Impact of the Capital Adequacy Ratio (CAR) and Mudharabah on the Return on Asset (ROA) on Sharia General Banks Registered in the Financial Services Authority (OJK)

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Abstract: The objective of this study was threefold: (1) to assess the impact of the capital adequacy ratio on the return on assets of Islamic Commercial Banks that are registered with the Financial Services Authority (OJK), (2) to examine the influence of mudharabah return on assets at Islamic Commercial Banks registered with OJK, and (3) to ascertain the combined effect of the capital adequacy ratio and mudharabah return on assets at Islamic Commercial Banks registered with OJK. The investigation was carried out throughout the period spanning from July to August of 2021. The research undertaken employed a quantitative-descriptive methodology, utilizing an associative approach. The utilized data source consisted of secondary data. The population under consideration encompasses the complete set of financial statements belonging to Islamic Commercial Banks (ICB) in Indonesia that were registered with the Otoritas Jasa Keuangan (OJK) throughout the period spanning from 2016 to 2020. The employed sample approach was the saturation sampling technique. The data was acquired from a collection of financial records comprising a total of 60 samples. The approaches employed for data collection involved the utilization of observation and documentation methods. The employed methodology for data analysis was multiple linear regression. The findings of this study suggest that there is a positive and statistically significant relationship between the capital adequacy ratio and return on assets at Islamic Commercial Banks, albeit to a partial extent. (2) The impact of mudharabah on the return on assets of Islamic Commercial Banks was found to be insignificant. (3) However, when considering the capital adequacy ratio and mudharabah together, a positive and substantial relationship was observed with the return on assets of Islamic Commercial Banks. The findings of the aforementioned study indicate that the capital adequacy ratio and mudharabah significantly impact the return on assets of Islamic Commercial Banks that are registered with the Otoritas Jasa Keuangan (OJK). Hence, the bank possesses the ability to oversee and uphold the standard of the capital adequacy ratio and mudharabah on return on assets (ROA) in order to enhance the bank's profitability. The findings suggest that both the capital adequacy ratio and mudharabah exhibit a favorable influence on the return on assets, as they demonstrate a positive impact and the ability to enhance bank profitability.

Keywords: CAR; Mudharabah; ROA

INTRODUCTION

The banking business plays a significant role in the economic development of a nation in the contemporary day. The banking sector in Indonesia has implemented a dual banking system, which involves two distinct types of operations conducted by Shariah banks and conventional banks. This system was established following the enactment of Act No. 10 of 1998 on banking, which subsequently became Law No. 21 of 2008 on Shariah banking (www.ojk.go.id, accessed on April 25, 2021). This development has been positively

received by stakeholders in the banking industry. By the year 2020, it is projected that there will be a cumulative number of 14 Sharia-compliant banks operating inside the Sharia General Bank. The presence of sharia-compliant banks can be observed through the public's inclination to deposit funds in these institutions. This preference is driven by the appeal of the sharia-compliant bank's product, which offers a more favorable ratio of yield to profit margin compared to traditional banks.

The profitability of a sharia bank is a significant factor in assessing its transaction capacity. The trustee evaluates the management's profitability performance by examining the return on assets (ROA) or asset withdrawal ratio, which measures the relationship between pre-tax profits and total assets. This assessment provides a thorough understanding of the management's effectiveness in generating profits (Rivai, 2017). Currently, the presence of Sharia banking is characterized by a relatively smaller market share compared to conventional banking. However, Sharia banks aspire to meet the objectives outlined in the 2020-2025 Sharia Banking Development Roadmap, which primarily focus on enhancing capitalization and operational efficiency. The enhancement of permodalan is crucial for the sustained improvement of competitiveness and resilience in the face of economic uncertainty following the epidemic (Santoso, 2021).

Banks require a significant amount of capital as it serves as a catalyst for fostering business expansion. Shariah General Bank ought to preserve both capital stability and transaction scale. The selection of the capital for Sharia General Bank will significantly influence the bank's endeavors to enhance its company operations. Furthermore, it exerts influence on the capital adequacy aspect of a bank by means of evaluating the sufficiency of the bank's capital through the comparison of capital aspects and performance elements, thereby demonstrating proficiency in maintaining capital adequacy.

