

Islamic banking institutions (IBIs) have registered double digit growth during H1-CY11 with bulk (84%) of incremental assets channeled into government securities. On average, IBIs are more solvent, liquid and profitable than the rest of the banking sector and these indicators improved during the period under review. Reputational and displaced commercial risk, though dormant, can pose significant challenge to the future growth prospects of the industry.

Figure 4.1

Total Assets as of 30-Jun-2011 (Rs. billions)

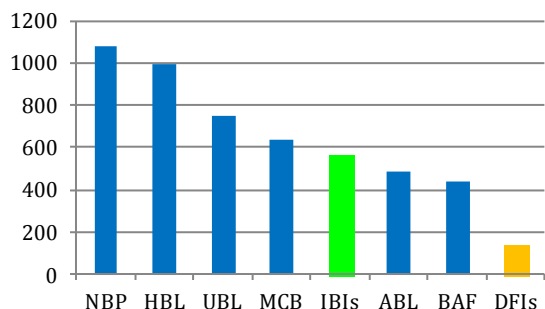


Figure 4.2

Share and Network of Islamic Banking

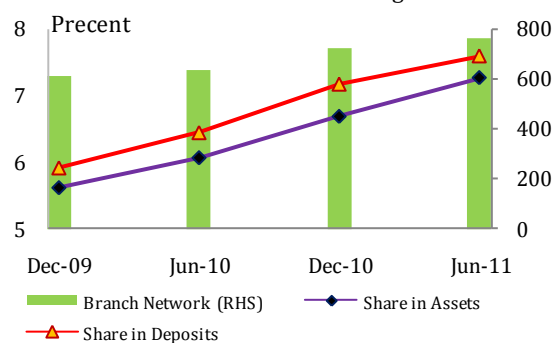


Table 4.1: Growth of Islamic Banking.

	billion Rupees				
	Dec-09	Jun-10	Dec-10	Jun-11	All Banks
Total Assets	366.3	411.1	477.0	560.5	7,714.6
Investments (net)	72.2	78.0	157.8	231.3	2,620.2
Financing (net)	153.5	157.5	180.4	188.6	3,383.5
Deposits	282.6	329.8	390.1	452.1	5,964.8
	percent change				
Total Assets	17.0	12.2	16.0	17.5	8.1
Investments (net)	34.9	8.0	102.3	46.6	22.3
Financing (net)	9.4	2.6	14.5	4.6	1.0
Deposits	18.7	16.7	18.3	15.9	9.4

IBIs continue to maintain double digit growth

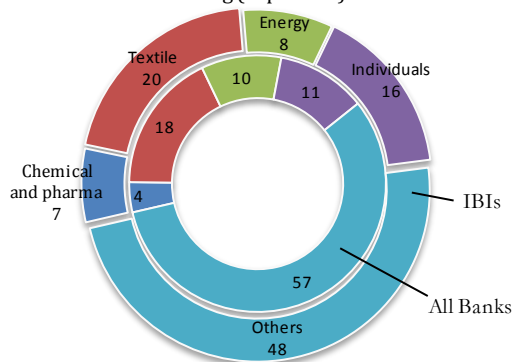
Islamic banking has registered double digit annual growth over the last decade and this trend continued with 17.5 percent growth in total assets during the period under review (H1-CY11). The growth rate in both assets and deposits picked up particularly during Q2-CY11. While part of the strong growth rate in assets can be ascribed to the small base effect, growing share of IBIs in Pakistan’s banking system is indicative of their increasing significance in the overall banking industry. With Rs. 560 billion of assets by June-11, IBIs have 7.3 percent share in total assets of the banking sector, which is more than the total assets of the 5th largest bank in Pakistan and over four times of the total assets managed by all DFIs in the country (Figure 4.1 & 4.2).

...with new funds mostly placed into government securities

Despite double digit growth in total assets, growth in financing remained subdued with net financing increasing by only 4.6 percent compared to a strong 46.6 percent growth in total investments (net) during H1-CY11 (Table 4.1). The unprecedented growth in investments also caused a significant shift in IBIs’ assets mix from financing to investments; the share of financing portfolio decreased to 33 percent while that of investments increased to 42 percent. Issuance of GoP Ijarah Sukuk of over 182 billion rupees between October 2010 and June 2011 facilitated this shift from financing to high quality sovereign investments enabling IBIs to invest as much as 83.7 percent of their incremental assets in government securities during H1-CY11. In fact, this trend of investments in government papers was quite similar to that of conventional banks in Pakistan (as highlighted in Chapter 1). Going forward, the 200 basis point cut in the policy rates coupled with lack of immediate availability of new sovereign Sukuk might redirect some funds to private sector, though energy crises, poor law and order situation and slack economic performance would continue to hamper any major reallocation of credit to private sector in the short run.

