

Performance of Islamic Commercial Banks in Malaysia: An Empirical Study

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Abstract

The objective of this paper is to characterize some of indicators of overall bank performance and to decide which, among performance determinants, appears to be the most important and significant. A regression model comprising of dependent variable (ROA or ROE) and numerous independent variables was used to analyze performance of Islamic commercial banks. The empirical results indicated that credit risk is the most significant meaning in performance of local Islamic Commercial Banking in Malaysian. Other contributing factors are liquidity rate and concentration of Islamic commercial Banking.

1. INTRODUCTION

Since its emergence in the early 1970s, Islamic banks have steady growth rate in Malaysia. However, recent global financial crisis drew more attention to Islamic banking, shedding doubts on functioning of traditional conventional banking. Since the onset of financial crisis in 2008, global Islamic banking and finance sector has the growth rate, due to increasing demand for its services Islamic banking is gaining popularity in emerging markets after helping some financial institutions avoid the worst of the economic meltdown.

Global Islamic Finance industry is experiencing average growth of 15-20% annually¹. Current global Islamic banking assets and assets under management have reached USD750 billion and it is expected to hit USD1 trillion by 2010² and USD1.6 trillion by 2012³.

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¹ Ibid

² Mckinsey, The World Islamic Banking Competitiveness Report 2007-08, 'Capturing The Trillion Dollar Opportunity'

³ Oliver Wyman Brief, (April 11, 2009), Reuters. <http://www.reuters.com/article/rbssFinancialServicesAndRealEstateNews/idUSL894329009040>

With assets valued at USD68.4 billion, Malaysia has the world's third biggest Islamic banking market after Iran and Saudi Arabia⁴. In Malaysia, Islamic Banking Act 1953 provides for the licensing and regulation of Islamic banking business. There is only 11 out of 17 Islamic banks are local institutions and remaining 6 are of foreign ownership. In 2006, commercial and Islamic banks' total assets value was RM904.54 billion. By the end of 2009, this number has tremendously grown to RM1364.664 billion, RM1139.726 billion and RM224.938 billion, commercial and Islamic sectors, respectively⁵.

Currently, Maybank is the country's largest Islamic banking service provider with USD6.4 billion in Shariah-compliant assets, followed by Bank Islam Malaysia, the second largest bank in the region. Other Malaysian banks include Hong Leong Islamic Bank, HSBC Malaysia, EON Bank, Affin Bank, Alliance Bank, OCBC Malaysia, Southern Bank, SME Bank, Standard Chartered Bank Malaysia, CIMB Group, and Kuwait Finance House Malaysia⁶.

This research is aimed towards examining the key factors among liquidity, credit risk, size of the bank, capitalization level, concentration and economic conditions that influence the performance of Islamic commercial banks in Malaysia. The purpose of this study is to characterize some of indicators of overall bank performance and to decide which, among performance determinants, appears to be the most important and significant. Thus, the results obtained through this research would be beneficial in providing effective solutions and strategies to help Islamic banks which are sensitive factors that contributed to the performance of Islamic Commercial Banks.

2. REVIEW OF LITERATURE

Various measures were used among researchers to evaluate bank performance, such as Return on Equity (ROE) and Return on Assets (ROA), percentage change in earnings per share as benchmark to evaluate performance of the banks.

Ahmed and Khababa (1999), Al-Tamimi (2010), Sufian (2009) separately defined ROA and ROE as dependent variables in they data analysis model to evaluate bank performance and profitability.

ROA and ROE was used as performance and profitability measure by Al-Tamimi (2010) to detect significantly contributing factors to performance of UAE Islamic and

⁴ Malaysia Leads in Islamic Finance', (April 11,2009) <http://www.themalaysianinsider.com/index.php/features/21940-malaysia-leads-in-islamic-finance>

⁵ Bank Negara Malaysia: Monthly Statistical Bulletin

⁶ Maybank is Region's Largest Islamic Banking Player (April 10, 2009). <http://www.bernama.com/finance/news.php?id=240078>

Conventional banks. Sufian (2009) findings confirm positive relationship and statistical significance of ROA in regression model. Similarly, P.P. Athanasoglou, S.N. Brissimis, M.D. Delis (2006) also used ROE and ROA as a measure of profitability of Greek banks for period 1985-2001. Their empirical framework incorporated traditional structure-conduct-performance (SPC) hypothesis. Overall, according to Khan (1983), the average return of an Islamic bank in the long run should be expected to be higher than the interest rate.

