

# The role of third-party funds on the effect of intellectual capital and zakat performing ratio on firm performance in Islamic banks

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## Abstract

**Purpose** - This study aimed to examine the effect of intellectual capital and zakat performing ratio on the firm performance of Islamic Banks with third-party funds as the moderating variable.

**Method** - This study included all Islamic Banks registered with the Financial Services Authority (OJK) from 2014 to 2020 which were selected using a purposive sampling method that included financial and annual reports, yielding 77 companies as samples. Data were obtained from the Indonesia Stock Exchange and tested using SPSS.

**Result** - The results showed that intellectual capital has a positive effect on ROA and ROE, while the zakat performing ratio has no effect on ROA and ROE. The results showed that third-party funds cannot moderate the effect of intellectual capital on firm performance, and third-party funds cannot moderate the effect of the zakat performing ratio on firm performance.

**Implication** - In order to improve firm performance, Islamic Banks in Indonesia must focus on factors that can increase customer and prospective customer trust in Islamic Banks.

**Originality** - This study used third-party funds as a moderating variable to complete the research gap on the effect of intellectual capital and the zakat performing ratio on firm performance.

**Keywords:** intellectual capital; zakat performing ratio; third-party funds; ROA; ROE



## Introduction

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Islamic Banks have a critical role in establishing a more competitive banking system based on profit-sharing and usury principles. As a result, Islamic Banks play a role in running the economic system from an Islamic perspective. The presence of Islamic Banks is very popular as a place to run an Islamic-based economy because there is no usury, ease of procedure, flexibility, profit, and performance which is considered better than conventional banks. This creates competition between Islamic and conventional banks in the domestic banking market.

Sgambati (2019) explained that banks are generally a place to collect funds in the form of deposits to be channeled back to the community in the form of credit. According to Law No. 21 of 2008, Islamic banking is an BUS and UUS in carrying out economic activities. According to OJK, Islamic Banks aim to participate in just, equitable and equitable national development. In addition, Islamic Banks perform social functions in the form of *baitul mal*. Social procedures are carried out while keeping the law and social processes with the provisions of laws and regulations and *fatwas* of Islamic institutions.

Parsa (2022) explained that the profitability of Islamic Banks is smaller than that of conventional banks. This research focuses on the financial performance of Islamic banks listed on the Indonesia Stock Exchange. Companies must improve operational and financial performance to improve an excellent corporate image. If the company's performance is appropriately reported, stakeholders and the public will likely increase their trust. In this case, financial performance is measured by the percentage of return on assets (ROA) and return on equity (ROE) of companies listed on the Indonesia Stock Exchange 2014-2020. The market share of Islamic Banks has shown 5% in the last 5 years, with only a 1% increase. In March 2018, this ratio was recorded at 1.23%, compared to 1.48% in 2017, until finally in 2019, the market share of the total disbursed financing assets experienced quite rapid growth, as seen in the first achievement of PYD 2019 of 353.9 billion rupiah. This phenomenon prompts the researchers to conduct a study to look at the

factors that contribute to the profitability of Islamic Banks. According to Chowdhury et al. (2019), profitability is a measure of banking performance that is calculated using Return On Assets (ROA) and Return On Equity (ROE). ROA compares the company's total assets to the return on assets from after-tax income. At the same time, in the eyes of investors, ROE is a measurement tool when compared to the company's model.

Intellectual capital is a factor that causes profitability by adding value to the company through intellectual property and technology. As a result, each of the major components of intellectual capital has a direct impact on profitability. The research of Lu et al. (2021); Smriti & Das (2018); Xu & Liu (2020), revealed that intellectual capital affects performance. This demonstrates that intellectual capital can demonstrate investment in internal and external resources in the previous year, demonstrating its importance in increasing profitability. Meanwhile, research by Xu & Zhang (2021a), (2021b) finds no relationship between intellectual capital and firm performance. As a result, stakeholders must be able to apply intellectual capital to improve firm performance.

