THE INFLUENCE OF CAPITAL ADEQUACY RATIO, NON-PERFORMING FINANCING, FINANCING TO DEPOSIT RATIO AND OPERATING EXPENSES TO OPERATING INCOME ON PROFITABILITY OF ISLAMIC BANKING IN INDONESIA

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Abstract

This study aims to analyze and determine the effect of Capital Adequacy Ratio (CAR), Non Performing Financing (NPF) Operating Costs to Operating Income (BOPO), on Profitability with Return on Assets (ROA) of Islamic Commercial Banks in Indonesia from 2016 to 2023. In addition, this study also aims to determine whether there are differences between the values of CAR, NPF, FDR, BOPO and ROA at Islamic Commercial Banks in the period before and after the COVID-19 pandemic. So that in this study, the research period is divided into the period before (2016-2019) and after (2020-2023) the COVID-19 pandemic. The type of research conducted is quantitative research. The samples in this study were 9 Islamic Commercial Banks in Indonesia so that the total observations in this study amounted to 72 data. The data obtained was then analyzed using SPSS. The analysis method used is Multiple Linear Regression Analysis and Paired Sample t-Test for hypothesis testing. Based on the results of data processing using hypothesis testing, it shows that partially CAR has a positive and significant effect on ROA, NPF has a negative and significant effect on ROA, FDR has no effect on ROA, and BOPO is also proven to have no effect on ROA at Islamic Commercial Banks. The results of the t-test explain that there are significant differences in the values of CAR, NPF and ROA in the period before and after the COVID-19 pandemic, while FDR and BOPO did not experience significant changes in the period before and after the COVID-19 pandemic in Islamic Commercial Banks.

Keywords: ***return on assets, capital adequacy ratio, non performing financing, financing to deposit ratio, operating costs to operating income.***

1. INTRODUCTION

The Islamic banking industry in Indonesia has shown significant development since the establishment of Bank Muamalat Indonesia in 1991 at the initiative of the Indonesian Ulema Council. The presence of Islamic banks in Indonesia is motivated by the majority of the population who are Muslim and the desire of the community to manage finances according to sharia principles. As a country with the largest Muslim population in the world, Indonesia has great potential for the development of an Islamic banking industry that can compete with conventional banks. Since its inception, Islamic banking has faced various challenges, including limited regulations that hindered its growth. It was only in 1998 and 1999, with the enactment of Law No. 10 of 1998 and Law No. 23 of 1999, that Islamic banking gained a stronger legal foundation for its operations. This regulatory change allowed conventional banks to open Islamic business units, which encouraged the growth of Islamic banking in Indonesia. Islamic banking profitability is one of the important indicators to measure the performance and sustainability of this industry.

Table 1.
Increase in Sharia Commercial Bank Profits 2019-2023

Sharia Commercial Bank Annual Profit (In Billions of Rupiah)					
Profit	2019	2020	2021	2022	2023
	5.598	5.087	6.224	9.596	10.388

Source: OJK Sharia Banking Statistics Data.

From the table above, it can be seen that in the period 2019-2023 every year there is an increase in profits in the Islamic banking industry. Especially from 2022 there was a very drastic increase in profits from the previous year, where in 2022 the profit of Islamic commercial banks was around Rp. 9,596,000,000,000 and in 2023 there was an increase in profits of around Rp. 10,388,000,000,000. Judging from the table of profit increase from the sample of Islamic commercial banks taken, it can be seen that every year there is an increase in profit from one year to the next, so that the overall accumulation of Islamic commercial bank profits increases every year.

As one of the countries with the largest Islamic finance, Indonesia occupies the 7th position for countries with the largest Islamic finance industry in the world. Indonesia's Islamic finance industry was also able to achieve 3rd place in the Islamic Finance Development Indicator 2023 published by the Islamic Finance Development Report 2023. Not only that, Indonesia also ranked 3rd in the Global Islamic Economy Indicator Score where Islamic finance is one of the indicators.

The development of Islamic banks cannot be separated from the measurement of their profitability. Measurement of profitability used to forecast the prospects of a company is by paying attention to the growth rate of profit. The ratio used to assess the level of profitability includes Return on Asset (ROA). ROA measures the ability of a company to generate profits using the total assets (wealth) owned by the company after being adjusted for the costs of funding these assets (Muhammad, 2014). Return on Assets is the extent to which the ability of the assets owned by the company can generate profits.

The profitability (ROA) of Islamic banks is influenced by several main factors. Capital Adequacy Ratio (CAR) indicates the adequacy of the bank's capital to bear the risk of loss, where a high CAR generally increases ROA (Widiasih, et al., 2024; Saad, 2024; Dewi, 2024; Heirunissa, 2024; Iklin, 2024; Suhendra & Aswat, 2024). Non-performing financing (NPF), which reflects the level of non-performing financing, has a negative effect on ROA because it increases the risk of loss (Heirunissa, 2024; Mubarok, et al., 2024; Sakti & Tandean, 2024; Tyas, 2024; Wahyunitasari, et al., 2024; Rosyida, et al., 2024). Financing to Deposit Ratio (FDR) shows the extent to which third party funds are used for financing, where a well-managed FDR can increase ROA (Hendriawan, et al., 2024; Rosyida, et al., 2024; Aydoğmuş, 2023; Mayasari & Destiani, 2022). Finally, Operating Expenses to Operating Income (BOPO), which reflects operational efficiency, is negatively related to ROA, where higher efficiency contributes to increased profitability (Oktaviani & Novida, 2024; Christianita & Pramesti, 2024; Kusdianto, et al., Ali, 2019).

