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An Empirical Re-Examination of the Islamic Banking Performance in Indonesia

Abdul Hamid[1], M. Shabri Abd. Majid[2*], and Lilis Khairunnisah[3]

[1]Department of Islamic Banking, Faculty of Islamic Economics and Business,
Islamic State Institute, Langsa, Aceh, Indonesia
[2]Department of Islamic Economics, Faculty of Economics and Business,
Syiah Kuala University, Banda Aceh, Indonesia
[*]Corresponding author: mshabri@unsyiah.ac.id
[3]Department of Management, Faculty of Economics and Business,
Syiah Kuala University, Banda Aceh, Indonesia

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Abstract
This study empirically re-examines the effects of bank-specific and macroeconomic determinants on the profitability of nine Islamic banks in Indonesia during the period 2009-2015. Four specific bank variables (i.e., the size of the bank, adequacy capital ratio, concentration ratio, non-performing financing), and three macroeconomic variables (i.e., economic growth, interest rate, and inflation) were, respectively, examined using the Generalised Least Squares (GLS) model. The study documented that the size of the bank, adequacy capital ratio, and economic growth positively contributed to the profitability of the Islamic banks. Meanwhile, the concentration ratio, interest rate, and inflation negatively influenced the profitability of the Islamic banks in the country. These findings implied that to enhance their profitability, the banks should increase their market shares and provide adequate capital ratio and run under the higher level of national economic growth. Additionally, ensuring the stability of interest rate and price level as well as promoting the awareness on the importance of having interest-free transaction for the Muslim via the Islamic banking institutions should be considered as strategic policies to promote the profitability as well as enhance the competitiveness of the Islamic banks in the biggest Muslim populous country, Indonesia.

Keywords: Performance; Banks' Specific Characteristics, Macroeconomic Determinants, Islamic Banking Institutions, Generalized Least-Square, INDONESIA.

Introduction

Bank plays an important role in the economy, considering its function as an intermediary institution, which channels funds from the surplus units to the deficit units in the financial sector (Ebert et al., 2014). As a business entity, the bank also collects funds from the public in

the form of savings and distributes to the community in the forms of credit and investment to improve people's living standards (Rivai and Arifin, 2010).

Since the establishment of the first Islamic bank, Bank Muamalat in 1991 in the country, Indonesia has adopted the dual banking system where the conventional banks were run in parallel with the Islamic banks. Unlike the conventional banks, the Islamic banks conduct their business activities based on *Shari'ah* principles, which are free from interest (*riba*), uncertainty (*gharar*), and gambling (*maysir*) (Central Bank of Indonesia, Laws of the Republic of Indonesia, No. 21, 2008).

As newly established banks in the country, the sustainability of Islamic banks is very much depending and their ability to improve their performances as well as enhance their competitiveness with the established conventional banks in the country. Given the rapid growth and high competition of Islamic banking industry with their conventional counterparts in Indonesia, thus, it is indeed important and timely to explore the determinants of Islamic banks performances.

Many previous studies have investigated factors affecting Islamic banks' performances and their measurements. Masood and Ashraf (2012) investigated whether bank-specific and macroeconomic determinants influence 25 Islamic banks' profitability in 12 selected countries of different regions. They found that banks with larger assets size, higher capital adequacy ratio, lower non-performing financing and efficient management lead to greater return on assets. Economic growth contributed positively to the banks' profitability. Abduh and Omar (2012) and Majid and Kassim (2015) also found that the economic growth in Malaysia has contributed to the development of Islamic banks and vice versa.

In the context of Indonesia, Asutay and Izhar (2007) empirically analyzed both bank's specific and macroeconomic determinants of performance of Bank Muamalat Indonesia (BMI) during the 1996-2001 period. They found that profit has been dominantly generated from financing activities, while service activities have not contributed significantly to the bank's performance. Additionally, inflation was found to be positively related to bank's performance. Kasri and Kassim (2009) explored the factors affecting saving in the Islamic banks in Indonesia from March 2000 to August 2007 and found that Islamic deposit is significantly and positively related to the rate of return, but negatively related to the interest rate. These findings indicated that the displaced commercial risk existed between the Islamic and conventional banks where the Islamic banks' depositors have transferred their funds to the conventional counterparts when the Islamic banks offered the lower rate of return compared to the interest rate of its counterpart. The findings of Kasri and Kassim (2009) was in harmony with the study by Hutapea and Kasri (2010) who found that interest rate negatively affected the Islamic bank margin, while that of conventional banks was positively related to interest changes.

