

# Determining Bank performance using CAMEL rating: A comparative study on selected Islamic and Conventional Banks in Bangladesh

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## ABSTRACT

The present article seeks to examine the determinants of the bank profitability in a developing country like Bangladesh and to compare the performance of Islamic and conventional banks during the period 2008 - 2014. Specifically working within the Bangladeshi financial sector, the analysis is confined to the domestic commercial banks operating in the Bangladeshi financial sector during the period 2008-2014. In order to achieve the study objectives and to answer some questions, the ratio analysis and CAMEL has been used. The study found that the higher capital ratio, Tier-1, and growth in total deposits for Islamic banks than conventional banks. On the other hand, Islamic banks are not able to good perform with ROA, ROE and cost-to-income ratio while conventional banks showed satisfactory performance in utilizing funds which was proved in this analysis as high ROA, ROE and cost-to-income ratio. This study shows that management efficiency regarding operating expenses positively and significantly affects the banks' profitability.

**JEL Classifications:** G2, G22, H12, G14

**Keywords:** Bank Performance, Islamic Bank, Conventional Bank, CAMEL

## INTRODUCTION

As financial intermediary, banks are the dominant institutions in Bangladesh. The banking system plays a vital role in the operation of most economies by channeling funds from those who have excess funds to those who have productive needs for those funds. In Bangladesh, Islamic and conventional banking systems are operating under the supervision and control of Bangladesh Bank (BB). While conventional banks (CBs) operating on traditional interest based system, Islamic banks (IBs) do their business in compliance with the principles of Islamic Shari'ah. In Bangladesh, Islamic banking system introduced in 1983 when for the first time an Islamic bank, named Islamic Bank Bangladesh Limited, established in its territory. Since then Islamic banking has been playing a significant role across different economic and social sectors of Bangladesh, although previously it was thought hardly possible to initiate and smoothly run IBs in this country. Before this, banking sector of Bangladesh was highly nationalized and all of these banks were conventional in operation. Now-a-days, in Bangladeshi banking industry has different types

of banks with multiple objectives, commitment and modus operandi. The commercial banking industry is composed of 5 types of banks viz. state-owned commercial banks (SOCBs), specialized banks (SBs), privatized commercial banks (PCBs), foreign commercial banks (FCBs) and Islamic banks (IBs). Different types of banks give priority to different stakeholders. While the private sector banks are guided primarily by profit motive, nationalized commercial banks (NCBs) are committed to social and economic considerations. Among private banks, Islamic banks are different as they operate beyond the narrow scope of commercial banking. An Islamic bank is simultaneously a commercial bank, an Investment bank and a development bank. It is hence, very difficult to find a common and unanimously accepted yardstick to compare the performance of different categories of banks. Bhattacharjee (1989) identified five sets of indicators, such as general business measures, social profitability measures, branch performance measures, employee performance measures, and profitability measures. According to Bikker (2010), five types of performance indicators for financial

institutions are competition, efficiency, costs, profit and market structure. In this article, we have tried to measure the comparative performances of conventional and Islamic banks operating in Bangladesh. For that purpose we have used common indicators such as CAMEL. Finally, it is very difficult to find a common and unanimously accepted yardstick to compare the performance of different categories of banks.

## OBJECTIVES OF THE STUDY

The main objective of this study is to evaluate the performance of IBs over the CBs by using CAMEL. For the sake of simplicity, this study measures only financial performance of banks. The specific objectives of this study are:

- To appraise the capital adequacy of IBs and CBs in Bangladesh;
- To evaluate the liquidity of IBs and CBs in Bangladesh;
- To compare the risk of IBs and CBs in Bangladesh;
- To compare the growth in total deposits of IBs and CBs in Bangladesh;
- To differentiate efficiency between IBs and CBs in Bangladesh;

## LITERATURE REVIEW

In the existing literature, profitability of a bank measured typically by the return on assets (ROA) and/or the return on equity (ROE), is usually expressed as a function of internal and external determinants. Management decisions and policy objectives are the key internal determinants and influencing factors by the bank. Such profitability determinants are the level of liquidity, provisioning policy, capital adequacy, expenses management, and bank size. On the other hand, external determinants, both industry and macroeconomic related, are variables that reflect the economic and legal environments in which the financial institutions operate. Liquidity risk, arising from the possible inability of banks to accommodate decrease in liabilities or fund increases on the assets side of the balance sheet, is considered an important determinant of bank profitability. The loans market, especially credit to households and firms, is risky and has a greater expected return than other bank assets, such as, government securities. Thus, one would expect a positive relationship between liquidity and profitability (Bourke 1989).

A number of variables are determined to be associated with financial distress. Forecasting failure using firm-specific features together with financial structure is originally attributed to the seminal works at Altman (1968) and Altman et al. (1977), which employed discriminate analysis of financial ratios to derive the Z-score approach. More recently, Mannasoo and Mayes (2009) displayed a comprehensive literature review on this subject. According to these authors, although no universal set of indicators had been used across previous studies, the CAMEL factors appear to have a significant power capacity to detect

distress. CAMELS stand for capital adequacy (C), asset quality (A), management efficiency (M), earning (E), liquidity (L), and Sensitivity to market risk (S). In recent year, several studies reported on the use of these variables in risk measurement and monitoring. Example can be found in Cole and Gunther (1995), De Young (1998), Oshinsky and Olin (2006), Kumar and Ravi (2007), Poghosyan and Cihak (2011), Ravisankar, et al. (2010) presented a practical application that emulated the CAMELS rating systems in the Brazilian banking industry using DEA dynamic slacks.

