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The Determinants of Financial Performance: A Comparative Analysis Between Conventional and Islamic Malaysian Banks

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Abstract: *This study aims to examine whether there is a difference between the financial performance of the Islamic and Conventional Banks in Malaysia. To meet this objective, a sample of 17 Islamic banks and 17 conventional banks was used during the period 2005 and 2011. The financial data are collected from the annual activity reports of the banks.*
Using the standardized test for independent samples, the results indicate that the mean values for the profitability ratios variables (ROA, ROE and COSR) are significantly different between the two types of banks, while the mean value for The variables relating to capital structure ratios (EQTA, EQL, DTAR and BS) are significantly different between the two groups of banks. For the rest of the ratios (DER and EM), the difference is not significant.

JEL classification: M48
Key words: Financial Performance, Comparative Analysis, Islamic banks, Malaysia, the profitability ratio, capital structure ratios

1. INTRODUCTION

Born in the seventies, the Islamic Finance appeared on a reduced scale by the establishment of the first Islamic banks in Egypt and in certain regions of the Gulf (the Islamic Development Bank in 1974, the Commercial Bank of Dubai in 1975). The abundant flow of oil rents, the surliquidity phenomenon that came with the development of the oil industry, especially accentuated by the "oil shock" of the 1970s and the pan-Islamist movement, highlighted the need to create appropriate financial institutions especially for the region.

Malaysia is one of those countries in which the Islamic banking sector is the core of the financial system. Moreover, the Malaysian financial system is dual, conventional banks work alongside Islamic banks, which facilitates any comparative study between them.
Therefore, the purpose of our work is to check if there is a difference between the financial performance of Islamic and conventional Malaysian banks.

Our paper is structured as follows. The first section presents the theoretical framework and research hypotheses. The second section discusses the methodological aspects. The analysis and discussion of our results are presented in the third section. The conclusion summarizes the main results, points out the limits and the openings of this research.

2. THEORETICAL FRAMEWORK

The purpose of our work is to examine if there is a difference between the financial performance of Islamic and conventional Malaysian banks. In literature, many studies have compared the performance of Islamic and conventional banks.

The study of Samad (1999), Samad and Hassan (2000) used a financial ratios to analysis and evaluate the performance of the Islamic Bank "BIMB" and 8 Malaysian conventional banks during the period 1984 to 1997. These authors have noted an improvement in the performance of BIMB for certain aspects (risk and solvency), however, the ratio PER is significantly higher for conventional banks compared to Islamic banks. This result is confirmed by Bisha (2004).

In contrast to the work by Haron (1996a, 1996b) that used international data, Bashir (2000) studied the performance variables of 14 Islamic Banks operating in 9 Middle Eastern countries (Bahrain, Kuwait, Qatar, United Arab Emirates, Jordan, Egypt, Turkey and Sudan) between 1993 and 1998. Thus, the study examined the relationship between performance and certain banking variables. Like Haron's studies, Bashir has divided these determinants into internal and external factors. Several conclusions have been reached. First, the measures of profitability of Islamic Banks react positively with capital increase and loan ratios. This result is consistent with previous studies. Second, implicit and explicit taxes have an inverse and

statistically significant relationship with the profitability of Islamic Banks. Thirdly, He also noted the importance of customers, short-term financing, non-interest bearing assets and overheads in promoting bank revenues. Fourth, the results reveal that the foreign banks are more profitable than their domestic counterparts.

A similar study by Hassan and Bashir (2005) analyzed how the performance of Islamic Banks is affected by the characteristics of the bank using data on Islamic Banks in 21 countries during the period 1994/2001. Although factors such as capital, gross domestic product, general expenses, and conventional interest rates have a positive relationship with performance, loan indicators, taxes, and bank size have been negatively associated.

In order to compare the performance of 12 Islamic banks and 12 conventional banks for the period 1990-1998, Iqbal (2001) used the same method as Samad and Hassan (2000). The ratios examined are the asset / capital ratio, the liquidity ratio, the asset utilization ratio, the cost / income ratio and the profitability ratios (ROA and ROE). It has been found that, in general, Islamic banks are well capitalized, stable, profitable and that their use of resources is efficient. It also seems that during this period, the two ratios (ROA and ROE) for conventional banks are considerably lower than Islamic Banks. Similarly, with the same balance sheet structure, Hassoune (2002) also showed that Islamic banks are more profitable than their conventional counterparts.

In Malaysia, over the period 1996/1999, Rosly and Abubakr (2003) carried out a study to test the profitability of Islamic and conventional banks. They noted that the return on assets (ROA) and the profit margin (PM) are higher for the Islamic banks.

For its part, Samad (2004) compared the profitability of 6 Islamic Banks and 15 commercial banks in Bahrain over the period 1991-2001. To measure profitability, the following variables are used: Return on Assets (ROA), Return on Equity (ROE) and COSR. The study concluded that only the ROA is significantly higher for Islamic Banks.

