AFIJIS | Al Fadhilah International Journal of Islamic Studies

Volume 01(1), 2024

Page: 25-42

Analysis of the Influence of CAR, NPF, FDR, and BOPO on the Profitability of Sharia Commercial Banks

Miranthi Nawrah Akhsanil Khuluqi

Institut Agama Islam Tazkia

Abstract. *The aim of the paper is to investigate the impact of Capital Adequacy Ratio (CAR), Non-Performing Financing (NPF), Financing to Deposit Ratio (FDR), and Operating Cost to Operating Income (BOPO) on the profitability of Sharia Commercial Banks in Indonesia. The research aims to investigate the simultaneous and partial effects of these variables on Return on Assets (ROA) as a proxy for profitability. The study uses secondary data from annual reports of Sharia Commercial Banks from 2019 to 2023 originated from the Financial Service Authority. Using multiple regressions linear, the results of the research shows that CAR, FDR, NPF, and BOPO have a negative influence on Return on Assets (ROA).*

Keywords: *CAR, NPF, FDR, BOPO, Islamic Bank*

Introduction

Banks have a fundamental role in country's financial institutions. They play an important role in managing and operating funds as well as helping people in financial transactions. According to Douglas (2008), bank is a legal entity that receives money from the public, which they can then withdraw on demand or at a specified time such as demand deposits, term deposits, certificates of deposit, savings, etc. These funds are then managed by the bank in the form of loans or other authorized investments.

Indonesia is a country that adheres to a dual banking system where there are two banking systems in a country which are implemented simultaneously by conventional banks and sharia banks, to meet people's needs for banking products and services as well as the economic sector (Nurun Nikmah et al., 2020). These two banking systems are separated entities that operate based on different principles, specifically conventional bank that carries out its business activities conventionally, which refers to national and international agreements, and is based on formal state law (Yusuf, 2023). Meanwhile, Alam et al. (2017) stated that sharia bank carries out its business activities based on Sharia Principles where the transaction that contains usury, gambling, uncertainty, persecution, bribery, haram substance, and violation of Islamic law are prohibited.

According to the news of The Central Bank of the Republic of Indonesia, the development of sharia bank in Indonesia shows consistency in growth with an increase in market share above the 7% range of the total national banking industry. The Financial Service Authority (OJK) also stated that the continuous development of the sharia banking system has made it become a credible alternative banking system that can be used by all groups of Indonesia society with no exception. Therefore, to maintain the trust they receive, sharia banks need to maintain and improve their performance to create a healthy banking system that efficiently implement sharia principles (Haryono, 2023).

The performance of a bank is measured from the aspects of profitability, liquidity and credit (Herlindayantri, n.d.). According to Adedeji & Adedeji (2018), profitability appears to play a dominant role in enhancing the corporate image of

banks since it creates a win-win situation between the banks and their stakeholders especially the investors.

The Central Bank of the Republic of Indonesia has determined that one measure of a bank's profitability is Return on Assets (ROA), which is used to measure a company's effectiveness and efficiency in generating profits by utilizing their assets. Many similar previous studies regarding the analysis of the Influence of CAR, NPF, FDR, and BOPO on the Profitability of Sharia Commercial Banks have produced different outputs. Therefore, the main reason as to why this research is conducted is to find out whether or not this research can produced the same outcome.

Literature Review

Sharia Banks

Sharia banks are financial institutions that operate in accordance with Islamic law, also known as sharia law. These banks provide banking and financial services that comply with the principles of Islamic law, which prohibit the payment or charging of interest (Ismail, 2011). It is also mentioned by Alam et al., (2017) that the investment in businesses that provide goods or services that are against Islamic principles, such as liquors, haram foods, and or involved in immoral services like gambling, discos, prostitution, night club, pornography, pubs are not allowed

According to Syachreza & Mais (2020), sharia banks uses the concept of sharing both profits and losses in their operational which quite the opposite to the conventional banks that uses interest rate in their operational. This concept is in accordance with the principles of ***al-Ghunm bi al-Ghurm*** which means profits is reward for readiness to bear losses. The implied meaning of this phrase according to Umar Abdullah al-Kamil implies that anyone who benefits from something he uses must be responsible for the risk that will occur (Adinugraha et al., 2017).

