

# Analysis of Islamicity Performance Index, Capital Adequacy Ratio, and Corporate Social Responsibility on Profitability with Intellectual Capital as a Moderating Variable in Sharia Public Banks Listed on the Financial Services Authority Period of 2016-2021

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## ABSTRACT

This research aims to test and analyze the effect of the Islamicity performance index, capital adequacy ratio, and corporate social responsibility on profitability with intellectual capital as a moderating variable in Sharia Public Banks listed on the Financial Services Authority period of 2016-2021. This associative-quantitative research employs secondary data. The research population is made up of 12 companies, and the sample are taken using a purposive sampling method, totalling 8 companies with criteria: Sharia banks that presented their financial statements from 2016-2021 period on the Financial Services Authority. Data obtained are analyzed using panel data regression method. This research results indicate that the profit-sharing ratio had an insignificant and negative effect, zakat performance ratio has a significant and positive effect, the Islamic income ratio has an insignificant and negative effect, the capital adequacy ratio has an insignificant positive effect, corporate social responsibility has an insignificant and positive effect on return on assets respectively. In addition, intellectual capital can moderate the effects of the profit-sharing ratio on return on assets, while intellectual capital does not moderate the effects of zakat performance ratio, Islamic income ratio, capital adequacy ratio, and corporate social responsibility on return on assets.

**Keywords:** *Islamicity Performance Index, Capital Adequacy Ratio, Corporate Social Responsibility, Intellectual Capital, Profitability.*

## INTRODUCTION

The development of modern Islamic banking began in Pakistan and Malaysia in 1940 and was characterized by unconventional management of Hajj funds. The rapid growth of Islamic banking has increased the interest of traditional banks in offering Islamic banking products. This reflects the behaviour of conventional banks offering Sharia products, such as Islamic windows in Malaysia, Sharia transactions in Egyptian banks, and Sharia services in Saudi Arabia Trade Bank (Muhith, 2012).

Islamic banking operates worldwide and has emerged as a practical and viable alternative system with much to offer to meet the needs of Muslims. Islamic banking has now achieved worldwide acceptance, and most Islamic Banks are established in promising countries. In the Middle East, many banks in developed countries are starting to appreciate the massive demand for Islamic banking financial products (Sufian, 2007).

The establishment of Islamic banking in Indonesia began when the government issued

Law No. 17 of 1992 to establish Bank Muamalat, collecting funds from the public following Sharia principles. In 1998, the government amended the law and enacted Law No. 10 of 1998, which allows traditional banks to initiate Sharia legal services. Furthermore, Sharia banking began to develop rapidly due to the majority of the population being Muslim and public awareness of building Sharia principles so that public interest in Sharia banking was high, indicated by the increasing number of Sharia commercial banks registered with the Financial Services Authority, namely 14. Islamic banking and financial systems are part of the Islamic economic concept and aim to instil ethical and Islamic values in the role of Islamic banking, thereby requiring improved banking performance. To measure its performance, it can be analyzed using estimated profitability metrics using return on assets (Pudyastuti, 2018).

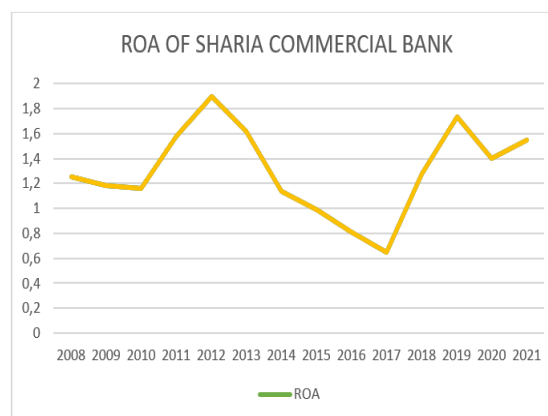
One of the benchmarks for a bank's financial performance is its profit level. When investing in Islamic banking, profitability is an essential consideration for stakeholders. Sharia banks that follow Sharia principles will provide high levels of profits. Stakeholders who use Sharia banking services want to feel that it is very different from traditional banks, which only care about profits. The bank's ability to maintain competitiveness and generate profitability is the most important indicator for measuring performance. The rate of conventional banks and Islamic banks can be seen as follows:

**Table 1. Growth Rate of Conventional Banks and Sharia Banks**

Year	Growth	
	Conventional Banks	Islamic Bank
2010	18.78	46.98
2011	21.41	48.61
2012	16.75	34.05
2013	16.21	24.23
2014	13.38	12.42

*Source: Indonesian Banking Statistics (processed)*

Statistical data on the growth rate of Islamic banks during 2010-2014 shows that the percentage growth rate of Islamic banks is still better than that of conventional banks, where it is estimated that the growth rate will tend to decline. However, conventional banks' Return on Assets is higher than Islamic banks. The average value of ROA in Islamic banks is 1.43%, while the average ROA in conventional banks is 2.17%. It shows that conventional commercial banks are more stable than Islamic ones., (2018). The development of Islamic banking ROA in Indonesia has been fluctuating. Below is a graph of ROA development from 2017-2021:



**Figure 1. The development of Islamic banking ROA in Indonesia**

The movement of the Return on Assets (ROA) graph of Islamic banking in Indonesia from 2008 to 2021 shows that the ROA ratio has fluctuated. Judging from the last 5 years, from 2017 to 2019, the ROA has increased. Whereas in 2017, the ROA of Islamic banking was 0.65%, which increased in 2018 to 1.28%, and in 2019, the ROA also increased to 1.73% from the previous year. However, in 2020, the ROA decreased to 1.40%, which fell by 0.33. In the following year, the 2021 ROA increased again to 1.55%, increased by 0.15%. The National Sharia Economic and Finance Committee [KNEKS] (2018) states that there has been a decrease in the quality of financing assets and securities in 2020, resulting in a decline

in profitability due to increased provision and funding costs.