Furthermore, Ika and Abdullah (2011) examined financial performance of Islamic banks against conventional banks during the pre- and post- enactment of Indonesia's Laws of Republic of Indonesia No. 21 (2008) on the Islamic bank. Using data from selected financial statements of the banks from the year 2000 to 2007, they found no major difference in financial performance between Islamic and conventional banks, except in terms of its liquidity. This indicated that Islamic banks are generally more liquid as compared to conventional ones. The finding of this

study was supported by Majid et al. (2014) who documented that the Islamic banks in Indonesia recorded a better asset management as compared to their conventional counterparts. To some extent, the Islamic banks in Indonesia also recorded higher productivity as compared to their conventional counterparts (Omar et al., 2007). In the similar vein, Jaouadi et al. (2014) assessed the efficiency of the conventional and Islamic banks by comparing the financial determinants of their profitability. They documented that the Islamic banks' performance did not depend on assets and liabilities.

Based on the above-reviewed papers, it is clear that the Islamic banks' performance was not only affected by the internal factors, but it is also affected by the macroeconomic determinants. According to Athanasoglou et al. (2008), the former factors are the bank-specific variables that directly determine the performance of banks, while the external factors are variables that have indirect relationships with the bank's performance. The former factors including the bank's financial ratios relating to the liquidity, management of asset, and management of debts (Akhtar et al., 2011; Almazari, 2014), and non-performing loan (Dendawijaya, 2009; Ponco, 2008), while the later determinants relating to macroeconomic variables such as economic growth (Tandelilin, 2010; Ali et al., 2011), interest (Dwijayanthy, 2009; Sahara, 2013), and inflation (Kunt, 1998; Wibowo, 2013; Bilal et al., 2013; Gholami and Salimi, 2014).

Considering the fast growing and high potency of Islamic banking industry in Indonesia, thus it is extremely important to study the determinants of their performances. Additionally, motivated by inconclusive previous empirical findings on the direction of effects of their determinants on Islamic banks' performances, this study intends to provide a confirmatory of latest empirical findings on the nature of their determinants' effects on the performances of Islamic banks in Indonesia. Specifically, this study aims at empirically re-examining the effects of banks' specific factors (i.e., the size of the bank, capital adequacy ratio, concentration ratio, and non-performing financing) and macroeconomic determinants (i.e., economic growth, interest rate, and inflation) of the nine Islamic banks in Indonesia during the period 2009-2015.

Unlike previous studies, the present study contributes the following specific aspects of novelty as to fill up the gaps in the existing empirical studies. Firstly, the study investigates both internal and external determinants of Islamic banks' performance. Secondly, the study covers more Islamic banks with the recent data in its analysis. Finally, the study adopts the generalized least square model to empirically explore the determinants of Islamic banks' performances. The findings of the study are hoped to shed some lights for the improvement of the Islamic banks' performances in the country, thus it could ensure their sustainability by enhancing their competitiveness against their conventional counterparts.

The rest of the paper is organized in the following sequence: in the next section, a brief overview of the Islamic banks and their development were provided. Section 3 provides the empirical framework and data. Section 4 discusses the findings and their implications, and finally, Section 5 concludes the paper.

A Brief Overview of the Islamic Banks in Indonesia

Historically, the first Islamic bank in Indonesia was Bank Muamalat which was launched in 1991. However, the development of Islamic banking industry in Indonesia started formally with the issuance of Banking Act No. 7 (1992). The Act accommodated Islamic banks activities with profit and loss sharing principle. To regulate the Islamic banking industry in Indonesia, the government issued the Islamic Banking Act No.21 (2008) with the aims to provide a more prudent legal basis and offer greater opportunities for the Islamic banks to develop in parallel with the conventional banks in the country (Sari et al., 2016).