Shariah represents a financing mechanism employed by the General Bank of India, commonly referred to as Profit and Loss Sharing (PLS). One of the financial ratios commonly utilized in the field is known as the mutharabah ratio. Mutharabah financing entails a collaborative arrangement between two entities, wherein the first party assumes the role of a sole capital provider, while the second party assumes the role of a capital investor. The outcome of the second party's efforts is determined based on a mutually agreed-upon ratio. In the event of a loss, the burden falls upon the capital investors, unless the loss is attributable to the actions of the capital manager, in which case the manager assumes responsibility for the loss (Raharjo and Wahyuni, 2019).

Table 1 CAR and ROA Development Data of Sharia General Bank (BUS) 2016-2020

Variabel	Tahun				
	2016	2017	2018	2019	2020
CAR (%)	16,63	17,91	20,39	20,59	21,64
ROA (%)	0,63	0,63	1,28	1,73	1,40

The table presented above illustrates a consistent annual growth in the development of CAR from 2016 to 2020. The country of CAR witnessed a peak growth rate of 2.48%

during the year of 2017-2018, while the lowest growth rate of approximately 0.2% was observed in the subsequent period of 2018-2019. The return on assets (ROA) exhibited a consistent value in the 2016-2017 period, with no notable fluctuations. However, in 2018, there was an observed rise in the ROA to 1.28%, followed by a further increase to 1.73% in 2019. The ROA access in 2019 represents the peak value seen within the preceding five-year period.

Table 2 CAR and ROA Development Data of Sharia General Bank (BUS) 2016-2020

Variabel	Tahun				
	2016	2017	2018	2019	2020
Mudharabah (miliar)	7.806	6.854	5.477	5.143	4.098
ROA (%)	0,63	0,63	1,28	1,73	1,40

According to the aforementioned financial data table, it is anticipated that the rate of deflation will exhibit an upward trend from 2017 to 2020. In the period spanning 2018 to 2019, the observed minimum rate of decline amounts to around 334 billion, while the maximum rate of reduction observed in the subsequent period from 2019 to 2020 reaches 1,045 billion. The return on assets (ROA) exhibited a consistent value without any notable fluctuations over the period of 2016-2017. However, in 2018, there was a notable rise in the ROA to 1.28%, followed by a further increase to 1.73% in 2019. The ROA accomplishment in 2019 represents the greatest figure observed during the past five years.

Given the aforementioned occurrence outlined in the background section, the author expresses a keen interest in selecting an appropriate title for the research study Impact of the Capital Adequacy Ratio (CAR) and Mudharabah on the Return on Asset (ROA) on Sharia General Banks Registered in the Financial Services Authority (OJK).

The author's interest lies in the study titled " Impact of Capital Adequacy Ratio (CAR) and Mudharabah on Return on Asset (ROA) on Sharia General Bank registered with the Financial Services Authority (OJK)", which is influenced by the aforementioned phenomenon discussed in the background.

Theoretical Review

The researchers posited the signalling theory as a comprehensive and overarching theoretical framework. The theory of Job Market Signalling was initiated by Michael Spence in 1972. The notion encompasses both internal management of signal receivers and external involvement of signal-receiving investors. The primary objective is to provide a signal to potential investors, with the expectation that they possess the capability to contribute to the decision-making process. Additionally, it is intended for investors to demonstrate that the financial condition of the firm is sufficiently robust to warrant a positive signal.

The presence of an information system has an impact on the investor's decision-making process about return on investment. The evaluation of financial report information can be conducted from multiple viewpoints, including the correctness,

relevance, completeness, and timeliness of the information (Irma, 2019). The idea of signals suggests that the information disseminated by a corporation may be received and acknowledged differently by users or parties involved in the financial reporting process, highlighting a distinction between the two.

Capital Adequacy Ratio (CAR)

The Neokyenes theory, proposed by economists Roy F. Harrod and Evsey D. Domar (1789), posits (as stated in Faruq and Mulyanto, 2017) that capital, investment, and demand play crucial roles in stimulating economic progress. These three factors exert a significant impact on the economic landscape of the nation. According to Raturrahmi (2018), the capital adequacy ratio is a metric utilized to assess a bank's proficiency in evaluating the sufficiency of its capital, as well as tracking and overseeing dangers that may impact the magnitude of its capital.

Mudharabah

The stewardship theory, proposed by Donaldson and Davis (1991), explores the notion that individuals may lack personal motivation to pursue their own goals when their primary focus is on advancing the interests of the organization. As such, this theory is rooted in psychological and sociological principles, aiming to provide a framework for motivating stewards.

