CAMEL CHARACTERISTICS, FINANCIAL PERFORMANCE AND STABILITY OF SELECTED ISLAMIC BANKING IN MALAYSIA

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ABSTRAK

Di Malaysia, prestasi dan kestabilan anak syarikat Islam bank konvensional adalah tunjak utama dalam perbankan Islam. Kajian ini mengkaji penentu prestasi kewangan dan kestabilan antara anak syarikat Islam bank konvensional dan syarikat Islam bank penuh selama lapan tahun (2010-2017). Kajian ini menggunakan pulangan ke atas aset (ROA) sebagai pengukuran prestasi kewangan manakala skor z bagi pengukuran kestabilan. Elemen rangka kerja CAMEL seperti kecukupan modal, kualiti aset, kecekapan pengurusan, kualiti pendapatan dan tahap kecairan dikumpulkan melalui laman web bank. Selain itu, ujian korelasi dan regresi (FEM dan GMM) digunakan untuk mengkaji kepentingan CAMEL sebagai pembolehubah bebas dengan prestasi kewangan dan kestabilan perbankan Islam. Bagi penentu keuntungan, didapati hubungan yang signifikan dengan elemen kualiti aset, kecekapan pengurusan, kualiti pendapatan dan kecairan bank Islam. Selain itu, tahap kestabilan turut mempunyai hubungan yang signifikan dengan elemen kualiti aset, kecekapan pengurusan dan kecairan. Hasil kajian ini memberi implikasi praktikal terhadap prestasi kewangan dan analisis kestabilan industri perbankan Islam. Hasil kajian ini turut memberi kesan kepada pengamal, pengawal selia dan penyelidik untuk meningkatkan pengetahuan tentang bagaimana elemen kerangka CAMEL dipilih bagi jangka masa yang panjang sebagai faktor penentu prestasi dan kestabilan dalam industri perbankan.

Kata kunci: CAMEL; prestasi kewangan; kestabilan kewangan; Perbankan Islam; Malaysia

ABSTRACT

In Malaysia, the remarkable performance and stability of Islamic subsidiaries of conventional banks have forefront leading in Islamic banking business. This research attempts evaluating the financial performance and stability elements in two full-fledged and two Islamic subsidiaries of conventional banks for eight years (2010-2017). In this research, the profitability is the return on assets (ROA) and stability measures are z-score. The elements of CAMEL framework is denoted as internal determinants by selecting the appropriate ratios of capital adequacy, asset quality, management competency, earning quality and liquidity through hand-collected information provided by the bank websites. Moreover, correlations and regression tests (FEM and GMM) are used to examine the relationships and significance of CAMEL as independent variables with financial performance and stability of Islamic banking. According to determinants of profitability, the assets quality, management efficiency, earning quality and liquidity of Islamic banks supported the return significantly. Instability, the financial stability indicators found to be powerfully critical to assets quality, management efficiency and liquidity. The findings of this research may have thoughtful practical implications on the financial performance and stability analysis of Islamic banking industry. This research provides the practitioner, regulator and researchers consciousness to expand knowledge on CAMEL framework for standardization on performance and stability comparison of banking industry.

Keywords: CAMEL; financial performance; financial stability; Islamic banking; Malaysia

INTRODUCTION

After first emerged in the 1970's, Islamic banking industry has demonstrated substantial development and resilience through making more challenging in financial environment universally. At the end 2018, Islamic finance assets experienced only 0.9% growth in assets with almost USD 1.57 trillion and share around 71.7% in the overall Islamic Financial Services Industry (IFSI) globally (Islamic Financial Services Board (IFSB), 2019). From worldwide ranking, it was reported that total Islamic assets under management (AuM) were USD70.8 billion and places the Islamic funds at 1,535 at the end 2017, (Bank Negara Malaysia (BNM), 2017). This evolution shows high demand from Muslim and non-Muslim populations who looking for shariah-compliant banks that comply with Islamic law for their investment and financial products (Sapuan, Bakar, & Ramlan, 2017).

In 2017, Ariff (2017) argued there is no difference between Islamic subsidiaries and wholesome Islamic banks operating in Malaysia, where these banks are obliged to the same rules and regulations with the rigorous Shariah requirements of the products offered imposed by the Shari'ah Advisory Council from BNM. However, Islamic subsidiaries have conventional parents both domestics and foreign, whereas wholesome Islamic banks are differentiated according to stand-alone domestic banks or subsidiaries of foreign Islamic parents. He further argued that Islamic subsidiaries are tremendously leading the market of Islamic banking businesses. However, the wholesome Islamic banks are shows decreasing in market share.