In Indonesia, an Islamic bank has been defined as the bank which operates its business activities based on the *Shari'ah* principles (Indonesia's Islamic Banking Act, No. 21, 2008). The Act stated that the activities of the Islamic banks should be free from elements of interest (*riba*), gambling (*maysir*), uncertainty (*gharar*), prohibited (*haram*), and injustice (*dzulm*). Additionally, the Islamic bank activities should promote the basic purposes of the fundamental religious concept of Islam (*Maqashid as-Shari'ah*), i.e., protecting five essential components: religion (*ad-Din*); life (*an-Nafs*); intellectual (*al-'Aql*); lineage (*an-Nasl*); and wealth (*al-Mal*). Thus, the Islamic banks should offer products and services based on the Islamic principles and promote the *Maqashid Shari'ah*. The requirement for the Islamic banks to comply with the *shari'ah* prohibited elements, according to Majid and Kassim (2015), would serve as a built-in check-and-balance mechanism and also reduce the possibility of financial instability of the overall economic and financial system (Majid and Zulhanizar 2016). The Islamic business ethics that emphasis on transparency and better governance further add to the stability of the system.

The presence of Islamic banks in Indonesia has been motivated to grasp a large niche market in the country, which is refused to be catered by conventional banks. The Islamic banks also provide an alternative system to their conventional counterparts as one of the banking restructuring programs initiated by the government of Indonesia. The services provided by the Islamic banks to cater the high demand by the Muslim in the country to have the banking system which is run based on the Islamic tenets.

Despite Indonesia having the largest Muslim population in the world, the contribution of Islamic banks to the national economy has been remarkably trivial. Of USD24 billion of total banking assets in Indonesia, Islamic banks only recorded 5% of the banking industry assets in the country in 2015. Although their market share was small, Indonesia's Islamic banking industry has recorded rapid growth in recent years due to a growing awareness of Indonesian on the Islamic banking and the government support programs. During the period 2010-2014, the assets of Islamic banking industry in Indonesia grew from USD8 billion to USD $22 billion, showing an annual growth rate of 29.2 percent, which was higher than the annual growth rate of their conventional counterparts (16.9 percent). In 2016, the Islamic banking industry of Indonesia comprised 13 general Islamic banks, 22 Islamic business units of conventional banks and 163 rural Islamic banks.

The fast growing of the Islamic banking industry in Indonesia was not isolated from the government solid support. The central bank of Indonesia, Bank Indonesia has set up a blueprint for the long-term development of the Islamic banking in the country which has been

implemented during the 2005-2015 period. Additionally, apart from launching the Islamic banking roadmap and the program of 'I Love Islamic Finance' in 2015, the government has also considering to ease foreign ownership limits on local Islamic banks and further introduce new Islamic-compliant financial instruments to promote the Islamic finance industry in Indonesia become more attractive to national and foreign investors. By having these measures, it is targeted that by 2023, the market shares of Islamic banking industry to increase up to 15 percent.

Empirical Framework

Data

Due to unavailability of data for the study period from 2009 to 2015, of 13 full-fledged Islamic banks in Indonesia, this study only investigated nine full-fledged Islamic banks, i.e., PT. Bank Syariah Mandiri, PT. Bank Syariah Muamalat Indonesia, PT. Bank Syariah BNI, PT. Bank Syariah BRI, PT. Bank Syariah Mega Indonesia, PT. Bank Panin Syariah, PT Bank Syariah Bukopin, PT. Bank Central Asia Syariah, and PT. Maybank Indonesia Syariah. The panel data used in the study were collected from the annual financial statements of Islamic banks published in their official websites under the authority of central bank of Indonesia, Bank Indonesia. Meanwhile, the macroeconomic variables were gathered from the Central Bureau of Statistics, Indonesia.

