OPEN ACCESS
Saudi Journal of Economics and Finance
Abbreviated Key Title: Saudi J Econ Fin
ISSN 2523-9414 (Print) |ISSN 2523-6563 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: http://saudijournals.com

Original Research Article

Domestic versus Foreign Islamic Banks: Do they have the same Profitability Determinants?

Nora Azureen Abdul Rahman[1*], Norhafiza Nordin[1]

[1]School of Economics, Finance and Banking, Universiti Utara Malaysia 06010 Sintok, Kedah, Malaysia

DOI: 10.36348/sjef.2022.v06i04.002 | **Received:** 22.02.2022 | **Accepted:** 28.03.2022 | **Published:** 06.04.2022

***Corresponding author:** Nora Azureen Abdul Rahman
School of Economics, Finance and Banking, Universiti Utara Malaysia 06010 Sintok, Kedah, Malaysia

Abstract

The liberalisation of the Islamic banking industry in Malaysia has given rise to the emergence of many foreign Islamic banks in the country, raising a major concern regarding its impact. This study investigates the impact of bank-specific and macroeconomic factors on bank profitability from 2005 to 2017. Unbalanced panel data of eleven domestic and six foreign Islamic banks have been employed to achieve the study's objective. The findings show that different factors influence the profitability of domestic Islamic banks and foreign Islamic banks. While internal factors significantly affect the profitability of domestic Islamic banks, the profitability of the foreign Islamic banks is more stable and less affected by internal and external factors. The findings provide insights to domestic Islamic banks to improve their operations, profitability, and competitiveness. These banks' better operational efficiency and performance will consequently improve the overall Islamic banking industry.

Keywords: Profitability, Islamic banks, bank-specific factors, macroeconomic factors.

INTRODUCTION

The significance of Islamic banks in Malaysia is undeniable. Since the emergence of Islamic banks in Malaysia, many competitive and popular advanced Islamic finance products and services have been introduced to the Malaysian market. Examples of products include Mudharabah (profit sharing), Wadiah (safekeeping), Musharakah (joint venture), and Murabahah (cost plus finance). These products and services have received a good response from the customers as an alternative to conventional banking products. The Malaysian government has introduced extensive measures to further develop the Islamic banking system and industry. The most significant milestone was the liberalisation of the Islamic banking industry in 1996, which has led to a large inflow of foreign Islamic banks to Malaysia. The rapid establishment and market penetration have raised major concerns regarding their impact on the competitiveness and profitability of domestic banks.

Proponents of market liberalisation argue that the entry of foreign banks benefits the domestic banking market by increasing competition and operational efficiency, which consequently increases the availability of credit (Hassan, Sanchez & Safa, 2013; Jeon et al., 2011; Xu, 2011; Wu *et al*., 2010). However, Hassan, Sanchez and Safa (2013) assert that liberalisation does not come without consequences. The emergence of foreign banks tends to reduce the profit and domestic banks' market share. The foreign banks bring large amounts of capital, culture and expertise. Thus, creating high competition in the local banking industry (Muda, Shaharuddin & Embaya, 2013). Jeon *et al*., (2011) indicate that banks 'fresh entering' approach creates a greater effect of competitiveness in the domestic banking market than banks entering through merger and acquisition activities. Kalluru and Bhat (2009) and Azmeh (2018) state that foreign banks tend to 'cherry-pick' the good and profitable businesses and leave the less creditworthy businesses and risky sectors of the economy to the domestic banks. This action has increased the domestic banks' operating costs and non-performing loans and thus, decreased their net income.

Although there are extensive studies on profitability determinants of banks in Malaysia, limited studies are done to focus on Islamic banks (see for example, Bashir (2003), Alkassim (2005), Hassan, Sanchez, and Safa (2013)). Since Islamic banks are part of the Malaysian banking system, examining the determinants of profitability of the Islamic banks is

crucial. Even though the determinants used are similar, the findings might be different. This difference is because the Shariah principle governs Islamic banks' operations. The findings will provide insights and serve as guidance towards enhancing the performance and competitiveness of the banks. Past studies focus more on comparing the domestic and foreign Islamic banks' profitability. In contrast, this study focuses on identifying the internal and external factors that influence profitability.

EMPIRICAL EVIDENCE ON BANK PROFITABILITY DETERMINANTS

Profitability plays an important role in ensuring a bank remains competitive in the financial market. Past studies explained that several factors determine bank profitability. These factors can be categorised into two groups: internal and external determinants (Menicucci & Paolucci, 2016; Muda, Shaharuddin & Embaya, 2013; Curak Poposki & Pepur, 2012). The internal determinants, also known as bank-specific factors, are related to the bank's management. Meanwhile, external determinants are related to the economic environment where banks operate. Changes in these variables will affect bank profit. Several studies have been conducted to examine the determinants of bank profitability. For example, Sackitey (2016), Menicucci and Paolucci (2016), Zarrouk, Jedidia and Moualhi (2016), Petria, Capraru and Ihnatov (2015), Zeitun (2012), Dietrich and Wanzenrie (2011), Aburime (2008), Bashir (2003) and, Hassan and Bashir (2003). Most of these studies have found that bank-specific factors and macroeconomic factors can explain the changes in bank profitability. The most common bank-specific factors that received attention from the previous studies are liquidity, asset quality, operating costs, capital strength, and bank size, while macroeconomic variables include GDP and inflation. However, the empirical results of the past studies are inconclusive. The mixed results are due to the differences in data set, study period, methodology used, and investigated countries.