Based on financial characteristics, Olson and Zoubi (2006) attempted to study the distinction between conventional and Islamic banks in the Gulf Cooperation Council. The sample includes 26 banks (13 conventional and 13 Islamic) for the year 2000, 28 banks (14 conventional and 14 Islamic) for 2001, and 47 banks (11 conventional and 36 Islamic) for the years 2002 and 2003. The ratios profitability include Return on Assets (ROA), return on equity (ROE), net operating margin (NOM), return of deposit (ROD), and income over expenditure (EEI). The authors found that Islamic banks are, on average, more profitable than conventional banks.

Kader and Asarpota (2007), based on a sample of 3 Islamic Banks and 5 conventional banks in the United Arab Emirates, and using financial ratios such as (ROA, ROE and PER), assessed the performance between 2000 and 2004. They found that the ROE is significantly lower in Islamic Banks.

In Bangladesh, Ahmad and Hassan (2007) analyzed the performance of Islamic Banks compared to conventional banks through operational ratios, such as net profit margin, net interest income, income relative to assets, interest-free income relative to assets in the period from 1994 to 2001. They showed that, except for return on equity (ROE), the two types of banks are similar in the other ratios.

In Pakistan, Moin (2008) compared the performance of the first Islamic Bank, namely Meezan Bank Limited (MBL), with a group of 5 conventional banks during the period 2003/2007, for the following aspects: profitability, liquidity, risk and efficiency. Several financial ratios (in total 12) are used to evaluate the performance, including the return on assets (ROA), the return on equity (ROE), the loan-to-deposit ratio (LDR) and the loan to asset ratio (LAR), the debt to equity ratio (DER), the asset utilization ratio (AU), and the income to expenditure ratio (IER). The study revealed that the MBL bank is less profitable, more solvent (less risky) and less efficient compared to the average of the 5 conventional banks. However, there was no significant difference in liquidity between the two groups of banks.

On the contrary, Siddiqi (2008) showed that Islamic Banks in Pakistan have been able to maintain good financial performance, sufficient liquidity and better risk management. These results are confirmed by Said (2011).

In addition, Olson and Zoubi (2008) studied the performance of 16 Islamic Banks compared to the 28 conventional banks belonging to the Gulf Cooperation Council during the period 2000/2005. The profitability ratios used are: Return on Assets (ROA), Return on Equity (ROE), Profit Margin (PM), Deposit Return (ROD) and Net Operating Margin (NOM). They concluded that conventional banks are less profitable than Islamic banks. Indeed, ROA, ROE and NOM are significantly lower for these banks. However, the debts in relation to the capital of the shareholder are significantly smaller in these banks. This result is confirmed by (Srairi, 2008, Chong and Liu, 2009). For this reason, Karim and Ali (1989) suggest that Islamic banks prefer to obtain funds from depositors rather than shareholders during periods of economic expansion. Besides, when combined with the risk-sharing requirement, ROE is lower for conventional banks than for Islamic Banks.

In the same context, Mohammad Ahmad (2010) examined the performance indicators of 24 Islamic and conventional banks in the Gulf region, during the period 2006-2009. The study used 20 different types of financial ratios including profitability ratios such as (the average return on equity "AROE", and the average return on assets "AROA"). The results show that Islamic banks are more profitable in terms of AROA, and less profitable in terms of AROE than conventional banks.

In the purpose of measuring and comparing the profitability of Islamic and conventional banks, before and after the financial crisis of 2008, in 2007 and 2009, Rashwan (2010) identified four variables namely: the average return on assets (AROA), the average return on equity (AROE), net loan versus total assets (NL / TA) and loan loss reserve over gross loans (LLR / GL). The results show that there is a significant difference between the two sectors in 2007 and 2009; however there are no significant differences in 2008. In fact, Islamic Banks perform better in 2007 and less successful in 2009 than their conventional counterparts. The conclusion of this study is confirmed by Khamis et al, (2010) and Hassan and Dridi (2010).

In order to analyze the banking structures of these two markets, Islamic and conventional, Ariss (2010) based on a sample of 58 Islamic banks and 192 conventional banks in 13 countries. The two variables used (AROA and AROE) show that there are no significant differences in profitability between the two segments of the industry during the period 2000/2006. This conclusion is confirmed by Abdul-Majid et al, (2005) and Bader et al, (2007), but in contradiction with the results previously found in the literature, that Islamic banks are more profitable compared to their conventional peers (Samad, 1999; Samad and Hassan, 1999; Iqbal, 2001; Hassoune, 2002; Rosly and Abubakr, 2003; Bisha, 2004; Olson and Zoubi, 2006).

Al-Tamimi (2010) examined some variables that influence the profitability of Islamic and conventional banks in the United Arab Emirates during the period 1996/2008. To measure profitability, a regression model was used in which ROE and ROA were used alternately as dependent variables. The explanatory variables are: Gross domestic product (GDP) per capita, size, financial development indicator (FDI), liquidity, concentration, cost and number of industries. The results indicate that liquidity and concentration are the important variables of conventional bank's performance, while the cost and the number of branches have been the determinants of Islamic bank's performance. This result is confirmed by El Masry (2011).