The phenomenon of Islamic banks before and after the COVID-19 pandemic shows various interesting developments that affect the Islamic financial sector in Indonesia as shown in the following table.

Table 2.
The Phenomenon of Islamic Banks Before and After the COVID-19 Pandemic

Condition and Development of Islamic Banks	
Before the Pandemic	
Growth	Islamic banks experienced significant growth, especially in Muslim-majority countries, such as Indonesia. Islamic products such as mudharabah and murabahah are growing rapidly.
Trust	Public trust began to shift to Islamic banks because they were considered more transparent and fair. Educational and promotional campaigns increased public trust.
Technology	Technology Islamic banks began to adopt digital technology, such as mobile banking and internet banking services, to improve customer accessibility and convenience.

After the Pandemic	
Resilience	Resilience Islamic banks are more resilient to crises due to prudent asset-based financing, resulting in lower default risk.
Product Interest	Product Interest Interest in Islamic products such as ijarah and murabahah contracts is increasing, as the Islamic system is considered more fair and ethical.
Policy	Government policy encourages the growth of the Islamic sector through the merger of state-owned Islamic banks into Bank Syariah Indonesia (BSI) in 2021 to increase global competitiveness.
Transformation	Pandemic transformation accelerates digital transformation in the Islamic banking sector, encouraging digital service innovation to facilitate transactions without physical contact.

The COVID-19 pandemic has had a massive impact on the global financial sector (Kachkar & Bwando, 2024), including Islamic banking in Indonesia. Islamic Commercial Banks, as part of the Islamic financial system, face major challenges in maintaining their financial and operational stability during the pandemic. This crisis will affect the economy at large, so it will affect the financial performance of banks (El-Ghonemey, 2024), especially in terms of Capital Adequacy Ratio (CAR), Non Performing Financing (NPF), Financing to Deposit Ratio (FDR), Operating Expenses to Operating Income (BOPO), and profitability (ROA).

So this study also aims to analyze the impact of the COVID-19 pandemic on the financial performance of Islamic Commercial Banks by using statistical analysis of paired sample t tests to compare performance before and after the pandemic. So that changes in key financial variables can be identified and understand how risk strategies can be adopted by Islamic banks to maintain stability and resilience during times of crisis.

2. RESEARCH METHODS

2.1 Population and Sample

The population in this study is Islamic Commercial Banks registered with Bank Indonesia obtained from Islamic Banking Statistics through the Financial Services Authority Website from 2016 to 2023. Researchers used Purposive Sampling technique in sampling this study. Namely the technique of determining the sample with certain considerations. The criteria for Islamic commercial banks set in the sample research are as follows:

1. Islamic Commercial Banks listed on the Indonesia Stock Exchange
2. Islamic Commercial Banks that have been listed and not delisted during the period 2016-2023
3. Islamic Commercial Banks that have complete data related to the variables used in this study.

Based on the purposive sampling method, there were 9 samples used in this study. So it can be seen that the number of observations used in this study is 9 companies × 8 years = 72 data.

2.2 Operational Definition of Variables

Table 3.
Operational Definition and Variable Measurement

Variable	Operational Definition	Parameter	Scale
Capital Adequacy Ratio (X1)	The capital adequacy ratio, also known as the Capital Adequacy Ratio (CAR), reflects the adequacy of the bank's capital to support assets that contain or generate risk.	$CAR = \frac{Equity}{RWA}$	Ratio
Non Performing Financing (X2)	NPF is the ratio between non-performing financing and total financing disbursed by Islamic banks.	$NPF = \frac{Non\ Performing\ Loans}{Total\ Loans}$	Ratio
Financing to Deposit Rasio	Financing to Deposit Ratio (FDR) is a ratio used to measure the extent	$FDR = \frac{Total\ Financing}{Total\ Third\ Party\ Funds}$	Ratio

Variable	Operational Definition	Parameter	Scale
(X3)	of loan funds sourced from third-party funds, indicating how effectively a bank utilizes the funds it has collected to generate income.		
Operating Expenses to Operating Income (X4)	The ratio between operating expenses and operating income, the lower this ratio the better, because the lower the level of the BOPO ratio means the better the bank's management performance, because it is more efficient in using existing resources in the company.	$BOPO = \frac{Operating\ Expenses}{Operating\ Income}$	Ratio
Profitability (Y)	Profitability, as measured by Return on Assets (ROA), is the company's ability to generate profits through its assets over a certain period of time. This ratio reflects how efficiently a company is utilizing its assets to produce net income, making it a key indicator of financial performance and operational effectiveness.	$ROA = \frac{Profit\ After\ Tax}{Total\ Assets}$	Ratio

2.3 Data Collection

Researchers' data collection in this study uses the documentation method, namely by collecting and studying existing data in the object of research. Research data obtained from the internet through several Islamic commercial bank sites each of which has previously been determined. The data obtained is in the form of the company's Audited Financial Statements as of December 31, 2016 to December 31, 2023. The data used in this research is secondary data. This secondary data is defined as a research data source obtained by researchers indirectly through intermediary media (obtained and recorded by other parties).

