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Business dynamics, efficiency, asset quality and stability: The case of financial intermediaries in Pakistan



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ABSTRACT

This research is aimed at assessing the possible differences in business dynamics, cost efficiency, asset quality and financial stability of conventional, *Shariah* compliant banks and non-banking financial institutions (NBFIs) in Pakistan, using an unbalanced panel between 2005 and 2013. Theoretically, these three financial intermediaries should demonstrate differences in various business attributes. However, we observe fewer than expected differences between conventional and Islamic banks. We report that Islamic banks have superior asset quality and financial stability than conventional banks. However, certain similarities are present in their respective business models. On the contrary, NBFIs demonstrate differences in business dynamics, with high fee based income and non-deposit funding, as compared to conventional banks. Due to higher business risk and variance in profitability, we find that NBFIs are financially more fragile, irrespective of their stronger capitalization, as compared to commercial banks.

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1. Introduction

Arrow and Debreu (1954) propose the idea of a perfect market in a neoclassical world, where certain key attributes prevail. They suggest, individual investors would be small enough to influence price formation, borrowers and lenders would expect similar conditions and discriminatory taxes would not exist. Moreover, they suggest in this perfect market, economies of scope and scale would prevail, and financial instruments (real rights and contingent claims) would be infinitely divisible. Further, no transaction or bankruptcy costs would exist and investors would have access to complete information about present and future events, which could impact the expected value of assets. In such perfect markets, given the symmetry of information, savers and investors would be able to locate each other without incurring any intermediation costs, resulting in fairly priced financial assets.

However, in the real world, information asymmetries occur, creating a need for financial intermediaries that create financial instruments to satiate the needs of market participants. Financial intermediation is a process by which an intermediary (mostly financial institution) channel funds between deficit and surplus units. These financial intermediaries are expected to contribute towards efficient allocation of resources and fund mobilization between savers and investors, thus providing substantial basis for economic development.

In Pakistan, the regulatory structure broadly classifies financial intermediaries as Commercial Banks and Non-Banking Financial Institutions (NBFIs). Commercial Banks are further bifurcated into banks that offer conventional instruments, and Islamic banks with Shariah compliant products. While conventional products have a rich history, the Shariah based banking system is relatively new. However, Shariah based banking has exhibited rapid growth, due to certain factors. Firstly, these products have a niche market based on clientele who believe this system to be consistent with their religious beliefs. Secondly, Islamic banks demonstrated more resilience during the financial crisis compared to their conventional counterparts, Hasan and Dridi (2010) noted that amongst plausible reasons for the superior performance of Islamic banks during periods of extreme economic turbulence, the most critical factor remains that Islamic intermediation, unlike conventional banking, is asset based. Hence, allowing risk sharing, rather than risk transfer. Further, Islamic banks are not permitted to invest in exotic instruments that are largely believed to be responsible for the recent financial crisis.

Islamic banks in Pakistan have experienced robust growth over the years, although their share in total banking industry remains limited. Total assets for Islamic banks witnessed a growth of 14.4%, while for conventional banking growth was significantly less at 5.9%. Similarly, total financing for Islamic banks increased by 6.2%, while conventional banking reported a decline of 1%. The deposit base for Islamic banks exhibited growth of 15.2%, while for conventional banks, deposits increased by 4.7%. Therefore, Islamic banks reported an impressive overall performance vis-à-vis their counterparts in the banking sector.

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Table 1Growth of Islamic banking.

| | PKR in billions | | | | | All banks |
|----------------|-----------------|--------|--------|--------|--------|-----------|
| | Dec-11 | Jun-12 | Dec-12 | Jun-13 | Dec-13 | Dec-13 |
| Total assets | 366.3 | 411.1 | 477.0 | 560.5 | 641.0 | 8170.8 |
| Investments | 72.2 | 78.0 | 157.8 | 231.3 | 274.3 | 3054.9 |
| Financing | 153.5 | 157.5 | 180.4 | 188.6 | 200.2 | 3349.2 |
| Deposits | 282.6 | 329.8 | 390.1 | 452.1 | 521.0 | 6243.6 |
| YoY change (%) |) | | | | | |
| Total assets | 17.0 | 12.2 | 16.0 | 17.5 | 14.4 | 5.9 |
| Investments | 34.9 | 8.0 | 102.3 | 46.6 | 18.6 | 16.6 |
| Financing | 9.4 | 2.6 | 14.5 | 4.5 | 6.2 | (1.0) |
| Deposits | 18.7 | 16.7 | 18.3 | 15.9 | 15.2 | 4.7 |

Source: SBP (Financial Stability Review).

Table 1 presents the statistics of progression in *Shariah* compliant banking.

On the contrary, the performance of NBFIs has remained constrained, largely due to less developed financial markets and intense competition by commercial banks. Most of the recent equity and debt issues were underwritten by commercial banks, (or a consortium) depriving possible opportunities of investment banking firms. Further, as banks experience economies of scale in funding, NBFIs remain at a disadvantage, as far as corporate financing is concerned. Therefore, given an overlap in business dynamics of banks and NBFIs, the latter has weakened over the years. Table 2 presents the comparative statistics of NBFIs, which provides substantial evidence of the tough times faced by NBFIs. In FY 13, the total number of NBFIs (excluding mutual funds) stood at 54, as compared to 63 in FY 11. The total asset base has also experienced a decline with PKR 517 billion in FY 13 (growth of 22.6% vis-à-vis FY 12), as compared to PKR 585.6 billion in FY 08.