Zakat performing ratio is one of the factors that contribute to profitability. Nomran & Haron (2022) explained that zakat replaces conventional performance indicators so that the more wealth, the more zakat must be paid. Research by Al-Homaidi et al. (2020), Nomran & Haron (2022) discovered effective results, while research by Bouheni et al. (2021), Nomran & Haron (2020), discovered no effect.

Given the research gap between the effect of Intellectual Capital and the Zakat Performing Ratio on the firm performance of Islamic Banks in Indonesia, this study added third-party funds as a moderating variable. Kustina et al. (2019) stated that third-party funds are originating from the public in the form of demand deposits, savings, and time deposits. As a result, their existence has an immediate impact on profitability. Therefore, the formulation of the problems in this study are: 1) Does intellectual capital have a positive effect on ROA and ROE?, 2) Does the zakat performing ratio have a positive effect on ROA and ROE?, 3) Do third-party funds moderate the effect

of intellectual capital on ROA and ROE?, and 4) Do third-party funds moderate the effect of zakat performing ratio on ROA and ROE?.

This study contributes to the understanding that Islamic Banks in Indonesia can improve their firm performance with intellectual capital, zakat performing ratios, third-party funds, and other factors. Therefore, it is hoped that an increasing number of customers and prospective customers will be able to deposit funds in Islamic Banks in Indonesia.

## **Literature Review**

### **Resource-Based Theory**

According to Wernerfelt (1984), Resources Based Theory (RBT) is a theory developed to describe company advantage, according to which competitive advantage arises when a company has professional resources that are not available in other companies. This theory examines how organizations can use and manage existing resources in the form of tangible and intangible assets. One of the intangible assets is intellectual capital.

This RBT explains that if a company can manage intellectual capital optimally, all company resources, including structural capital, invested capital, and employees (human capital), can provide added value. The conclusion from this theory is how companies create value (added value) by managing the existing intellectual capital in the company.

### **Third-Party Funds**

According to Anggari & Dana (2020), third-party funds come from the public in the form of demand deposits, savings, and time deposits. If the nominal amount is large, the bank can also channel it back as large amounts of credit. Lending will benefit both banks and customers. Banks will accept cash as channeling institutions. The funds can be used to fund the bank's operational activities.

Hermuningsih (2019) explained that third-party funds are made up of current accounts, which include savings that are withdrawn using a giro,

savings that are disbursed using a passbook, and deposits whose withdrawals are subject to the agreed-upon timeframe. Third-party funds are the most important source of funds for a bank's operational activities and their ability to finance operational activities from third-party funds (Anggari & Dana, 2020). By increasing third-party funds, the funds allocated for lending will increase, resulting in higher bank revenues and higher bank profitability.

### **Intellectual Capital**

According to Al-Htaybat et al. (2019), intellectual capital is an intangible corporate asset that is reflected in intellectuality. As a result, the company value is higher when compared to other companies, indicating that this variable is quite competitive in business competition. Chowdhury et al. (2019) stated that intellectual capital is managed via human capital (HC), structural capital (SC), and Capital Employed (CE). Intellectual capital can be measured through Value Added (VA), which is the measurement of total income minus total expenses, Value Added Capital Employed (VACA), including the measurement of equity, Value Added Human Capital (VAHU) which is measured through VA divided by HU, Structural Capital (STVA) which is measured with SC (VA-HC) versus VA, and VAIC as measured by the combination of VACA, VAHU, and STVA.

### **Zakat Performing Ratio**

Alamad (2019) explained that zakat is an obligation stipulated in Islam. Islamic banks issue tests to replace conventional performance indicators based on sharia principles. The zakat performing ratio compares the amount of zakat paid to the total net worth. Net purchases are calculated by subtracting debts from total assets. If the value of the property is small, the zakat paid is also small, and vice versa. If Islamic banks carry out sharia principles systematically, the public will be more confident that their transaction activities are in accordance with Islamic law.

