Financial intermediation and monetary transmission through conventional and Islamic channels

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1 Introduction

According to an IMF study by Imam and Kpodar (2010), Islamic banking and finance (IBF) has experienced double digit annual growth globally during the last decade and has progressed from a niche to a large industry in many counties. Total volume of the Islamic banking assets reached USD1 trillion in 2010 (S&P (2010)). Although its share in global banking assets is still minute, the future projections of IBF suggest that in many Muslim counties IBF would become a competitive alternative to the conventional banking sector and an important part of global financial sector. In their study Imam and Kpodar (2010) attribute growth of IBF to per capita income, the proportion of the Muslim population in the concerned countries, and the status of many countries as oil producers. They do not find any importance of 9/11 event as an important determinant of Islamic banking diffusion, which coincided with the rising oil prices. In the aftermath of recent financial crisis, the principles of IBF have not only been reemphasized by Islamic scholars but also by some western economists (see Rogoff (2011); Buiter (2009)). These principles broadly comprise ban on interest and sale of debt (discounting), short selling, gambling and excessive uncertainty in contracts. IBF endorses financing based on the profit and loss sharing contracts (equity financing). Debt financing that is backed by real assets is also allowed in IBF.

In the wake of US financial crisis and subsequent turmoil in some European states because of sovereign debt problems, suggestions have been made to tighten the regulatory framework including stringent capital requirements, reinforce market discipline, introduce financial reforms, restructure the banking system and promote financing based on equity and risk-sharing principles.[1] Interestingly, in Cyprus the proposed solution for the largest bank, Bank of Cyprus, would turn major depositors into shareholders of the bank. Thus 37.5 percent of uninsured deposits above 100,000 Euros would be transformed into bank shares. This figure possibly would increase by an additional 22.5 percentage points if the bank needed further injection of liquidity. The remaining 40 percent will get interest paid if the

[1] Basel III has been developed to strengthen the capital position both by increasing liquidity and decreasing leverage in the banks. Regulations about the structure of the banking system are proposed in Volcker rule, Vickers initiatives, and Liikanen proposals. These initiatives broadly try to end implicit too big to fail subsidies by reducing economies of scope (Gambacorta and Rixtel (2013)) as the diversification by the large global banks has been intertwined with high concentration of financial services in few large and complex financial conglomerates (Boot (2011)).

bank performs well.[2] This is congruent with the precepts of IBF as in Islamic banking the deposits (except current accounts which pay no interest) are issued on profit and loss sharing (equity) basis. Thus account holders share the risk with the bank in proportion to their saving or investment deposits. Ban on short selling very after the financial crisis 2007-2009 in several jurisdictions is also a manifestation of IBF principles as in *shariah* (Islamic law) one cannot sell a thing unless one owns it. Similarly, at macro level, issuance of a GDP indexed bond by Greece in crisis is also in accordance with IBF doctrines because returns on any general government security should be corresponding to the performance of the overall economy.

Although, Islamic banking came into limelight in recent years, the theoretical foundations of banking on Islamic principles was laid down in 1940s when Muslims around the world were striving for independence from the colonial system. Syed Abul A'la Maududi (1903-1979) is considered to be the first who presented the theme of Islamic Economics as a part of his reformation movement which aimed at transforming the whole political order according to Islamic principles (Kuran (1996)). Recently, the promising performance of the Islamic banking during crisis (Hasan and Dridi (2010)) has developed renewed interest among academics as well as policymakers about this segment of the financial industry. Some important questions arise about the structure and functions of the IBF *vis*-à-*vis* conventional banking and finance. What are the salient features of the IBF and how it is different from that of conventional banking and finance? Which modes are used by the Islamic banks for financial intermediation? Are there any tools available for monetary policy in an interest-free financial system? How stable is Islamic banking in comparison to the conventional banking system? The importance of last question has been increased especially after the financial crisis 2007-09. How capital market instruments are structured and, in case of defaults, restructured. Last but not least, it is also important to analyze how the monetary policy would be transmitted through Islamic banks to the real sector of the economy when Islamic banks also co-exist with conventional banks.

Against this backdrop, focus of my PhD dissertation is to address these micro and macro aspects of IBF and their implications in comparison with traditional banking and finance.

