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Comparative Analysis of Islamic and Conventional Banks in Camel Model: In Case of Malaysia

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Comparative Analysis of Islamic and Conventional Banks in Camel Model: In Case of Malaysia

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I. Introduction

In this contemporary world, banks play a significant role in the daily life of society since it is the primary agency of making transaction between individuals and financial institutions. It is the fact that the economic and financial stability of each country will depend on the performance of its banking sector. In the last decades, demand for the Islamic banking is increasing dramatically since its interest free and profit and loss sharing features between depositors and creditors. Currently, Islamic banking mainly operates in Muslim countries, namely UAE, Pakistan, Singapore, Malaysia and Indonesia. In fact, Malaysia is known as the first nation which successfully implemented the dual banking system and the both Islamic and Conventional banks operates simultaneously. The broad aim of this research is to conduct a comparative study between Islamic and conventional banking systems in case of Southeast Asian county, namely Malaysia and empirically analyzing the financial performance of those banks within the period of 2006 and 2016. The primary objective of the research is divided to the specific dual objective. Firstly, to compare Islamic banks and Conventional banks in term of profitability through applying CAMEL (Capital Adequacy, Asset Quality, Management Quality, Earning Quality and Liquidity) framework and find out which type of banking system performed outstanding in terms of profitability. Secondly, through applying two tailed t-test analyses in order to find out whether, there is a significant difference or not between Islamic and Conventional banking in terms of CAMEL components.

Comparison between Islamic and Conventional banking system

Comparison the profitability between Islamic and conventional banks is extremely significant to look at the characteristics and features of both banking systems. Undoubtedly, the primary objective of conventional banks is profit maximizing and thus conventional banks concentrate more on increasing their profit rather than increasing the well-being of society. Regarding Islamic banking sector, Islamic banks possess two types of goals; initially, Islamic banks focus more on maximizing welfare as well as living standards of each society rather than maximizing its profit. Please refer to Appendix One to obtain more information regarding the various features between Islamic and Conventional banks.

II. Literature Review

So far, a number of researches and studies have been investigated on the comparison of financial performance between Islamic and Conventional banks by various researchers in terms of profitability through utilizing capital adequacy, asset quality, management quality, earnings efficiency, and liquidity ratios.

Jaffar and Manavri[1] made an analysis on the performance of Islamic and Conventional banks in Pakistan during the time period of 2005 and 2009. They implemented capital adequacy, management quality, asset quality, earning quality, and liquidity ratios of five selected Islamic and conventional banks among all banks in Pakistan. According to the result of Jaffar and Manavri's research, Islamic banks are investing their assets more on equity rather than debts. Lower loan to asset ratio in Pakistani Islamic banks compared with Pakistani conventional banks indicated that Islamic banks are more liquidity position rather than conventional banks in Pakistan. In addition, Siraj and

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[1] Jaffar M., Manavri I. (2011). Performance comparison of Islamic and Conventional banks in Pakistan. Global Journal of Management and Business Research (11). pdf.

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Pillari[2] analyzed six Islamic and six conventional banks in Arab League countries during 2005-2010. In their research, operating expenses, profit, assets, deposits and total equities are utilized as determinants of the bank's performance in order to evaluate and compare the profitability of these two types of banking system. In fact, according to the results of ANOVA tests in their research, Islamic banks acquired higher returns on the assets and equities compared with conventional banks which is the consistent with the result of previous study. Viverita[3] analyzed the performance of conventional banks compared with the performance of Islamic banks in Indonesia. Indeed, CAMEL framework was applied by Viverita during his comparative analysis. The empirical results showed that Islamic banking system acquired lower cost efficiency ratio compared with conventional counterparts, in addition, revenue and profit ratios were higher in Islamic banks rather than interest-based conventional banks.

III. Data, Variables and Research Methodology

The principal goal of this research analysis is to conduct comparative financial performance analysis between Islamic and Conventional banks in Malaysia. In order to make an appropriate comparative analysis, specific four Islamic banks, namely RHB Bank Berhad, Public Bank Berhad, CIMB Islamic Berhad, May bank Islamic Berhad as well as four conventional banks, specifically, Bankok Bank Berhad, Deutsche Bank Berhad, Citibank Berhad, HCBC Bank Berhad were selected as a sample from Malaysian banking sector. Indeed, in order to obtain substantiated results, the bank-specific variables such as profits, assets, loans and net interest margin were obtained from the annual financial statements such as financial balance sheets as well as income statements were collected from the official website of the respective banks and the collected secondary data which was derived from the financial statements is transformed into percentages and ratios in order to make a proper comparison between Islamic and conventional banks over the period of 11 years from 2006 to 2009. In this comparative study, CAMEL framework will be applied in order to evaluate the performance of both Malaysian Islamic and conventional banks in terms of profitability. Based on CAMEL model, there are five major categories of variables which are capital adequacy, asset quality, management capability, earning quality and liquidity.

