Islamic Banking: An Appraisal of Insolvency Hazard

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Abstract
The literature reveals that most of the comparative studies have been conducted in the field of conventional versus Islamic banks while as much focus has not been paid to analyze comparative performance of Islamic banks across the countries and literature is scant in this area. This study appraises and analyses comparatively the riskiness and solvency of selected Malaysian and Pakistani Islamic banks during 2006 to 2011. Data have been obtained from secondary sources of annual audited financial reports of various banks under study that has been analyzed through mean, standard deviation, coefficient of variation and t-test. The empirical findings demonstrate that solvency has gradually condensed and Malaysian Islamic banks are more vulnerable to financial risk as financial leverage has moved upward. The Malaysian Islamic banks (MIB) have fairly attracted deposits compared to Pakistani Islamic banks (PIB), resultantly they are more exposed to default risk. It is concluded that Malaysian Islamic banks are more risky and less solvent compared to Pakistani Islamic banks which are less risky and more solvent. The study is a valuable addition to literature and it signals policy makers devise policies to remain productive.

Key words
Financial performance, risk and solvency, Islamic banks and ratio analysis

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1. Introduction

The Islamic-banking is a system that is in agreement with spirit and value system, and fully governed by the Sharia principles. The narrow concept of Interest-free banking is to denote the number of operations or instruments preventing Riba. Generally, Islamic banking prohibits the interest based transactions as well as disallows unsocial and unethical endeavors’. The Islamic banking model aims at gauging and achieving prosperous economy, in which socio benefits are also addressed. The Holy Quran and Hadith are the major sources of Sharia, which have prohibited the usury from all the economic transactions, as commanded at several places (2:275-279; 3:130; 4: 161 and 30: 39) that interest is forbidden and trade is permitted; and all those who are comingling interest in economic transactions are alarmed to give it up or be ready for accountability. The matters regarding to lending are also articulated here (2:280 and 281).

Islamic banking emerged in 1963 in Egypt and Organization of Islamic Countries (OIC) established the Industrial Development Bank (IDB) in 1974 as the first explicit bank to provide the funds to member countries on profit and loss sharing basis. Malaysian government established the Tabung Haji and Fund Board in 1963 to encourage the savings of Malaysian Muslims in Mudarabah, Musharaka and Ijara and in 1983 Band Islamic Malaysia Berhad (BIMB) was set up to work subject to Islamic laws. Pakistan has been trying to translate
traditional banking in Islamic one since late 50s but has not got much success due to strong resistance. State bank of Pakistan has licensed to the Meezan Bank Limited (MBL) as first Islamic bank in 2002.

Branch network, deposits, customers, assets, liabilities and equities of Islamic commercial banks are rapidly expanding especially in Muslim world. Every bank is striving to stay in Islamic banking because of the profitability of Islamic banking products and services. Pakistani Islamic banking Industry (IBI) reported an expansion of 19 new branches with 7.70 percent quarterly growth and its assets reached to Rs. 644 (billion) at the end of March 31, 2012 and regarding assets its share in market slightly decreased, however, its deposit share remained stable at 8.40 percent. At the end of this quarter the Islamic banking industry has recorded the financing of 206 billion rupees with Mudarabah 40.10 percent, Diminishing Musharaka 35.10 percent and Ijara with 10.70 percent. 35.1 percent and Ijara 10.7 percent. Liabilities of the industry were 13.80 percent for last quarter which declined in this quarter due to 2.00 percent decrease in deposit volume, and only 0.20 percent is reported by the end of this quarter. The IBI’s earnings remained strong during the quarter with annualized ROA and ROE of 1.6 percent and 17.8 percent respectively, which are higher than that of overall banking industry (SBP, 2012).

The solvency and risk are core parameters on the basis of which financial performance of a bank is appraised and these are closely tagged with liquidity, as more liquid operation ensures greater solvency and lesser chances of default risk, and on the other hand sound equity capital reflects the paramount solvency position. Inability to mop-up short term bearings gives birth to liquidity risk, and failure to defray fixed financial charges and long run obligations take a bank towards insolvency.

1.1. Research objectives

The main objective of this study is to appraise and analyze comparatively the riskiness and solvency of Pakistani and Malaysian Islamic banks. Besides of this it enriches the existing literature in the area of performance appraisal of Islamic banking system.

1.2. Significance of the study

The study is worthwhile as literature reveals that performance comparison of conventional banks and conventional versus Islamic banking has been the focus. There is a serious shortage of contribution as to Islamic banking performance evaluation and it will be new to literature. Bearing in mind this phenomenon this work is directed to enrich the literature with inclusive comparative analysis of Islamic banking performance on the basis of risk and solvency.