2.4 Data Analysis

The model used to test this hypothesis is a multiple regression analysis model. The data analysis carried out is with quantitative data expressed by numbers in the calculation using statistical methods assisted by the SPSS data program. The methods used are descriptive analysis, classical assumption test, coefficient of determination R2, simultaneous significance test (F Statistical Test), and partial significance test (t Statistical Test) and different test (Paired Sample t-Test).

In this study there are two categories of data. Therefore, testing was carried out using the average difference test method for two paired samples (paired sample t-Test). The t-test was used to analyze the pre-post research model or before and after the COVID-19 pandemic. T-tests are used to evaluate certain treatments on the same sample in two different observation periods. Paired sample t-Test is used if the data is normally distributed. Paired sample t-Test is one of the testing methods used to assess the effectiveness of treatment, characterized by differences in the average before and average after treatment. The Paired Sample t-Test test procedure is carried out with the following steps:

1. Determine the hypothesis; which is as follows:
   a. The hypothesis is rejected (H0): There is no difference in the value of Capital Adequacy Ratio (CAR), Non Performing Financing (NPF), Financing to Deposit Ratio (FDR), Operating Costs to Operating Income (BOPO) and ROA in the period before and after the COVID-19 pandemic.
   b. Hypothesis accepted (Ha): There is a difference in the value of Capital Adequacy Ratio (CAR), Non Performing Financing (NPF), Financing to Deposit Ratio (FDR), Operating Costs to Operating Income (BOPO) and ROA in the period before and after the COVID-19 pandemic.

2. Determine the level of significance which is 5% or 0.05.
3. Determine the basis for decision making to accept or reject H0 in this test, which is as follows:
   a. If t count > t table and probability (Asymp. Sig) <0.05, then H0 is rejected and Ha is accepted.
   b. If t count < t table and probability (Asymp.Sig) > 0.05, then H0 is accepted and Ha is rejected.
4. Drawing conclusions based on hypothesis testing.

3. RESULT

3.1 Partial Hypothesis Testing

Before conducting hypothesis testing, the authors conducted a classic assumption test including normality, multicollinearity, heteroscedasticity and autocorrelation tests. The normality test results are considered normal because the resulting significance value is greater than 0.05. The multicollinearity test does not occur because the three independent variables have a tolerance value greater than 0.10 and a VIF value that is less than 10. The heteroscedastistas test conducted shows that there is no heteroscedastistas problem because the scatterplot results show that the data is randomly distributed and there is no clear pattern, and the points spread above and below the number 0 on the Y axis. Likewise, the autocorrelation test shows that there is no autocorrelation problem in this study because the Durbin-Watson value in this study is 1.031 which lies between -2 and 2 (-2 < 1.031 < 2). So this result shows that this research model is free from autocorrelation problems.

Table 4.
Hypothesis Test Results

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	t	Sig.
(Constant)	1.297	1.234	1.051	.297
CAR	.039	.019	2.109	.039
NPF	-.204	.093	-2.192	.032
FDR	-.023	.015	-1.517	.134
BOPO	.008	.006	1.280	.205
			F Count	4.397
			Significant F	0.003
			R Square	0.208
			Adjusted R Square	0.161

Source: Data processed by SPSS, 2024

Based on the table above, the regression model equation can be obtained as follows:

$$Y = 1.297 + 0.039X1 - 0.204X2 - 0.023X3 + 0.008X4$$

1. The constant shows the value of Return on Assets (ROA) when all independent variables (CAR, NPF, FDR, and BOPO) are zero. So that ROA is expected to be 1.297 if there is no influence from the four independent variables.
2. The CAR coefficient of 0.039 indicates that every 1 unit increase in CAR will increase ROA by 0.039 units, assuming other variables remain constant. So it can be seen that CAR has a positive influence on ROA, meaning that the higher the CAR, the better the ROA.
3. The NPF coefficient of -0.204 indicates that each increase of 1 unit of NPF will reduce ROA by 0.204, assuming other variables remain constant. So it can be seen that NPF has a negative effect on ROA, meaning that the higher the NPF (non-performing loans), the lower the ROA. This shows that an increase in non-performing loans will reduce the bank's ability to generate profits.
4. The FDR coefficient of -0.023 indicates that every 1 unit increase in FDR will decrease ROA by 0.023 units, assuming other variables remain constant. So it can be seen that FDR has a negative effect on ROA, meaning that the higher the FDR, the lower the ROA value.
5. The BOPO coefficient of 0.008 indicates that each 1 unit increase in BOPO will increase ROA by 0.008 units, assuming other variables remain constant. So it can be seen that BOPO has a positive influence on ROA, meaning that the higher the operational efficiency, the higher the ROA.

Based on Table 4 above, it can also be seen that the significance value for CAR is 0.039 (<0.05) indicating that CAR partially has a significant effect on ROA. The coefficient value of CAR is 0.039 which indicates that CAR has a positive and significant effect on ROA at Islamic Commercial Banks. The significance value for NPF is 0.032 (<0.05) which indicates that NPF partially has a significant effect on ROA. The coefficient value of NPF is -0.204, which indicates that NPF has a negative and significant effect on ROA. This means that any increase in NPF will reduce profitability (ROA) at Islamic Commercial Banks. The significance value for FDR is 0.134 (> 0.05) indicating that FDR partially has no significant effect on ROA. So that the effect is not statistically strong enough. The significance value for BOPO is 0.205 (> 0.05) indicating that BOPO partially has no significant effect on ROA. So the effect is not statistically strong enough.