According to most of researchers, bank performance determinants are divided into two broad categories: internal and external factors. Further, internal determinants include both financial statement indicators derived from balance sheet and income statement in published annual reports, as well as other internal indicators, which have no direct relation to the financial statements of a bank.

Among researchers who have studied internal determinants of bank performance are Bourke (1989), Rasiah and Devi Naga (2002), Cihak and Hesse (2010), Sufian and Habibullah (2009), Al-Tamimi (2010), Said and Tumin (2010).

According to Sufian (2009), liquidity proved to be a significant factor of higher bank efficiency especially during the period of unstable macroeconomic conditions in Malaysia. Rasiah and Devi Naga (2002) used liquidity as one of the independent variables of profitability of commercial banks in Malaysia and Singapore.

Results of research conducted by Bourke (1989), suggest that well capitalized banks have a cheaper access to sources of funds. In addition, Short (1979) suggests capital adequacy of the bank and its size are related, as new capital acquisition is less costly for larger banks.

Similarly, Beck, Demirguc-Kunt and Merrouche (2010) measured financial stability of Islamic and conventional banks. As a result, they provided an evidence of higher capitalization and higher liquidity reserves of Islamic banks. Further, Sufian and Noor (2009) confirmed positive relationship between bank efficiency and level of capitalization in Islamic banks of Middle East, North Africa and Asian countries. Similarly, Hassan and Bashir (2003) confirmed that higher level of capital of Islamic banks with results in higher level of profitability.

Credit risk is a possibility that the borrower or counter-parties might default or inability to meet the contractual obligation and repay back the promised amount as defined by Hull (2007). Similarly, in practice as studied by Sufian (2009) Malaysian banks with higher credit risk and higher loan concentration seem to be less profitable. However, credit risk management in Islamic banks is more complicated due to the

nature of the contract and externalities, such as inability to charge a penalty due to default in payment by the counterparty as traditional conventional banks can charge penalty or overdue interest. This limitation might be misused by counterparty. Kosmidou, Tanna and Pasiouras (2005) studied relationship between performance of UK banks and credit risk measured in terms of loan loss reserves. Findings indicate that loan loss reserves are positive on net interest margin, but have negative insignificant effect on bank profits. However, Fraser and Rose (1974) came to conclusion that loan-to-deposit ratio had no effect on bank profitability.

Ahmed and Khababa (1999) found out that bank size was one of the main determinants of the banks' performance in Saudi Arabia. Although, Hussein (2003) claimed that from the data of Islamic banks in Sudan for period of 1999-2000, larger banks are less efficient than smaller size. Also, Sufian and Habibullah (2009) based on empirical results of their research, concluded that size of the bank has negative impact on return on average equity, but has positive impact on return on average assets and net interest margins. Hassan and Bashir (2009) confirmed that size of Islamic banks and their profitability were adversely related.

In case of Islamic banks, Cihak and Hesse (2010) assessed financial strength of Islamic banks and found out that small Islamic banks tend to be financially stronger than small commercial banks. They also concluded that small Islamic banks generate most of their profit from low-risk investment and fee income, whereas large banks concentrate more on profit-loss sharing arrangements.

Hassan, Mohamad and Bader (2009) examined effects of cost, revenue and profit efficiency, size of conventional and Islamic banks based on data of 40 banks over the period 1990-2005. Results reveal that size and age factor did not significantly influence the efficiency of both Islamic and conventional banks. In this paper we consider size of the bank as an internal dependent variable, as it is assumed to be a variable controllable by management of the bank. In general, the management of the bank will carry out the duty of bank expansion. However, some researchers, such as Short (1979) and Bourke (1989), classified this determinant as external factor.

External determinants are not related to the management of bank, but doubtlessly can affect the operations and performance of financial institutions. Economic growth, inflation and interest rates, exchange rates, money supply, ownership, market share, competition, concentration and regulation are classified as external explanatory variables of bank performance. Among researchers who have studied external determinants of bank performance are Hussein (2003), Sufian (2009), Liu and Wilson (2010).

Bourke (1989) also compared concentration level to bank profitability of ninety banks. Focus was on banks in Australia, Europe and North America for period of 1972-1981. Result of the study by Bourke (1989) confirmed a positive relationship between concentration and bank profitability. Liu and Wilson (2010) also came to conclusion that industry concentration has impact on profitability of commercial banks in Japan and Cameroon, respectively.

