ASSET LIABILITY MANAGEMENT OF CONVENTIONAL AND ISLAMIC BANKS IN MALAYSIA

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Abstract. Asset Liability Management of Conventional and Islamic Banks in Malaysia. *The objective of the paper is to investigate the effect of asset liability management on the financial performance of 6 conventional and 6 Islamic banks in Malaysia during the period of 2010 to 2013. The variables used in the study are capital adequacy, asset quality, management efficiency, earnings quality, liquidity, size of bank and degree of risk aversion in relation to asset liability management to examine the return on equity (ROE), which is the measure of profitability of the banks. The quantitative analysis using correlation and regression analysis concluded that there is a positive relationship between asset liability management and the financial performance of the banks.*

Keywords: *asset liability management, conventional banks, Islamic banks*

Abstrak. Pengelolaan kewajiban aset bank konvensional dan bank Islam di Malaysia. *Tujuan dari makalah ini untuk mengetahui pengelolaan kewajiban aset bank pada kinerja keuangan 6 bank konvensional dan 6 bank Islam di Malaysia selama periode 2010 sampai 2013. Variabel yang digunakan dalam penelitian ini adalah kecukupan modal, kualitas aset, efisiensi manajemen, kualitas laba, likuiditas, ukuran bank dan tingkat penghindaran risiko dalam kaitannya dengan manajemen kewajiban aset untuk memeriksa return on equity (ROE), yang merupakan ukuran profitabilitas bank. Analisis kuantitatif menggunakan korelasi dan analisis regresi menyimpulkan bahwa ada hubungan positif antara pengelolaan kewajiban aset dan kinerja keuangan bank.*

Kata kunci: *pengelolaan kewajiban aset, bank konvensional, bank Islam*

Introduction

Banking and finance industry is essential for the development of the economy in Malaysia. Especially after the financial crisis in year 1997 and U.S. subprime mortgage crisis, it reminded the people that a sound, dynamic and efficient banking system is a sine qua non for maintaining the stability of its financial sector. Bank strategic planning, predominantly effective risk management is important in this financial environment of heightened uncertainty and increased potential for financial vulnerabilities. Asset liability management therefore is one of the major tool for decision making in order to reduce risk and increase profit of the banks as much as possible.

Dual banking system is inaugurated successfully in Malaysia and it implies that the Islamic banking system, which does not involve interest or riba is operating parallel with the conventional banking system (Mokhtar et al., 2008). In this competitive financial market, it can be seen that the Islamic banks is expanding steadily and gaining rapid market shares. Therefore, comparison between both conventional and Islamic banking system can be made in terms of the evaluation of bank performance. As the assessment of the bank performance is important for the globalization effect (Mokni and Rachdi, 2014).

Asset liability management in bank is the simultaneous planning and arrangement of all asset and liability positions on the balance sheet of the bank under discussion of the different bank management goals and legal, administrative and market constraints, in order to keep liquidity, mitigate interest rate risk and enhance the value of the bank (Gup and Brooks, 1993). In other words, it can also be defined as the practice of managing a business, as a result, the judgements taken regarding to assets and liabilities are organized. Hence, the resources can be utilized effectively and thus profitability can be increased (Baum, 1996).

Asset liability management is important to ensure the balance between profitability and risks. It involves the optimal investment of assets and also satisfies current goals and future liabilities (Novickyt and Petraityt, 2014). However, there are more foreign players that are managed to get a place in the market as the huge changes in the dynamic financial environment, and thus it caused the risk exposure had increased and become more complex (Meena and Dhar, 2016). As new products and services are introduced, it has becoming more challenging in managing the asset and liability.

In order to optimize the balance sheet, *Asset Liability Management Committee* (ALCO) has the role to oversee the implementation of the asset liability management system. As there are different kinds of risks due to the mismatch of the asset and liability, ALCOs have to formulate a balance sheet policy for the banks based on

a detailed evaluation of risk and return trade off. ALCOs must also consider the liquidity of the banks in the short run and develop new system and procedure for the analysis of balance sheet risks and set up the benchmark for the effective risk management (Vij, 2005).