Using data from the financial statements, Chatti et al, (2011) estimated the risk-adjusted performance of eight Islamic Banks in Malaysia. Due to unavailability of data, the sample is limited to the period 2004/2008. Using ROA and RAROC (Risk Adjusted Return on Capital), as analysis ratios, the authors found that retail and commercial banks are the first activities that contribute significantly to the benefit of the bank (about 65% of the total profits of the sample).

Jaffar and Manarvi (2011) examined and compared the profitability of the 5 Islamic banks and 5 conventional banks operating in Pakistan between 2005 and 2009. Using the ROA as a ratio of measurement of the earning capacity of two groups of banks, the authors noted that the profitability of conventional banks is relatively higher than that of Islamic banks. This result is explained by the mismanagement of the leaders of the Islamic Banks.

To verify if there is a difference between the financial performance of Islamic and conventional Malaysian banks, Shaista and Gunasegavan (2013) used a sample of five banks Islamic and 9 conventional banks in Malaysia over the period 2005/2009.The variables employed are: profitability, capital adequacy, liquidity, operational efficiency and quality of assets, the board of directors and economic conditions. They noted that on average the return on assets, the size of the bank and the board of directors were higher for the case of conventional banks, and the other variables were higher for the case of Islamic banks. All variables except liquidity, board of directors' characteristics and bank type, were found to be very significant in affecting bank performance.

3. THE METHODOLOGY

3.1 Sample and data collection

To studied whether there is a difference between the profitability of Islamic and conventional banks, it is necessary to use a comparison test of means when the analysis is based on a bivariate relationship including a non-metric or nominal variable (types of banks) and a metric variable (ratios). There are three types of means comparison tests depending on the situation to be analyzed and the nature of the sample. In our case, we will use the comparison test of means for independent samples. This test assumes that the non-metric variable has only two modalities.

Hypothesis H0 is here: **"The means observed in the two groups of banks are equal"**. The objective is to reject this hypothesis H0 to accept hypothesis H1: "**The means observed in the two groups of banks are different"**.

This study is useful for all partners of the bank including, customers, managers and regulators.

To achieve this objective, we will employ a sample of 17 Islamic and conventional Malaysian banks over the period 2005 to 2011. The financial data are collected from the annual activity reports of the banks.

3.2 The variables selected

To compare between Islamic banks and conventional banks, many variables were used in the literature, namely: ratios of profitability, ratios of liquidity and solvency. Indeed, several studies have used financial ratios to examine and evaluate these two types of banks (Rosly and Bakar, 2003; Samad, 2004; Ahmad and Hassan, 2007; Olson and Zoubi, 2008). These ratios correspond to profitability, liquidity or solvency measures or to specific characteristics of the bank.

Thus, we can group the ratios of our analysis into two categories: profitability ratios (ROA, ROE and COSR) and capital structure ratios (EQTA, EQL, DER, DTAR, EM and BS).

3.2.1 Profitability ratios

The profitability ratios are ROA, ROE and COSR.

3.2.1.1 The return on assets ratio (ROA)

This ratio is defined as after-tax profit divided by total assets. It is the most used ratio to compare the profitability of the banks as it indicates the income generated by the assets financed by the bank. The more the ROA increases, the more the financial performance increases.

3.2.1.2 The return on equity ratio (ROE)

This ratio is defined as the ratio of earnings after tax to equity. This ratio is also referred to as after-tax shareholders' profitability, which is used to evaluate the return on the funds invested by them in the bank. The more the ROE increases, the more the financial performance increases.

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3.2.1.3 The cost-income ratio (COSR)

This ratio is the most used to calculate bank financial performance. It is measured by the ratio of total debt to total income. The lower the ratio, the higher the profitability of banks.

3.2.2 Capital Structure Ratios

In the literature, there are several ratios namely: EQTA, EQL, DER, DTAR, EM and BS.

3.2.2.1 The capitalization ratio of the bank or equity to total assets (EQTA)

This ratio, noted as EQTA, is defined by the ratio of equity to total assets. It indicates the weight of the capital of the bank. Thus, it determines the distribution of the bank's sources of financing between debt and equity. As a result, the higher the ratio, the less risky the bank and the lower the bank's profitability.

3.2.2.2 The ratio of financial autonomy of the bank or equity to liabilities (EQL)

This ratio is defined by the ratio between equity and total debt. A bank with low equity relative to its debt will be less financially strong and less resilient to the vagaries of the market. The higher the equity, the better the bank is able to withstand temporary difficulties, and the longer it can guarantee its sustainability.

3.2.2.3 The financial leverage (DER)

The financial leverage evaluates the use of debt by the company compared to equity. It measures the bank's ability to finance his projects by debts. Thus, a bank with a low DER is more profitable than the bank with a high DER.

3.2.2.4 The debt to asset ratio (DTAR)

The DTAR variable is measured by the sum of total debt used to finance its total assets. A high DTAR means that the bank has financed the majority of its assets through debt rather than equity financing. In addition, a high DTAR shows that the bank is involved in riskier investments.

3.2.2.5 The equity multiply (EM)

To study the relationship between the profitability of assets and that of equity, we will use a ratio called equity multiplier which is equal to the total assets divided by total equity. When EM increases, the banking risk will increase.

