A COMPARISON OF LEVERAGE AND PROFITABILITY OF ISLAMIC AND CONVENTIONAL BANKS.

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Abstract :

The aim of this research is to determine empirically differences between Islamic and conventional banks with particular focus on their financial characteristics such as leverage and profitability. Our sample is made of Islamic and conventional banks, resulting in a panel of 545 observations with 250 of these observations being for Islamic banks, from 18 countries over the period 2004-2008. We run t-test of equality of means, a binary logistic regression and a discriminant analysis using leverage and profitability ratios and their determinants. Results provide broad evidence on differences in leverage and profitability across conventional and conventional banks.

JEL: G21
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1. Introduction

The pioneer modern theory of capital structure was established by Modigliani and Miller (1958). The M-M proposition has shown that; provided the existence of competitive capital markets and the absence of bankruptcy costs, corporate income taxation or other market imperfections; the value of a firm is independent of its financial structure. Since, various studies have been conducted to explore the optimal capital structure and suggest restoring one or more of these excluded conditions. Under these conditions, the value of a bank is not independent of the way it is financed. Three conflicting theories of capital structure have been developed which are the static trade off theory (Bradley et al, 1984), pecking order theory (Myers and Majluf, 1984) and agency cost theory (Jensen and Meckling, 1976).

Fewer studies focus on the comparison of capital structure at Islamic and conventional banks. Conventional banks use debts and equity to finance their investments. These institutions typically engage in leverage by borrowing to acquire more assets with the aim of increasing their profitability. However, the composition of liabilities present in an Islamic bank balance sheet is different from the conventional scheme and varies depending on the Islamic bank’s activity and the market orientation.

The aim of our research is to determine whether Islamic and conventional banks are distinguishable from one another on the basis of financial characteristics, in particular, we consider leverage and profitability ratios.

All over the world, many countries currently experience a dual banking system where Islamic banks operate side by side with conventional banks. The first country which enjoyed a dual banking system is the United Arab Emirates where the Dubai Islamic Bank was established in 1973. The creation of the Dubai Islamic Bank was followed by the establishment of a large number of banks operating in various parts of the world on the same Islamic principles. In the last two decades, the number of Islamic banks significantly increased and their geographical spread has grown exponentially to cover all continents, especially in GCC countries and South Asia. According to Global Islamic Finance Report (2010), there are now 614 registered Islamic financial institutions operating in 47 countries worldwide.

Specialists often refer Islamic finance as simply being interest free. Unlike conventional banks, Islamic banks are not allowed to offer a fixed and predetermined interest rate on deposits and are not allowed to charge interest on loans. In fact, the perception of any predetermined fixed rate of return completely disconnected from the actual performance of the underlying asset is not permitted. The relationship between investors and financial intermediaries is based on Profit and Loss sharing principle (PLS) since the terms of financial transactions need to reflect a symmetrical risk-return distribution between counterparties. Islamic banks are expected to depend primarily upon shareholders equity and PSIA deposits. The investment deposits PSIA are a profit sharing financial instruments that is neither a financial liability nor an equity instrument in the conventional senses of these terms. PSIA depositors supply funds to an entrepreneurial party (Islamic bank) for trading and investment purposes while the Islamic bank contributes its expertise. Profits from operations funded by PSIA funds are divided between the bank and PSIA depositors according to ratios agreed in
advance in the contract. Moreover, PSIA-depositors have no voting rights since they do not own any portion of the bank’s equity capital. As owners of the bank, shareholders receive a proportion of the profit as a reward for the work which their agent (the management of the bank) performs in managing PSIA funds. In case the portfolio investment results in a loss from normal business causes or natural causes, PSIA holders bear all the loss pertaining to their investments to the extent of their deposits. In that case, shareholders receive no reward for work performed by the management of the bank in managing these funds. If the loss is due to misconduct or negligence of the bank, it turns into a liability of the bank.

Since the depositors are not entitled to receive a fixed interest rate but are going to share the profit with Islamic bank according to a mutually agreed ratio, depositors’ funds should be considered theoretically as equity. Depositors in a conventional bank create immediate claims on the bank, whereas PSIA-depositors in Islamic banks are like partners. The Financial Accounting Standard (FAS) N° 6, published by AAOIFI\(^1\) in Accounting and Auditing Standards for Islamic Financial Institutions, stated clearly that equity of unrestricted profit sharing investment account (UPSIA) holders shall be presented as an independent category in the balance sheet of the Islamic bank between liabilities and shareholders’ equity.

Fewer studies investigate this major difference and compare leverage and capital structure of the two types of banks. It is important to study the extent to which the Islamic banking sector is dependent on creditors’ funding especially that the principles governing the deposits in the liabilities side structure of Islamic banks are different. Our sample is made of Islamic and conventional banks, resulting in a panel of 545 observations with 250 of these observations being for Islamic banks, from 18 countries over the period 2004-2008. We run t-test of equality of means, a binary logistic regression and a discriminant analysis using leverage and profitability ratios and their determinants. Our choice is explained by the fact that the banking activity is traditionally based on high leverage and it is interesting to investigate if this characterizes similarly the Islamic banking business. Globally, our study tests the hypothesis that differences in leverage and profitability exist between Islamic and conventional banks.

Our research proceeds as follows: Section 2 provides a brief review literature on the related literature. Section 3 presents the empirical methodology used in the study. Section 4 describes the data and defines the variables used in the study. Section 5 presents results and interpretations. Finally section 6 concludes our paper.

2. Literature review

In view of the rapid growth of Islamic banking, recent researches have examined and compared different aspects (efficiency, liquidity, risk, etc.) of this new form of banks and conventional ones using financial ratios (Metwally 1997; Samad and Hassan 2000; Iqbal 2001; Hassoune 2002; Rosly and Bakar 2003; Samad 2004; Ahmad and Hassan 2007; Kader and Asarpota 2007; Olson and Zoubi 2008; Srairi 2008). The literature reviewed in the table 1 draws on the results of these comparison studies across a variety of countries.