3.2 Comparative Hypothesis Testing

T-test is used to evaluate certain treatments on the same sample in two different observation periods. In this study, there are two categories, namely the period before and after the COVID-19 pandemic. Therefore, testing was carried out using the mean difference test method for two paired samples (paired sample t-Test). The t-test is used to analyze the pre-post research model or before and after the COVID-19 pandemic.

Table 5.
Results of Paired Samples Test Statistics

		Mean	N	t	Sig. (2-tailed)
Pair 1	CAR_Before	23.7189	36	-3.620	.001
	CAR_After	28.6800	36		
Pair 2	NPF_Before	2.9172	36	2.121	.041
	NPF_After	2.4092	36		
Pair 3	FDR_Before	88.9089	36	1.308	.199
	FDR_After	85.7078	36		
Pair 4	BOPO_Before	89.5019	36	063	.950
	BOPO_After	89.2694	36		
Pair 5	ROA_Before	2.7719	36	2.850	.007
	ROA_After	1.7292	36		

Source: Data processed by SPSS, 2024

The test criteria are carried out using a 95% confidence level with a significance level of 5% or a probability value <0.05. Based on the paired sample t-Test test results as shown in the table above, it can be described as follows:

1. CAR_Before and CAR_After is a comparison of two periods for the CAR variable, which shows the period before and after the COVID-19 pandemic. The resulting significance value is 0.001, which is smaller than 0.05 (0.001 <0.05). So it can be concluded that there is a significant difference between the CAR value in the period before and after the COVID-19 pandemic in Islamic Commercial Bank companies.
2. NPF_Before and NPF_After is a comparison of two periods for the NPF variable, which shows the period before and after the COVID-19 pandemic. The resulting significance value is 0.041, which is smaller than 0.05 (0.041 <0.05). So it can be concluded that there is a significant difference between the NPF value in the period before and after the COVID-19 pandemic in Islamic Commercial Bank companies.
3. FDR_Before and FDR_After is a comparison of two periods for the FDR variable, which shows the period before and after the COVID-19 pandemic. The resulting significance value is 0.199, which is greater than 0.05 (0.199 > 0.05). So it can be concluded that there is no significant difference between the value of FDR in the period before and after the COVID-19 pandemic in Islamic Commercial Bank companies.
4. BOPO_Before and BOPO_After is a comparison of two periods for the BOPO variable, which shows the period before and after the COVID-19 pandemic. The resulting significance value is 0.950, which is greater than 0.05 (0.950> 0.05). So it can be concluded that there is no significant difference between the value of BOPO in the period before and after the COVID-19 pandemic in Islamic Commercial Bank companies.
5. ROA_Before and ROA_After is a comparison of two periods for the ROA variable, which shows the period before and after the COVID-19 pandemic. The resulting significance value is 0.007, which is smaller than

0.05 (0.007 <0.05). So it can be concluded that there is a significant difference between ROA values in the period before and after the COVID-19 pandemic in Islamic Commercial Bank companies.

4. DISCUSSION

4.1 Effect of Capital Adequacy Ratio on Return on Assets

Based on the research results, it can be concluded that the Capital Adequacy Ratio (CAR) has a positive and significant effect on Return on Assets (ROA) at Islamic Commercial Banks. This shows that an increase in the level of capital adequacy consistently contributes to an increase in bank profitability, as measured by ROA.

Capital Adequacy Ratio (CAR) is a ratio that shows capital adequacy, which is the amount of own capital needed to cover the risk of losses arising from risky assets. The CAR value illustrates the condition of the capital owned by the bank is getting higher, therefore the bank is getting stronger to bear the risk of any risky financing or productive assets so that the bank is more flexible in providing financing to third parties (Khuluqi, 2024). CAR serves as an indicator of financial health and bank stability (Ferili, et al., 2024), this relationship can be caused by factors such as inefficient asset management, low asset quality, and unfavorable economic conditions. Therefore, banks need to consider more effective capital management strategies and focus on improving asset quality to improve their profitability performance (Cantero-Saiz, et al., 2024).

Stewardship Theory focuses on the relationship between leaders and those they lead, where stewards (managers or administrators) act in the best interest of the organization, without any personal motivation to pursue self-interest. The results of this study are in line with Stewardship Theory which explains how bank managers focus on managing capital (as reflected in CAR) to increase bank profitability. By having a high level of capital adequacy, banks become better able to deal with risks arising from financing or investment activities. Stewardship here plays an important role, because bank managers will make maximum efforts to maintain the financial health of the bank by increasing CAR, so that it will have a positive impact on ROA (Firgana, et al., 2019). In this perspective, the relationship between CAR and ROA is seen as the result of good management and the responsibility of bank stewards to manage capital wisely for the long-term interests of the bank and its stakeholders.

The results obtained in this study are also in accordance with the results of research conducted by Heirunissa (2024); Iklin (2024); and Suhendra & Aswat (2024) which in their research state that CAR has a positive and significant effect on ROA. These results are also in line with the results of research by Widiasih, et al., (2024); Saad (2024); and Dewi (2024) which also state that CAR has a positive and significant effect on ROA.