3.2.2.6 The bank size (BS)

This ratio will be measured by the natural logarithm of total assets.

The following table summarizes the definitions and measures used for the different variables used.

Table 1 Definitions and measures of variables used

Variables	Definitions	Mesures
ROA	The Return on assets	Net profit / total assets
ROE	The Return on Equity	Net profits / equity
COSR	The cost to income ratio	Total cost / total income
EQTA	Equity to Asset ratio	Total equity / total assets
EQL	Equity to liabilities	Total equity/ total debt
DER	Financial leverage of bank	Total debt / total equity
DTAR	The debt to asset ratio	Total debt / total assets
EM	The equity multiply	Total assets / equity
BS	The size of the bank	The natural logarithm of total assets

4. ANALYZES AND DISCUSSIONS OF THE RESULTS

For each group, we calculate the mean and standard deviation of each ratio that can characterize the banks. The aim is to highlight the factors that can differentiate them.

Table 2 covers the results of the continuous variables used. The student's t-test is performed in order to compare the averages between the continuous variables of the two subsamples of the banks (Islamic Banks "IB" and conventional banks "CB"). In order to perform the average comparison tests, we create a binary variable relative to the types of banks. The results of

descriptive statistics between the two groups of banks for the nine variables used are summarized in Table 2.

The student's t-test results show that variables such as ROA, ROE and BS are significantly different at the 1% level between the two types of banks, whereas the average value of: EQTA, EQL and DTAR is significantly different at the 10% level. For the rest of the variables DER and EM, the difference between the two groups of banks is not significant.

Table N 2. Descriptive statistics of continuous variables for the two groups of Malaysian banks during the period 2005-2011

Variables	Size		Average		Standard deviation		Test t for equality of averages	
	CB	IB	CB	IB	CB	IB	t-value	p-value
ROA	118	120	0,055	-0,09	0,2	0,4	-3,743	0,000*
ROE	118	120	0,51	-0,28	2,097	1,4	-3,466	0,001*
COSR	118	120	24,81	93,87	18,21	377,12	2,004	0,047**
EQTA	118	120	0,18	0,13	0,23	0,18	-1,727	0,086***
EQL	118	120	1,11	47,28	4,19	290,25	1,742	0,084***
DTAR	118	120	0,81	0,86	0,23	0,18	1,727	0,086***
DER	118	120	9,75	10,89	5,62	8,68	1,206	0,229
EM	118	120	10,75	11,89	5,62	8,68	1,205	0,229
TB	118	120	9,91	8,97	1,39	1,12	-5,686	0,000*

Source: Output using STATA 9.0.

* p< 1% , ** p< 5%, ***p < 10%

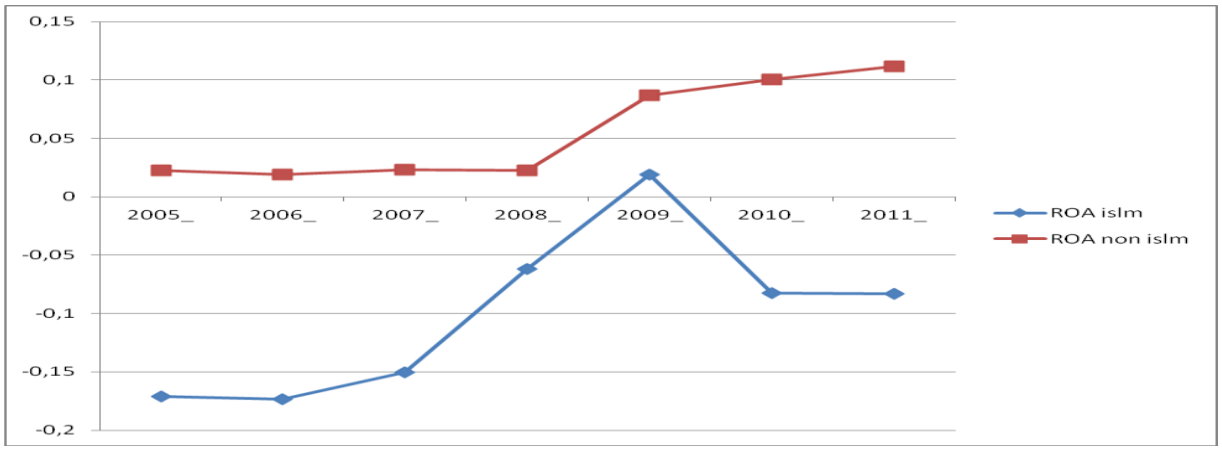
4.1 Analysis based on performance variables

4.1.1 Analysis based on the return on assets ratio

According to Table 2, we notice that classic banks are, on average, more profitable than Islamic banks. Differences in means are significant at the 1% level. Indeed, the return on

assets (ROA) is significantly higher for conventional banks (5.5%) than that of Islamic banks (-9.9%).

