

Submitted 2023-07-14 | Reviewed 2024-09-23 | Revised 2024-04-22 | Accepted 2024-05-06

## **Impact of Risk and Competition on Indonesian Islamic Bank Performance: Panel Data Evidence**

**Issa Hamadou<sup>1\*</sup>**

Email: [issa.hamadou@uiii.ac.id](mailto:issa.hamadou@uiii.ac.id)

Universitas Islam International Indonesia

### **Abstract**

This paper examines the impact of banking risk and competition on the performance of Islamic banks in Indonesia. The study used financing to deposit ratio (FDR) as a representation of liquidity risk, non-performing financing (NPF) as a representation of financing risk, and the operating expense ratio (BOPO) as a representation of operational risk. Regarding competition, market share (MS) and market concentration (MC) proxies by the Hirschman–Herfindahl Index (HHI) were used. Time series data were collected from 14 Islamic banks operating in Indonesia for the period 2010–2020 and the Least Square method was used. It was found that liquidity risk affects positively the profit of Islamic banks, while financing risk and operational risk impact negatively the variation of the profit. Only market share, influences the variation in the profit of Islamic banks in terms of competition level. Therefore, the Indonesian government should apply a competition policy to the Islamic banking sector in order to increase their profitability and improve economic growth. For future research, it is recommended to include other Islamic finance institutions like Islamic rural banks and Islamic takaful (Islamic insurance) to analyse these effects in a general way.

**Keywords:** Banking risk; Competition; Panel data Indonesia

### **Abstrak**

*Tulisan ini mengkaji dampak risiko perbankan dan persaingan terhadap kinerja bank syariah di Indonesia. Penelitian ini menggunakan financing to deposit ratio (FDR) sebagai representasi risiko likuiditas, non-performing financing (NPF) sebagai representasi risiko pembiayaan, dan rasio biaya operasional (BOPO) sebagai representasi risiko operasional. Mengenai persaingan, proksi pangsa pasar (MS) dan konsentrasi pasar (MC) dengan Indeks Hirschman – Herfindahl (HHI) digunakan. Data time series dikumpulkan dari 14 bank syariah yang beroperasi di Indonesia periode 2010–2020 dan digunakan metode Least Square. Ditemukan bahwa risiko likuiditas berpengaruh positif terhadap laba bank syariah, sedangkan risiko pembiayaan dan risiko operasional berpengaruh negatif terhadap variasi laba. Hanya pangsa pasar saja yang mempengaruhi variasi keuntungan bank syariah ditinjau dari tingkat persaingan. Oleh karena itu, pemerintah Indonesia harus menerapkan kebijakan persaingan pada sektor perbankan syariah untuk meningkatkan profitabilitas dan meningkatkan pertumbuhan ekonomi. Untuk penelitian di masa depan, disarankan untuk melibatkan lembaga keuangan Islam lainnya seperti Bank Perkreditan Rakyat Islam dan Takaful Islam (asuransi Islam) untuk menganalisis dampak ini secara umum.*

**Kata Kunci:** *Risiko Perbankan; Kompetisi; Data panel Indonesia*

## **INTRODUCTION**

The global financial crisis helps us to focus on banking competition and the role of the state in competition policies among policymakers and scholars (that is, policies and laws that affect the extent to which banks compete). On one hand, Mazumder et.al (2010), Mazzucato(2013), Kim et.al(2013) are a few among those that claim the financial instability was caused by increased financial innovation and competition in industries like subprime lending and on the other hand Beck(2004), World Bank (2013), are concerned that the crisis and government assistance to the biggest banks increased banking concentration, decreasing access to credit and competition, and perhaps causing future instability due to the moral hazard issues associated with too-big-to-fail organizations. This shows that the banking system's insecurity has been exacerbated by the financial crisis. Since then, governments, banking regulatory authorities and bank executives have become increasingly concerned about risk-taking behaviour. Major risk occurs in the banking sector because of leaders' desire to maximize profits, which leads them to be risk takers. According to Anginer et.al. (2014), the risks that banks face are primarily caused by competition in the banking sector. Because of the competition, they are more willing to take risks, making the banking system less vulnerable to shocks.