The use of stewardship theory can be employed in the financing of banking products by financial institutions. The Sharia-compliant bank assumes a central role by appointing the client as a trustee responsible for the management of finances. The funds mentioned have the capacity to fulfil the requirements of leaders and managers through services that can influence behaviors and foster collaboration within organizations and groups. According to Audia (2017), The research suggests that the stewardship theory has implications for the Sharia General Bank, which acts as a fund processor. According to this theory, the bank takes the initiative to offer superior services to fund owners by effectively managing and preserving the debtor's revenue through financing arrangements.

Profitability

The Schumpeterian theory was initially formulated by Joseph A. Schumpeter (1934), who introduced the concept of profit in his work. Based on its developmental context, profitability is regarded as a key variable within the business-oriented component that can propel entrepreneurs towards achieving financial gain or profit through effective innovation strategies, either by minimizing production costs or by enhancing the value of their products. According to Kadmasasmita (2016).

The Return on Assets (ROA) is a financial metric utilized to assess the efficiency with which a company utilizes its assets to generate profits. This ratio quantifies the profitability of the bank's entire management. According to Sintiya (2018).

RESEARCH METHOD

The present study employs a quantitative-descriptive research design characterized by an associative method. The study was carried out throughout the months of July and August 2021, specifically at the premises of a public bank according to Shariah principles. The populace utilized the unity report of the Shariah General Bank, which was duly registered with the OJK. The sampling technique employed in this study involved the use of saturated samples, resulting in an increase of up to 60 in the number of samples.

The present study employs a data analysis technique known as double-linear analysis, which is conducted using a computer program (software). In the study, a hypothetical test was conducted utilizing the trial of dual linear regression in SPSS 21. Prior to conducting the test, various diagnostic tests were performed to assess normality, multicollinearity, heteroscedasticity, and autocorrelation. In this study, we will employ various statistical tests to evaluate our hypotheses. Specifically, we will utilize the determination coefficient (R^2), the partial t-test, and the simultaneous F-test. These tests will allow us to assess the relationships between variables and determine the significance of our findings.

RESULT AND DISCUSSION

In this research, data processing is facilitated by the utilization of Microsoft Excel and the IBM SPSS 20 application. These software tools are employed to enhance the efficiency of result acquisition, thereby enabling a comprehensive understanding of the variables under investigation.

Descriptive Analysis

Table 3 Descriptive Analysis Results

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
X1 CAR	60	14.72	21.64	18.5113	2.27326
X2 MUDHARABAH	60	4098	8422	6162.55	1299.091
Y3 ROA	60	0.16	1.88	1.1785	0.40450
Valid N (listwise)					

According to the findings of the statistical analysis conducted using SPSS, the average value of the CAR variable is determined to be 18,5113, with a corresponding standard deviation of 2,27326. This implies that if the mean value exceeds the standard deviation, a more favorable outcome is observed. The mean value of Mudharabah is 6162.55, with a standard deviation of 1299.091. This indicates that the average quantity is higher than the typical deviation. The outcome is favorable.

Classical Assumption Test

Table 3 Normality Test Results

Normality test

One—Sample Kolmogorov—Smirnov Test		
		Unstandardized Residual
N		60
Normal Parameters[a,b]	Mean	OE-7
	Std. Deviation	.23155492
	Absolute	.116
Most Extreme Differences	Positive	.063
	Negative	-.116
Kolmogorov-Smirnov Z		.896
Asymp. Sig. (2-tailed)		.398
a. Test distribution is Normal		
b. Calculated frorn data		

Based on the results of the one-sample Kolmogorov-Smirnov test, it can be inferred that the residual data follows a normal distribution. This conclusion is drawn from the acquired significance value of 0.398, which exceeds the predetermined significance level of 0.05 (α = 5%).

