ISLAMIC BANKING PROFITABILITY: ROLES PLAYED BY INTERNAL AND EXTERNAL BANKING FACTORS

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ABSTRACT

Due to the uncertainties and slowdown in the global economy, Islamic banking is facing challenges that will affect its performance and profitability. Poor performances include high levels of credit risk, poor quality loans, limited or inadequate capitalization, operational efficiencies and high level of credit risk will influence the profit of banks. The idea of this paper is to examine how internal and external factors affect the profitability of Islamic banks. This will be seen on how performance through bank size, asset quality, GDP, inflation and money supply attempt to address the banks' profitability. 10 samples of banks with seven years financial data are chosen to be analyzed in this research. The result is obtained by applying panel data analysis, using the probability sample. It is expected that the findings of this study will show that the variety of internal and external factors will lead to banks profitability. If the Islamic banks fully understand and able to determine the strength factors, it will enhance the institutions' profitability. Therefore, policy makers, financial analyst and investors may benefit from this research as the findings could be used as a guideline for them in analyzing the factors affecting the success of Islamic banks, thus will contribute to the high growth rate in these banks that are currently operating in Malaysia. A future research should include other internal and external factors that will affect the profitability of banks such as liquidity risk, bank operational efficiency and capital efficiency.

Keywords: Islamic banking, banks' profitability, fixed effect model, banks performance, Malaysia.

INTRODUCTION

Islamic banking is one of the fastest-growing sectors in the global financial landscape. Moving forward, Islamic banking continues to present itself as a sustainable and competitive funding option to sustain strong economic growth in Malaysia. The Islamic recovery in the late 1960's and 1970's contributed in initiating the call for a financial system that allows Muslim to transact in a system that is in line with their religious beliefs (Bank Negara Malaysia, 2007). Thus, Islamic bank performance is regarded as one of the key indicator in helping economy to boost and expand in a good prospect.

As profits being a key determinant of growth and employment, this has encouraged a large number of Islamic banks in Malaysia to find alternatives and ways of how to increase their profitability over years. Changes in profitability can make a huge impact to economy as it could be an important contributor to economic progress. Banks normally is able to influence profit through investment and saving decisions. Increase in profit improves the performance of banks and contribute greater flexibility in the source of finance for corporate investment. Therefore, having a successful performance benefits many people and business because a particular and on-going measuring of bank's performance would allow allocation of resources to be more effective, and assist in audits targeting, leading to a better understanding on the operation of banks (Barr, Selford & Siems, 1994). Banks should also be able to function efficiently to ensure they contribute to high return. As such, there is a need to review the performance level of financial institutions, in Malaysia.

Based on the issues and points noted above, this paper therefore focus on determining the factors affected the profitability of Islamic banks. Nevertheless, most of the study is conducted on the conventional banks instead of Islamic banks. For instance, Sufian & Parman (2009) studied the factor influencing conventional banks' profitability in a developing country. Haron (1996), Wassuizzaman & Tarmizi (2010) and Guru, Staunton & Balashanmugam (2002) studies were also focused on the analysis of factors determining conventional banks' profitability. Some recent studies made by Ong, San & Heng (2013), Ali (2015), Ramlan & Adnan (2016) and Rashid & Jabeen (2016) indicate that the current study is interesting and it explores important issues. Existing studies based on previous research need to be updated as the bank's performance could be changed over the years due to liberalization, new regulation, demand and future trends of this industry. So the current research is aimed to conduct an investigation on Islamic banking industry in order to evaluate their suitability and applicability in Malaysia's banking context, since both banking systems; conventional and Islamic banking, have different financial concepts and operations (Ghazali, 2008). By using the same determinants and quantitative methods as those done earlier, this study will go in-depth into which factors make significant impact on the bank's profitability. Among the five variables being tested, the study will recognize the strongest factor that the banks need to focus more as a way to increase profit.

The main objective of the proposed study is to analyze the Islamic banks performance in Malaysia and to find out what are the main determinants of the Islamic banks performance in Malaysia. In particular, to determine the impact of internal factors namely bank size and asset quality, as well as the external factors namely GDP, inflation and money supply. The overall sections of this research paper cover the history of Islamic banking in Malaysia, the literature review,

research methodology and findings analysis. The final implication of the study, which will be elaborated in the last section, is expected to benefit bank controllers and policy makers through identifying and analyzing which factors contributes to bank's profitability.

