Al-Infaq: Jurnal Ekonomi Islam, (p-ISSN: 2087-2178, e-ISSN: 2579-6453)
Vol. 15 No. 1 (2024)

MAXIMIZING PROFITABILITY: ANALYZING THE IMPACT OF OPERATIONAL EFFICIENCY AND CAPITAL STRENGTH ON BANK BJB SYARIAH'S FINANCIAL PERFORMANCE

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Article History
Received: 22 August 2023 Revised: 05 October 2023 Accepted: 11 January 2024

Abstract

This study aims to analyse the impact of the BOPO (Operating Costs to Operational Income) and CAR (Capital Adequacy Ratio) ratios on the profitability of Islamic banks registered with the OJK for the period from 2015 to 2022. Using the Vector Auto Regression (VAR) method, the research employs purposive sampling to select relevant data. The findings reveal that, for Bank BJB Syariah, the BOPO ratio does not have a significant effect on profitability, as indicated by a probability value of 0.2047, which exceeds the 10% significance level. Similarly, the CAR ratio also shows no significant impact on profitability, with a probability value of 0.9785, again above the 10% threshold. These results suggest that, within the context of Bank BJB Syariah, both operational efficiency and capital adequacy do not directly influence profitability as measured by Return on Assets (ROA). This study contributes to the understanding of the financial dynamics of Islamic banking, highlighting the need for further investigation into other factors that may affect profitability in this sector.

Keywords: *Capital Adequacy Ratio (CAR), Financial Performance, Islamic Banks, Operating Expenses Operating Income (BOPO), Profitability*
JEL Classification: *G21, G32, L25, M41*

1. INTRODUCTION

Currently, Islamic banking has become a global phenomenon, including in non-Muslim majority countries. The growth of banking in Indonesia is very rapid from the increase in banks offering sharia products as well as from asset growth. Efforts to introduce Islamic banks at that time were only in the form of limited discussions on individual initiatives. This effort seems to have sunk amidst the size and strength of the operational system of non-Islamic banks. It seems that there is no gap that allows for the establishment and implementation of an Islamic banking system.

The practice of Islamic banking is not only governed by religious teachings, but even as a country, Islamic banks have rules that must be implemented, in accordance with the Law of the Republic of Indonesia Number 21 of 2008 concerning Islamic banks which in Chapter I Article 1 Number 12 states that "Sharia principles are principles of Islamic law in banking activities based on fatwas issued by institutions that have the authority to issue fatwas in the field of sharia" in Chapter II article 2 "Sharia banking in carrying out its business activities is based on sharia principles, economic democracy, and the principle of prudence". as well as in Chapter III article 3 it is explained that "Sharia Banking aims to support the implementation of national development in the framework of increasing justice, togetherness and equity of people's welfare".

In recent years, Islamic banking in Indonesia has shown a positive trend, this can be seen from the rapid growth of Islamic banks that exceed conventional banks. This situation makes Islamic banking required to perform well to compete in seizing market share for Islamic banking in Indonesia. In the report on the development of Islamic finance, the Financial Services Authority (OJK) (2016) said that growth marked Islamic banking in 2016 after the last 3 years experienced growth delays. However, OJK remains optimistic in looking at the future economic situation and the prospects for the development of national financial services including sharia banking and hopes that this sharia banking planning technique in Indonesia will have benefits for the development of financial services and as a reference for world sharia finance (Syakhrun, 2019).

The level of soundness in banking can be assessed from several indicators. One of the indicators used as the basis for the assessment is the bank's financial statements. Based on the financial reports, a number of financial ratios can be calculated which are used as the basis for evaluating the soundness of the bank. The results of the financial statements will help interpret various relationships and trends that can provide a basis for consideration regarding the potential success of the company in the future (Rusydiana et al., 2019).

One of the most appropriate indicators to measure a company's financial performance is the profitability ratio. Islamic banking operating in Indonesia is competing to achieve maximum profit levels because the higher the company's profitability, the better the company's financial performance. One of the ratios used to measure profitability performance is Return on Assets (ROA). In addition, Bank Indonesia also prioritizes the profitability of a bank as measured by assets whose funds mostly come from the public, so that ROA is more representative (Syakhrun, 2019; Devi and Firmansyah, 2020).

Profitability ratios serve as critical indicators of a company's financial health, providing insight into its ability to generate profit relative to its resources. In the context of Islamic banking in Indonesia, the competition to maximize profitability is particularly pronounced. This emphasis on profitability is not only essential for sustaining operations but also for enhancing the bank's reputation and trust among customers. As Islamic banks seek to align their financial objectives with Sharia principles, achieving high profitability becomes a key driver of their overall performance. Studies have shown that banks with higher profitability ratios tend to enjoy greater financial stability and resilience during economic downturns, underscoring the importance of robust financial performance metrics (Muda et al., 2019).