Figure 4.3

Concentration of Financing (in percent)

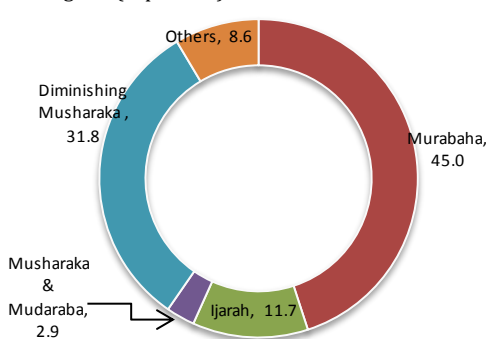


In terms of credit allocation, around half of the total credit extended by IBIs was directed towards four key areas; textile, energy, chemical and individuals (Figure 4.3). Though a relatively high exposure of IBIs in textile sector makes them vulnerable to adverse developments in textile industry, credit concentration of this level is somewhat unavoidable given the share of textile in overall exports and large scale manufacturing sector. While IBIs' credit exposure to various sectors was in line with that of the overall banking industry, their exposure to individuals and chemical and pharmaceutical sector was almost double than the rest of the banking sector. However, the relatively higher exposure to the chemical and pharmaceutical sector does not give rise to concentration risk as it constitutes just 7 percent of the IBIs' financing portfolio.

Limited size of profit and loss sharing financing portfolio remains a reputational risk

Figure 4.4

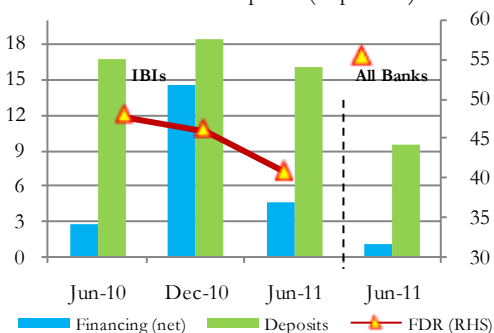
Financing Mix (in percent)



Notwithstanding the importance attached to profit and loss sharing (PLS) modes of financing in Shariah, IBIs continued to rely heavily on mark-up based and mortgage/lease type modes of financing (Figure 4.4). This continued neglect of the distinct Islamic finance modes has attracted considerable criticism both from Shariah community and public as the present approach is diluting the distinction between Islamic and conventional banking. The IBIs' reluctance in making serious efforts to increase the share of P&L financing is however understandable, given the higher risk and moral hazards associated with such financing and lack of formal and informal dispute resolution mechanisms. Therefore, in addition to increasing the IBIs' appetite for P&L financing, supportive legal and regulatory environment will have to be created to address this reputational risk.

Figure 4.5

Growth in Advances and Deposits (in percent)



Falling FDR appears a mixed blessing

In the wake of deteriorating asset quality and continued government borrowings through Ijarah Sukuk offering attractive returns, IBIs remained shy of lending to the private sector despite sufficient availability of loanable funds. With growing supply of Shariah compliant low-risk sovereign sukuk, IBIs increased their exposure towards investments, thus registering a further drop in their Financing-to-Deposit ratio (FDR) to 40.8 percent, compared to 55.4 percent for the entire banking sector¹ (Figure 4.5). In fact, Government of

¹ For conventional banks, 55.4 percent is Loan-to-Deposit ratio (LDR) which is not exactly same as FDR of Islamic Banks. Still, these numbers provide a rough comparison.

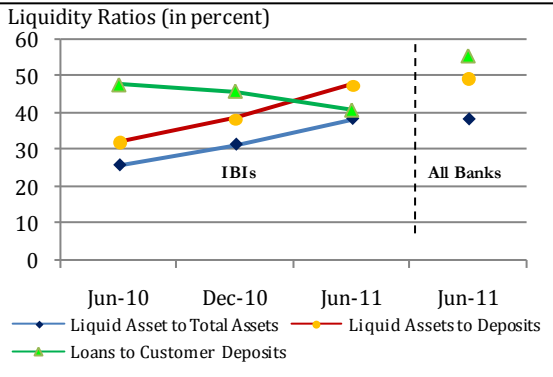
Pakistan issued Ijarah sukuks of Rs. 89 billion during H2-CY10 and of another Rs. 93 billion during H1-CY11, causing investments to rise by 96 percent and 46.6 percent respectively.