2. Literature review

The financial ratios are used as benchmark for performance evaluations and Altman (1968) first used financial ratios model to envisage insolvency at company level. Ali, Akhtar and Ahmed (2011) explored the profitability of commercial banks with the help of ROA and ROE models. Beck, Kunt and Merrouche (2010) applied ratio analysis to compare interest-free and interest-based banks and found interest-free banks performance well ahead. A study of twelve Islamic and twelve non-Islamic banks around the Islamic world pertaining to their performance during nineties has been conducted using ratio analysis and trend analysis (Iqbal, 2001). Olson and Zoubi (2007) have adopted accounting ratios to make discrimination between Islamic and conventional banks. Sadaqat, Ali and Farhan (2011) investigated that the Liquidity risk is one of the major challenges for Islamic banks in Pakistan with the use of ratio tool. Shar, Shah and Jamali (2010) applied Bankometer as a ratio tool to rate the selected banks on the basis of key ratios. Akhtar, Ali and Sadaqat (2011) probed the relationship underlying the performance of IBs operating in Pakistan and to the bank specific factors and found a positive and significant relationship among the variables considered. Losses experienced by the Islamic banks at preliminary stage, showed the only insignificant relation in models used.

Profitability, risk and efficiency of Meezan bank are very low, while it has greater solvency position and liquidity was not significantly different from conventional banks with which it was compared and it is claimed that trends in Islamic banking performance were increasing and in near future would be belonging to them (Moin, 2008). The role of measurement of financial performance in decision making process is very significant as financial and economic development is linked with it. Majority of the stakeholders use performance
appraisal approaches for respective objectives and the organizations which they serve, also apply performance measurement norms (Kangarlouei, Motavassel, Azizi & Farahani, 2012).

During world financial crisis numbers of customers have switched over to Islamic banks because the loan they had taken from conventional banks caused serious injuries. Islamic work ethics play a vital role in organizational development and creating an effective and innovative environment and Islamic work ethics need to be implemented in public sector organization of Pakistan (Awon & Akram, 2012).

Ahmad, Rehman and Saif (2010) observed that Islamic banks customers are highly satisfied with quality products compared to interest based banks. World is dramatically changing into globalization, despite the fact that interest based banking has firm roots worldwide, it needs to bring such changes as may address the novelty and innovative requirements. This dynamic paradigm has resulted in the emergence of Islamic banks all over the globe but facing serious challenges (Ahmad & Hassan, 2007). Elsiefy (2012) assessed various types of risk associated with banks in Qatar. He found an increasing trend in overall risk for Islamic banks and a decline in for conventional banks, which is due to a creeping credit risk to Islamic banks.

Haron and Ahmad (2008) identified that although mechanism of sharing profits and dividend does not differ much from conventional banks but there are chances of getting return while placing deposits with Islamic banks. This fact cannot be denied that Islamic financial institutions do have the potency to grow but they have a number of trials encountering them. Customers rely heavily upon traditional financial institutions and there is shortage of Islamic financial institutions (FIs) to cater to the transactional needs across the national boarder and in the absence of unified regulatory set up it is difficult to catch new customers (Garas, 2007). The study regarding feasibility of applying interest-free banking model demonstrates that there is a need to clearly understand the merits and demerits of such a system prior to its successful implementation. It is also indicated that Islamic banking is more oriented towards investment activities (Siddiqui, Malik & Ghafar, 2011).

Though Islamic banking is expanding globally due to its uniqueness but it needs to get the consultation with highly qualified Islamic scholars who have complete command over Sharia compliance and all technical matters should be brought to them for optimal and most suitable solutions. Study has prescribed the collaboration with international Shariah scholars and to bring institutional changes to be effective in the global economy (Ahmad & Noor, 2010). Islamic banks are encountered by misconception of people about their operation; compete with widespread traditional banking and Sharia compliance (Hanif, 2011). This is a fundamental principle that acts like an axiom of the system and no efforts were made in this study to justify forbidding of interest, which is charged on loans in value free society but not justifiable in spiritual value society (Siddiqui, 2012).