The fundamental ideas behind this practical application are embedded in the close relationship between efficiency levels and distance to the frontier of best practices: the later may be considered as proxies of looming financial distress indicator. However, it should be noted that, because the original criteria used to determine the CAMEL rating are not disclose to the general public (Jin, Kanagaretnam, and Lobo, 2011), proxies are often selected accordingly, based both on prior studies and availability data.

In Granger-Causality tests, Berger (1995b) finds a positive relationship between the capital ratio and the return on equity. Berger bases his argument supporting this relationship on the expected bankruptcy costs, which may be relatively high for a bank maintaining capital ratios below its equilibrium values. A subsequent increase in capital ratio should lead to an increase in the return on equity by lowering insurance expenses on uninsured debt. Demircuc-Kunt and Huizinga (2000) show that financial development has an important impact on bank performance. They provide empirical evidence for higher bank development being related to lower bank profitability, i.e., countries with under develop financial systems often have significantly higher level of bank profit.

A pioneer research by Pettway (1976) explores the relationship between capital structures and risk for U.S. banks and bank holding companies over the period of 1971 and 1974, surprisingly finding a positive relationship between equity-to-total assets and risk. Shrieves and Dahl (1992) also adopt U.S data reach the same positive result. Similar results are reached by applying Europe data, such as in Rime (2001) and Jannota et al. (2007)

Sarker (1999) analyzed the productive efficiency, operational efficiency, allocative efficiency, distributive efficiency and the stabilization efficiency of IBs in Bangladesh. The study found Islami Bank Bangladesh Limited (IBBL) as the leader in the bank market in profit maximization ratio, loan recovery ratio, and branch and employee coverage during the period 1998-2004. Rafiuddin and Alam (2012) used profitability ratio, liquidity ratios, risk and solvency ratio for different IBs and conventional banks of Abu Dhabi, Dubai and Sharjah for the period 2005-2009. They concluded that conventional banks are more profitable compared to IBs. High liquidity and low risk were observed in IBs.

Hassan (2007) analyzed the asset quality, capital ratio, operational ratio, and liquidity ratio for IBs in Bangladesh for the period 1994-2001. The study reported that IBs were outperforming others in capital adequacy and adequate liquidity. Except Return on Equity (ROE), IBs were at par with the industry in all other cases. More recently, Kosmidou (2008) has been found the determinants of the performance of the Greek commercial banks during the period 1990-2002. The empirical findings seems to suggest that the more profitable banks are relatively better capitalized have lower cost to income ratios. He also suggests that the growth of the gross domestic product (GDP) is positively related to bank profitability, while the inflation rate is negatively related to bank profitability during the period under study.

A study by Hassan and Bashir (2003) examine the impact of factors on profitability of Islamic banks. Hassan and Bashir found that the statistically significant and positive effect for the loans activities ratio and capital adequacy on the Islamic banks profitability. Arif (1998) stated that difference between Islamic bank and conventional bank in that while the conventional banking follows conventional interest-based principles, the Islamic is based on interest-free principle and principle of Profit –Loss-Sharing (PLS) in performing their business as intermediaries. Dar and Presley (2000) stated that like conventional bank, Islamic bank is an intermediary and trustee of money of other people but the difference is that it shares profit and loss with its depositors. This difference that introduces the element of maturity in islam banking makes its depositors as customers with some ownership of right in it. Yudistira (2003) stated that many Islamic economics studies has been discussed about rational behind prohibition of interest and the importance of PLS in Islamic banking. Moreover, Islamic PLS principles create the relationship of financial trust and partnership between borrower, lender, and intermediary.

This study is different from other related studies in that it focuses on a number of performance indicators for IBs and CBs in Bangladesh. Besides, along with industry level comparison it also makes a comparison among individual IBs and CBs.

## DATA AND METHODOLOGY

### Research Design

This is a diagnostic research study aims to compare the performance of Islamic and conventional banks in Bangladesh (Kothari, 2008). Empirical data on sample banks were used to draw conclusion over the whole banking industry regarding the problem in question.

### Population and Sample

Currently, fifty six scheduled banks in Bangladesh are operating under full control and supervision of Bangladesh Bank. Under scheduled banks, again 5 State Owned Commercial Banks (SOCBs), 3 Specialized Banks (SDBs), 39 Private Commercial Banks (PCBs) among these PCBs (31 conventional PCBs, 8 Islami Shari'ah based PCBs), 9 Foreign Commercial Banks (FCBs) and 4

non-scheduled banks are operating in industry (BB, 2015). Primarily, five Islamic banks, namely, Islami Bank Bangladesh Limited (IBBL), Social Islami Bank Limited (SIBL), Shah Jalal Islami Bank Limited (SJIBL), Al-Arafah Islami Bank Limited (AIBL) and First Security Islami Bank Limited (FSIBL), and five conventional banks, namely, Arab Bangladesh Bank Limited (AB), Bank Asia (BAL), Prime Bank Limited (PBL), Eastern Bank Limited (EBL) and IFIC Bank Limited (IFIC) have been chosen on the basis of purposive random sampling.