LITERATURE REVIEW

Profit is one of the crucial indicators of performance. The Bank Negara Malaysia (BNM) governor Tan Sri Dr Zeti Akhtar Aziz has recommended the Islamic banking sector to focus on improving their level of performance, so that they are able to increase the profitability (BIS Review, 2006). Looking from the perspectives of bank performance, Haron & Azmi (2004) examined jointly the effects of both internal and external factors that contributed towards the profitability of Islamic banks. Their study found that internal factors such as liquidity, total expenditures, funds invested in Islamic securities, and the percentage of the profit-sharing ratio between the bank and the borrower of funds are highly correlated with the level of total income received by the Islamic banks. Similar effects were found for external factors such as interest rates, market share and size of the bank.

Size of bank, which is normally measured by total assets of a bank is an important factor in measuring the profitability (El Mousawwi & Obeid, 2011). Following the study by Goddard, Molyneux & Wilson (2004) which used five banks in European countries over the 1990s, has tested the relationship between bank size and profitability. Panel and cross-sectional regressions have been used to estimate banks' profit. The final conclusion suggested that, as banks become larger, their growth performance tends to increase further, with little or no sign of mean decline in growth. Idris et al. (2011) also agreed that bank size is the main factor in explaining profitability. Their study focused on nine Islamic banks (consist of foreign and local banks) operating in Malaysia, and they found that larger bank size will basically have better access to capital markets, unburdened with high cost of borrowing and would be able to generate higher returns. Said & Tumin (2004) however, provided evidence which suggested that size is insignificant determinant in contributing to profitability of nine local commercial banks in Malaysia, and the size did not have any impact on the profit growth. For the banks that become tremendously large, size could be negatively affecting the banks returns due to bureaucratic policy. In general, the effect of bank size could be significantly positive and negative towards the profit of banks. There are several reasons and evidences in justifying the results behind this relationship. These mixed findings might be due to the differences in bank's policy and environment operates in particular banks.

Asset quality is one of the main factors to effect the profitability of banks because failure in manage the asset quality may lead to higher credit risk; and the reasons

of collapse in bank operations. Numerous studies assumed that relationship between asset quality and profitability are negatively related, as poor loans may drop down the returns. This inverse result was found in previous studies by Athanasoglou, Brissmi & Delis (2005), Vong & Chan (2009), Wasiuzzaman & Tarmizi (2010), and Ramadan, Kilani & Kaddumi (2011). The more provision of loan-loss reserves in a bank, the lower profitability it could earn. The result supported Athanasoglou, Brissmis & Delis (2005) hypothesis that states exposure in credit risk may threaten the banks' profitability. This serious banking problem could be due to the failure of banks to recognize impaired assets and create reserves for writing-off these assets, to evaluate credit risk more effectively.

The GDP is a measurement of total economic activity within an economy. It is considered as an external determinant of banks' profitability, given the positive relationship between the growth of the economy and the well-being of the banking sector (Levine & Zevros, 1998). This further confirms the findings of Pasiouras & Kosmidou (2007) in which the macroeconomic condition such as economic growth is statistically significant and positively related to both domestic and foreign banks operating in 15 European countries. In contrary, Athanasoglou et al. (2005) in their study using estimated cyclical input measure agreed that GDP did not present any significant effect on bank's profitability. In periods during which GDP is below trend, the output gap is negative. This justified that banks faced greater challenge to perform in periods of downswings.

Bourke (1989) and Molyneux & Thornton (1992) both empirically tested the effect of inflation based on Revell's hypothesis by using Consumer Price Index (CPI) as a proxy. Both studies showed a significant relationship between inflation and bank's profitability. Inflation is defined as a rise in the level of prices of goods and services in an economy, and it could reflect the purchasing power of money. When inflation happens, the purchasing power of money will become weaker. However, if a bank could increase its income over the cost, the relationship is expected to be a positive relationship. It indicates that higher inflation could bring higher profitability to banks. These findings are also supported by Vong & Chan (2009) and Wasiuzzaman & Tarmizi (2010).

