Financial Stability of Islamic Banks; A Case Study of Pakistan

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Authors' contributions

This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.

Article Information

Case Study

ABSTRACT

It is reported by Thomson Reuter in its publication, that Islamic banks contribute $ 1.3 trillion in total assets of International Banking Sector during 2012, with the growing rate of 15% per annum. According to State Bank of Pakistan (SBP), there are five (05) fully fledged Islamic banks operating in Pakistan. And their share to deposits in banking business is nearly 13% and is expected to grow to 20% in 2020. Being the deposit taker and engine of economy, banks are required to be financially sound. Since emergence of Islamic Banking in 1975, share of Islamic banks is growing in the industry and corporate or ordinary investors are very keen to know their credibility, so their stability is very much questioned. To answer this, an empirical measure i.e. Z-Score was calculated and was compared with large as well small conventional banks operating in Pakistan. Financial statements for last eight years (2007-2014) of fifteen banks were obtained and ratios were calculated for each bank. In analysis, five large conventional banks, five Islamic banks and five small conventional banks were selected from Pakistan. And based on the average values of ratios and empirical analysis using statistical tools it was resulted that Islamic banks were more economically secure than both huge and small conventional banks. But their return on assets was comparatively smaller than large conventional banks but was larger than small conventional banks.

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1. INTRODUCTION

Islamic banks have healthy share in deposits and other banking services across the globe and also in Pakistan. Islamic banking stemmed officially in 1970, when Finance Ministers of the Islamic Countries held conference in Karachi, Pakistan [1]. At first, Islamic Development Bank was setup in 1975 and the first modern Islamic Bank i.e Dubai Islamic Bank was established in 1979. Starting from only one institution in 1975, now Islamic Banking is being practiced in more than 75 countries (including Europe and United States) with more than 300 Islamic Financial institutions [2].

According to Thomson Reuters estimates, total value of financial assets of Islamic Banks Worldwide is nearly USD 1.3 trillion in 2011. Only the Sukuk (a financial instrument, equivalent of bond) worth US$ 84 billion in 2011 in world financial market, having a record growth of nearly 150% in last five years [1] and is growing @ 10-15% annually [3]. As the nature of Islamic Finance is asset-backed which makes it ideal for building highways networks, ports and other big projects. According to an estimate of Asian Development Bank, US$ 800 billion will needed for infrastructure financing in Asia alone over the next decade [4]. Keeping in view the future perspective, Turkey, Indonesia and Jeddah based Islamic Bank i.e. Islamic Development Bank is planning to establish an Islamic Infrastructure Bank with minimum investment of US$ 300 million each by Turkey and Indonesia.

According to press release by State Bank of Pakistan (SBP) [5], in Pakistan five full-fledged Islamic banks, one MCB's Islamic banking supplementary and seventeen conventional banks having Islamic banking branches are operating with more than 1700 branches all over the country. Share of Islamic banking deposits in banking industry is nearly 12.8% as on June 30, 2015 and is anticipated to develop to 20% in 2020. Islamic banking regulatory and supervisory body is established by SBP to make certain Shariah fulfillment of Islamic banking operations. To encourage Islamic banking, Pakistan's Government in 2013 had constituted a direction-finding Committee which has to pave the way for advancement of Islamic finance and its instruments. In different initiatives taken by steering committee, one includes the organization of separate Islamic Finance section at SECP (Securities and Exchange Commission of Pakistan) with the aim to promote and develop Islamic Capital Markets. In developing the International Standards for Islamic Finance, State Bank of Pakistan played very active role in the institutions like International Islamic Financial Market (IIFM), Islamic Financial Services Board (IFSB) and Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI).

For a deposit taker, financial soundness and stability is very critical for the protection of principal amount as well as profit over it. All the potential depositors are very keen to know the credibility of a deposit taker institutes either by making empirical analysis (for corporate investors) or by the previous experience of general public (ordinary investors). As the business of Islamic banks is growing with the passage of time, so it is the matter of high importance that their financial stability must be gauged. In previous research by [6], it is found that Islamic banks are better capitalized and have higher asset qualities and are less likely to dis-intermediate during crisis and showed better stock presentation during the crisis in 2013.

The research in question is very much concerned about the scenario of Isamic Banking in Pakistan and knowing whether or not these Islamic Banks are financial sound than conventional banks.