As for the dependent variable, the study used the ratio of Return on Assets (ROA) to measure the banks' performance. Meanwhile, the independent variables cover bank-specific variables (i.e., the banks' s*ize* that is proxied by the total assets, Capital Adequacy Ratio (CAR), Concentration Ratio (CR), and Non-performance Financing (NPF)), and macroeconomic variables (i.e., economic growth that is proxied by Gross Domestic Product (GDP), interest rate, and inflation which is measured by the changes in Consumer Price Index (CPI)).

In a more detailed, ROA is the ratio used to measure the ability of bank management in obtaining profit. This ratio is calculated by the differences between net income and the total assets of the bank. The banks' size is a scale to classify the banks into various sizes. The size of the banks was calculated by the natural logarithm of total assets. Next, CAR is an indicator to measure the banks' capital adequacy, which is calculated by comparing the owned capital comprising core capital and complementary capital to the risk-weighted assets. CR shows a pattern density of the assets in the Islamic banking sector. The CR is calculated by comparing the relative size of the banks to the whole industry (Demsetz and Strahan, 1997). Finally, the NPF measures the non-performing financing of the banks to the total financing.

Additionally, three macroeconomic determinants are also investigated in the study, comprising economic growth, interest rate, and inflation. The economic growth that is proxied by GDP measures all goods and services produced by entire citizens of Indonesia in a given period. Meanwhile, interest rate represents the price of the use of money for a certain period. It also reflects the attitude of policy or monetary policy stance set by the central bank of Indonesia and announced to the public. Finally, the inflation shows the tendency of increase in the general price level continuously within a certain period, which is measured by the changes in CPI.

Empirical Model of Estimation

Since the study used panel data, thus a proper model of estimation adopted in the study is the panel multiple regression analysis based on the Generalized Least Square (GLS) estimation model, following Majid and Maulana (2012). In this context, the observations are combined both cross-sectional and time series data over several time periods (Gujarati 2009). Hence, the general form of panel regression model is as follows:

$$BP_{it} = \beta_0 + \beta_1 SZ_{1it} + \beta_2 CAR_{2it} + \beta_3 CR_{3it} + \beta_4 NPF_{4it} + \beta_5 EG_{5it} + \beta_6 INT_{6it} + \beta_7 INF_{7it} + e_{it} \quad (1)$$

Where *BP* is the Islamic banks' performance, *SZ* is the banks' size, *CAR* is the Capital Adequacy Ratio, *CR* is the Concentration Ratio, *NPF* is the Non-performing Financing, *EG* is the economic growth, *INT* is the interest rate, *INF* is the inflation, β_0 is the intercept, β_i is the estimated coefficients, *e* is the error term, and *it*, is the Islamic bank *i* at the year *t*.

In analyzing the panel data, two most prominent GLS models were commonly adopted, namely the Fixed Effects Model (FEM) and the Random Effects Model (REM) or Error Components Model (ECM) (Gujarati, 2009). To identify the most appropriate model to be used, the Hausman test would be firstly conducted in the study. If the result of *the p*-value of Hausman test is insignificant, or the probability of chi-square is larger than the 90% confidence level, then, the REM would be used as the most suitable panel regression model. On the other hand, if the result of the *p*-value is significant, the FEM model would be adopted. Within the FEM framework, the model allows to have a different intercept in the regression model among individual, thus the Model (1) can be further re-written as follows:

$$BP_{it} = \beta_i + \beta_1 SZ_{1it} + \beta_2 CAR_{2it} + \beta_3 CR_{3it} + \beta_4 NPF_{4it} + \beta_5 EG_{5it} + \beta_6 INT_{6it} + \beta_7 INF_{7it} + e_{it} \quad (2)$$

The subscript *i* in Model (2) is positioned on the intercept term (β), indicating that the intercepts of the data could be varied. The differences could be associated with special features of each Islamic bank, i.e. managerial style and management philosophy (Majid and Maulana, 2012). Commonly, the dummy variables have been introduced to capture the dissimilar intercepts. In this context, the FEM would be the most appropriate approach to be used when the correlation between the individual specific intercept and regressors is anticipated.