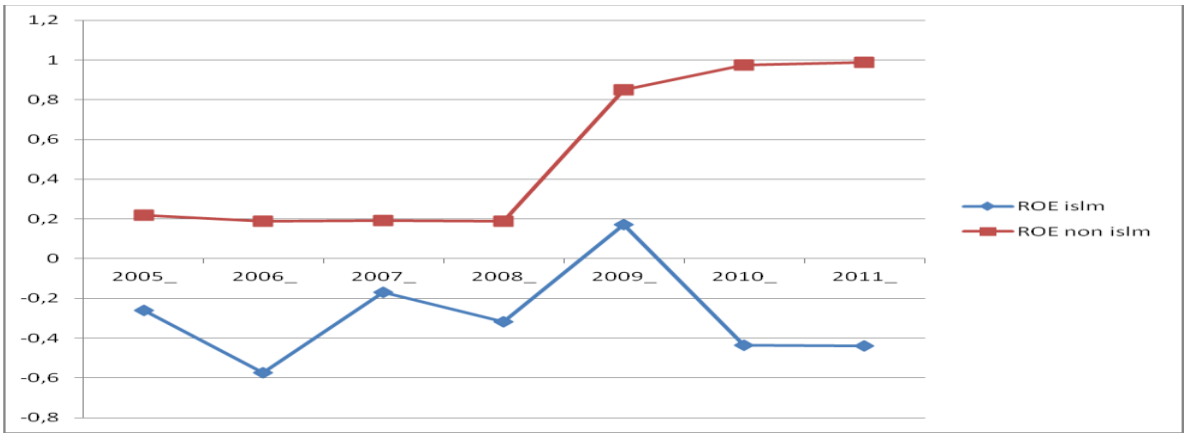
Figure 1. Comparison of performance in terms of ROA



4.1.2 Analysis based on ROE ratio

Regarding the variable ROE, it is interesting to note that the average return on equity realized by Islamic Banks (-28%) is lower than that of conventional banks (51%). The differences between the two groups are significant at the 1% level. This result is inconsistent with previous empirical investigations by Iqbal (2001) and Olson and Zoubi (2008).

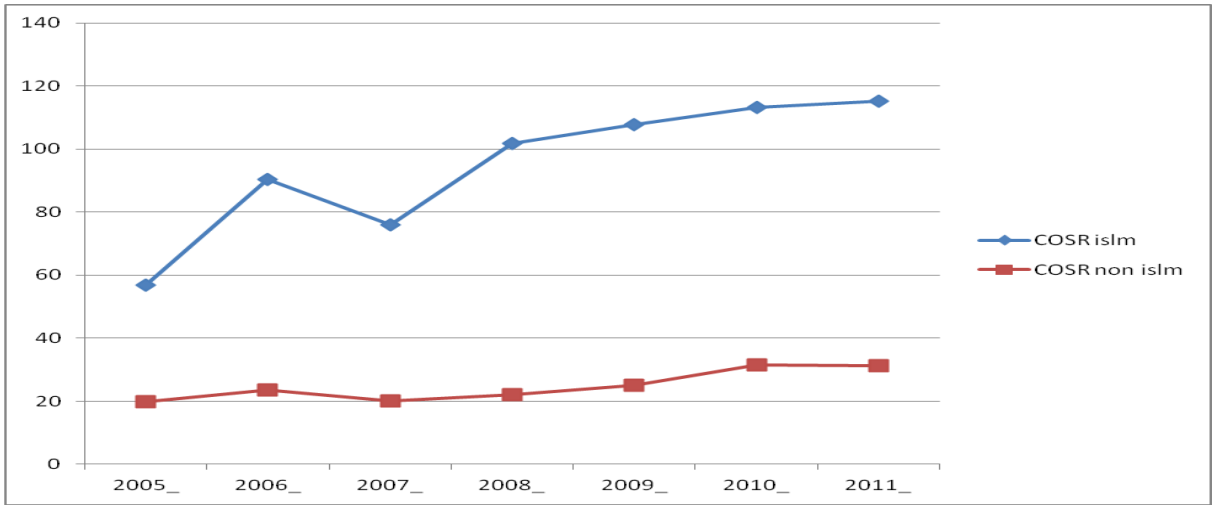
Figure 2. Comparison of performance in terms of ROE



4.1.3 Analysis based on the COSR ratio

The t-test for the equality of averages shows that there is a statistically significant difference in bank performance between the two groups as measured by the cost to income ratio (COSR). Thus, the cost to income ratio is significantly higher in Islamic Banks than that of conventional banks. This result does not support the conclusions of Hassoune (2003) and Samad (2004).