4.2 The Effect of Non Performing Financing on Return on Assets

Based on the research results, it can be concluded that Non Performing Financing (NPF) has a negative and significant effect on Return on Assets (ROA) at Islamic Commercial Banks. This shows that an increase in the level of non-performing financing (NPF) will have an impact on decreasing bank profitability, as measured by ROA. In other words, the higher the NPF, the lower the bank's ability to generate profits.

Non Performing Financing (NPF) is a financial ratio related to the amount of risk experienced by a bank (Setiawan & Irfani 2024). The higher the NPF of a bank means that it indicates that the bank has a financing risk borne by the bank (Roihan, 2023). So that the greater the NPF of a bank will result in the profitability (ROA) of the bank going down. This is due to the increased costs incurred by the bank, namely the cost of provisioning for productive assets needed to be higher (Murtiningsih & Tohirin, 2023).

The results in this study are in line with Agency Theory which refers to the relationship between the owner (principal) and manager (agent) in a company, where the shareholder acts as the principal and the bank manager as the agent. This theory explains that there is a potential conflict of interest between the two, because bank managers do not always act in accordance with the interests of shareholders due to differences in incentives. When NPF increases, bank managers face pressure to reduce losses from non-performing financing (Addury, 2023). In agency theory, there is a risk that managers are more focused on achieving short-term goals or bonuses and thus ignore long-term risks. This can worsen NPF if managers continue to provide financing without taking risks into account (Lazzari & Vena, 2025). If managers' incentives are not in line with shareholders' objectives, then losses due to NPF may increase, thereby reducing ROA and burdening shareholders with higher reserve costs to cover the non-performing financing.

The results obtained in this study are also in accordance with the results of research conducted by Heirunissa (2024); Mubarok, et al., (2024); and Sakti & Tandean (2024) which in their research state that NPF has a negative and significant effect on ROA. These results are also in line with the results of research by Tyas (2024); Wahyunitasari, et al., (2024); and Rosyida, et al., (2024) which also state that NPF has a negative and significant effect on ROA obtained by the company.

4.3 Effect of Financing to Deposit Ratio on Return on Assets

Based on the research results, it can be concluded that the Financing to Deposit Ratio (FDR) has no significant effect on Return on Assets (ROA) at Islamic Commercial Banks. This shows that the ratio of financing to deposits (Financing to Deposit Ratio) is not the main factor affecting the bank's ability to generate profits.

Financing to Deposit Ratio (FDR) is a ratio that measures how much financing is provided by the bank compared to the total deposits owned (Mayasari & Destiani, 2022). A high FDR indicates that the bank uses most of its deposits to provide financing. A high FDR can show that the bank utilizes deposits well to provide financing, which can increase income from interest and fee-based income, thus potentially increasing ROA.

The results obtained in this study are in line with Stewardship Theory which explains that high FDR does not always have a direct effect on ROA, because bank managers who act as stewards tend to focus financing on more sustainability-oriented needs with lower risk, instead of just pursuing high ROA levels. That is, even though the bank provides more financing (higher FDR value), the manager chooses to avoid high-risk financing that could cause a decrease in ROA in the event of a loss (Aydoğmuş, 2023).

The results obtained in this study are also in accordance with the results of research conducted by Sopingi (2024); Kusumaningrum & Maika (2024); and Yayan & Ayuningtyas (2024) which in their research state that FDR has no effect on ROA. These results are also in line with the results of research by Heirunissa (2024); Fazriah & Hidayat (2024); and Christianita & Pramesti (2024) which also state that FDR has no effect on ROA obtained by the company.

4.4 The Effect of Operating Expenses on Operating Income on Return on Assets

Based on the research results, it can be concluded that Operating Expenses on Operating Income (BOPO) has no significant effect on Return on Assets (ROA) at Islamic Commercial Banks. This shows that operational efficiency, as measured by the BOPO ratio, is not the main factor affecting the bank's ability to generate profits.

Operating Expenses to Operating Income BOPO is a ratio that measures the efficiency of bank operations by comparing total operating expenses to total operating income (Ali, 2019). This ratio shows how much cost is incurred to generate revenue. The lower this BOPO ratio measures the ability of operating income to cover operating costs, from this BOPO value it can be seen the condition of the performance of the bank concerned.

The results obtained in this study are in line with Stewardship Theory which explains that although low BOPO (more efficient operating costs) can increase short-term profitability, banks operating on the principle of stewardship are more concerned with service quality and social responsibility which are not always directly correlated with operational cost efficiency. For example, when banks prefer to allocate more funds for employee training or development of better technology infrastructure, which can improve service quality and customer satisfaction, although it tends to increase BOPO, it does not directly increase ROA.

The results obtained in this study are also in accordance with the results of research conducted by Subari & Sudarsi (2024); Wulandari & Pratiwi (2024); and Siahaan & Lukito (2024) which in their research state that BOPO has no effect on ROA. These results are also in line with the results of research by Lestiawati & Lukito (2024); Sodikin (2024); and Prihatin (2024) which also state that BOPO has no effect on ROA obtained by the company.