The fewer previous studies reveal that Islamic banks hold more capital than conventional banks. In fact, Olson and Zoubi (2008) show that liabilities to shareholder’s capital ratio are significantly smaller at Islamic banks in GCC countries. Kader and Asarpota (2007) confirm also that the average means of shareholder’s equity to liabilities ratio is higher in Islamic banks in UAE. Their study reveals also that the equity multiplier and the total debt to assets ratio are significantly smaller at Islamic banks. Metwally (1997) suggests that the lower is

\(^1\) Accounting and Auditing Organization of Islamic Financial Institutions.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Period, Data, country</th>
<th>Variables</th>
<th>Methodology</th>
<th>Significant variables</th>
<th>results about profitability and leverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olson and Zoubi (2008)</td>
<td>2000-2005 28 conv. banks 16 Isl. banks GCC region</td>
<td>BANK PROFITABILITY RATIOS ROA return on asset; ROE return on equity; PM profit margin; ROD return on deposits; ROSC return on shareholders’ capital; NOM net operating margin. BANK EFFICIENCY RATIOS IEE interest income to expenses; OEA operating expense to asset; OIA operating income to assets; OER operating expenses to revenue; ATO asset turnover; NIM net interest margin; NNIM net- non interest margin. ASSET QUALITY INDICATOR PEA provision to earning assets; APL adequacy of provisions for loans; WRL write off ratio; LR loan ratio; LTD loans to deposits LIQUIDITY RATIOS CTA cash to assets; CTD cash to deposits</td>
<td>t-test for equality of means logistic regression neural networks model k-means nearest neighbours</td>
<td>ROA, ROE, NOM ATO, NNIM PEA, APL, LTD RETA Logit Model ROE OEA PEA TLSC, RETA</td>
<td>Islamic banks are more profitable than conventional banks. ROA and ROE are significantly higher for Islamic banks. NOM is than twice as large for Islamic banks relative to conventional banks and the difference is significant. TLSC is significantly smaller for Islamic banks.</td>
</tr>
<tr>
<td>Kader and Asarpota (2007)</td>
<td>2000-2004 5 conv. banks 3 Isl. banks UAE</td>
<td>PROFITABILITY RATIOS ROA return on assets; ROE return on equity; PER profit to total expenses. LIQUIDITY RATIOS CTA Cash&amp;portfolio Inv/ deposits; CTD Credit to deposits</td>
<td>t-test for equality of means.</td>
<td>ROE CTA, CTD ETD, CA, EM NOM , AU, OE</td>
<td>ROE is significantly smaller at Islamic banks ETD is significantly higher at Islamic banks. CA is significantly smaller at Islamic banks. EM is significantly smaller at Islamic banks.</td>
</tr>
<tr>
<td>Samad (2004)</td>
<td>1991-2001 6 Isl. banks 15 conv. banks Bahrain</td>
<td>PROFITABILITY RATIOS ROA return on assets; ROE return on equity; COSR cost to income ratio. LIQUIDITY RATIOS NetLTA net laons / total assets; LdSAF liquid asset to deposit and ST funds; LDBG net loans/total deposit. CREDIT RISK RATIOS EQTA equity to asset ratio; EQL equity /net loan; IMLGL non performing loans/gross loans.</td>
<td>t-test for equality of means.</td>
<td>NetLTA</td>
<td>-</td>
</tr>
<tr>
<td>Source</td>
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<tr>
<td>Rosly and Bakar (2003)</td>
<td>1996-1999</td>
<td>Malaysia</td>
<td>ROA return on assets; ROD return on deposits; PM net profit to operating income; AU asset utilisation; NOM net operating margin; OER operating efficiency ratio</td>
<td>t-test for equality of means</td>
<td>ROA is significantly higher for Islamic banks. PM is significantly higher for Islamic banks.</td>
</tr>
<tr>
<td>Samad and Hassan (2000)</td>
<td>1984-1997</td>
<td>Malaysia</td>
<td>PROFITABILITY RATIOS ROA return on assets; ROE return on equity; PER profit expense ratio</td>
<td>t-test for equality of means</td>
<td>PER is significantly lower for Islamic banks. DTAR is significantly lower for Islamic banks.</td>
</tr>
<tr>
<td>Metwally (1997)</td>
<td>1992-1994</td>
<td>Malaysia</td>
<td>LIQUIDITY RATIOS CD cash /deposits LEVERAGE RATIOS DA total deposits /total assets; EA equity capital and reserve to asset CREDIT RISK RATIOS RL funds channelled to direct investments /loan-able funds; DL loans used to finance durable /total loans; PL personal loans /total loans PROFITABILITY RATIOS YA gross income /total assets; PD average return /deposits EFFICIENCY RATIOS XA operating expenses / total assets Logit model Probit model Discriminant analysis</td>
<td>Logit and Probit model Discriminant analysis</td>
<td>The higher the EA, the higher the probability that the bank is an Islamic one. The lower the DA, the more likelihood that the bank is an Islamic one. Discriminant analysis DA is the third in importance as predictor while the EA is the fifth one.</td>
</tr>
<tr>
<td>Iqbal (2001)</td>
<td>1990-1998</td>
<td>Malaysia</td>
<td>CAPITAL ASSET RATIO LIQUIDITY RATIO CD cash and accounts with banks to total deposits DEPLOYMENT RATIO total investment to total equity and total deposits COST/INCOME RATIO PROFITABILITY RATIO ROA, ROE.</td>
<td>Comparison of the variable’s means</td>
<td>Capital to asset ratio is higher for Islamic banks. ROE and ROA are higher for Islamic banks.</td>
</tr>
</tbody>
</table>


total deposits to assets ratio, the more likelihood that the bank is an Islamic one. He suggests also that the higher is capital to asset ratio, the higher the probability that the bank is an Islamic one. Metwally (1997) shows also that total capital to asset ratio is a good discriminator between Islamic and conventional banks. Iqbal (2001) argues that capital to asset ratio is higher for Islamic banks. Samad and Hassan (2000) reveal that Islamic banks have lower debt to asset ratio compared to conventional banks in Malaysia.