Nevertheless, the FEM tends to reduce the number of degree of freedom, and thus it, in turns, lower the parameter of efficiency. This shortcoming could be solved by introducing the error term variable by applying the REM or ECM. The used of the REM would estimate the panel data using the error term that would be timely and individually interdependent. In the fixed effect model, it is assumed that each Islamic banks have its own and dissimilar intercept. Additionally, it is assumed that the intercepts are stochastic in the REM. If the sample of the study is found randomly, this model is the most suitable to be adopted. Thus, the REM could be re-written, as follows:

$$BP_{it} = \beta_0 + \beta_1 SZ_{1it} + \beta_2 CAR_{2it} + \beta_3 CR_{3it} + \beta_4 NPF_{4it} + \beta_5 EG_{5it} + \beta_6 INT_{6it} + \beta_7 INF_{7it} + e_{it} + u_{it} \quad (3.1)$$

$$BP_{it} = \beta_0 + \beta_1 SZ_{1it} + \beta_2 CAR_{2it} + \beta_3 CR_{3it} + \beta_4 NPF_{4it} + \beta_5 EG_{5it} + \beta_6 INT_{6it} + \beta_7 INF_{7it} + w_{it} \quad (3.2)$$

It is important to note here that, before the data are further estimated using the above mentioned GLS model, the rigorous classical assumption tests of normality, multicollinearity, autocorrelation, and heteroscedasticity were firstly performed. To test for normality, the Jarque-Bera (JB) test was performed. If the value of JB test is smaller than the specified significant level, then the data is found to be normally distributed. As for the multicollinearity test, the Tolerance Value (TV) and Variance Inflation Factor (VIF) are used. If the TV is greater than 0.1 or the VIF is smaller than 10, thus the data are free from the multicollinearity problem. The Durbin-Watson (D-W) test is used to check for the autocorrelation, where if the D-W value is around 2, then the data is said to be free from the autocorrelation problem. Finally, the Breusch-Pagan (BP) test is used to test for the heteroscedasticity of the data. If the value of BP test is greater than the specified probability value, then the data is found to be homoscedastic (Gujarati 2009).

Findings and Discussion

In this section, the findings of the study on the effects of banks' specific characteristics and macroeconomic variables on the performances of the Islamic banking industry for the period 2009 to 2015 are reported. However, the descriptive statistics of the variables would be reported first to highlight the trends of the variables investigated.

Descriptive Statistics

As observed from Table 1, the average performance of Islamic banks in Indonesia, which is measured by profitability was 1.3 percent recorded the minimum and maximum values of -2.5 percent and 8.2 percent, respectively. The highest profitability was recorded by the PT. Maybank Indonesia Syariah, while the lowest one was recorded PT. BNI Syariah both in 2009. The highest performance of the PT. Maybank Indonesia Syariah was due to its highest size of 33.745 and concentration ratio 0.004 in the year 2014. However, although the smallest Islamic bank in Indonesia was the PT. Bank Panin Syariah of 25.804, but its performance was above the industry's average.

In terms of capital adequacy, PT. Bank Mandiri Syariah recorded the highest with the CAR value of 0.106 in 2010, while the lowest CAR value of 0.763 was recorded by the PT. Bank Panin Syariah in 2009. This is reasonably enough for the PT. Bank Panin Syariah to have the lowest capital adequacy due to its smallest Islamic bank in the country as shown by the smallest CAR value (0.763) and CR value (0.001) both in the year 2009. Finally, the best performer of the Islamic bank in terms of Non-Performing Financing was recorded by the PT. Bank Central Asia Syariah in 2012, which the highest one was recorded by PT. Bank Muamalat Syariah with the NPF score of 0.315 in the year 2010. The highest NPF of PT. Bank Muamalat Syariah could be due to its longest establishment as compared to other Islamic banks in the country, thus it has provided more financing to the customers since 1991 that were failed to be recollected.