Return on Assets (ROA) is one of the most widely accepted measures of profitability, reflecting how efficiently a bank can utilize its assets to generate earnings. For Islamic banks, ROA is particularly significant, as it takes into account the unique funding structures that rely heavily on public deposits. According to research by Alhabshi and Bakar (2018), ROA is not only a measure of operational efficiency but also a crucial metric for investors and stakeholders in evaluating a bank's performance. By prioritizing ROA, Islamic banks can demonstrate their commitment to transparency and accountability, which are core values in Islamic finance. This focus on asset utilization ensures that banks remain competitive and meet the expectations of their customers, while also adhering to regulatory standards set forth by Bank Indonesia.

Moreover, the regulatory environment plays a pivotal role in shaping the profitability of Islamic banks in Indonesia. The Central Bank of Indonesia emphasizes the need for financial institutions to maintain adequate levels of profitability to support their operations and growth. Research by Rahman and Mohamed (2020) highlights that

regulatory frameworks, including capital adequacy ratios and liquidity requirements, can significantly influence a bank's profitability. As such, Islamic banks must navigate these regulations while striving to enhance their ROA, which can lead to sustainable growth and improved financial performance. By balancing operational efficiency and capital strength, banks can maximize their profitability while remaining compliant with regulatory standards, ultimately benefiting the broader economy.

The increasing competition in the Islamic banking sector in Indonesia necessitates a deeper understanding of the factors that drive profitability. As financial institutions strive to maximize their profits, operational efficiency and capital strength emerge as critical determinants of financial performance. With the growing importance of Islamic banking in the Indonesian economy, there is a pressing need to analyse how these factors specifically impact profitability. Bank BJB Syariah, as a prominent player in this sector, serves as an ideal case study to explore the intricate relationship between operational efficiency, capital adequacy, and financial performance. By focusing on this bank, the study aims to provide valuable insights that can inform strategic decision-making and enhance competitive advantage in the rapidly evolving financial landscape.

Despite the increasing body of literature on profitability in the banking sector, there remains a significant gap in research specifically addressing the relationship between operational efficiency, capital strength, and financial performance in Islamic banks, particularly in the Indonesian context. Most existing studies tend to focus on conventional banks, leaving a limited understanding of the unique challenges and opportunities faced by Islamic financial institutions. Additionally, while some research has explored the individual impacts of operational efficiency and capital adequacy on profitability, few have integrated these variables in a comprehensive analysis. This study seeks to fill this gap by employing a systematic approach to examine how both operational efficiency and capital strength collectively influence Bank BJB Syariah's financial performance. By bridging this gap, the research will contribute to the existing literature and offer practical implications for enhancing the profitability of Islamic banks in Indonesia.

2. LITERATURE REVIEW

2.1. Islamic Bank

Bank is a financial institution whose main business is collecting funds and channeling these funds back to the public in the form of credit as well as an institution that functions to facilitate the flow of payment traffic. lack of funds for business activities and other activities in accordance with Islamic law (Irawan et al., 2019)**.** Sharia banking is basically a banking system which in its business is based on the principles of Islamic law or sharia with reference to the Qur'an and Al Hadith. The purpose of a system that is in accordance with Islamic sharia is to operate according to the provisions of Islamic sharia, especially those concerning muamalat procedures, for example by staying away from practices that contain elements of usury and carrying out investment activities on the basis of financing profit sharing. While business activities refer to the Qur'an and Al Hadith which are intended to operate according to the prohibitions and orders contained in the Al Qur'an and the Sunnah of the Prophet Muhammad SAW. The emphasis in this prohibition is mainly related to bank practices that contain and give rise to elements of usury (Dahlan, 2005).

Based on article 4 of Law no. 21 of 2008 concerning Islamic banking, it is stated that Islamic banks are required to carry out the function of collecting and channelling

public funds. Islamic banks can also carry out social functions in the form of baitulmal institutions, namely receiving funds originating from zakat, infaq, alms, grants, or other social funds (among others fines against customers or ta'zir) and channelling them to zakat management organizations. In addition, Islamic banks can also collect social funds originating from cash waqf and distribute them to the waqf manager (nazhir) according to the will of the waqf giver (wakif).

In some Islamic banking literature, Islamic banks with various transaction schemes belonging to non-usury schemes have at least four functions, viz. (1) Investment manager function; (2) Investor function; (3) social function; (4) the function of financial services (rizal yaya, 2009). Islamic banks in carrying out their business have at least 5 operational principles consisting of (Prehantoro, 2010):

1. savings system, Pure Savings Principle is a facility provided by Islamic Banks to provide an opportunity for parties with excess funds to save their funds in the form of al Wadiah. Al Wadiah facilities can be provided for security and book-entry purposes and not for investment purposes in order to gain profits such as savings and time deposits, in the world of conventional banking al Wadiah is equated with current accounts at conventional banks.
2. Profit sharing, this system is a system that includes procedures for sharing business results between providers of funds and fund managers. The distribution of the results of this business can occur between the Bank and the depositor of funds, as well as between the Bank and the customer receiving the funds. Forms of products based on this principle are mudharabah and musyarakah. Furthermore, the principle of mudharabah can be used as a basis for both funding products (savings and deposits) and financing, while musyarakah is only for financing products.
3. Profit margin, this principle is a system that implements buying and selling procedures, the bank will first buy the goods needed by the customer or appoint the customer as a bank agent and the customer in his capacity as a bank agent purchases goods on behalf of the bank, then the bank sells the goods to customers at a price of the purchase price plus profit (margin/mark-up).
4. Rent, this principle is broadly divided into 2 types:
    a. Ijarah (pure leasing), just like a bank leasing tractors and other product equipment (operating lease) to customers.
    b. Bai al takjiri (lease purchase), the lessee (customer) has the right to own the goods at the end of the lease period (financial lease).
5. Fee, this principle covers all non-financial services provided by the Bank. Forms of products based on this principle include al kafalah, al hawalah, al wakalah, al qardh, ar rahn.