The majority of previous studies report also that Islamic banks achieve higher records of profitability compared to conventional banks. (Olson and Zoubi 2008) confirm that Islamic banks in GCC countries are more profitable and therefore reward shareholders with higher returns than conventional banks. Samad & Hassan (2000) report similarly that Islamic banks outperform conventional banks in Malaysia. Hassoune (2002) shows also that Islamic banks are more profitable than conventional peers with the same balance sheet structure. Iqbal (2001) finds that Islamic banks are doing fairly well compared to a benchmark sample of conventional banks. The study conducted by Rosly and Bakar (2003) shows also a higher value for return on asset and profit margin than conventional banks in Malaysia. However, Metwally (1997) and Ahmed & Hassan (2007) reported different results. The work by Metwally (1997) finds that Islamic banks do not seem to differ much in terms of the ratios of gross income to assets and the return on deposits. Both Islamic banks and conventional banks offer their depositors similar returns. (Olson and Zoubi 2008) argue that the profit sharing principle of the saving deposits depends on future profits but the expected returns are similar to those of conventional saving deposits of the same maturity. Ahmed and Hassan (2007) show also that both types of banks have almost similar return on equity and return on asset in Bangladesh.

Previous studies have been conducted to analyze factors that influence bank’s profitability and capital structure. No empirical research has focused on the determinants of Islamic banks capital structure. However, numerous studies on capital structure theory and determinants of conventional bank leverage have appeared. The empirical studies literature suggest a large set of variables that may influence the financial structure of conventional banks such as age, size, profitability, growth, risk, tax and earning volatility etc. A recent study of Caglayan and Sak (2010) examine the capital structure of Turkish banks during 1992-2007. They found that profitability and tangibility have a negative effect on leverage. However, the size and market to book have a positive effect on leverage. Gropp and Heider (2010) examine also the determinants of capital structure of US and European banks. Their study reveals a negative effect of profitability and dividends and a positive effect of bank size, market to book and collateral on leverage of American banks. Their funding proved also the same results for the European banks except for the market to book variable which has a negative impact on leverage. For all banks, the effect of tangibility variable is ambiguous. In general, fewer studies are published focusing on the theories of bank capital structure comparing to those focusing on non-financial firms (e.g. Diamond and Rajan (2000), Barrios and Blanco (2003)). Banks are generally excluded from samples of studies interested to firm’s capital structure because the nature of their debts is different from those of non-financial firms.

In the same way, the determinants of bank’s profitability have long been also a major focus of banking research. Previous empirical studies examine the relationship between the performance of Islamic and conventional banks and a set of internal and external banking characteristics. Srairi (2008) investigates the determinants of Islamic and conventional commercial banks in GCC countries over the period 1999-2006. The study reveals a negative
(insignificant) effect of liquid assets held by the Islamic (conventional) banks on profitability. This result is in line with results of Chong and Liu (2009) and Olson and Zoubi (2008) and confirms that Islamic banks hold more cash relative to assets or deposits, thus the liquidity surplus affects negatively the bank profitability. The study shows also that financial risk measured by total liabilities to asset affects positively (insignificantly) the Islamic (conventional) banks return on average assets. This funding reveals the importance of leverage in the practice of Islamic banks and is in line with results of Olson and Zoubi (2008) that equity multiplier (Asset/equity) is larger for Islamic banks. The author finds also that good economical conditions and larger stock market relative to the banking sector have positive effect on profitability. Finally, the study suggests a negative and unimportant effect of size on profitability of Islamic and conventional banks. Sanusi and Ismail (2005) proceed also to a panel data analysis of the determinants of 25 Malaysian Islamic bank returns between 1995 and 2004. The authors argue that high total liabilities to asset will increase bank profits suggesting that higher leverage lead to higher profitability. Their results reveal also that growth is negatively significant in affecting the banks profit. The negative relationship implies that big size of total assets tends to be associated with less profitability in Islamic banks. The study shows also a negative effect of the ratio of non-interest income over total assets on bank profits. Bashir and Hassan (2003) examine also the performance indicators of Islamic banks worldwide during 1994-2001. They find that good economical conditions, leverage and loans to assets ratio are positively related to profitability. Bashir (2003) studies the factors influencing the Islamic banks profitability in eight countries (Bahrain, Kuwait, Qatar, UAE, Jordan, Egypt, Turkey and Soudan) over 1993-1998. The author shows that profitability in Islamic banks responds positively to the increases in capital, increases in loan ratios and good economical conditions. The results revealed that larger equity to total asset ratio, larger loan to asset ratio and higher GDP lead to higher profit margins. The study indicates also the importance of consumer and short-term funding, non-interest earning assets, and overheads in promoting bank’s profits. Also, foreign ownership seems to have contributed significantly to Islamic bank’s profitability. The results suggest also that the tax factors are much more important in the determination of bank performance. The negative and statistically significant effects of taxes indicate that financial repression is distorting the performance of Islamic banks. The study reports also the negative effect of the reserve ratio which reveals the opportunity cost of holding reserves. Sudin (1996) analyses also how bank characteristics and the overall financial environment affect the performance of the Islamic banks across eight Middle Eastern countries between 1993 and 1998. The study confirms that interest rate inflation and size have significant positive impact on the profits of Islamic banks. With regard to the market share, the author confirms a negative impact on profitability although conventional banking theory postulates that the bigger the market, the more profit of banks. Empirical results of studies focusing on determinants of bank’s profitability vary across countries because Islamic and conventional banks have to deal with different macroeconomic environments, legal and regulatory environments, deposits insurance regimes, financial market conditions and different tax policies (Dermirguc-Kunt and Huizinga, 1999).

The aim of our study is to distinguish between the Islamic and conventional banks with particular focus on leverage and profitability. Our motivation is that traditionally the conventional banking industry is based on the concept of high leverage. The leverage effect is very characteristic for the bank, known also under the title of leverage multiplier. It measures the degree in which the attraction and using of new resources conduct to an increase of capital profitability. The indicator illustrates how many time bank successes to multiply the invested capital by resources attraction. The leverage multiplier illustrates the fact that involving of new resources is efficient for the bank, respectively when the resources cost is lower than the
return costs. It is interesting to analyze leverage and profitability at Islamic banks since the principle governing the associated liabilities side structure is different. Our study tests that there are differences between Islamic and conventional banks with particular focus on their financial characteristics such as leverage and profitability ratios. The hypotheses to be tested:

**H1**: there are differences between Islamic and conventional banks with particular focus on their financial leverage characteristics and their profitability.