### Tools and Analysis

To evaluate the performance of Islamic Banks over the conventional banks, we used in this research CAMEL to determine the bank's profitability between Islamic and Conventional banks in Bangladesh. CAMEL (source: US) stand for capital adequacy (C), asset quality (A), management efficiency (M), earning (E) and liquidity (L).

(1) Capital adequacy ratio (CAR) or Total capital ratio indicates that bank's capital position and it is expressed as a ratio of capital to its assets.

$$\text{CAR} = (\text{Tier 1 Capital} + \text{Tier 2 Capital}) / \text{Risk Weighted Assets or Total capital ratio} = \text{Total capital} / \text{Total assets}$$

(2) Asset quality is an evaluation of asset to measure the credit risk associated with it.

$$\text{Tier 1 Capital} = \text{Total Equity} - \text{Revaluation Reserves}$$

(3) Management efficiency is the organizational process that includes planning, strategic, setting; objectives, managing resources, deploying the human and financial assets needed to achieve objectives and measuring result. For profitability analysis, the following two widely used financial ratios are measured.

Profitability ratio means a class of financial matrices that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. For profitability analysis, the following three widely used financial ratios are measured:

i) Return on Asset (ROA) = Net Profit after Tax/ Total Asset

ii) Return on Equity (ROE) = Net Profit after Tax/ Share Holders' Equity

(4) Earning quality is used in numerous empirical studies to show trends over time; to changes the evaluation of the financial accounting standards and in other institutions, such as enforcement and corporate governance; to compare financial reporting systems in different countries; and to study the effect of earning quality on the cost of capital.

$$\text{Cost-to-income ratio} = \text{Operating Expenses} / \text{Operating Income}$$

(5) Liquidity means to a company's ability to pay the bills from cash or from assets that can be turned into cash very quickly.

(i) Growth in total deposits, GTD = (Difference between Total Deposits in two subsequent periods/ Total Deposits in the first period)

**Collection of Data**

Data on key financial performance indicators of sample banks were collected for the period of 2008-2014. To conduct this research, secondary data were mainly collected from various sources including annual reports, official websites, balance sheets of sample banks, website of Bangladesh Bank, scientific articles and so on.

**Analysis of Data**

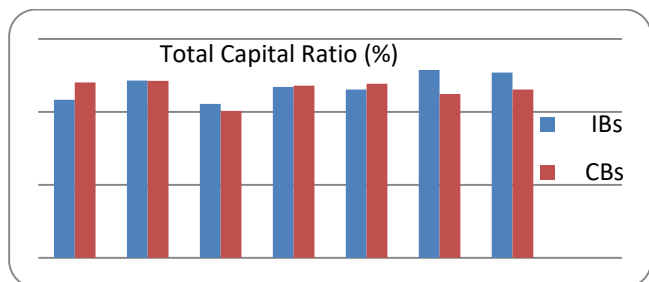
As this is a comparative analysis of financial performance between Islamic and conventional banks in Bangladesh, data of the banks were analyzed by using various financial ratios. After collecting data from various sources, financial performance ratio were presented into tabular form and then pictured into graph. Finally, mean value for each ratio of Islamic and conventional banks were calculated and compared.

Following Bennaceur and Goaid (2008), Kosmidow (2008), and Abbasoglu et al. (2007) among others, the dependent variable used in this study is ROA. Both return on Assets (ROA) and Return on Equity (ROE) measures are closely tied to the key item in the income statement; profit after tax. ROA and ROE have been used in most bank performance studies. ROA shows the profit earned per dollar of assets and, most importantly, reflects the management’s ability to utilize the bank’s financial and real investment resources to generate profits (Hassan and Bashir 2003). For any bank, ROA depends on the bank’s policy decisions as well as other uncontrollable factors relating to the economy and government regulations. Many regulators believe that ROA is the best measure of bank profitability (Hassan and Bashir 2003), while Rosly and Abu Bakar (2003) point out that ROA is the best measure of bank profitability to most analysts. Rivard and Thomas (1997) suggest that bank profitability is best measured by ROA as ROA is not distorted by high equity multipliers and ROA represents a better measure of the ability of the firm to generate returns on its portfolio of assets. ROE, on the other hand, reflects how effectively a bank management is using its shareholders funds. A bank’s ROE is also used to control for the impact of bank size, as the larger banks would have better capability of diversify.

**RESULTS AND DISCUSSION**

Figure 5.1: Comparison of capital ratio among the IBs and CBs.