The operational system of Islamic banks can be shown as a mechanism with the following flow.

1. The operational system of Islamic banks starts with fundraising activities from the public. Fundraising can be done with investment schemes or deposit schemes. In raising funds using investment schemes from customers who own funds (shahibul maal), Islamic banks act as fund managers or commonly known as mudharib. As for the collection with a safekeeping scheme, sharia banks act as deposit recipients.

2. Funds received by the bank are then channelled to various parties, including investment partners, investment managers, buyers of goods, and lessees of goods or services provided by Islamic banks. When funds are channelled in the form of investment, Islamic banks act as owners of funds. When funds are channelled in buying and selling activities, Islamic banks act as sellers and when distributed in buying and selling activities, Islamic banks act as sellers and when distributed in procurement activities for leased objects, they act as lessor.
3. From channelling funds to various parties, Islamic banks then receive income in the form of profit sharing from investments, margins from buying and selling and fees from rents and various types of income obtained from other permissible fund distribution instruments.
4. Income received from disbursement activities is then distributed to customers who own funds or depositors of funds. Distribution of funds to fund owners is mandatory in accordance with the agreed profit-sharing portion. The distribution of funds to customers depositing funds is voluntary without being determined in advance and is commonly referred to as a bonus.
5. In addition to carrying out collection and distribution activities, Islamic banks in their operational systems also provide financial services such as ATMs, transfers, letters of credit, bank guarantees, and so on. Because these services are carried out without using funds from the owner of the funds or depositor of funds, the income derived from these services can be fully owned by Islamic banks without having to share them.

Thus, it can be concluded that the operational system of Islamic banks consists of a collection system, a system for channelling funds collected, and a system for providing financial services. When compared with the operational systems of Islamic banks and conventional banks, the difference lies in the mechanism for obtaining profits for the parties involved in collecting and channelling bank funds. The mechanism for earning income at conventional banks uses an interest system, which is a system that promises the party that saves the money or distributes the funds at a certain percentage of the funds deposited or distributed (Yaya, 2009).

2.2. Financial statements

Financial statement analysis is a very important tool for obtaining information regarding the financial position and results achieved by the company concerned (Moorcy et al., 2020)**.** The purpose of financial reports is to provide information concerning the financial position, performance and changes in financial position of an Islamic entity that is useful for a large number of users in making economic decisions. Apart from that, the other objectives are as follows:

1. Increasing compliance with sharia principles in all transactions and business activities.
2. Information on sharia entity compliance with sharia principles, as well as information on assets, liabilities, income, and expenses that are not in accordance with sharia principles, if any, and how they are acquired and used.
3. Information to help evaluate the fulfilment of sharia entity responsibilities towards the mandate in securing funds, investing them at a reasonable rate of return.

4. Information regarding the level of return on investment obtained by investors and owners of temporary *syirkah* funds as well as information regarding the fulfilment of social function obligations of sharia entities, including the management and distribution of zakat, infaq, alms and endowments.

Financial reports play a crucial role in demonstrating the actions taken by management in the stewardship of an organization's resources. They serve as a transparent account of management's accountability, reflecting how effectively resources have been utilized to achieve organizational objectives. According to Rizal (2009), these reports not only provide stakeholders with insights into the financial health of the organization but also convey the management's commitment to responsible resource management. By detailing revenues, expenses, and overall financial performance, financial reports enable stakeholders—including investors, regulators, and the community—to assess management's performance and decision-making processes. This transparency fosters trust and confidence among stakeholders, as it highlights management's dedication to upholding ethical standards and ensuring the prudent use of resources entrusted to them. Ultimately, the integrity and clarity of financial reports are essential for effective stewardship and accountability in any organization.

2.3. Sharia Bank Profitability

Bank profitability is determined by factors controlled by management and factors beyond management's control. Factors that can be controlled by management are factors that describe the policies and decisions of the bank's management itself, such as raising funds, capital management, liquidity management, and cost management. While the factors beyond management's control include environmental factors and bank characteristics, environmental factors include market structure, regulations, inflation, interest rates, and market growth. Bank characteristic factors include: company size and ownership (Wibowo and Anto, 2012). Profitability is a capability that describes the company's fundamental performance in terms of the level of efficiency and effectiveness of the company's operations in obtaining profits. According to Hasibuan (2008) that bank profitability is a bank's ability to gain profits expressed in percentages. Profitability is basically profit (Rupiah) expressed in percent (%) profit (Hanafia and Karim, 2020)**.**

Profitability (ROA)

The ratio of profitability (return on assets) consists of two types of ratios that show profitability in relation to sales and ratios that show profitability in terms of investment. Together, these ratios will show the overall operational effectiveness of the company (James & John, 2012). Profitability ratio or commonly referred to as profitability is the ability of a company, to generate profits during a certain period. This profit analysis reflects the level of effectiveness achieved by the company's operational efforts. Likewise, the profitability ratio is one of the financial ratios in measuring the performance (performance) of a company or bank in managing its results operationally, this ratio also measures the effectiveness of management as a whole which is indicated by the size of the level of profit obtained by sales and investment.(Hidayat & Miftahurrahmah, 2021).