The last variable to measure bank performance is macroeconomic conditions. The variables normally used as macroeconomic determinants are inflation rate, interest rate, and GDP growth, money supply as well as stock market development. Researchers had a different view on relationship between economic conditions and bank profitability.

For example, Liu and Wilson (2010) states that industry concentration as well as economic condition, measured by GDP growth and extent of stock market development have significant factors contributing to profitability of Japanese banks. Hassan and Bashir (2003) conducted a research on effects of controlled and uncontrolled variables on Islamic banks profitability. Results of the study revealed that gross domestic product and conventional interest rates were positively related to profitability. Haron (2004) found that money supply, inflation and interest rates play major role in influencing the profitability of Islamic bank.

Sufian (2009) studied determinants of bank efficiency during unstable macroeconomic environment in Malaysia. The results of his study revealed that natural Gross Domestic Product (LNGDP) is negatively correlated with banks' efficiency in Malaysia. This could be explained by volatile post- crisis economic condition of the state, which could prompt lower financial sector activity. Sufian and Habibullah (2009) proved that inflation has negative relationship with profitability of banks in Bangladesh.

Molyneux and Thornton (1992) used ownership as independent variables in their analysis. Surprisingly, results showed that government ownership has significant positive effect. In contrast, Short (1979) found that government- owned banks are likely to have lower profits.

Vernon (1971) came to conclusion that rates of return on owner –controlled banks were not higher than returns on management-controlled banks. According to Mullineaux (1978) only-bank holding companies relatively earned more profits than multi-bank holding company. This could be explained by difficulty of accommodating numerous interests as compared to one well-defined course of

direction. Hussein (2003) studied impact of ownership variable on efficiency of Sudanese banks. While, findings of his research show that foreign owned banks are more efficient, revealing significant variations in the cost efficiency of Sudanese banks.

3. DATA & METHODOLOGY

In Table 1, a total of 11 local Islamic Banks in Malaysia are chosen for this study. Research data is extracted from published annual reports as well as from each bank's web sites, Central Bank of Malaysia and Thomson DataStream Advance 4.0 online database from 2006 to 2009. Besides that, Values of total assets of Islamic Commercial banking sectors for period 2006-2009 were extracted from Monthly Statistical Bulletin by Central Bank of Malaysia. Data for Gross Domestic Product (GDP) per capital for the same period was obtained from Department of Statistics Malaysia.

Pool regression analysis was applied with assumption that there were no industry or time effects, as the study focuses on correlation indicators. Therefore, overall there are 120 observations in the pooled data. We used six explanatory variables to measure their effect on performance of banks in terms of ROA and ROE.

Table 1: List of local Islamic Banks in Malaysia

Affin Islamic Bank Berhad
Alliance Islamic Bank Berhad
AmIslamic Bank Berhad
Bank Islam Malaysia Berhad
Bank Muamalat Malaysia Berhad
CIMB Islamic Bank Berhad
EONCAP Islamic Bank Berhad
Hong Leong Islamic Bank Berhad
Maybank Islamic Berhad
Public Islamic Bank Berhad
RHB Islamic Bank Berhad

Source: Bank Negara Malaysia

This study assumes two proxies for bank performance (dependent variables): ROA, as Net Income to Total Assets ratio; and ROE, as Net Income to Total Equity ratio. For potential independent variables of performance, we test six independent variables, which are further divided into internal and external determinants.

Internal determinants include both financial statement indicators derived from balance sheet and income statement in published annual reports, namely liquidity (LIQ), credit risk (CR), level of capital (CAPITAL), concentration level (CONCEN) and size of the bank (SIZE).

Liquidity of the bank is measured as loan-to-deposit ratio (LIQ). If the ratio is too high, there is a chance that bank might not be able to cover any unforeseen withdrawals, thus creating a risk. On the other hand, if bank keeps too much money to maintain high liquidity, it might be forgoing chances of earning more profits. In our model, we do not assume any prior relationship with performance.

Next explanatory variable- credit risk is measured as loan loss provisions-to-loan ratio (CR). If a bank expects that high number of borrowers will default in near future, then its loan loss provision will increase. This will directly reduce the net income for the year. Thus, loan loss provision might represent prevailing economic conditions. Unfavorable economic events will cause banks to set a higher budget for expected losses. Loan loss provisions or allowance of loan losses will normally appear in Income statement, reducing net income. The higher the ratio means that a bank faces higher credit risk, which affects its performance. As a result, we expect negative relationship between credit risk and ROA and ROE.