The argument among researchers about the characteristics of Islamic banks and their effect on financial performance and financial stability is essential to countries' economic growth. Thus, this research is carried out to explore the role of internal determinants like capital adequacy, assets quality, management efficiency, earning quality and liquidity (CAMEL) framework and its association with performance and the stability of the selected Islamic banks focusing in Malaysia. Many researchers still questioning the issue whether Islamic banks' performance and stability are affected by CAMEL parameters (for example; Saif-Alyousfi, Saha, & Md-Rus, 2017); Abdul

Karim, Alhabshi, Kassim, & Haron, 2018). Prior researchers namely Xu, Hu and Das (2019) and Alharthi (2017) engage such research with regards to the determinants of financial performance and stability. An analysis by them has found that the bank's financial performance as measured by profitability and financial stability is the internal characteristics of the bank influenced a proxy of z-score. However, their research has found contradict relationship among each different bank characteristics with the bank performance and stability.

Hence, to fulfill the research gap above, we would investigate the effect of each internal character of independent variable on the banks' performance and stability. The research also finds out if the variables have significant influence or not. So it is necessary to find the solution of some questions related to overall activities, performance and stability of the selected Islamic banks: (i) what factors would affect the performance and stability of full-fledged and Islamic subsidiaries banks in Malaysia? (ii) what are the most significant factors that would affect the performance and stability faced by full-fledged and Islamic subsidiaries banks in Malaysia? Thus, these research questions will be the objective of this research.

RELEVANT LITERATURE AND RESEARCH HYPOTHESES

BANKS PROFITABILITY

Due to pressure from the global economic crisis (Muhmad & Hashim, 2015; Kumar & Sayani, 2015), economic growth (Samail, Zaidi, Mohamed & Kamaruzaman, 2018; Murni, Astuti, Nisa & Djaddang, 2017) and changes in financial regulations (Rozzani & Rahman, 2013) of the countries, make force the researchers to concentrate on the performance of financial sector through bank profitability. The performance measurement considered an essential need for the bank's growth and to determine the best solutions for the problems arisen by bank (Qasim, Yazis, & Ibrahim, 2017). Profitability ratios can be used to estimate the volume of a bank to generate earnings rather than evaluation of all costs and expenses of the bank (Issah & Ngmenipuo, 2015). Abu Hanifa (2015) strengthens that ratios are helpful for banks' performance measurement and it can compensate with bank disparities created by bank size.

As reviewed from previous literature, almost banks' profitability is represented by return on assets (ROA), return on equity (ROE) and other financial ratios. Setyawati, Suroso, Suryanto and Nurjannah (2017); Rahman and Akhter (2015); Husain, Affandi, and Shukur (2015) are concentrated using return on asset as the proxy of banks' profitability in their studies. For any bank, factors that influencing return on assets (ROA) be determined by the bank's policy decisions and uncontrollable factors such as economy and government regulations. ROA is the best indicator to measure bank profitability by many regulators (Olalekan & Adeyinka, 2013). Besides, Rosly and Abu Bakar (2003) claimed that the return of asset over return of equity is a priority because financing was made by Islamic banks from their depositors and not from shareholders' capital contribution. Youssef and Samir (2015) empirically found that the ROA indicator showed no differences exist between conventional and Islamic banks in Egypt.

BANKS STABILITY

Different opinions have been developed from prior literature indicates whether Islamic banks have a significant contribution to financial stability as compared with conventional banks in presence. The Islamic banks' financial strength from country to country has approximately differed by specifying high level of inefficiency and slacks in Islamic banks when compared to conventional ones. Therefore, financial stability is defined as liquidity, solvability, and positive net worth of a financial institution. A bank is well financially stable if it meets all payments upon it with its own or borrowed funds (Ghassan & Krichene, 2017). The z-score has been used as a bank's solvency measurement by many researchers on risk and financial soundness (Abdul Karim, Alhabshi, Kassim, & Haron, 2018; Wanke, Azad, & Barros, 2016; Rajhi & Hassairi, 2013; Čihák & Hesse, 2010). The z-score is associated with the probability of insolvency of a bank where the probability debt value will become higher than assets value. Higher z-score signaling for a lower risk of insolvency and the z-score is commonly used for determining the bank's soundness.