Operating Expenses Operating Income

Bank's performance is based on a quantitative assessment of bank profitability which can be measured using the ratio of operating expenses to operating income

(Kuncoro and Suhardjono, 2002). According to bank efficiency, it can affect bank performance, namely, to show whether the bank has used all its production factors properly, to be successful and efficient. One of the ratios used to measure the efficiency of a banking company is operating income operating costs (BOPO), namely the ratio between operating costs and operating income. The operating expense ratio is used to measure the level and distribution of bank costs in carrying out its operations. The lower the BOPO means the more efficient the bank is in controlling its operational costs (Hermina & Suprianto, 2014)**.**

Capital Adequacy Ratio (CAR)

CAR is a ratio that shows how far all bank assets contain a ratio that shows how far all bank assets that contain risk (loans, securities investments, claims on other banks) are also financed from the bank's own capital funds in addition to obtaining funds from other sources outside the bank, such as public funds, loans (debt), and others. In other words, CAR is a bank's performance ratio to measure the adequacy of the bank's capital to support assets that contain or generate risk, for example loans. CAR shows the extent to which a decline in bank assets can still be covered by available bank equity, the higher the CAR, the better the bank's condition. The greater the Capital Adequacy Ratio (CAR), the greater the bank's profits. In other words, the smaller the risk of a bank, the greater the profit the bank will get. CAR is a ratio that indicates the extent to which a bank's capital capacity is able to absorb the risk of credit failure that may occur so that the higher the ratio, the healthier the bank and vice versa (Sudarmawanti & Pramono, 2017)**.**

3. METHODOLOGY

In this research approach using quantitative research methods, where the quantitative type is research in the form of numbers to test a hypothesis. The type of data used in this study is secondary data in the form of financial reports at Bank BJB Syariah, the source of which is obtained from publications by the financial services authority (OJK). In accordance with the problems in this study, it is an associative approach, namely a research question that connects two variables. There are independent variables (variables that influence) and dependent variables (variables that are influenced). The independent variables in this study are Operating Expenses Operating Income (BOPO) and Capital Adequacy Ratio (CAR) and the dependent variable is profitability (ROA). In this study the authors used quantitative research, because the data obtained was in the form of numbers. The numbers obtained will be further analysed in data analysis. The population in this study is the entire object that is the target of research, namely the Financial Statements of Bank BJB Syariah.

The sampling method in this research is non-probability sampling. Probability sampling is a sampling technique that provides equal opportunities for each element (member) of the population to be selected as a member of the sample. The sampling technique was carried out using a purposive sampling technique, which is a sampling technique with certain considerations. The criteria for sampling are as follows:

1. Banks with a large customer base and widespread public recognition.
2. Financial reports of BJB Syariah bank for the years 2015-2022.
3. The financial accounts are comprehensive and have been published on the official website of the Financial Services Authority (OJK).

4. Researchers conducted a quantitative analysis of the financial statements of Bank BJB Syariah from 2015 to 2022, examining a representative number of samples on a quarterly basis.

Meanwhile, variable used in this study has the following formula.

1. Operating Expenses Operating Income (BOPO). This ratio measures the efficiency of a company. The more efficient the company, the company is in good condition or healthy

$$BOPO = \frac{\text{Total Operational Cost}}{\text{Total Operational Revenue}} \text{ X } 100\%$$

2. The Capital Adequacy Ratio (CAR) is a bank's performance ratio to measure the bank's capital adequacy to support risky assets.

$$CAR = \frac{\text{Total Capital}}{\text{ATMR}} \text{ X } 100\%$$

3. The profitability ratio describes the company's fundamental performance in terms of the level of efficiency and effectiveness of operations in obtaining profit.

$$ROA = \frac{\text{Net Profit after Tax}}{\text{Total Asset}}$$

The data analysis technique used in this study is the VAR (vector Autoregression) method. The VAR method was first proposed by Christopher Sims (1980). Sims developed an economic model by ignoring priori assumption tests. VAR was developed by Sims as a critique of the simultaneous method. The large number of variables and endogenous and exogenous clarifications of the simultaneous method are the basis for this criticism. These two variables, where the endogenous variable is a variable whose completion value is obtained from within the model, while for exogenous variables is a variable whose values are obtained from outside the model or have been determined based on existing data (Tanjung and Devi, 2013).