While practicing Islamic banking the management is liable to consider the interests of stakeholders as well as that of stockholders and this socio consideration has made it highly lucrative component of Islamic financial system (Muhammad, 2013). Samad (2004) examined and compared the performance of interest-based and interest-free banks of Bahrain, for a period 1991-2001. He measured profitability, liquidity and credit risk using nine respective ratios and found that in regard to ability to earn profit and discharging obligations, there is not a significant difference. But Islamic banks are ahead in credit performance to conventional ones, which indicates that conventional banks are open to risk compared with interest-free banks of Bahrain. The relationship between the bank parameters and financial performance of Islamic and conventional banks is not the same as the volume of assets and total expenses are negatively correlated to financial performance of conventional banks and positively correlated to performance of Islamic banks in Pakistan (Ansari & Rehman, 2011). Islamic banks are better than conventional banks and mixed banks subject to the capital adequacy and assets quality and management competence, while profitability of the Islamic and conventional banks is lesser then mixed banks. Author concluded that Islamic banking set up is developing (Kouser & Saba, 2012). Islam (2012) has measured the financial health of two Malaysian financial institutions and empirical results revealed healthy performance of development financial institutions gauges in catering to the economic financial requirements and also aids in attaining socio-economic enlargement goals at country level.

Fayed (2013) has comparative analyzed the financial performance of Egyptian Islamic and conventional banks for a period of 2008-10, with the help of bank-o-meter. The empirical findings demonstrate that capacity to earn profit; ability to meet the due obligations; solvency and risk conventional banks are ahead to
selected Islamic banks. Najjar (2013) suggested the use of ratio model to have an indicator regarding safety of operation and management of liquidity position, assessing risk and prevention of defaults can be best monitored by ratio application.

3. Methodology of research

Data have been collected from secondary sources and tested through well-known statistical tool ratio analysis in this field. The ratio model appraises comparatively the riskiness and solvency of Pakistani and Malaysian Islamic banks for the span of six years ranging from 2006 to 2011.

3.1. Model description

Figure 3.1 has depicted the performance indicator and its dimensions. Where, R&S = Riskiness & Solvency, DTA = Debt to Assets Ratio, DTE = Debt to Equity Ratio, EMR = Equity multiplier ratio, RTL = Reserves to Total Liabilities. Financial performance of the selected Islamic banks is assessed on the basis of risk and solvency.

3.1.1. Risk and Solvency

The solvency ratios give an idea about the business’s long run survival as well as an indication of potential financial risk associated with its long term bearings. As liquidity ratios are of interest of short term creditors and solvency ratios are keen interest for long term lenders. Lenders analyse the long term solvency of the firm as they want to recover the extended loan and service chargers. Long term debts provide an incentive for tax exemption to bank management and it might be problematic for management as stakes of lenders and investors are injured. Solvency ratios are expressed in percentage form and Debt to assets ratio (DTA), Debt to equity ratio (DTE), Equity multiplier ratio (EMR) and Reserves to Total Liabilities (RTL) examine the solvency of a bank unit.

3.2. Hypotheses

Following hypotheses are designed to examine the performance:

H₀: There is no difference in risk and solvency level of Pakistani and Malaysian Islamic bank.

H₀(a): The Pakistani Islamic bank are more solvent than Malaysian Islamic banks.
3.3 Sampling, data and analysis

In this study five Islamic banks; Meezan Bank Limited, Dubai Islamic Bank Pakistan Limited, AlBaraka Bank (Pakistan) Limited, BankIslami Pakistan Limited and Burj Bank Limited are operating in Pakistan and these all are taken into account, however for the purpose of ease in analysis five Islamic banks form the Malaysian Islamic banking industry; Bank Islam Malaysia Berhad, Bank Muamalat Malaysia Berhad, Affin Islamic Bank Berhad, AmlIslamic Bank Berhad and Hong Leong Islamic Bank Berhad, are conveniently chosen. The audited annual financial statements of respective Islamic banks are used to obtain data for the period 2006 to 2011. The data description is done through mean; standard deviation; coefficient of variation and t-test examines the significant performance differences.

4. Data analysis and discussions

4.1. Risk and Solvency

The results of parameters those measure the risk and solvency, are discussed below with reference to corresponding tabular values and graphs.

4.1.1. Deposits to Assets Ratio (DTA)

Table 4.1 exhibits the deposits to assets ratio of PIB and MIB over the period. The mean value of this ratio for PIB is 0.0698 and for MIB it is 0.0988, which is pointing out that MIB have attracted greater volume of deposits compared to PIB for the period. The deviation in DTA is 0.0191 for PIB is less and ensures the stable volume of deposits maintenance during the period. Consistency has been observed in results produced by last two columns while for MIB due to increasing trend in DTA this deviation is 0.0547. However, PIB are stable, less risky and comparatively solvent as they have enough assets as a cover for depositors. Our results are strengthening Moin (2008) that PIB are less risky and solvent.