Table 1. ***Descriptive Statistics***

Variable	Minimum	Maximum	Mean	Std. Deviation
Performance	-0.025	0.082	0.013	0.016
Size	25.804	33.745	29.886	1.617
Capital Adequacy Ratio	0.106	0.763	0.206	0.146
Concentration Ratio	0.001	0.004	0.002	0.161
Non-Performing Financing	0.001	0.315	0.021	0.041
Economic Growth	0.063	0.065	0.064	0.054
Interest Rate	0.057	0.087	0.069	0.009
Inflation	0.042	0.069	0.055	0.009

Additionally, in terms of macroeconomic variables, the lowest (6.3 percent) and highest (6.5 percent) economic growth were documented in years 2009 and 2015, respectively. During the study period, on the average, the economic growth of the country was 6.4 percent, the interest rate was 6.9 percent, and the inflation rate was 5.5 percent. The lowest interest rate of was 5.7 percent occurred in 2012, while the highest interest rate of 8.7 percent existed in 2015. Finally, the inflation rate in the country was spanning from 4.2 percent to 6.9 percent in years 2012 and 2015, respectively. These show that, during the study period, the country recorded the stable economic growth with a relatively lower of the rates of interest and inflation.

The Effects of Banks' Specific Characteristics on the Islamic Banks' Performance

In this section, the findings from the GLS model on the effects of banks' specific characteristics on the Islamic banks' performance. However, before the findings are reported, the study should identify first which GLS model is the most suitable to estimate the panel data in the study. For this purpose, as mentioned in the earlier methodological section, the Hausman test is adopted to identify which model is the most suitable (either the FEM or REM) to be used in this study to empirically explore the effects of banks' specific characteristics and macroeconomic determinants on the Islamic banking industry performance in Indonesia.

As reported in Table 2 of the last column, the study found that the *p*-value of chi-square of Hausman test is greater than the 10% significance level. This finding confirmed that the REM model was the most suitable model to be utilized in the study. Thus, the findings of the study were reported based on the GLS model of the Random Effect Model (REM).

As mentioned earlier, before the study estimate the effect of bank's specific and macroeconomic determinants on the banks' performance, the study conduct first the classical assumption tests. As observed in Table 2, the study found that all variables investigated in the study were normally distributed as shown by the Jarque-Bera test p-value; has no multicollinearity problem as shown by the VIF value between 1,078-1.435; homoscedastic as indicated by the BP p-value, and non-autocorrelated as indicated by the DW value of 1.933. These findings indicated that the variables have fulfilled all classical assumption, thus could be used in the model for further estimation.

Table 2 also reported the effects of banks' specific factors on the banks' performance. With the exception of the non-performing financing, all other banks' specific factors were found to significantly affect the banks' performance at least at the 10 percent level of significance. The study documented that the size of the bank positively and significantly affected the performance of the Islamic banks at the 1 percent significance level. This indicates that a number of assets possessed by the banks have been better at placing the investment and productively utilized, as the assets have positively contributed to enhancing the profitability of the banks. This finding further implies that the banks have been operated under the economies of scale situation. As the size of the banks enlarged, the bank becomes more efficient, and in turns led the banks to accumulate a higher profit. This empirical finding was in harmony with the findings by Priharyanto (2009), Arini (2009), Stiawan (2010), and Almazari (2014) who recorded the positive effect of assets on banks' profitability in Indonesia.

Table 2. ***The GLS Estimation Findings based on the REM (Banks' Performance as the Dependent Variable)***

Variable	Coefficient	t-Statistics	Diagnostic Tests
Constant	-0.303***	-3.707	HT (p-value) = 0.152;
Size	0.021***	3.713	F-Stats (p-value) =0.000***;
Capital Adequacy Ratio	0.025*	1.850	Adj. R^2 = 0.202;
Concentration Ratio	-0.146**	-2.488	JB (p-value) = 0.000-0.025
Non-Performing Financing	0.011	0.334	VIF = 1.078-1.435;
Economic Growth	0.005**	2.461	BP (p-value) = 0.165;
Interest Rate	-0.547**	-2.153	DW=1.933.
Inflation	-0.241*	1.901	

Note: ***, **, and * indicate significances at the 1%, 5% and 10% levels, respectively. HT is the Hausman test used to identify the most suitable model, the FEM or the REM to analyse the panel data in the study; F-Stats is the F-statistics; Adj-R^2 is the adjusted R^2; JB is the Jarque-Bera test for normality; VIF is the variance inflation factor test for multicollinearity; BP is the Breusch-Pagan test for heteroscedasticity; and DW is the Durbin-Watson test for autocorrelation.