The following are assumption tests that must be met in a VAR analysis, these tests include:

1. Stationarity test. The stationarity test is the first step in estimating the VAR model, to ensure that the data used is stationary. Stationarity is also one of the basic concepts in time series data analysis. Time series data must first be stationary due to the estimation method used.
2. Optimum lag. After the ADF test is carried out, one of the most decisive things in the stationarity test is the determination of the lag.
3. Cointegration. In VAR analysis, integration is used to determine the existence of a long-term relationship between non-stationary variables. Cointegration means, although individually not stationary, the linear combination of two or more of these variables can become stationary.

In carrying out its analysis, VAR has specific instruments that have the function of explaining the interactions between variables in the model. The instrument includes:

1. *Impulse Response Function* (IRF). IRF (Impulse Response Function) analysis aims to find out how long it takes for a variable to respond to changes that occur in other variables.
2. *Variance Decomposition* (VD). Analysis of Variance Decomposition (VD) otherwise known as forecast error variance decomposition is used to predict the percentage contribution of the variance of each variable due to changes in certain variables in the system. This test provides information about the proportion of the movement of the shock effect on one variable to other variables currently and in the future.

4. RESULT AND DISCUSSION

This study uses a quantitative research approach with the type of data used is secondary data. The data used is in the form of annual financial reports. The data used is in the form of quarterly data for the company. The population used in this study is BJB Syariah Bank registered with the Financial Services Authority (OJK) in the 2015-2022 period. In term of stationarity test using the ADF test, on the data level of all variables does not pass the stationary test, because it has a probability value above 5%, while the ADF test on the first different data all variables pass the stationary test because each variable has a probability value below 5% so that all variables are stationary. From the test results it can be concluded that all data is stationary on the first different data, and further data testing can be carried out.

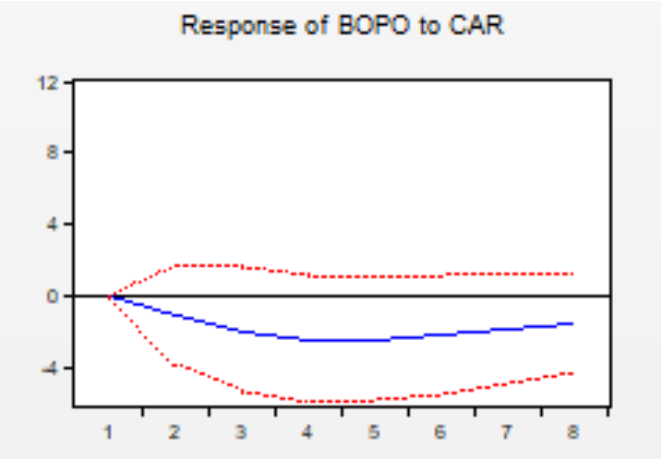
4.1. VAR Assumption Test Result

To carry out causality tests and VAR tests, it is necessary to determine the optimal lag length first, because the causality test and VAR tests are very sensitive to the optimal lags. In this study, researchers determined the optimal lag length by looking at the lowest/minimum Akaike Information Criterion (AIC) value. The length of the lag included ranges from 0 to lag 2. Because the data used is quarterly and only 8 years. From the result, it can be concluded that the AIC table for Bank BJB Syariah is at lag 1. Therefore, the optimal lag length used in causality testing and VAR analysis for Bank BJB Syariah is 1. The cointegration test in this study is to determine the long-term effect of the variables to be studied.

Based on the result, it can be seen that the three variables in the Bank BJB Syariah data above in this study have cointegration at a significance level of 1% and 5%. Thus, the results of the cointegration test indicate that the BOPO, CAR and ROA movements have a relationship of stability or balance and similarity in the long term. In other words, in the short term, all variables tend to adjust to each other to achieve balance in the long term. In the causality test, the researcher wants to see the causality relationship between each variable. The results of causality can be known by looking at the probability value. The decision criterion used is if the probability value is less than the 10% test level. The length of the lag used is in accordance with the results of the lag test that has been done before, namely lag 1 for variable data at Bank BJB Syariah. From the result, only the ROA variable influences BOPO, or this variable has a causal relationship by looking at the probability which is significant at the 10% test level. thus, it can be concluded that there is unidirectional causality between the ROA variable and the BOPO variable.

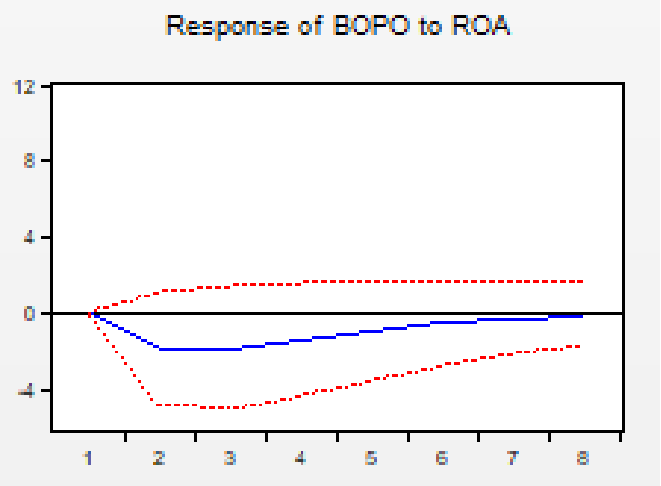
4.2. Impulse Response Function (IRF) Analysis

IRF analysis explains the impact of shocks on a variable on other variables. This analysis also serves to see how long this effect occurs. Following are the results of the IRF chart display.