### **Firm Performance**

According to Wamba-Taguimdje et al. (2020), firm performance is a company's attempt to generate profits. Firm performance has a direct impact on the company's investor policy. If the firm's performance is large, the company will invest by increasing its funds, and vice versa, and will be able to bring in new investors. This ratio is calculated by taking into account all of the factors that the company uses to generate profits. This ratio is supported by the number of sales and investment, implying that if large profits are desired, sales and investment must be increased.

Dalwai & Salehi (2021) explained that ROA measures firm performance across all assets. If the company's performance appears to be big, its future may be more secure. This means that if the ROA ratio improves, the profit and the company's position improve as well. Profit before taxes is used to calculate ROA.

Hutauruk & Ghozali (2020) explained that ROE is a measuring tool in obtaining company profits that is guided by the company's net profit compared to the amount of capital. This ratio is also affected by the size of the company's debt, with high debt implying that this ratio will rise.

### **Hypothesis Development**

According to Wang & Juo (2021), intellectual capital is an intangible asset in the form of intelligent knowledge that, when managed properly, will increase the effectiveness and efficiency of the company's strategy. Dang et al. (2019) explained that profitability will automatically increase if this variable shows an increasing number. This statement is supported by the influential research of (Castro et al., 2021).

*H<sub>1</sub>: Intellectual capital has a positive effect on ROA*

*H<sub>2</sub>: Intellectual capital has a positive effect on ROE*

Nomran & Haron (2022) described that the zakat performing ratio is a measure of all company assets issued to serve zakat as a substitute for the same profit ratio when measured through conventional performance.

According to Fidiana (2020), if the zakat ratio adheres to the understanding that if someone gives zakat, his/her wealth will not decrease but will increase. This statement is supported by Nomran & Haron (2022) study and effective results. Ibrahim et al. (2020) explained the performance zakat ratio as a comparison of how much Zakat is paid in relation to net income, implying that if net income is high, the Zakat paid is also of high nominal value. This statement is supported by a study by Kustina et al. (2019) which yielded positive results

*H<sub>3</sub>: Zakat performing ratio has a positive effect on ROA*

*H<sub>4</sub>: Zakat performing ratio has a positive effect on ROE*

According to Bossone (2021), third-party funds are funds in the form of demand deposits, savings, and time deposits that offer the opportunity to earn a large nominal income. Pooya et al. (2020) explained that if sufficient funds are collected, both the customer and the bank will mutually benefit. This statement is supported by research by Hermuningsih (2019), whose results are influential. Anggari & Dana, (2020) explained one of the internal factors that influence the distribution of Islamic bank financing is third-party funds. This follows Priyadi et al. (2021) research which states that the size of the third-party funds will affect the distribution of funds in Islamic commercial banks. If a bank wants to increase profits and run its operations every day, a large third-party funds is needed. By having a large third-party funds, the bank will make financing so that it benefits the bank.

*H<sub>5</sub>: Third-party funds moderate the effect of intellectual capital on ROA*

*H<sub>6</sub>: Third-party funds moderate the effect of intellectual capital on ROE*

*H<sub>7</sub>: Third-party funds moderate the effect of the zakat performing ratio on ROA*

*H<sub>8</sub>: Third-party funds moderate the effect of the zakat performing ratio on ROE*

The research framework of third-party funds that moderates the effect of intellectual capital and zakat performing ratio on firm performance, where firm performance is measured in ROA and ROE, is as follows:

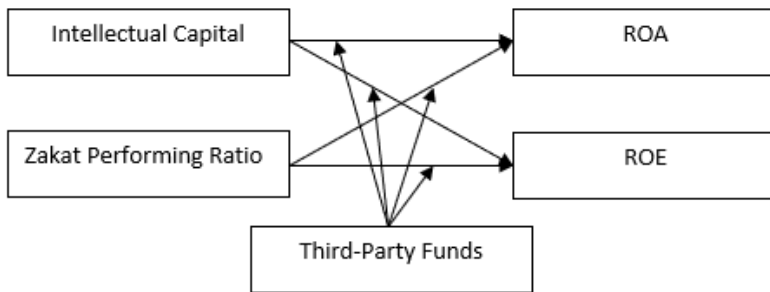


Figure 1. Research Framework

### Research Methods

This study employed quantitative methods. The population in this study was Islamic banks registered with the Indonesia Stock Exchange from 2014-2020 with a total 34 companies. Purposive sampling was used in this study, covering those with annual reports and financial reports for 2014-2020, obtaining a sample of 77 companies. SPSS was used to test direct and moderation relationships. The regression equation for the direct relationship and moderation in this study is as follows:

$$ROA = \alpha_1 + \beta_1 IC + \beta_2 ZPR + \varepsilon_1$$

$$ROE = \alpha_1 + \beta_1 IC + \beta_2 ZPR + \varepsilon_2$$

$$ROE = \alpha_2 + \beta_2 IC + \beta_3 ZPR + \beta_4 TPF + \beta_5 TPF * IC + \beta_6 TPF * ZPR + \varepsilon_3$$

$$ROA = \alpha_2 + \beta_2 IC + \beta_3 ZPR + \beta_4 TPF + \beta_5 TPF * IC + \beta_6 TPF * ZPR + \varepsilon_4$$

Ousama et al., (2020) explained that intellectual capital is a measuring tool in assessing company assets, with the following formula:

1. Calculation VA
 

VA	=	OUT - IN
OUT (Output)	=	Total income



- IN (Input) = Operating expenses
2. Calculation VACA
    - VACA =  $VA / CE$
    - CE = Total equity
  3. Calculation VAHU
    - VAHU =  $VA / HC$
    - HC = Employee expenses
  4. Calculation STVA
    - STVA =  $SC / VA$
    - SC =  $VA - HC$
  5. Calculation VAIC
    - VAIC =  $VACA + VAHU + STVA$

Nurpermana (2021) explained that ZPR is a zakat performance measurement tool with the zakat formula compared to net worth multiplied by 100%. Hermuningsih (2019) explained that third-party funds originate from the wider community consisting of savings, demand deposits, and time deposits.

## Results and Discussion

Table 1. shows descriptive statistics of the minimum and maximum values of each variable, including return on assets of 0.00 and 0.03, return on equity of -0.01 and 0.22, the intellectual capital of 0.17 and 5.30, zakat performing ratio of 0.10 and 0.99, and third-party funds of 0.00 and 33.85 respectively.

Table 2 shows the Pearson correlation test, showing a positive correlation between intellectual capital and asset returns, with a significance value of 1%. Likewise, there is a positive correlation between intellectual capital and return on equity, with a significance value of 1%.

In tables 3 and 5, simple linear regression testing on model 1 and 2 examines the effect of intellectual capital and zakat performing ratio on ROA and the effect of intellectual capital and zakat performing ratio on ROE. The effect of intellectual capital on ROA yields a t value of 4.83 with a significance value of 0.00 (sig <1%). This demonstrates that intellectual capital has a

positive effect on ROA, so H1 is accepted. The effect of intellectual capital on ROE yields a t-value of 3.56 with a p-value of 0.00 (sig < 1%). This demonstrates that intellectual capital has a positive effect on ROE, so H2 is accepted. The effect of the Zakat Implementation Ratio on ROA has a t value of -0.41 with a significance value of 0.69 (sig>10%). This demonstrates that the Zakat Implementation Ratio has no effect on ROA, so H3 is rejected. The effect of the Zakat Implementation Ratio on ROE has a t value of -1.07 with a significance value of 0.29 (sig>10%). This shows that the Zakat Implementation Ratio has no effect on ROE, so H4 is rejected.