In case of DTA, t-statistic has rejected H₀, which expresses that there is a significant difference in this ratio for Pakistani and Malaysian IBs investigated there in the same period, however, H₀(a) is rejected that reveals that MIB have maintained better DTA over the period compared to PIB. MIB are open to default risk and they are less solvent due to greater amount of deposits they have, that contrast Hamid and Azmi (2011).

Table 4.1. Descriptive statistics and risk & solvency indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Bank</th>
<th>Mean</th>
<th>S.D</th>
<th>CV</th>
<th>t-value</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>RISK &amp; SOLVENCY</td>
<td>DTA</td>
<td>PIB</td>
<td>0.0698</td>
<td>0.0191</td>
<td>0.2736</td>
<td>1.9626</td>
</tr>
<tr>
<td></td>
<td>MIB</td>
<td>0.0988</td>
<td>0.0547</td>
<td>0.5536</td>
<td>3.1906</td>
<td>H₀: Rejected</td>
</tr>
<tr>
<td></td>
<td>DTE</td>
<td>PIB</td>
<td>0.2289</td>
<td>0.1258</td>
<td>0.5496</td>
<td>8.4988</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MIB</td>
<td>0.4527</td>
<td>0.3339</td>
<td>0.7376</td>
<td>3.0834</td>
</tr>
<tr>
<td></td>
<td>EMR</td>
<td>PIB</td>
<td>6.7631</td>
<td>3.0345</td>
<td>0.4487</td>
<td>4.2117</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MIB</td>
<td>0.1551</td>
<td>0.0434</td>
<td>0.2798</td>
<td>4.2117</td>
</tr>
</tbody>
</table>

Source: Calculations on the basis of secondary data.

Figure 3.2 graphically expresses the comparative average DTA ratio for Pakistani and Malaysian Islamic banks respectively. The average DTA for MIB is 0.0988, well ahead to that of PIB which is 0.0698. The low DTA ratio hints that PIB have attracted fewer deposits, places low liability to return these when customers would demand and it makes them more solvent and less risky. The high DTA graph is evident that comparatively more deposits are placed with MIB; and it indicates that potential funds required to repay the deposited amount will be greater. The customers may arrive at any time to withdraw funds, so MIB have to maintain healthy reserves to cope this demand; and it opens them to insolvency risky.
4.1.2 Deposits to Equity Ratio (DTE)

Table 4.1 reveals the DTE ratio of PIB and MIB for the period. Mean value of this ratio for PIB is 0.2289 and for MIB it is 0.4527. It is pointing out that MIB have more deposits in response to equity compared to PIB for the period. Deviation in DTE is 0.1258 for PIB is less and ensures the stable volume of deposits maintenance during the period. While for MIB due to increasing trend in DTE this deviation is 0.3339, and same indication is experienced by CV figures. In case of DTE, on the basis of t-statistic $H_0$ is rejected, and articulates that there is a significant difference in the ratio for IBs of both countries, that’s why $H_0(a)$ is tested and is being rejected as well. Rejection of $H_0(a)$ discloses that MIB have comparatively maintained better DTE over the period. However, PIB are stable, less risky and comparatively solvent as they have enough equity as a cover for depositors or less deposit obligations to pay. MIB are exposed to insolvency risk and they are less solvent due to greater amount of deposits they have and/or lesser amount of equity.

Figure 3.3 is reflecting graphically the comparative average DTE ratio for both sets of banks over the period, 0.2289 for PIB and 0.4527 for MIB which is almost double comparative to DTE of PIB. It is likewise the DTA; and demonstrates the MIB are vulnerable to default risk and they are less solvent comparative to PIB which are more solvent and less risky.
4.1.3. Equity Multiplier Ratio (EMR)

Table 4.1 illustrates the EMR ratio of PIB and MIB for the period. The mean value of this ratio for PIB is 8.4988 and for MIB it is 6.7631, that indicates MIB have utilized more external funds to finance assets compared to PIB who have higher EMR which indicates that comparatively major portion of assets are equity financed during the period. Deviation in EMR is 1.9632 for PIB is less than MIB deviation and certifies the stable practices of equity financing during the period. While for MIB due to increasing-decreasing trend in EMR this deviation is 3.0345, and CV figures are supporting the arguments provided by SD. In case of EM ratio, on the basis of t-statistics $H_0$ is rejected and states that there is a significant difference in this ratio for Pakistani and Malaysian IBs. To check this significance $H_{0(a)}$ is tested and accepted. PIB have maintained better EM ratio over the period compared to MIB. However, PIB are stable, less risky and comparatively solvent as they have enough equity to finance assets. MIB are comparatively open to insolvency risk and they are less solvent.