Graph 1. IRF Analysis of BOPO to CAR

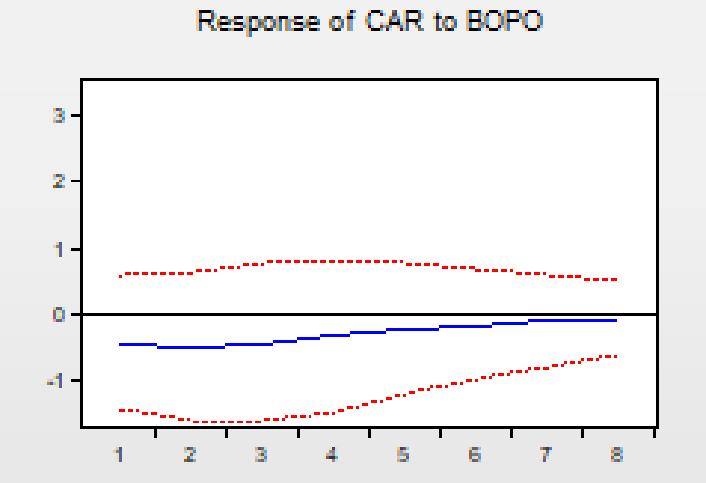
The graph 1 above shows the BOPO response to the CAR variable. BOPO started to respond to the shock with a positive trend (+), the response started moving negatively (-) until it entered the 8th period, BOPO gave a very volatile response (starting from a positive response to negative) until the 8th period. The impact of the shock is starting to diminish with the chart being less volatile. So that equilibrium (returning to the BOPO balance point) can be achieved starting in the 8th period.



Graph 2. IRF Analysis of BOPO to ROA

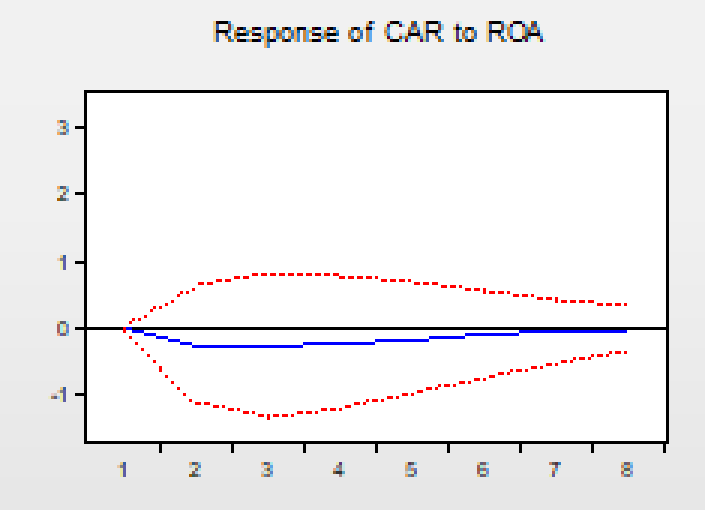
Graph 2 above shows the BOPO response to the ROA variable. BOPO began to respond to the shock with a negative (-) trend until it entered the 7th period, the response started to move positively (+) until it entered the 8th period, BOPO gave a very volatile response (starting from a negative response to being positive) until the 8th period. -8. The

impact of the shock is starting to diminish with the chart being less volatile. So that equilibrium (returning to the BOPO balance point) can be achieved starting in the 8th period.



Graph 3. IRF Analysis of CAR to BOPO

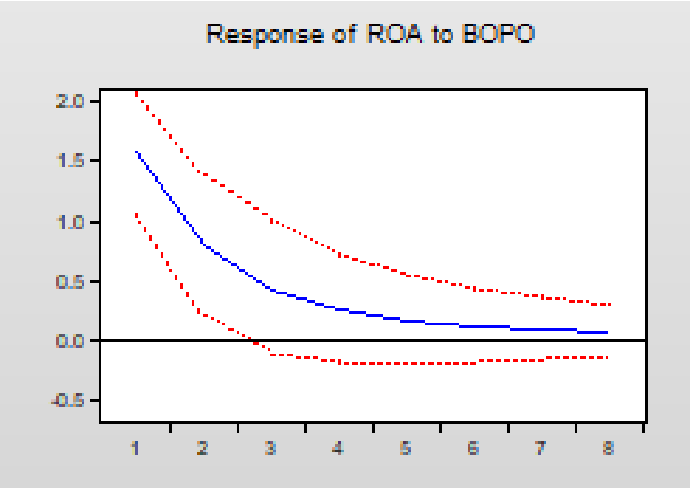
Graph 3 above shows the CAR response to the BOPO variable. CAR began to respond to the shock with a negative (-) trend until it entered the 8th period, the response started to move positively (+) until it entered the 8th period, CAR gave a very fluctuating response (starting from a negative response to being positive) until the 8th period. -8. The impact of the shock is starting to diminish with the chart being less volatile. So that equilibrium (returning to the CAR balance point) can be achieved starting in the 8th period.