Profitability is related to the Islamic Performance Index indicator. This indicator is used as a measure of organizational performance to measure the financial performance of Sharia institutions by applying Sharia principles that affect the financial health of Sharia banking in Indonesia (Ibrahim et al., 2003). The method for measuring the performance of Islamic financial institutions discussed by Hameed et al. (2004) was developed using the "Islamic Performance Index". The index consists of several indicators: profit-sharing ratio, zakat performance ratio, equitable distribution ratio, direct-employee welfare ratio, Islamic income vs. non-Islamic income, and Islamic investment vs. non-Islamic investment ratio. It allows for measuring the financial performance of Islamic banking precisely and accurately and assessing the principles of justice, ethics, and cleanliness (tazkiyah) implemented by Islamic financial institutions to provide positive information to the public related to Sharia banking.

Djuwita et al. (2019) stated that the Islamic Performance Index positively impacts profitability (ROA) because compliance with Islamic law provides a competitive advantage for Islamic institutions such as Islamic banks. High compliance with Islamic sharia principles by Islamic banks can increase public confidence in using Islamic banking products, impacting good profitability. One of the leading Islamic performance indicators is the profit-sharing ratio. This metric determines the acquisition of profit sharing from lending to customers. According to Khasanah (2016), the profit-sharing ratio affects the profitability of Islamic banks. Funding from Islamic banks is risky and less desirable, and there is evidence that non-current long-term funding impacts financial performance.

Rilsha (2019) found that intellectual capital can mitigate the ratio of profit sharing to return on assets because each product increases staff proficiency in promoting

Islamic banking products, and intellectual capital can support the maximum allocation of funds. However, a study by Murtadho et al. (2018) states that intellectual capital weakens the profit-sharing ratio to return on assets.

Another important indicator of the Islamicity performance index is the Zakat Performance Ratio. It is one of the essences of Islamic economics and explains and expresses the principles of Islamic banking. According to Mayasari (2020), the level of zakat returns affects Islamic banks' general profitability. Because Zakat can expand and increase assets, it is believed that it does not reduce assets but increases existing assets and is put to good use. In contrast to Rilsha's (2019) research, the zakat performance ratio does not affect profitability because the zakat issued by Sharia banks is not proportional to the amount of net worth that Sharia banks can receive.

Islamic banks operate following Sharia principles. In this case, Islamic banks generate income from halal sources. In this case, the Islamic income ratio measures halal income. However, Sharia banking income is not entirely halal, and transactions involving usury still exist. Therefore, the halal income ratio is used as an index to measure Sharia bank income. Several opinions are divided on the impact of the sharia income ratio on the profitability of sharia banks. According to Ahmad (2020), revenue generated by banks other than Mudarib income is unavoidable for Islamic banks and is not halal income, so the Islamic income ratio does not affect profitability. It is shown as financial in payment receipts, with revenue from customer penalties and conventional bank loans. This is different from research by Falikhatum and Assegaf (2012), which found that the Islamic income ratio affects the profitability of Islamic banks. The results above can be said to indicate that there are several differences of opinion among researchers. Not all indicators from the Islamicity performance index can be researched due to the shortcomings of the

other 4 indicators, namely that they are less related to financial performance. The indicators above influence the financial performance of Sharia banking because the above hands can be seen directly through Sharia banking financial reporting instruments.

The soundness level of Islamic banks can be assessed in terms of capital. One way to measure the performance of a company's assets is through the capital adequacy ratio. According to Kasmir (2012), the capital adequacy ratio (CAR) is a ratio of capital and assets weighted according to risk, namely by hiding risk assets and funding all fixed assets and bank ownership as well as the amount of equity capital required to cover losses that occur to affect the profitability of Islamic banks.

**Table 2. Capital Adequacy Ratio (CAR) of Islamic Commercial Banks in 2018-2020**

No	Bank	CAR			
		2018	2019	2020	2021
1	Bank Muamalat	12,34	12,42	15,21	23,76
2	Bank Viktoria	22,07	18,71	18,24	22,09
3	Bank Panin Syariah	23,15	14,46	31,43	25,81
4	Bank Mega Syariah	20,54	19,96	24,15	25,59
5	Bank Bca Syariah	24,30	38,30	45,30	41,40

*Source: Annual Financial Report of Islamic Banking*

Based on mini research, the table above shows that the CAR of a Sharia bank has increased and decreased over several years. This is because Islamic commercial banks have not been able to maintain sufficient capital, and Islamic banks have not increased their need to build reserves to anticipate the impact of increased risk associated with asset optimization that does not increase. This can affect the bank's ability to develop the distribution of funds to Sharia banks in Indonesia.

According to Fitriah & Kurniasih (2016), the higher the CAR, the better the bank can take risks from risky loans or generate wealth. In such situations, this can contribute significantly to profitability. Zulifah Susilowibow (2014) argue that CAR impacts profitability. These results align with

research by Primadewi and Suputra (2015). In contrast to the study by Cai & Huang (2014) and Hantono (2017), CAR states that it has no impact on profitability.