To determine the effect of money supply on profitability, Bourke (1989) used the annual growth of money supply as a proxy for growth in the market. Bourke concluded a significant positive relationship and suggested that market expansion would enable banks to increase profit. When market expands, the supply of money will increase, inducing a decline in price level. However, Sufian & Chong (2008) have observed and found that money supply has a negative relationship and do not significantly explain the variations in the profitability of Philippines banks. Although the money supply is basically determined by the Central Bank policy, it may also be affected by the behavior of banks. For instance, banks have

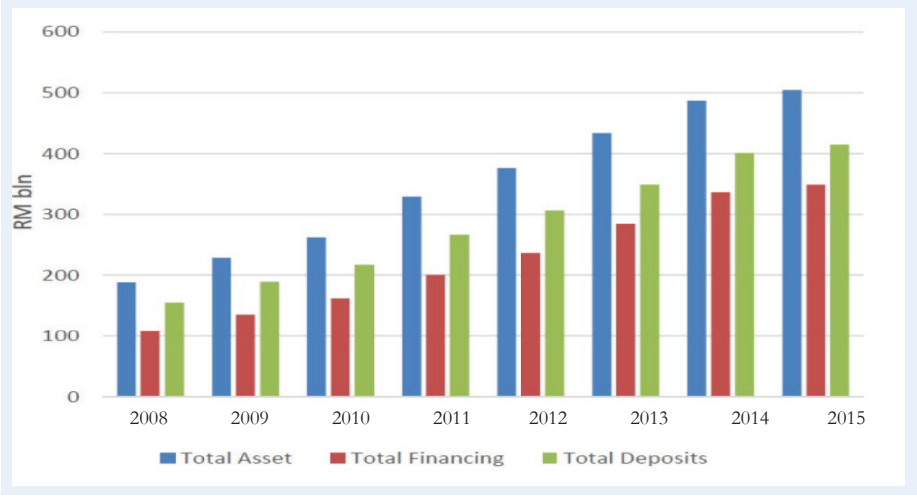
the authority to adjust the price/charge their services thus inducing a change in money supply.

Islamic Banking Industry in Malaysia

The establishment of Bank Islam Malaysia Berhad (BIMB) in July 1983 marked a milestone for the development of the Islamic financial system in Malaysia. BIMB carries out banking business similar to other commercial banks, but along the principles of Islamic laws (*Shariah)*. Bank Negara Malaysia (BNM) reported that Malaysia's Islamic Finance segment mentioned its growth momentum in 2015, with its Islamic banking asset expanding greatly from year 2014, accounting for 20.7 percent of the total assets of the overall banking system in 2015. The report also noted that Malaysia continues to dominate the global Sukuk market and remains a top investment destination for Islamic funds. Sukuk is an Islamic bond, structured in such a way as to generate returns to investors without infringing Islamic law (that prohibits riba or interest). Sukuk issued in Malaysia accounted for 65.6 percent of global issuances in 2014 (The Edge Financial Daily, March 2015). **Figure 1** shows the total assets, total financing and total deposits of Islamic banking markets in Malaysia which continued to expand by years.

Figure 1:

Malaysia Islamic Banking System: Key Financial



Source: BNM's Monthly Statistical Bulletin (2015)

Interestingly, when BNM Banking and Financial Institutions Act (BAFIA) were amended in 1993, most conventional banks in Malaysia decided to set up their own full-fledged Islamic subsidiary. In a research about banking systems conversion, Sole (2007) stated that once a conventional bank has operated an

Islamic window for some time and has gathered a sizeable customer base for its Islamic activities, they may decide to establish an Islamic subsidiary, or even fully convert into a full-fledged Islamic bank. Other than that, Islamic banking was going further and successfully complementing with the conventional financial system in the economy. Malaysia once again proves to the world that implementing dual banking and financial system is achievable (Seethaletchumy, Hishamuddin & Uchenna, 2011).

METHODOLOGY

Data Collection

The chosen population of the study is the local Islamic banks in Malaysia. As stated in BNM Annual Report 2015, a total of 16 Islamic banking institutions (local and foreign) operate actively in the country. However, only 10 samples of banks with seven years financial data were chosen to be analyzed in this research. This study used the annual data of the local Islamic banks incorporated in Malaysia for a period of 2009 until 2015. In order to examine the determinants of Islamic banks' profitability, panel data regression was applied to analyze the cross-section and time series data. Balanced panels data was used in this research as each cross section units contained equal number of observations. Various tests were performed using econometrics Gretl software for analyzing and producing the regression results. Refer **Table 1**.