Asset and liability management is a bank-specific control mechanism. Therefore, the banks can choose to apply standardized asset and liability management techniques, or choose to use customized systems (Cole and Featherstone, 1997). In this study, the researcher is going to apply bank specific variables under CAMEL which are capital adequacy, asset quality, management efficiency, earnings quality and liquidity, bank size and degree of risk aversion to meet the objectives of the research.

There are significant contributions from the researchers regarding the financial performance of the banks such as Hassan (2005), Brown and Skully (2005), Majid and Sufian (2007). It is very important to find out the banks' performance. As the performance of the banks not only can reflects how well the bank has performed towards its objectives and long term goals which are especially important to the managers. Besides, the performance can provide information and send signal to the potential depositor and investor whether they should put in money for that particular bank or withdraw their funds from it and buy or sell the securities of the bank. By evaluating the financial performance of the banks, it can ensure the soundness of the banks, not only that, it is to preserve the public confidence in the financial sector and identify and avoid the banks to face financial distress.

One of the most popular performance indicator is profitability. It measures the efficiency in the utilization of organizational resources in adding value to the business. There are a few methods to evaluate and determine the financial performance of the banks. Traditional financial ratios can be used, for example, return on Assets (ROA) and return on Equity (ROE) and it is able to compensate bank disparities. Since the size of the banks are not equivalent, financial ratio can helps to eliminate the disparities in size of bank and put them at the same level (Samad, 2004).

The Malaysian banking system comprises of conventional and Islamic banks. The conventional banking system functions on pre-fixed interest and is established on a purely financial model, in which banks as an intermediary generally borrow from public and lend to individual or business. For this mode of operation, the conventional banking system generates income from the difference of interest rate by the action of money borrowing and lending (Shahid et al., 2010).

Generally, both systems have their own uniqueness and special traits on financial designing systems. As the modes of operations between conventional

banks and Islamic banks are not the same where the conventional banks based on pre-fixed interest while Islamic banks functions on profit sharing principle. Many researchers have then discussed about the differences between both banks such as service quality (Taap, et.al, 2011), risk management practices (Abu Hussain and Al-Ajmi, 2012), efficiency (Ismail, et.al, 2013) and argued upon which systems are better in promoting economic growth.

The development of the financial sector in this fast growing environment has brought more risks to the system in recent years. Not to mention the impact after the global economic crisis such as high inflation rate and high unemployment rate, some banks may undergo bankruptcy or merging and acquisition. Thus, asset and liability management in the banks is therefore relatively important in order to monitor the conditions of the bank. The dynamic changes in the financial environment is therefore increase the importance of this study.

As the Islamic banking sector has grown tremendously over the years, the study aim to examine Islamic and conventional banks in Malaysia in view of financial performance. This is very important and relevant as the Islamic and conventional banking system is competing in the market despite the difference between the modes of operation. The study is going to interest the stakeholders, regulators, bankers and researchers. Through this paper, the people can understand about the topic of the impact of asset liability management on the profitability of conventional and Islamic banks in Malaysia. As for government and regulators, they can find out the weaknesses and come out with new policy which can improve the efficiency of bank management. Further, bankers can know more about the competitiveness in the dynamic financial environment and thus make more changes towards their management on allocation of asset and liability. For stakeholders such as depositors and investors are advised to know more about the institutions that they invested, whether the banks is sound, efficient in risk management and gaining profit.

Literature Review

In order to find out the optimal mix of assets and liabilities for the financial performance of conventional and Islamic banks, a review of the existing literature is needed. Sun et al. (2014) found out that liability management strategy is used for short-term gaps and asset management strategy is applied for long-term gap management by both conventional banks and Islamic banks. Both conventional and Islamic banks found to be generally experience positive long-term gaps and negative short-term gap, indicating that banks attempt to use short-term financing to fund for short and long-term loans, advances and investments, correspondingly.