[2] http://www.bbc.co.uk/news/world-europe-21992745

Chapter 2 provides the theoretical and historical background of Islamic banking and finance, its main features, and the current structure of Islamic banks followed in several jurisdictions. Also, the aim of the study is to examine the main products used by Islamic banks on the asset and the liability sides of their balance sheets. Islamic banks are allowed to use either equity based instruments or asset-backed modes of financing such as operating lease (*ijarah*),[3] hire purchase (*ijarah wa iqtina*) and sale of merchandise on credit basis (*murabahah*). In practice, due to agency problem, Islamic banks prefer asset-backed modes of financing instead of equity based products. The second purpose of this chapter is to review the monetary policy tools suggested by Islamic economists in interest-free regime as well as the practice of central banks of Muslim countries in this regard. The study show that the most important issues to be addressed in IBF are difficulties in liquidity management and limited scope of monetary policy tools mainly because of insufficient issues of *sukuk* (Islamic securities) and absence of interest-free standing credit facility by the central banks. The chapter can also be read as a preface to subsequent chapters.

IBF mainly emerged because of negative screening based on religious principles which exclude interest-based transactions, gambling, short selling, sale of debt and excessive uncertainty in contracts. It is, therefore, expected that IBF would have a different financial structure from conventional banking. Chapter 3 which is joint work with Moazzam Farooq empirically investigates how the structure of Islamic banking is different from that of conventional banking using the quarterly data of conventional and Islamic banks in Pakistan during 2002:II to 2010:I. The outcomes suggest that Islamic banking institutions (IBIs) rely less on non-deposit funding which indicates that they are more engaged in core banking business. However, their asset portfolio reveals that they have lower loans to total asset ratio than that of Conventional banking institutions (CBIs). This outcome specifies that IBIs are less involved in financial intermediation than their conventional counterparts. Likewise, IBIs are less cost efficient than CBIs. However, with increase in their size the differences between IBIs and CBIs in terms of cost efficiency and business structure decline. Analysis at disaggregated level of IBIs, show that both full-fledged Islamic banks (IBs) and Islamic

[3] International Accounting Standard (IAS) 17.4 differentiates operating and finance lease on the basis of ownership of the leased assets. Finance lease considerably transfers the risks and rewards pertaining to the ownership of the underlying asset to the lessee, otherwise is the case is an operating lease.

banking branches (IBBs) of mixed banks with both Islamic and conventional operations rely less on non-deposit funding, have lower loans to assets ratio, and are less efficient. However, as both types of IBIs become larger their cost efficiency improves and the difference between IBIs and CBIs fades away. Similarly, with the increase in size IBs rely more on non-deposit funding and are engaged less in financing activities. But IBBs rely more on non-deposit funding and financing activities as they grow bigger. The model with bank-time fixed effects show that Islamic windows of both large and small mixed banks depend less on fee based income. Moreover, contrary to Islamic windows of large mixed banks, Islamic windows of small mixed banks are more involved in financial intermediation shown by their higher loans to assets ratio. However, Islamic windows of both small and large of mixed banks are less efficient than conventional banking branches (CBBs) of mixed banks as their cost indicators are higher than those of CBBs.

Chapter 4 is based on joint work with Moazzam Farooq and Sweder van Wijnbergen. The proponents of Islamic banking and finance argue that financial intermediation based on Islamic principles would render better asset quality and bring greater stability not only in domestic economy and financial markets but also in international economy. This chapter tests this proposition through an empirical study using the data of conventional and Islamic banks in Pakistan during 2002: II to 2010: I. Our results show that full-fledged IBs are more stable than CBIs. These banks are also better capitalized than their conventional counterparts. Moreover, full-fledged IBs also have less volatility in return on their assets, have lower non-performing loans (NPLs) and, therefore, lower loan loss provisioning. Similarly, IBBs of mixed banks, with both conventional and Islamic windows, have better asset quality as they have lower NPLs and loan loss provisioning than that of CBIs. The model with bank-time fixed effects show that Islamic windows of small mixed banks are better capitalized and higher return on assets. However, due to higher volatility in returns of their assets, their stability index is lower than that of CBBs of mixed banks. Conversely, NPLs and thus loan loss provisioning by IBBs of both small and large mixed banks is lower in comparison to conventional banking branches of mixed banks. This shows that Islamic windows of mixed banks have better asset quality than their conventional windows.