Graph 4. IRF Analysis of CAR to ROA

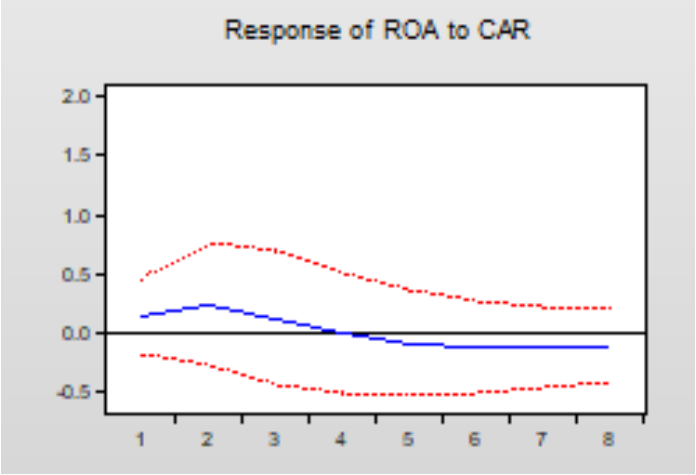
Graph 4 above shows the CAR response to the ROA variable. CAR began to respond to the shock with a negative (-) trend until it entered the 6th period, the response started to move positively (+) until it entered the 8th period, CAR gave a very fluctuating

response (starting from a negative response to being positive) until the 8th period. -8. The impact of the shock is starting to diminish with the chart being less volatile. So that equilibrium (returning to the CAR balance point) can be achieved from the 7th period.



Graph 5. IRF Analysis of ROA to BOPO

Graph 5 above shows the ROA response to the BOPO variable. ROA began to respond to the shock with a positive (+) trend until it entered the 8th period, the response started to move positively (+) until it entered the 8th period, ROA gave a very fluctuating response with a positive response until the 8th period. The impact of the shock is starting to diminish with the chart being less volatile. So that equilibrium (returning the ROA balance point) can be achieved from the 8th period.



Graph 6. IRF Analysis of ROA to CAR

Graph 6 above shows the ROA response to the CAR variable. ROA began to respond to the shock with a positive trend (+) until it entered the 4th period, the response started to move negatively (-) until it entered the 8th period, ROA gave a very fluctuating response (starting from a positive response to negative) until the 8th period. -8. The

impact of the shock is starting to diminish with the chart being less volatile. So that equilibrium (returning the ROA balance point) can be achieved from the 8th period.

The analysis of the responses depicted in the graphs reveals significant dynamics between the BOPO, CAR, and ROA variables over time. In the case of BOPO's response to the CAR variable, a notable trend is observed where initial positive reactions transition into negative territory until the eighth period, indicating a period of volatility. This pattern suggests that while BOPO initially responds positively to changes in capital adequacy, it eventually experiences fluctuations that stabilize around the eighth period, reflecting a return to equilibrium. Similarly, the response of BOPO to the ROA variable follows a parallel trajectory, demonstrating initial negativity that shifts to a positive trend, also stabilizing by the eighth period. This consistent pattern across both graphs highlights the interconnectedness of operational efficiency and profitability as they react to changes in capital strength.

Further analysis of the CAR and ROA responses reinforces these observations. Both CAR's reaction to BOPO and ROA exhibits an initial negative trend that transitions to a positive response by the eighth period, revealing a fluctuating relationship that ultimately seeks equilibrium. The ROA's response to both BOPO and CAR underscores this volatility, showing an initial positive trend that turns negative before stabilizing. These findings collectively indicate that while the effects of shocks to these financial ratios can lead to significant short-term volatility, they tend to diminish over time, suggesting that Bank BJB Syariah's financial performance stabilizes around a balance point after several periods. Overall, these results emphasize the importance of monitoring these financial indicators to understand their dynamic interactions and to inform strategic decision-making within the bank.

4.3. Variance Decomposition Analysis

Variance decomposition aims to measure the magnitude of the contribution or composition of the influence of each independent variable on the dependent variable.

Table 1. Variance Decomposition of BOPO

Variance Decomposition of BOPO:				
Period	S.E.	BOPO	CAR	ROA
1	9.573102	100.0000	0.000000	0.000000
2	11.30001	96.74558	0.781320	2.473103
3	12.15913	92.55758	3.110656	4.331765
4	12.70957	88.73825	6.206041	5.055708
5	13.08840	85.73440	9.093239	5.172357
6	13.34535	83.59689	11.30946	5.093649
7	13.51229	82.18591	12.81963	4.994456
8	13.61578	81.30719	13.77079	4.922021

Table 1 above shows that BOPO fluctuations are most dominantly influenced by BOPO itself, while CAR is in second place starting from the 2nd period to the 8th period, fluctuations in the BOPO variable are influenced by the BOPO variable itself by 100 percent. In the intervals of subsequent periods, the influence of the BOPO variable decreases. However, it is still very dominant. In the 1st period, the CAR variable as a

variable that has an influence on BOPO begins to appear, until the 8th period, the CAR variable can explain the variability of BOPO with a contribution of 13.7 percent. Then, ROA has also appeared in the 2nd period even though the variability is much smaller than CAR. Up to the 8th period, BOPO variability can be explained by the ROA variable with a contribution of 4.92 percent.