Chakraborty and Mohapatra (2009) concluded that the ownership and structure of the banks do have a major bearing in the asset liability management procedure. Dash (2013) examined the impact of asset and liability management on the profitability of 35 banks in India at the financial year of 2015-2016. The results indicated improved financial performance is a reason to keep up negative maturity mismatch in the short term. Thus, there is a risk-return trade-off for short-term maturity mismatch.

There are few existing studies used capital adequacy, asset quality, management efficiency, earnings quality, liquidity., bank size and degree of risk aversion to figure out the effect of asset and liability management on the financial performance of the banks. Anjili (2014) found out that all the factors chosen are statistically significant to give an impact to the financial performance of the banks.

Suresh and Bardastani (2016) reported that there are significant differences in the bank performance by measured using CAMEL framework although both banks operate under the same socioeconomic, political and regulatory environment. An empirical study conducted by Chowdhury (2015) proved that the efficiency ratio is negatively and significant to the profitability statistically. However, credit risk and liquidity risk are found to be not significant to the banks' profitability.

Muhmad and Hashim (2015) found out that capital adequacy, asset quality, earnings quality and liquidity is highly significant to the performance of the banks, which measured by ROA and ROE. As earnings performance is always a concern for the stakeholders, the rise in earning quality will inspire confidence and hence, it is important in describing the financial performance of the banks. However, the management competency is found to be insignificant the bank performance. Martha (2015) proved that capital adequacy does not affect the profitability of the commercial banks significantly. However, it is still recommended for the banks to maintain and keep adequate capital to absorb unanticipated losses.

Athanasoglou et.al. (2008) employed an empirical study that integrates the structure-conduct-performance (SCP) hypothesis in order to find out the effect of bank-specific, industry-specific and macroeconomic control variables on the performance of Greek banks during the period of 1985 to 2001. As a result, the coefficient of the capital variable is positive and highly significant to the profitability of Greek banks. On the other hand, the operating expenses which is one of the ratio to be studied in this study, is found out to be negatively significant, reflecting the financial condition of Greek banks according to this literature. Bank size is also have no significant impact on profitability after all estimated equations from these researchers.

Almazari (2014) indicated that there is a positive and significant correlation between liquidity risk and profitability. However, the bank size and the profitability

is in negative relationship where they give further explanation that banks, which are growing and expanding might encounter the diminishing marginal returns therefore the average profits would reduce with bank size. Jaffar and Manarvi (2011) found out that conventional banking system have a comparative advantage in terms of asset quality which implies that it have better loan loss ratio compared to Islamic banks. However, both modes of operation do not experience efficient loan disbursement process which is under operating expenses ratio. Not only that, the literature give evidence to both conventional and Islamic banks exhibit high loan to asset ratio and cause more debt and increase the possibility of risk that it is going default, however, it supports that conventional banks have a better liquidity performance compared to the Islamic banks.

Mokni and Rachdi (2014) analyzed empirically and evaluated whether conventional or Islamic banking system is relatively more profitable in Middle Eastern and North Africa (MENA) region from year 2002 to 2009. The findings found out that the measure of credit quality is positive and significant for Islamic banks. This is in consistent with Naceur and Omran (2011) where agree that credit risk will generate more on to the income of banks as loans are the most risky and therefore, this is the assets have the highest yields. For liquidity ratio, the study found out that there is a mix result on ROE where the relationship is positive and significant for Islamic banks and negative to the conventional banking system. The research also found out that size of the banks is negative and highly significant on ROE for the full sample, which implies that larger banks make fewer profit. Ong and Teh (2013) indicated that the profitability performance is affected significantly by bank specific determinant. however, macroeconomic conditions have no impact on bank profitability performance in Malaysia.

A quite interesting issue is then to be discussed is whether degree of risk aversion is related to the bank profitability especially using ROE. However, there are more evidence to prove that there is a relationship between degree of risk aversion with bank interest margin. As Maudos and Guevara (2004) examined and explored the factors explaining the interest margin in the banks of the European Union from year 1993 to 2000. The result from the study presents that risk aversion shown the expected positive sign.