According to previous empirical studies on determinants of banks capital structure we presented above, size and profitability were found to have respectively a positive and negative effect on leverage. So, larger banks tend to have more leverage and the more profitable banks tend to hold significantly more capital and less leverage. According to the pecking order theory (Myers and Majluf, 1984), firms prefer using internal sources of financing first, then debt and finally external equity obtained by stock issues. All things being equal, the more profitable the firms are, the more internal financing they will have, which means lower debt levels and higher retained earnings, and therefore we should expect a negative relationship between leverage and profitability. In the trade-off theory and according to the interest-tax shield, an opposite conclusion is expected. When firms are profitable, they should employ more debt to benefit from the tax shield. In addition, if past profitability is a good proxy for future profitability, profitable firms can borrow more as the probability of paying back the loans is greater. Hence, a positive relationship between leverage and profitability will support the trade-off theory, whereas a negative relationship will support the pecking order theory.

The trade-off theory states also a positive relation between size and leverage, since larger firms have been shown to have lower bankruptcy risk and relatively lower bankruptcy cost. In addition, large firms have lower agency costs of debt; relatively smaller monitoring costs, less volatile cash flows, easier access to credit market, and require more debt to fully benefit from the tax shield. Dividend also is also recognized to have a negative effect on leverage. Financial firms which pay dividends have on average a lower level of leverage. The pecking order theory suggests that as dividends provide good signals about the firm’s future prospects, the firm will issue more equity as there is less information asymmetry in the equity market. The difference in leverage consequently between Islamic and conventional banks may be explained by the difference in size, profitability and dividend policy. We test so the following hypotheses:

**H2**: the difference in profitability between Islamic and conventional banks makes the difference in leverage between the two types of banks.

**H3**: the difference in size between Islamic and conventional banks makes the difference in leverage between the two types of banks.

**H4**: the difference in dividend policy between Islamic and conventional banks makes the difference in leverage between the two types of banks.

According to previous empirical studies on determinants of banks profitability we presented above, size and leverage were found to have an effect on profitability. Bashir & Hassan (2003) and Bashir (2003) found that leverage affects negatively the profitability of the Islamic banks. However, Srairi (2008) and Sanusi & Ismail (2005) show different results which is
more profitable Islamic banks rely on greater levels of debt than less profitable ones. This result supports normally the trade off theory. Results about the effect of size are different also. Srairi (2008) and Sanusi & Ismail (2005) suggest a negative effect and Sudin (1996) reports a positive effect. Under our research, we test so the following hypotheses:

**H5:** the difference in leverage between Islamic and conventional banks makes the difference in the profitability between the two types of banks.

**H6:** the difference in size between Islamic and conventional banks explains the difference in the profitability between the two types of banks.

The majority of comparative studies reviewed focused on Islamic banking industry in a single country and fewer are studies which cover the banking sector in a panel of countries where Islamic banks are implemented. Kader and Asarpota (2007) compare Islamic and conventional banks in UAE over the period 2000-2004. Samad (2004) analyse the case of Bahrain over the period 1991-2001. Rosly & Bakar (2003) and Samad & Hassan (2000) proceed to comparative analysis in Malaysia. Ahmed and Hassan (2007) compare banks in Bangladesh. However, Olson and Zoubi (2008) and Zrairi (2008) extend their research to more than one country and provide a comparison of both types of banks in GCC region. We extend our comparative analysis to 18 countries including Asian, European and North African ones.

3. Models formulation

We used the binary logistic regression and the discriminant analysis to investigate whether Islamic and conventional banks can be distinguished from one another on the basis of their financial characteristics: leverage and profitability. Our aim is to identify the variables (predictors) that help to discriminate between a given groups. The dependant variable for each method is the type of the bank Y where Y=1 if the bank is Islamic and Y= 0 if the bank is conventional.

3.1 Logistic regression

Logistic regression assumes that a logistic relationship exists between the probability of group membership and one or more predictor variables. We use a binary logistic regression since the dependent variable, bank type, is classified into two groups (Islamic and conventional banks). The technique is described in detail by (Morgan, Vaske et al. 2003; Worth and Cronin 2003). A binary logistic regression model selects the n statistically significant variables \( X_j \) (financial ratios) that help to distinguish between the two categories of banks. At each observation, the logit probabilities are represented by:

\[
\ln[P_i/(1-P_i)] = \alpha + \sum_{j=1}^{n} \beta_j X_j + \epsilon_i
\]  

(1)

Where \( (P_i) \) is the probability that a given bank is belonging to group 1 (Islamic banks); \( (1- P_i) \) is the probability that a given bank is belonging to group 0 (conventional banks); \( P_i/(1-P_i) \) is the odds ratio; \( \ln[P_i/(1-P_i)] \) is the logit transform of \( P_i \); \( \alpha \) is the constant; \( \beta_j \) is the coefficients of the \( n^{th} \) predictor variable in the estimated logit model and \( X_j \) is the independent variable or a predictor variable. In our study, \( X_j \) are the financial ratios.
3.2 Discriminant analysis

Discriminant function analysis is also used to determine which variables are the best predictors to discriminate between two groups (Islamic and conventional banks) and to derive classification models for predicting the group membership of new observations. Discriminant analysis is also a technique for classifying a set of observations into predefined classes. The purpose is to determine the class of an observation based on a set of variables known as predictors or input variables. The model is built based on a set of observations for which the classes are known. This set of observations is sometimes referred to as the training set. The technique is described in detail by (Morgan, Vaske et al. 2003; Worth and Cronin 2003). Based on the training set, the technique constructs a set of linear functions of the predictors, known as discriminant functions, such that:

\[ L = \alpha + \sum_{j=1}^{n} \beta_j X_j + c \]  

Where \( \beta_j \) is the regression coefficient for \( n \) variables; \( X_j \) is the input variable or predictor and \( \alpha \) is the constant.

4. Data and empirical specifications

4.1 Data

High explanatory variables were used. Data on Islamic and conventional banks were drawn from the Thomson-one database for the period 2004-2008 resulting in a panel of 545 observations. The resulting sample only considers full-fledged Islamic banks and 18 countries are considered in our research. As shown in table 2, we collected 250 observations, or bank year of data, for Islamic banks and 295 for conventional ones. Our sample contains 109 banks (50 Islamic and 59 conventional). The sample distribution of banks for various parts of the world under study is described on table 2 and graph 1.