Figure 3. Comparison of performance in terms of COSR

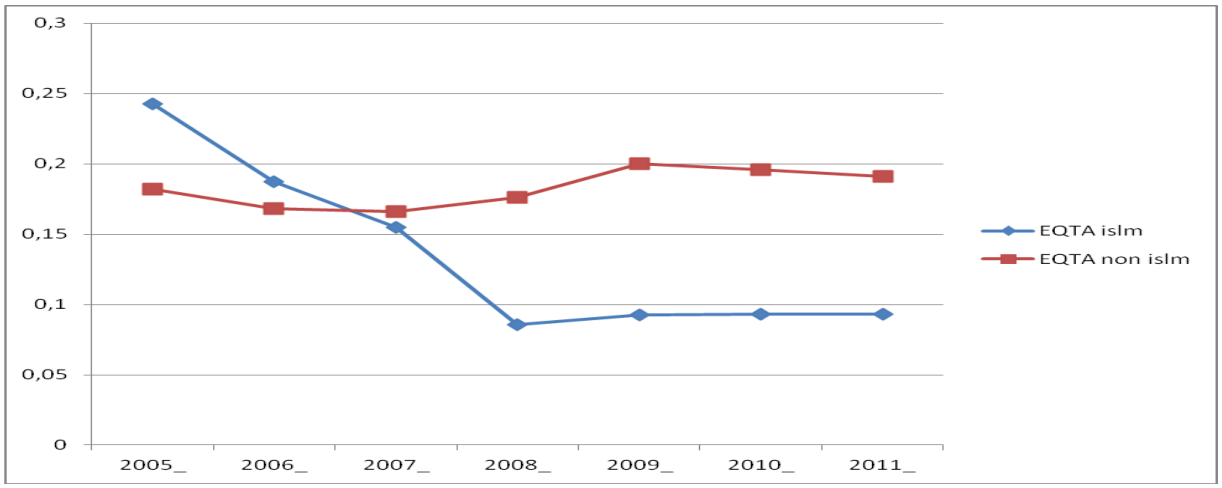


4.2 Analysis based on capital structure ratios

4.2.1 Analysis based on the EQTA ratio

As for the EQTA variable, the average comparison tests emphasize that the difference between the two families of banks is insignificant. In fact, the average capitalization ratio of Islamic and conventional Malaysian banks is around 15% and shows that 85% of bank assets are mainly composed of debts. This very high debt ratio could be explained by the important role of financial intermediation played by the two groups of Malaysian banks.

Figure 4. Comparison of performance in terms of EQTA

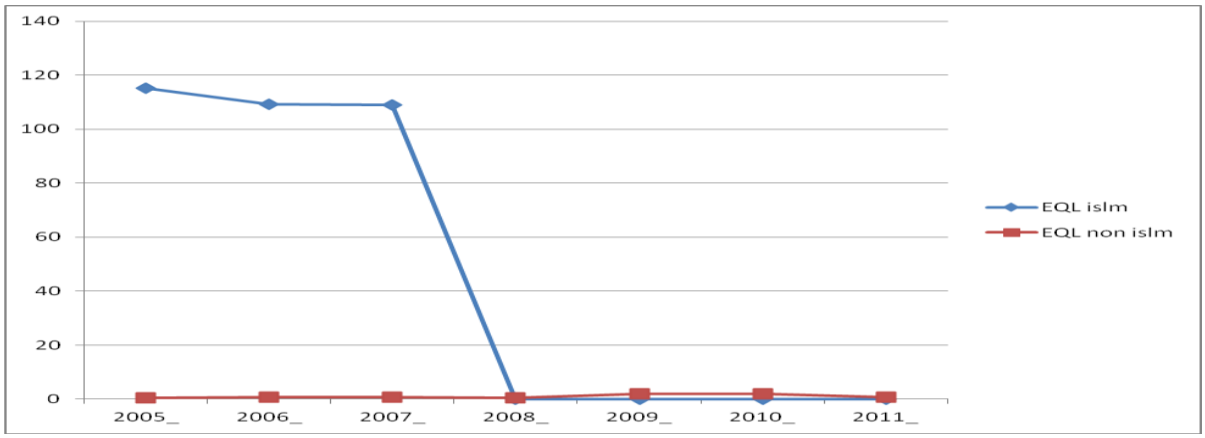


4.2.2 Analysis based on the EQL ratio

Regarding the EQL variable, we note that Islamic banks are on average less indebted (47.28 times equity) than conventional banks with a capital ratio of 1.11 times. The differences are significant at the 10% level.

It should be noted that as the level of equity increases, the financial autonomy of the bank increases which leads to a decrease in the need for long-term financing.

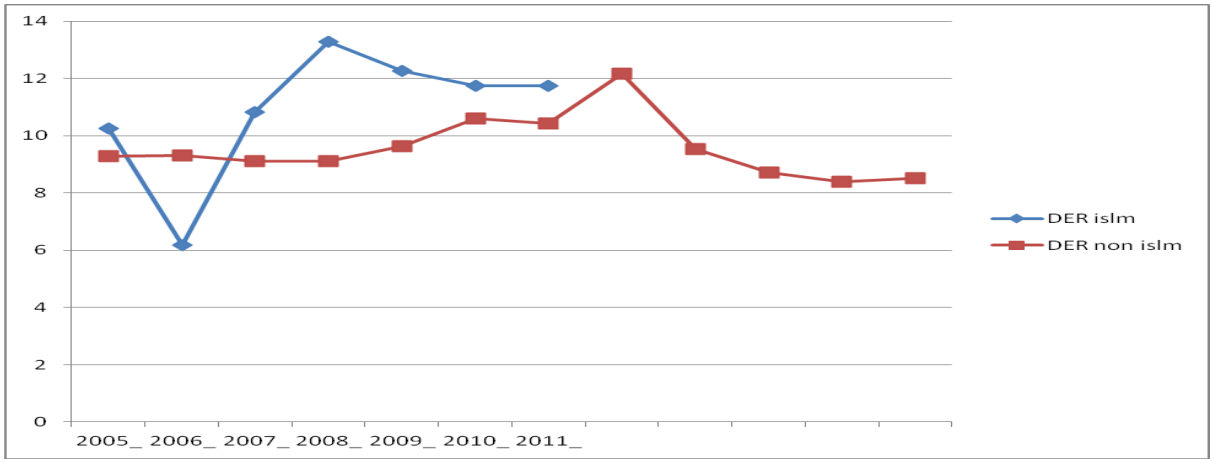
Figure 5. Comparison of performance in terms of EQL