Regarding bank size comparative research, Rajhi and Hassairi (2013), found large conventional banks likely to be unstable than large Islamic banks, while small conventional banks tend to be more stable than small Islamic banks in Southeast Asian countries. However, Čihák & Hesse (2010) found small Islamic banks are more durable than small conventional banks and large size conventional banks are more stable than large size Islamic banks. In addition, they indicated that large Islamic banks are unstable than small Islamic banks in twenty countries.

BANKS CAMEL

Recent research by Dincer, Gencer, Orhan and Sahinbas (2011) employed the group of financial variables known as CAMEL ratios, which stand for capital adequacy, asset quality, management competence, earnings quality and liquidity. U.S. regulators commented that it is inadequate without the sixth factor of CAMEL, namely sensitivity to market risk that includes rating interest rate, foreign exchange and price risk to assess the current global competitive markets (Gasbarro, Sadguna & Zumwalt, 2002). If these five elements of CAMEL are inadequate, it will increase the prospects of bank failure. However, most researchers only used five factors for their evaluation with the following reasons: (i) CAMEL ratios are the most significant ratios to forecast failure and assess the performance of finance companies and (ii) CAMEL indicators signify a central aspect in financial statement of banks. These facts are supported by Rashid, Muhmad, Hamid, Rasit and Noor (2017) and summarised on the sustainability of CAMEL framework by identifying this model can be acted as a risk and fragility detector of the banking institution. Husna and Rahman, 2012) proposed that CAMEL framework can be used to evaluate the financial distress of Islamic banks.

CAMEL as financial determinants are mostly preferable among previous scholar to be concentrated in their research for comparison between conventional and Islamic banks either in cross-country or individual countries' banking system (for example: Ebrahimi, Bahraminasab, & Seyedi, 2017; Alemu & Aweke, 2017; Abdulazeez, Saif-Alyousfi, Asish & Md-Rus, 2017). There are similar limited studies are carried out, particularly for Islamic bank, for example; Masood, Khan Ghouri and Aktan (2016) and Sarker (2006).

CAPITAL ADEQUACY

Capital adequacy (CA) is measured on the bank's financial strength and capital position. This ratio is derived by calculating the total capital over total assets, which to discover the banks' ability and capacity to hold a reasonable level of losses from banks' operation. The higher ratio shows that the bank has adequate capital funding its operation expansion (Ab-Rahim, Kadri, Ee-Ling & Dee, 2018), investors' protection, and the bank is stronger. The strength of a bank is to be subjected to the availability of capital funds. Therefore capital adequacy plays a vital role in return on assets (Apere, 2016).

Research of banks in Nigeria, Apere (2016) revealed that there is long-run significant positive relationship between capital adequacy and return on assets. Javaid and Alalawi (2018) indicated that the coefficient of capital adequacy is positive and highly significant with the profitability measurement which reflecting the sound financial condition of Saudi banks. This research consistent with Tahraoui and Khadidja (2015) which return on assets has positive and significant influence on capital adequacy in Malaysia Islamic banks. Muhmad and Hashim (2015) found significance of the ratio of total capital to total assets (CA), indicating Malaysian banks have sufficient or enough capital to support their assets. These results explained that the investor might decide to put their money in the bank or elsewhere. The negative relationship determines that as CA increases, the bank's failure decreases. Based on the above argument, this research hypnotized that capital adequacy (CA) affects financial profitability and stability significantly in selected Malaysian Islamic banks.

ASSET QUALITY

The assets quality (AQ) also measures the bank's strength, where it recognizes the types of advances that the bank has made from interest income and the types of debtors. For example, the interest rate charged will be lower on the loans given to the highly rated companies than the doubtful companies. Banks' asset quality is linked to the quality of the credit provided by the bank as measured with the non-performing loan (NPL) which consists of overdue loans and follow-up loans. The ratio of provision for loan loss specifies the amount of the expense that the bank allocates for future losses on bad loans (loan defaults). A bank with low ratio of provision for loan loss indicates that the bank is taking a small number of loans risk and vice-versa.