4.5 The Effect of COVID-19 on Capital Adequacy Ratio, Non Performing Financing, Financing to Deposit Ratio, Operating Expenses to Operating Income and Return on Assets

Based on the results of the paired sample t-test analysis, there are significant differences and inequalities among the variables observed in the period before and after the COVID-19 pandemic. The CAR, NPF, and ROA variables show significant differences, while the FDR and BOPO variables do not show significant differences between the two periods.

The COVID-19 pandemic has brought significant changes to several performance indicators of Islamic Commercial Banks. The Capital Adequacy Ratio (CAR) has increased which indicates the adoption of a conservative strategy by banks in managing capital. This step was taken to deal with economic uncertainty by strengthening capital reserves, reducing high-risk financing, and managing assets more carefully. The increase in CAR reflects the readiness of banks to absorb potential losses and maintain financial stability, as well as providing positive signals to depositors and investors regarding the resilience of banks. On the other hand, Non Performing Financing (NPF) declined, indicating the bank's success in improving financing quality. Risk mitigation measures such as loan restructuring, which provided relief to customers affected by the pandemic, played an important role in reducing the risk of non-performing loans. This reflects the bank's adaptation to difficult conditions, while maintaining the stability of the financing portfolio.

Meanwhile, the Financing to Deposit Ratio (FDR) is relatively stable, indicating that banks are able to maintain a balance between financing disbursed and funds raised. This stability indicates good liquidity management, as well as maintained public trust in Islamic banks during the pandemic. For Operating Expenses to Operating Income (BOPO), its stability indicates that operational efficiency is maintained. Banks have been able to reduce costs without sacrificing service quality, thanks in part to the increased use of digital technology that reduces operational costs. However, the pandemic has had a negative impact on profitability, as seen in the decline in Return on Assets (ROA). External pressures such as the economic slowdown and rising credit risk limited the bank's ability to generate profits. Although stability in other aspects was maintained, the decline in profitability shows the huge challenges banks face in maintaining their performance amidst challenging economic conditions.

5. CONCLUSION

This study shows that the Capital Adequacy Ratio (CAR) has a positive and significant effect on Return on Assets (ROA) at Islamic Commercial Banks, indicating that an increase in adequate capital can strengthen bank profitability. Conversely, Non Performing Financing (NPF) has a negative and significant effect on ROA, which means that an increase in non-performing financing reduces the bank's ability to generate profits. Financing to Deposit Ratio (FDR) and Operating Expenses to Operating Income (BOPO) do not show a significant effect on ROA, indicating that the ratio of financing to deposits and operational efficiency do not directly affect profitability.

In addition, there are significant differences in the values of CAR, NPF, and ROA between the period before and after the COVID-19 pandemic, indicating the impact of the pandemic on capital management, financing quality, and profitability. Meanwhile, FDR and BOPO remained stable with no significant changes, reflecting the liquidity management and operational efficiency maintained during the pandemic. This conclusion provides an overview of how the pandemic has affected various aspects of the financial performance of Islamic Commercial Banks.

6. IMPLICATIONS

The results of this study have several important implications for the management of Islamic Commercial Banks and stakeholders. The finding that Capital Adequacy Ratio has a positive and significant influence on Return on Assets indicates that strengthening capital is an essential strategic step to increase bank profitability. By strengthening capital reserves, banks can be better prepared to face various risks that may arise in the future, as well as being able to maintain sustainable financial stability in challenging economic situations.

In addition, the significant negative effect of Non Performing Financing on Return on Assets emphasizes the importance of tighter and more effective credit risk management. Banks need to implement more conservative policies in risk evaluation before approving financing and strengthen monitoring systems and collection mechanisms to minimize non-performing financing. This will not only help improve asset quality but also maintain customer and investor confidence.

The significant differences in Capital Adequacy Ratio, Non Performing Financing, and Return on Assets between the periods before and after the COVID-19 pandemic also highlight the huge impact of the economic crisis on Islamic banking. This suggests that banking policies and regulations must continue to support efforts to strengthen capital and manage risk in a sustainable manner to ensure that banks can survive and remain competitive in the face of various challenges that arise due to changes in global economic conditions. Flexibility in operational and financial strategies is also key for banks to adapt to dynamic economic conditions. Banks must be able to develop policies that are adaptive and responsive to changes in the business environment, so that they can maintain stability and good financial performance in the long term. This reflects the need for a proactive approach in risk management and financial planning to achieve this goal.

REFERENCES

Addury, M. M. (2023). *Do Financing Models in Islamic Bank Affect Profitability? Evidence from Indonesia and Malaysia. Journal of Islamic Economics Lariba*, *9*(1), 79-96.

Ali, A. M. (2019). *Analysis of the Determinants of Capital Adequacy Ratio: The Case of Full-Fledged Islamic Banks in the Gulf Cooperation Council (GCC). European Journal of Islamic Finance*, (14).

Aydoğmuş, İ. (2023). *Islamic Banking Performance Analysis: Comparison in Turkey, Indonesia, and Malaysia. Journal of International Islamic Business Studies*, *1*(01), 01-11.

Cantero-Saiz, M., Polizzi, S., & Scannella, E. (2024). *ESG and Asset Quality in the Banking Industry: The Moderating Role of Financial Performance. Research in International Business and Finance, 69*.