Sharia banking companies have started listing, as evidenced by the increasing number of Islamic banking companies registered with the Financial Services Authority. Technological advances have made it easier for investors to access company financial reports. Investors are interested in investing their money in companies that apply the principles of corporate social responsibility (CSR) (Muhammad & Ridwan, 2017). The existence and impact of corporate activities often conflict and can even harm the interests of other parties. Therefore, companies should not only focus on their interests but also consider the interests of external stakeholders (Novrianty, 2015). Companies need to pay attention not only to financial aspects but also to social and environmental aspects. Because companies exist not only for the benefit of their shareholders but also for other stakeholders such as workers, government, society, consumers, and the environment, when a company implements a CSR program, it will provide many benefits, one of which is improving the company's image, which will attract the attention of investors and consumers, thereby increasing consumer interest. The more companies implement social responsibility, the greater the company's profits (Brown & Moore, 2001). However, the company's CSR activities require much money, ultimately becoming a burden for the company, resulting in decreased sales and profit. However, on the positive side, CSR activities improve the company's image in the eyes of consumers and increase consumer loyalty. Some theoretically contradictory research literature, especially by Odetayo et al. (2014), found that CSR significantly impacts ROA. This study is consistent with the work of Novrianty (2015). In contrast, research by Aliah et al. (2019) found that CSR has no significant effect on ROA.

In addition to the development of Islamic finance in Indonesia, several non-financial factors can improve performance. Intellectual capital can improve company performance with advances in science, information technology, and intense competition in the banking industry. As a result, Islamic banks will change their strategy from work business to knowledge business.

Since the enactment of PSAK-19 regarding intangible assets, intellectual capital has begun to develop in Indonesia. Several studies show the impact of intellectual capital on return on assets. Ramadhan et al. (2014) stated that intangible assets can be identified but are not physically tangible. The most essential thing in the knowledge-based economy (knowledge-based business) is value creation or added value.

Intellectual capital, when used effectively, creates wealth by creating greater assets. Methods for accurately measuring a company's intellectual capital are still under development. Value Added Intellectual Capital (VAIC) is an indirect measure of intellectual capital.

Khasanah (2016) found that intellectual capital positively impacts the profitability of Islamic commercial banks. Djuwita et al. (2019) stated that intellectual capital does not affect profitability.

## LITERATURE REVIEW

### Profitability

According to Sutrisno (2009), profitability is the company's capability, namely using all capital to generate profits. According to Sofyan (2019), profitability is the company's ability to generate profits using all existing skills and resources such as operating activities, cash, capital, number of employees, company reserves, etc. Therefore, profitability can be summarised as a company's ability to generate profits and encourage investors to invest their funds to facilitate expansion. The following is a table of ROA ranking criteria:

**Table 3. ROA Rating Criteria**

Criteria	Rating	Predicate
$ROA > 1.5\%$	1	Very Healthy
$1.25\% < ROA \leq 1.5\%$	2	Healthy
$0.5\% < ROA \leq 1.25\%$	3	Healthy Enough
$0 < ROA \leq 0.5\%$	4	Unwell
$ROA \leq 0$	5	Not Healthy

The return on assets creates the ability to develop intuitions by comparing the investments with the assets that make the intuitions. It is used to determine the effectiveness of a company's activities in generating profits from the growth of its assets. This indicator is the most important among other profitability indicators. The higher this ratio, the better the company's financial position, and vice versa (Kasmir (2017)). In other words, this ratio is used intuitively to determine the overall operational efficiency of a company. The rules are as follows:

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\%$$

### Profit Sharing Ratio

One of the primary sources of financing in Islamic institutions is the implementation of mudharabah and musyarakah. The practice of al-mudharabah is widely used in Islamic banking because it is an effective tool that coordinates well with the concept of an interest-free banking system. The following is an explanation of mudharabah and musyarakah.

Mudharabah is a partnership based on an intuitive perspective, where capital is balanced by one party (capital owner), and the other party (mudharib) balances the expertise of its workforce. With the concept of al-mudharabah, financing through loans can be reduced or minimized because al-mudharabah uses the concepts of capital and entrepreneurship.

Musyarakah is an agreement between investors to dispose of their assets in the company so that the distribution of agreed-upon advantages and disadvantages

becomes a joint responsibility. The practice of Al-Musyarakah mode is total investment, where a bank or several other financial institutions become one of the shareholders in a company.

$$PSR = \frac{\text{Mudharabah} + \text{Musyarakah}}{\text{Total Financing}}$$

### Zakat Performance Ratio

According to Hamid et al. (2004), research shows that zakat is one of the objectives of sharia accounting. Therefore, the performance of Islamic banks must be based on Zakat issued by Islamic banks. The traditional method emphasises that Bank wealth is based on net profit (net profit) rather than net income. Therefore, if a bank has a large net worth, naturally, it will pay zakat in a large amount.

Zakat performance measurements are also calculated to see how significant the impact of the Sharia banking business is in increasing the welfare of the ultimate. The ratio calculation is like a circuit:

$$ZPR = \frac{\text{Zakat}}{\text{Net Assets}}$$

### Islamic Income Ratio

This ratio is used to calculate income generated from halal sources. Islamic economic practices prohibit usury, gharar, and gambling, but in practice, there are still inconsistent practices, therefore, it is essential for Islamic banks to disclose their income transparently and fairly.