Douglas (2008) mentioned in his book *The Role of a Banking System in Nation-Building* that banking system is the heart and lifeline of a functioning country's economy, without it a country could collapse. Therefore, the very existence of this system is necessary for the economic growth and development of the country. The same goes for Islamic banking or sharia banks. Mansur (2011) considered that

although sharia banks operate without interest and run their operational with the principle of profit and loss system, they are able to perform their mobilizing, allocating and using their resources for economic development.

Financial Performance

Financial performance refers to a company's overall financial health. It is a comprehensive assessment of a company's financial position in various categories such as assets, liabilities, equity, expenses, revenue, and profitability. Financial performance plays a critical factor in determining the success and sustainability of a bank. Menicucci & Paolucci (2016) believed that if the financial system is efficient, bank will see improvements in profits, increased flow of capital from depositor to borrowers, and better quality of service to customers which ultimately create a healthy bank.

In respond to this, Juanaristo & Astika (2022) said that healthy banks are banks that can function normally, maintain good asset quality, manage and operate corresponding to safety principles, generate enough profits to maintain continuous operations and maintain liquidity to meet demand. They also believed that unhealthy banks could harm various parties with an interest in financial reporting, including managers, investors of the bank, the government, relevant institution, creditors, supplier, and clients.

Schinasi (2004) explained that each part of financial system’s performance does not necessarily require each part of the financial system to operate persistently at peak performance to achieve stability. Instead, it is consistent with the financial system operating on a "spare tire" from time to time. This means that the system can function effectively even if some components are not performing optimally, as long as there are alternative mechanisms or channels available to support economic activities

Return on Asset (ROA)

ROA is used to measure the earnings of banking companies as it focuses on calculating the effectiveness of a banking company in managing its assets to generate profits. Return on assets can be influenced by the loan to deposit ratio, capital adequacy ratio, non-performing loans, and operating costs and operating income as well as third party funds (Kadek et al., 2021). This also corresponds to Diaz (2019)

statement regarding the usefulness of ROA as indicator for evaluating a company's financial strength and resource utilization efficiency.

Meanwhile, according to Ingves (2014), banks are highly leveraged institutions that are in the business of facilitating leverage for others. Leverage in banks is usually far higher than in other industry sectors. For example, the average leverage ratio across 10 of the world's largest listed non-financial companies is on the order of 50%. That is, on average these companies fund their assets around 50:50 with debt and equity. In banking, a more common ratio is 95:5. The high use of debt is necessary for banks' operational. However, excessive leverage is dangerous as it may lead to bankruptcy cost when the cash flows unable to cover debt obligation. Thus, 1% ROA or higher in the banking institutions is enough to indicate banks significant profits.

Capital Adequacy Ratio (CAR)

Capital Adequacy Ratio (CAR) is an indicator of how well a bank can meet its obligations by measuring its available capital as a percentage of its risk-weighted credit exposures. It is also used as an indicator for a bank's stability and solvency to absorb losses before they become insolvent and consequently lose depositors' funds (Hayes, 2024).

Global regulatory framework for banks stipulates that banks must maintain a minimum of 8% of risk-weighted assets at all times (Basel Committee On Banking Supervision, 2011). Therefore, if this condition is not met, the bank only has two options, either to increase its capital in the form of additional paid-in capital by the owner or by merging with a bank that has sufficient capital.

From the previous research done by Sumarmi et al. (2020) on Bukopin Sharia Bank which proven that CAR had a positive and significant effect on ROA. Opposite result is obtained from the research of Almunawwaroh & Marliana (2018) that stated CAR had a negative and significant effect on ROA.