Multicollinearity test

Table 4 Multicollinearity Test Results

Coefficients*

Model		Collinearity Statistics	
		Tolerance	VIF
1	Xl CAR	.137	7.275
	XI MUDHARABAH	.137	7.275

Based on the provided table, it is feasible to ascertain the CAR and Mud tolerance values of 0.137, which exceeds the threshold of 0.10. Additionally, the VIF value of 7.275 falls below the threshold of 10. The test findings indicate that there is no evidence of multicollinearity based on the tolerance values exceeding 0.10 and the variance inflation factor (VIF) values being below 10 for each variable.
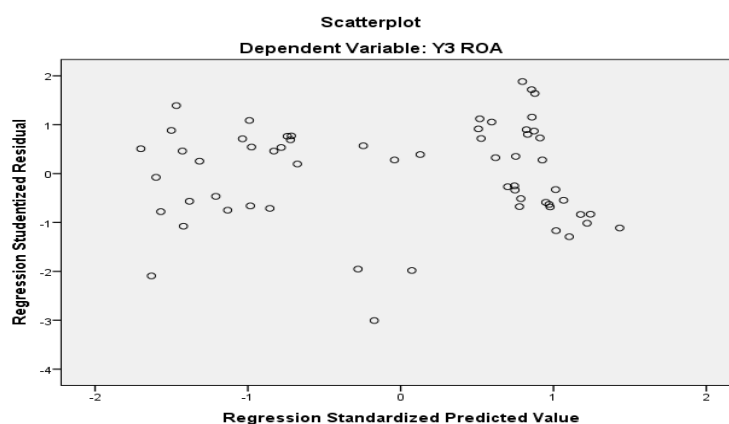
Heteroscedasticity test

Figure 1: Scatterplot heteroscedasticity

The scatterplot depicted above visually represents the dispersion of abstract pattern-shaped data points surrounding the origin (0) on the Y-axis. This implies that heteroscedasticity does not exhibit any observable symptoms, and the analytical model can be effectively employed to forecast a rise in return on assets (ROA) in relation to its independent variable.

Autocorrelation Test

Table 5 Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Eror of the Estimate	Durbin Watson
1	.820[a]	.672	.661	.23558	2.081

a. Predictors: (Constant): X2 MUDHARABAH, Xl CAR

b. Dependent Variable: Y3 ROA

Based on the provided table of Durbin-Watson values, the observed Durbin-Watson statistic (DW) falls within the range of du and 4du, where du represents the lower limit and 4du represents the upper limit. Specifically, the observed DW value is 2.081, while the lower limit (dL) is 1.5144 and the upper limit (dU) is 1.6518. Hence, based on the given values of DW (1.6518 < 2.081 < 2.3482), it may be inferred that there is no evidence of autocorrelation.

Double Regression Analysis

Table 6 Multiple Linear Regression Test Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-6.384	4.598		-1.389	.170
	X1 CAR	3.051	.936	.699	3.261	.002
	X2 MUDHARABAH	.140	.541	.055	.259	.797
Dependent Variable: Y3 ROA						

Based on the data shown in the table above, the subsequent regression model is derived:

Y= -6,384 + 3.051 X1+ 0,140 X2+ e

Description:

Y   = Binded dependent variable (ROA)

α = constant β1 & β2 = coefficient

X1 = Independent Variable (CAR)

X2 = Independent Variable Mudharabah

e   = Error Level

The findings of the analysis are presented as follows:

1) The constant value is -6,384, when the CAR free variable and the change price are = 0 then the ROA bound variable is constant -6.384.

2) The coefficient of the CAR (Cumulative Abnormal Return) is determined to be 3.051. When the CAR variable is incremented by one unit, the ROA variable experiences an increase of 3,051. In the event that a positive trend is observed in the regression coefficient, the presence of a directional link between the CAR and ROA variables implies that an increase in CAR will lead to a corresponding increase in ROA, hence exerting a substantial influence.

3) Given a mudharabah coefficient value of 0.140, it can be observed that a unit increase in the mudharabah results in a corresponding rise of 0.140 in the return on assets (ROA). If there is a positive trend observed in the regression coefficient, it suggests the presence of a directional association with the mudhurabah variable. The Return on Assets (ROA) reveals that an increase in mudhurabah leads to a corresponding increase in ROA, without any significant impact.

R2 test
Table 7 Test of Determination Coefficient R2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.672	.661	.23558

   a. Predictors: (constant), X2 MUDHARABAH, X1 CAR
   b. Dependent Variable: Y3 ROA

The R2 value obtained for the regression model is 0.661, indicating that about 66.1% of the variation in the dependent variable, baseline ROA, can be explained by the independent variable, CAR. The remaining 33.9% of the variation is attributable to other variables not included in the study.

Hypothesis Test

The purpose of this hypothesis test is to examine the impact of the Capital Adequacy Ratio (CAR) and Mudharabah on the Return on Assets (ROA).