While Loan-to-Deposit ratio of conventional banks is also falling since Q4-CY08, IBIs' FDR remain significantly lower than LDR. The plausible reasons are:(a) As IBIs have more restricted access to money market for short-term funding needs, they need to maintain higher liquidity for precautionary purposes, (b) lender of the last resort facility is not available to Islamic banks making them more vulnerable to liquidity risk and consequent increase in their appetite for liquid securities, and (c) their deposits are on 'tap' basis after acquiring customer, while extending credit may require more efforts & time. This issue can be more relevant for newer banks like IBIs.

While the continuously falling FDR might undermine the intermediation function of IBIs, it would ironically have a positive effect on their liquidity, asset quality, and profitability as highlighted in the following paragraphs.

...as it allows IBIs to comply with rising SLR requirements

Figure 4.6



On the back of growing investments in government securities and cautious financing, liquidity ratios continued to improve during the period under review. Apart from falling FDR, ratios of liquid asset to total assets and to deposits improved as well, moving in line with rest of the banking sector (Figure 4.6). Comfortable liquidity position of the IBIs was evident from the trend of the afore-mentioned liquidity ratios.

Before 2011, IBIs were subject to concessionary Statutory Liquidity Reserve (SLR) requirements because of dearth of SLR eligible securities. The Government of Pakistan issued additional SLR-eligible sukuks of 182 billion rupees during FY11. Considering the comfortable liquidity position of IBIs and availability of sufficient Shariah compatible and SLR eligible avenues to place the required funds, the concession given to IBIs was fully withdrawn during H1-CY11. As IBIs are already placing a sizeable portion of their assets in government securities, this withdrawal of concession will not affect the bottom line of IBIs in the short-run. However, in the longer run, IBIs will have to compete for credit growth with their conventional counterparts on a more level playing ground.

Table 4.2: Asset Quality

	in percent			
	IBIs		All Banks	
	Jun-10	Dec-10	Jun-11	Jun-11
NPF to Financing	6.5	7.3	7.5	15.3
Net NPF to Financing	2.8	3.2	3.2	5.5
Provisions to NPFs	58.8	58.6	60.0	67.9
Net NPAs to Total Capital	11.5	13.3	14.3	26.6

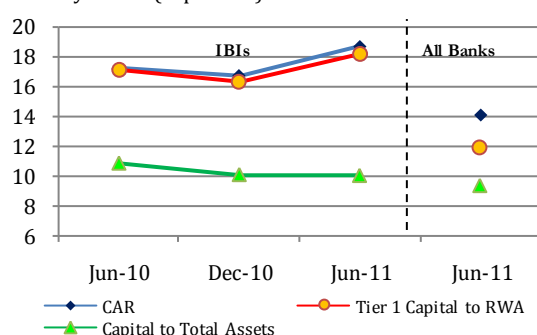
	IBs		IBBs	
	Dec-10	Jun-11	Dec-10	Jun-11
	NPF to Financing	9.2	9.6	3.5
Net NPF to Financing	3.8	3.7	1.9	2.2
Provisions to NPFs	60.8	63.4	46.9	46.7
Net NPAs to Total Capital	16.1	16.5	7.1	8.9

	IBs	IBBs
NPFs (billion Rs.)	11.7	11.8

IBs=Islamic Banks, IBBs = Islamic Banking Branches, IBIs = IBs+IBBs

Figure 4.7

Solvency Ratios (in percent)



Loss absorption capacity is adequate, despite marginal deterioration in asset quality

After rising sharply during H2-CY10 with an addition of Rs3.2 billion, the accumulation in Non Performing Financing (NPFs) of IBIs considerably decelerated and grew by only 1.0 billion rupees during H1-CY11. The infection ratios, as a result, deteriorated only marginally during the period under review (Table 4.2).

Asset quality indicators of IBIs remained relatively better than those of conventional banks reflecting their cautious lending behaviour as evident from the growing share of investments in their asset portfolio, and their ability to better manage credit risk as demonstrated by their lower NPLs compared with conventional banks².