4.2.3 Analysis based on DER ratio

Unlike the results found for the EQL and EQTA variables, reading the table shows that the leverage ratio is significantly greater for Islamic Banks. The annual average of the DER variable is 10.89 times and 9.75 times respectively for Islamic and conventional banks. Whereas, Student's t-test is not significant. Thus, a lower ratio indicates that conventional banks, because of their greater dependence on shareholder capital, are less risky and able to absorb financial shocks compared to Islamic ones. This result corroborates the conclusions of Olson and Zoubi (2008) but does not confirm those of Kader and Asporta (2007).

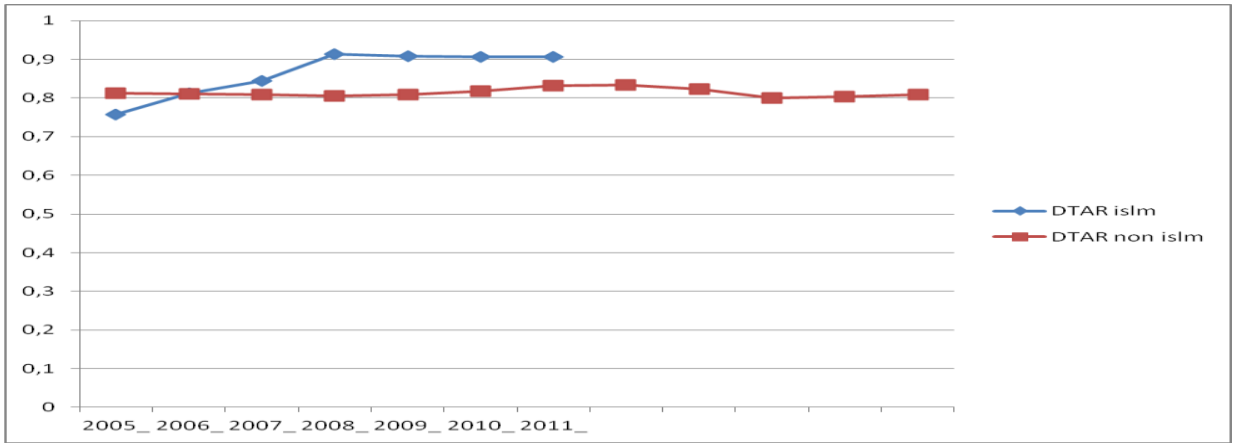
Figure 6. Comparison of performance in terms of DER



4.2.4 Analysis based on the ratio DTAR

The results for the debt ratio (total liabilities versus total assets) are in line with our results for the DER ratio. In fact, the examination of the variable DTAR indicates that Islamic banks are more risky (86%) than non-Islamic banks (81%). However, the Student's t-test is significant.

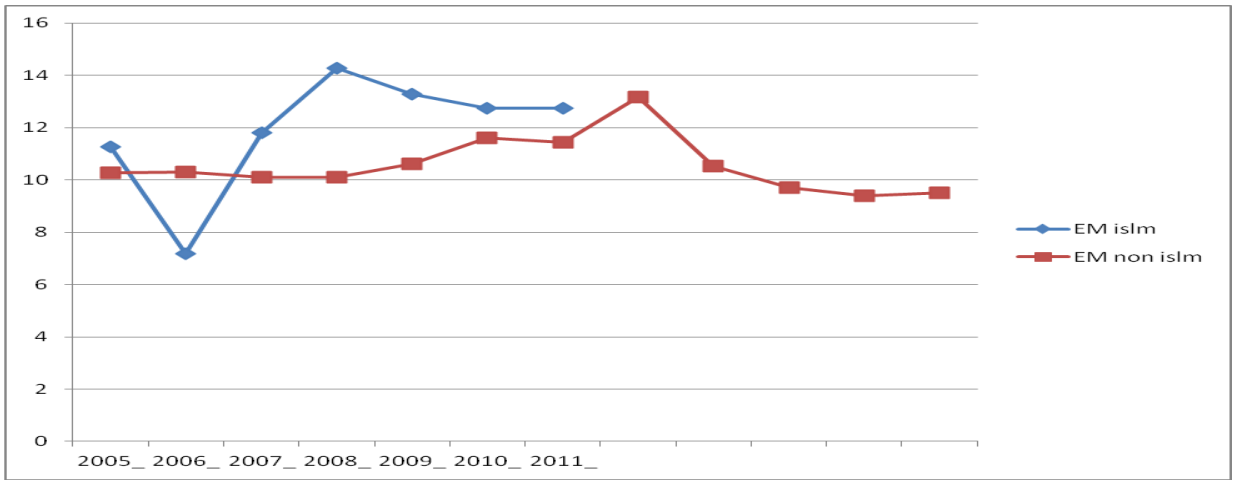
Figure N ° 7. Comparison of performance in terms of DTAR