Zhou and Wong (2008) shown that degree of risk aversion have a negative sign. The management quality also have a negative sign which indicate the efficiency in management is crucial and poor management may lead to lower interest margin. Size of the bank however is significantly negative as it means large bank size lowers the interest margins of the bank in China. Samad (2004) examined the profitability, liquidity risk, and credit risk to make comparison for the performance of 6 Islamic

banks and 15 conventional commercial banks in Bahrain from year 1991 to 2001. The researcher found out that there is no main difference in profitability and liquidity between these two different types of banks. However, the Islamic banks are more superior compared to conventional banks in terms of credit performance. The research also found out that the Islamic banks are doing as well as conventional banks despite the facts that it is new to the market.

In additional to the studies that have been done, Ramlan and Adnan (2015) shown that total equity to total assets for both banks is statistically significant to ROE. The findings shown that profitability of Islamic banks are relatively greater to conventional banks in Malaysia. Sayeed et al. (2012) conclude that for total income, the banks with high profitable charges higher price on assets then low profitable banks. For net operating income, high earning banks earns higher net return and lower marginal cost is incurred on the liabilities than low profitable banks.

There are two hypotheses were developed in this study to meet the research objectives, namely,

Hypotheses 1

H_0: There is no relationship between asset liability management and financial performance of the conventional banks

H_1: There is a relationship between asset liability management and financial performance of the conventional banks

Hypotheses 2

H_0: There is no relationship between asset liability management and financial performance of the Islamic banks

H1: There is a relationship between asset liability management and financial performance of the Islamic banks

Methods

The data is extracted from the annual audited financial statements of 12 selected banks in Malaysia for the period of 4 years which is from year 2010-2013. The banks are considered from both domestic conventional and Islamic banking system on the basis of banks' total assets as at financial year 2013. In terms of sample selection, the study uses six conventional banks such as Maybank Bhd, Public Bank Bhd, CIMB Bank Bhd, RHB Bank Bhd, Hong Leong Bank Bhd and AmBank Bhd, and six Islamic banks namely, Maybank Islamic Berhad, CIMB Islamic Bank Berhad, Bank Islam Malaysia Berhad, Public Islamic Bank Berhad, AmIslamic Bank Berhad and RHB Islamic Bank Berhad. The selection of banks is based on judgmental sampling design by looking at the market capitalizations of each bank.

Financial performance is the dependent variable whereas asset and liability management components are the independent variables of the research study. The researcher computed correlation coefficient (R), coefficient of determination (R square) and analysis of variance (ANOVA) using the regression model below.

The study hypothesis that asset liability management has a positive relationship to financial performance of banks.

$$ROE_{it} = \alpha + \beta_1 CAR_{it} + \beta_2 ASQ_{it} + \beta_3 ME_{it} + \beta_4 ESR_{it} + \beta_5 LQR_{it} + \beta_6 Size_{it} + \beta_7 DRA_{it} + \epsilon_{it}$$

Where; ROE is return on equity; CAR is capital adequacy ratio; ASQ is asset quality; ME is management efficiency; ESR is earnings quality; LQR is liquidity ratio; Size is bank's size; DRA is degree of risk aversion.

Result and Discussion

There are a total of 48 observations collected from both conventional and Islamic banks covering the period of 2010 to 2013. Correlation analysis is employed to find out the relationship between the variables. It can be discussed about the relationship between independent and dependent variables or between two independent variables. Generally, the value can be positive or negative with different amounts. In the study, the researcher analyzed the Pearson correlations of conventional and Islamic banks individually.

Table 1. Pearson correlations of Conventional Banks

	ROE	CAR	ASQ	ME	ESQ	LQR	SIZE	DRA
ROE	1.000							
CAR	0.050	1.000						
ASQ	0.606	0.203	1.000					
ME	-0.580	-0.049	-0.685	1.000				
ESQ	0.655	0.279	0.615	-0.763	1.000			
LQR	-0.071	-0.389	-0.619	0.187	-0.365	1.000		
SIZE	-0.458	0.315	0.015	0.055	0.105	-0.475	1.000	
DRA	-0.544	0.172	-0.201	0.195	-0.242	0.007	0.414	1.000

In the case for conventional banks, there is a positive association of CAR, ASQ and ESQ with ROE. However, the relationship of ME, LQR, SIZE and DRA on ROE

is negative. For Islamic banks, CAR, ESQ, SIZE and DRA have affected positively on ROE. In contrast, ASQ, ME and LQR have negative correlation with ROE.