Table 2. Variance Decomposition of CAR

Variance Decomposition of CAR:				
Period	S.E.	BOPO	CAR	ROA
1	2.851037	2.596224	97.40378	0.000000
2	3.545941	3.789273	95.60576	0.604967
3	3.843944	4.558948	94.31244	1.128616
4	3.973998	5.010656	93.55474	1.434602
5	4.030080	5.257734	93.15832	1.583946
6	4.054016	5.385818	92.96561	1.648577
7	4.064220	5.449742	92.87616	1.674098
8	4.068610	5.480900	92.83565	1.683453

Table 2 above shows that CAR fluctuations are most dominantly influenced by CAR itself, while BOPO is in second place from period 1 to period 8, CAR variable fluctuations are influenced by the CAR variable itself at 97.40 percent. In the intervals of subsequent periods, the influence of the CAR variable decreases. However, it is still very dominant. In the 1st period, the BOPO variable as a variable that has an influence on CAR begins to appear, until the 18th period, the BOPO variable can explain CAR variability with a contribution of 5.48 percent. Then, ROA has also appeared in the 2nd period even though the variability is much smaller than BOPO. Until the 8th period, CAR variability can be explained by the ROA variable with a contribution of 1.68 percent.

Table 3. Variance Decomposition of CAR

Variance Decomposition of ROA:				
Period	S.E.	BOPO	CAR	ROA
1	1.808862	75.92599	0.549308	23.52470
2	1.996922	78.53495	1.767656	19.69740
3	2.051335	78.99406	2.017050	18.98889
4	2.073942	78.89377	1.973350	19.13288
5	2.086702	78.63881	2.100249	19.26094
6	2.095582	78.33966	2.400090	19.26025
7	2.102102	78.06283	2.739054	19.19812
8	2.106715	77.84451	3.025310	19.13018

Table 3 above shows that ROA fluctuations are most dominantly influenced by BOPO, while BOPO is in first place starting from period 1 to period 8, fluctuations in the ROA variable are influenced by the BOPO variable by 75.92 percent. In the intervals of subsequent periods, the influence of the ROA variable decreases. But not dominant. In the 1st period, the BOPO variable as a variable that has an influence on ROA begins to

emerge, until the 8th period, the BOPO variable can explain the variability of ROA with a contribution of 77.84 percent. Then, CAR has also appeared in period 1 even though the variability is much smaller than BOPO. Up to the 8th period the ROA variability can be explained by the BOPO variable with a contribution of 19.13 percent.

The findings of this research are consistent with the study conducted by Abdul Karim and Fifi Hanafia (2020), which also concluded that the Capital Adequacy Ratio (CAR) does not significantly impact Return on Assets (ROA) and that the Operating Costs to Operational Income (BOPO) ratio similarly has no significant effect on ROA. This alignment suggests a broader trend within certain Islamic banks, where traditional indicators like CAR and BOPO may not directly influence profitability as measured by ROA. Such results highlight the possibility that other factors, perhaps specific to the operational or market conditions of these banks, might play a more pivotal role in determining their profitability. This underlines the importance of context-specific analysis in understanding the financial performance of Islamic banking institutions.

Conversely, these findings diverge from the research conducted by Dedi Irawan (2019), where it was found that both BOPO and CAR had a significant impact on ROA, with BOPO having the expected negative effect and CAR positively influencing profitability. The discrepancy between these studies could be attributed to differences in the time periods analysed, the sample of banks studied, or methodological approaches. Dedi's findings suggest that in certain contexts, BOPO and CAR can indeed be critical determinants of profitability. The contrast between these studies indicates that the relationship between these financial ratios and profitability is complex and may vary across different banking environments. This inconsistency calls for further investigation into the specific conditions under which BOPO and CAR might influence ROA, potentially involving a broader range of Islamic banks or different time frames to better understand the factors driving profitability in this sector.

5. CONCLUSION AND RECOMMENDATION

In this final chapter, some conclusions will be made based on the results of the research from the discussion in the previous chapter and some suggestions regarding this research. Based on the explanation of writing this research, the writer can conclude according to the following hypothesis: (a) Based on the results of the causality test on Bank BJB Syariah data, BOPO has no significant effect on profitability (ROA) because the probability value is greater than the 10% test level, namely with a value of 0.2047; (b) Based on the results of the causality test on BJB Syariah bank data, CAR does not have a significant effect on profitability (ROA), because the probability results are greater than the 10% test level, namely with a value of 0.9785. The suggestions that can be given for development in further research are as follows: (a) For other researchers who wish to carry out further research, they should look for accurate data, and process research results repeatedly, ensuring that there are no errors or omissions in the research; (b) Future research can develop this research model by adding other variables.

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