Halal income is obtained through total revenue minus the amount of non-halal income. Meanwhile, non-halal income can be seen in the number and import reports. This ratio has an intuitive function of prioritizing the disclosure of income originating from halal sources. This ratio can be calculated as a circuit:

$$\text{Halal Income} = \frac{\text{Halal Income}}{\text{Total Income}}$$

### Capital Adequacy Ratio

According to Sutanto (2013), CAR is a minimum capital requirement that all banks must always meet regarding total assets. According to Sawir (2009), CAR is a crucial asset for balancing business and protecting against potential losses from holding risky productive investments and financing other investments. Bank Indonesia Decree No. 3/30/DPNP dated December 14, 2001 regarding the other health assessments of Bank Uimuim can be seen as the following:

**Table 4. CAR Assessment Criteria**

No	Criteria	Description
1	CAR > 12%	Very Healthy
2	9% ≤ CAR < 12%	Healthy
3	8% ≤ CAR < 9%	Healthy Enough
4	6% ≤ CAR < 8%	Unwell
5	CAR < 6%	Not Healthy

While the CAR measurement indicator is the comparison between capital and weighted assets multiplied by 100%.

$$CAR = \frac{\text{Capital}}{\text{Risk Weighted Assets (RWA)}} \times 100\%$$

RWA increases the value of risky assets and requires anticipated capital in sufficient amounts. Under the provisions of Bank Indonesia circular letter 3/30/DPNP dated December 14, 2001, confirmed the risk of achieving a minimum capital increase obligation of 8%.

### Corporate Social Responsibility

According to Ismail (2014), CSR is a social responsibility that evolves according to the wishes of its owners, usually intuitively generating as much money as possible while adhering to the basic rules established in society carried out in the form of lawful rituals. On the other hand, according to Rahmawati (2012), corporate social responsibility is an intuitive organizational mechanism that voluntarily incorporates

environmental responsibility and social capital into its operations and interactions with stakeholders beyond responsibility.

According to the GRI suite, there are as many as 91 CSR indicators: Economic Performance, Environment, Social, Workforce, Human Rights, Community, and Product.

$$CSR = \frac{\text{Number of Disclosures}}{91}$$

### Intellectual Capital

Ines (2020) states that intellectual capital is one of the resources owned by companies. Intellectual capital is an intangible asset that cannot be seen but has important values and roles in companies and is an essential strategic asset in economic-based knowledge. Intellectual capital is generally defined as the difference between the market value of a company and the book value of a company's assets or financial capital. Intellectual capital has increasingly become a key indicator of profitability according to a company's business.

$$IB-VAIC = IB-VACA + IB-VAHU + IB-STVA$$

### Framework

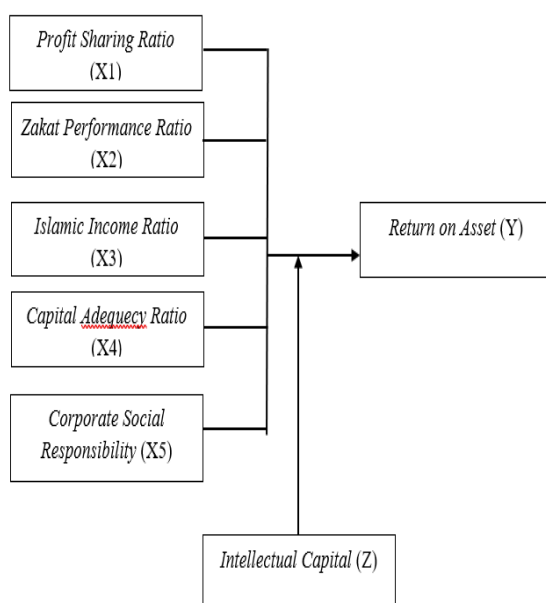


Figure 2. Framework

H1: Profit Sharing Ratio has a significant positive effect on Return on Assets

H2: Zakat performance ratio has a significant positive effect on Return on Assets

H3: The Islamic Income Ratio has a significant positive effect on Return on Assets

H4: Capital Adequacy Ratio has a significant positive effect on Return on Assets

H5: Corporate Social Responsibility has a significant positive effect on Return on Assets

H6: Intellectual Capital moderates the significant influence between Profit Sharing Ratio and Return on Assets

H7: Intellectual capital moderates the significant influence between the zakat performance ratio and Return on Assets

H8: Intellectual capital moderates the significant influence of the Islamic Income Ratio on Return on Assets

H9: Intellectual capital moderates the significant influence between Capital Adequacy Ratio and Return on Assets

H10: Intellectual capital moderates the significant influence between Corporate Social Responsibility and Return on Assets.

### MATERIALS & METHODS

This research used an associative quantitative index (cause and effect). The analysis was carried out to determine the influence between two or more variables. This study describes the impact of the Profit Sharing Ratio (X1), Zakat Performance Index (X2), Islamic Income Ratio (X3), Capital Adequacy Ratio (X4), Corporate Social Responsibility (X5) as independent variables, and Return on Assets as the dependent variable, along with Intellectual Capital as a moderation variable.

The population in this study are Sharia banks registered on the Financial Services Authority, namely 12 Sharia Islamic banks with the 2016-2021 yearly period because

the latest annual financial statements are used.

According to Erlina (2011), samples are part of a population that intuitively estimates the characteristics of a population. The selection of sample data needed in this research is a purposive sampling technique. It is a selection technique or sampling technique with purposive sampling using purposive sampling methods based on purposive considerations. The balance carried out in the sample is as follows:

1. Sharia banks registered with Financial Services Authority: 12
2. Sharia banking companies registered with the Financial Services Authority which do not publish or make public financial reports for the period 2016-2021: 4
3. Sharia banking companies registered with the Financial Services Authority, which publishes or makes public financial reports for the period 2016-2021: 8

Based on the criteria above, the sample in this study was 54 data (8 Islamic commercial banks x 6 years).