Liquidity

Liquidity reflects the ability of a bank to meet its obligations when they are due. Menicucci and Paolucci (2016) contend that banks need to maintain high liquidity to meet the demand for depositor withdrawal and make profits. Chen and Liao (2011) indicate a positive relationship between liquidity and bank profit, implying that an increase in bank liquidity leads to an increase in bank profitability. The finding is similar to the findings by Berger and Bouwman (2009), Bordeleau and Graham (2010) and Tran, Lin and Nguyen (2016). However, some previous studies find negative relationships between liquidity and bank profitability. Pasiourus and Kosmidou (2007), King (2013) and, Sahyouni and Wang (2018) report a significant negative relationship between liquidity and profitability, arguing that there is a trade-off between liquidity and profitability. In contrast, Naceur and Kandil (2009) reveal that bank liquidity does not significantly impact profits.

Asset Quality

Asset quality is a common major determinant of bank profitability. The quality of bank assets depends primarily on the bank's loan portfolio, where poor asset quality is normally associated with poor loan quality (Salike & Ao, 2017). The theoretical consideration is that loans are generally the most sizeable item on the asset side of a bank's balance sheet. The asset quality ratios involve the possibility of borrowers paying back the loan (Alkassim, 2005). Loans are the biggest potential risk to the bank's capital account. Poor quality loans will erode the bank's profitability. Bock and Demyanets (2012) report that poor asset quality of banks is significantly associated with worsening loan quality, while Abulescu (2015) provides evidence that non-performing loans significantly impact banks' profitability. Athanasoglou et al. (2008), Afriyie and Akotey (2013), and Adusei (2015) find that high exposure to credit risk, which is an indicator of asset quality, would decrease the profitability of banks. In contrast, Curak, Poposki and Pepur (2012) find that credit risk is insignificant to banks' profitability in the Republic of Macedonian, indicating that the profitability of the country's banks is influenced by other costs factors rather than loan activities. The study is in line with the study of Kithinji (2010) on Kenya banks. The author finds no relationship between the number of loans and non-performing loans with the number of profits.

Operating Cost

Operating costs appear to be another major determinant of bank profitability. Operating costs reflect the bank management's ability, whereas lower-cost reflects better operational management of the bank. Previous studies such as Fidanoski *et al*., (2018) and Dietrich and Wanzenried (2011) find a significant negative relationship between operating cost and bank profitability. The finding indicates that higher operating costs imply the inefficiency of banks in managing their operating costs, resulting in lower profitability. In Malaysia, a study by Muda, Shaharuddin and Embaya (2013), Wasiuzzaman and Tarmizi (2010), and Sufian (2006) find that operational efficiency or low operating costs have a positive effect on profits. In contrast to the above findings, Masood and Ashraf (2012) argue that the effect of operating costs on bank profitability is weak or not important. The findings are derived based on a study of 25 Islamic banks from 12 countries.

Capital Strength

Capital strength refers to the bank's capacity to fulfil depositors' demands and determine the degree of robustness of the bank to withstand a financial shock. The majority of past studies provide evidence of a positive relationship between capital strength of banks

and their profitability, such as Abulescu (2015); Ahokpossi (2013); Aebi *et al*., (2012); Masood and Ashraf (2012); Flamini *et al*., (2009); Athanasoglou et al. (2008). The studies suggest that capital strength increases profitability by auguring customers' confidence and exploiting market opportunities. In addition to that, it attracts more deposits. Hence, more prospects to obtain higher interest income and better earnings diversification. Ghosh (2016) indicates that a positive relationship of capital to profitability is expected even if there is an increase in regulatory capital cost. Banks will normally transfer the costs to the customers. In contrast, Curak, Poposki and Pepur (2012) report a significant negative relationship between capital to asset ratio and profitability. The authors indicate that although a higher level of bank capital provides safety, overcaution in the banking business lowers profitability. Based on the risk-return hypothesis, some authors explain the relationship between capital and bank profitability. They conclude that banks with a higher capital ratio are considered less risky and, thus, have lower profitability (Saona, 2011; Ali *et al*., 2011; Staikouras & Wood, 2004).

Size

Past empirical studies proved the role of size as a determinant for bank profitability (Menicucci & Paolucci, 2016). However, a review of the previous studies shows inconclusive results of the relationship between size and bank profitability. Studies such as Saeed (2014), Dogan (2013), Gul *et al*., (2011), Alp *et al*., (2010), Athanasoglou *et al*., (2008) and, Pasiouras and Kamidou (2007) report a significant positive relationship between size and bank profitability. The authors indicate that large banks can benefit from economies of scale, which enable banks to increase their operational efficiency and reduce costs. As larger banks are expected to produce more than smaller banks, the economies of scale will result in higher profits. However, there are also previous studies that reported the opposite finding. Dietrich and Wanzenried (2011), Sufian and Habibullah (2009), Kosmidou, Tanna and Pasiouras (2008) and, Sufian and Chong (2008) find that larger banks realise less profits than smaller banks do. The negative relationship between size and profitability of extremely large banks is caused by higher costs related to the management of the banks, expenses of bureaucratic procedures, and agency costs (Athanasoglou *et al*., 2008).