2. LITERATURE REVIEW

2.1 Basics of Islamic Banking

There is significant difference between conventional and Islamic banks in terms of conceptual framework, as Islamic banks totally follow the Islamic basic principles in which Interest (Riba) is prohibited (Al-Quran). Replacing interest, Islamic banks operate on the concept of profit and loss sharing arrangements between client and the bank, purchase and resale agreements and also provide services for fees. The rate of return on potential investment or obligation is not known or predetermined in Islamic banking. Hence, maximizing the risk and transferring it to investor rather than banks itself. In purchase and sale agreements (like Ijarah), the Islamic banks makes the profit by taking mark-up from the client which usually based on benchmark rate, generally equal to the national or international market rate like London Inter Bank Offer Rate (LIBOR) [5].

While discussing the rate of return and risk taking by the Islamic banks, it is common practice that PLS accounts for equal risk sharing between client and the bank. Hence resulting in balanced income distribution and less monopolize economy [7].

2.2 Lending by the Islamic Banks

Islamic banks lending principles based on purchase re-sale practice, in which bank purchase the item by itself and then re-sale it to client by allowing him to pay in installment. In certain practices banks lend money on floating interest rate which is equal to certain percentage of company's earnings. Hence, when principal amount of loan is recovered the contract ends [8].

In another approach; bank and client share an agreed ratio of capital to purchase an asset, hence converting the contract into partnership deed. At first, the profit generated by the asset is shared between banks and client at an agreed ratio. Later on the asset's ownership is handed over to the borrower by giving borrower the chance to purchase the bank's share by paying in equal installment to bank [9].

2.3 Investment Practice in Islamic Banking

Approximately 100 Islamic equity funds are operating worldwide and this is the fastest growing (@ about 12-15%/annum) sector within Islamic financial system. The investment practices in Islamic banking concept regret the un-ethical investing, moral purchasing, alcohol, pork, gambling, etc, because these are prohibited by Islam [8].

2.4 Deposit Taking

In Islamic Banking current deposits are taken by the banks as *Amanat* (Safe Keeping and repaid on demand), the services provided on current deposit are generally free of cost. While fixed posit are taken on investment basis, in which profit or loss is shared predetermined ratio [10].

3. DATA SOURCES AND METHODOLOGY

3.1 Data Sources

Data was collected from the previous 08 years (2007 to 2014) financial statements of 15 banks operating in Pakistan. Banks were categorized as Large Conventional, Small Conventional and Islamic Banks, vide criteria given in Banking Survey of Pakistan [11]. Five Large Conventional banks i.e., Habib Bank Ltd (HBL), United Bank Ltd. (UBL), Muslim Commercial Bank (MCB), Allied Bank Ltd. (ABL) and National Bank of Pakistan (NBP) were selected; five Small Conventional banks i.e., Faysal Bank, Bank of Punjab (BOP), Bank of Khyber (BOK), Jahangir Saddiqui (JS) Bank and Askari Bank were selected whereas five Islamic Banks, which include Dubai Islamic Bank, Al-Barka Bank, Meezan Bank, Bank Islami and Bank Al-Falah were selected for evaluation.

First, individual values i.e Total Assets, Total Equity, Gross Loan, etc, were taken directly from financial statements of each bank. Average was calculated of individual ratios for each bank for all 08-years. Then based on those average ratios, required values of Capital Asset Ratio (CAR), Return on Assets (ROA), Standard Deviation of ROA, were calculated for each bank. After that Z-Score was calculated, based on ratios [12].

3.2 Financial Soundness

Financial stability means public trust and confidence on financial institutions, infrastructure, market and the system as a whole. It is very critical for healthy and well-functioning efficient economy. Islamic banks in different operating countries are playing a reasonable role in smooth running of country's economy.

For smooth and progressive macro-economic development (both nationally and internationally), financial system must be strong which may allow the efficient capital flow in all the organs of economy. And to make this possible, financial institutions including banks play a key role in strong macro-economic performance. The soundness and stability of financial institutions is so important that they are thought to be the pockets of economy. That's the reason, why governments are keeping closer look at financial and structural health as well as efficiency of the financial institutions and financial markets. Detail of financial measure used in this study is given below.