The data analysis technique used in this research uses an assistive tool like the EViews12 application. The data were analyzed using the regression analysis method of panel data and moderating testing.

## RESULT

### A. Descriptive Statistical Analysis

Table 5. Descriptive Statistical Analysis

	ROA	PSR	ZPR	IIR	CAR	CSR
Mean	-0.166760	0.544052	0.000229	0.999230	22.15917	0.141481
Median	0.315000	0.528300	0.000158	0.999745	21.35000	0.109900
Maximum	4.080000	1.336000	0.001384	1.000000	45.30000	0.472500
Minimum	-10.17000	0.001600	0.000000	0.994860	11.51000	0.044000
Std. Dev.	2.624171	0.267252	0.000258	0.001150	7.572359	0.087519
Skewness	-2.328902	0.191558	2.283545	-2.143011	1.114734	1.645154
Kurtosis	8.237452	3.304187	9.792607	7.170450	4.152435	5.883411
Jarque-Bera	98.25208	0.478615	133.9957	71.52528	12.59727	38.28036
Probability	0.000000	0.787173	0.000000	0.000000	0.001839	0.000000
Sum	-8.004500	26.11450	0.010978	47.96305	1063.640	6.791100
Sum Sq. Dev.	323.6548	3.356901	3.13E-06	6.22E-05	2695.009	0.360000
Observations	48	48	48	48	48	48

Source: Data Processed with EViews 2023

Based on table 5 it can be explained the minimum, maximum, mean, and standard deviation values of each variable with 48 samples during the 2016-2021 year:

- a) The banking company with the most beautiful ROA value is PT. Panin Dubai Syariah in 2017, and the highest ROA was PT. Bank Mega Syariah in 2021. The mean value of ROA is -0.1667, which indicates that ROA in Islamic banking is predicated less healthy, and the standard deviation value is 2.6241.
- b) The banking company with the most beautiful PSR value was PT. Bank Mega Syariah in 2017, and the highest PSR was PT. Bank Syariah Indonesia in 2020. The mean value of PSR is 0.5440, and the standard deviation value is 0.2672. It can be interpreted that the profit-sharing ratio has a good value.
- c) The banking company with the most beautiful ZPR value is PT. Panin Dubai Syariah in 2021, and the highest ZPR is PT. Bank Mega Syariah in 2021. The median value of ZPR is 0.00022, and the standard deviation is 0.00025. It can be interpreted that the zakat performance ratio still carries a value by the standard.
- d) The banking sector with the most beautiful IIR value was PT. Bank Victoria Syariah in 2017, and the highest IIR was PT. Bank Panin Dubai Syariah in 2016-2019. The mean value of IIR is around 0.9992, and the standard deviation value is around 0.0011. It can be interpreted that the Islamic income ratio has a good value.
- e) The bank that has the most beautiful CAR value is PT. Panin Dubai Syariah in 2017, and the highest CAR is PT. Bank Central Asia in 2020. The median value of CAR is 22,159, meaning that the CAR in Islamic banking is very healthy, and the standard deviation is 7.5723.
- f) Banks that have the most beautiful CSR values are PT. Bank Victoria Syariah in 2017-2019, and the highest CSR is PT. Bank Muamalat Indonesia in 2017. The



mean value of CSR is 0.1414, and the standard deviation value is 0.0875. can be interpreted that corporate social responsibility has a good value.

## B. Panel Data Regression Model Estimation Selection

Three models use panel data regression. Namely: Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effeict Model (FEM). By carrying out three models of reform in realizing the regression model, namely the Chow Test, Hausman Test, and Lagrange Multiplier Test.

### Chow Test

Chow's Test was used to determine whether the Common Effect or Fixed Effect Model is the most appropriate for the regression model. There are hypotheses in carrying out this test, namely:

H0 = Probability > 0.05, then CEM is used

H1 = Probability < 0.05, then FEM is used.

Research output results use EViews 12 as follows:

**Table 6. Chow Test Result**

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.635441	(7,34)	0.7233
Cross-section Chi-square	5.901522	7	0.5513

Source: Data Processed with EViews 2023

Based on Chow's test results above, the probability for Cross-section F is  $0.7233 > 0.05$ , and Cross-section Chi-Square is  $0.5513 > 0.05$ ; the estimation model used is the Common Effect Model (CEM).

### Hausman Test

The Hausman Test was used to determine whether the Fixed Efficiency Model (FEM) or Random Effect Model (REM) is the most appropriate in determining the regression model. There are hypotheses in interpreting the test, namely:

H0 = Probability > 0.05, then use REM,

H1 = Probability < 0.05, then FEM is used  
Output results are using EViews12 as follows:

**Table 7. Hausman Test Result**

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq.		
	Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.429604	6	0.6187

Source: Data Processed with EViews 2023

Based on the table above, based on the Hausman Test, the probability of random cross-section is  $0.6187 > 0.05$ , so the estimation model used is the Random Effect Model (REM).