<table>
<thead>
<tr>
<th></th>
<th>Islamic Banks</th>
<th>Conventional banks</th>
<th>Total number of Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle East</td>
<td>28</td>
<td>36</td>
<td>64</td>
</tr>
<tr>
<td>South Asia</td>
<td>14</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>North Africa</td>
<td>6</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Europe</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Total number of Banks</td>
<td>50</td>
<td>59</td>
<td>109</td>
</tr>
<tr>
<td>Total Obs.</td>
<td>250</td>
<td>295</td>
<td>545</td>
</tr>
</tbody>
</table>

*Table 2: Sampled banks by region and type*

*Middle East: Iran, Egypt, Qatar, Turkey, UAE, Bahrain, Kingdom of Saudi Arabia, Kuwait, Jordan*

*South Asia: Pakistan, India, Thailand, Brunei, Malaysia, Indonesia*

*Europe: UK*

*North Africa: Tunisia, Sudan*
4.2 Variables and Financial ratios

The profitability ratios are the basic bank financial ratios which focus on how well a business is performing in terms of profit. The difference in leverage between Islamic and conventional banks may be explained by the difference in profitability (Caglayan and Sak, 2010; Gropp and Heider, 2010). We consider the following profitability ratios.

- **Return on equity ROE** is the most significant indicator for profit and measures how much a bank earns within a specific period in relation to the amount that is invested in its common stock.

- **The return on asset ROA** shows how profitable a bank’s assets are in generating revenue.

The Return on Equity ROE and the Return on Asset ROA are the most used ratios to compare the profitability of Islamic and conventional banks in the previous empirical studies (Olson and Zoubi, 2008; Kader and Asarpota 2007; Samad, 2004; Rosly and Bakar, 2003; Samad and Hassan, 2000; Iqbal, 2001).

- **The net margin ratio NETMAR.** Olson & Zoubi (2008) and Rosly & Bakar (2003) used this ratio to compare Islamic and conventional banks.

- We consider also the **dividend payout ratio DIVPAY** which measures the percentage of earnings paid to shareholders in dividends. Gropp and Heider (2010) reveal that dividend policy determines the level of leverage in banks.

For all these profitability ratios, having a higher value relative to a competitor’s ratio is an indicative that the bank is doing well.

Our research considers in addition leverage ratios to compare the capital structure of Islamic and conventional banks. Leverage ratios describe the degree to which the firm uses debt in its capital structure. They are used to calculate the financial leverage of a bank to get an idea of methods of financing or to measure its ability to meet financial obligations. There are several different ratios, but the main factors looked at include debt, shareholder’s equity, capital and assets.

- Our research considers **Total debt to equity ratio DEBEQ and long-term debt to equity ratio LTDEBEQ** to compare the two types of banks as Olson and Zoubi (2008) and Samad and Hassan (2000). These are financial ratios indicating the relative proportion of shareholders’ equity and debt used to finance a bank's assets and it indicates how
much a bank is leveraged. It is important to realize that if the ratio is smaller than one, assets are primarily financed through equity.

Our research considers also the debt to asset ratio \( \text{DEBASS} \) to show the proportion of a bank's assets which are financed through debt. Olson and Zoubi, (2008), Kader and Asarpota (2007), Samad and Hassan (2000) and Metwally (1997) used this ratio to distinguish between Islamic and conventional ones. The difference in profitability between Islamic and conventional banks may be explained by the difference in leverage. Sanusi & Ismail (2005) and Srairi (2008) reveal that Debt to assets ratio affects positively the return on asset of Islamic banks. Bashir & Hassan (2003) and Bashir (2003) found that leverage affects negatively the profitability of the Islamic banks.

We consider finally the variable \( \text{SIZE} \). The previous empirical studies reviewed show that size is a determinant of profitability and leverage in banks (Caglayan and Sak, 2010; Gropp and Heider, 2010; Srairi, 2008; Sanusi & Ismail, 2005). Consequently, the difference in size between Islamic and conventional banks may explain the difference in leverage and profitability.

Table 3 provides a summary of the variables used in this research.

<table>
<thead>
<tr>
<th>Table 3: Definitions of variables</th>
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<tr>
<td>1.  ROE: return on Equity = net income/shareholder’s equity</td>
</tr>
<tr>
<td>2.  ROA: return on Asset = net income/total assets</td>
</tr>
<tr>
<td>3.  NETMAR: net margin = net profit/revenue</td>
</tr>
<tr>
<td>4.  DIVPAY: Dividend payout = Dividends/Net Income</td>
</tr>
<tr>
<td>5.  DEBEQU: Total Debt to common Equity*</td>
</tr>
<tr>
<td>6.  LTDEBEQU: long term Debt to common Equity**</td>
</tr>
<tr>
<td>7.  DEBASS: total Debt to total Asset</td>
</tr>
<tr>
<td>8.  SIZE :ln (total asset)</td>
</tr>
</tbody>
</table>

*For Islamic banks, Profit Sharing Investment Accounts are included in Debt, Debt = Liabilities + Unrestricted Investment Accounts.

5. **Empirical results and interpretation**

To begin the investigation of whether Islamic and conventional banks can be distinguished from one another on the basis of leverage and profitability characteristics and determinants, the table 3 shows the descriptive statistics of different variables for both types of banks. The last column of the table shows the results of the t-test for equality of means between the Islamic and conventional group of banks for each of the 8 variables.

Overall, 6 variables have means that are statistically different between the two types of banks. The mean values for the following variables: DIVPAY, LTDEBEQ, DEBASS and SIZE are significantly different at 1% level between the two types of banks, while the mean value of NETMAR and DEBEQ is significantly different at 5% level. For the rest of ratios (ROE, ROA), the difference is not significant.

The measures of profitability ROA and ROE indicate that there exist no consistently significant differences in profitability levels across conventional and Islamic banks. Based on
these simple descriptive statistics, results confirm that Islamic banks are slightly more profitable than conventional banks. On average, the ROA of 2.26% for Islamic banks is relatively higher than ROA for conventional banks (2.01%). This result is in line with results of Samad and Hassan (2000), Samad (2004) and Olson and Zoubi (2008). The results show also return on equity is slightly higher for Islamic banks (15.45%) compared to 15.41% for conventional ones. This result is in line with those reported by Olson and Zoubi (2008) and Iqbla (2001).