3.3 Z-score

Our primary measure of financial soundness of banks is z-score, as it has become a popular and analyzes the bank's capitalization, profitability and deviation in asset return in one index [13] and [14]. The z-score has been used frequently to check the bank riskiness in crisis period ([15,16,17,18,19]).

$$z - Score = \frac{CAR + ROA}{SDROA}$$

Whereas, *CAR* is "capital to asset ratio" *ROA* is ratio of "total return on assets" and *SDROA* is the standard deviation in the ratio of ROA.

A time series analysis of different banks was made at the same period of time. The higher value of z-score indicates that bank is more stable and is less risky and *vice versa**.

Z-score reflect same affect for both conventional and Islamic banks? The answer is, YES Z-score can equally be applied to both conventional and Islamic banks, because it is the objective measure of bank soundness. Means that, it only focuses the situation in which banks are running out of capital and reserves, overstating the low or high risk adjusted return strategy used by the banks [20].

The possible criticism on the z-score, when applied to Islamic Banks, is the characteristic of profit or loss sharing agreement by Islamic banks and hence passing on the risk of default to investors/depositors. And the answer to criticism is, conventional banks also pass on risk to creditors in one form or other, for examples taking collateral/mortgage during extending loan. In contrast, when losses occurred, their affect is reflected in capital and reserves and hence additional layer of protection is exhausted [21].

At first stage of analysis, we find out the values of z-score for both conventional and Islamic banks. Conventional banks were further divided into large conventional and small conventional banks. And their z-score was compared with each other, to find out the final results.

Regression model was used to find out the dependency of ROA, CAR and Bank Type on Z-Score, which is given below:

$$f(ZScore) = \alpha + \beta ROA_{ij} + \gamma CAR_{ij} + \vartheta Btype_i + \varepsilon_{ij}$$

Where as ROA is the return on assets of bank *i* for year *j*, CAR is the capital asset ratio of bank *i* for year *j*, *Btype* represent bank type and ε is error term.

ROA, CAR and Btype were regressed over Z-Score to find out the relationship between both (dependent and independent variables).

4. RESULTS AND DISCUSSION

4.1 Z-score

Table 1 depicts that z-score of large conventional bank showed little variation as compared to Islamic and small conventional banks. The mean value of z-score for large conventional banks was 31.3 at 95% confidence interval with the standard deviation of 8.9. The upper limit of z-score of large conventional banks showed the value of 42.4. The mean value of Islamic banks was 45.4 at 95% confidence interval with the standard deviation of 15. Whereas, the upper limit of z-score of Islamic banks showed the value of 64. The mean value of small conventional banks was found to be 26.3 at 95% confidence interval with standard deviation of 12. And the upper limit of z-score was recorded 41.6. Which shows that Islamic Banks are more financially stable than both large and small conventional banks.

Table 1. Descriptive statistics

	Btype		Statistic	Std. error
z-score	Large Conventional	Mean	31.3060	3.99139
	Islamic	Mean	45.3660	6.88056
	Small Conventional	Mean	26.3480	5.51873
CAR	Large Conventional	Mean	11.9460	1.05721
	Islamic	Mean	17.0140	2.24874
	Small Conventional	Mean	14.1740	3.07752
ROA	Large Conventional	Mean	2.8560	.43257
	Islamic	Mean	1.0300	.30661
	Small Conventional	Mean	.7080	.12835

Table 2. Model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.831[a]	.691	.686	9.26963

a. *Pridictors: (Constant), ROA1, CAR1*

Table 3. ANOVA[b]

Model	Sum of squares	df	Mean square	F	Sig
Regression	22502.306	2	11251.153	130.940	0.000[a]
Residual	10053.349	117	85.926		
Total	32555.654	119			

a. Pridictors: (Constant), ROA1, CAR1
b. Dependent Variable: Zscore1

Table 4. Coefficients[a]

Model	Unstandardised coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	-.240	2.484		-.097	.923
CAR1	2.147	.133	.841	16.159	.000
ROA1	2.406	.695	.180	3.462	.001

a. Dependent Variable: ZScore1

4.2 Capital Asset Ratio

As shown in Table 1, the average mean value of capital to assets ratio of large conventional banks showed the value of 12 with little variation. Whereas the average mean value of Islamic banks was 17 and this value for small conventional banks was 14. Which showed that Islamic banks are vulnerable to take risk? This can be the individual strategy of every bank but this is the fact that Islamic banks pass on larger share of investment risk to their clients. This can also be depicted that Islamic banks keep adequate capital to survive or keep themselves safe from insolvency, hence taking a cushion against possible losses from operations. Small conventional banks are also vulnerable to risk as compared to large conventional banks hence showing little CAR.