In the global financial industry, Islamic finance has emerged as one of the most rapidly growing sectors. The tenacity of Islamic banking organizations after the financial crisis has inspired not only nations with majorities of Muslims but also nations with minorities of Muslims, such as Britain, Germany, France, and the USA to provide Islamic financial services in their conventional banking sector (A.Ali et al. 2019). This shows that Islamic banking industries have put trust in investors given the fact that they are profit and risk-sharing financial systems compared to the conventional banking system. This points to the fact that, the demand for Islamic banking products will rise due to the failure of the conventional banking system. Therefore, the rise in demand for sharia banking products brought about the financial industries into a competitive market.

The structural approach and the non-structural approach are the two main empirical methods used to measure competition in the banking literature. The structure-conduct-performance (SCP) paradigm is used in the structural method to model bank competition on the premise that banking organizations' market strength rises with industrial concentration, directly connecting industry structure to competitive conducts. The SCP to evaluate the market structure's competitive environment uses the Herfindahl-Hirschman index (HHI) and concentration ratios of major firms (CR). Increased potential for collusion between banks is thought to result from increased concentration, which will raise pricing and profitability (Yildirim, 2002).

Many studies have been conducted to investigate the impact of risky bank competition on profitability, Boahene et.al. (2012). However, researches in the Islamic banking sector that combined the analysis of risk and competition are limited. This paper seeks to fill this gap by investigating the impact of banking risk and competition on the

performance of Islamic banks in Indonesia. To accomplish this, the study considers concentration ratios (CR) and market share as proxies of competition, and financing risk, liquidity risk, and operational risk as proxies of banking risk. The following is the paper's outline: The second section contains the literature review of the study. The methodology and data are discussed in the third section, and the empirical results are discussed in the fourth section. The final section contains the research's conclusion and recommendations.

## **LITERATURE REVIEW**

### **Risk, Competition and Performance of Banking System**

Ever since the onset of the global financial crisis in 2008, government agencies and scholars have focused on the direct authority of systemic risk in order to stabilize the financial sector. There have been numerous studies in various countries that examine the impact of banking risk and competitive pressure on banks' profitability. A few of these studies will be discussed below.

Staikouras and Wood (2004) discussed the findings on financial reporting quality studies and categorize the predictors of Western banks' performance. As per the estimates, the profitability of European banks is influenced not only by management decisions, but also by changes in the external macroeconomic environment. The findings contradict previous researches that looked at the framework relationship in the Western financial sector and discovered that concentration and or market share variables had a positive impact on bank earnings.

Chronopoulos (2015) reviewed the relationship between liquidity and profitability for a large sample of US banks from 1984 to 2010. He investigates the extent to which short-run profits persist and whether this persistence is influenced by regulatory changes and the recent financial crisis. The findings suggest that, while not instantaneously, the competitive process reduces positions of abnormal profitability. There is also evidence that regulatory changes implemented in the 1990s had an impact on both the level and persistence of bank profitability and also the financial crisis of 2007–2010 appears to have increased the persistence of banks' profitability.

Sufian (2011) investigated bank profitability in Southeast Asia. It was discovered that Korean banks with lower levels of liquidity are more profitable. The study also suggested that a greater diversification of bank income sources towards derivative instruments and other fee-based activities is beneficial. The effects of credit risk and overhead costs are always negative, regardless of whether macroeconomic and financial conditions are controlled. Business cycle effects, particularly inflation, have a substantial top player effect on financial performance. The market share of the national banking system has a positive and significant impact on bank performance.