Table 1: The CAMEL model of this comparative analysis as follows

Variable	Measurement
Capital Adequacy Ratio	Total Equity/Total assets
Asset Quality Ratio	Total Credit, Advances and Financing/ Total Loans
Management Quality Ratio	Total Loans/Total Deposits
Earning Quality Ratio	Total expenses/Total revenue
Liquidity Ratio	Net loans/Total Assets

IV. Empirical Analysis

a) Capital Adequacy Ratio

Capital adequacy is also known as Capital to Risk (Weighted) Asset Ratio. Capital Adequacy measures the capability of a bank to meet different types of shocks and unexpected losses during the period of risk (Hamedian)[4]. The capital adequacy ratio plays an essential role in decision making in order to ensure that banks can withstand a reasonable level of losses occurred because of operational losses and evaluate the capacity of the bank in meeting the losses. Thus, higher capital adequacy ratio highlights better bank's financial performance.

[2] Siraj K., Pillari S. (2012). Comparative study on performance of Islamic banks and conventional banks in GCC region, Journal of Applied Finance & Banking, vol. 2, no.3, 2012, pp.123-161.
[3] Viverita D. (2010). Performance analysis of Indonesian Islamic and conventional banks. Social Science Research Network No. 186893. Available from http://www.ssrn.com/.
[4] Hamedian B. (2013). Financial Performance of Islamic Banks vs. Conventional Banks: The Case of Malaysia.

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Table 2: Two tailed T-test on Capital Adequacy of IBs and CBs

	Islamic Bank's CAR	Conventional Bank's CAR
Mean	0.166181818	0.119033703
Variance	0.000112964	0.000217391
Observations	11	11
Pearson Correlation	-0.246650153	
Hypothesized Mean Difference	0	
df	10	
t Stat	7.744835386	
P(T<=t) two-tail	0.0374584	
t Critical two-tail	2.228138852	

Source: Authors calculation based on the Stata program

Table 2 illustrates that the sample t-value is 7.545 while the p-value is 0.0374. Since the sample t-value is greater than 2.228(the t-critical value) and the p-value is less than 0.05 (the critical p-value), the null hypothesis will be rejected and it indentifies that there is a significant difference between the capital adequacy of Islamic banks and Conventional banks in Malaysia during 2006 - 2016.

b) Asset Quality Ratio

Significant part of banks' assets is accounted for loans and indeed, providing loan is considered as the principal source for banks to generate additional profit. Asset Quality ratio indicates how much percentage of bank's asset is occupied by loans and mainly AQR is utilizes as an indicator or proxy measurement for evaluating the value of loans and the creditworthiness of the banks (Table 3).

Table 3 defines that the sample t-value is 10.444 while the p-value is 0.044. Since the sample t-value is greater than 2.228 (the t-critical value) and the p-value is lower than 0.05 (the critical p-value), then, the null hypothesis will be rejected. Rejection of null hypothesis underlines the acceptance of alternative hypothesis which states that there is a significant difference between the asset quality of Islamic banks and Conventional banks in Malaysia.

Table 3: Two tailed T-test on Asset Quality of IBs and CBs

	Islamic Bank's AQR	Conventional Bank's AQR
Mean	0.705832666	0.501896776
Variance	0.00376645	0.002217918
Observations	11	11
Pearson Correlation	0.309715442	
Hypothesized Mean Difference	0	
df	10	
t Stat	10.44415959	
P(T<=t) two-tail	0.04371495	
t Critical two-tail	2.228138852	

Source: Authors calculation based on the Stata program

c) Management Quality Ratio

Management quality points out how the bank management is performing in receiving deposits and providing loans. According to Fayzullayev[5] clarifies that management quality measures the productivity and efficiency of bank's performance in getting more deposits from financially strong as well as trustworthy lenders and reducing defaults of borrowers through providing loans to creditworthy creditors. Total Expense to Total Income ratio which is used as a proxy measurement in order to measure the level of efficiency of the bank in our comparative financial performance analysis of Islamic and conventional banks (Table 4).

Table 4 emphasizes that the sample absolute t-value is 11.439 while the p-value is 0.028. Since the sample absolute t-value is greater than 2.228 (the t-critical value) and the p-value is less than 0.05 (the critical p-value), then, the null hypothesis is rejected and alternative hypothesis will be accepted. Acceptance of alternative hypothesis highlights that there is a significant difference between the Management efficiency of Islamic banks and Conventional banks during 2006 - 2016 in Malaysia.

[5] Fayzullayev A. (2011). Comparative Analysis between Islamic Banking and Conventional Banking Firms in terms of Profitability. 2009.

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Table 4: Two tailed T-test on Management Quality of IBs and CBs

	Islamic Bank's MQR	Conventional Bank's MQR
Mean	1.068803233	1.198583468
Variance	0.000740525	0.001521597
Observations	11	11
Pearson Correlation	0.398650434	
Hypothesized Mean Difference	0	
df	10	
t Stat	-11.43946851	
P(T<=t) two-tail	0.0276589	
t Critical two-tail	2.228138852	

Source: Authors calculation based on the Stata program

d) Earning Quality Ratio

Earning quality measures the efficiency of bank in terms of controlling its expenses and costs; indeed, earning quality will help to examine the capability of banks to control the costs, the productivity in performance, and achieving ultimate goal which is earning more and more profit. More specific definition of earning quality ratio is the cost incurred by bank in order to earn every dollar of income. Therefore, the lower earning quality ratio underlines the lower cost and expense is occurred by banks and to generate additional income (Table 5).