Financing Deposit Ratio (FDR)

Loan to Deposit Ratio (LDR) is better known as Financing to Deposit Ratio (FDR) in sharia banks, is a financial ratio used to evaluate a bank's liquidity and funding strategy. It provides insight into a bank's ability to meet its obligations and maintain liquidity. According to (Munandar, 2022), a high FDR suggests that a bank is

performing very well and is able is able to perform its role as an intermediary optimally. However, a low FDR ratio means that bank has not been able to regulate its intermediation function properly. Having said that, the higher FDR become, the more possibility that the bank is less liquid as more funds are allocated for providing financing. On the other hand, a low ratio indicates that the bank has increased liquidity.

Almunawwaroh & Marliana (2018) stated that based on Bank Indonesia regulations, the standard LDR value according to Bank Indonesia is between 80%-110%. This means if the ratio is higher, it gives an indication of the lower liquidity capacity of the bank concerned. Reduced levels of liquidity can have an impact on increasing profitability. Therefore, FDR has a positive influence on the level of profitability. The results of their research are in accordance with the theory put forward, which shows that FDR has a significant positive influence on profitability.

On the other hand, Lufianda & Syafri (2023) stated that FDR has a negative influence on ROA, indicating the low income of the object of the research. Thus proofing that FDR below 80% can indicate that the bank has the ability to finance business activities that are less than what is obtained from deposits, which could potentially disrupt the bank's ability to finance larger business activities.

Non-Performing Financing (NPF)

Non-Performing Financing (NPF) refers to the portion of a bank's financing that is not generating return, such as loans that have not been repaid on time or have defaulted. NPF is a concern for banks as it reduces their profitability and increases their risk. When a loan is classified as non-performing, it means that the chances of receiving repayments is significantly lower, and the bank may need to take action to recover the loan, such as selling it to a collection agency or taking possession of assets pledged as collateral.

In accordance with the rules set by Bank Indonesia, a good NPF amount is below 5%. The greater the NPF ratio, the more it will affect the bank's profit/profitability because uncollectible funds result in the bank being unable to finance other productive assets. Thus, resulting in bank income being reduced so that banking profitability will be disrupted (Almunawwaroh & Marliana, 2018).

As NPF act as an indicator of a bank's credit risk, studies from Lutfi & Santosa (2021) stated the NPF has a positive significant effect on ROA, meaning that the higher NPF value, the greater the impact will be. But both Almunawwaroh & Marliana (2018) and Syachreza & Mais (Syachreza & Mais, 2020) point out that NPF has a negative significant effect on ROA

Operating Expense and Operating Income (BOPO)

Operating Expense and Operating Income (BOPO) is the ratio that measure bank's efficiency from operational costs incurred by a bank compared to the operational income obtained. This indicator is being used to evaluate bank's performance in managing operational costs and optimizing its income.

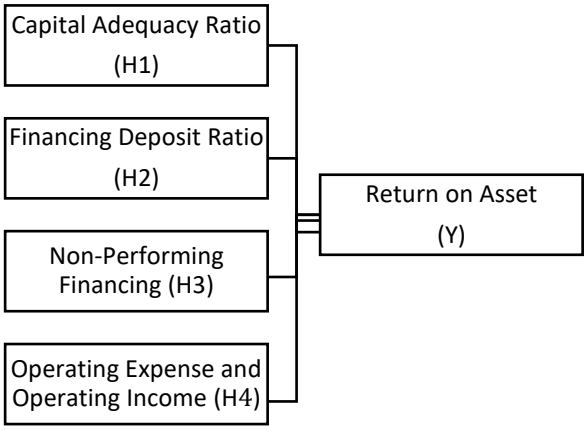
According to Sudarsono (2017), the smaller sharia bank's BOPO ratio, the more efficient the bank in controlling its operational cost. In the long term, BOPO variable has significantly influences ROA in positive way. But this does not apply in short term whereas BOPO has no influences on ROA.