Furthermore, Liu and Wilson (2010) investigated the profitability of Japanese banks in the aftermath of the country's major financial crisis in the nineties. They also looked into the elements that influence banking performance for a sample of banks with various governance mechanisms. It was discovered that well-capitalized, efficient banks with lower credit risks outperform their less-capitalized, less-efficient counterparts with higher credit risks. More recently, from 2003 to 2011, Yong Tan (2016) investigated the

effects of risk and competition on earnings in the country's banking system. Using the Simplified Method of Moments framework estimator, the findings concerning the effects of competitive pressure and risk, revealed a positive impact on Chinese bank profitability.

All the above studies were conducted to examine the conventional banks, but there are also some scholars who investigated their analysis on the effect of bank risk and competition on profitability in the field of the Islamic banking sector. Saiful (2019) investigated the impact of credit, liquidity, and operational risk management on Indonesian bank performance in the years between 2012-2016, the sample included 26 conventional banks and 11 sharia banks. This study discovered that credit and liquidity risk management have a beneficial impact on Indonesian bank performance as evaluated by return on asset (ROA) and return on equity (ROE). Moreover, this study discovered that operational risk management had a beneficial impact on Indonesian bank performance as assessed by ROA, ROE, and ROI as well as net interest margin.

Irwan et.al. (2018) investigated the factors influencing bank profitability in Shariah rural banks in Indonesia. Using a sample of 151 Indonesian Islamic rural banks, the researchers discovered that margins are influenced by both bank- and regional-level characteristics. Two major bank-level variables that have a considerable impact on bank margins are competition and revenue diversification. In less competitive situations and with less revenue diversification, Islamic rural banks boost bank margins. Their findings also demonstrate that all regional-level variables have a significant impact on bank margins, showing that regional differences are important in determining margins. It implies that competition factors have a greater impact on banks with less loan contract diversification and a higher proportion of profit-and-loss sharing and lending.

Abduh (2017) examined the competitive condition and market power of 27 Indonesian Islamic banks. The study's findings validated the position of the Islamic banking business in Indonesia, which operates with a larger degree of market strength, resulting in a less competitive market. During the tested era, Islamic banks earned their income through monopolistic competition. This study also discovered a negative but negligible association between concentration and competition, indicating that market dominance for top enterprises in the Indonesian Islamic banking industry has decreased in recent years.

Similarly, Abdul-Rahman et al. (2018) investigated the effect of competition in the market on liquidity management for Malaysian Islamic banks. The study examined 17 Islamic banks from 1996 to 2015 using the panel regression method. According to the findings, Islamic banks need a certain level of market power to manage liquidity risk. Furthermore, Abbas and Arizah (2019) conducted a study on the marketability of sharia banks depending on the market share and concentration. Data from 2011 to 2016 was used. After applying Partial Least Square estimation method, they discovered that market value has a positive effect on the profitability of sharia banks in Indonesia. This means that the level of competition measured by concentration and market share affect positively the variation of Return on Assets (ROA) and Return on Equity (ROE). It also suggests that the more the concentration of sharia banking in the market, the more the

level of profit. Having a big market share will increase sales which further influences the performance of the Islamic banks in Indonesia.

Recently, a study conducted by Wiranatakusuma (2020) explored the risks exposed by sharia banks in Indonesia. They used monthly time series data from 2010:M1 to 2018:M8 for this purpose. They applied VECM in order to look at the short-run and long-run relationship between banking risk and see which is the most impactful on Indonesian Islamic banks performance. Their findings indicated that, given the fact that Islamic banks can absorb transmitted risk, particularly that resulting from funding and operational issues, which is demonstrated by the absence of liquidity issues, liquidity risk is manageable and sound. Financing risk is thought to be a significant factor in operational risk. Operational risk is important for Islamic institutions since it is quite attentive to the financial side of the challenges.

