Capital adequacy implications on Islamic and non-Islamic bank's behavior: Does market power matter?

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Abstract

After each crisis, reforms are carried out to prevent a new episode of financial crises. In this context, our objective in this study is to examine and simultaneously compare the behavior of Islamic and conventional banks in relation to the ratio of the capital adequacy in different competitive circumstances. We used data from 12 MENA and South East Asian countries characterized by the coexistence of Islamic and conventional banks. We concluded that the funding ratio has a significant impact on the behavior of 70 conventional banks and 47 Islamic banks. However, competitive conditions have no significant effect on the relationship between the weighted assets ratio and Islamic bank behavior, which means that this type of banks is applying theoretical models based on the prohibition of the interest.

JEL classification: G21; G28; G32

Keywords: Bank competition; Capital adequacy ratio; Deposits and loans

1. Introduction

Since the early 80s, the number, frequency and size of financial crises have continued to rise. A large number of developed, developing and in transition countries have experienced severe banking crises during the eighties and nineties and recently the 2007/2008 global financial crisis. The interest in the bank failure is caused by the bankruptcy substantial costs. Actually, the consequences of a bank failure are usually very expensive; financial losses for the fund suppliers (shareholders, depositors, and insurers), loss of competitiveness of the banking industry and a destabilization of the financial system as a whole if several individual failures escalate into a banking crisis through contagion mechanisms. The resolution of this type of failure implies a waste of resources, which are particularly scarce in the emerging economies (Honohan, 1997).

The excess risk is the major cause of bank failure. It is the result of inefficient management and control of the bank lending activity. The information asymmetry is the cause of two issues that can affect the level of the credit risk. The first is an ex-ante problem called adverse selection which occurs before the financial transaction takes place. Adverse selection is when the lender is subject to risk from the borrower because of the information he keeps for his own interest. The second is an ex-post problem and also known as moral hazard. This type of problem arises after the granting of the credit. Such problem arises after the credit is granted as a result of the lender's failure to observe the borrower's actions (shares) so as to ensure the proper use of the distributed funds, which, therefore, affects the probability of repayment. Obviously, the level of the information asymmetry, of the adverse selection and of the moral hazard depends on the quantity and the quality of the information flow circulating between the lender and the borrower. This increase of the banking problems on a large
scale has stimulated the interest of the economists and regulators about the stability of the financial system. Supervisors are indeed led to make room for growing internal controls and strengthen their prudential information. This change is due to the fact that an appropriate supervision of institutions is a precondition for the understanding of their risks.

The main objective of this theoretical movement is to analyze the behavior of banks in terms of portfolio choice, which is risk-taking, when the regulator imposes a solvency standard on them. The main challenge of this approach is to provide the basics of an effective prudential regulation that keeps the bank failure risk below a given threshold, which is considered acceptable. Therefore, banks are thus treated as portfolio managers operating on incomplete markets and whose decisions are compelled by prudential regulations.

In this context, there are several studies which demonstrate the impact of the Basel agreements on the lending behavior of conventional banks, whereas the literature on this topic in the Islamic banking sector is still scarce. The study of the minimum capital requirements of Islamic banks is relevant due to the principle of risk and profit sharing that could, in turn, reduce the overall risk incurred by the bank (Pellegrina Dalla, 2007).

The Islamic banking system, mainly the investment loss and profit sharing, foster the investor's participation in equity, which promotes the assiduity in the investment management and proper monitoring. Furthermore, the other Islamic financial mechanisms (such as Murabaha, Ijara and Istisna) require the involvement of investors in the real economy; as a result, financial transactions are fully backed by real assets. This feature enables Islamic banks to have a clearer view on the allocation of funds and reduce their exposure to speculative behavior (Khediri, Charfeddine & Ben Youssef, 2015).

Siddiqui (2006) argues that equity-based Islamic contracts will reduce adverse selection and moral hazard problems, which thereafter, downplays the credit risk of these Islamic financial institutions. Actually, Islamic finance requires information symmetry and transparency in their transactions since Islam prohibits excessive uncertainty (gharar). Moreover, gambling (maysir) is prohibited, which means that excessive risk taking is not allowed. Finally, Cihak and Hesse (2010) argue that more difficult access to liquidity for Islamic banks requires that they should be more selective so that they will not incur a greater risk of moral hazard.

The purpose of our study is to examine and simultaneously compare the performance of loans and deposits of Islamic and conventional banks in relation to the funding ratio and in different competitive conditions. In fact, we tried to identify the role of competitive conditions regarding the relationship between the adequacy of the equity ratio and the banking behavior.

In the literature, there are two opposing theories regarding the impact of competitiveness on banking behavior. The first shows that a competitive market may increase banks’ risk-taking behavior in order to maintain their previous levels of profit (Allen & Gale, 2004; Hellman, Mudock & Stiglitz, 2000). This risky behavior can be noticed either through the rise of the credit risk in the loan portfolio or through the fall of the capital level “buffer” or both simultaneously. These risky policies can lead to an increased level of non-performing loans and subsequently to a great probability of bank failure. However, the second theory postulates that a restricted competitiveness should encourage banks to protect their very high “franchise values” by pursuing security policies that contribute to the stability of the whole banking system. Therefore, according to the paradigm of the “franchise value”, banks limit their risk when they have pensions, i.e. when they have market power. This theory was theoretically and empirically supported in the banking literature.

The originality of our research is to apply the concept of the market power and its impact on the relationship between the capital regulation and the lending and deposit banking behavior. Most of the previous studies examined the effect of information asymmetry on the financial risk and operations in general. Since the competitiveness conditions exert great pressure on the choice of the banking portfolio, we contributed to the literature by highlighting the role of competitiveness in the banking behavior.

Our methodological approach includes, in a first stage, a measure of the market power of Islamic and conventional banks through the Lerner index. Actually, the use of the Lerner index in evaluating the competitiveness of Islamic banking conditions in the MENA and South East Asian region can be considered as a contribution to the Islamic banking literature. Next, we present an empirical analysis that deals with the relationship between capitalization and banking behavior, on the one hand, and the effect of competition on this relationship, on the other hand.

Our paper is organized as follows: Section 2 presents the literature review. Section 3 describes the data and the research methodology. Section 4 contains the results and interpretations. Section 5 includes a robustness check. Finally, Section 6 details our conclusion.

### 2. Review of literature

The academic literature on banking behavior, in accordance with the capital regulation, uses various modeling approaches and considers the regulation of capital in terms of the level of the required capital, the equity ratio, the required capital as a percentage of deposits and loans and specifically of the recent regulation based on the risk-weighted assets. In what follows, we organize this literature depending on the basic approaches of the banking modeling.

#### 2.1. Portfolio approach

One approach to analyze the effects of the bank capital requirements is to consider banks mainly as managers of asset portfolios. From this point of view, the main effect of any system of capital is to adjust the capital level regarding the risk in order to encourage banks to select the desired portfolio strategy.

The seminal work analyzing the impact of capital requirements on the choice of the portfolio are those of...
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