Partial Test

Table 8 Partial Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-6.384	4.598		-1.389	.170
	X1 CAR	3.051	.936	.699	3.261	.002
	X2 MUDHARABAH	.140	.541	.055	.259	.797
Dependent Variable: Y3 ROA						

The impact of CAR on ROA

Based on the analysis of the SPSS data, it can be shown that the calculated t-value (thitung) of 3.261 exceeds the critical t-value (ttable) of 2.002, indicating a statistically significant result. Furthermore, the obtained p-value of 0.002 is less than the predetermined significance level of 0.05. Consequently, these findings suggest that the CAR regression coefficient has a positive and substantial impact on the ROA.

The influence of Mudharabah on ROA

According to the results of data processing in SPSS, it can be observed that the decision-making basis is 0.259, which is less than the critical value of 2.002 as indicated in Table 2. Additionally, the obtained value of 0.797 is greater than the significance level of 0.05. Consequently, these findings suggest that there is a positive influence on the variable ROA, albeit one that is not statistically significant.

Simultaneous Testing

Table 9 Simultaneous Test Results

ANOVA[a]

Model		Sum of Square	Df	Mean Square	F	Sig.
1	Regression	3.058	2	1.529	20.519	.000[b]
	Residual	4.173	56	.075		
	Total	7.231	58			
a. Dependent Variable: Y3 ROA						
b. Predictors: (constant), X2 MUDHARABAH, X1 CAR						

Based on the statistical analysis using the Anova method, the obtained result of 20,519 is greater than the critical value of 3.16 at a significance level of 0.05. This indicates a statistically significant relationship between the variables under investigation. Specifically, both CAR and Mudharabah have a positive and substantial impact on ROA when tested simultaneously.

Impact of Capital Adequacy Ratio and Mudharabah on Return on Asset

The research findings indicate that the author posited a positive and statistically significant relationship between CAR and ROA in the General Bank registered with the OJK. If the bank's capital adequacy ratio grows, there is a corresponding increase in the bank's return on assets (ROA). The rationale behind the implementation of an elevated capital adequacy ratio within a bank is to safeguard the bank's capacity to fund all business operations, mitigating potential losses. Furthermore, by assuming both the credit risk and ownership of productive assets, the bank's performance and profitability experience enhancement. The maintenance of sufficient capital adequacy is of paramount importance for banks in order to safeguard financial stability and effectively mitigate potential losses.

The impact of the price on the return on assets

The findings of the presented research indicate a positive and significant impact of mudharabah on the return on assets (ROA) variable in relation to Shariah-compliant banks registered with the Financial Services Authority (OJK). The concept of Mudharabah involves evaluating the relationship between the magnitude of Mudharabah payments and

the overall financing amount. It is seen that an increase in Mudharabah payments leads to a corresponding increase in profitability.

The impact of financial losses on the return on assets is found to be positive but statistically insignificant. This can be attributed to the fact that banks prioritize the allocation of funds towards payment plans that incorporate the principle of return and an uncertain profit rate. Consequently, the profitability achieved is contingent upon the success of the customer's business venture. The level of risk is elevated due to the relatively small size of the distribution fund, which is controlled by the bank and so contributes only minimally to the overall profit.

Impact of Capital Adequacy Ratio on Return on Asset

According to the findings of a concurrent examination, it is evident that the variables of CAR and mudharabah exhibit a noteworthy and positive correlation with the rebound of ROA at the General Sharia Bank. This implies that the enhancement of a bank's health is contingent upon the sufficiency of its capital and the implementation of mudhurabah, as evidenced by the bank's proficiency in investing in its owned assets to generate profits for the institution. Consequently, an increase in both the capital adequacy ratio and mudhurabah will lead to a corresponding rise in the return on assets (ROA) of a bank, thereby contributing to the overall improvement of its financial well-being.

CONCLUSION

Based on the findings derived from testing and subsequent data analysis, it can be inferred that a partial capital adequacy ratio has a positive and statistically significant influence on the return on assets. However, it is observed that this ratio does not have a meaningful effect on the returns on assets. Shariah General Bank should prioritize and ensure the adequacy of capital in its operations in order to enhance the bank's profitability and mitigate the potential risks of operational losses. Shariah General Bank is anticipated to effectively enhance expense management and elucidate the process of exchanging expenses with potential consumers, so facilitating smooth operations. Mudharabah is a banking model that has the potential to enhance a bank's profitability by diligent consideration of the associated risks stemming from financing activities.

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