### **Indonesian Islamic banking system**

The development of sharia banking in Indonesia began long before a formal legal basis for sharia banking operations was established. Prior to 1992, several non-bank financial institutions that used share base contracts were established. This evidence demonstrates a public need for the existence of financial institutions that operate in accordance with Sharia principles. In order to meet the public's needs for the establishment of a new banking system, the government has implicitly permitted sharia banking operations in Act No. 7 of 1992 Concerning Banking, which is elucidated in the Government Gazette.

There was Bank Applying Share Base Principles Decree No. 72 of 1992. This set of regulations has served as the legal foundation for sharia banking operations in Indonesia. Between 1992 and 1998, there was only one sharia commercial bank and 78 sharia rural banks in operation. Act No. 10 of 1998 amending Act No. 7 of 1992 concerning banking came into force in 1998, providing a stronger legal foundation for the existence of a sharia banking system. The new Act No. 23 of 1999 concerning Bank Indonesia empowers the bank to conduct its operations in accordance with Sharia principles. Since then, the sharia banking industry has expanded rapidly. Sharia banking has coloured the banking industry, for the past 20 years. Indonesia's Islamic banking sector began to take shape with the establishment of PT Bank Muamalat Indonesia (BMI) in 1992.

In April 2020, Islamic financial market shares contributed up to 9.03 percent of Indonesia's financial system. This indicates an approximately 8% increase in position compared to 2019. The total asset value of Islamic finance in Indonesia, excluding Islamic capital, is approximately IDR 1,496.05 Trillion as of April 2020. In comparison to conventional acts, Islamic banking has shown potential growth over the last 20 years. Actually, there are 15 sharia banks operating in Indonesia. Therefore, Due to Indonesia's rapid development of Islamic banking, there is greater competition among Islamic banks to increase the quality of their services and draw in consumers. Numerous studies have revealed that the profit aspect influences how clients behave while selecting Islamic banks. The findings of a study by Husnelly (2003) and Mangkuto (2005) further support

the notion that the community's considerations while investing its money in Islamic banks is a determinant of return for the outcomes.

Through a review of the bank's financial performance and financial statements, factors influencing the outcomes can be identified. Among these factors, we have liquidity risk, credit risk and operational risk. In addition to the financial statements ratios, we also have typical factors that can assess the performance of Islamic banks. These factors are related to the competition in the banking sector. The present study tries to examine the impact of banking risk and competition factors on Indonesian Islamic banks performance.

## **RESEARCH METHODS**

### **Data and Selected Variables**

Data are collected from annual reports that were downloaded from the websites of each Indonesian Islamic bank that operated between 2010 and 2020. Three variables for the representation of banking risk were used in this study: Financing to Deposit Ratio (FDR) as a proxy for liquidity risk, non - performing financing ratio (NPF) as a proxy for financing risk, and the expense ratio (BOPO) as a proxy for operational risk.

For the first variable, Financing-to-deposit ratio (FDR) is selected, which is used to evaluate a bank's liquidity by comparing the total loans to total deposits in the same period. It is used to measure liquidity risk. Liquidity risk can be defined as the risk of incurring losses as a result of failing to meet payment obligations on time when they become due or failing to do so at a sustainable cost. Liquidity is consistently related to the performance of a company. It indicates the capability of the company to pay its debts and make a profit. Sufian (2011) investigated bank profitability in Southeast Asia. He discovered that Korean banks with lower levels of liquidity are more profitable. That means that the more a company is able to reduce liquidity risk, the more the profitability. Consequently, this will affect the performance of the company and it shows the ability of the company to meet the short and long-term debt. Hence this variable was chosen in order to look at the impact of liquidity risk in the context of Indonesian Islamic banks.