Gross Domestic Products

Banking literature suggests that bank profitability is not only influenced by internal factors but also by the economic conditions in which it operates (Flamini *et al*., 2009; Adelopo, Lloydking & Tauringana, 2017; Curak *et al*., 2012; Dietrich & Wanzenreid, 2011; Kosmidou, Tanna & Pasiouras, 2008). The previous studies' most commonly used economic indicators are gross domestic products (GDP) and inflation. Bashir (2003), Hassan and Bashir (2003), Kosmidou, Tanna and Pasiouras (2008), Wasiuzzaman and Tarmizi (2010), and Garcia and Guerreiro (2016) report a significant positive relationship between GDP and bank profitability. The authors argue that higher GDP is expected to stimulate the demand for bank loans. As the demand increases, the banks have more opportunities to expand their businesses. Large businesses will enable banks to generate more revenues. Higher revenues may lead to higher profits. However, Yanikkaya et al. (2018), Ben Ameur and Mhiri (2013), and Naceur and Omran (2011) find a negative relationship between GDP and bank profitability. They argue that higher GDP will lead to higher competition between banks, which might decrease profits.

Inflation

Empirical pieces of evidence report mixed results of the relationship between inflation and bank profitability. Inflation is one of the most important economic factors which may affect bank costs and revenues. Flamini et al. (2009) and Athanasoglou *et al*., (2008) indicate that the effects of inflation on banks profitability depend on how precise an inflation rate can be estimated and passed on to customers. Fully anticipated inflation rates enable banks to adjust interest rates to raise revenues and eventually profit. This situation results in a positive impact of inflation on bank profitability. However, in the case of unanticipated inflation, banks might not be able to adjust the interest rates appropriately or timely. This situation might result in a faster increase in costs than revenue, leading to a deterioration in profits. Hence, the impact of inflation on bank profitability will be negative. Wasiuzzaman and Tarmizi (2010), Flamini *et al*., (2009), Athanasoglou *et al*., (2009) and, Sufian and Habibullah (2009) find a positive relationship between inflation and bank profitability, while Sufian and Chong (2008) report a negative relationship. Adelopo, Lloydking and Tauringana (2017) contend that inflation will increase banks' operating costs, which will lead to a reduction in profits. Buckley (2011) argues that the net effect of inflation on bank profitability is complicated and ambiguous, while Petria, Capraru and Ihnatov (2015) indicate that inflation has no effects on bank performance.

METHODOLOGY

This study uses the whole population of Islamic banks in Malaysia, as reported by Bank Negara Malaysia. It consists of eleven domestic Islamic banks and six foreign Islamic banks. The data of bank-specific variables are collected from the banks' balance sheets and income statements, while data for the macroeconomic variables are obtained from the Department of Statistics, Malaysia. This study uses unbalanced panel data from 2005 to 2017 (13 years). The data are limited within the stated period as no complete data on foreign Islamic banks is available before 2005.

Return on equity (ROE) and return on asset (ROA) are proxies for bank profitability. Specifically:

- ROE equals the ratio of net income to total equity. It reflects a bank's efficiency to earn profits from every unit of shareholders' equity. In other words, it measures the return earned by the shareholders.
- ROA equals the ratio of net income to total assets. ROA reflects the ability of a bank to utilize its assets to make profits.

The independent variables are bank-specific factors and macroeconomics factors. Bank-specific factors refer to the individual bank characteristics which affect the bank performance. In contrast, macroeconomic factors refer to influential fiscal, natural, or geopolitical factors that broadly affect a regional or national economy. The economic conditions in which banks operate influence the operations and performance of the banks (Menicucci & Paolucci, 2016; Masood & Ashraf, 2012). The bank-specific variables of this study are proxied by liquidity, asset quality, operating costs, capital ratio, and bank size, while macroeconomics variables are proxied by GDP and inflation. Previous studies reported that these variables are important factors in achieving profitability in banking institutions (Hussein *et al*., 2019; Adelopo, Llyodking & Tauringana, 2017; Menicucci & Paolucci, 2016; Albulescu, 2015; Masood & Ashraf, 2012).

- *Liquidity:* Liquidity is one of the major causes of bank failure (Masood & Ashraf, 2012). High liquidity signifies that banks are more liquid and can withstand unfortunate events. However, high liquidity also means higher opportunity costs. Total deposits to total assets measure liquidity.
- *Asset Quality:* The asset quality is measured by non-performing loans to total loans. Large loans have the potential to generate high profitability. However, they may lead to lower profitability if they include high default loans (Menicucci & Paolucci, 2016).
- *Operating Costs:* The operating costs measure how effectively a bank operates, reduces costs, and generates profits. It is measured by operating expenses to total assets.
- *Capital Ratio:* The capital ratio is a key measure to determine the bank's financial health (Menicucci & Paolucci, 2016). Banks with a strong capital ratio can alleviate financial distress costs, reduce the need for external funding, and have a higher interest margin. The capital ratio in this study is measured as equity to total assets.
- *Size:* Bank size is proxied by the bank's total assets. The logarithm of total assets represents the bank size. The belief that large banks could benefit from economies of scale will reduce costs. It is expected that larger banks to produce more than smaller banks.
- *GDP:* The annual gross domestic product (GDP) is used to measure the country's economic activity. GDP influences the fluctuations in the business cycle and, thus, the performance of the businesses. It is anticipated that banks are generally motivated to lend more under sound economic conditions and will be able to earn higher returns (Hussein *et al*., 2019).
- *INF:* Annual inflation rate reflects the percentage increase in the Consumer Price Index (CPI) for all goods and services. Theoretically, the actual values of costs and revenues are affected by inflation. Previous studies also use this variable to examine the effect of inflation on banks' profitability, such as Masood and Ashraf (2012), Petria, Capraru and Ihnatov (2015), and Fidanoski (2018).