Chapter 5 which is based on joint work with Sweder van Wijnbergen analyses the issues in Islamic capital markets while studying four major *sukuk* defaults that occurred in recent past around the same time when global economy experienced financial crisis. *Sukuk* are presented as an alternative to the interest based conventional bonds with a view that these are asset-backed securities, free of interest and meet the other standards of IBF. However, while structuring most of the *sukuk*, several clauses were put in the offering circulars which made them equal to conventional bonds. For example, (i) undertaking by the originator/obligor to repurchase the *sukuk* at face value on maturity of the *sukuk* and (ii) offering fixed returns for equity-based *sukuk* (iii) credit enhancement through ascertaining return on capital with some promissory notes or guarantees by the originators or third parties. Provisions of conventional securities features in *sukuk* create a situation in which there is a possibility for *sukuk* to default like a conventional bond. Further, most of the *sukuk* did not transfer the underlying assets to the *sukuk* holders, and thus violated a basic condition for *sukuk* to be valid Islamic law (*shariah*). So, in the event of default, *sukuk* holders have no recourse, as effectively there were no underlying assets in their ownership. Therefore, *sukuk* are treated as subordinated debt of the obligor/guarantor inferior to secured creditors on the occurrence of any default or restructuring. The paper concludes that the default of the *sukuk* occurs mostly because of incorporating the features of conventional bonds in *sukuk*, the imprudent business practices, forgeries in the originating companies and week financial positions of originator, i.e. liquidity mismatch and high leverage. However, even in a purely *shariah* compliant *ijarah (*leasing*) sukuk* the defaults cannot be ruled out as the bad market conditions can also affect the financial position of the originators and render them unable to pay the rentals and honor their commitments regarding repurchase undertaking of *sukuk*.

Chapter 6 is based on combined work with Steven Ongena and Sweder van Wijnbergen and has been accepted for publication in International Journal of Central Banking. The chapter studies the implications of the Islamic banking at macro level. The fast growth of Islamic banking and finance raises an important question: will the transmission of monetary policy through the bank lending channel change when the Islamic banks co-exist with conventional banks under a conventional monetary system. The bank lending channel importantly depends on the ability of the central bank to affect bank loan supply. For that it matters whether banks can or not attract time deposits perfectly elastically at interest rates outside the control of the Central Bank and whether they consider the loans granted and securities held in portfolio as perfect substitutes. Islamic banks may, on the one hand, be unable or unwilling to issue wholesale time deposits at a fixed rate and may not consider their Islamic loans substitutable for any of the securities they would alternatively hold in their portfolio. This may make the transmission of monetary policy shocks through the Islamic segment of the banking sector more potent. On the other hand, Islamic banks that singularly attract deposits and lend under interest free arrangements, likely to be approached by depositors and borrowers for religious reasons. These contractual and motivational features on both their liability and asset sides may allow Islamic banks to immune themselves from monetary policy shocks. Thus in the end whether Islamic banks transmit monetary policy differently than conventional banks is an empirical question, which is addressed in this chapter. The aim of the study is to investigate the differences in banks' responses to monetary policy shocks across bank size, liquidity, and type, i.e., conventional versus Islamic, in Pakistan between 2002: II to 2010: I. The results show that following a monetary contraction, small banks with liquid balance sheets cut their lending less than other small banks. In contrast large banks maintain their lending irrespective of their liquidity positions. Islamic banks, though similar in size to small banks, respond to monetary policy shocks as large banks. Hence *ceteris paribus* the credit channel of monetary policy may weaken when Islamic banking grows in relative importance.

Finally, Chapter 7 concludes the dissertation. The structure of IBF has different implications from that of conventional banking and finance at micro and macro level. The integration of IBF may bring ethics and stability in the traditional financial system. However, to gauge the complete impact of IBF at micro and macro level more theoretical and empirical research has to be done in this field. Especially a general equilibrium model needs to be developed purely on the basis of IBF principles.