The second variable is Non-performing financing (NPF). This is used to assess the Bank credit risk, which can be communicated, by the number of bad loans or non-performing loans (NPL) in conventional banks and Non-Performing Financing (NPF) in Islamic banks. The study used this variable to assess credit. Credit risk is also defined as the probability of suffering a loss because of a borrower's failure to make loan payments or fulfill contractual commitments. It typically refers to the possibility that a lender won't get the principal and interest that is owed, which would disrupt cash flows and raise collection costs. Empirical works have found a positive impact of credit risk on the performance of banking institutions. Lawrence et al. (2020) investigated the impact of credit on the performance of South African commercial banks. After using Non-Performing Financing (NPF) as a representation of credit risk, it was found that there is a significant impact of credit risk on performance. Ali et al. (2019) for the case of Pakistani Islamic banks found similar results. It revealed that credit risk is negatively correlated with performance. Meanwhile, as the percentage of credit risk increases, the performance

of Islamic banks decreases and vice versa. Based on the important results regarding the impact of credit risk on the performance, the study used Non-Performing Financing (NPF) to represent the credit risk to look at the real impact of credit risk in the case of Indonesian Islamic banks.

Thirdly, Expenses ratio (BOPO) was chosen to represent operational risk of banking institutions. This simply refers to the expense ratio –a fee that must be paid by shareholders of a mutual fund or exchange-traded fund (ETF). According to Dendawijaya (2005), the Operating Expenses to Operating Income Ratio (BOPO) measures the proportion of operating expenses to operating income. It is used to assess the effectiveness and operational capacity of banks. According to Harfiah et al. (2016), BOPO ratio has a significant impact on the profitability of Islamic Indonesian Banks during 2010-2016. Indeed it is crucial to use this variable to examine the relationship between operational risk and performance of Islamic banks in Indonesia with different methods of estimation.

To analyse competition, the study has used market share as well as concentration ratio. Each of these variables is explained further below.

Market share and Market concentration (MS and MC: In economics, competition is a scenario where different economic firms are in contention to obtain goods that are limited by varying elements of the marketing mix such as price, product, promotion and place). In classical economic thought, competition causes commercial firms to develop new products, services and technologies.

A variety of measurements can be used to assess the level of competition. Scholars have developed SCP as a rational approach in the existing literature. Structure conduct performance (SCP) is a term used by Jeon and Miller (2005) and Khan and Hanif (2019) to describe market concentration and market share. Market share is calculated by dividing total assets in individual sharia banks by total assets in all sharia banks. This particular variable appears to be an accurate predictor of profitability. Mirzae et al. (2013) discovered a positive relationship between market share and profitability. The higher the market share, the higher the level of earnings.

Market concentration is proxied by the Hirschman–Herfindahl Index (HHI), which is used to calculate market structure size. According to Rettab et al. (2010), the relationship between market power and structure is linear, and the Hirschman–Herfindahl (HHI) Index can be used to identify it. This index, which is calculated by adding the square root of each individual bank's percentage market share in the industry, is used to determine the market's competitiveness. A market with an HHI of less than 1,500 is considered competitive, one with an HHI of 1,500 to 2,500 is considered moderately concentrated, and one with an HHI of 2,500 or greater is considered highly concentrated.

The explained variables given above are used as the independent variables to predict the value of the profitability. As for the dependent variable, return on assets (ROA) was chosen. This is a profitability ratio that measures the net income produced by total assets during a period. This is calculated by comparing net income to the average total assets. According to Dendawijaya (2005), ROA performance ratios are used to assess a bank's management capacity for overall profit. The more profitable the bank is,

the better it can demonstrate its capacity for big profits (Fahmi, 2012). A greater ROA suggests that a bank's financial performance is stronger since it can generate large profits from the usage of its assets. Therefore, if ROA increased, clients would likewise receive a higher degree of revenue share. Hence, for this study, this variable was selected as the representation of Indonesian Islamic banks' performance.