Almost 70 percent of the NPFs of IBIs are in the loss category and are therefore adequately provided for. That explains relatively better coverage ratio (provisioning to NPFs) of IBIs compared with the rest of the industry. Despite suffering a significant blow in the last one year due to sharp increase in NPFs during H2-CY10, Net NPAs to Total Capital of IBIs remained at comfortable levels of 14.3 percent as of 30-Jun-2011 (Figure 4.7) reflecting adequate cushion to absorb unprovided-for losses. Moreover, IBIs boasted a healthy 18.7 percent CAR as of 30-Jun-2011 suggesting satisfactory capacity of IBIs to absorb unanticipated losses.

Within Islamic Banks, Islamic Banking Branches (IBBs) have significantly lower stock of NPFs as compared to Islamic Banks (IBs). Though NPFs of branches increased sharply (Rs 0.9 billion) during H1-CY11, it was primarily on account of a single bank. On the other hand, incremental NPFs of IBs increased by only 0.1 billion during the same period, which was significantly lower than a rise of Rs.2.8 billion that took place during H2-CY10.

Profits surge on the back of growing investments in high yield Sukuks

IBIs registered a healthy increase in earning indicators during the H1-CY11 as return earned on financing increased by 3.5 billion rupees or 30 percent over the corresponding period of 2010. Nevertheless, the most significant improvement was witnessed in return earned on investments as the shift in asset mix from low yielding placements in interbank market through commodity murabaha like instruments to higher yielding

²IBI's NPFs of 7.5% (compared with 15.3% NPLs of conventional banks) can be partially explained by their penalty structure. In the event of delinquency by the borrower, the penalty charged by IBIs cannot be taken to their income, thereby reducing their incentives to lend to marginal customers and increasing their incentives for better scrutiny of the borrowers.

Figure 4.8

Sources of Earnings (Rs Billion)

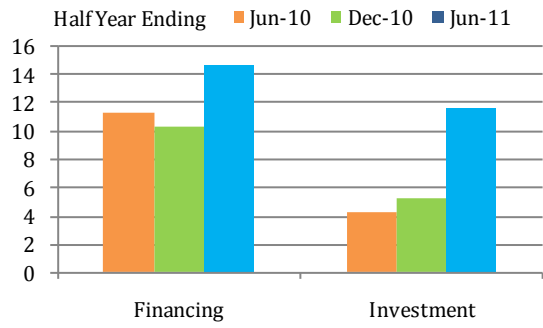


Table 4.3: Earnings in percent

	IBIs			All Banks
	Jun-10	Dec-10	Jun-11	Jun-11
Return on Assets	0.8	0.6	1.6	1.4
Return on Equity	6.9	5.2	16.5	14.4
Operating Expenses to Gross Income	71.8	72.6	62.3	51.0

investments in Ijarah Sukuk started to payoff in the form of better earnings. The return earned on investments during the period under review shot up by 7.4 billion rupees (rise of 175 percent) from the corresponding period of 2010 (Figure 4.8).

The improved earnings on financing and investment portfolios coupled with lower provisions against non-performing assets lead to noteworthy improvements in earning ratios. Earning indicators of IBIs outperformed those of the overall banking sector for the first time, as ROA for the period under review increased from 0.8 percent to 1.6 percent. Similarly, ROE surged to a healthy 16.5 percent from 5.2 percent as of Dec-10 (Table 4.3).

The efficiency of IBIs' use of resources also improved with operating expenses to gross income ratio decreasing to 62.3% during the first half of 2011 as compared to 71.8 percent during the same period of 2010. This improvement was primarily due to increase in return earned on financing and investment rather than reduced operating expenses.

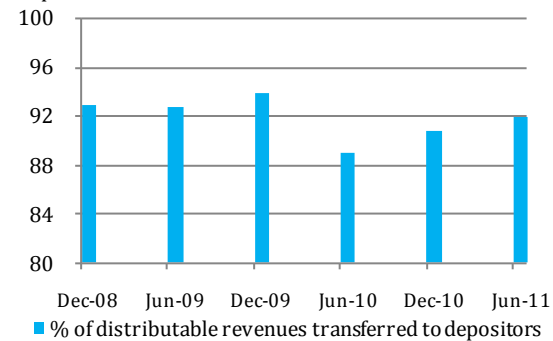
...but displaced commercial risk remains significant

In theory, PLS depositors of IBIs are contractually obliged to share in profit and/or losses. This profit and loss sharing provision supplements the capital of IBIs by giving them an additional cushion to absorb losses. The share of IBIs (as *mudarib*) in revenues generated from funds of PLS deposits ranged from 50 percent to 85 percent. However, instead of sharing profits and losses according to the contract, whenever the profits/revenues fall short of the market rates, IBIs make good of the shortfall by foregoing (part of) their own share of profits to match the returns of PLS depositors with the market rates. During the last two years, IBIs have distributed about 90% of the revenues generated from the funds of PLS depositors, and this trend continues despite improved profitability during H1-CY11 (Figure 4.9). IBIs have continued this practice under the (possibly flawed³) assumption that doing so would dissuade depositors from withdrawing deposits.

