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Islamic versus conventional banks in the GCC countries: A comparative study using classification techniques

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A B S T R A C T

This paper contributes to the empirical literature on Islamic finance by investigating the feature of Islamic and conventional banks in Gulf Cooperation Council (GCC) countries over the period 2003–2010. We use parametric and non-parametric classification models (Linear discriminant analysis, Logistic regression, Tree of classification and Neural network) to examine whether financial ratios can be used to distinguish between Islamic and conventional banks. Univariate results show that Islamic banks are, on average, more profitable, more liquid, better capitalized, and have lower credit risk than conventional banks. We also find that Islamic banks are, on average, less involved in off-balance sheet activities and have more operating leverage than their conventional peers. Results from classification models show that the two types of banks may be differentiated in terms of credit and insolvency risk, operating leverage and off-balance sheet activities, but not in terms

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of profitability and liquidity. More interestingly, we find that the recent global financial crisis has a negative impact on the profitability for both Islamic and conventional banks, but time shifted. Finally, results show that Logit regression obtained slightly higher classification accuracies than other models.

1. Introduction

In recent years, many conventional banks have encountered financial difficulties and failure due to the global financial crisis of 2007–2008. In contrast, Islamic banks have successfully withstood this crisis. In empirical literature, most studies have attributed this success of Islamic banks to their financial regulation guided by *Shariah* principles which prohibits the payment or receipt of interest (*riba*) and encourage risk sharing (see for instance Willison, 2009; Hasan and Dridi, 2010). As a consequence, the attention of academics, policy makers and investors on Islamic banking has been largely increased in the last few years. Actually, there are more than 300 Islamic financial institutions worldwide including banks, mutual funds and insurance firms. In addition, most Western international banks such as Citigroup, HSBC and others have opened Islamic windows. Several factors can explain this rapid growth of interest-free finance, including strong demand for Sharia-compliant products, improvement in the legal and regulatory framework for Islamic finance, growing demand from conventional investors for diversification purposes, and the capacity of the industry to innovate and develop a number of financial instruments that meet the needs of investors (Hasan and Dridi, 2010).

In theory, there are many differences between Islamic and conventional banks. For instance, interest-bearing contracts in conventional banks are replaced in Islamic bank by return-bearing contracts, where the profits and losses as well as risks are shared between the creditor and the borrower. Moreover, Islamic banks collect funds through demand deposits (guaranteed and yield no return) and investment deposits (similar to mutual fund shares and not guaranteed a fixed return). Islamic banks have developed free financing products based on profit and loss sharing (PLS) and markup principles. However, since all banks operate in the same competitive environment and are regulated in the same way in most countries, it is possible that Islamic and conventional banks have similar behavior and hence adopt similar strategies. In fact, several studies show that Islamic banks are not very different from conventional banks in the adoption of PLS principle. Siddiqui (2006) argues that Islamic banks are relying more on markup financing contracts rather than PLS based financing contracts. Chong and Liu (2009) and Khan (2010) find that only a small portion of Islamic banks financing is based on PLS and that Islamic deposits are not interest-free. Bourkhis and Nabi (2013) point out that in most Islamic banks, less than 20% of total assets are dedicated to long term and risk sharing investments. They observe that Islamic banks are mimicking the commercial strategies of their conventional peers and diverging from their theoretical business model.

In parallel to the increased interest in Islamic finance, the literature on Islamic banking has been growing rapidly. The main sizeable body of research has explained the general Islamic principles and the instruments used in Islamic banking (Bashir, 1983; Khan, 1985; Sundararajan and Errico, 2002; Siddiqui, 2006). Recent studies have discussed the management, regulatory and supervisory challenges related to Islamic banking (Murjan and Ruza, 2002; Sole, 2007; Jobst and Andreas, 2007), the efficiency of Islamic banks using frontier analysis approaches such as Data Envelopment Analysis and Stochastic Frontier Analysis (Abdull-Majid et al., 2010; Srairi, 2010; Belanes and Hassiki, 2012), the characteristics and profitability of Islamic Banks (Karim and Ali, 1989; Srairi, 2008; Ben Khediri and Ben-Khedhiri, 2009; Abedifar et al., 2013; Beck et al., 2013), and whether it is possible to distinguish between Islamic and conventional Banks (Metwally, 1997; Iqbal, 2001; Olson and Zoubi, 2008). Another strand of literature has studied the soundness, resilience and financial stability of Islamic banks during the global financial crisis (Cihak and Hesse, 2010; Hasan and Dridi, 2010; Beck et al., 2013; Caby and Boumediene, 2013; Bourkhis and Nabi, 2013).