Table 3: Descriptive statistics of group, t-test of equality of means

The table presents descriptive statistics for the variables used in our estimation. The data are collected by the researcher from the Thomson one database. The sample contains 109 banks (50 Islamic and 59 conventional) for the Period 2004-2008. ROE is the return on equity defined as the net income to shareholders’ equity. ROA is the return on asset defined as the net income to total asset. NETMAR is the net margin defined as the net profit to revenue. DIVPAY is the dividend payout defined as total dividend to net income. DEBEQ is defined as the total debt to total equity. LTDEBEQ is defined as the long term debt to common equity. DEBASS is defined as the total debt to total asset. SIZE is the firm size defined as the natural logarithm of total assets.

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th>Std Deviation</th>
<th>t-test for equality of means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conv. Bk</td>
<td>Isl. Bk</td>
<td>Conv. Bk</td>
</tr>
<tr>
<td>ROE</td>
<td>15.41</td>
<td>15.45</td>
<td>22.64</td>
</tr>
<tr>
<td>ROA</td>
<td>2.01</td>
<td>2.26</td>
<td>2.54</td>
</tr>
<tr>
<td>NETMAR</td>
<td>23.05</td>
<td>12.83</td>
<td>26.20</td>
</tr>
<tr>
<td>DIVPAY</td>
<td>24.64</td>
<td>15.73</td>
<td>47.44</td>
</tr>
<tr>
<td>DEBEQ</td>
<td>11.48</td>
<td>7.83</td>
<td>11.11</td>
</tr>
<tr>
<td>LTDEBEQ</td>
<td>65.27</td>
<td>28.35</td>
<td>100.29</td>
</tr>
<tr>
<td>DEBASS</td>
<td>88.37</td>
<td>82.77</td>
<td>9.02</td>
</tr>
<tr>
<td>SIZE</td>
<td>9.02</td>
<td>7.95</td>
<td>3.21</td>
</tr>
</tbody>
</table>

The t-test for equality of means is based on the mean for Islamic banks minus that of conventional banks for each financial ratio. The test is calculated assuming unequal sample variances.

<sup>a</sup> denotes significance at the 1% level.
<sup>b</sup> denotes significance at the 5% level.

The net margin ratio NETMAR is significantly smaller at 5% for Islamic banks. These results are not in line with those reported by previous works. Olson and Zoubi reveal that net margin is than twice as large for Islamic banks relative to conventional banks in GCC countries. The same result is reported by Rosly and Bakar (2003) in Malaysia.

The dividend payout of 24.64% for conventional banks versus 15.73% for Islamic banks is also significantly larger at 1%. Conventional banks pay higher percentage of earnings to shareholders in dividends. A low dividend payout ratio for Islamic banks can indicate a fast growing bank whose shareholders willingly forego cash dividends, because the bank uses the extra money to generate higher returns and, in turn, a high stock price. A lower dividend payout for Islamic banks can be also a sign that Islamic banks practice returns smoothing on investments accounts by transferring a proportion of shareholders returns to investment account depositors. A higher dividend payout for conventional banks can also point to mature banks comparing to Islamic ones.
With regard to leverage ratios, the comparative analysis allows us to conclusively confirm the hypothesis that leverage at Islamic banks is significantly different from conventional banks. Leverage ratios are significantly at 1% level.

Debt to equity ratio (DEBEQ) is significantly smaller at the 1% level for Islamic banks because of the greater reliance upon shareholders capital in Islamic banks. DEBEQ averages annually 7.8 times for Islamic banks versus 11.48 times for conventional banks. Kader and Asporta (2007) suggest the same result. Compared to Islamic banks, the assets in conventional banks are mainly financed with debt. However, the equity provides the majority of the financing in Islamic banks. A lower ‘debt to equity’ ratio reveals that Islamic banks are less risky compared to conventional ones and indicate the bank capacity of absorbing financial shocks. This result is not in line with finding of Olson and Zoubi (2008) that found a higher value of this ratio.

The significant lower debt to asset DEBASS ratio confirms the result above. Kader & Asporta (2007) and Samad and Hassan (2000) find the same result. The ratio DEBASS averages 82.77% in Islamic banks versus 88.37% in conventional ones. This result is not in line with the finding of Olson and Zoubi (2008).

Long term debt to equity ratio (LTDEBEQ) ratio, with average 65% for conventional banks, is significantly smaller for Islamic ones (28.35%) at 1% level.

Finally, with regard to SIZE, Islamic banks are significantly smaller than conventional ones at 1% level.

We run also a binary logistic regression using the 8 variables for all 545 observations, in order to explore profitability and capital structure determinant’s that help to distinguish between the two categories of banks. The best explanatory model was selected using a stepwise logit contained in the SPSS software. An exhaustive search was performed across all combinations of variables to select the n statistically significant ratios or variables. The dependent variable to be predicted is a categorical variable (Islamic or not) taking the value of one for an Islamic bank and zero for a conventional bank.

The results of the logit model led to the following explanatory model:

\[ \ln \left( \frac{P_i}{1-P_i} \right) = 5.869 - 0.008 \text{NETMAR} - 0.003 \text{LTDEBEQ} - 0.057 \text{DEBASS} -0.095 \text{SIZE} + \epsilon \]

These results are consistent with hypothesis that there are differences in capital structure and profitability between Islamic and conventional banks. According to this regression, the net margin, long term debt to equity ratio, debt to asset ratio, and size are statistically significant and carry a negative sign. These results suggest that the lower are these ratios, the more the likelihood that the bank is an Islamic one.

The negative sign of size shows that the lower the size of the bank, the more likelihood that the bank is an Islamic one. The size, as a determinant of leverage and profitability, may explain the difference in levels of these financial characteristics between Islamic and conventional one.

In addition, our results reveal that the lower the size and the lower debt to asset ratio, the more the probability that the bank operate under Islamic principles. Consistent with previous research, smaller banks (Islamic ones) tend to have lower leverage (Caglayan and Sak, 2010; Gropp and heider, 2010). Hence, our results support the trade off theory. Based on the capital structure theory, the trade-off theory states a positive relationship between size and leverage,
since larger firms have been shown to have lower bankruptcy risk and relatively lower bankruptcy cost.