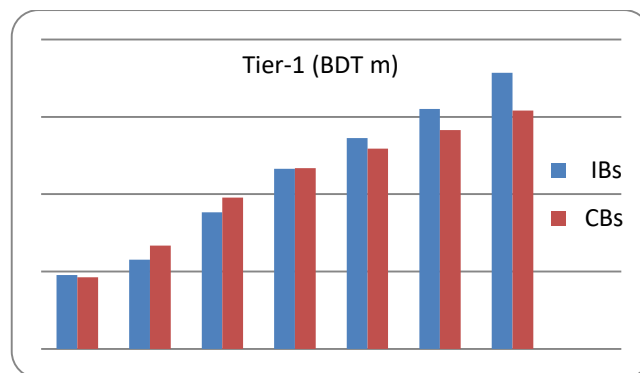
Capital ratios have long been important tool for assessing the safety and soundness of banks. Generally a bank with a high capital ratio is considered safe and likely to meets its financial obligations.



In this study has shown that higher capital ratios of Islamic banks are 2013 and lowest one for Islamic banks are 2010. On the contrary, highest capital ratios of conventional Banks are 2009 and lowest for conventional banks are 2010. Among all banks highest capital ratio is 2014 for Islamic banks and lowest one is 2010 for conventional banks. The result shows that IBs performances are not enough good from 2009 to 2010, but IBs performance 2011 to 2014 are good. Capital ratio of both banks had been increasing trend from year 2012 to 2014. The result also shows that both banks performances are almost same in the year 2009.

Figure 5.2: Comparison of Tier-1 among the IBs and CBs.

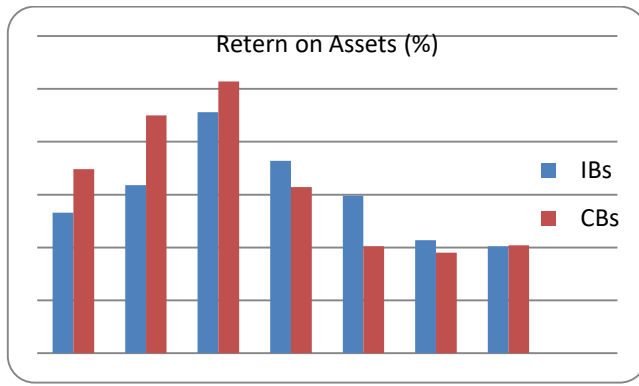
Generally, Tier-1 capital ratio compare between a banking firm’s core equity capital and total risk weighted assets. Core equity capital is known as its Tier -1 capital and is the measure of a bank’s financial strength based on the sum of its equity capital and disclosed reserves, and sometimes non-redeemable, non-cumulative preferred stock. Risk weighted assets of the firm includes all assets that firm holds that are systematically weighted for credit risk.



In this analysis, Tier-1 of both sets of bank show different results in the different years. The Tier-1 of both banks had been increasing trend during the year 2008 to 2014. The result shows that conventional banks Tier-1 is greater than Islamic banks from 2009 to 2011, but 2012 to 2014 IBs Tier-1 is higher than conventional banks. More specifically, Tier-1 is highest in the year 2014 from those years, but IBs Tier-1, 2014 is higher than conventional banks.

Figure 5.3: Comparison of return on assets among the IBs and CBs.

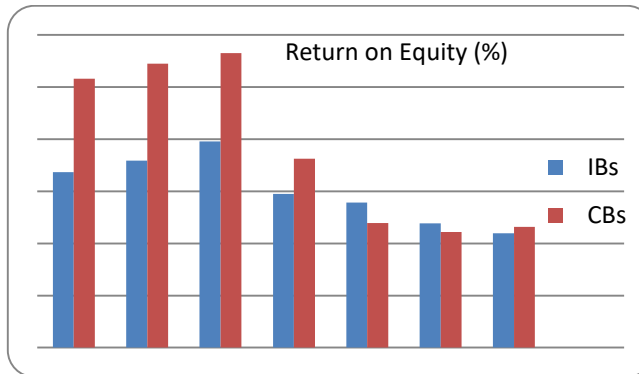
The profitability analysis focuses on return on assets. Generally, higher ROA indicate that the firm efficiently utilizes its assets. ROA also shows that how much the bank is earning after tax for each taka invested in the assets of the firm. Van Horn (2005) sated that on assets indicates the profitability on the assets of the firm after all expenses and taxes. Ross and Westerfield (2005) stated that it is a common measure of managerial performance. Islam and Salim (2011) stated that it is the most stringent and excessive test of return to shareholders. If a company has no debt, the return on assets and return on equity figures will be the same.



The figure 5.3 depicts the percentage ROA of IBs and CBs from 2008 to 2014 in the Bangladeshi banking industry. The performance of both level of banks are showing more or less similar trends during the study period. From the first three years of this study, the banks reveal upward trends with achievement apex point in 2010 and the all the banks are showing dwindle trends up to 2014. Finally, from the above discussion, it has been lucid that Bangladeshi banking industry is not performing as previous way.

Figure 5.4: Comparison of return on equity among the IBs and CBs.

ROE is importance to compare the profitability of a company and Return on Equity (ROE) measures how much the bank is earning after tax for each taka invested in shareholders' equity of the company. Samad and Hasan (2000) stated that ROE is net earnings per dollar equity capital. Van Horn (2005) stated that ROE indicates that the profitability to shareholders' of the firm after all expenses and taxes. Islam and Salim (2011) stated that it measures a firm's efficiency at generating profits from every unit of shareholders' equity (also known as net assets or assets minus liabilities).