Dependent Variables	**Description**	**Measurement**	
ROE	Return on equity	Net income/total equity	
ROA	Return on asset	Net income/total assets	
Independent Variables	**Description**	**Measurement**	**Expected Effect**
LIQ	Liquidity	Total deposit/total assets	+ve
ASSETQ	Asset quality	NPL/total loan	+ve
OPE	Operating cost	Operating expenses/total assets	-ve
CAP	Capital	Equity/total assets	+ve
SIZE	Size	Log of total assets	+ve
GDP	Gross domestic product	Annual rate	+ve
INF	Inflation	Annual rate	-ve

In order to carry out the analysis, multicollinearity, homoscedasticity and auto-correlation test are checked. Based on the nature of panel data, the consistent model for 'pooled' is carried out using the Chi-square test. Then, based on the result of the 'not to follow pooled model', the Hausman test is carried out to choose the most appropriate model for the study. The Hausman test shows that the fixed effects (FE) model is more appropriate for the study than the random effects (RE) model. The research model of this study is presented as follows:

Profitability = f (LIQ, ASSETQ, OPE, CAP, SIZE, GDP, INF) ……. (1)

$$ROE = \alpha_0 + \beta_1 LIQ_{it} + \beta_2 ASSETQ_{it} + \beta_3 OPE_{it} + \beta_4 CAP_{it} + \beta_5 SIZE_{it} + \beta_6 GDP_{it} + \beta_7 INF_{it} + e_{it} \quad \text{..... (2)}$$

$$ROA = \alpha_0 + \beta_1 LIQ_{it} + \beta_2 ASSETQ_{it} + \beta_3 OPE_{it} + \beta_4 CAP_{it} + \beta_5 SIZE_{it} + \beta_6 GDP_{it} + \beta_7 INF_{it} + e_{it} \ldots\ldots\ldots\ldots (3)$$

EMPIRICAL RESULTS

The descriptive results of the study are divided into two sections, domestic Islamic banks and foreign Islamic banks. The results are presented as follows:

Table 2: Descriptive Results of Domestic and Foreign Islamic Banks

Variables	Mean		Median		Std. Dev	
	DB	FB	DB	FB	DB	FB
ROE	0.069082	0.055878	0.0086	0.0052	0.185962	0.190398
ROA	0.163238	0.220794	0.1114	0.0373	0.429385	1.288468
LIQ	0.163238	0.755538	0.8941	0.8194	0.176543	0.874287
ASSETQ	0.027833	0.026787	0.0192	0.0126	0.024314	0.045762
OPE	0.012854	0.016619	0.0079	0.0114	0.033448	0.039097
CAP	0.072129	0.15043	0.0743	0.114	0.017763	0.164635
SIZE	7.330756	6.375171	7.36	6.9729	0.484214	2.648927
GDP	5.990756	5.977922	5.99	5.96	0.202188	0.160577
INF	2.782857	2.798442	3.0000	3.0000	1.235491	1.204698

Note: DB = Domestic Banks; FB = Foreign Banks

The descriptive statistics in Table 2 show that domestic Islamic banks have a higher mean of ROE (69%) and lower standard deviation (18.6%) compared to the foreign Islamic banks (55.9%) and (19%), respectively. The figures imply that domestic Islamic banks have higher and more stable shareholder returns than foreign Islamic banks. However, foreign Islamic banks have a higher mean of ROA (22.18%) than domestic Islamic banks (16.32%), indicating that they are more efficient in managing their assets to produce profits during the study period. The results also show that foreign Islamic banks in Malaysia have higher liquidity (75.55%) than domestic banks (16.32%) and have a higher capital ratio. Nevertheless, domestic Islamic banks have a better asset quality, lower operating costs, and larger asset size than foreign Islamic banks, implying a prudent loan policy, efficient operations management, and active loan activities.

Next, the correlation analysis is conducted on domestic and foreign Islamic banks. The results are shown in Table 3 and Table 4, respectively.

Table 3: Correlation Matrix of Domestic Islamic Banks

	ROE	ROA	LIQ	ASSET	OPE	CAP	SIZE	GDP	INF
ROE	1								
ROA	0.0049	1							
LIQ	0.1149	0.0691	1						
ASSET	-0.0057	-0.0400	-0.0077	1					
OPE	-0.0544	-0.0100	0.0636	-0.0683	1				
CAP	-0.1906	-0.2596	-0.2480	0.1545	0.1648	1			
SIZE	-0.2529	0.0441	0.2483	-0.0940	-0.0708	-0.2304	1		
GDP	-0.0285	-0.0059	0.0698	-0.2836	0.0726	0.0553	0.3619	1	
INF	0.0323	0.0887	-0.0801	0.1225	0.1255	0.1021	0.0755	0.1711	1

The correlation analysis results for the domestic banks do not show any sign of multicollinearity problem in the data. The highest correlation coefficient is between GDP and size, which is 0.3619. However, the value is far below 0.90; the benchmark used to indicate the existence of multicollinearity (Pallant, 2007).

Table 4: Correlation Matrix of Foreign Islamic Banks

	ROE	ROA	LIQ	ASSET	OPE	CAP	SIZE	GDP	INF
ROE	1								
ROA	0.8897	1							
LIQ	-0.0129	0.0128	1						
ASSET	0.0440	-0.0126	0.6626	1					
OPE	0.0342	0.0054	0.0246	-0.0736	1				
CAP	0.3000	0.0356	-0.0271	0.1762	0.1625	1			
SIZE	0.0419	0.0135	0.3086	0.1659	0.1104	0.3693	1		
GDP	-0.0050	-0.1323	0.1552	0.0969	0.2048	0.0763	0.4690	1	
INF	0.1870	0.0898	0.0108	-0.1038	0.1185	0.1831	-0.0267	0.2008	1