**Table 1. Descriptive Statistics Test Result**

Variable	N	Min	Max	Mean	Std. Dev
ROA	77	0.00	0.03	0.01	0.01
ROE	77	-0.01	0.22	0.08	0.06
IC	77	0.17	5.30	2.72	0.94
ZPR	77	0.10	0.99	0.38	0.26
TPF	77	0.00	33.85	27.88	6.94

**Notes:** This table presents descriptive statistics for the dependent, independent, and moderating variables. The sample consists of Islamic Banks listed on the Indonesia Stock Exchange from 2014 to 2020.

**Table 2. Pearson Correlation**

Variable	ROA	ROE	IC	ZPR	TPF
ROA	1				
ROE	-	1			
IC	0.58*** (0.00)	0.51*** (0.00)	1		
ZPR	-0.00 (0.97)	-0.09 (0.44)	0.07 (0.56)	1	
TPF	-0.26** (0.02)	-0.02 (0.83)	0.08 (0.51)	0.04 (0.73)	1

**Notes:** This table presents the Pearson correlation for the dependent, independent, and moderating variables. The sample consists of Islamic Banks listed on the Indonesia Stock Exchange from 2014 to 2020. \*\* & \*\*\*, showing a significance level of 5% and 1%, respectively.

**Table 3. Regression Analysis**

Variable	(1) ROA	(2) ROE
IC	0.49*** (4.83)	0.38*** (3.56)
ZPR	-0.04 (-0.41)	-0.12 (-1.07)
R <sup>2</sup>	0.24	0.15
R <sup>2</sup> _a	0.22	0.13
N	77	77

**Notes:** This table presents the regression analysis for the dependent and independent variables. The sample consists of Islamic banks listed on the Indonesia Stock Exchange from 2014 to 2020. \*\*\* indicates a significance level of 1%.

**Table 4. The Moderated Regression Analysis (MRA)**

Variable	(3) ROA	(4) ROE
IC	-0.21 (-0.22)	0.15 (0.15)
ZPR	-0.48 (-1.60)	-0.12 (-0.36)
TPF	-0.81 (-1.22)	-0.19 (-0.25)
TPF*IC	0.88 (0.75)	0.29 (0.22)
TPF*ZPR	0.50 (1.59)	0.03 (0.98)
N	77	77

**Notes:** This table presents a moderated regression analysis (MRA) to test the moderating variable. The sample consists of Islamic banks listed on the Indonesia Stock Exchange from 2014 to 2020.

Tables 3 and 4 show testing moderation with moderate regression analysis (MRA) in models 3 and 4 to test third-party funds to moderate the effect of intellectual capital and zakat on performance ratio on ROA and the effect of intellectual capital and zakat on performance ratio on ROE. First,

third-party funds that moderate the effect of intellectual capital on ROA have a significance of 0.46 (sig>10%). This indicates the presence of a moderator homologist, so that H5 is rejected. Second, third-party funds that moderate the effect of intellectual capital on ROE have a significance of 0.83 (sig>10%). This indicates the presence of a moderator homologist, so that H6 is rejected. Third, third-party funds that moderate the effect of the Zakat Performing Ratio on ROA have a significance of 0.12 (sig>10%). This indicates the presence of a moderator homologist, so that H7 is rejected. Finally, third-party funds that moderate the effect of the Zakat Performing Ratio on ROE have a significance of 0.98 (sig>10%). This indicates the presence of a moderator homologist, so that H8 is rejected.

**Table 5. Results of the Hypothesis Test**

	Hypothesis	Regression Coefficient	T Value	p-Value	Notes
H1	IC → ROA	0.49	4.83	0.00***	Significantly Positive
H2	IC → ROE	0.38	3.56	0.00***	Significantly Positive
H3	ZPR → ROA	-0.04	-0.41	0.69	Not Significant
H4	ZPR → ROE	-0.12	-1.07	0.29	Not Significant
H5	TPF*IC → ROA	0.88	0.75	0.46	Not Moderating
H6	TPF*IC → ROE	0.29	0.22	0.83	Not Moderating
H7	TPF*ZPR → ROA	0.50	1.59	0.12	Not Moderating
H8	TPF*ZPR → ROE	0.03	0.98	0.98	Not Moderating

**Notes:** This table presents a summary of the results of the hypothesis test. The sample consists of Islamic banks listed on the Indonesia Stock Exchange from 2014 to 2020. \*\*\* indicates a significance level of 1%.