The regulation of SE BI No. 6/23/DPNP 2004 stated that a bank will be considered to have an optimal BOPO if their ratio is below 96%. The smaller ratio, the more the more efficient the operational costs incurred by the bank. However, the research concluded by Lufianda & Syafri (2023) on sharia commercial banks has denied this theory where their results show negative outcome of BOPO influencing ROA.

Research Framework and Hypothesis

Research Framework

The framework of this research is used to clarify the concept of this research so that it will be easier to understand. In this research, the author conducted a study of factors that affecting sharia banks profitability with the aim to analyse factors such as CAR, FDR, NPF, and BOPO to the ROA of sharia banks.



Hypothesis

Based on the background and differences that has been displayed in previous research, the temporary research hypothesis conclusion will be as follows:

H1: CAR has a positive significant effect to profitability of sharia commercial bank.

H2: FDR has a positive significant effect to profitability of sharia commercial bank.

H3: NPF has a negative significant effect to profitability of sharia commercial bank.

H4: BOPO has a positive significant effect to profitability of sharia commercial bank.

Data and Methodology

Data

We used quantitative secondary data in this research methodology which refers to data that was previously collected by another person or organization for another purpose and now is used by the current author for different purposes. Unfortunately, although secondary data is usually well-structured and reliable, it may not be as relevant as primary data which is directly collected by a researcher or an author for a specific reason.

According to Lutfi & Santosa (2021), quantitative research methods are methods that are based on positivism and used to study a specific population or sample by collecting research instruments data or quantitative/statistical data analysis for the purpose of testing predetermined hypotheses. The data we collected is in the form of monthly report Islamic banking statistic from Indonesia Financial Service Authority or better known as OJK with coverage from 2019 to 2023

Methodology

There are steps of analytical methods used in this research. First, we do the descriptive analysis and then classical assumption tests which involves normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The hypothesis testing will involve multiple linear regression, t test (partial), F test (simultaneous), coefficient of determination.

Results

Descriptive Analysis

Descriptive analysis is a fundamental step in data analysis that involves summarizing and describing the primary properties of a dataset. It provides vital insights into the data's frequency distribution, central tendency, dispersion, and identifying position (Villegas, n.d.). This type of analysis helps researchers and analysts better understand and utilize their data, identify exceptions and mistakes, and see how variables are related.

Classical Assumption Test

The Classical Assumption Test is used as a statistical requirement that must be met in multiple linear regression analysis using the Ordinary Least Square (OLS) method, involves several aspects, namely:

Normality Test

The normality test aims to test whether the dependent and independent variables in the regression model have a normal distribution or not. A good regression model requires that the data distribution be normal or close to normal. To ensure this, the normality test is performed using tools like the Kolmogorov-Smirnov test. The test compares the significance value to 0.050. If the significance value is greater than 0.050, the data is declared normal. Otherwise, it is declared abnormal.

Multicollinearity Test

The multicollinearity test ensures that the independent variables do not have a correlation relationship between them. A good regression model should not have a correlation between the independent variables. This test can be done by looking at the Tolerance Value and Variance Inflation Factor (VIF) values. If the VIF value is greater than 10 and the tolerance value is less than 1, there is a symptom of multicollinearity.

Heteroscedasticity Test

Heteroscedasticity tests check for the presence of unequal variances in the residuals. This is important because it can affect the accuracy of the regression model. The test can be performed using tools like the Breusch-Pagan test or the White test.

Autocorrelation Test

The autocorrelation test checks for the presence of autocorrelation in the residuals. Autocorrelation occurs when the residuals are correlated with previous residuals. This can also affect the accuracy of the regression model. The test can be performed using tools like the Durbin-Watson test.