### Lagrange Multiplier (LM) Test

This test determines whether the Common Effect or Random Effect Model is more appropriate for the regression data panel. Testing is done with a hypothesis as follows:

Ho = Probability > 0.05, then the Common Effect Model (CEM) is used

H1 = Probability < 0.05, then the Random Effect Model is used

The results of this research output are as follows:

**Table 8. Lagrange Multiplier (LM) Test Result**

Lagrange Multiplier Tests for Random Effects

Null hypotheses: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

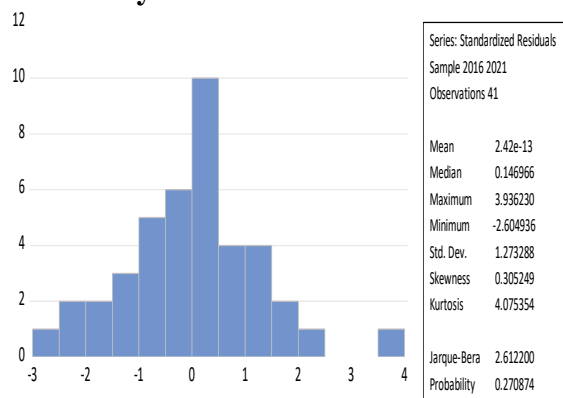
	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	1.333672 (0.2482)	1.037248 (0.3085)	2.370920 (0.1236)
Honda	-1.154847 (0.8759)	1.018454 (0.1542)	-0.096445 (0.5384)
King-Wu	-1.154847 (0.8759)	1.018454 (0.1542)	0.032406 (0.4871)
Standardized Honda	-0.423787 (0.6641)	1.351435 (0.0883)	-2.694016 (0.9965)
Standardized King-Wu	-0.423787 (0.6641)	1.351435 (0.0883)	-2.486253 (0.9935)
Gourieroux, et al.	--	--	1.037248 (0.3031)

Source: Data Processed with EViews 2023

The result of the Breusch-pagan probability is  $0.1236 > 0.05$ . It is concluded that the method used is the Common Effect Model (CEM).

### C. Classic Assumption Test

#### Normality Test



Source: Data Processed with EViews 2023  
Figure 3. Normality Test Result

Based on Figure 3, the EViews output results show that the Jarque-Bera probability value is 0.270874 > 0.05. means that research is normally distributed. This means that the assumption of normality is fulfilled.

#### Multicollinearity Test

The multicollinearity test can be seen through the VIF value. If the tolerance value is > 0.1 and the VIF value is <10, then there is no multicollinearity problem, and if the tolerance value is <0.1. If the VIF value is <10, then a multicollinearity problem occurs. The results of the multicollinearity test are as follows:

Table 9. Multicollinearity Test Result

Variance Inflation Factors  
Date: 04/29/23 Time: 16:04  
Sample: 1 48  
Included observations: 48

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	100926.8	910019.0	NA
PSR_X1_	1.687041	5.566258	1.063869
IIR_X2	101142.3	910561.3	1.179886
ZPR_X3	1908524.	2.023223	1.123144
CAR_X4_	0.002218	10.94094	1.122659
CSR_X5	16.44589	4.080519	1.112182
VAIC_Z_	0.045798	1.696497	1.119845

Source: Data Processed with EViews 2023

The output results of EViews show that the tolerance value is > 0.1 and the VIF value is < 10, so there is no multicollinearity problem between independent variables.

#### Autocorrelation Test

The autocorrelation test is used to know assumptions about the residuals' independence intuitively. The autocorrelation test can be tested with the Durbin-Watson test, ranging between 0 and 4. The results of this test can be seen as follows:

Table 10. Autocorrelation Test

Root MSE	2.132604	R-squared	0.325503
Mean dependent var	-0.166760	Adjusted R-squared	0.226797
S.D. dependent var	2.624171	S.E. of regression	2.307485
Akaike info criterion	4.644232	Sum squared resid	218.3041
Schwarz criterion	4.917115	Log likelihood	-104.4616
Hannan-Quinn criter.	4.747355	F-statistic	3.297678
Durbin-Watson stat	1.694149	Prob(F-statistic)	0.009677

Source: Data Processed with EViews 2023

The EViews output results show that the Durbin-Watson (DW) value is 1,694. We will compare the DW value of 1.694 with the DW table value with a significant level of 5%, the number of observations (T) = 48 and K (the number of independent variables) = 5, then the dL value is 1.3701 and the dU is 1.7210. The DW value of 1.694 is located in the region (DW = 1.6941 > dL = 1.3701), the DW value is greater than dL, and it is concluded that there is no positive autocorrelation. (4-D) > dU = 2.3059 greater than dU (1.7210), so there is supposed to be no negative autocorrelation.

#### Heteroscedasticity Test

This test determines whether there is a deviation from the classical assumption, heteroscedasticity, namely the presence of variance inequality from residuals, to predict the regression model. If the prob value is <0.05, then a symptom occurs. If the prob value is > 0.05, no symptoms occur in this research model. The results of the Heteroscedasticity test are as follows:

Table 11. Heteroscedasticity Test

Heteroskedasticity Test: White			
Null hypothesis: Homoskedasticity			
F-statistic	1.926891	Prob. F(26,21)	0.0644
Obs*R-squared	33.82262	Prob. Chi-Square(26)	0.1395

Source: Data Processed with EViews 2023

From the test results using the white method, the probability value is  $0.1395 > 0.05$ , so it can be concluded that heteroscedasticity does not occur.