Although the asset quality has significant importance on banks' profitability where banks provide critical components of financial markets, proper process of the banking operations and financial system as well as national economy contributions. Samail et al. (2018) empirically recommended the Islamic banking must able to grow their asset in making high profitable investments. Apere (2016); Muhmad and Hashim (2015); Dzeawuni and Tanko (2008) found the negative relationship of AQ indicates that as loan loss provisions decrease, the bank performance will increases. Based on the above argument, this research hypnotized that assets quality (AQ) affects financial profitability and stability significantly in selected Malaysian Islamic banks.

MANAGEMENT EFFICIENCY

Management efficiency (ME) reflects the soundness bank' management as safeguard acting of the management to operate the bank efficient and smoothly. This is depending on how management controls its cost to increase productivity as well as banks achieving higher profits ultimately known as excellence management or skillful management (Ahsan, 2016). Further, the aspects of management efficiency through board members' ability and management team for measuring, identifying and controlling the risks of business activities to achieve the efficacy, safety and sound operation as complying with the rules and regulations (Ab-Rahim et al., 2018). This situation can be concluded that the better the management quality, the better is the efficiency, but with significant differences.

Previous empirical studies have found different opinions on the application of operational cost efficiency and growth of banking industries. For example studies in East Africa countries, Olweny and Shipho (2011) found that ratio of operational cost efficiency and performance has significantly negatively related as the efficiency becomes improved. However, Flamini, Schumacher and McDonald (2009) found that overhead cost has a significant positive impact on performance where firms enjoy a lot of market shares because costs in the form of low interest are transferred to depositors and lenders in the form of high lending rate in relatively uncompetitive market.

Concerning the Islamic banks' perspective, Aliyu and Yusof (2016) found the composition of cost-efficiency ratios such as non-interest expense to average asset, other operating income to average asset and net interest revenue to average asset are significantly explaining profitability of fixed-effect model. Abduh, Hasan and Pananjung (2013) used ratio analysis to measure the performance of the Islamic banks suggested that all Islamic banks have shown virtuous growth on their level of performance efficiency. Based on the above argument, this study hypnotized that management efficiency (ME) affects financial profitability and stability significantly in selected Malaysian Islamic banks.

EARNING QUALITY

Earnings quality (EQ) is subjected to the effectiveness and efficiency of assets and liabilities management of institutional. The earnings performance' increase should attract stakeholders' confidence, such as depositors, investors, creditors, and the public. This profile of the earnings and profitability can support present and future bank operations (Shar, Shah, & Jamali, 2010). Based on the above argument, this research hypnotized that earning quality (EQ) affects financial profitability and stability significantly in selected Malaysian Islamic banks.

LIQUIDITY

Bank liquidity (LQ) refers to cash reserves, securities, bank's ability to convert an asset into cash, and available bank lines of credit. To have adequate liquidity, it must meet one-year maturity period for all unsecured debt obligations. Iqbal (2012) pointed that problem of liquidity rose when the depositors decided to withdraw their deposits, but the cash in hand of bank has not enough. Therefore, in practice, banks should regularly manage imbalances in the asset and liability side of the balance sheet and need to control it accurately to avoid any insolvency risks. There are two ratios to measure the

perfect banks' liquidity, which are liquid assets to total assets (LQ1) and total deposits to total assets (LQ2). The ratio of liquid assets to total assets (LQ1) is used to recognize the comparative position of the liquid assets (cash and cash equivalents) in the total assets of the bank, which contributes to the liquidity situation (Obeidat, Khasawneh, & Altal, 2017). Conforming assets should match the ratio of total deposit to total assets concerns on the maturity liabilities. The size of deposits (short-term liabilities) over total assets gives irregular estimation of liquidity risk and associated with withdrawal of deposit (Sahut & Mili, 2011).

Several empirical reviews on the effect between liquidity and return on assets show inconsistent findings. For example, Samail et al. (2018) found positive relationship which specified that the more loans from the customers, it will increase the financial performance of the banks. Mohanty and Mehrotra (2018) and Rasul (2013) found that there is a significant negative effect of liquidity on ROA because banks were facing unnecessary liquidity rather than investing the money to generate profit in public sector banks and Islamic banks respectively. Hunjra and Bashir (2014) indicated that Islamic banks found to be more liquid and less risky than conventional banks in Pakistan. Based on the above argument, this study hypnotized that liquidity (LQ) affects financial profitability and stability significantly in selected Malaysian Islamic banks.