Like ROA, ROE of both types of banks shows different results in different years. In case of conventional banks, The ROE is higher from year 2008 to 2011 than Islamic banks. Then from year 2012 to 2013, Islamic banks earned a higher ROE than conventional banks. ROA of conventional banks had been increasing in year 2008 – 2010 and the other year's on the contrary conventional banks ROE is decreasing significantly. Specifically, in the year 2011 ROE of conventional banks decreased by 64.11 percent whereas Islamic banks ROE decreased 74.55 percent.

Figure 5.5: Comparison of cost-to-income ratio among the IBs and CBs.

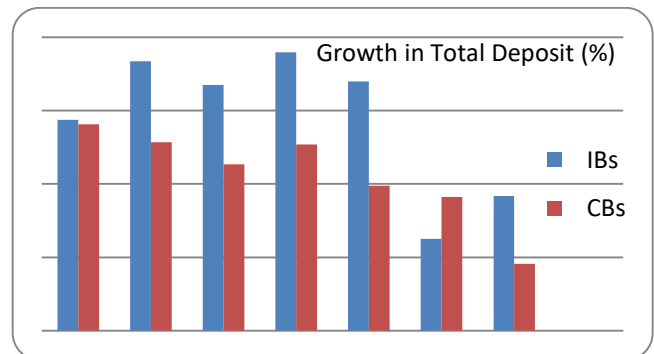
Generally cost-to-income ratio measures operating expenses as a percentage of operating incomes. Cost-to-income ratio a clear outlook of how the company is being managed, it is an important way of determining a bank's value. A low ratio means the company is in good standing. Cost -to-income ratio is known as the efficiency ratio or expense to income ratio.



In this individual mean value analysis indicates that the highest cost-to-income ratios of Islamic banks are highest in the year 2008. On the contrary, lowest income-to-cost ratios are conventional banks in the year 2010. Cost-to-income ratio of conventional banks had been higher in 2011 and 2014 than that of Islamic banks and the year 2008,2009,2010,2012 and 2014 shows opposite picture. From 2010-2014, conventional banks cost-to-income ratios has increased gradually and decreased 2008-2009.

Figure 5.6: Comparison of growth in total deposits among the IBs and CBs.

Growth in total deposits refers increase or addition in total deposits. High real interest rate is leading to lower growth rate of the banks and alternatively low real interest rate is leading to higher growth rate of the banks.



From this analysis, we have seen that the growth in total deposits of Islamic banks is constantly higher than conventional banks during the time horizon of the study without 2013. After 2011, growth in total deposits decreased for IBs and CBs exceptional 2014 for Islamic banks. Finally the result shows for conventional banks, the growth in total deposits sequentially has decreased without 2011.

## SUMMARY OF THE RESULTS (MEAN VALUE)

| SL. | CAMEL                 | Required ratio           | Banks    |          |
|-----|-----------------------|--------------------------|----------|----------|
|     |                       |                          | IBs      | CBs      |
| 1.  | Capital Adequacy      | Capital Ratio            | 11.76    | 11.52    |
| 2.  | Assets Quality        | Tier-1                   | 11145.34 | 10753.23 |
| 3.  | Management Efficiency | ROA                      | 1.51     | 1.58     |
|     |                       | ROE                      | 15.16    | 19.15    |
| 4.  | Earning quality       | Cost-to-income ratio (%) | 45.53    | 40.77    |
| 5.  | Liquidity             | Growth in total Deposits | 28.81    | 21.28    |

Source: IBBL, SIBL, SJIBL, AIBL, FSIBL, AB, Bank Asia, Prime, EBL, IFIC. 2008, 2009, 2010, 2011, 2012, 2013, 2014

In this study, we have seen that the capital ratio of conventional banks has been lower than Islamic banks for the period 2008 - 2014. This means that Islamic banks are better in performance compared to conventional banks.

In this analysis, we have found that Islamic banks Tier-1 is greater than conventional banks. It indicates that Tier-1 capital is the form of banks capital-the money the bank has stored to keep it functioning through all the risky transaction it performs such as trading.

In case of profitability, the profitability analysis focuses on return on asset, return on equity. Generally, higher ROA indicate that the firm efficiently utilizes its assets. Result shows that the ROA of Islamic banks has been lower than conventional banks for the period 2008- 2014. This means that conventional banks utilizes more efficiently of their assets than Islamic banks. ROE of Islamic banks is consistently lower than ROE of conventional banks states that conventional banks earned greater profit over the shareholders' equity as compared to Islamic banks for the year 2008 to 2014. Thus overall result reveals that Islamic banks were found less profitable than conventional banks in Bangladesh for the period 2008 to 2014.

From the table (Summary of the Results), it is seen that cost-to-income ratio of banks are substantially higher for Islamic banks compare to conventional banks. This indicates that Islamic banks have greater opportunity to income compared to conventional banks.

In this study, we have seen the growth in total deposits of Islamic banks is surprisingly higher than the growth in total deposit of its counterpart. More specifically, growths in total deposits of Islamic banks are 26 percent greater than that of conventional banks.