According to Bayraktaroglu et al. (2019), intellectual capital is a company's intellectual property. As a result, as this variable rises, so will the profitability. If properly managed, added value will rise as well. According to Cornell & Damodaran (2020), if the company's value is high, investors will invest heavily in order to increase profitability. These findings are consistent with the findings of Xu & Zhang (2021a), which yielded influential results.

Intellectual capital is a resource in the form of knowledge that can be used to generate future economic benefits. As a result, this variable is related to value creation in terms of increasing competitive advantage. If companies can compete, the business world will have a highly competitive atmosphere. According to Birindelli et al. (2019), IC in banking has the most intensive and homogeneous position when compared to other sectors. These findings are consistent with the findings of Xu & Zhang (2021a), whose findings are influential, firm's, managers must realize the important role of intellectual capital to be able to allocate these resources efficiently for a comprehensive increase in value creation.

According to Nomran & Haron (2022), the zakat performing ratio in Islamic banks is made up of internal entities (assets) and external entities (customers). As a result, the total zakat ratio issued is typically low, with the zakat ratio outside the entity dominating. As a result, zakat has no impact on profit.

Zakat is an Islamic order that is one of the goals of establishing Islamic accounting. According to Nomran & Haron (2022), Islamic banks must consider the zakat performing ratio as a substitute for conventional performance. In other words, the bank's assets are derived from the net profit assets reported in the financial statements. As a result, if the wealth is great, the zakat must be increased as well. However, it turns out that this was not realized in the Islamic banks used as the study's sample. This is evident from the Zakat value of only 5.4%, which is insufficient to affect the profitability that can be obtained in the current year's profit. This result is in line with the research of Nomran & Haron (2022) whose results had no effect, managers seeking to improve company performance must invest in human resources by enhancing the skills and capabilities of employees through continuous learning.

The test results show that third-party funds cannot moderate the effect of intellectual capital on ROA and ROE. This indicates that intellectual capital is a strategic resource that organizations can use to improve firm performance (Bayraktaroglu et al., 2019). Therefore, in achieving superior performance,

companies can develop intellectual capital and use it efficiently. However, funds received from the public cannot solve financial problems because problems in financing are often caused by external factors such as the state's economic condition.

According to the test results, third-party funds cannot moderate the effect of the zakat performing ratio on ROA and ROE. Therefore, the zakat performing ratio can provide a positive outlook for customers in Islamic banks to provide good firm performance. Third-party funds received from customers, on the other hand, cannot positively influence the zakat performing ratio in order to improve firm performance.

### **Conclusion**

In this study, intellectual capital has a positive effect on ROA and ROE. These results suggest that the use of intellectual capital can be a good indicator of success to be invested efficiently in business and improve the firm performance of Islamic banks in Indonesia. The zakat performing ratio has no effect on ROA or ROE. This is because Islamic banks in Indonesia that pay zakat continue to fall short of the payment limit percentage, namely 2.5% of assets that have reached the nishab and are not in line with the high net assets owned. Third-party funds are unable to moderate the impact of intellectual capital and zakat performance ratios on ROA and ROE. External funds do not support intellectual capital and zakat performing ratios in achieving firm performance improvement strategies. This is because several internal factors (such as leverage, company size, etc.) can support intellectual capital and zakat performing ratios in improving firm performance. According to the findings of this study, increasing the firm performance of Islamic banks in Indonesia requires a focus on intellectual capital as a business strategy. Furthermore, internal and external factors in their business strategy must be taken into account. Further research may use other factors that can improve firm performance, such as car adequacy ratios, profit sharing ratios, Islamic performance, etc. Additionally, contingent variables

such as mediation and moderation of bridging gaps in previous research can be included.

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