DATA AND METHODOLOGY

DATA COLLECTION

This research purposively uses a sample of four (4) selected IBs of the sixteen (16) banks from Malaysia for 2010 until 2017. The four IBs consists of two (2) full-fledged/wholesome Islamic banks (Bank Islam Malaysia Berhad (BIMB) and Bank Muamalat Berhad (BMB) and two (2) Islamic subsidiaries of conventional banks (Maybank Islamic Bank Berhad (MIBB) and CIMB Islamic Bank Malaysia (CIMB). The hand-collected data of the internal (bank-specific) variables were extracted from balance sheets and income statements of IBs annual reports.

ESTIMATION METHOD AND REGRESSION MODEL

The estimation method of this research use panel or longitudinal data, which provides numerous benefits, such as superior degrees of freedom, low levels of collinearity, and improved efficiency of estimates. Besides, panel data help to overcome the intrinsic multicollinearity between the independent variables. Therefore, this research employs the fixed-effect method (FEM) and Generalized Method of Moments (GMM) to estimates the relationship between profitability and stability indicators and internal banks determinants following recent studies (Javaid & Alalawi, 2018; Alharthi, 2017; Saif-Alyousfi, Saha, & Md-Rus, 2017). Research in-depth from prior literature review, the data examination through FEM and GMM techniques were found to be appropriate for analyzing the data in attaining significant results. FEM has imperfection because they ignore between-unit variation, eliminate all-time- constant effects, and does not provide solutions to all sources of endogeneity bias (Alharbi, 2015). The GMM model helps for controlling the time-invariant of fixed effects through taking first-differences of all variables, provides autoregressive data process for each efficiency indicator and traces any potential presence of endogeneity of the explanatory variables (Alharthi, 2017).

PROFITABILITY MODEL

Based on previous studies, the dependent variable, which is the financial performance of this research, the return on asset (ROA) ratio used as a proxy of profitability. The ROA is computed by dividing the net income of the bank with its total assets. This return value demonstrates how a bank manages its real investment resources to generate profits. According to Wasiuzzaman and Ahmad Tarmizi (2010), ROA is more efficient compared to ROE, which ROE would ignore the financial leverage analysis of banks. Irfan, Majeed and Zaman (2014) recommended to use return on asset ratio in measuring the financing mode of Islamic banks that referring on equity basis . Table 1 explains the data descriptive of profitability factors and the profitability model is illustrates as follows:

$$ROA = \alpha + \beta_1 CA1 + \beta_2 AQ1 + \beta_3 ME1 + \beta_4 ME2 + \beta_5 EQ1 + \beta_6 LQ1 + \beta_7 LQ2 + \varepsilon_{it} \qquad (1)$$

Where: ROA is presenting as the dependent variables of profitability ratios; α denotes the constant; β is the regression coefficient; CA1 is proxy of capital adequacy; AQ1 is a measure of assets quality; ME1 and ME2 are proxies of management efficiency; EQ1 represent earning quality and LQ1 and LQ2 are the liquidity.

STABILITY MODEL

Inspired by Alharti (2017) and Rajhi and Hassairi (2013) this research tries to develop a stability model of using z-score bank-specific indicators to get more understanding of the development of insolvency risk. Table 1 explains the data descriptive of stability factors. The model for stability can be illustrated as follows:

$$Z\text{-score} = \alpha + \beta_1 CA1 + \beta_2 AQ1 + \beta_3 ME1 + \beta_4 ME2 + \beta_5 EQ1 + \beta_6 LQ1 + \beta_7 LQ2 + \varepsilon_{it} \quad (2)$$

FINDINGS AND DISCUSSION

DESCRIPTIVE ANALYSIS

Table 1 provides a summary descriptive statistics analysis (mean and standard deviation) for all the variables that are used in the research. The profitability has a mean of 0.851% of total assets and a standard deviation of 0.297 for full-fledged IBs in Malaysia, which was high as compared to a mean of 0.787% and standard deviation 0.098 of the Islamic subsidiaries of conventional banks in Malaysia. The mean value of z-score is 6.598% but with a standard deviation reaching to 3.072 for full-fledged IBs, meanwhile, the mean value for the same stability score reached to 14.875% with a standard deviation of 9.079 for Islamic subsidiaries. It can be realized in Table 1 that mean range for CAMEL parameters is between 0.275% and 104.962% for full-fledged IBs as compared with Islamic subsidiaries is range from 0.787% and 101.238%. The mean value of EQ obtains the highest scores of 103.100% that exhibited the ratio of interest revenue to total revenue in measuring the earning quality of the Islamic banks. The LQ2 is the second-highest in which the ratio of total deposit to total assets is 86.999%. LQ1 of ratio liquid assets to total assets in Islamic subsidiaries is highest (16.820%) compared