## POLICY IMPLICATIONS

This study furnishes a signal to the conventional banks in case of managing efficiency in capital ratio as it is found from this study that the conventional banks have set backs in this aspect. This study has found lacking in the efficiency level of maintaining ROA of the Islamic banks. So, Islamic banks consider these findings in their further steps of developing strategies regarding banks overall performance.

## CONCLUSION

The empirical analysis makes it possible to identify the findings and draw a conclusion. This study finally concludes that Islamic banks perform better than conventional banks in terms of Capital ratio, Tier-1, and Growth in total deposits. On the other hand, ROA, ROE and cost-to-income ratio were found lower in Islamic banking which advocates the goal of restricted profit achieving by this banking system with maintaining Islamic justice (Hassan, 2003, p. 76). Liquidity of conventional banks was also found lower that is another threat to fulfilling the clients' liquid demand. Based on performance indicators used in this paper, it can be said that the financial performance of both Islamic and conventional banks were improving during 2008-2012, and it was falling beyond this period (See appendices). Irrespective of IBs and CBs, return on equity of conventional banks was excessively high compared to IBs. FSIBL attained ever highest growth in total deposits compared to any other banks in 2008-2014 (See Appendix). Based on above mentioned analysis, let us provide suggestions for Islamic Banks to improve the banking business in Bangladesh. Firstly, Islamic banks may effectively rely on Islamic Inter-bank Fund Market (IIFM) in order to solve the liquidity problem, which was established by BB in 2012 ("Islamic banks get separate", June 04, 2012). Secondly, poor performance of banking industry after the period of 2012 demands for further study to explore the causes. If it is occurred due to external factor, in that case, more supervision and monitoring by the central bank are necessary to overcome illegal practices. Since CBs are in worst situation in terms of CAMEL without management and earning quality, BB as well as concerned banking authority should follow the procedures properly before sanctioning the loans and advances etc. Islamic banks should also expand its banking business into the rural areas that will cover more people into the Islamic banking services. Finally, Islamic banking is now widely recognized as a socially responsible banking, that is why, all Islamic banks should follow the green banking guideline as prescribed by BB to make the business sector as a safeguard of green economy. Further research is necessary to confirm these results.

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## APPENDICES

Capital Adequacy, Assets quality, Management, Earning quality, Liquidity

Appendix 1: Capital Adequacy - Total capital ratio (Percentage)

| Year | Islamic Banks |       |       |       |       | Mean<br>Value of IBs | Conventional Banks |           |       |       |       | Mean<br>value of IBs |
|------|---------------|-------|-------|-------|-------|----------------------|--------------------|-----------|-------|-------|-------|----------------------|
|      | IBBL          | SIBL  | SJIBL | AIBL  | FSIBL |                      | AB                 | Bank Asia | Prime | EBL   | IFIC  |                      |
| 2008 | 10.72         | 10.87 | 12.24 | 11.21 | 9.15  | 10.83                | 12.84              | 11.25     | 10.88 | 12.71 | 12.40 | 12.01                |
| 2009 | 11.65         | 14.97 | 12.04 | 11.25 | 10.91 | 12.16                | 11.09              | 10.01     | 14.71 | 11.34 | 13.49 | 12.12                |
| 2010 | 11.06         | 9.33  | 8.78  | 14.49 | 9.09  | 10.55                | 9.91               | 8.11      | 11.69 | 10.81 | 9.78  | 10.06                |
| 2011 | 13.09         | 13.17 | 9.83  | 13.47 | 9.07  | 11.72                | 11.37              | 14.88     | 12.46 | 10.18 | 10.13 | 11.80                |
| 2012 | 13.49         | 11.52 | 10.74 | 11.75 | 10.20 | 11.54                | 11.73              | 13.05     | 12.64 | 12.05 | 10.18 | 11.93                |
| 2013 | 14.26         | 11.64 | 13.69 | 14.66 | 10.13 | 12.87                | 10.80              | 11.05     | 12.03 | 11.95 | 10.37 | 11.24                |
| 2014 | 12.83         | 11.36 | 13.61 | 14.03 | 11.73 | 12.71                | 10.32              | 11.32     | 12.68 | 13.22 | 10.14 | 11.53                |
| Mean | 12.44         | 11.83 | 11.56 | 12.98 | 10.04 | 11.76                | 11.15              | 11.38     | 12.44 | 11.75 | 10.92 | 11.52                |