Multiple Regression Analysis

Multiple regression analysis is used to model the relationship between a dependent variable and multiple independent variables. The goal is to identify the significant independent variables that influence the dependent variable. The regression model used is as follows:

$$y = \alpha + \beta 1\, X1 + \beta 2\, X2 + \beta 3\, X3 + \beta 4\, X4 + e$$

$$ROA = \alpha + \beta 1\, CAR + \beta 2\, FDR + \beta 3\, NPF + \beta 4\, BOPO + e$$

ROA : ROA acts as the dependant variable which is affected by the independent variables.

CAR : CAR acts as the independent variable.

FDR : FDR acts as the independent variable.

NPF : NPF acts as the independent variable.

BOPO : BOPO acts as the independent variable.

T Test (Partial)

The partial test aims to see the significance of the effect of individual independent variables on the dependent variable. The test is performed using the t-statistic and the p-value. If the calculated t-value is smaller than the t-table, the null hypothesis is rejected, indicating that the independent variable partially has a significant influence on the dependent variable. If the calculated t-value is greater than the t-table, the null hypothesis is accepted, indicating that the independent variable partially does not significantly influence the dependent variable.

F Test (Simultaneous)

The F-test is used to test the overall significance of the regression model. It compares the variance explained by the model to the variance not explained by the model. If the F-statistic is greater than the F-table, the null hypothesis is rejected, indicating that the model is significant.

Coefficient of Determination (R-Square)

The coefficient of determination, also known as R-Square, is a measure of how well the independent variables explain the variation in the dependent variable. The value of R-Square ranges between 0 and 1. A higher value indicates that the independent variables explain more of the variation in the dependent variable.

Results and Analysis

Descriptive Analysis

Before testing the influence of the independent variable on the dependent variable, we will first review the description of the research variables using descriptive statistical analysis. Descriptive statistics in this research provide an overview or description of data which includes the number of samples (N), minimum value, maximum value and average (mean) for each variable. Based on the table descriptive analysis, we gathered the total of 300 data samples from sharia banking statistical reports held by the financial services authority (OJK). The table details various information regarding the sample size, minimum value, maximum value, and average of each variable.

Variable	Obs	Mean	Std. Dev.	Min	Max
car	60	22.822	2.222256	19.56	26.28
nfp	60	2.949167	.4523696	2.1	3.58
fdr	60	77.23467	3.251538	68.98	83.19
bopo	60	82.412	4.36633	75.78	93.1
roa	60	1.804167	.2613608	1.32	2.18

The criteria for determining the ROA composite ranking consist of 5 ranks where: Rank 1, if the ROA ratio is more than 2%, then the bank is declared very healthy. Rank 2, if the ROA ratio is 1.25% to 2% then the bank is declared healthy. Rank 3, if the ROA ratio is 0.5% to 1.25% then the bank is declared healthy, quite healthy. Rank 4, if

the ROA ratio is 0% to 0.5% then the bank is declared healthy or unhealthy. Rank 5 if the ROA ratio is 0% or less than 0% (negative) then the bank is declared healthy or unhealthy (Sarah, 2018). The table shows average ROA value is 1.8% which still declares as a healthy bank when we based it on the rank.

The minimum CAR for a bank is 8% of risk-weighted assets at all times. The table above shows the average of the CAR of 22.82%. A higher CAR value in Islamic banking indicates that the bank has more balanced capital and is better able to face risk. Thus, the CAR value can be considered a relatively high value and shows that the bank has more balanced capital and is better able to face risk.

NFP a good NPF amount is below 5% which in the table display the average 2.94%. The greater the NPF ratio, the more it will affect the bank's profit/profitability because uncollectible funds result in the bank being unable to finance other productive assets. Thus, resulting in bank income being reduced so that banking profitability will be disrupted

FDR the standard LDR value according to Bank Indonesia is between 80%-110%. Meanwhile the average of FDR in the table is 77.23% which is a little bit below the standard that has been set by Bank Indonesia. This means lower FDR may indicate a poorer ability to repay credit funds, so ROA may also decrease. Therefore, Islamic banks must increase their FDR so that it is higher and closer to the standards set by Bank Indonesia.