However, by doing so, IBIs shift the risks from the PLS depositors to the shareholders of the bank and also deprive themselves as also the current account holders from the

Figure 4.9

Displaced Commercial Risk



³ Literature suggests that depositors of Islamic Banks are not necessarily in 'search of yield' and their decision to withdraw deposit may be less sensitive to profit rates on deposits. For details please refer to Gerrard, P. and J. B. Cunningham (1997). "Islamic banking: a study in Singapore." International Journal of Bank Marketing, and Khan, A. K. (2010). "God, Government and Outsiders: The Influence of Religious Beliefs on Depositor Behavior in an Emerging Market". Cambridge MA, Harvard.

additional layer of cushion available to absorb losses. Banks in Pakistan are presently not maintaining either Profit Equalization Reserve (PER) or Investment Risk Reserve(IRR)⁴ to mitigate displaced commercial risk.

More transparent disclosures would help reduce judicial risk

IBIs operate with a relatively higher legal risk as compared to conventional banks. This higher legal risk emanates from possible or presumed Shariah non-permissibility of various Islamic finance contracts. As elsewhere, there have been instances where the defaulting parties have questioned the Shariah permissibility of the contractual obligations they had agreed while obtaining the financing. IBIs can possibly reduce this risk by carefully drafting their financial contracts which not only meet the Shariah requirements but also explicitly state the rights and obligations of the parties to the contract.

⁴Purpose of both PER and IRR is to smooth returns to the PLS depositors by accumulating these reserves during periods of higher profitability and drawing down from these reserves during periods of lower profitability. PER is created by IBIs out of the income *before* allocating their own share in profits as mudarib's fee. PER thus belongs to both equity holders and PLS depositors. IRR is created by IBIs out of the income *after* allocating their own share in profits as mudarib's fee. Thus these reserves belong solely to the PLS depositors.

Box 4.1

Credit Risk in Conventional and Islamic Banking⁵

Islamic banking is one of the fastest growing parts of the financial sector. Islamic banks maintained strong growth in assets in the midst of financial crisis as well, growing at more than double the pace of conventional banks on average during 2007-09 (*IMF* report by Hasan and Dridi (2010)).

Despite the fast growth of Islamic banking and the imperative claims made about the built-in protection against excessive risk-taking by financial institutions, no research so far has investigated the default rate of individual conventional versus Islamic loans⁶. This lack of evidence arises out of steep identification challenges and corresponding data requirements; we aim to fill this gap by a detailed and systematic analysis of the default rates of conventional versus Islamic loans in Pakistan.

We find robust evidence that Islamic loans are less likely to default. This effect is not only statistically significant, but also economically relevant. The hazard rate on Islamic loans is on average less than half the hazard rate on conventional loans.

The elimination of interest in all its forms or *Riba* in Islamic banking, and the resultant structuring of Islamic loans into, among others, deferred-sale and lease-like contracts, may provide only a partial explanation for this robust finding. We cannot exclude the possibility that borrowers may also feel a more acute conflict with their individual religious beliefs or those of their fellow believers when defaulting on an Islamic loan.

Data and Identification Strategy

We analyze loan level data obtained from the Consumer Protection Department (CPD) of the State Bank of Pakistan that maintains the domestic credit registry, i.e., the Credit Information Bureau (CIB). The monthly available data covers all business loans outstanding in Pakistan from 2006:4 to 2008:12. Our analysis of individual loan performance commences from the point when a unique credit decision is made. We therefore focus on new loans and loans that are renewed, extended or altered during the sample period. **Table 1** provides the sample details. Within the sample period quite a few borrowers and banks have balance sheets containing both conventional and Islamic loans. **Table 2** indicates the sample composition by borrower and bank type.

We define default to occur if a debt or an installment / interest payment is overdue by 90 days. This definition of default is standard and identical for conventional and Islamic loans. Later on, we confirm the robustness of our findings if we define default to occur if loans payments are overdue for 180 days rather than 90 days.