Appendix 2: Assets quality - Tier-1

(In million Taka)

| Year | Islamic Banks |           |            |           |           | Mean<br>value of IBs | Conventional Banks |           |           |           |          | Mean<br>value of IBs |
|------|---------------|-----------|------------|-----------|-----------|----------------------|--------------------|-----------|-----------|-----------|----------|----------------------|
|      | IBBL          | SIBL      | SJIBL      | AIBL      | FSIBL     |                      | AB                 | Bank Asia | Prime     | EBL       | IFIC     |                      |
| 2008 | 11,272.12     | 2168.22   | 3,605.00   | 3,498.07  | 3,379.03  | 4784.48              | 6,128.00           | 3,317.22  | 6,265.00  | 4,271.00  | 3,145.00 | 4625.24              |
| 2009 | 14,714.10     | 3914.62   | 4,676.00   | 2,639.08  | 2,862.24  | 5761.20              | 9,250.00           | 4,644.40  | 9,057.00  | 6,441.00  | 4,045.00 | 6687.48              |
| 2010 | 18,559.80     | 4678.56   | 6,748.00   | 9,582.85  | 4,582.21  | 8830.28              | 12,411.00          | 6,569.16  | 15,791.00 | 8,375.00  | 5,737.00 | 9776.63              |
| 2011 | 23,401.24     | 9534.52   | 7,917.00   | 11,924.50 | 5,449.44  | 11645.34             | 13,410.00          | 9,536.33  | 18,744.00 | 10,199.00 | 6,569.00 | 11691.6              |
| 2012 | 28,249.95     | 9,071.99  | 9,646.00   | 13,073.14 | 8,145.33  | 13637.28             | 14,630.00          | 10,444.33 | 20,664.00 | 12,232.00 | 6,738.00 | 12941.67             |
| 2013 | 32,222.40     | 10,000.94 | 10951.28   | 15,113.62 | 9,261.24  | 15509.9              | 15,570.00          | 11,904.15 | 21,708.00 | 13,245.00 | 8,324.00 | 14150.23             |
| 2014 | 35,025.95     | 13078.26  | 11698.49   | 17,181.97 | 12,259.90 | 17848.91             | 16,561.00          | 14,173.67 | 22,611.00 | 13,958.00 | 9,695.00 | 15399.73             |
| Mean | 23349.37      | 7492.44   | 7891.68.00 | 10430.46  | 6562.77   | 11145.34             | 12565.71           | 8655.60   | 16405.71  | 9817.28   | 6321.85  | 10753.23             |

Appendix 3.1: Management Efficiency - ROA

(Percentage)

| Year | Islamic Banks |      |       |      |       | Mean<br>value of IBs | Conventional Banks |           |       |      |      | Mean<br>value of IBs |
|------|---------------|------|-------|------|-------|----------------------|--------------------|-----------|-------|------|------|----------------------|
|      | IBBL          | SIBL | SJIBL | AIBL | FSIBL |                      | AB                 | Bank Asia | Prime | EBL  | IFIC |                      |
| 2008 | 0.92          | 1.19 | 2.26  | 1.71 | 0.61  | 1.33                 | 3.12               | 1.87      | 0.61  | 1.68 | 1.44 | 1.74                 |
| 2009 | 1.34          | 1.24 | 2.08  | 1.77 | 1.56  | 1.59                 | 3.52               | 2.18      | 1.56  | 2.34 | 1.66 | 2.25                 |
| 2010 | 1.47          | 2.39 | 3.01  | 2.65 | 1.89  | 2.28                 | 3.08               | 2.22      | 1.89  | 3.19 | 2.49 | 2.57                 |
| 2011 | 1.35          | 2.72 | 1.26  | 2.06 | 1.75  | 1.82                 | 0.93               | 1.72      | 1.75  | 2.52 | 0.93 | 1.57                 |
| 2012 | 1.27          | 2.75 | 1.44  | 1.30 | 0.69  | 1.49                 | 0.88               | 0.70      | 0.69  | 1.72 | 1.07 | 1.01                 |
| 2013 | 0.96          | 1.67 | 1.02  | 1.20 | 0.53  | 1.07                 | 0.53               | 0.96      | 0.53  | 1.68 | 1.09 | 0.95                 |
| 2014 | 0.67          | 2.36 | 0.59  | 1.10 | 0.35  | 1.01                 | 0.54               | 1.28      | 0.96  | 1.28 | 1.07 | 1.02                 |
| Mean | 1.14          | 2.04 | 1.66  | 1.68 | 1.05  | 1.51                 | 1.8                | 1.56      | 1.14  | 2.05 | 1.39 | 1.58                 |



## Appendix 3.2: Management Efficiency - ROE (Percentage)

| Year | Islamic Banks |       |       |       |       | Mean<br>value of IBs | Conventional Banks |           |       |       |       | Mean<br>value of IBs |
|------|---------------|-------|-------|-------|-------|----------------------|--------------------|-----------|-------|-------|-------|----------------------|
|      | IBBL          | SIBL  | SJIBL | AIBL  | FSIBL |                      | AB                 | Bank Asia | Prime | EBL   | IFIC  |                      |
| 2008 | 19.02         | 10.82 | 25.58 | 24.70 | 4.10  | 16.84                | 40.96              | 23.00     | 20.58 | 18.64 | N/A   | 25.79                |
| 2009 | 16.93         | 12.14 | 25.10 | 24.10 | 11.40 | 17.93                | 39.84              | 32.03     | 30.19 | 22.10 | 12.15 | 27.26                |
| 2010 | 19.00         | 15.31 | 30.71 | 20.01 | 14.00 | 19.80                | 30.77              | 32.12     | 21.65 | 23.64 | 33.12 | 28.26                |
| 2011 | 17.42         | 11.51 | 13.80 | 18.34 | 12.75 | 14.76                | 9.25               | 19.61     | 20.19 | 19.03 | 22.52 | 18.12                |
| 2012 | 13.42         | 14.15 | 17.01 | 13.51 | 11.60 | 13.93                | 9.31               | 7.11      | 13.53 | 14.44 | 15.43 | 11.96                |
| 2013 | 11.36         | 11.01 | 11.25 | 14.15 | 11.95 | 11.94                | 6.13               | 10.55     | 8.35  | 14.44 | 15.98 | 11.09                |
| 2014 | 8.85          | 15.68 | 6.60  | 12.80 | N/A   | 10.98                | 7.18               | 14.09     | 10.08 | 10.93 | 15.67 | 11.59                |
| Mean | 15.14         | 12.94 | 18.57 | 18.23 | 10.96 | 15.16                | 20.49              | 19.78     | 17.79 | 17.60 | 19.14 | 19.15                |