The regulation of SE BI No. 6/23/DPNP 2004 stated that a bank will be considered to have an optimal BOPO if their ratio is below 96%. On the table, the average of BOPO value is 82.41% which clarifying that most of commercial sharia banks in Indonesia are able to manage their operational costs and optimizing its income effectively.

1.1 Classical Assumption Test

Normality Test

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
car	60	0.89880	5.501	3.675	0.00012
nfp	60	0.86984	7.075	4.217	0.00001
fdr	60	0.98132	1.015	0.032	0.48707
bopo	60	0.91802	4.456	3.221	0.00064
roa	60	0.89891	5.495	3.673	0.00012

Multicollinearity Test

Variable	VIF	1/VIF
car	3.67	0.272403
bopo	3.53	0.283152
nfp	3.38	0.295434
fdr	1.48	0.674493
Mean VIF	3.02	

Heteroscedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of roa

chi2(1) = 3.30
Prob > chi2 = 0.0693

Autocorrelation Test

1.2 Hypothesis Testing

Multiple Regression Analysis

Source	SS	df	MS	Number of obs	=	60
				F(4, 55)	=	25.23
Model	2.60854578	4	.652136446	Prob > F	=	0.0000
Residual	1.42171232	55	.025849315	R-squared	=	0.6472
				Adj R-squared	=	0.6216
Total	4.03025811	59	.068309459	Root MSE	=	.16078

roa	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
car	.0260517	.0180467	1.44	0.155	-.0101148	.0622181
nfp	-.0136657	.0851284	-0.16	0.873	-.1842669	.1569354
fdr	-.0193964	.0078383	-2.47	0.016	-.0351047	-.0036881
bopo	-.0347371	.0090089	-3.86	0.000	-.0527914	-.0166829
_cons	5.610749	1.408332	3.98	0.000	2.788388	8.433109

Based on the results of the multiple linear regression analysis tests in table 4.6, the regression equation can be formulated as follows, where:

$$ROA = 5.610749 + 0.0260517CAR - 0.0136657FDR - 0.0193964NPF - 0.0347371BOPO + e$$

Constant = 5.610749

This shows that the constant (α) is 26.311, which means that the independent variables CAR, BOPO, NPF and FDR are considered constant, so ROA is 5.610749.

Coefficient ($\beta 1$)= 0.0260517 CAR

This shows that for every increase in the Capital Adequacy Ratio (CAR) variable by one unit, the Profitability variable (ROA) will increase by 0.0260517 assuming the other variables are considered constant.

Coefficient ($\beta 2$)= -0.0136657 FDR

A coefficient value of -0.0136657 indicates that for every increase in the Financing to Dept Ratio (FDR) variable by one unit, the profitability variable (ROA) will increase by 0.012 assuming the other variables remain constant.

Coefficient ($\beta 3$)= -0.0193964 NPF

This shows that for every increase in the Non Performing Financing (NPF) variable by one unit, profitability (ROA) will increase by -0.0193964 assuming other variables are considered constant.

Coefficient ($\beta 4$)= -0.0347371 BOPO

A regression coefficient value of 1 indicates that for every increase in the BOPO variable by one unit, profitability -0.0347371 will decrease by an amount assuming other variables are considered constant.

The result of the multiple regression linear shows that the coefficient correlations of the data are below the standard of 0.05, thus the hypothesis will be:

H1: 0.0260517 < 0.05

CAR does not have the significant impact towards the profitability of sharia commercial bank.

H2: -0.0136657 < 0.05

FDR does not have the significant impact towards the profitability of sharia commercial bank.

H3: -0.0193964 < 0.05

NPF does not have the significant impact towards the profitability of sharia commercial bank.