Table 2. Pearson correlations of Islamic Banks

	ROE	CAR	ASQ	ME	ESQ	LQR	SIZE	DRA
ROE	1.000							
CAR	0.434	1.000						
ASQ	-0.309	-0.598	1.000					
ME	-0.189	-0.362	0.463	1.000				
ESQ	0.578	0.134	-0.178	-0.353	1.000			
LQR	-0.149	-0.194	0.446	-0.025	0.046	1.000		
SIZE	0.468	0.123	-0.341	-0.051	0.089	-0.423	1.000	
DRA	0.178	0.593	-0.882	-0.327	0.016	-0.582	0.092	1.000

The results shown that CAR in both conventional and Islamic banks have positive impact on ROE which are 0.050 and 0.434 respectively. This is in line with Athanasoglou et al. (2008) that suggested a bank with a sound capital can managed more effectively and there is additional capital to absorb unexpected losses, thus gain in higher profit. This results is also supported by previous studies such as Berger (1995), Demirguc-Kunt and Huizingha (1999), Staikouras and Wood (2003) as they agreed that well capitalized banks face lower cost of external financing, and hence the net profit can increase effectively.

From above, ESQ of conventional and Islamic banks have positive association with the profitability of the banks. The finding is consistent with the literature from Zarrouk et al. (2016) where shown that ESQ have a positive sign on financial performance of the banks. It argue that the profit in non-financing activities boosts the performance. However, the study from Muhmad and Hashim (2015) have different results where they found out that earnings quality which calculated using the ratio of net interest income to total assets have negative relationship with ROE.

Conversely, the findings present that ME in both conventional and Islamic banks have negative impact on ROE. This finding is also support by Guru et.al. (1999), Kosmidou et.al. (2005) and Smaoui and Salah (2012) that more expense incurred may reduce the profitability of banks. The banks with poor expense management will lessen the profit and thus, they prefer lower cost to income ratio to improve the performance of the banks.

Molyneux and Thorton (1992) supported the findings that LSQ are

negatively related to financial performance of both conventional and Islamic banks where they concluded that liquidity ratio have an inverse relationship with profitability, most probably it represent a cost to the bank as the bank can loan out to earn more profit instead of keeping the funds.

ASQ in conventional banks shown that it has positive association on ROE. This is consistent to the evidence suggested by Bashir (2003) where the larger the loan portfolio, the greater is the profit. On the other hand, this is contradict with the results in Islamic bank which stated ASQ has negative impact on ROE. Miller and Noulas (1997) also reported that the more exposure the bank face loans with higher risk, the possibilities the more accumulation for unpaid loans and hence, profitability will be reduced.

SIZE is in positive relationship with ROE in Islamic banks as Berger and Humphrey (1997) supported, where larger bank gain more profit as they achieve economies of scale. However, the findings is contradict with the conventional banks where it reported that SIZE is negatively affected on the financial performance. This finding is supported by the study reported by Pasiouras and Kosmidou (2007), Athanasoglou, et.al (2008) and Almazari (2014). For banks that become extremely large, phenomenon of the diseconomies of scale exists, the more difficult for management to conduct surveillance and the higher the level of bureaucracy that have a negative effect on financial performance of the banks. Therefore, the size–profitability relationship might be expected to be non-linear.

DRA is in positive relationship with profitability of the Islamic banks in the findings. This is consistent by previous literature from Hawtrey and Liang (2008) where they found out that DRA is positive related to the bank interest margins while Ong and Teh (2013) taken bank interest margin as one of the measures for profitability. This can be explained by the risk averse bank manager tends to apply an extra interest margin is a compensation of taking systematic risk. DRA for conventional banks have the opposite results where it is in negative relationship with financial performance which is supported by Lepetit et al. (2008) where found mixed results with positive and negative coefficients for different accounting margins and spreads investigated.