Table 1: Variable Definitions and Descriptive Analysis

Panel Variables	Definition	A: Full sample		B: Islamic full-fledged		C: Islamic subsidiaries	
		Mean	S.D	Mean	S.D.	Mean	S.D.
	Dependent variables						
ROA	Return on Assets = Net profit/Total Assets (%)	0.819	0.220	0.851	0.297	0.787	0.098
Z-score	Z-score = (ROA + capital ratio) / S.D.	10.737	7.882	6.598	3.072	14.875	9.079
	Independent variables						
Capital Adequacy (CA)							
(CA1)	Total Capital/Total Assets (%)	3.414	2.314	5.480	0.839	1.347	1.122
Asset Quality (AQ)							
(AQ1)	Non-performing loan/Total Loans (%)	0.231	0.238	0.275	0.265	0.188	0.208
Management Efficiency (ME)							
(ME1)	Interest Expense/Deposits (%)	2.595	0.555	2.257	0.3896	2.932	0.493
(ME2)	Net Interest Revenue/Total Assets (%)	4.646	0.804	5.157	0.633	4.135	0.614
Earnings Quality (EQ)							
(EQ1)	Interest Revenue/Total Revenue (%)	103.100	10.140	104.962	9.055	101.238	11.095
Liquidity (LQ)							
(LQ1)	Liquid Assets/Total Assets (%)	14.149	13.926	11.477	10.179	16.820	16.791
(LQ2)	Total Deposit/Total Assets (%)	86.999	5.038	87.978	2.780	86.019	6.533
	Observation	32		16		16	

with full-fledged (11.477%). The CA represent by ratio of total capital to total assets is, on average, 5.480% of total assets but with a significant variation 0.839 for full-fledged IBs, and the mean for Islamic subsidiaries was 1.347% with a standard deviation 1.122. Furthermore, the AQ as a proxy of non-performing loan to total loan ratio are 0.275% of total assets with a standard deviation of 0.265 for full-fledged IBs, and the mean for Islamic subsidiaries was 0.188% with a standard deviation approaching 0.208. ME2 which is net interest revenue to total assets ratio obtain the highest mean value (4.646%) and standard deviation (0.804) for all IBs. Besides, the mean value of ME1 using ratio of interest expense to deposits is 2.257%, but with a standard deviation reaching to 0.389 for full-fledged IBs, meanwhile, the mean value for the same ratio reached to 2.9325% with a standard deviation of 0.493 for Islamic subsidiaries.

DIAGNOSTIC TEST

The Variance Inflation Factor (VIF), a multicollinearity indicator is used through diagnostic tests to ascertain the estimated regression coefficients are not biased. Gujarati and Porter (2009) specified two rules of thumb by considering the variance inflation factor (VIF) of a variable exceeds 10 and R^2j exceeds 0.90. This VIF value indicates that variable is said to be highly collinear. This research has performed the multicollinearity test of the data set and found no multicollinearity problem exists, as the VIF of variables is less than 10 for all the models (see Table 3). This research contempt the multicollinearity among all explanatory variables.

CORRELATION ANALYSIS

Table 2 presents the correlation between the independent variables to identify any variables could influence the other independent variables using STATA 14 software. The correlation matrix shows that all the variables are less than 0.90 shows that there is no problem with multicollinearity, and the interpretation of the regression coefficient would not adversely be affected (Gujarati and Porter, 2009).

Table 2: Correlation Analysis of All IBs

Correlation Matrix	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) ROA	1.00								
(2) Z-Score	0.169	1.00							
(3) CA1	0.233	-0.244	1.00						
(4) AQ1	-0.031	-0.131	0.268	1.00					
(5) ME1	-0.222	0.457	-0.513	-0.259	1.00				
(6) ME2	0.482	-0.113	0.750	0.465	-0.180	1.00			
(7) EQ1	0.072	-0.029	0.281	0.725	-0.019	0.599	1.00		
(8) LQ1	-0.092	-0.026	-0.221	0.592	-0.308	-0.143	0.427	1.00	
(9) LQ2	0.018	-0.041	0.230	-0.006	-0.213	0.032	0.039	-0.100	1.00

EMPIRICAL RESULTS

Table 3 demonstrates the regression analysis examining the effect of CAMEL parameters on the selected IBs financial performance and stability through the application of widely accepted in the performance literature econometric methodologies, fixed-effect and GMM.