4.3 Return on Assets

Table 1 also depicts that return on assets value for large conventional banks showed relatively high value i.e., 2.8 as compared to Islamic (1.0) and small conventional banks (0.71). By simultaneously analyzing both, CAR and ROA ratios, it is clear that large conventional banks take higher risk to earn high return and small conventional banks takes little risk and hence earn little profit as compared to large.

Regression results show that independent variables (CAR & ROA) explained 69.1% of the variation in the dependent variable i.e Z-Score.

5. CONCLUSION

It is the fact that large conventional banks operating in Pakistan, takes high risk (as shown by CAR) to earn more and more profit as compared to other type of banks. All its recourses are put forward by the management to earn profit. In the case of Islamic banks, which use the higher CAR from other banks, these use little resources for earning profit and use preventive strategies while investing its assets. From z-score values it is clear that small conventional banks are less stable banks and their ROA and CAR are less as compared to other banks because these invest less aggressively. Large conventional banks have relatively small z-score than Islamic banks while greater than small conventional banks, but with small CAR, large banks put their maximum at risk to earn more and more profit which resulted in higher ROA than all other types of banks. Z-score of Islamic banks is relatively higher than large and small conventional banks, which shows that Islamic banks are more stable than other type of banks. Their CAR is larger, which means these also show little aggressiveness in their investment strategies and their ROA is relatively higher than small conventional banks but smaller than large conventional banks.

It is hereby recommended that both large and small conventional banks should properly utilize their resources for better outcome and while getting into agreement with clients, potential risks should be shared equally between bank and client.

The finding discussed in this paper are not final and may be viewed as preliminary because there are some other variables which contribute in earning, stability and growth of banks. These variables may be policy management, organizational structure, risk behavior, stakeholder's management, implementation of organizational strategy, etc.

The scope of research can be extended to more sample size, with more variables and use of different measure of financial soundness. Further search can find the way, how Islamic Banks can increase their ROA, along with maintaining higher CAR.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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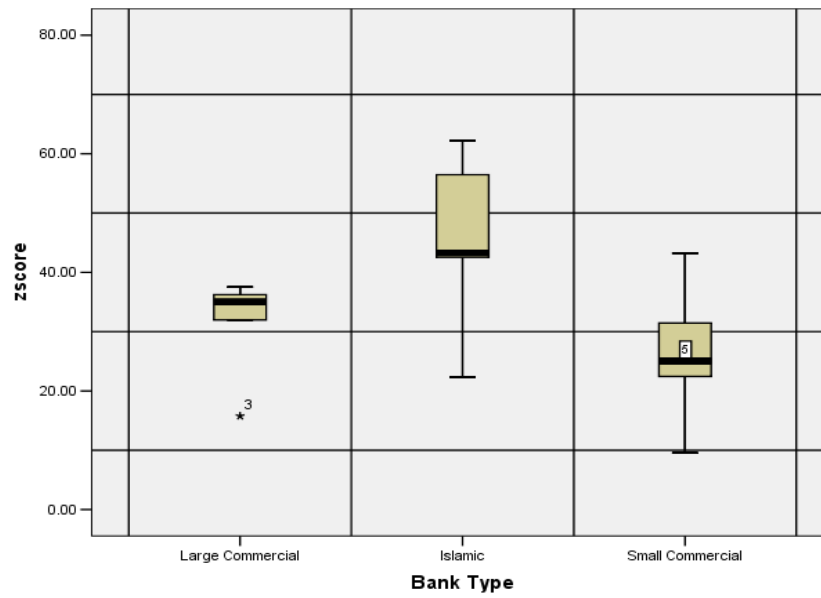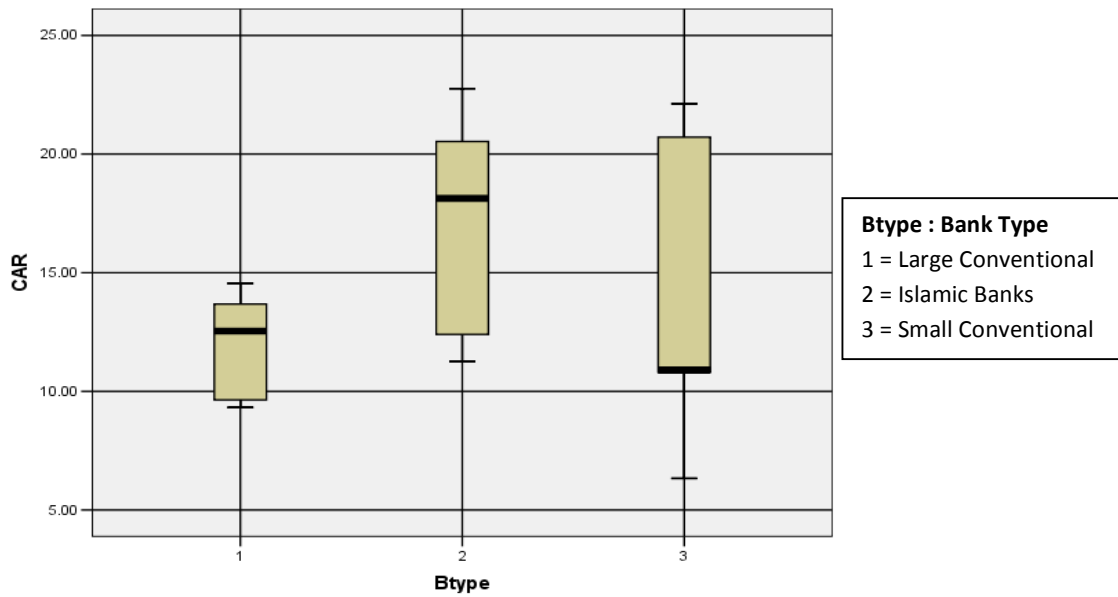
APPENDIX