Next, as for the effect of capital adequacy on the banks' performance, the study also documented a positive relationship between them. The adequate capital owned by the Islamic banks in Indonesia might cause the public confidence towards the banks increased and has attracted more customers to transact with and place their monies in the Islamic banking industry. This would certainly have an impact on improving banks' profitability, finding similar to Dewi (2010). The determination of capital adequacy ratio of the banks was based on the level of bank risk. The level of this ratio at a certain point is intended for banks to have sufficient capital capability to mitigate the possibility of risks, as a result of the expansion of assets, especially assets that are categorized as riskier assets. A Higher ratio of capital adequacy could protect depositors from losing their monies, and thus increased the public confidence in banks, which in turn caused an increase in banks' profitability.

Unlike the above two banks' specific characteristics, the concentration ratio was found to have a negative effect on the banks' performance at the 5 percent level of significance. This ratio measures the relative size of the bank to the entire Islamic banking industry. This finding was not surprising as the Islamic banking industry only contributed lesser than 5 percent to the entire banking industry in the country. The higher concentration ratio of their competitors, the higher banking industry dominated by their conventional counterparts and led the industry to become more inefficient. Supported by the poor level of the regulatory framework, the existing dominant conventional banks would deter the new entries as well as the expansion of the Islamic banks into the industry, thus creating inefficiencies among the banks, and in turn caused their profitability to decline. This finding in line with the Berger (1995)'s hypothesis of the structure conduct performance (SCP), which stated that the degree of market concentration is inversely related to the degree of competition. This is because market concentration encourages firms to collude. More specifically, the standard SCP paradigm asserted that there is a positive relationship between the degrees of market concentration and competition among firms (Mirzaei et al., 2013).

Finally, the study found that non-performing financing has no significant on the banks' profitability. This finding could be partially due to the lower level of non-performing financing among the Islamic banking industry in Indonesia. The ability of the banks to manage their financing using the *Shari'ah* based contract dominated by the *Murabahah* (mark-up) financing has caused no declining in the banks' profitability. This finding supported the earlier finding by Altunbas et al. (2007) who documented that non-performing financing has no significant effect on the profitability of Islamic banks.

The Effects of Macroeconomic Determinants on the Islamic Banks' Performance

Having discussed the effects of banks' specific factors on the performance of Islamic banking industry in Indonesia, the study is now presenting and discussing the empirical evidence on the effects of macroeconomic determinants on the banks' performance.

As reported in Table 2, the first macroeconomic variables tested are the study was the economic growth that is proxied by the Gross Domestic Product (GDP). The study documented that the economic growth contributed positively to the profitability of the banks at the 5 percent level of significance. An increase in the economic growth is linked to supply and demand loans, savings, and demand deposits. When the economic growth rises, it would be followed by an increased in the peoples' income, which then leads to an increased in their ability to save more. The increase in saving would, in turn, positively affected the profitability of the Islamic banks. This finding supported the earlier finding by Sahara (2013). Additionally, Majid and Kassim (2015) documented that the economic development has caused the Islamic banks to grow, as it was showed by the increase in their market shares and profitability.

As for the interest rate, the study found a negative relationship with the profitability of the Islamic banks in Indonesia. As one of the monetary instrument used by the government to control the money supply in the economy, the expansionary monetary policy conducted by the government would lead the interest rates charged by the conventional banks to increase. An increase in interest rate would motivate people to save more money in the conventional banks.