The negative sign of net margin NETMAR ratio reflects also the small size of Islamic banks. Small-sized banks usually try to grow faster even at the expense of their profitability. Islamic banking is a new industry and the newly established Islamic banks are not particularly profitable in their first years of operation since these institutions place greater emphasis on increasing their market share and the volume of their assets rather than on improving profitability. This result reflects also the evidence that intensification of competition in the banking sector should reduce margins of Islamic banks as shown by previous studies (Saunders and Schumacher 2000; Maudos and Fernández de Guevara 2004; Claeys and Vander Vennet 2008; Hawtrey and Liang 2008; Naceur and Omran 2010). Meanwhile, Islamic banks rely heavily on activities based on trade financing contracts (Murabaha², Ijara³, etc.), commonly referred to as ‘cost-plus financing’ or ‘mark-up financing’ (El-Hawary, Grais et al. 2007). In Murabaha contracts for example, the mark up price is fixed for the duration of the contract, while the benchmark rate may change. In cases where the prevailing mark up rate increases beyond the benchmark rate, the Islamic bank is unable to benefit from the increased rates like in conventional banks. Other reasons may explain our result. Islamic banks are known for having limited investment opportunities. Consequently, although Islamic banks are able to expand their market share, they are still unable to convert funds into earning assets. Secondly, these institutions tend to concentrate on short-term financing and this type of investment generates theoretically less income.

In addition, our results reveal that the lower the net margin and the lower debt to asset ratio, the more the probability that the bank is an Islamic one. If we consider the net margin as a proxy of the profitability, our results support the trade off theory. In fact, based on the capital structure theory, the trade-off theory suggests a positive relationship between profitability and leverage.

The negative sign of debt to asset ratio reflects higher capital and lower leverage at Islamic banks. This result suggests that Islamic banks are more protected against asset’s losses more than conventional banks and reflects a better shock absorbing capacity. The lower value of this ratio reveals that Islamic banks have a greater capacity to sustain the assets losses. The same result is reported by Metwally (1997), Samad and Hassan (1999), Samad (2004), Olson and Zoubi (2008). In the event of a crisis, the lower the leverage ratio, the lower is the probability that a bank will fail to pay back its debt. This result can reveal also one of the financial reporting practices of Islamic banks concerning the accounting treatment of the profit sharing investment accounts PSIA. The lower debt to equity ratio for Islamic banks can be explained by the treatment of PSIAs as ‘off balance sheet funds’ by several Islamic banks. PSIs may be either restricted or unrestricted. Restricted PSIAs are normally treated by Islamic banks as ‘off balance sheet funds under management’. However, Unrestricted PSIAs are normally reported on the balance sheet but that could not be the case because of the lack of accounting standards concerning the PSIAs in some countries. The reason is that these special accounts do not meet the legal definition of deposits.

We can explain the negative coefficient also from a regulatory view. In its pure form in which regulation constitutes the overriding departure from the Modigliani and Miller irrelevance proposition, a regulator could force riskier banks to hold more book equity. In fact, in the majority of countries where Islamic banks are implemented (e.g. Qatar, Malaysia, Uk, Tunisia

² An Islamic bank buys an asset on behalf of its client and then sells the same asset to its client after adding a mark-up to the purchase price.
³ Leasing
etc.), the supervision authority takes the view that Islamic banks should not allow PSIA depositors to suffer a loss of their capital or a major fall in their returns, so Islamic banks have a constructive obligation to insure these investment accounts. Thus, instead of being voluntary, the practice becomes obligatory and PSIA being regarded as virtually certain capital (Fiennes 2007). Hence, the greater the volume the profit sharing investment accounts, the more equity the Islamic bank will hold to absorb the eventual losses. This result may be explained also by the greater proportion of reserves as component of the Islamic bank’s capital in comparison with conventional ones. In fact, since PSIA deposits are assimilated as equity and accordingly their nominal values are not guaranteed, Islamic banks hold additional and special reserves to cater with risks associated with the PSIA deposits like withdrawal risk, displaced commercial risk, etc. (Archer and Karim 2006; Sundararajan 2008; Archer and Karim 2009). AAOIFI’s Statement on the Purpose and Calculation of the Capital Adequacy Ratio for Islamic Banks takes into consideration what it terms “displaced commercial risk.” The Statement states that an Islamic bank is liable to find itself under commercial pressure to pay a rate of return to its profit sharing investment account holders which is sufficient to induce those investors to maintain their funds with the bank, rather than withdrawing them and investing them elsewhere (Karim 2001). According to the asymmetric information in unrestricted contracts, such as Mudarabah, adequate reserves provide depositors with a psychological reassurance to help maintain their confidence against possible loss on the performance of banks (Makiyan 2008). A recent study of Olson and Zoubi (2008) reflects smaller reserves for loan losses in Islamic banks.

The results reveal also that the lower the long term debt to equity, the more likelihood the bank is an Islamic one. Generally, this lower LTDEBEQU can be explained partially by the short term maturity of customer’s deposits, especially PSIAs mobilized by Islamic banks. This lower ratio may reflect also the low level of issuance of long term Islamic bonds “Sukuk” by Islamic banks. As conventional bonds, Sukuk provides banks with access to financing and liquidity. The Sukuk are like Asset Backed Securities (ABS) in conventional finance. The issuance of Sukuk by Islamic banks remains relatively less significant than the issuance of bonds by conventional ones in spite of the big success which knows the issuance of Sukuk these last years.

The reminder of variables is not statistically significant according to logit model. This result reveals that no difference exists between the two types of banks with respect to financial characteristics represented by ROE, ROA, DIVPAY and DEBEQ.

As the binary logistic regression, Discriminant function analysis is also used to determine which variables are the best predictors to discriminate between Islamic and conventional banks. The dependent variable to be predicted is a categorical variable (Islamic or not) taking the value of one for an Islamic bank and zero for a conventional bank. The independent variables were the 8 defined variables.

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6 Mudaraba is a partnership investment whereby one party provides capital (investor/depositor) and the other party manage the funds (fund manager/Mudarib /Islamic bank). PSIA are remunerated, not on the basis of a predetermined interest rate. In fact, under the Mudaraba contracts that typically govern the PSIA, the profits are shared in a pre-agreed ratio between the Islamic bank and the PSIA depositors. Losses arising from assets financed by PSIA funds are to be borne by the depositors except in the case of misconduct, negligence or breach of contracted terms by the Islamic bank (Shariah standard 13, AAOIFI 2008)
The pooled within groups correlation matrix indicates low correlations between the predictors. Hence, there is no several problem of multi-collinearity.