4.2.5 Analysis based on the EM ratio

The equity multiplier analysis proves once again that Islamic banks are riskier and less solvent than conventional banks. These results are consistent with our findings for the variable DTAR and DER. Indeed, the average value of the variable EM is in the order of 10.75 times and 11.89 times respectively for the first group and for the second group. However, the difference between the two groups is not significant.

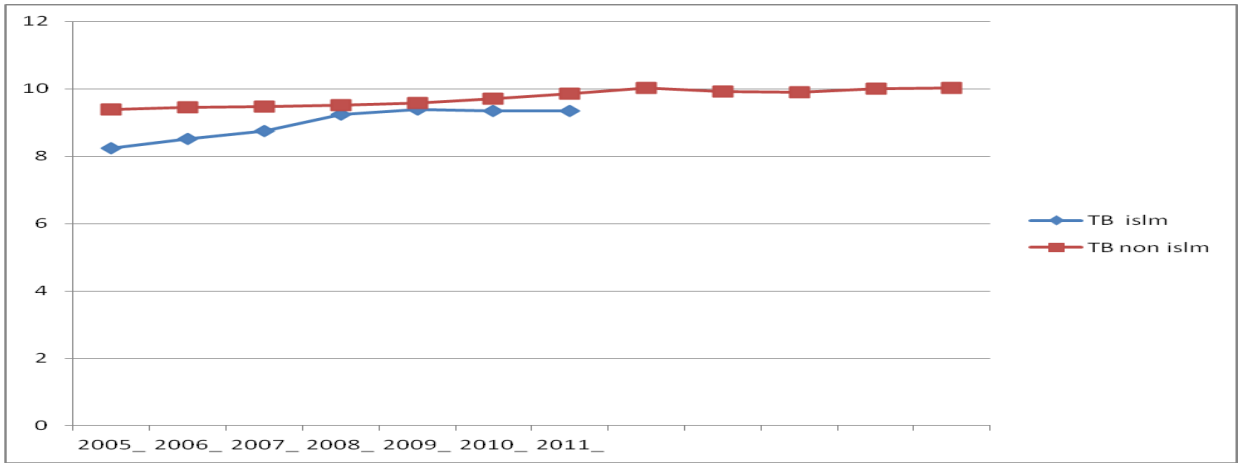
Figure 8. Comparison of performance in terms of EM



4.2.6 Analysis based on the BS ratio

Finally, as far as the size variable is concerned, Islamic Banks are much smaller than traditional banks. Differences in means are significant at the 1% level.

Figure 9. Comparison of performance in terms of BS



From these descriptive statistics, we note that there are no statistically significant dissimilarities between Islamic and conventional banks with respect to the two variables such as: financial leverage and equity multiplier. On the other hand, the analysis of the results of the comparison in terms of various financial ratios indicates that there are significant differences between the two groups of banks for the following variables: the return on equity, the capitalization ratio of the bank, the debt ratio, the return on assets, the cosr ratio, the ratio of financial autonomy and the size of the bank. Indeed, we find that Islamic banks, as newcomers in the financial market, are less efficient and riskier than conventional banks.

It's to highlight that sometimes the Islamic Banks do not record sufficient returns for the moucharaka and mudaraba contracts; in this case the clients will tend to withdraw their funds for the benefit of the conventional banks. This is the translated business risk. In order to solve

this problem, Islamic financial institutions will adjust their returns to LIBOR[1] rates and this will allow them to offer competitive returns.

5. CONCLUSION

To sum up, the results show that in terms of capital structure and performance ratios, the Islamic and conventional Malaysian Banks have a statistically significant dissimilarity. Indeed, Malaysian Islamic Banks are less efficient and riskier than their conventional counterparts.

These results can be explained by the fact that, the value of the firm is dependent on the ratio (debt / equity) and therefore of its financing structure. So, there is not an optimal capital structure that suits all Islamic banks, given the lack of borrowing. Each group must, when assessing its performance, take into account its internal characteristics (size, capital structure, etc.) and its specific governance characteristics. In addition, the difference in results is largely due to the fact that Malaysian conventional banks are older and larger, allowing them to gain extensive experience, learning the mechanics of the financial markets and gaining a large market share in the Malaysian financial sector. Besides, the financing techniques used (including the principle of sharing profits and losses) and the strict application of the principles of Sharia (such as the prohibition of interest ...) can contribute to these differences.

For this reason, some authors have suggested adapting financial ratios to the specificities of Islamic Banks or applying other indicators more appropriate to the principles of Sharia.

CONFLICTS OF INTEREST AND PLAGIARISM: The authors declare no conflict of interest and plagiarism.

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