FIXED EFFECT

Table 3 shows that the overall R2 for models (1-2) is relatively high (Panel A: 0.669, 0.540; Panel B: 0.811, 0.858; Panel C: 0.841, 0.572) under fixed-effect method which indicates that

the models are appropriate as CAMEL parameters are good indicators of banks performance. The analysis of the fixed effects for panel A of all IBs, two out of the seven CAMEL ratios is found a negative and significant relationship between AQ1 and EQ1 on performance of model 1 (p= 0.001, 0.001). In addition, ME2, LQ1 and LQ2 has a positive and significant relationship on performance (p= 0.001, 0.05, 0.01). Panel B of full-fledged IBs, a negative relationship is found between AQ1 and ME1 and performance (p= 0.05) and a positive relationship is found between ME2 and performance (p= 0.05). Finally, the panel C of Islamic subsidiaries of conventional banks, a negative and significant relationship is found between AQ1 and performance (p= 0.05) and a positive relationship is found between EQ1 and the performance (p= 0.01).

In the relation of stability factors in Model 2 of panel A, there is a negative and significant relationship is found between AQ1 and stability (p= 0.005) and a positive relationship is found between ME2 and LQ1and the stability (p= 0.001). Similarly, for panel B of full-fledged, the same negative relationship is found between AQ1 and ME1 and stability (p = 0.01) and a positive relationship is found between ME2 and stability (p= 0.05). Finally, for panel C of Islamic subsidiaries, there is insignificant relationship is found between CAMEL parameters and stability.

GENERALIZED METHOD OF MOMENTS (GMM)

As Table 3 shows on the GMM method, provides a more significant result as compared to the fixed-effect method. The full sample panel of IBs based on the GMM, four CAMEL ratios (CA1, AQ1, ME1 and ME2) are found to affect the performance of IBs significantly. A positive relationship is found between ME2 and performance for model 1(p= 0.05). This positive relationship indicates the situation where costs transferred to depositors at low interest and high lending rates with low relative competitive market to lenders (Flamini, Schumacher & McDonald, 2009). For full-fledged IBs, five CAMEL ratios (ME1, ME2, EQ1, LQ1 and LQ2) are found to affect the performance significantly and a positive relationship is found between LQ1 and LQ2 and performance (p= 0.01, 0.001). This positive relationship shows more loans from the customers as it will increase the financial performance of the banks (Samail et al., 2018). Finally, for panel C of Islamic subsidiaries, there is a significant positive relationship found between EQ1 and performance (p=0.05).

In the relation of stability factors, panel A of full sample, three CAMEL ratios are negative and significant relationship is found between CA1, AQ1 and ME1 and stability (p = 0.005) and a positive relationship are found between ME2 and the stability (p= 0.001). Similarly, for panel B of full-fledged IBs, a similar negative and significant relationship is found between CA1, AQ1, ME1, EQ1 and LQ2 and stability (p= 0.05, 0.001) and a positive relationship is found between ME2 and stability (p= 0.001). Finally, in panel C of Islamic subsidiaries, there is a significant negative relationship found between AQ1 and stability (p=0.01).