Table 4: pooled within groups correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>ROE</th>
<th>ROA</th>
<th>DIVPAY</th>
<th>NETMAR</th>
<th>DEBEQ</th>
<th>LTDEBEQ</th>
<th>DEBASS</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>.262</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIVPAY</td>
<td>.092</td>
<td>.122</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NETMAR</td>
<td>.097</td>
<td>.351</td>
<td>.113</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEBEQ</td>
<td>-.047</td>
<td>-.043</td>
<td>-.056</td>
<td>-.037</td>
<td>1,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LTDEBEQ</td>
<td>-.047</td>
<td>-.066</td>
<td>-.040</td>
<td>-.039</td>
<td>-.049</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEBASS</td>
<td>.081</td>
<td>-.315</td>
<td>-.028</td>
<td>.173</td>
<td>.114</td>
<td>.131</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-.007</td>
<td>-.093</td>
<td>.077</td>
<td>.035</td>
<td>.043</td>
<td>.123</td>
<td>.154</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Table 5 provides an index of the importance of each predictor like the standardized regression coefficients did in multiple regression. The larger the standardized coefficient, the greater is the contribution of the respective variable to discriminate between Islamic and conventional banks.

Table 5: the standardized canonical discriminant function coefficients

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>-.099</td>
</tr>
<tr>
<td>ROA</td>
<td>.015</td>
</tr>
<tr>
<td>DIVPAY</td>
<td>.254</td>
</tr>
<tr>
<td>NETMAR</td>
<td>.120</td>
</tr>
<tr>
<td>DEBEQ</td>
<td>.259</td>
</tr>
<tr>
<td>LTDEBEQ</td>
<td>.391</td>
</tr>
<tr>
<td>DEBASS</td>
<td>.578</td>
</tr>
<tr>
<td>SIZE</td>
<td>.408</td>
</tr>
</tbody>
</table>

Debt to asset ratio DEBASS was the strongest predictor in discriminating the two types of banks while SIZE was next in importance as a predictor. These two ratios are followed by the ratios of long term debt to equity ratio LTDEBEQ, debt to equity ratio DEBEQ, Dividend payout DIVPAY and the net margin ratio NETMAR. Like the binary logistic regression, the results of the discriminant analysis confirm moreover that financial ratios can be used to discriminate between Islamic and conventional banks. These results confirm furthermore the first hypothesis that there are structural differences in terms of profitability and leverage between two types of banks.

In addition, both the regression and discriminant analysis suggest that Islamic and conventional banks don’t seem to differ much in terms of the profitability ratios ROE and ROA. This result is also in line with those of t-test of equality of means.
6. Conclusion

A number of studies have tried to compare predictive performance and relative efficiencies of the two statistical techniques used in this paper such as binary logistic regression and discriminant analysis. This is not the aim of this study. The paper has attempted to find out if there are structural differences between conventional and Islamic banks using these two predictive models and to develop the reasons of these differences. In our approach, we used financial characteristics as leverage and profitability to discriminate between the two types of banks. Over the period 2004-2008, we built a sample of Islamic and conventional banks across 18 different countries.

T-test of equality of means, binary logistic regression and discriminant analysis provide broad evidence on differences in leverage and profitability across Islamic and conventional banks. We confirm consequently the first hypothesis. The empirical results indicate that measures of bank characteristics such as profitability ratios and leverage ratios are good discriminators between Islamic and conventional banks. Such findings are consistent with the literature that financial accounting ratios are useful for classifying firms within the same industry based on financial characteristics.

The examination of the leverage indicators indicates structural differences between the composition of liabilities side of Islamic and conventional banks. Globally, Islamic banks rely more heavily on their equity in financing assets than conventional banks. Larger equity to capital indicates a higher shock absorbing capacity for the Islamic bank. It can withstand more assets losses compared to banks which have less capital. This difference in capital structure can be explained by the difference in size and dividend policy, we confirm so the third and the fourth hypotheses. Our results support the trade off theory that states a positive relation between size and leverage.

The return on equity and the return on asset ratios are not significant according to binary regression and t-test of equality of means and are not good discriminators between two types of banks according to the discriminant analysis. Based on these results, the difference in leverage cannot be explained by the difference in profitability if we consider ROE and ROA. Hence, the second hypothesis is not confirmed. Results show that there are no consistently significant differences in profitability levels across Islamic and conventional banks in terms of return on equity and return on asset. While the Islamic banking industry is attracting a lot of attention, there is no evidence of significant higher returns.

However, net margin indicator reveals some additional differences between Islamic and conventional banks. Islamic banks seem to be less profitable according to this financial ratio. An explanation for this may be also that Islamic banking is a new industry and newly established Islamic banks are not particularly profitable in their first years of operation since these institutions place greater emphasis on increasing their market share and assets rather than on improving profitability. Small-sized banks usually try to grow faster even at the expense of their profitability and this result confirms the sixth hypothesis that the difference in size may explain the difference in profitability. A lower net margin also may be due to the structure of Islamic contracts.

If we consider the net margin as a proxy of the profitability, our results support the trade off theory. Our research reports a positive relationship between profitability and leverage. We confirm so the fifth and the second hypothesis.

As conclusion, we can explain these differences based on the financial theory of capital structure. Moreover, the specific characteristics of Islamic banks as the profit and loss sharing principle governing the investment accounts and the structure of sale contracts contribute in these differences.
No matter, all these differences must be considered to manage the risk of Islamic bank. The most important issue of Islamic banking is the lack of a well-defined regulatory and supervisory framework for these institutions for their effective functioning in line with Islamic principles. Understanding the differences between the two types of banks is the key to build a sound regulatory framework for Islamic banks.

The limitations of our study are the following. We did not include some other determinants in our models (such as tangibility, regulation, market share, liquidity, etc.) that may affect capital structure and profitability. The inclusion of more variables permits us to understand more the differences between Islamic and conventional banks. Furthermore, the time period analysis is relatively short (5 years) and we estimate that our results can be different is a larger time frame is used, especially including the period of the global financial crisis.

References:


