ASEAN Entrepreneurship Journal (AEJ)

The Effects of Internal and External Economic Variables on the Islamic Banks' Profitability in Malaysia

Mohamad Azwan Md Isa[1], Fakhrullah Ikram Baharudin[2]
1 Faculty of Business and Management, UiTM Johor Branch, Segamat Campus, Johor Malaysia (moham821@uitm.edu.my)
2 Faculty of Business and Management, UiTM Johor Branch, Segamat Campus, Johor Malaysia (fakhrullahikram96@gmail.com)

Abstract
The aim of this study is to examine the relationships and effects of bank-specific and economic variables on the profitability of eight Islamic Banks in Malaysia. The study uses 7-year annual panel data from 2012 to 2018. The profitability of the banks is tested using the banks' return on asset (ROA) whilst the economic variables are divided into two, namely banks' size, efficiency and financial risk that represent the bank-specific or internal variables, whereas the Gross Domestic Product (GDP), inflation rate and Kuala Lumpur Shariah Index (KLSI) represent the external or macroeconomic variables. The methods used to analyze the data consist of descriptive statistics analysis, Pearson's correlation analysis and multiple regression analysis. This study revealed that the five economic variables (banks' size, efficiency, financial risk, GDP and KLSI) have positive effects on the Islamic banks' profitability in Malaysia, whereas inflation rate poses negative effect. However, we noted that only the banks' efficiency, the GDP and KLSI have significant relationships with the Islamic banks' profitability in Malaysia. These finding are very beneficial to the related parties such as the Islamic banks' management and shareholders, investors of the Islamic stock market and the policy makers.

ARTICLE INFORMATION
Received: 13 Feb 2020
Revised: 25 Feb 2020
Accepted: 18 Mac 2020

Keywords: *Islamic banks, profitability, economic variables, Malaysia*

INTRODUCTION

Since the first Islamic bank, Bank Islam Malaysia Berhad, was established in 1983, Malaysian Islamic banking has grown quite remarkably and increased in number. Currently, there are 16 Islamic banks in Malaysia, which play pivotal roles towards the economic growth and development of the country. The acceptance of the Islamic banking in Malaysia is not only among the Muslims, but also among the non-Muslims from various races. This factor has motivated the domestic and foreign conventional banks to step into this multi-billion dollar booming industry by establishing its Islamic wings and units.

The statistics issued by the Central Bank of Malaysia (Bank Negara Malaysia, BNM) showed that the total assets of the Islamic Banking system stood at RM 653.32 billion in the year 2017 and then the figure rose to RM 733.19 billion in 2018 or 12.23 percent increase. As in May 2019, the total assets stood at RM 747.98 billion, which is translated into 9.3 percent higher year on year.

In 2019, it was estimated that the Islamic banking sector in Malaysia has grown from 10 percent to 11 percent, which was slightly higher growth rate achieved in 2018. The Islamic financing continued to expand at a much faster pace than the conventional loans, hitting 11 percent compared to the 3.3 percent growth of the latter. Malaysia's rating agency (RAM) has maintained a good outlook for the Malaysian Islamic banking sector in line with its positive view of the overall domestic banking system in 2019. These statistics indicate a phenomenal rate of growth in the Islamic banking industry in Malaysia.

Therefore, it is crucial to study the internal factors (micro) and external factors (macro) that affect the profitability of Islamic Banks in Malaysia and to examine how the factors affect the Islamic Banks' profitability. The findings of this study are important to strengthen the banks' risk management besides protecting and further developing the entire Islamic banking industry in Malaysia and ultimately minimizing the financial shock in the wake of any economic crises in the future.

Next sections of this study will present the literature review, and then followed by data and methodology of study, results and discussion, and lastly conclusion and recommendation.

2.0 REVIEW OF LITERATURE

Previous studies by Hassan and Bashir (2005), Wasiuzzaman and Tarmizi (2010), Masood and Ashraf (2012), and Abduh and Idrees (2013) indicated that the Islamic bank's profitability is influenced by macroeconomic (external) and microeconomic (internal or banks-specific) variables.

According to Agusman, Monroe, Gasbarro and Zumwalt (2008) larger bank size would contribute towards better stability of the banks, which implies that bigger Islamic banks are more stable due to the diversification benefit that enables the banks to participate in riskier and more profitable financings without growing vulnerability. In addition, larger banks would have better access to the capital markets, lower financing costs with higher earnings, more competitive and larger economies of scale (Idris, Asari, Taufik, Salim, Mustaffa, & Jusoff, 2011). Anbar and Alper (2011) noted that banks' size pose significant and positive effect on the banks' profitability in Turkey. However, Wasiuzzaman and Tarmizi (2010) found that the bank size does not have an impact on the Islamic banks' profitability.

Efficiency is a major factor of a company's operations. A company is considered to be efficient if the company can produce a given level of output at a minimum level of resources. Abidin and Endri (2009) stated that efficiency in the banking sector as a whole is a significant aspect to consider in efforts to achieve a sound and viable banking output. Haron (2004) noted that larger companies or banks are able to provide products and services more efficiently and at a lower price than smaller banks. As a result, the low-cost and high-efficiency banks will have a higher income and earn higher profits (Shahimi, Ismail, & Ahmad, 2006).

Financial risk measures the leverage level of banks or banking sector. Large exposure to the financial risk would cause a fall in banks' profitability (Idris et al., 2011). In other words, the financial risk and banks' profitability have negative relationship. Masood and Ashraf (2012) found that the financial risk has significantly and negatively affected the profitability of Islamic banks. Their finding is supported by Zarrouk, Jedidia, and Moualhi (2016), who suggested the importance of financial risk management in relation to banks' profitability.

Kuala Lumpur Shariah Index (KLSI) is a weighted average index, where it consists of Main Board companies classified as Shariah-approved securities by the Securities Commission's Shariah Advisory Council (SAC). Mitton (2006) concluded that the companies whose stocks are opened to be invested by foreign investors would experience higher profitability, better efficiency, and lower leverage. Pástor and Pietro (2003) have empirically evidenced that the stock return volatility has relationship with the volatility of firms' profitability. However, Hao, Jin and Zhang (2011) proved an inverse or negative relationship between firms' relative profitability and stock return sensitivity.

Inflation rate is the speed at which the money is devalued, that brings about a rise in overall costs of consumer goods and services. Wasiuzzaman and Tarmizi (2010) stated that when inflation is high and unexpected, the banks will most possibly be unable to timely adjust their financing or profit rate. As a result, the banks' profitability would be affected negatively as banks' cost might increase quicker than banks' income. Francis (2013) also suggested that there is negative and significant relationship between the inflation and bank profitability. However, Tan and Floros (2012), and Gul, Irshad and Zaman (2011) revealed that there is a positive relationship or effect of inflation on the banks' profitability in China and Pakistan, respectively. Their finding is consistent with Athanasoglou, Brissimis and Delis (2008), who proved that inflation positively and significantly affects banks' profitability in Greece.

The GDP is an economic measure of total economic activity. Hassan and Bashir (2005) noted that GDP does not have significant effect on the profitability performance. Masood and Ashraf (2012) also stated that GDP is not a significant factor, but it negatively affects the Islamic banks profitability. Tan and Floros (2012) showed that there is a negative relationship between GDP growth and bank profitability in China. Further, Francis (2013) supported that there is negative and significant relationship between the GDP and bank profitability in Sub-Saharan Africa. However, Pasiouras and Kosmidou (2007), Srairi (2009), Sufian and Habibullah (2010) and Wasiuzzaman and Tarmizi (2010) found positive relationship between the GDP growth and the banks' profitability.

Our study combines both external and internal factors that could give impacts on the Islamic banks' profitability. From the literature reviewed, we could state that the factors such as bank size, bank efficiency, inflation rate and GDP are among the most common factors tested against the bank profitability. However, to the best of our knowledge, we could not find any previous studies that use the KLSI as a proxy for stock market performance tested against the bank profitability. In addition, in this study, we use debt ratio to proxy for financial risk whilst previous studies used debt to equity ratio. These two elements show the gap between this current study and previous studies and support the significance of our study.

3.0 DATA AND METHODOLOGY

This study covers the seven-year annual panel data from 2012 to 2018 for the following eight domestic Islamic banks in Malaysia, namely Maybank Islamic Berhad (MIB), Bank Islam Malaysia Berhad (BIMB), CIMB Islamic Bank Berhad CIBB), Bank Muamalat Malaysia Berhad (BMMB), Hong Leong Islamic Bank

(HLIB), RHB Islamic Bank (RIB), HSBC Amanah Malaysia Berhad (HAMB) and Public Bank Islamic (PBI). The secondary data that are used as variables are summarized in Table 1 as follows:

Table 1 Summary of Variables

Variables
ROA (proxy for bank profitability)
Total assets (proxy for bank size)
Assets turnover (proxy for efficiency)
Debt ratio (proxy for financial risk)
KLSI (proxy for Islamic stock market)
Inflation rate
GDP (proxy for economic growth)

The data for ROA, asset turnover and debt ratio are extracted from the respective banks' annual report that is published online. The raw data is then used to calculate the following ratios, which are as follows:

ROA = Profit before financing cost and tax/total asset
Asset turnover = Total revenue or income/total asset
Debt ratio = Total debt/total asset

Whereas, for total asset that proxy for bank size, we have used the log form due to its large amount. Meanwhile, the KLSI is obtained from the Bursa Malaysia website and the inflation rate and GDP are collected from the World Bank source via the DataStream software.

The data is run in the EViews 10 software. We use three types of analyses, namely (1) descriptive analysis to measure the central tendency, spread or dispersion and normality of data; (2) Pearson's correlation analysis to examine the weak, medium or strong correlations among the variables; and (3) multiple regression analysis to investigate the significant or insignificant relationship of the six independent variables (IVs) with the dependent variable (DV) besides determining the positive or negative effects of the IVs on the DV. The regression model of this study is expressed as below:

$$ROAit = \beta 0 + \beta 1BSit + \beta 2EFit + \beta 3FRit + \beta 4KLSIit + \beta 5IRit + \beta 6GDPit + \epsilon$$

Where:

ROA:	DV represents return on asset
BS:	IV represents bank size
EF:	IV represents bank efficiency
FR:	IV represents financial risk
$KLSI$:	IV represents Kuala Lumpur Shariah Index
IR:	IV represents inflation rate
GDP:	IV represents Gross Domestic Product
$\beta 0$:	Constant
$\beta 1,\ldots, \beta 6$:	Beta coefficient of each IV
ϵ:	Error term

Based on the review of literature, we have developed the following six hypotheses:

Hypothesis 1
There is positive significant relationship between bank size and Islamic bank profitability
Hypothesis 2
There is positive significant relationship between efficiency and Islamic bank profitability
Hypothesis 3
There is negative significant relationship between financial risk and Islamic bank profitability
Hypothesis 4
There is positive significant relationship between KLSI and Islamic bank profitability
Hypothesis 5
There is mixed significant relationship between inflation rate and Islamic bank profitability
Hypothesis 6
There is mixed significant relationship between GDP and Islamic bank profitability

We use the 5 percent or 0.05 level of significance to accept or reject the hypotheses. 'Mixed' relationship means the relationship is ambiguous and it could be either positive or negative.

4.0 RESULTS AND DISCUSSION

4.1. Descriptive Analysis

Table 2 presents the descriptive statistics. There are 56 observations for each variable.

Table 2 Descriptive Statistics

Variable	ROA	FR	BS	EF	KLSI	GDP	IR
Mean	0.0084	0.9247	16.8452	0.0469	5.9000	10561.9400	2.2661
Median	0.0081	0.9249	17.1756	0.0447	4.2000	10817.4400	2.1044
Max.	0.0140	0.9543	18.3955	0.0631	18.9000	11319.0800	3.8712
Min.	0.0037	0.9018	13.1120	0.0347	-7.4000	9671.0250	0.8847
SD	0.0021	0.0127	1.3949	0.0064	9.3186	642.2937	0.9105
Skewness	0.1250	0.1374	-1.7744	0.7299	0.0254	-0.2267	0.3775
Kurtosis	3.0119	2.2163	4.9839	2.7470	1.6016	1.3731	2.3714

From the table, we could see that the ROA has a mean of 0.0084 whilst the financial risk and efficiency show means of 0.92 and 0.05 times, respectively. The bank size indicates a mean of 16.85 times, KLSI records a mean of 5.9 and inflation rate reports a mean of 2.27, whereas the GDP indicates a mean of 10,562. In term of the standard deviation, the ROA, efficiency and financial risk show the smallest variation from their mean, respectively whilst the GDP and KLSI report the largest variation of the data observed from the means, respectively.

Based on the skewness values, we found that the data for ROA, financial risk and KLSI have been

symmetric around the mean values. In other words, we could say that the data for ROA, financial risk and KLSI are normally distributed. Meanwhile, the data for efficiency and inflation rate have been skewed to the right or long right tail, whereas the GDP and bank size are skewed to the left. From the kurtosis values, the ROA has recorded a slightly normal-curve whilst the bank size shows a peaked-curve. The other five variables (financial risk, efficiency, inflation rate, KLSI and GDP) have indicated flatted-curves.

4.2. Correlation Analysis

The result of Pearson's correlation in Table 3 shows that the financial risk, bank size and inflation rate are negatively correlated with the ROA and their correlations are weak, respectively. Out of the three variables, only the bank size is found to be significant at the p-value of 0.0157. Meanwhile, the efficiency, KLSI and GDP indicate positive correlations with the ROA, where the efficiency poses medium correlation at 0.5803 whilst the other two have weak correlations. Based on the p-values, the efficiency and GDP are found to be significant factors and the KLSI is not a significant factor.

Among the IVs, we noted that the inflation rate has negative weak correlation with the other IVs except with the KLSI at 0.3156. The GDP is spotted to have negative weak correlations with the bank size and inflation rate, but weak positive correlations with the other IVs. The KLSI indicates weak negative correlations with the bank size and efficiency, whereas it has weak positive correlations with the others.

The strongest positive correlation is found between the bank size and financial risk (0.5979) whilst the strongest negative correlations are found between the efficiency with the bank size (-0.6738) and financial risk (-0.6730), respectively. Nevertheless, we could conclude that there is no multi-collinearity problem among the IVs because the correlation coefficients are generally low or below 0.8.

Table 3 Pearson's Correlation Results

Cor. Prob.	ROA	FR	BS	EF	KLSI	GDP	IR
ROA	1.0000						
FR	-0.2376	1.0000					
	0.0779	-----					
BS	-0.3214	0.5979	1.0000				
	0.0157	0.0000	-----				
EF	0.5803	-0.6730	-0.6738	1.0000			
	0.0000	0.0000	0.0000	-----			
KLSI	0.2468	0.1440	-0.0980	-0.0467	1.0000		
	0.0667	0.2896	0.4725	0.7326	-----		
GDP	0.3331	0.0359	-0.0318	0.0536	0.1615	1.0000	
	0.0121	0.7929	0.8163	0.6947	0.2345	-----	
IR	-0.1010	-0.0360	-0.0015	-0.0822	0.3156	-0.2300	1.0000
	0.4589	0.7922	0.9912	0.5472	0.0178	0.0882	-----

4.3. Multiple Regression Analysis

Table 4 Multiple Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.0371	0.0226	-1.6392	0.1076
FR	0.0241	0.0235	1.0267	0.3096
BS	0.0002	0.0002	0.9783	0.3327
EF	0.2476	0.0493	5.0177	0.0000*
KLSI	0.0001	0.0000	2.2499	0.0290*
GDP	0.0000	0.0000	2.2295	0.0304*
IR	-0.0001	0.0003	-0.5220	0.6040

From regression the results, the regression model or equation can be expressed as below:

$$\widehat{ROA}i = -0.0371 + 0.0002BSit + 0.2476EFit + 0.0241FRit + 0.0001KLSIit - 0.0001Rit + 0.0000GDPit$$

Based on the coefficient results, we have found that five factors pose positive effects on the Islamic banks' profitability in Malaysia. The five factors are the financial risk, bank size and efficiency (internal) and the KLSI and GDP (external). This implies that when the five independent variables rise in value, it would be able to increase or enhance the Islamic banks' profitability or vice versa. This finding is consistent with Anbar and Alper (2011), (Shahimi et al., 2006), Pástor and Pietro (2003) and Sufian and Habibullah (2010) and Wasiuzzaman and Tarmizi (2010). Meanwhile, the inflation rate poses negative effect on the banks' profitability, which means the higher inflation rate, the lower banks' profitability or vice versa. This finding supports previous studies by Francis (2013) and Wasiuzzaman and Tarmizi (2010). If we look at the beta coefficients closely, only the bank efficiency and financial risk have shown the meaningful or material effects, whereas the other four variables indicate very little effect due to very small coefficient values.

By referring to the p-values that are below 0.05, we note that only three factors, namely the bank efficiency, KLSI and GDP have significant relationships with the ROA or banks' profitability. These results are consistent with Abidin and Endri (2009) and Francis (2013). The other three variables, namely financial risk, bank size and inflation rate are found not significant. The findings are consistent with Wasiuzzaman and Tarmizi (2010).

We summarize the hypotheses testing results in Table 5.

Table 5 Hypotheses Testing Results

Hypothesis	IV	Effect	Significant	Accept/Reject
1	BS	Positive	No	Reject
2	EF	Positive	Yes	Accept
3	FR	Positive	No	Reject
4	KLSI	Positive	Yes	Accept
5	IR	Negative	No	Reject
6	GDP	Positive	Yes	Accept

5.0 CONCLUSION AND RECOMMENDATION

This study investigates the relationship and effects of the internal and external factors or macroeconomic variables on eight Islamic banks' profitability in Malaysia. The results show that the efficiency of the bank, the KLSI and GDP has significantly and positively affected the profitability of the Islamic banks. The efficiency shows how well the Islamic banks manage and utilize its assets in order to generate revenue or income. If the banks are able to generate more income every year with the same amounts of assets, the banks have achieved an increased efficiency. Hence, the Islamic banks must utilize and manage its assets or resources efficiently to boost its profitability in the future. The KLSI also play an important role towards the Islamic banks' profitability. The investors in the Islamic stock market will influence the value of banks. When more investors invest in the Shariah-compliant stocks, it will not only improve the value of banks, but it also will bring up the banks reputation and credibility. This factor will influence the consumers to use the banks' facilities and services that ultimately will increase the banks' income and profits. Therefore, the market regulator and operator specifically the Securities Commission of Malaysia and Bursa Malaysia must ensure the capital market is sufficiently supervised and improved from time to time to attract more investors and to sustain the investors' confidence in the market. The GDP, as a proxy for the country's economic growth also plays pivotal role in the profitability of the Islamic banks. The government particularly needs to have clear, concrete and strategic plans to stimulate and develop the economy. Once the economic activities are flourishing, the players in the industry will go for the banks' financing to support their business operations and this will contribute towards increasing the banks' profitability.

Despite the other three variables (financial risk, bank size and inflation rate) showing insignificant results, the banks could not take them for granted. Financial risk is closely related to the leverage. The banks must make sure the financial risk is at the acceptable or optimum level because once the risk has breached the optimum level, it will cause unnecessary cost to the banks and this will contribute towards a decline in profit. Bank size, even though is not a significant factor, is able to affect the banks' profitability positively. Thus, the banks need to ensure the appropriate bank size in order to be competitive in the industry and to achieve economies of scale. Inflation too could affect the banks' profitability either positively or negatively. Hence, the banks' management must be able to predict inflation and be prepared with contingency plans in order to protect the banks' profitability in the future. The most important is that government or policymakers should tighten the monetary policy to control the inflation.

This study has its limitations, where we just focus on the eight domestic Islamic banks. Future study could be conducted on the foreign Islamic banks that operate in Malaysia. Besides, we only employ six independent variables. Next research can test on other variables such as interest rate, exchange rate, bank liquidity and dividend policy by applying other methodologies as robustness. Comparison study with other countries' Islamic banks is also recommended.

Reference

Abduh, M., and Idrees, Y. (2013). Determinants of Islamic banking profitability in Malaysia. Australian Journal of Basic and Applied Sciences, 7(2), 204-210.

Abidin, Z., & Endri, E. (2009). Kinerja efisiensi teknis bank pembangunan daerah: pendekatan Data Envelopment Analysis (DEA). Jurnal Akuntansi dan Keuangan, 11(1), 21-29.

Agusman, A., Monroe, G. S., Gasbarro, D., & Zumwalt, J. K. (2008). Accounting and capital market measures of risk: evidence from Asian banks during 1998–2003. Journal of Banking & Finance, 32(4), 480-488.

Anbar, A., & Alper, D. (2011). Bank specific and macroeconomic determinants of commercial bank profitability: empirical evidence from Turkey. Business and Economics Research Journal, 2(2), 139-152.

Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. Journal of International Financial Markets, Institutions and Money 18(2), 121-136.

Francis, M. E. (2013). Determinants of commercial bank profitability in Sub-Saharan Africa. International Journal of Economics and Finance, 5(9), 134-147.

Gul, S., Irshad, F., & Zaman, K. (2011). Factors affecting bank profitability in Pakistan. The Romanian Economic Journal, Year XIV, 39, 61-87.

Hao, S., Jin, Q., & Zhang, G. (2011). Relative firm profitability and stock return sensitivity to industry-level news. The Accounting Review: July 2011, 86(4), 1321-1347.

Haron, S. (2004). Determinants of Islamic bank profitability. Global Journal of Finance and Economics, 1(1), 11-33.

Hassan, M. K., & Bashir, A.-H. M. (2005). Determinants of Islamic banking profitability. Islamic Perspectives on Wealth Creation, 118-140.

Idris, A. R., Asari, F. F. A. H., Taufik, N. A. A., Salim, N. J., Mustaffa, R., & Jusoff, K. (2011). Determinant of Islamic banking institutions' profitability in Malaysia. World Applied Sciences Journal 12 (Special Issue on Bolstering Economic Sustainability), 01-07.

Masood, O., & Ashraf, M. (2012). Bank-specific and macroeconomic profitability determinants of Islamic banks: the case of different countries. Qualitative Research in Financial Markets, 4(2/3), 255-268.

Mitton, T. (2006). Stock market liberalization and operating performance at the firm level. Journal of Financial Economics, 81(3), 625-647

Pasiouras, F., & Kosmidou, K. (2007). Factors influencing the profitability of domestic and foreign commercial anks in the European Union. Research in International Business and Finance, 21(2), 222-237.

Pástor, L., & Pietro, V. (2003). Stock valuation and learning about profitability. The Journal of Finance, 58(5), 1749-1789

Shahimi, S., Ismail, A. G., & Ahmad, S. (2006). A panel data analysis of fee income activities in Islamic banks. Journal of King Abdulaziz University: Islamic Economics, 19(2).

Srairi, S. A. (2009). Factors influencing the profitability of conventional and Islamic commercial banks in GCC countries. Review of Islamic Economics, 13(1), 5-30.

Sufian, F., & Habibullah, M. S. (2010). Assessing the impact of financial crisis on bank performance: empirical evidence from Indonesia. ASEAN Economic Bulletin, 27(3), 245-262.

Tan, Y., & Floros, C. (2012). Bank profitability and inflation: the case of China. Journal of Economic Studies, 39(6), 675-696.

Tan, Y., & Floros, C. (2012). Bank profitability and GDP growth in China: a note. Journal of Chinese Economic and Business Studies, 10(3).

Wasiuzzaman, S., & Tarmizi, H. (2010). Profitability of Islamic banks in Malaysia: an empirical analysis. Journal of Islamic Economics, Banking and Finance, 6(4), 53-68.

Zarrouk, H., Jedidia, K. B., & Moualhi, M. (2016), Is Islamic bank profitability driven by same forces as conventional banks?. International Journal of Islamic and Middle Eastern Finance and Management, 9(1), 46-66.