The majority of the Islamic bank's customers would also withdraw their money from the Islamic banks and then saved it in the conventional banks. This implied that an increased interest rate would cause a higher risk withdrawal among the Islamic banks' depositors. This could be existed due to the Islamic banks' customers have been more profit oriented rather than saving their money in the Islamic banks because of their religious awareness of indulging in interest (*riba*) activities was prohibited in Islam (Kasri and Kassim, 2009).

Additionally, excessively high-interest rates would also affect the present value of the banks' cash flow resulted in less attraction to the existing investment opportunities provided by the Islamic banks, thus motivated their customers to withdraw their funds from the Islamic banks to their conventional counterparts. This finding was in harmony with the study by Kurniawati (2012), who found that the negative interest rate- profitability relationship.

Finally, the inflation was found to have an insignificant relationship with the banks' profitability at the 10 percent significance level. High inflation rate would reduce profitability, while low inflation rate caused a slow economic growth and impeded the banks' profitability. As Indonesia has experienced a relatively higher inflation ranging between 5 to 7 percent during the study period, it has caused real value of money to decline. This would, in turn, lead the customers of the banks to invest their monies more in the real assets rather than in the financial assets, including depositing their money in the banks. Furthermore, a higher rate of inflation resulted in a decline in the Islamic profitability thus affecting the banks' ability to provide more profit to their shareholders. The increase in interest rate as the price for money would also increase the banks' capital cost, thus the effect of the increased in non-anticipated inflation would lower the value of the banks (Suryanto and Kesuma, 2012). This finding is also in line with the studies by Ongore and Kusa (2013) and Naceur and Omran (2011).

Conclusion

This study empirically re-examines the effects of bank-specific and macroeconomic determinants on the profitability of nine Islamic banks in Indonesia. Four specific bank variables (i.e., the size of the bank, adequacy capital ratio, concentration ratio, non-performing financing), and three macroeconomic variables (i.e., economic growth, interest rate, and inflation) were, respectively, examined and analyzed using the Generalised Least Squares (GLS) model during the period 2009-2015.

The study found that the size of the bank, adequacy capital ratio, and economic growth positively contributed to the profitability of the Islamic banks in Indonesia. Meanwhile, the concentration ratio, interest rate, and inflation impeded the performances of the Islamic banks in Indonesia. Thus, to enhance the performances of the Islamic banks, the banks should capture more market share and provide more capital adequacy. The national economy should be promoted by ensuring the stability of interest rate and price level. The awareness on the importance of having interest-free transaction for the Muslim population in the country through the Islamic banking institutions should be considered as the most strategic policies to be implemented by the Islamic banks' manager and regulators to promote the performance as well as enhance the competitiveness of the Islamic banks in the biggest Muslim populous country, Indonesia.

It is important to note here is that the negative relationship between interest rate and the performance of the Islamic banks provided evidence that there has been a tendency of the Islamic banking customers to withdraw their money from the Islamic banks when the interest rate in the country tended to increase, and this, in turns, would reduce the Islamic banks' profitability. The customers of the Islamic banks have been still strongly motivated to gain higher returns, thus they would withdraw their money from the Islamic banks and deposited them into the conventional counterparts without bothering on the prohibition of involving in interest activities, which are strongly prohibited in Islam just simply for the sake of gaining higher interest income. Thus, it is extremely important for the Islamic banks to promote their products and services that are free from the element of *riba* (interest), *gharar* (uncertainty), and *maysir* (gambling) as well as offer competitive return to their customers.

As there was only nine full-fledged Islamic banking in Indonesia investigated in this study, the findings might only be indicative and definitely not conclusive for the entire Islamic banking industry in the country as a whole. Since there have been more Islamic banks existed in the country in the last few years, further comprehensive studies are suggested to empirically explore the determinants of entire Islamic banking institution in the Indonesian banking industry. It is also suggested for the future study to incorporate more banks' specific and macroeconomic determinants and compare them to their conventional counterparts nationally, regionally and internationally to provide a better picture on the factors affecting the performances of the Islamic banking industry in Indonesia and worldwide.

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