Fig. 1. Z-Score
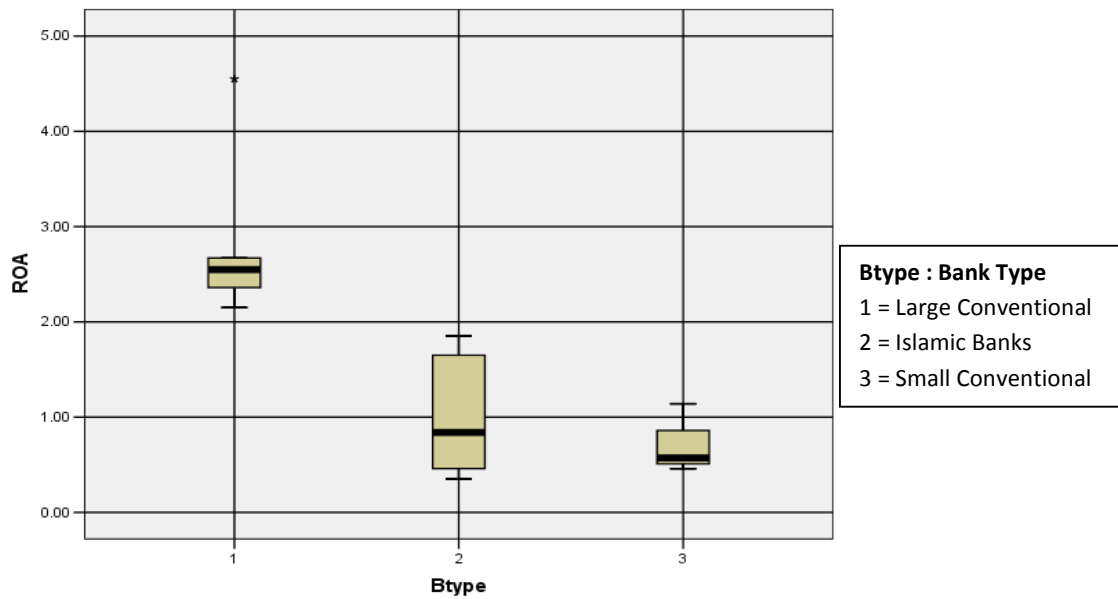

Fig. 2. Capital Asset Ratio (CAR)

Btype : Bank Type
1 = Large Conventional
2 = Islamic Banks
3 = Small Conventional

Btype : Bank Type
1 = Large Conventional
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Fig. 3. Return on Assets