Christianita, N. R., & Pramesti, H. (2024). Pengaruh Rasio Keuangan terhadap Return on Asset pada BPR Syariah Eks-Karisidenan Surakarta. *Jurnal Penelitian Manajemen Terapan (PENATARAN)*, *9*(1), 20-27.

Dewi, K. S. (2024). Pengaruh Net Interest Margin (NIM) Dan Capital Adequaty Ratio (CAR) Terhadap Return On Asset (ROA) Pada Bank Konvesional Yang Terdaftar di OJK Triwulan Tahun 2018-2020. *Bilancia: Jurnal Ilmiah Akuntansi*, *8*(1), 51-55.

El-Ghonemey, A. G. O. (2024). *Determinants of the Capital Adequacy Ratio: Islamic Versus Conventional Banks in MENA Region. Alexandria Journal of Managerial Research and Information Systems*, *3*(3), 16-73.

Fazriah, N., & Hidayat, A. (2024). Pengaruh Non Performing Financing (NPF) dan Financing to Deposit Rasio (FDR) Terhadap Return On Asset (ROA) Pada PT Bank Panin Dubai Syariah Tbk Tahun 2012-2021. *Journal of Research and Publication Innovation*, *2*(1), 875-884.

Ferilli, G. B., Altunbas, Y., Stefanelli, V., Palmieri, E., & Boscia, V. (2024). *Fintech Governance and Performance: Implications for Banking and Financial Stability. Research in International Business and Finance*, *70*.

Heirunissa, H. (2024). Pengaruh FDR, BOPO, CAR, dan NPF Terhadap Return On Asset (ROA) Pada Bank Umum Syariah Di Indonesia. *YUME: Journal of Management*, *7*(3), 208-224.

Hendriawan, W., Siregar, E. S., & Martaliah, N. (2024). Pengaruh Dana Pihak Ketiga, Financing to Deposit Ratio dan Non Performing Finacing Terhadap Pembiayaan Murabahah Pada Bank Umum Syariah di Indonesia Tahun 2018-2022. *Jurnal Kajian dan Penalaran Ilmu Manajemen*, *2*(1), 216-230.

Iklin, M. (2024). Pengaruh CAR, NPL, BOPO Dan LDR terhadap Retrun on Assets pada Bank Pembangunan Daerah. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, *6*(1), 360-379.

Kachkar, O., & Bwando, W. (2024). *The Effect of the COVID-19 Pandemic on the Performance of Turkish Banks: A Comparative Panel Data Analysis. International Journal of Accounting, Auditing and Performance Evaluation*, *20*(1-2), 155-182.

Khuluqi, M. N. A. (2024). *Analysis of the Influence of CAR, NPF, FDR, and BOPO on the Profitability of Sharia Commercial Banks. Al Fadhilah International Journal of Islamic Studies*, *1*(1), 25-42.

Kusdianto, S., Supramono, S., & Sulistyawati, A. I. (2024). Pengaruh Rasio Tingkat Kesehatan Bank Terhadap Profitabilitas Dengan GCG Sebagai Variabel Moderating. *Sustainable Business Journal*, *3*(2), 121-132.

Kusumaningrum, T. A., & Maika, M. R. (2024). Pengaruh BOPO Dan FDR Terhadap Profitabilitas Return On Asset (ROA) Bank Bukopin Syariah. *Jurnal Tabarru': Islamic Banking and Finance*, *7*(1), 451-462.

Lazzari, V., & Vena, L. (2025). *Enterprise Value and Risk Taking in the Banking Industry: Cooperatives vs. Corporations. Research in International Business and Finance*, *73*, 102622.

Lestiawati, P., & Lukito, C. P. (2024). Pengaruh Capital Adequacy Ratio (CAR), Biaya Operasional Pendapatan Operasional (BOPO) Dan Loan To Deposit Ratio (LDR) Terhadap Return On Asset (ROA) Pada PT. Bank Danamon Tbk Periode 2013-2022. *Journal of Research and Publication Innovation*, *2*(4), 1118-1128.

Mayasari, I., & Destiani, I. R. (2022). *Determinants of Profitability in Sharia Public Financing Banks in Indonesia. International Journal of Arts and*

Mubarok, H., Suryadi, M., & Harahap, R. D. (2024). Pengaruh Pembiayaan Natural Uncertainty Contract (NUC), Natural Certainty Contract (NCC), dan Non Performing Finance (NPF) Terhadap Profitabilitas Bank Umum Syariah. *Wawasan: Jurnal Ilmu Manajemen, Ekonomi dan Kewirausahaan*, *2*(1), 71-89.

Muhammad. (2014). Manajemen Keuangan Syariah: Analisis Fiqh dan Keuangan. Yogyakarta: UPP STIM YKPN.

Murtiningsih, S., & Tohirin, A. (2023). *The Influence of Some Bank Financial Ratios Characteristics on Profitability in Sharia Bank. International Journal of Economics, Business and Accounting Research (IJEBAR)*, *7*(1).

Oktaviani, Y., & Novida, I. (2024). Pengaruh NPF, FDR, Dan BOPO Terhadap Profitabilitas PT Bank Syariah Indonesia Tbk KCP Tangerang Cimone. *Fidusia: Jurnal Keuangan Dan Perbankan*, *7*(1).

Prihatin, K. S. (2024). Pengaruh NPF dan BOPO Terhadap Profitabilitas pada Bank BJB Syariah Periode 2014-2021. *Progress: Jurnal Pendidikan, Akuntansi dan Keuangan*, *7*(1), 36-46.