## Appendix 4: Earning quality - Cost to income ratio / Efficiency ratio (Percentage)

| Year | Islamic Banks |       |       |       |       | Mean<br>value of IBs | Conventional Banks |           |       |       |       | Mean<br>value of IBs |
|------|---------------|-------|-------|-------|-------|----------------------|--------------------|-----------|-------|-------|-------|----------------------|
|      | IBBL          | SIBL  | SJIBL | AIBL  | FSIBL |                      | AB                 | Bank Asia | Prime | EBL   | IFIC  |                      |
| 2008 | 73.00         | 15.00 | 34.24 | 65.17 | 66.49 | 50.78                | 30.14              | 34.15     | 33.42 | 35.60 | 70.65 | 40.79                |
| 2009 | 74.00         | 38.00 | 28.68 | 67.40 | 43.44 | 50.30                | 29.83              | 36.63     | 35.47 | 35.62 | 47.40 | 36.99                |
| 2010 | 72.00         | 38.00 | 37.11 | 29.19 | 42.27 | 43.71                | 32.01              | 36.31     | 36.94 | 32.10 | 39.79 | 35.43                |
| 2011 | 73.00         | 33.00 | 24.97 | 26.25 | 41.94 | 39.83                | 44.31              | 36.88     | 35.75 | 34.44 | 51.36 | 40.54                |
| 2012 | 76.00         | 37.00 | 25.50 | 31.89 | 48.41 | 43.76                | 48.27              | 35.40     | 36.62 | 37.39 | 49.66 | 41.46                |
| 2013 | 75.00         | 47.00 | 17.26 | 35.02 | 54.06 | 45.66                | 45.78              | 36.53     | 41.98 | 38.87 | 54.86 | 43.60                |
| 2014 | 74.00         | 41.00 | 17.64 | 33.99 | 56.77 | 44.68                | 43.03              | 40.34     | 48.29 | 43.01 | 58.40 | 46.61                |
| Mean | 73.85         | 35.57 | 26.48 | 41.27 | 50.48 | 45.53                | 39.05              | 36.60     | 38.35 | 36.71 | 53.16 | 40.77                |

## Appendix 5: Liquidity - Growth in total Deposits (Percentage)

| Year | Islamic Banks |       |       |       |       | Mean<br>value of IBs | Conventional Banks |           |       |       |       | Mean<br>value of IBs |
|------|---------------|-------|-------|-------|-------|----------------------|--------------------|-----------|-------|-------|-------|----------------------|
|      | IBBL          | SIBL  | SJIBL | AIBL  | FSIBL |                      | AB                 | Bank Asia | Prime | EBL   | IFIC  |                      |
| 2008 | 21.51         | 22.00 | 61.30 | 29.03 | 10.00 | 28.76                | 28.00              | 28.00     | 24.83 | 39.12 | 20.70 | 28.13                |
| 2009 | 20.86         | 31.07 | 38.44 | 29.18 | 64.08 | 36.72                | 21.00              | 29.00     | 21.51 | 18.32 | 38.58 | 25.68                |
| 2010 | 19.50         | 41.98 | 32.67 | 40.48 | 32.81 | 33.48                | 15.00              | 58.00     | 16.47 | 14.70 | 9.28  | 22.69                |
| 2011 | 17.09         | 49.05 | 32.37 | 52.52 | 38.69 | 37.94                | 21.00              | 10.00     | 28.29 | 33.86 | 33.74 | 25.37                |
| 2012 | 22.22         | 40.00 | 22.58 | 44.40 | 40.64 | 33.96                | 21.00              | 16.00     | 13.91 | 21.50 | 26.43 | 19.76                |
| 2013 | 13.23         | 9.09  | -5.57 | 18.78 | 26.94 | 12.49                | 15.00              | 21.00     | 10.90 | 27.58 | 16.60 | 18.21                |
| 2014 | 18.50         | 21.96 | 2.19  | 18.35 | 30.81 | 18.36                | 22.00              | 5.00      | 1.45  | -0.27 | 17.45 | 9.12                 |
| Mean | 18.98         | 30.73 | 26.28 | 33.24 | 34.85 | 28.81                | 20.42              | 23.85     | 16.76 | 22.11 | 23.25 | 21.28                |

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