Table 1:

List of Malaysian Islamic Banks Included in the Data Sample

No.	Name	Year of establishment
1	Affin Islamic Bank Berhad	2006
2	Alliance Islamic Bank Berhad	2007
3	Ambank Islamic Berhad	2006
4	Bank Islam Malaysia Berhad	1983
5	Bank Muamalat Malaysia Berhad	1999
6	CIMB Islamic Bank Berhad	2005
7	Hong Leong Islamic Bank Berhad	2005
8	Maybank Islamic Berhad	2007
9	Public Islamic Bank Berhad	2008
10	RHB Islamic Bank Berhad	2005

Source: Bank Negara Malaysia, 2015

Model Specifications

In line with past literature, a panel regression is employed to examine the determinants of the profits of Islamic banks. The data collected is converted into natural logarithm values and the linear model is as follows:

$$ROA = \alpha 0 + \beta 1\,[LOGTA] + \beta 2\,[LLR] + \beta 3\,[GDP] + \beta 4\,[CPI] + \beta 5\,[MS] + \varepsilon$$

where;

Dependent variable:
ROA = Profitability; Return on Asset

Independent variables:

LOGTA	=	Bank Size
LLR	=	Asset Quality
GDP	=	Gross Domestic Product (growth rate)
CPI	=	Consumer Price Index (inflation)
MS	=	Money Supply

α is intercept, β is regression coefficient and ε is an error term

Dependent Variable

In this study, the return on asset (ROA) is used as proxy for profitability. According to Flamini, Mcdonald & Schumacher (2009), to determine bank's profitability, ROA is a better proxy than return on equity (ROE). It is because, as cited by Wasiuzzaman & Tarmizi (2010), ROE has neglected the financial leverage. ROA and ROE are the indicators of measuring managerial efficiency. ROA is net earnings per unit of a given asset. It shows how a bank can convert its asset into net earnings.

The higher ratio indicates higher ability and therefore is an indicator of better performance. Similarly, ROE is net earnings per equity capital. Higher ratio is an indicator of higher managerial performance. In measuring profitability, Hassan & Bashir (2003) used both ROA and ROE as measures of overall performance in their study of determinants of Islamic banking profitability. However, the researchers stressed that ROA can precisely reflect the management ability to utilize the bank's financial and real investment resources to generate profits. Thus, many regulators believed that ROA is the best measure of bank profitability.

Independent Variables

Different banks often practice different rules and policies. Since Islamic banking differs in terms of its practices as compared to conventional banks, they may possess different factors towards the improvement of performance. The issue that needs to be raised is how each factors is being deployed for specific decision that result to profitability. Therefore the measurements of each factor were different to another.

Bank size is measured using the natural logarithm of total assets as a proxy. This is consistent to the studies of Bashir (1999), Milbourn, Boot & Thakor (1999), Altunbas, Carbo, Gardener & Molyneux (2007) and El Moussawi & Obeid (2011). Ratios for asset quality are normally based on the loans and the leases. It is also a method of evaluation in assessing the credit risk associated with a particular asset. This study used the loan loss reserve to gross loans (LLRL) as the determinant of how asset quality could influence the profit of Islamic banks in Malaysia. Some previous studies that used the LLRL ratio as to measure asset quality include those of Awan (2009), Sufian (2011), and Kutsienyo (2011). As for all the external factors (GDP, inflation and money supply), the data was retrieved from the IMF International Financial Statistic (IFS) database.

RESULTS

Descriptive Analysis

Descriptive statistics computed include the means, standard deviations, skewness and kurtosis values of the responses on the dependent and independent variables: profitability, bank size, asset quality, GDP, inflation and money supply. Refer **Table 2**.

Table 2:

Descriptive Statistics

Variable	Mean	Std dev	Skewness	Kurtosis
A. Dependent variable				
Profitability (ROA)	0.189	0.263	1.216	0.234
B. Independent variables				
Bank size (TA)	7.528	0.221	0.931	0.292
Asset quality (LLR)	0.435	0.279	0.021	0.000
Gross Domestic Product (GDP)	0.635	0.228	-1.189	-0.892
Inflation (CPI)	0.219	0.227	-0.793	-0.397
Money supply (MS)	0.952	0.114	1.365	0.170

On average, the mean value of profitability for the ten studied Islamic banks is 0.189 and the mean value for all five independent variables is positive. Bank size shows the highest mean value which is 7.528 and the highest standard deviations

is asset quality (0.279). High standard deviation indicates that there is a huge gap between the amounts of asset quality owned by different banks.

Bank size used total asset as proxy to measure the ratio. Its average value is 7.528 and the standard deviation is 0.221. The skewness value is positively skewed with a value of 0.931, while for kurtosis value indicates 0.292. The ratio loan-loss reserve to gross loan (LLR) is the proxy used to represent asset quality. The average of LLR in the data is 0.435 and it has a standard deviation of 0.279. The skewness value is positively skewed at 0.021, whereby kurtosis value is 0.00. Therefore, it is normally distributed.

Gross domestic product (GDP), money supply and inflation are three external variables used in this research. GDP is a macroeconomic variable and is an acronym for gross domestic product growth. It has mean of 0.635 and standard deviation of 0.228. Its skewness is indicated as negatively skewed (-1.189). The value of kurtosis is -0.892. Although the skewness does not satisfied the normally distributed residuals, the result of kurtosis is normally distributed as the value was less than three.

Consumer price index (CPI) which is the proxy for inflation has a mean of 0.219 and 0.227 standard deviation. The skewness is negatively skewed at -0.793. Meanwhile, the kurtosis value is -0.397. Hence, from the result it is normally distributed as the value is less than three. Money supply has a mean of 0.952 and 0.114 of standard deviation. This variable is positively skewed based on skewness value of 1.365. While for kurtosis the value is 0.170. The result of kurtosis is less than three and represents normally distributed.

The mean and standard deviations respectively show that there are variations of data in every variable. There are no extremely low or extremely high numbers in the data set. Following the rules of thumb written by Sekaran (2013), if the residuals normally distributed, the skewness value would be zero, or it can be tolerated from -0.5 to 0.5. For most of the variables, the value is above zero, so it has positive skewness, and just two of the variables (GDP and inflation) exhibit negative values. Regarding kurtosis, normally distributed residuals should have value equal or less than three. In this case, all the variables satisfied the assumption. The data found are normally distributed or very close to normal distribution.

Regression Results

This study analyzed the multicollinearity, Breusch-Pagan Lagrange Multiplier (LM) and Hausman test prior regression analysis. To test the hypotheses made, the data were analyzed using regression as shown in **Table 6**.

As stated, in order to find whether there is a multicollinearity problem in the model, this study used the variance inflation factor (VIF). **Table 3** presented the

VIF between the independent variables to test the multicollinearity problem. This indicated that the model does not suffer from multicollinearity problem as all the VIF values were not greater than 10 (Ethington, 2005).

Table 3:

Variance Inflation Factor (VIF)

Variables	VIF
Bank size	1.750
Asset quality	1.606
GDP	1.143
Inflation	1.344
Money supply	1.730

To identify which model is appropriate, the POLS model or the REM, the Breusch-Pagan Lagrange Multiplier (LM) test is used. This study does not reject the null hypothesis as the value of chi-squared statistic was high. In favor of the FEM model, the result presented in **Table 4** showed that the panel FEM was appropriate.

Table 4:

The Summary of Breusch-Pagan Lagrangian Multiplier Test

Chi–chi-squared	Prob > chi2
94.6631	0.0000

Hausman test is performed to decide either fixed or random effects are more suitable with the model. The result indicated that FEM was the appropriate panel data estimator. **Table 5** showed p-value of chi2 was 0.0495 which is lower than 0.05. It means that the model is significant and, thus, supported the null hypothesis.

Table 5:

The Summary of Hausman Test

Chi-Sq Statistic	Prob > chi2
10.6159	0.0495

The determinants of the relationship between profitability and bank performance are based on the results presented in **Table 6** below. From the table, only two variables which are inflation and money supply have positively significant values. Meanwhile, bank size was found to have a negative significant value (p-value; 0.006). From the analysis, it can be concluded that the asset quality and GDP variables do not have any impact on the profitability of Islamic banks.

Table 6:

Results of Fixed Effects Model

Variables	p-value
Bank Size (p-value)	0.006***
(t-test)	
Asset Quality	-2.84
	0.111
GDP	-1.63
	0.962
Inflation	-0.05
	0.087*
Money Supply	1.75
	0.068*
CONSTANT	1.86
	0.008***
	2.76
R-squared (overall)	0.90
F-value	F (5,50)
	3.43
	Prob > F
	0.000

Notes: *** significant at 1% level, ** 5% level, * 10% level

CONCLUSION

In all, the research displayed mixed outcome for both the bank size and asset quality. The size of the banks has a significant negative relationship with profitability. This significant negative relationship shows that the size of bank could significantly affect the profitability of the bank negatively. That is, as the bank size increases, it is not necessarily leads to higher profits. Although larger banks have the advantages of more access to additional financing sources, they

actually have to face higher risk in dealing with liquidity problems and diversifying products. Present research shows that the asset quality does not influence profitability. One reason can be due to the fact that banks have different risk attitudes. Prior research by Vong & Chan (2009) stated that the more provision of loan losses reserves in a bank, the lower profitability it could earn. The study has notified higher LLR ratio leads to the poorer asset quality, thus not influence profitability as credit risk (i.e. unpaid loans) may cause lower earnings.

This research has agreed that the economic growth does not play a very important role in stabilizing economy. It discovered that the value of GDP is not significant thus do not influence the profitability of Islamic banks. The insignificant value between GDP and profitability may be affected by the value of GDP rate in year 2009 (-1.64 percent), as at the time, Malaysia has just survived from economic slowdowns. This situation was supported by Athanasoglous, Delis & Staikouras (2008), which indicated that banks are unable to survive their performance during GDP is below trend. This is due to the huge cyclical output gap between the growth trends. Between the year 2009 to 2014, Malaysian Islamic banks seemed excellent in forecasting the changes resulted from inflation, which results a balanced increase between the bank costs and revenues that consequently have a positive impact on bank profitability. Since Islamic banks are known as practicing the interest free concept, it could be clarified that accurate forecasts help the banks manager to make decisions on profit sharing and thus increase profit. So that inflation positively impacts on profitability. This case was different as in the study made by Heggested (1977) where inflation has a negative impact on profitability. The research found banks failed to predict inflation accurately.

Money supply is defined as the total amount of money that circulates in an economy. As money supply increase, banks will earn more profit. Bourke (1989) and Haron & Azmi (2004) have agreed that expanding the market would enable banks to increase profit. Bank may expand their products or services into new demographic and geographic market. The increase in business activities would contribute to the rapid supplies of money as the activities gives a good respond to the demand of goods and services. The banks may also expand its loans if they wish to maximize its total profits. More loans supply will generate more returns. Even though the Islamic banking practices profit sharing concept, the banks may put efforts in making better sales of Al Bai Bithaman Ajil (BBA) based financing. According to BNM statistics 2007, BBA financing is the most familiar in Islamic banking, as this product involves credit sales of goods on a deferred payment basis (Haque, 1993). Moreover, Rosly (1999) stated that a fixed rate BBA is a most dominant tool to hedge in opposition to interest rates.

In contrast, money supply (M2) is the summation of currency in circulation, demand deposit, time deposit and saving deposit (Al-Qudah & Jaradat, 2013). The positive and significant result shows the Islamic banks have a good control over amount of money in an economy, resulting in high profitability of banks. Besides,

the situations of financial crises and financial deregulation ended by the year 2008. Supposedly, these situations create no disruption between the relationship of money supply and returns (Ghazali, 2008).

The findings of this study, in many cases, were consistent with those of the earlier banking performance studies (Boyd & Runkle, 1993; Berger, Hanweck & Humphrey, 1987; Naceur & Goaied, 2008). In the study of Naceur & Goaied (2008) for example, they suggested that the bank size negatively explained the variation of profitability for Islamic banking institutions. This result is consistent with the argument of scale inefficiencies. This happened when bank fails to gain cost advantage when size is growing. It is even worse for large banks that had a high cost of running bank's operation and unfortunately bank's profit are not sufficient to cover costs. In the same way, Almazari (2013) also agreed that growing bank size will face diminishing marginal return and bank profit will be declined further when size grows larger.

The need to enhance the profitability of Islamic banks is crucial because it will consequently boost Islamic economy. This is necessary, as indicated in the *sunnah* and the holy Quran, because it would help to grow the Islamic countries and provide a better living for Muslims. By identifying the important determinants of bank performance, it would help bank managers and policy makers to find the right tools and strategies to apply in the banking systems. These research findings are also essential as it could be used as a guideline to financial institutions in Malaysia, particularly Islamic banks as they have important roles in ensuring financial stability and maintaining good economic growth.

Finally, as the scope of this study was limited to only 10 local-owned Islamic banks, future research may include all Islamic banks as the respondent as this would add additional credibility to the findings. From this, researcher can compare the performance of all these Islamic banks (local and foreign) in Malaysia.

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