Figure 3.4 graphically expresses the comparative on average EM ratio of Pakistani and Malaysian IBs; and portrays healthy EM ratio for both sets but on average EM is high for PIB compared to MIB. However PIB are stable, less risky and comparatively more solvent as they have enough equity to finance assets, while MIB are open to insolvency risk and they are risky as well.

![Average EMR](image)

*Figure 3.4. Comparative average EMR ratio*

4.1.4. Reserves to Liabilities Ratio (RTL)

Table 4.1 demonstrates the RTL ratio of PIB and MIB for the period, showing average value of this ratio for PIB is 0.1551 and for MIB it is 0.1003. It is directing that MIB have low level of reserves compared to PIB which have higher RTL indicates that comparatively they have maintained sound reserves volume during the period. Deviation in RTL is 0.0434 for PIB is greater than MIB deviation and endorses the instable reserves position. However, for MIB this deviation is 0.0270 and same assistance being provided by CV results. On the basis of t-statistics $H_0$ is rejected and holds that there is a significant difference in this ratio for PIB and MIB over the period taken into account in the study. Hence, to scale this significance $H_{0(a)}$ is tested and its acceptance reflects that PIB have maintained high RTL ratio for the period. PIB are comparatively more solvent to MIB but MIB are consistent in maintaining stable reserves position to meet future contingencies, while reserve ratio is declining for PIB and improving for MIB.

Figure 3.5 comparatively depicts the average RTL for PIB and MIB and it is 0.1551 and 0.1003 respectively. This high RTL indicates the less riskiness and solvent position of PIB, which is strengthening the study of Saifullah, (2010) and they having less financial risk, whereas, MIB are less solvent and more risky which is contrasting the findings of Saifullah (2010).
5. Conclusion and recommendations

5.1. Conclusion

Pertaining to DTA, PIB have reported increasing trend and a downward trend is observed in MIB. Findings demonstrated that performance of Malaysian IBs is better in maintaining high DTA and DTE compared to PIB. In response to DTE both countries IBs are growing over the time. High DTA and DTE are indicators of high insolvency risk for MIB and PIB are comparatively less risky in that regard, it is supporting Elsiefy (2012) that risk for Islamic banks is creeping up. Both streams are greatly depending on equity as revealed by EMR, but this reliance is more for PIB because equity financing is less risky. Findings revealed better EM ratio by PIB which is serving as a safeguard against the insolvency risk and MIB are a bit risky in this respect. Pakistani and Malaysian Islamic banks are cutting down the reserves position and utilizing more funds to generate revenues but this ratio is very high for PIB. This high RTL ratio is a cushion against the default risk for PIB while, MIB are open to such risk. Referred to DTA and DTE, MIB are performing better however, for EM and RTL, PIB are superior and it is inferred that MIB are more risky and less solvent, consistent with (Fayed, 2013) comparative to PIB which are less risky and more solvent (Samad, 2004 & Moin, 2008).

5.2. Summary

Solvency has gradually condensed for both set of banks over the period under consideration and they are vulnerable to financial risk. Leverage is demonstrating an upward movement in level of risk associated with financing activities. MIB have succeeded to attract fair amount of deposits compared to PIB, though, it is a good sign that there operation is grooming at good pace but increasing amount of risk associated when these deposits would be called back by customers. Analysis indicated solvency of MIB and PIB has declined and MIB are more open to default risk.

5.3. Recommendations

1. Default risk for Malaysian Islamic banks has risen up with the passage of time and it is recommended to carefully proceed in future as the massive amount of risk might cause serious injuries. The seminars and conferences require to be arranged at national level to stimulate the desire and demand for Islamic banking.

2. It is found that PIB are operating with riskless policies that ensured solvency. It is suggested that Pakistani Islamic banks may take calculated risk to yield sound revenues.

3. In Pakistan there are only five Islamic banks and it is suggested that like Malaysia, Islamic banking network needs to be expanded and at government level serious steps required to give lasting life to Islamic financial institutions.
4. While most of the Islamic banks operating in Pakistan are in private hands. Due to non-public ownership they are reluctant to formulate the risky and profitable policies. They are striving to play safe and that is the embedded reason of low profits.

5. It is suggested that Islamic banking should fully be assisted by Pakistan government, so that they may have abundance of equitable funds and their administrators and policy makers may reframe the risk aversion policies and become courageous in taking aggressive and profitable steps.

6. It is also suggested that Islamic banking professional needed be hired to get insight regarding the Malaysian Islamic banking success, supervision and consultation may be made to make Pakistani Islamic banking more catchy and worthwhile for the public.

References