Table 3: CAMEL Characteristics, Financial Performance and Stability

Panel	A: Full sample				B: Islamic full-fledged				C: Islamic subsidiaries				vif
Method	FEM		GMM		FEM		GMM		FEM		GMM		
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	
	ROA	Z-score	ROA	Z-score	ROA	Z-score	ROA	Z-score	ROA	Z-score	ROA	Z-score	
CA1	0.030	0.281	-0.066**	-0.586**	-0.037	-0.121	-0.028	-0.412*	0.022	0.218	0.014	-0.063	4.72
	(1.18)	(1.22)	(-2.46)	(-1.67)	(-0.69)	(-0.39)	(-0.91)	(-2.27)	(0.93)	(0.60)	(0.58)	(-0.07)	(0.211)
AQ1	-0.406***	-2.437*	-0.809***	-9.347*	-0.728*	-4.442**	-0.241	-3.474***	-0.497*	-4.166	-0.625***	-11.629**	3.22
	(-3.25)	(-2.20)	(-3.10)	(-2.77)	(-2.06)	(-2.19)	(-1.18)	(-2.98)	(-2.67)	(-1.48)	(-3.06)	(-1.76)	(0.310)
ME1	-0.047	-0.273	-0.215**	-2.085**	-0.448*	-2.549**	-0.450***	-3.553***	-0.097	-0.691	-0.041	-3.947	2.79
	(-0.71)	(-0.46)	(-2.52)	(-1.74)	(-1.97)	(-1.96)	(-5.25)	(-6.58)	(-0.50)	(-0.55)	(-0.43)	(-1.05)	(0.358)
ME2	0.265***	1.657***	0.422***	4.036***	0.540**	3.321*	0.842***	6.198***	-0.047	-1.308	-0.107	2.029	5.27
	(4.78)	(3.36)	(3.77)	(3.05)	(3.48)	(3.73)	(9.38)	(11.02)	(-0.50)	(-0.90)	(-0.77)	(0.33)	(0.189)
EQ1	-0.005**	-0.031	-0.005	-0.046	-0.004	-0.024	-0.015***	-0.063***	0.014**	0.149	0.014*	0.105	4.00
	(-1.70)	(-1.15)	(-1.03)	(-0.66)	(-0.73)	(-0.64)	(-3.96)	(-2.69)	(2.16)	(1.49)	(1.95)	(0.26)	(0.249)
LQ1	0.006*	0.043***	0.004	0.008	-0.000	-0.008	0.006**	0.028	0.001	0.011	-0.001	-0.170	4.13
	(2.85)	(2.09)	(0.90)	(0.14)	-0.13	(-0.22)	(1.66)	(1.20)	(0.48)	(0.20)	(-0.14)	(-0.29)	(0.242)
LQ2	0.005**	0.032	0.002	-0.047	-0.020	-0.097	-0.023***	-0.242***	-0.001	-0.049	-0.002	-0.058	1.21
	(1.75)	(1.10)	(0.68)	(-0.81)	(-1.11)	(-0.93)	(-3.23)	(-5.25)	(-0.55)	(-0.95)	(-0.58)	(-0.51)	(0.828)
Constant	-0.374	3.073	0.218	-0.503	1.786	8.365	-0.014	12.334	0.016	11.687	-0.354	1.822	
R^2	0.669	0.540	--	--	0.811	0.858	--	--	0.841	0.572	--	--	
p-value	0.000	0.000	--	--	0.990	0.051	--	--	0.545	0.000	--	--	
Observation	32	32	28	28	16	16	14	14	16	16	14	14	

t-statistics in parentheses; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CONCLUSION AND RECOMMENDATION

The objective of this research is to examine the effect of CAMEL parameters on financial performance and stability for Islamic banks in Malaysia from 2010 to 2017. For profitability, this research concluded that overall Islamic banks need to improve their profits through enlarging banks' capital and equity. In addition, the results of this research identified that full-fledged Islamic banks show more stable as well as more profitable. Full-fledged Islamic banks seem to compete with their Islamic subsidiaries of conventional. While the Islamic subsidiaries of conventional banks have diversified their products and allow to open Islamic windows in many countries, they cannot adopt similar strategy, as the core principle of Islamic finance prohibits them from doing so. All these indications stressed that the current trends in the banking industry mainly Islamic banks are likely to remain trapped in this infant stage for a much more extended period (Ariff, 2017).

The performance of full-fledged Islamic banks found to be more efficient as compared with Islamic subsidiaries of conventional. All Islamic banks need to improve their quality of assets to make a better profit from their investment (Samail et al. (2018). The financial stability indicators (z-score) found to be strongly crucial to each other. Asset quality supports stability significantly, but it could mislead banks' stability and loan risk.

The limitation of this research can be extended by consideration for some other variables such as inflation, financial crisis and corruption. Further research can be extended on period covering before and after financial crisis. Furthermore, several numbers of Islamic banks can be established by focusing more on other regions such as MENA, GCC and Asian areas. Different types of statistical regressions can provide stronger robust evidence of analysis, for example, generalized least squares, random-effects and OLS models.

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