We use duration model as the main estimation methodology. The hazard function in duration analysis provides a suitable method for summarizing the relationship between the time to default and the likelihood of default. The hazard rate has an intuitive interpretation as per-period probability of loan default provided the loan “survives” up to that period. For robustness, we also employ (dynamic) logit model.

Table 1: Sample Composition

Variable	Number of Obs.	Unit
All new loans granted	1,238,574	loan - months
<i>Minus</i> loans to non-corporates ¹	363,221	loan - months
<i>Minus</i> micro, special and non-bank loans	252,047	loan - months
Sample loans observed each month	603,677	loan - months
<i>Conventional</i>	571,478	loan - months
<i>Islamic</i>	32,199	loan - months
Loans	152,730	loans
Borrowers	22,723	borrowers
Banks	40	banks

¹Loans to financial intermediaries, public sector enterprises, local, provincial or federal governments, and other autonomous bodies

²Loans smaller than Rs. 50,000, loans larger than Rs. 419,000,000, and loans granted by financial institutions that are not registered as banks.

Table 2: Samples for borrowers and banks by loan types

Loans observed each month	Granted by banks that offer loans that are			Totals	
	Only conventional	Conventional and Islamic	Only Islamic		
Obtained by borrowers with loans that are	Only conventional	172,120	331,675	-	503,795
	Conventional and Islamic	37,755	44,946	8,307	91,008
	Only Islamic	-	2,028	6,846	8,874
Totals		209,875	378,649	15,153	603,677

⁵ This section is gleaned from Baele, Lieven; Farooq, Moazzam; and Ongena, Steven, “Of Religion and Redemption: Evidence from Default on Islamic Loans” (October 1, 2010). CentER Discussion Paper Series No. 2010-136; European Banking Center Discussion Paper No. 2010-32; Center for Economic Policy Research (CEPR) Discussion Paper No. 8504. Available at SSRN: <http://ssrn.com/abstract=1740452>

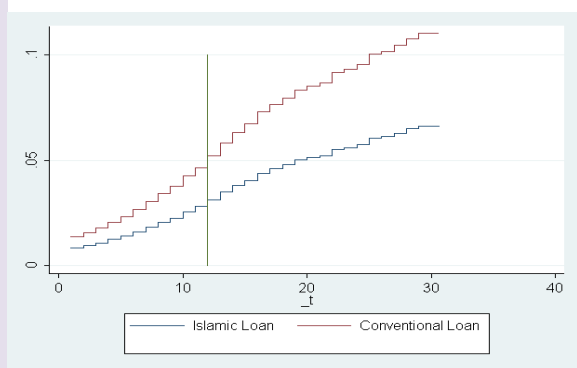
⁶ Scholars are often hesitant to label many of the Islamic financial products as “loans” (Kuran [2004]) or even as “Islamic” We henceforth employ the term “Islamic loan”, for ease of writing.

Empirical Results

The results show that hazard rate is substantially lower for an Islamic than for a conventional loan. This effect is robust to many additional controls, including borrower, bank, and borrower*bank fixed effects and is economically large. The coefficient in our baseline specification implies that the hazard rate of an Islamic loan is only 2/3rd of the hazard rate on a conventional loan. Moreover, Islamic loans granted by Islamic banks have a lower hazard rate. Borrower, loan and/or bank characteristics that differ between conventional and Islamic loans may be responsible for the estimated difference in the hazard rates. Therefore, we also systematically investigate each of these possible sources of variation.

Figure 1

Cumulative hazard of conventional and Islamic loans



Differences between Borrowers that Obtain Conventional and Islamic Loans?

We control for borrower size, region, and industry, yet these controls may not capture all borrower heterogeneity. We therefore include borrower fixed effects to capture all time-invariant unobservable and observable borrower heterogeneity. The results show that the same borrower is more likely to default on a conventional loan than on an Islamic loan. We more closely assess the economic relevancy of our findings for a one-year (median), collateralized, cash loan that is not for export or agricultural purposes, or granted by a government, specialized, foreign or large bank.

Figure 1 displays the resulting schedule of the cumulative hazard of conventional and Islamic loans. After one, the difference in the cumulative hazard is already more than 2

percent. This first-year cumulative hazard rate on conventional loans equals 5.2 percent, not uncommon for loans in a developing economy, while the first-year cumulative hazard rate for Islamic loans equals 3.1 percent, more equal to the default rates on loans commonly observed in developed economies.