#### D. Regression Analysis with Panel Data

**Table 12. Regression Analysis Test Results**

Dependent Variable: ROA  
 Method: Panel Least Squares  
 Date: 05/01/23 Time: 21:20  
 Sample: 2016 2021  
 Periods included: 6  
 Cross-sections included: 8  
 Total panel (balanced) observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	299.6861	310.4683	0.965271	0.3399
PSR	-0.997111	1.278362	-0.779991	0.4398
ZPR	4237.349	1365.435	3.103296	0.0034
IIR	-302.9518	310.7799	-0.974811	0.3352
CAR	0.091149	0.046233	1.971512	0.0553
CSR	2.963845	3.858712	0.768092	0.4467

Root MSE	2.133461	R-squared	0.324961
Mean dependent var	-0.166760	Adjusted R-squared	0.244599
S.D. dependent var	2.624171	S.E. of regression	2.280766
Akaike info criterion	4.603368	Sum squared resid	218.4795
Schwarz criterion	4.837269	Log likelihood	-104.4808
Hannan-Quinn criter.	4.691760	F-statistic	4.043728
Durbin-Watson stat	1.682257	Prob(F-statistic)	0.004373

Source: Data Processed with EViews 2023

The equation formed from the estimation of the CEM regression model above is described as follows:

$$ROA = 299.68 - 0.997 (PSR) + 4237 (ZPR) - 302.95 (IIR) + 0.091 (CAR) + 2.963(CSR)$$

#### E. Hypothesis Testing

##### Statistical Test F (Simultaneous)

The constant value (a) = 12.326 indicates that if the value of the independent variable is assumed to be equal to zero, then the value of the dependent variable is 12.326.

**Table 13. Simultaneous Test Results**

Root MSE	2.132604	R-squared	0.325503
Mean dependent var	-0.166760	Adjusted R-squared	0.226797
S.D. dependent var	2.624171	S.E. of regression	2.307485
Akaike info criterion	4.644232	Sum squared resid	218.3041
Schwarz criterion	4.917115	Log likelihood	-104.4616
Hannan-Quinn criter.	4.747355	F-statistic	3.297678
Durbin-Watson stat	1.694149	Prob(F-statistic)	0.009677

Source: Data Processed with EViews 2023

$$F \text{ count} = (n-k-1) = 48-5-1 = 42 (2,594)$$

$$F \text{ count} > F \text{ table and probability} < 0.05$$

From the results above, the prob f statistic is  $0.009677 < 0.05$ , so it is concluded that all independent variables (profit sharing ratio,

Islamic income ratio, zakat performance ratio, capital adequacy ratio, corporate social responsibility) are simultaneously significant to the dependent variable (return on asset).

##### Statistical Test t (Partial)

The statistical t-test shows how much the independent variables influence the independent variables on the independent variables. Acceptance or rejection of the hypothesis can be done with the following criteria;

- The value of the t statistic  $> 0.05$  means that an independent variable individually does not affect the independent variable
- The value of the t statistic  $< 0.05$  means that the individual independent variables individually influence the independent variables. Statistical test t can be seen as follows:

**Table 14. Partial Test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	299.6861	310.4683	0.965271	0.3399
PSR	-0.997111	1.278362	-0.779991	0.4398
ZPR	4237.349	1365.435	3.103296	0.0034
IIR	-302.9518	310.7799	-0.974811	0.3352
CAR	0.091149	0.046233	1.971512	0.0553
CSR	2.963845	3.858712	0.768092	0.4467

Source: Data Processed with EViews 2023

$$t \text{ count} = 1.682$$

$$t \text{ count} > t \text{ table, prob} < 0.05$$

Based on the output above, it can be interpreted that:

- The profit-sharing ratio (X1) has a negative and insignificant effect on ROA (Y) with a coefficient value of -0.997 and a probability value of  $0.4398 > 0.05$ .
- Zakat Performance Ratio (X2) has a positive and significant impact on ROA (Y) with a coefficient value of 4237 and a probability value of  $0.0034 < 0.05$
- Islamic Income Ratio (X3) has a negative and insignificant effect on ROA (Y) with a coefficient value of -302.95 and a probability value of  $0.3352 > 0.05$
- Capital Adequacy Ratio (X4) has a positive and insignificant impact on ROA

- (Y) with a coefficient value of 0.091 and a probability value of  $0.055 > 0.05$
- e) Corporate Social Responsibility (X5) has a positive and insignificant effect on ROA (Y) with a coefficient value of 2.963 and a significant value of  $0.4467 < 0.05$

### Determination Coefficient Test (R2)

Table 15. Determination Coefficient Test Result

Root MSE	2.132604	R-squared	0.325503
Mean dependent var	-0.166760	Adjusted R-squared	0.226797
S.D. dependent var	2.624171	S.E. of regression	2.307485
Akaike info criterion	4.644232	Sum squared resid	218.3041
Schwarz criterion	4.917115	Log likelihood	-104.4616
Hannan-Quinn criter.	4.747355	F-statistic	3.297678
Durbin-Watson stat	1.694149	Prob(F-statistic)	0.009677

Source: Data Processed with EViews 2023

From the results above, it can be interpreted that the value of the coefficient of determination (R-squared) is 0.2267. The value above explains that the effect of the profit-sharing ratio, Islamic income ratio, zakat performance ratio, capital adequacy ratio, and corporate social responsibility on returns on assets is equal to 22.67%. In comparison, other factors influence the remaining 77.33%.