The third variable- leverage is measured, as total equity-to-total assets ratio (CAPITAL). Lower ratio indicated higher level of leverage. Excessive leverage by bank is widely believed to have contributed to the global financial crises (FSB 2009). According to Sufian (2006) there is empirical evidence that bank leverage raises during boom times and leverage falls during downturns. We do not assume any prior relationship with bank performance.

We measure the size of a bank (SIZE) as natural logarithm of total assets of the bank (Sufian, 2009). A positive relationship is expected, as by increasing size of the bank, acquisition costs can be substantially reduced.

Concentration (CONCEN) is a ratio of Total assets of individual Islamic bank to Total assets of Islamic banking industry. Higher ratio indicates higher market share in terms of total assets. As a result, we expect that banks with higher concentration will have more assets in their utilization to earn higher profits. This will certainly have positive impact of ROA and ROE bank performance measures.

External determinants are factors not related to the management of bank, however, they, doubtlessly, can affect the operations and performance of financial institutions. In this study, we classify economic condition as the only external macroeconomic variable. It is assumed that GDP per capita between 2006-2009 is indicator of economic condition in Malaysia (ECON). Normally, favorable economic conditions will improve not only bank's performance, but also country's overall economy. We assume economic conditions to have positive relationship with bank performance.

Table 2: Descriptive of the variables and the expected signs of these variables

Variable	Description	Expected relationship with performance
LIQ	Liquidity	+/-
CR	Credit Risk	-
CAPITAL	Capitalization	+/-
SIZE	Size of the bank	+
CONCERN	Concentration	+
ECON	Economic conditions	+

3.1 Performance Measurement Methodology

Consistent with previous researches, this study employed the methodology used by Al-Tamimi (2010), who determined factors influencing performance of UAE Islamic and conventional banks.

Considering all the above mentioned variables, the regression models are constructed as:

$$\text{PERF} = f(\text{LIQ}, \text{CR}, \text{CAPITAL}, \text{SIZE}, \text{CONCEN}, \text{ECON})$$

$$\text{ROA} = f(\text{LIQ}, \text{CR}, \text{CAPITAL}, \text{SIZE}, \text{CONCEN}, \text{ECON})$$

and

$$\text{ROE} = f(\text{LIQ}, \text{CR}, \text{CAPITAL}, \text{SIZE}, \text{CONCEN}, \text{ECON})$$

Where:

PERF- is represent performance measures for the Malaysian banks

ROA- is a measure of bank's performance

ROE- is a measure of bank's performance

LIQ- is a measure of bank's liquidity

CR- is a measure of bank's credit risk

CAPITAL- is a measure of bank's capital or leverage

CONCEN- is a measure of bank's concentration

ECON- is a measure of economic conditions

In view of the characteristics of the data obtained, this study adopts an experiment method to analyse the data. Therefore, panel data multiple regression models are estimated. The data analysis is carried out using SPSS software package.

For additional information, analysis of simple linear regression models where the dependent variable is expressed as a linear function for each of the single explanatory variable is also included. We aim to determine the relationship between two dependent and six independent variables, namely ROA, ROE and LIQ, CR, CAPITAL, SIZE, CONCEN, ECON, which we assumed to be explained the performance of Islamic banks in Malaysia.

4. DATA ANALYSIS AND DISCUSSION ON THE FINDINGS

Table 3: Correlation of Islamic Banks variables

	LIQ	CR	CAPITAL	SIZE	CONCERN	ECON
LIQ	1					
CR	-0.117	1				
CAPITAL	0.189	-0.647**	1			
SIZE	-0.527**	0.140	-0.650**	1		
CONCERN	-0.285	-0.101	-0.443*	0.792**	1	
ECON	-0.066	-0.260	-0.030	0.303	0.337	1

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

In Table 3, shows to which extend variables of the model are correlated. In this cases size of the bank (SIZE) and its concentration (CONCEN) seem to be highly correlated; indicating Pearson correlation equal to 0.792, such high correlation might have bias results, thus, not suitable to test bank performance, if it is not eliminated. As a result, we make a decision to eliminate size of the bank (SIZE) as one of the determining factors of banks' performance.