Differences in the Loan Contracts?

Despite the controls for the several loan characteristics, it is still possible that differences in loan contract characteristics between conventional and Islamic loans would explain the difference in hazard rates. We use a set of specifications to address this concern. We start by excluding the non-cash facilities that may differ more between conventional and Islamic loans in other loan characteristics. We re-estimate all duration models and our results are almost unaffected. Our data set does not include loan seniority we therefore include a proxy variable for *Seniority of Charge* that equals one if the loan is the only one outstanding, and equals zero otherwise. The coefficient on this new variable is insignificant, while the coefficient on Islamic Loan is unaffected.

We employ a battery of tests by including a coarse measure of *durability* of financed asset, by adding loan rate (*Interest Rate*) to account for time-varying borrower heterogeneity that is also unobservable to us but that may be observable to the lending bank, by excluding *Musharakah* and *Mudarabah* contracts (both types are more similar to equity financing than to conventional bank credit, and by redefining default to occur only after 180-days instead of 90 days. Our main results remain unaffected for all alternative specifications.

In sum, it does not seem to be the case that only differences in loan contract characteristics between conventional and Islamic loans can explain their difference in hazard rates.

Differences in the Banks that Grant the Conventional and Islamic Loans?

While we do correct for bank type, controlling for (time-invariant) bank fixed effects may be important, as default rates may be due to bank-specific clientele effects, risk-taking incentives, and/or screening and monitoring technology.

We therefore include bank fixed effects in a variety of models estimated on the set of loans that are issued only by banks that offer both conventional and Islamic loans. We find robust evidence that hazard rate on Islamic loans is lower than those on conventional loans for those banks that give both types of loans.

One possible explanation for this lower default could reside in the penalties banks charge in case of default these

penalties flow to the bank in case of non-performance on a conventional loan and to a charity in case of an Islamic loan. In case banks would set penalties optimally they would set the penalties on conventional loans lower than on Islamic loans, especially for borrowers that mix loan types and that are of an intermediate credit quality. Yet, we do not think differential penalties are the explanation here. First, anecdotal evidence suggests that banks may actually set the penalties on conventional and Islamic loans equal to each other. Second, when introducing in a variety of specifications the interactions of the Islamic loan dummy with – as a proxy for borrower quality – the observed loan rate and the rate squared, the estimated coefficients on the interaction terms are statistically insignificant but are actually pointing in an opposite direction (i.e., for intermediate loan rate borrowers the difference in the hazard rate between conventional and Islamic loan is minimal not maximal as we would expect if penalties are set optimally).

Borrower, Bank or Loan Characteristics? Or Religion?

One possible explanation for these robust findings is that borrowers may choose not to default on Islamic loans because of their individual religious beliefs. As argued before, the motivation to take the Islamic loan may also discourage the borrower from defaulting on it.

To assess this, we add two variables that capture whether borrowers (that have both type of loans) during the sample period switch to Islamic or to conventional borrowing, i.e., whether during the sample period conventional loans were obtained first or later than Islamic loans. Those borrowers that switch to Islamic borrowing may be, given the recency of their decision, even more motivated not to default on their Islamic loans.

For this exercise the start of the sample period presents a severe left-censoring problem, i.e., we cannot observe those loans that are no longer outstanding. Though not statistically different, the estimates suggest that individual motivation may play a role. Those borrowers that only recently turned to Islamic loans are even less likely to default on their Islamic loans than those that switched to conventional loans.

To establish beyond any doubt that religious beliefs matter for loan default one would need an objective measurement of religiosity for each individual borrower. As far as we are aware no existing research has had access to such a measure,⁷ and neither do we. We therefore introduce a number of specifications that are a first step in identifying whether religion in this setting matters for loan default.

First, we introduce a variable *Ramadan* that equals one if the month is in the Ramadan period and equals zero otherwise. If either (1) the local network effect of religious activity, and/or (2) the identification of the borrower with Islamic tenets, plays a role in explaining the lower hazard rate on Islamic loans, one would expect this differential between conventional and Islamic loans to widen during the holy Muslim month. The estimated coefficient on the interaction between Islamic loan and Ramadan is indeed negative and sizeable, implying that during Ramadan months default on Islamic loans drops by more than half.