### **Econometric model**

The Econometric model is written as follows:

$$ROA(i, t) = \alpha + \beta_1 FDR(i, t) + \beta_2 NPF(i, t) + \beta_3 BOPO(i, t) + \beta_4 MS(i, t) + \beta_5 HHI(i, t) + \varepsilon_{i, t}$$

Where:  $\alpha$  = constant value,  $\beta$  = coefficients value,  $i$  = Islamic banks,  $t$  = year of observation,

ROA = Return on Assets

FDR = Financing to Deposit Ratio

NPF = Non-Performing Financing

BOPO = Expenses ratio

MS = Market share

HHI = Hirschman–Herfindahl Index

$\varepsilon_{i, t}$  = random error term

## **DISCUSSION**

### **Descriptive statistics**

Table 1 shows the descriptive statistics of the dependant variable (ROA) and independent variables: Financing to Deposit Ratio (FDR), Non-Performing Financing (NPF), Expenses ratio (BOPO), Market share (MS), Hirschman–Herfindahl Index (HHI). Among these statistics, we have Mean, Median, and standard deviation (SD).

For the dependent variable, Return on Asset (ROA), the highest value is 11.15% and the lowest value is -20,13%. It means that in the beginning, Islamic banks in Indonesia were operating at a loss. But with the passage of time, they succeeded to reach the rentability of their assets at 11.15%. This demonstrates the growing sector of Islamic banking in Indonesia. The average value of ROA is 1.44% meaning that the overall financial performance of Indonesian Islamic banks is quite good.

For the independent variable Financing to Deposit Ratio (FDR), the maximum value is 506% and the minimum value is 0.13% meaning that at the beginning, Islamic banks were able to have liquidity. But as the banks are growing, they started facing liquidity problems. The average value of the ratio is 92,94% and as it is lower than 110% it shows a good value of FDR. Therefore, in general, Islamic banks in Indonesia are more liquid.

For the variable NPF, the maximum value is 43.99% and the minimum value is 0%. This implies that at the starting point Islamic Banks had no credit risk. By the time the business started growing they faced credit risk problems. Though the ratio is quite



good as it is only 43.99%. The average value is amounted to 3.26% and it shows a good signal for Islamic banks. They are able to eliminate credit risk.

For the variable BOPO, the maximum value amounted to 84,87% and the minimum value was 9.8% meaning that in the beginning, Islamic banks didn't have the problem of operational risk but when they started growing, they started facing operational risk. But as the average value is only 87.87%, it implies that Islamic banks are quite good in managing operational risk.

For the variables MS the maximum value is 59.90% and the minimum value is 0.029% it means that 59.90% shares of the market belongs to one company. The average value of market share is 7.15% therefore it indicates quite a good signal. As for the variable HHI, the mean value is 3547.92 and this value is greater than 2500, so it indicates a highly concentrated market.

Figure 1 below shows the market share of each Islamic bank. It depicts that Bank Mandiri (12) has almost the 59% of the total market. The remaining shares belong to the other 13 Islamic banks. This means that the Islamic banking market is highly concentrated in the banking sector. The second Islamic bank has only 8%. In addition, if we look at the Hirschman–Herfindahl Index (HHI), the value ranges around 3547. This value is greater than 2500, so it indicates a highly concentrated market. Hence a competition policy is needed to ensure competitiveness and increase economic growth.

Figure 2 also shows the relationship between market share and performance of Indonesian Islamic banks. From the figure, it can be seen that in some Islamic banks the profit is negative (-21 and -11). Similarly, the market share (MS) has a low value. But in other Islamic banks, the market share (MS) is high and the profit is also high. The highest value of market share is about 59% implying that there is a high concentration of the Islamic banking market.

### **Results of Panel regression (POLS)**

The results from table 2 below show that  $R^2=0.7777$  meaning that 77.77% of the variations in Islamic banks' performance measured by Return On Asset (ROA) is explained by the banking risk and competition faced by these banks. Therefore, the model is overall significant.

The results further showed that Financing to Deposit Ratio (FDR) is positively significant with a p-value of (0.0000) less than 0.05 meaning that when FDR increases, the Islamic banks will also increase. Concurrently, the level of profitability of Islamic banks will increase the greater the FDR. Harfiah et al. (2016) found similar results. The larger the ability of the FDR ratio to increase, the more money banks can distribute (Muhammad, 2008). This implies that as a result of the bank making more money, more clients are also being paid at the same rate. Therefore, as the amount of revenue rises so does FDR. Hence, it can be said that liquidity risk affects Indonesian Islamic banking performance whereby the lower the liquidity risk, the higher the performance of the banks.