Table 4 provides results of the regression model for Islamic commercial banks in Malaysia, where ROA and ROE are used as dependent variables. Results show that adjusted R^2 explained 93.4% of the variation in performance of conventional banks, when ROA is the dependent variable of the model. And, adjusted R^2 explained as high as 90.5% of variation with ROE as dependent variable.

Table 4: Regression Results of Islamic Commercial Banks

Model		t-statistic	p-value*
ROA	Constant	-0.607	0.551
	<i>CR</i>	-9.735	0.000
	<i>LIQ</i>	-1.983	0.063
	<i>CAPITAL</i>	1.596	0.128
	<i>ECON</i>	0.670	0.511
	<i>CONCERN</i>	0.763	0.456
ROE	Constant	0.833	0.416
	<i>CR</i>	8.983	0.000
	<i>LIQ</i>	1.152	0.264
	<i>CAPITAL</i>	-0.056	0.956
	<i>ECON</i>	-0.917	0.371
	<i>CONCERN</i>	1.654	0.116
Model	R	R-squared	F-statistics
ROA	0.974 ^a	0.948	66.045
ROE	0.962 ^a	0.925	44.664

*5% significant level is used.

a. Dependent Variable: ROA, ROE

Credit risk (CR) is expected to have negative impact on ROA, as larger loan loss provisions will result in lower NI, as a result reducing ROA of the bank. The finding conform to hypothesis stated that CR is negative impact on ROA, it is as expected with others researchers. Besides, CR is the most significant factor of bank performance, indicating the highest t-value of -9.735. However, CR has unexpectedly positive effect on ROE, and it is a significant determinant of bank profitability. Such negative relationship was found in studies conducted by Sufian (2009) and Kosmidou,

Tanna and Pasiouras (2005); however, the latter claim the relationship to be insignificant.

Liquidity (LIQ), is insignificant factor in bank performance when measured as ROA. However, it is negatively related to ROA. In other words, the more loans are given out as a ratio of deposits; the liquidity risk of the banks face rises, negatively affecting earning of the banks. (LIQ) is positive, but insignificant factor of bank performance, when measured with ROE. Results are consistent with findings of Said and Tumin (2010).

Higher level of capital of the bank (CAPITAL), measured, as a ratio of TE to TA, will enhance performance of the bank. Although the determinant is insignificant, but (CAPITAL) is positive factor of Islamic banks performance. Positive relationship of two variables confirmed our prior expectations. Is it also consistent with findings of Sufian and Noor (2009)] and Hassan and Bashir (2009), Kosmidou, Tanna and Pasiouras (2005) and Beck, Demirguc-Kunt and Merrouche (2010). In contrast, (CAPITAL) is has insignificant negative impact on ROE. If Islamic bank's activity is more heavily sponsored by equity, then ratio will fall, thus resulting in lower return.

Concentration of Islamic banks (CONCEN) unexpectedly insignificant in Malaysian market. Results indicate t-value to be as low as 0.763. However, higher-level concentration contributes to higher ROA, (CONCEN) is positively insignificant factor of Islamic bank performance, consistent with findings of Al-Tamimi (2010). Similarly, (CONCEN) has positive effect on ROE, however, it is insignificant factor.

Economic conditions (ECON) in economy seem to only slightly affect earning of Islamic banks. It is a positive factor, as expected, but unexpectedly insignificant in determining performance of Islamic banks. However, results show that good economic conditions are not favorable to Islamic banks performance, when ROE is used as proxy. Such negative relationship can be explained by volatile post-crisis condition of banking sector. Haron (2004) came to similar conclusions.

5. CONCLUSION

The regression results indicated a high correlation between two variables, namely size of the bank (SIZE) and concentration (CONCEN) and the value is 0.792. Consequently, the model had to be refined by means of eliminating one of highly correlated factors. In this case, we omitted (SIZE), leaving five independent variables in regression model.

The results indicate that credit risk is the most significant positive factor in performance of Islamic Commercial Banks in Malaysia. Earlier studies, such as Khan (2003), Sufian (2009) and Kosmidou, Tanna and Pasiouras (2005) documented similar results. Higher credit risk will result in lower earnings and lower ROA and ROE ratios. However, liquidity of banks and concentration are also contributing factors, but relatively insignificant. Level of capital and economic conditions do not influence performance of Islamic Commercial banks. Islamic Banks must identify all types of risk factors in order to manage them effectively and efficiently to survive and also to sustain their profitability in the Malaysian banking environment.

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