### Moderating Test

#### 1. Testing Intellectual Capital (Z) in moderating the Effect of Profit-Sharing Ratio (X1) on Return on Assets (Y)

Dependent Variable: ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.043288	1.256004	-2.422992	0.0196
PSR	4.631974	2.008212	2.306516	0.0259
IC	3.051130	0.894758	3.410006	0.0014
M1	-4.945580	1.380701	-3.581935	0.0008

It is known that PSR\_IC(M1) has a coefficient value of -4.9455, which is a negative value, which means that intellectual capital has a lower profit-sharing ratio to returns on assets. The interaction probability of PSR\_IC(M1) is  $0.0008 < 0.05$ , which means it is significant. So, it can be

concluded that Intellectual Capital can moderate the considerable influence of the Profit-Sharing Ratio on Return on Assets.

#### 2. The influence of Intellectual Capital (Z) in moderating the relationship between Zakat Performance Ratio (X2) and Return on Assets (Y)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.227490	0.512279	-2.396136	0.0209
ZPR	4390.721	1481.408	2.963884	0.0049
IC	-0.225191	0.262197	-0.858863	0.3951
M3	1214.422	1228.010	0.988935	0.3281

It is known that the coefficient value of ZPR\_IC(M3) is 1214.442, which is a positive value, which means that intellectual capital impacts the zakat performance ratio toward return on assets. The interaction probability value of ZPR\_IC is  $0.3281 > 0.05$ , which means it is not significant, so it can be concluded that Intellectual capital cannot moderate a significant impact on the Zakat Performance Ratio to Return on Assets.

#### The influence of Intellectual Capital (Z) in moderating the relationship between Islamic Income Ratio (X3) to Return on Assets (Y)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	355.9183	340.9866	1.043790	0.3023
IIR	-356.2868	341.2808	-1.043969	0.3022
IC	64.72577	144.1712	0.448951	0.6557
M2	-64.82485	144.2998	-0.449237	0.6555

It is known that the coefficient value of IIR\_IC(M2) is -64.824, which is a negative value, which means that intellectual capital has the highest Islamic income ratio to return on assets. The interaction probability value of IIR\_IC is  $0.655 > 0.05$ , which means it is not significant. So, it can be concluded that intellectual capital cannot moderate the significant influence of the Islamic Income Ratio on Return on Assets.

**The influence of Intellectual Capital (Z) in moderating the relationship between Capital Adequacy Ratio (X4) and Return on Assets (Y)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.500757	1.745694	-2.005366	0.0511
CAR	0.141570	0.067643	2.092900	0.0422
IC	0.827477	0.909741	0.909574	0.3680
M4	-0.031294	0.032301	-0.968824	0.3379

It is known that the coefficient value of CAR\_IC(M4) is -0.0312, which is a negative value, which means that intellectual capital has a lower capital adequacy ratio to return on assets. The interaction probability value CAR\_IC is 0.3379 > 0.05, which is insignificant. So, it can be concluded that intellectual capital cannot moderate the significant influence of the Capital Adequacy Ratio on Return on Assets.

**The influence of Intellectual Capital (Z) in moderating the relationship of Corporate Social Responsibility (X5) to Return on Assets (Y)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.285681	1.125391	-2.031011	0.0483
CSR	23.10079	10.77232	2.144458	0.0376
IC	0.826536	0.559880	1.476271	0.1470
M5	-10.28942	5.430879	-1.894613	0.0647

It is known that the coefficient value of CSR\_IC(M5) is -10.2894, which is negative, which means that intellectual capital impacts corporate social responsibility towards return on assets. The interaction probability value of CSR\_IC is 0.0647 > 0.05, which is insignificant. It can be concluded Intellectual Capital cannot moderate the significant impact of Corporate Social Responsibility on Return on Assets.

**CONCLUSION**

Based on the results of the research and discussion in the previous chapter, several conclusions can be drawn as follows:

1. Profit Sharing Ratio has an insignificant

- negative effect on Return on Assets, so hypothesis 1 is rejected.
2. The Zakat Performance Ratio positively impacts Return on Assets, so hypothesis 2 is accepted.
3. The negative Islamic Income Ratio does not significantly impact Return on Assets, so hypothesis 3 is rejected.
4. Capital Adequacy Ratio has an insignificant positive influence on Return on Assets, so hypothesis 4 is rejected.
5. Corporate Social Responsibility has an insignificant positive impact on Return on Assets, so hypothesis 5 is rejected.
6. Intellectual Capital can moderate the significant influence of the Profit-Sharing Ratio on Return on Assets so that hypothesis 6 is accepted.
7. Intellectual Capital does not moderate the significant effect of the Zakat Performance Ratio on Return on Assets, so hypothesis 7 is rejected.
8. Intellectual Capital does not moderate the significant effect of the Islamic Income Ratio on Return on Assets, so hypothesis 8 is rejected.
9. Intellectual Capital does not moderate the significant influence of the capital-equity ratio on Return on Assets, so hypothesis 9 is rejected.
10. Intellectual Capital does not moderate the significant influence of Corporate Social Responsibility on Return on Assets, so 10 is rejected.

**LIMITATIONS**

Based on this research, there are strengths and limitations. The limitations of this research are that at the time the research was conducted, there was an economic crisis in the era of the COVID-19 pandemic, so this research cannot be described under normal economic conditions. Therefore, further research is needed under normal economic conditions.

## **IMPLICATIONS**

1. Theoretical Implications. For academics, this research can be a source of reinforcement of knowledge and information related to the variables studied. It is hoped that it will provide benefits to increase insight and knowledge and a means to apply knowledge during their studies. Further research is expected to add broader research objects and other industries to the latest research period.
2. Practical implications. For investors, the results of this study can be used as a consideration for investors in making investment decisions in the hope of getting a good return. For Islamic Banks, the research results are expected to be used as information and material for improving and increasing profits.

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