Table 3. Model Summary for Conventional banks

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.906a	0.822	0.743	0.05194

a. Predictors: (Constant), DRA, LQR, ME, CAR, SIZE, ESQ, ASQ
b. Dependent Variable: ROE

The regression results of ROE for conventional banks show that correlation coefficient (R) is 0.906 and coefficient of determination (R square) is 0.822, which means that 82.2% of the total variation in the value of ROE is attributed to the effect of the independent variables. In layman's terms, it indicates 82.2% of the financial performance of conventional banks can be predicted by the 7 independent variables considered in the study which are CAR, ASQ, ME, ESQ, LQR, SIZE and DRA. In other words, there are remaining 17.8% unexplained. As the correlation is positive, thus the correlation is statistically significant; therefore, there is a positive relationship between asset liability management and financial performance of conventional banks.

Table 4. Model Summary for Islamic banks

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.814a	0.663	0.516	0.05717

a. Predictors: (Constant), DRA, LQR, ME, CAR, SIZE, ESQ, ASQ
b. Dependent Variable: ROE

Based on the findings, the regression results of ROE for Islamic banks present that correlation coefficient (R) is 0.814 and coefficient of determination (R square) is 0.663, which imply that 66.3% of the variance in ROE are explained by CAR, ASQ, ME, ESQ, LQR, SIZE and DRA. There are 33.7% left unexplained and it indicated that there are other important variables in explaining ROE have not been considered in the research. Since the correlation is positive, the correlation is statistically significant, and hence, there is a positive relationship between asset liability management and financial performance of Islamic banks.

Table 5. ANOVA for Conventional banks

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.199	7	0.028	10.522	.000b
	Residual	0.043	16	0.003		
	Total	0.242	23			

a. Dependent Variable: ROE
b. Predictors: (Constant), DRA, LQR, ME, CAR, SIZE, ESQ, ASQ

Table 5 and 6 above present that the fitted regression model is significant with F statistic of 10.522 and 4.504 for conventional and Islamic banks respectively.

Table 6. ANOVA for Islamic banks

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.103	7	0.015	4.504	.006b
	Residual	0.052	16	0.003		
	Total	0.155	23			

a. Dependent Variable: ROE
b. Predictors: (Constant), DRA, LQR, ME, CAR, SIZE, ESQ, AS

The null hypothesis stated that there is no significant correlation at all. This implies that all the coefficients are 0 and none of the variables chosen is fit in the model. The alternative hypothesis is not that every variable belongs in the model but that at least one of the variables belongs in the model. From the findings, as the p-value is 0.000 and 0.006 for conventional and Islamic banks correspondingly, it is statistically significant which also means that at least one of the variables chosen (CAR, ASQ, ME, ESQ, LQR, SIZE and DRA) is related to the dependent variable (ROE). Hence, the research would reject the hypotheses that there is no correlation at all and this proved that this is a good model for prediction. It indicates that the points lie moderately close to the line of best fit in the scatter diagram. It also imply that the model is relatively suitable in explaining the variance of profitability of both conventional and Islamic banks as explained by the variance in CAR, ASQ, ME, ESQ, LQR, SIZE and DRA. The multiple regression then can be employed.

Table 7 presents that ASQ (p= 0.019), ESQ (p= 0.007) and SIZE (p= 0.053) were significant predictors for the profitability of conventional banks. The variables of CAR, ME, LQR and DRA were insignificant predictors for the dependent variable. Hence, the estimated equation for conventional banks can be formulated as

Y= 0.702 + 0.695CAR+ 0.695ASQ + 0.37ME+ 21.074ESQ + 0.819LQR - 0.065SIZE - 3.502DRA

The model implied that ROE would be 0.702 when all the factors are held constant. There is 0.317 units of increase for ROE when there is a unit increase of CAR while other factors held constant. A unit increase for ASQ holding other factors constant would increase ROE by 0.695. The financial performance for conventional banks would increase by 0.37 when there is a unit of increase of

ME, holding other factors constant. A unit of increase for ESQ when other factors held constant would increase the profitability for conventional banks by 21.074. Holding other factors constant, a unit of increase for LQR would increase ROE by 0.819 units. On the other hand, a unit of increase in SIZE holding other factors constant, would decrease ROE by 0.065. The financial performance for conventional banks would reduce by 3.502 units when there is a unit of increase for DRA holding other factors constant.