In case the network effect of religious activity plays a role, the location of the borrower/bank may matter. In rural areas (and small towns) there may be more inherent social pressure to repay and more informal help from family and friends in case a borrower faces financial difficulties, and religious affiliation and practice may provide few or no extra network benefits. The distinction between religious and other political parties in small towns may also be less acute than in big cities because rural dwellers may in general be more religious. We, therefore, introduce a dummy variable *Big City* that equals one if borrower is located in a city with more than one million inhabitants and equals zero otherwise. To measure local religious fervency we rely on a variable *Share Religious Political Parties*, which equals the percentage of total votes obtained for National Assembly seats by the coalition of six religious-political parties in the General Elections of 2002 in the district where the borrower is located.⁸

The estimated coefficients suggest that in big cities: (1) the loan hazard rate is on average almost 50 percent higher than in rural areas or smaller cities; (2) Islamic loans are relatively more likely to default than in rural areas and (3) Islamic loans are relatively less likely to default loans if the share of religious parties grows while this is not the case in rural areas.

⁷ Al-Azzam, Hill et al. (2011) find that the repayment delay on 160 *group* loans in Jordan is negatively affected by the percentage of group members who pray five times a day. More broadly Guiso, Sapienza et al. (2011) document that homeowners that find it “*morally wrong* to walk away” are less likely to say that they are willing to default when the value of their home equity falls below a certain threshold even if they can afford to pay the monthly mortgage costs.

⁸ We use the poll results from the 2002 General Election because 5 of the 6 religious-political parties boycotted the 2008 edition.

This evidence suggests that difference in loan performance of conventional and Islamic loans, especially among urban dwellers that in general may be less pious, may be explained by the network effect of religious activity.

In robustness we replace the Share of Religious Political Parties with *Religious School Enrollment* we glean from Andrabi, Das et al. (2006). They define this variable as the number of children enrolled in religious schools as a percentage of total school enrollments in each district. Results again suggest that network effects of religion play a role in determining the differential probability of conventional and Islamic loan repayment, though now the effect is more muted in big cities than in rural areas. Possibly the increased possibilities for pupils to commute in big cities may weaken the correspondence between this measure of local religiosity and the differential in hazard rates.

In a recent study, Pepinsky (2010) argues that the demand for Islamic banking products is determined more by a quest by individuals to claim or maintain a Muslim identify, rather than by religiosity itself. The need for identification tends to be stronger for middle-class borrowers, who are more vulnerable to social dislocation problems induced by modernization and globalization, especially when located in a big city. We hypothesize that in particular these middle-class borrowers that look to strengthen their Muslim identify not only demand more Islamic banking products but also have a lower propensity to default on them, especially in big cities.

To test this conjecture, we introduce a variable *Share of Post-Natal Private Care* which equals the percentage of women that used private (and not public) hospitals or clinics for their post-natal care in the district of the borrower captures the local consumption of a luxury good by the middle class. The estimated coefficient on the triple interaction term suggests that in big cities Islamic loans are less likely to default than conventional loans if the share of post-natal private care grows.

In sum, the reported estimated correlations suggest that in addition to borrower, loan and/or bank loan characteristics, also religion may play some role in determining the differential repayment performance of conventional and Islamic loans, through individual piousness, network effects and maybe also group identification.

Conclusions

The hazard rate on Islamic loans is less than half the hazard rate on conventional loans, across many duration models we estimate using a comprehensive monthly dataset from Pakistan that follows more than 150,000 loans over the period 2006:04 to 2008:12. During Ramadan and in big cities where religious parties poll well Islamic loans default less likely, suggesting that religious motivation may partly determine the differential loan default rates.

It is important to notice that this study does not aim to address the broader question if conventional or Islamic finance is “better” from either the borrower’s, bank’s or even society’s perspective. Nor does our study imply that similar effects could not be present among adherents to other religions or value systems. But studying the default rates on individual conventional and Islamic loans is a first and necessary step, however, in understanding how the specific arrangements in Islamic finance may, or may not, determine borrower loan repayment. The study, however, suggests that financial inclusion of different faith based groups can be beneficial not only from societal but also from financial stability point of view. Moreover, conventional banks may learn important lessons and adopt some screening and operational technology employed by Islamic banks that may improve screening and monitoring of borrowers. Some of such practices are following. The provision that Islamic banks must give away penalty charged on delinquent loans to charity may force them to exercise more caution when assessing marginal borrowers. Similarly PLS provisions may provide incentives to Islamic banks for better monitoring of their clients and more engagement in the business process of customers may enhance the ability of Islamic banks to better monitor their borrowers.