H4: -0.0347371 < 0.05

BOPO does not have the significant impact towards the profitability of sharia commercial bank.

Conclusion

Based on the result of the analysis of the Influence of CAR, NPF, FDR, and BOPO on the profitability of sharia commercial banks, the finding of this research shows that the initial hypothesis are different from the results.

The following are the findings taken from the discussion analysis that has been carried out: All of the variable independent which are Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Non-Performing Finance (NPF), and Operational Costs Operating Income (BOPO) shows the probability value less than 0.05, which means, all of the independent variable have a negative influence on Return on Assets (ROA).

References

Adedeji, A. O., & Adedeji, O. A. (2018). Effect of Non-interest Income on Banks' Profitability in Nigeria. *Journal of Economics, Management and Trade*, *21*(9), 1–10. https://doi.org/10.9734/jemt/2018/44287

Adinugraha, H. H., Dian, U., & Semarang, N. (2017). *Penerapan Kaidah al-Ghunm bi al-Ghurm dalam Pembiayaan Musharakah pada Perbankan Syariah Pendahuluan Konsep dasar dalam perbankan syariah ialah konsep pembagian*. *8*, 81–102.

Alam, M. M., Akbar, C. S., Shahriar, S. M., & Elahi, M. M. (2017). The Islamic Shariah Principles for Investment in Stock Market. *Qualitative Research in Financial Markets*, *9*(2), 132–146. https://doi.org/10.1108/QRFM-09-2016-0029

Almunawwaroh, M., & Marliana, R. (2018). Pengaruh Car,Npf Dan Fdr Terhadap Profitabilitas Bank Syariah Di Indonesia. *Amwaluna: Jurnal Ekonomi Dan Keuangan Syariah*, *2*(1), 1–17.

https://doi.org/10.29313/amwaluna.v2i1.3156

Basel Committee On Banking Supervision. (2011). Basel III: A global regulatory framework for more resilient banks and banking systems December 2010 (rev June 2011). In *Bcbs 189* (Vol. 2010, Issue June). http://www.bis.org/publ/bcbs189.pdf

Diaz, J. F., & Pandey, R. (2019). Factors Affecting Return on Assets of Us Technology and Financial Corporations. *Jurnal Manajemen Dan Kewirausahaan*, *21*(2), 134–144. https://doi.org/10.9744/jmk.21.2.134-144

Douglas, J. L. (2008). The Role of a Banking System in Nation-Building. *Maine Law Review*, *60*(2).

Haryono, E. (2023). Bulan Pembiayaan Syariah 2023: Pacu Pembiayaan Syariah Untuk Mendukung Pemulihan Ekonomi Nasional. *Bank Indonesia*. https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_2526523.aspx

Hayes, A. (2024). What the Capital Adequacy Ratio (CAR) Measures, With Formula. *Investopedia*. https://www.investopedia.com/terms/c/capitaladequacyratio.asp#toc-why-the-capital-adequacy-ratio-matters

Herlindayantri, E. N. (n.d.). *Analisis Pengukuran Kinerja Bank Pendekatan Balance Scorecard*.

Ingves, S. (2014). Banking on leverage. *10th Asia-Pacific High-Level Meeting on Banking Supervision*, 1–5.

Ismail. (2011). *Perbankan Syariah* (Edisi Pert). Prenadamedia Group. https://books.google.co.id/books?id=X9xDDwAAQBAJ&pg=PR7&hl=id&source=gbs_selected_pages&cad=1#v=onepage&q&f=false

Juanaristo, R. K. E., & Astika, I. B. P. (2022). Assessment of Bank's Financial Health Using Risk Profile, Good Corporate Governance, Earnings, Capital (RGEC) Analysis. *European Journal of Business and Management Research*, *7*(4), 93–98. https://doi.org/10.24018/ejbmr.2022.7.4.1355