Table 7. Coefficients for Conventional banks

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.702	0.735		0.956	0.353
	CAR	0.317	0.913	0.043	0.347	0.733
	ASQ	0.695	0.267	0.574	2.609	0.019
	ME	0.37	0.299	0.265	1.237	0.234
	ESQ	21.074	6.768	0.588	3.114	0.007
	LQR	0.819	0.504	0.318	1.625	0.124
	SIZE	-0.065	0.031	-0.315	-2.091	0.053
	DRA	-3.502	2.043	-0.218	-1.714	0.106

a. Dependent Variable: ROE

Table 8 shows that CAR (p= 0.074), ESQ (p= 0.002) and SIZE (p= 0.020) were significant predictors for the ROE of Islamic banks. The variables of ASQ, ME, LQR and DRA were not significant predictors for the dependent variable. Hence, the estimated equation for Islamic banks can be formulated as

Y= -1.928 + 2.102CAR+ 0.569ASQ + 0.094ME+ 14.192ESQ + 0.34LQR + 0.078 SIZE + 2.269DRA

The model implied that when all the factors are held constant, financial performance for Islamic banks would be -1.928. There is 2.102 units of increase for ROE when there is a unit increase of CAR while other factors held constant. A unit increase for ASQ holding other factors constant would increase ROE by 0.569 units. ROE would increase by 0.094 when there is a unit of increase of ME, holding other factors constant. Holding other factors constant, a unit of increase for ESQ would increase ROE by 14.192 units. A unit of increase for LQR other factors held

constant would increase the financial performance for Islamic banks by 0.34. Other factors held constant, a unit of increase for SIZE would increase ROE by 0.078 units. A unit of increase for DRA when other factors held constant would increase the profitability for Islamic banks by 2.269 units.

Table 8. Coefficients for Islamic banks

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.928	0.846		-2.278	0.037
	CAR	2.102	1.101	0.367	1.909	0.074
	ASQ	0.569	0.471	0.603	1.207	0.245
	ME	0.094	0.15	0.113	0.627	0.539
	ESQ	14.192	3.873	0.598	3.665	0.002
	LQR	0.340	0.352	0.248	0.967	0.348
	SIZE	0.078	0.030	0.630	2.571	0.020
	DRA	2.269	2.063	0.606	1.1	0.288

a. Dependent Variable: ROE

Both conventional and Islamic banks shown that ESQ and SIZE is significant predictors for financial performance of the banks. According to the findings from Muhmad and Hashim (2015), the researchers found out there relationship between ESQ and ROE is significant and hence support this findings. It is then expressed the ability to support current and future bank operations depends on the profile of the earnings and profitability.

The findings about SIZE is one of the important determinants of financial performance for conventional and Islamic banks, is supported by previous studies from Boyd and Runkle (1993), Hassan and Bashir (2003) and Pasiouras and Kosmidou (2007). This finding suggests that the size of bank affected the profitability. Larger size can provide more varieties and wide range of financial services at a lower cost due to economies of scale, and hence generate more income. However, Athanasoglou et al. (2008) found out the opposite results where size proved to be not significant in affecting the profitability. The explanation from the research is that small sized banks generally attempt to grow and expand in faster speed, even though it will cost a lot and reduce profitability.

From the analysis of Islamic banks, CAR is significant to the ROE of the banks. This is in accordance to Berger (1995) as CAR represent the ability to withstand losses and hence it is one of the contributors to the profit of the banks. Due to the existence of asymmetric information, the banks with sound capital position are considered less risky and thus, have the advantage to access funds at better terms. Hence, it is less costly for bankers to low risk capital, report capital than banks with a significant risk. On the other hand, Smaoui and Salah (2012) support the findings that CAR is insignificant for ROE in conventional banks.