The correlation analysis results of foreign Islamic banks also show no multicollinearity problem exists in the data. Like the domestic Islamic banks, the highest correlation coefficient is between GDP and size. Next, the Breusch-Pagan-Godfrey test and Lagrange Multiplier test are conducted to check for heteroscedasticity and auto-correlation problem, respectively, in domestic Islamic banks and foreign Islamic bank data. The results of both tests are found to be significant at $p<0.01$, indicating the existence of heteroscedasticity and auto-correlation problems in both data set. The heteroscedasticity problem is then corrected using White's General Heteroscedasticity test, while the auto-correlation problem is tackled by incorporating AR(1). The regression results of bank-specific and macroeconomics variables on bank profitability are presented as follows;

Table 5: Regression Result of Bank Specific Variables and Macroeconomic Variables on ROE

Variables	Domestic Islamic Banks			Foreign Islamic Banks		
	Coefficient	Std Error	T-statistic	Coefficient	Std Error	T-statistic
C	0.587246	0.527259	1.113770*	0.177473	0.936220	0.189563*
LIQ	0.164477	0.087084	1.888718	0.001510	0.037418	0.040349
ASSETQ	0.099011	0.499639	0.198165	0.049425	0.697570	0.070853
OPE	-0.388876	0.179478	-2.166710**	-0.088273	0.580606	-0.152036
CAP	-2.615788	1.098822	-2.380538***	0.343232	0.162946	2.106423**
SIZE	-0.153838	0.041879	-3.673359***	-0.003734	0.011135	-0.335370
GDP	0.103966	0.081324	1.278428	-0.035561	0.163959	-0.216891
INF	0.013301	0.012402	1.124441	0.022214	0.019756	1.124441
AR(1)	0.619699	0.096660	6.411128	0.667277	0.035354	18.87421
Adjusted R^2	0.279050			0.231270		
F	3.253201			1.257041		
F-Statistics	35.00352			28.28457		
N	119			77		

*,** and *** indicate significance levels of 10, 5, and 1 percent, respectively.

Table 5 shows the effect of bank-specific variables and macroeconomic variables on ROE. The adjusted R^2 value for domestic Islamic banks is 27.91%, while the value for foreign Islamic banks is 23.13%. Operating costs, capital ratio, and bank size are found statistically significant to ROE of domestic Islamic banks. In contrast, only capital ratio is found significant to ROE of foreign Islamic banks. In line with the hypothesis, operating costs are found to have a significant negative effect on the ROE of the domestic Islamic banks, indicating that banks' profitability will increase if banks manage to reduce their operating costs. The result is consistent with financial intermediation theory which indicates that high costs will erode profits. High operating costs imply management inefficiency in managing their operational costs, eventually affecting their profits. Banks with high operating costs are likely to report low profits (Pasiouras & Kosmidou, 2007). The result is parallel with the findings of Athanasoglou *et al.* (2008); Gekonge and Muriu (2019); Chen and Liao (2011), and Wasiuzzaman and Tarmizi (2010).

Contrary to the hypothesis, capital ratio is found to have a significant negative effect on the ROE of the domestic Islamic banks. The result implies that the higher the banks' capital, the lower is the banks' profitability. Ahokpossi (2013) asserts that well-capitalised banks face a lower cost of borrowing and low risk of bankruptcy, implying that these factors may make banks charge lower margins and thus reduce their profitability. Banks' ability to pass their capital regulatory cost to the customers might be another plausible reason for the negative effects of capital ratio on ROE of the domestic Islamic banks. Gosh (2016) argues that a positive effect of capital on banks' profitability depends greatly on whether banks can pass the costs to the customers efficiently. The result is consistent with Wasiuzzaman and Tarmizi (2010) and Muda, Shaharuddin and Embaya (2013), who find a significant negative effect of capital on the profit of Islamic banks in Malaysia.

Different from what has been hypothesised, bank size has a significant negative impact on the ROE of domestic Islamic banks. Previous studies argue that as banks expand their businesses by venturing into new markets, building new branches, product diversifications, and product development, the costs of banks will increase, which will erode the profitability of the banks (Dietrich and Wanzenreid, 2011; Shehzad *et al.*, 2013; Ahokpossi, 2013). Some studies suggest a negative effect of size on banks profitability due to diseconomies of scale of large banks (Kosak & Cok, 2008), agency costs, other expenses of large banks, and the overhead expenses of bureaucratic processes (Stiroh & Rumble, 2006; Pasiouras & Kosmidou, 2007). The result is inconsistent with Muda, Shaharuddin and

Embaya (2013), who find positive effects of bank size on the profitability of Islamic banks in Malaysia.

As for the foreign Islamic banks, the effect of capital ratio on ROE is consistent with the hypothesis. The result shows that capital ratio has a significant positive impact on ROE. The result suggests that as capital increases, shareholders are more concerned with banks' activities, induce higher monitoring, supervision, and control of bank activities, and consequently increase the banks' profitability. Another plausible reason is that a higher level of capital increases bank capacity to grant loans to customers and exploit market opportunities, thus increasing bank profitability. The result is in line with previous studies such as Olson and Zoubi (2011) and Ramlall (2009). However, the result is contrary to the study done by Muda, Shaharuddin and Embaya (2013) that finds significant negative effects of capital on the foreign Islamic banks' profitability.