Kadek, N., Swandewi, M., & Purnawati, N. K. (2021). Capital Adequacy Ratio Mediates the Effect of Non-Performing Loan on Returns on Assets in Public Commercial Banks. *American Journal of Humanities and Social Sciences Research*, *5*, 651–656. www.ajhssr.com

Lufianda, P., & Syafri. (2023). Pengaruh CAR, NPF, FDR dan BOPO terhadap Profitabilitas Pada Bank Umum Syariah. *Journal of Economic*, *3*(2), 356–372. https://doi.org/10.35313/jaief.v3i2.3766

Lutfi, A., & Santosa, M. (2021). Analisis Pengaruh CAR, BOPO, NPF dan FDR terhadap Profitabilitas Bank Umum Syariah di Indonesia. *Journal of Unimma*, *https://journal.unimma.ac.id/index.php/conference/issue/view/321*, 519–539. https://journal.unimma.ac.id

Mansur, A. (2011). Peran Bank Syariah Di Dalam Pembangunan Ekonomi. *El-Qist: Journal of Islamic Economics and Business (JIEB)*, *1*(1), 63–88. https://doi.org/10.15642/elqist.2011.1.1.63-88

Menicucci, E., & Paolucci, G. (2016). The determinants of bank profitability: empirical evidence from European banking sector. In *Journal of Financial Reporting and Accounting* (Vol. 14, Issue 1). https://doi.org/10.1108/jfra-05-2015-0060

Munandar, A. (2022). Faktor-Faktor Yang Memengaruhi Financing To Deposit Ratio (Fdr) Serta Implikasinya Terhadap Return on Assets (Roa) Dan Net Operating Margin (Nom) Pada Bank Umum Syariah Periode Januari 2014-September 2021. *Ekonomica Sharia: Jurnal Pemikiran Dan Pengembangan Ekonomi Syariah*, *7*(2), 105–116.

Nurun Nikmah, A. N., Suryanto, T., & Surono, S. (2020). Evaluation of Dual Banking System in Banking in Indonesia. *ISLAMICONOMIC: Jurnal Ekonomi Islam*, *11*(2). https://doi.org/10.32678/ijei.v11i2.158

Sarah, A. S. (2018). *PENILAIAN TINGKAT KESEHATAN BANK NEGARA INDONESIA DENGAN MENGUKUR EARNING DAN LIKUIDITAS (Studi Kasus Pada Bursa Efek Indonesia Periode 2013-2017)*. 1–23.

Schinasi, G. J. (2004). Defining Financial Stability. *IMF Working Papers*, *04*(187), 1. https://doi.org/10.5089/9781451859546.001

Sudarsono, H. (2017). Analisis Pengaruh Kinerja Keuangan terhadap Profitabilitas Bank Syariah di Indonesia. *Economica: Jurnal Ekonomi Islam*, *8*(2), 175–203. https://doi.org/10.21580/economica.2017.8.2.1702

Sumarmi, Sopingi, I., & Sudarwanto, T. (2020). Pengaruh CAR, FDR, NPF, BOPO dan BI Rate Terhadap Profitabilitas. *JIES : Journal of Islamic Economics Studies, Volume 1*(Nomor 3), 126–133.

Syachreza, D., & Mais, R. G. (2020). Analisis Pengaruh CAR, NPF, FDR, Bank Size, BOPO terhadap Kinerja Keuangan Bank Umum Syariah di Indonesia. *Jurnal Akuntansi Dan Manajemen*, *17*(01), 25–37. https://doi.org/10.36406/jam.v17i01.326

Villegas, F. (n.d.). *Descriptive Analysis*. https://www.questionpro.com/blog/descriptive-analysis/

Yusuf, M. Y. (2023). Inilah Perbedaan Bank Umum dan Bank Syariah. *IDX Channel*. https://www.idxchannel.com/banking/inilah-perbedaan-bank-umum-dan-bank-syariah