Table 5 states that the sample absolute t-value is 1.76896 while the p-value is 0.10733. Since the sample absolute t-value is less than 3.182 (the t-critical value) and the p-value is greater than 0.05 (the critical p-value), the null hypothesis is accepted i.e. there is no significant difference between the Earning Quality of Islamic banks and Conventional banks in Malaysia between the period of 2006-2016.

Table 5: Two tailed T-test on Earning Quality of IBs and CBs

	Islamic Bank's EQR	Conventional Bank's EQR
Mean	0.715818445	0.739965777
Variance	0.001958596	0.000356687
Observations	11	11
Pearson Correlation	0.158857338	
Hypothesized Mean Difference	0	
df	10	
t Stat	-1.768957283	
P(T<=t) two-tail	0.107333848	
t Critical two-tail	2.228138852	

Source: Authors calculation based on the Stata program

e) Liquidity Ratio

Liquidity ratio is one of the most significant indicators which represent the ability of bank to withstand compensating all deposits of lenders during the unexpected situations and failure in repaying deposits for depositors in those circumstances might lead to solvency and bankruptcy. If the liquidity ratio is high, there is not any risk for banks since banks acquires sufficient amount of liquid assets such as cash to repay to its depositors in any situation Molyneux and Thorton[6]. Due to keeping majority part of money or deposits on itself, banks will generate lower amount of profit (Table 6).

Table 6: Two tailed T-test on Liquidity of IBs and CBs

	Islamic Bank's LQR	Conventional Bank's LQR
Mean	0.576925822	0.388760208
Variance	0.000630529	0.006561265
Observations	11	11
Pearson Correlation	0.024414439	
Hypothesized Mean Difference	0	
Df	10	
t Stat	7.41033154	
P(T<=t) two-tail	0.03673247	
t Critical two-tail	2.228138852	

Source: Authors calculation based on the Stata program

[6] Molyneux P., Thorton J. (1992). Determinants of European Bank Profitability: A Note, Journal of Banking and Finance. Vol. 16, No. 6, pp. 1173-1178.

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Table 6 states that the sample t-value is 7.4103 while the p-value is 0.036732. Since the sample t-value is greater than 2.228 (the t-critical value) and the p-value is less than 0.05 (the critical p-value), then the null hypothesis is rejected and alternative hypothesis will be accepted, while alternative hypothesis underlines that there is a significant difference between the Liquidity ratio of Islamic banks and Conventional banks.

V. Overall Financial Performance

In order to evaluate the overall financial performance of Islamic and conventional banking system, average ratios of Capital adequacy, Asset quality, Management quality, Earnings quality, and Liquidity ratios were calculated, based on their relationship to performance, for each banking categories and results are presented in table below:

Table 7: Two tailed T-test on all CAMEL variables of IBs and CBs

	Islamic Bank	Conventional Bank
Mean	0.219263831	0.110284318
Variance	0.568283451	0.585156383
Observations	5	5
Pearson Correlation	0.992029471	
Hypothesized Mean Difference	0	
df	4	
t Stat	2.524736474	
P(T<=t) two-tail	0.065027903	
t Critical two-tail	2.776445105	

Source: Authors calculation based on the Stata program

Table 7 summaries that the sample t-value is 2.5247 while the p-value is 0.065. Since the sample absolute t-value is less than 2.776 (the t-critical value) and the p-value is greater than 0.05 (the critical p-value), the null hypothesis our research analysis will be accepted and the null hypothesis of our research analysis defines that there is no significant difference between the overall financial performance of Islamic banks and Conventional banks in Malaysia during 2006-2016.

VI. Conclusion

In this section of our research analysis, all main point of our research analysis will be restated. Especially, the outcome of empirical analysis and result section will be concluded in this part. First of all, the background information and distinctive characteristics of both Islamic and Conventional bank was provided. Indeed, Islamic banks conduct its operation based on Sharia law and earning interest (Riba) is prohibited in Sharia law thus all profits and losses will be equally divided into both parties in Islamic banking. Regarding conventional interest-based banking system, conventional banks are benefited from earning interest between depositors and creditors and, in fact, conventional banks follow constitutional law, not Sharia law. Furthermore, CAMEL model implemented in order to examine the financial performance between Malaysian Islamic and Conventional banks for the period 2006-2016. The five components of CAMEL model which are Capital Adequacy, Asset Quality, Management Quality, Earning Quality, Liquidity ratios of both Islamic and Conventional banks has been evaluated and compared individually with T-test in the empirical analysis section of our comparative analysis.

The findings and outcomes of our analysis shows that there is not significant difference between Islamic and Conventional banks in terms of overall financial performance based on CAMEL model.

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