Given the nature of financial intermediation in Pakistan, it is interesting to analyze if conventional banks, Islamic banks and NBFIs can be differentiated on the basis of their business dynamics, efficiency, asset quality and financial stability. The literature on this front is not exhaustive and the few studies that exist have attempted to examine the differences between conventional and *Shariah* compliant banking practices, without considering other financial intermediaries. An interesting finding was reported by Cihak and Hesse (2010) who observed larger Islamic banks to be more financially fragile, as compared to their conventional counterparts, owing to issues in credit risk management emanating from profit and loss sharing (PLS).

Similar findings were documented by Abedifar et al. (2012) who observed that in Muslim countries smaller Islamic banks have lower credit risk than conventional banks. However, Beck et al. (2013) reported that on the contrary, business models of Islamic banks are largely similar to commercial banks, except with better asset quality, capitalization and stronger resistance to financial crisis. Othman and Mersni (2014) reported that there are no significant differences in the use of discretionary loan loss provision used by Islamic and conventional banks in the Middle Eastern region. In addition, Gheeraert (2014) reported that Islamic banking in Muslim countries has fueled banking sector development. Furthermore, the Islamic banking sector has complemented conventional banking in these countries. Saeed and Izzeldin (2014) examined the relationship between efficiency and default risk in Islamic

Table 2 Profile of NBFIs.

| | FY 10 | FY 11 | FY 12 | FY 13 |
|----------------------------|-------|--------|--------|-------|
| Total NBFIs* | 63 | 59 | 56 | 54 |
| Growth (%) | n/a | (6.3) | (5.1) | (3.6) |
| Total assets (PKR Billion) | 585.6 | 470.1 | 421.9 | 517.4 |
| Growth (%) | n/a | (19.7) | (10.3) | 22.6 |

Source: SBP (Financial Stability Review).

and conventional banks in Gulf Cooperation Council (GCC) countries and compared the results with three non-GCC countries. They reported that causality from profit efficiency to default risk is inversely related in Islamic banks. Hence, Islamic banks hold the potential to provide early warning indicators for financial instability.

As per theory, Islamic and conventional financial institutions should have fundamental differences in their business model and efficiency. However, unlike asset quality and stability, most of the previous studies could not report significant differences in business model and efficiency, 1 questioning the theoretical rationale of *Shariah* compliant practices.

In this paper, we attempt to document the differences that should exist within conventional banks, Islamic institutions and NBFIs. The findings of this study have explicit implications for investors and regulators. Based on theoretical perception, investors believe that significant differences exist amongst the three types of intermediaries, primarily in their business models. However, if untrue, it may warrant investors revisiting their investing rationale. Similarly, if there are differences in asset quality and financial stability, regulators should focus on the relatively fragile intermediaries to make the financial system less sensitive to systemic risk. We would like to mention one caveat to this paper. The scope of this research is limited to analyzing various dynamics of financial intermediaries and it is not intended to challenge any theoretical foundations, especially that of Islamic banking. The rest of the paper is organized as follows. Section 2 will present data and methodology, Section 3 will highlight empirical findings while Section 4 will conclude.

2. Data and methodology

For the purpose of this study, State Bank of Pakistan's (SBP) classification was used to categorize financial intermediaries into commercial banks, Islamic banks and NBFIs.² In Pakistan, the concept of Islamic banking is relatively new, as compared to NBFIs, with the first Islamic bank commencing operations in March 2002. Therefore, in order to allow for reasonable representation by Islamic Banks' (and Islamic banking by conventional banks), our sample period will be from 2005 to 2013. For our unbalanced panel dataset, firms must be operational for at least one year and have at least two observations to be included. Further, firms that merged, liquidated or seized operations during our sample period were not included. Information for most variables was collected from annual reports of financial institutions, websites of Karachi Stock Exchange and State Bank of Pakistan.

Some estimation problems may result due to the unbalanced panel. For example, due to unbalanced data, there may be heterogeneity in variance, causing issues in estimations of standard errors. However, these problems are largely associated if attritions in the panel are not stochastic. In our sample, these attritions are clearly random and there is no correlated exit or entry of new firms in the financial system. Hence, using a balanced panel is a possible solution. However, given an already small economy with limited participants (especially Islamic banks and Islamic banking operations of conventional banks with separate financial reporting), the cost of balances panel in form of loss of valuable information will be too high. The year wise sample distribution is reported in Table 3.

A large set of variables is used to compare the financial intermediaries in Pakistan. First, we assess their business dynamics by taking into account their income streams, funding flexibility and funding allocation. Fee based income to total operating income is used to explore

^{*} Excluding mutual funds.

 $^{^{\}rm 1}\,$ For example see Mohamad et al. (2008), Bader et al. (2008), El-Gamal and Inanoglu (2003).

² Since our main focus is on financial intermediaries that are involved in lending businesses therefore we exclude mutual funds from our sample of NBFIs.

³ To check for consistency, we repeated analysis on a balanced panel and results remained consistent. These are available on request.

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