For ASQ in Islamic banks, it is significantly related to profitability. Muhmad and Hashim (2015) provide further evidence to support this where they found out ASQ is statistically significant to the bank's financial performance and stated that the increase of assets to be financed with loans would increase the bank's performance. ASQ hence is one of the prerequisite for increased profitability of the banks. However, ASQ is not statistically significant to the financial performance of conventional banks and this is consistent with Al-Omar and Al-Mutairi (2008).

ME is insignificant to ROE from the findings and this is backed by the study from Ong and Teh (2013) where the researchers found out that ME is however statistically significant to the other two measures of profitability which are Return on Asset (ROA) and Net Interest Margin (NIM). This contradicts with the previous study from Pasiouras and Kosmidou (2007) where ME exhibit significant impact to the financial performance of the banks. The results imply weak expenses management leads to poor profitability.

LQR is found out that statistically insignificant to the financial performance of both conventional and Islamic banks. This is proven by Muhmad and Hashim (2015) as the ratio of liquid assets to total assets is not significant to ROE of the banks. However, they also reported that the ratio of liquid assets to total deposits which is under the factor of LQR is significant to the profitability of the banks. Hence, we can assume that different ratio will affect the significance of the factors to the dependent variable.

The results shown that DRA is found out that to be insignificant to ROE of conventional and Islamic banks in Malaysia. In support of this, Entrop et.al. (2015) which focused on German banking system found out that bank's risk aversion has mixed results where explained by high endowments of excess capital lead to significantly different adjustments of loan rates but not of deposit rates. According to the existing studies where Ho and Saunders (1981), McShane and Sharpe (1985) and Zhou and Wong (2008) which generally evaluate the effect of DRA on bank interest margin but not on ROE in terms of profitability. The previous studies have proven that DRA is affected significantly to bank interest margin.

Conclusion

This paper aim to empirically investigates the asset liability management on the profitability of 6 conventional and 6 Islamic banks in Malaysia during the period of 2010 to 2013. The findings shown that asset liability management have a significant effect on the profitability of both conventional and Islamic banks in Malaysia. The results shown that ESQ and SIZE is the important determinants for the profitability of both conventional and Islamic banks in Malaysia. For conventional banking system, ASQ is also one of the contributing factors for the financial performance. In view of Islamic banks, CAR is another factor that give significant impact to the profitability.

However, it can be found that ME, LQR and DRA are statistically insignificant to ROE, which is a measure of profitability used in the study. There is a possibility that the ratio used for the stated factors are not suitable for the banking system in Malaysia for the period of the study. Hence, as the dependent variable is limited to one variable (ROE), the relationship of the factors may not be strong with this variable, but might be significant to other measures of profitability such as Return on Asset (ROA) and Net Interest Margin (NIM). The researcher can then conclude that more ratio should be added under the factor of ME, LQR and DRA to find out whether the suitable ratio to examine the financial performance of the banks.

Concerning the correlation of the variables chosen with the profitability, it can be seen that the relationship of CAR and ESQ shared the same results for both conventional and Islamic banks which is positive correlation whereas ME and LQR have negative relationship with the profitability for both conventional and Islamic banks in Malaysia. On the other hand, ASQ in conventional banks exhibit negative sign towards the performance and Islamic banks ASQ present positive relationship with profitability. Both SIZE and DRA in conventional banks shown negative sign towards profitability while in Islamic banks, these two factors have positive relationship with the financial performance.

The difference from the findings for conventional and Islamic banks can be explained by the different modes of bank operations. As Islamic banking system is constrained by the prohibition of riba and also, need to comply with Sharia requirements and regulations. Thus, Islamic banks will face more risks compared to the conventional counterparts as the Islamic banking system is exposed to risks due to the unique asset and liability structure. Because of the complexity of the risk from the nature of business such as the profit and loss sharing from Islamic banking system and difference in the financial products and services, there is a difference in the accounting standards and reporting methods for both system and hence, there will be little difference in the findings.

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