Table 6: Regression Result of Bank Specific Variables and Macroeconomics Variables on ROA

Variables	Domestic Islamic Banks			Foreign Islamic Banks		
	Coefficient	Std Error	T-statistic	Coefficient	Std Error	T-statistic
Model 2: Dependent Variable - ROA						
C	0.786321	1.253739	0.627181*	10.19842	6.580480	1.549799*
LIQ	0.051002	0.235600	0.216478	-0.002314	0.263004	-0.008800
ASSETQ	0.045129	1.654556	0.027276	0.286261	4.903064	0.058384
OPE	0.189310	1.207956	0.156720***	0.845382	4.080949	0.207153
CAP	-6.503611	2.400411	-2.709374	-0.207440	1.145307	-0.181122
SIZE	-0.018479	0.090706	-0.203728	0.062496	0.078268	0.798481
GDP	0.101899	0.120166	0.847987	-1.804599	1.152428	-1.565911*
INF	0.039275	0.032685	1.201629	0.151134	0.138858	1.088402
AR(1)						
Adjusted R^2	0.298730			0.538036		
F	1.424956			1.445357		
F Statistic	20.02356			23.87008		
N	119			77		

*, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively

Table 6 shows that the adjusted R^2 value for domestic Islamic banks is 29.87%, while for foreign Islamic banks is 53.80%. The table also shows that only operating costs have significant effects on profitability (ROA) of domestic Islamic banks; at a 1% significance level. As for the foreign Islamic banks, only GDP is statistically significant to profitability, at a 10% significance level.

The significant positive effect of operating costs on the profitability of domestic banks is contrary to the hypothesis. The result suggests that the higher the operating cost, the higher is bank profitability. The plausible reason for this effect lies in the basic intermediation role of banks as the intermediary between savers and lenders. As banks are highly dependent on deposits as their source of funds, the cost of borrowing of banks will increase due to higher interest paid to depositors. However, larger deposits mean larger loans that can be extended to the customers, thus increasing bank profitability (Rose & Hudgins, 2012). Lee and Hsieh (2013) indicate that more deposits benefit banks as more profits can be earned. Menicucci and Paolucci (2015) argue that banks with higher loan growth volume seem to be more profitable due to the added business established.

As for foreign Islamic banks, the significant negative effect of GDP on banks profitability is different from the hypothesis. The negative result could be due to the higher competition between banks during higher economic growth. Economic growth will improve businesses, creating more opportunities, new products and services, diversification, and joint ventures. Thus, resulting in higher demand for bank loans. The situation creates competition between banks. Consequently, banks become more flexible or less stringent in assessing borrowers' creditworthiness, exposing banks to high credit risk, and reducing bank profitability. The result supports the result by Tan and Floros (2012), which reveals that a high GDP growth rate decreases banks' profitability in China.

CONCLUSION

Overall, the empirical results provide evidence that domestic Islamic banks and foreign Islamic banks in Malaysia have different profitability determinants. Using return on equity as an indicator for bank profitability, the findings reveal that bank-specific variables play a significant role in influencing the profits of domestic Islamic banks than the foreign Islamic banks. Changes in operating costs, capital ratio, and bank size affect the profitability of domestic Islamic banks in different ways. While the result of operating costs on banks profitability is consistent with the hypothesis, capital ratio and size have different effects on profits of the domestic Islamic banks. Using return on assets as a second indicator of bank profits,

findings indicate that bank-specific variables only affect domestic Islamic banks' profitability, not foreign Islamic banks. However, the profitability of foreign Islamic banks is affected by changes in GDP. Hence, based on the result, the study concludes that domestic and foreign Islamic banks in this country have different profitability determinants. Internal factors significantly affect the profitability of domestic Islamic banks; management decisions such as bank policy, objectives, mission, and strategies.

Meanwhile, the profitability of the foreign Islamic banks is more stable and less affected. A plausible reason might be that foreign Islamic banks' operations and activities are more geographical diversified. Thus, making them more stable and resilient during difficult times or when facing financial adversities. The result of this study is important, especially for domestic Islamic banks, as it provides insights that can be used to improve the banks' profitability and thus, increase competitiveness. The results are also important to policymakers; to regulate appropriate measures for the survival and betterment of the domestic Islamic banks. The finding of this study is limited to domestic and Islamic banks in Malaysia from 2005 to 2017. It is suggested that future studies conduct a comparative study between Islamic banks and conventional banks. This is in line with the dual banking practices in Malaysia, where Islamic banks operate parallel with conventional banks.

Acknowledgement: This work was supported by Universiti Utara Malaysia [grant number 13468].

REFERENCES

- Aburime, U. (2008). Determinants of bank profitability: Industry level evidence from Nigeria. *International Journal of Nigerian Studies and Development*, 14, 21-34.
- Adelopo, I., Lloydking, R., & Tauringana, V. (2017). Determinants of bank profitability before, during and after the financial crisis. *International Journal of Managerial Finance*, 14(4), 378-398.
- Adusei, M. (2015). The impact of bank size and funding risk on bank stability. *Cogent Economics and Finance*, 3(1), 1-19.
- Aebi, V., Sabato, G., & Schmid, M. (2012). Risk management, corporate governance, and bank performance in the financial crisis. *Journal of Banking & Finance*, 36(12), 3213-3226.
- Afriyie, H. O., & Akotey, J. O. (2013). Credit risk management and profitability of rural banks in the Brong Ahafo of Ghana, *European Journal of Business and Management*, 5, 24-35.
- Ahokpossi, C. (2013). Determinants of bank interest rate margins in Sub-Saharan Africa. IMF Working Paper No. WP/13/34, 1-20.
- Albulescu, C. T. (2015). Banks' profitability and financial soundness indicators: A macro-level investigation in emerging countries. *Procedia Economics and Finance*, 23, 203-209.
- Ali, K., Akhtar, M. F., & Ahmed, H. Z. (2011). Bank specific and macroeconomic indicators of profitability: Empirical evidence from the commercial banks of Pakistan. *International Journal of Business and Social Science*, 2(6), 235-242.
- Alkassim, F. A. (2005). The profitability of Islamic and conventional banking in the GCC countries: A comparative study. *Journal of Review of Islamic Economics*, 13(1), 5-30.
- Alp, A., Ban, U., Demirgunes, K., & Kilik, S. (2010). Internal determinants of profitability in Turkish banking sector. *Istanbul Stock Exchange Review*, 12(46), 1-14.
- 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 & Money*, 18(2), 121-136.
- Azmeh, C. (2018). Foreign bank entry and financial development: new evidence on the cherry picking and foreign bank's informational disadvantage phenomena in the MENA countries. *Cogent Economics and Finance*, 6, 1-14.
- Bank Negara Malaysia. (2005), Annual Report, Kuala Lumpur, Malaysia.
- Bank Negara Malaysia. (2018), List of Licensed Financial Institutions in Malaysia. Retrieved 10th February 2018 from www.bnm.gov.my/index.php?ch=fs&pg=fs_mfs_list&ac.
- Bashir, A. (2003). Determinants of profitability in Islamic banks: Some evidence from the Middle East. *Islamic Economic Studies*, 11(1), 31-57.
- Ben Ameur, I., & Mhiri, S. (2013). Explanatory factors of bank performance evidence from Tunisia. *International Journal of Economics, Finance and Management*, 2(1), 1-11.
- Berger, A. N., & Bouwman, C. (2009). Bank liquidity creation. *Review of Financial Studies*, 22(9), 3779-3837.
- Bock, R. D., & Demyanets (2012). Bank asset quality in emerging markets: Determinants and spillovers. IMF Working Paper, WP/12/71, 1-27.
- Bordeleau, E., & Graham, C. (2010). The impact of liquidity on bank profitability. Bank of Canada Working Paper, 1-23.
- Buckley, A. (2011), Financial Crisis: Causes, Context and Consequences, Financial Times Prentice Hall, Edinburgh.
- Chen, S. H., & Liao, C. C. (2011). Are foreign banks more profitable than domestic banks? Home- and host-country effects of banking market structure, governance, and supervision. *Journal of Banking and Finance*, 35(4), 819–839.
- Curak, M., Poposki, K., & Pepur, S. (2012). Profitability determinants of the Macedonian

banking sector in changing environment. Procedia Social and Behavioral Sciences, 44, 406-416.

- Detragiache, E., & Gupta, P. (2006). Foreign banks in emerging market crises: Evidence from Malaysia. *Journal of Financial Stability*, 2(3), 217-242.
- Dietrich, A., & Wanzenried, G. (2011). Determinants of bank profitability before and during the crisis: Evidence from Switzerland. *Journal of International Financial Markets, Institutions and Money*, 21(3), 307-327.
- Dogan, M. (2013). Does firm size affect the firm profitability? Evidence from Turkey. *Research Journal of Finance an Accounting*, 4(4), 53-59.
- Fidanoski, F., Choudhry, M., Davidovic, M., & Sergi, B. S. (2018). What does affect profitability of banks in Croatia? *Competitiveness Review: An International Journal*, 28(4), 338-367.
- Flamini, V., McDonald,C., & Schumacher, L. (2009). The determinants of commercial bank profitability in Sub-Saharan. IMF Working Paper, No. GP/09/15, 1-30.
- Gekonge, B. G., & Muriu, P. W. (2019). What explains bank risk? Evidence from an emerging economy. *European Journal of Business and Management*, 11(18), 146-152.
- Ghosh, S. (2016). Political transition and bank performance: How important was the Arab Spring? *Journal of Comparative Economics*, 44(2), 372-382.
- Gul, S., Irshad, F., & Zaman, K. (2011). Factors affecting bank profitability in Pakistan. *The Romanian Economic Journal*, 14(39), 61-87.
- Hassan, K., & Bashir, A. (2003). Determinants of Islamic banking profitability. ERF paper, 10th Conference.
- Hassan, K.M., Sanchez, B., & Safa, F.M. (2013). Impact of financial liberalisation and foreign bank entry on Islamic banking performance. *International Journal of Islamic and Middle Eastern Finance and Management*, 6(1), 7-42.
- Hussein, M. E., Alam, M. M., Murad, M. W., & Wahid, W. (2019). The performance of Islamic banks during the 2008 global financial crisis: Evidence from the Gulf cooperation council countries. *Journal of Islamic Accounting and Business Research*, 10(3), 407-420.
- Jeon, B. N., Olivero, M. P., & Wu, J. (2011). Do foreign banks increase competition? Evidence from emerging Asia and Latin America. *Journal of Banking and Finance*, 35(4), 856-875.
- Kalluru, S., & Bhat, S. (2009). Does foreign bank entry affect operations of domestic banks? A study on Indian public sector banks. Institute of Chartered Financial Analysts of India (Hyderabad). *The ICFAI Journal of Managerial Economics*, 7(3/4), 40-51.
- King, M. R. (2013). The Basel III net stable funding ratio and bank net interest margins. *Journal of Banking and Finance*, 37 (11), 4144-4156.
- Kithinji, A. M. (2010). Credit Risk Management and Profitability of Commercial Banks in Kenya. Unpublished Master Thesis. University of Nairobi.
- Kosmidou, K., Tanna, S., & Pasiouras, F. (2008). Determinants of profitability of domestic UK commercial banks: Panel evidence from the period 1995-2002. *Economics, Finance and Accounting Applied Research*, 1-27.
- Lee, C. C., & Hsieh, M. F. (2013). The impact of bank capital on profitability and risk in Asian banking. *Journal of International Money and Finance*, 32(C), 251-281.
- Masood, O., & Ashraf, M. (2012). Bank specific and macroeconomic profitability determinants of Islamic banks. *Qualitative Research in Financial Markets*, 4(2/3), 255-268.
- Menicucci, E., & Paolucci, G. (2016). The determinants of bank profitability: Empirical evidence from European banking sector. *Journal of Financial Reporting and Accounting*, 14(1), 86-115.
- Muda, M., Shaharuddin, A., & Embaya, A. (2013). Comparative analysis of profitability determinants of domestic and foreign Islamic banks in Malaysia. *International Journal of Economics and Financial Issues*, 3(3), 559-569.
- Naceur, S. B, & Kandil, M. (2009). The impact of capital requirements on banks' cost of intermediation and performance: The case of Egypt. *Journal of Economics and Business*, 61(1), 70-89.
- Naceur, S. B., & Omran, M. (2011). The effect of bank regulations, competitions and financial reforms on banks' performance. *Emerging Market Reviews*, 12(1), 1-20.
- Olson, D., & Zoubi, T. A. (2011). Efficiency and bank profitability in MENA countries. *Emerging Markets Review*, 12(2), 94-110.
- Pallant, J. (2007). A Step-by-Step Guide to Data Analysis Using SPSS for Windows (Version 15), 3rd Edition. Allen and Unwin, Sydney.
- Pasiourus, F., & Kosmidou, K. (2007). Factors influencing the profitability of domestic and foreign commercial banks in the European union. Research in International Business and Finance, 21 (2), 222-237.
- Petria, N., Capraru, B., & Ihnatov, I. (2015). Determinants of banks' profitability: Evidence from EU 27 banking systems. *Procedia Economics and Finance*, 20, 518-524.
- Ramlall, I. (2009). Bank-specific, industry-specific and macroeconomic determinants of profitability in Taiwanese banking system: Under panel data estimation. *International Research Journal of Finance and Economics*, 34, 160-167.

- Rose, P. S. & Hudgins, S. C. (2012). Bank Management and Financial Services. 9th ed. McGraw-Hill International Edition. Boston.
- Sackitey, D. T. (2016). A critical analysis of key financial performance indicators in the banking industry in Ghana. *Texila International Journal of Management*, 2(2), 1-35.
- Saeed, M. S. (2014). Bank-related, industry-related and macroeconomic factors affecting bank profitability: A case of the United Kingdom. *Research Journal of Finance and Accounting*, 5(2), 42-50.
- Sahyouni, A., & Wang, M. (2018). Liquidity creation and bank performance: Evidence from MENA. *ISRA International Journal of Islamic Finance*, 11(1), 27-45.
- Salike, N., & Ao, B. (2017). Determinants of bank's profitability: Role of poor asset quality in Asia. *China Financial Review International*, 8(2), 216-231.
- Saona, P. H. (2011). Determinants of the profitability of the US banking industry. International *Journal of Business and Social Science*, 2(22), 255-269.
- Shehzad, C.T., De Haan, J., & Scholtens, B. (2013). The relationship between size, growth and profitability of commercial banks. *Applied Economics*, 45(13), 1751-1765.
- Staikouras, C. K., & Wood, G. E. (2004). The determinants of European bank profitability. *International Business and Economic Research Journal*, 3(6), 57-68.
- Stiroh, K., & Rumble, A. (2006). The dark side of diversification: The case of US financial holding companies. *Journal of Banking and Finance*, 30(8), 2131-2161.
- Sufian, F. (2006). Size and returns to scale of the Islamic banking industry in Malaysia: Foreign versus domestic banks. *Journal of Economics and Management*, 14(2), 147-175.
- Sufian, F., & Chong, R. R. (2008). Determinants of bank profitability in a developing economy: Empirical evidence from the Philippines. *Asian Academy of Management Journal of Accounting and Finance*, 4(2), 91-112.
- Sufian, F., & Habibullah, M. S. (2009). Bank specific and macroeconomic determinants of bank profitability: Empirical evidence from the China banking sector. *Frontiers of Economics in China*, 4 (2), 274-291.
- Tan, Y., & Floros, C. (2012). Bank profitability and GDP growth in China: A note. *J Chin Econ Bus Stud*, 10(3), 267–273.
- Tran, V. T., Lin, C. T., & Nguyen, H. (2016). Liquidity creation, regulatory capital and bank profitability. *International Review of Financial Analysis*, 48, 98-109.
- Wasiuzzaman, S., & Tarmizi, H. A. (2010). Profitability of Islamic Banks in Malaysia: An Empirical Analysis. *Journal of Islamic Economics, Banking and Finance*, 6(4), 53-68.
- Wu, J., Jeon, B. N., & Luca, A. C. (2010). Foreign bank penetration, resource allocation and economic growth: Evidence from emerging economies. *International Journal of Economic Integration*, 25 (1), 167-193.
- Xu, Y. (2011). Towards a more accurate measure of foreign bank entry and its impact on domestic banking performance: the case of China. *Journal of Banking and Finance*, 35(4), 886-901.
- Yanikkaya, H., Gumus, N., & Pabuccu, Y. (2018). How profitability differs between conventional and Islamic banks: A dynamic panel data approach. *Pacific-Basin Finance Journal*, 48, 99-111.
- 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.
- Zeitun, R. (2012). Determinants of Islamic and conventional banks performance in GCC countries, using panel data analysis. *Global Economy and Finance Journal*, 5(1), 53-72.