Roihan, M. (2023). *The Influence of Capital Adequacy, Non-Performing Financing, Liquidity, and Operational Efficiency on Profitability of Islamic Banks. International Journal of Economics, Business and Accounting Research (IJEBAR)*, *7*(3), 1036-1044.

Rosyida, O. A., Hakim, R., & Warokhmah, M. (2024). Pengaruh Capital Adequency Ratio (CAR), Non-Performing Financing (NPF), dan Financing to Deposit Ratio (FDR) Terhadap Profitabilitas:(Studi pada Sektor Perbankan Syariah BUMN 2016-2020). *Journal of Islamic Economics Development and Innovation (JIEDI)*, *4*(1), 021-038.

Saad, B. (2024). Pengaruh Interest Based Income, Fee Based Income Dan Capital Adequacy Ratio (CAR) Terhadap Return on Assets (ROA). *Journal of Accounting, Management and Islamic Economics*, *2*(1), 91-102.

Sakti, D. T., & Tandean, V. A. (2024). Pengaruh Beban Operasional Pendapatan Operasional (BOPO), Non Performing Financing (NPF), Dan Financing To Deposit Ratio (Fdr) Terhadap Profitabilitas Pada Bank Umum Syariah Yang Terdaftar Di OJK Periode 2019-2023. *Journal Accounting International Mount Hope*, *2*(3), 289-300.

Setiawan, F., & Irfani, A. F. (2024). *Predicting Capital Adequacy Ratio of Islamic Rural Banks Based on FDR, NPF, ROA, and BOPO.* In *Proceeding International Conference on Law, Economy, Social and Sharia (ICLESS)* (Vol. 2, pp. 748-771).

Siahaan, P. B., & Lukito, C. P. (2024). Pengaruh Beban Operasional Pendapatan Operasional (BOPO) Dan Non Performing Loan (NPL) Terhadap Return On Asset (ROA) (Studi Kasus Pada Bank Swasta Yang Terdaftar Di Indonesia Stock Exchange Periode 2013-2023). *Journal of Research and Publication Innovation*, *2*(4), 1652-1660.

Sodikin, A. (2024). Analisis Pengaruh Bopo, Ldr, Inflasi Dan Pertumbuhan Ekonomi Terhadap Return On Assets (ROA) Pada Bank Umum Milik Pemerintah Daerah Propinsi Di Indonesia. *Tamwil: Jurnal Manajemen Keuangan*, *1*(1), 1-9.

Sopingi, I. (2024). Pengaruh Dana Pihak Ketiga Dan Financing To Deposit Ratio Terhadap Profitability Bank Syariah. *Jurnal Ekonomi, Manajemen dan Perbankan (Journal of Economics, Management and Banking)*, *10*(1), 31-38.

Subari, N., & Sudarsi, S. (2024). Pengaruh DAR, TATO, Dan BOPO Terhadap ROA Perusahaan Fintech Yang Terdaftar di OJK. *Oikos Nomos: Jurnal Kajian Ekonomi dan Bisnis*, *17*(1), 14-24.

Suhendra, S., & Aswat, I. (2024). Pengaruh Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), Beban Operasional dan Pendapatan Operasional (BOPO) Terhadap Return on Asset (ROA) Pada PT Bank Pembangunan Daerah Kalimantan Periode 2018-2022. *Jurnal Ekonomi Bisnis, Manajemen dan Akuntansi (JEBMA)*, *4*(1), 161-171.

Tyas, I. A. (2024). Pengaruh NPF, CAR dan BOPO Terhadap ROA pada Bank Victoria Syariah Periode 2015-2022. *EKOMA: Jurnal Ekonomi, Manajemen, Akuntansi*, *4*(1), 3125-3139.

Wahyunitasari, E. D., Sopingi, I., & Musfiroh, A. (2024). Pengaruh BOPO, BI Rate, NPF dan DPK Terhadap ROA Pada Perbankan Syariah Di Indonesia. *Afkaruna: International Journal of Islamic Studies (AIJIS)*, *2*(1), 76-90.

Widiasih, G. M., Buchdadi, A. D., & Yusuf, M. (2024). Ukuran Perusahaan Sebagai Pemoderasi Pengaruh Likuiditas Dan Solvabilitas Terhadap Profitabilitas BPR di Kabupaten Tangerang. *Jurnal Revenue: Jurnal Ilmiah Akuntansi*, *4*(2), 715-730.

Wulandari, A., & Pratiwi, A. (2024). Pengaruh Capital Adequacy Ratio (CAR), Biaya Operasional Pendapatan Operasional (BOPO), Non Performing Loan (NPL), Dan Loan To Deposits Ratio (LDR) Terhadap Return On Assets (ROA) Pada PT. Bank Rakyat Indonesia (Persero) Tbk. *PENG: Jurnal Ekonomi dan Manajemen*, *1*(2), 585-599.

Yayan, K. A., & Ayuningtyas, R. N. (2024). Pengaruh CAR, BOPO, NPF, dan FDR Terhadap Profitabilitas Bank Umum Syariah (Studi Kasus 2018-2022). *SAUJANA: Jurnal Perbankan Syariah dan Ekonomi Syariah*, *6*(01), 24-38.