The variable Non-Performing Finance (NPF) is also significant with a negative relationship to profitability. Whence the amount of non-performing financing increases,

the profitability decreases and consequently it affects the performance of the banks. Ali et al. (2019) and Lawrence et al. (2020) found similar results. This points out to the fact that credit risks are significantly affecting the performance of Islamic banks. Indeed, higher financing risk will decrease profitability. Islamic banks are facing financing risks related to Mudarabah, Murabaha, and Musharakah. Due to moral hazard and adverse selection problems, the financing risks are high and more typical in Islamic banks. Therefore, when Islamic banks finance projects related to risk and profit sharing, the non-performance of the contract will affect the profitability of the banks and consequently this will also impact their performance.

The variable Expenses Ratio (BOPO) is also negatively significant. This indicates that high BOPO represents the fact that banks can not cover their expenses by using their operational revenues. Thus, there will be a potential operational risk implying that the level of profitability increases with the decrease of BOPO. The findings of this study confirm the idea that Islamic banks' cost-effectiveness can produce significant financial gains. The calculation was used to determine how much BOPO was helping in order to increase company performance to the approval of the concept by Donaldson and Davis (1991) although Harfiah et al. (2016) found contradictory results. Nevertheless, in financial theory the higher the operational cost the less the profit. Along these lines, there might be some variables missed while measuring the operation costs.

Globally, liquidity risk impacts positively the profit of Islamic banks while financing risk and operational risk impact negatively the variation of the profit. Despite this effect, banking risk has a great impact on the profitability of Islamic banks.

For the competition level, the variable Market share is positively significant. This indicates that the greater the market share, the more increased the level of profitability. Mirzae et al. (2013) found similar results. This can be illustrated by the fact that when a company has more market share in a sector, it shows the ability of this company to earn more profit. Consequently, market share is positively influencing the performance of Indonesian Islamic banks. However, the variable Hirschman–Herfindahl Index (HHI) is not significant at 5% because the p-value (0.9) is higher than 0.05 indicating that HHI does not influence the profitability because the market is highly concentrated by few Islamic banks.

Finally, only market share influences the variation of profit of the Islamic banks. For this reason, the Indonesian government should apply a fair competition policy in the Islamic banking sector in order to increase their profitability. Increasing the banking profit will also increase economic growth (Claessens & Laeven, 2005). The general view in economic literature is that bank competition promotes economic growth. Competition will help Islamic banks to be innovative, and create different financial products that will be suitable for the demand of customers in order to compete with their conventional counterparts.

## CONCLUSION

In this paper, the effects of banking risk and competition on the profitability of Indonesian Islamic banks for the period 2010–2020 were examined. Pooled ordinary least square regression (POLS) with panel data is used to analyse these effects. Our main findings can be summarized as follows: Firstly, liquidity risk influences positively the performance of Islamic banks, while financing risk and operational risk impact negatively the Islamic banks' performance. Despite this effect, banking risk has a great effect on the performance of Islamic banks. Secondly, at the competition level, only market share influences the variation in profit of the Islamic banks. From this point of view, Islamic bank managers should implement risk management techniques that help the banks to curb the adverse effect of credit risk. These techniques include credit approving authority, risk rating, prudential limits, loan review mechanism, risk pricing, and portfolio management. Furthermore, the Indonesian government should apply a competition policy in the Islamic banking sector in order to increase its profitability. Increasing banking profit will also increase economic growth. The general view in economic literature is that bank competition promotes economic growth. For future research, it is recommended to include other Islamic finance institutions like Islamic rural banks and Islamic takaful (Islamic insurance) to analyse these effects in a general way.

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