Causality between Profitability and Corporate Social Responsibility: Evidence from Selected Banks in Bangladesh

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Abstract: This exploratory study aimed to identify the impact of profitability on the Corporate Social Responsibility Expenditure (CSRE) of the commercial banks quoted in the Dhaka Stock Exchange (DSE), Bangladesh. This study used the secondary information from Annual Report of fifteen (15) banks and used the Net Interest Margin (NIM), Cost to Income Ratio (CIR), Return on Assets (ROA), Return on Equity as the proxy variables for the measurement of the profitability. Data was analyzed using the Statistical Packages for Social Sciences (SPSS) program. This study reveals that there is positive impact of profitability on the CSRE of banks. Furthermore, this study also found sharp impact of EPS and ROA on profitability rather than NIM, CIR and ROE. So it can be referred from the findings that if the profitability increases the banks become more encouraged to invest in CSRE in Bangladesh Context.

Keywords: Commercial Banks, Corporate Social Responsibility Expenditure (CSRE), Profitability, Relationship.

1. Introduction

In today’s business world business organization is not merely a tool for making profit rather a means of discharging the social responsibilities as the corporate citizen. This notion is confirmed by Islam (2012) [1] who argued that the business organizations are not only responsible to the stockholders but also to the wide stakeholders. So they should extend activities to community and not limited to goods only (Bakri, 2005) [2] to maintain the balance between corporate growth and social progress. Scholars term these corporate efforts toward the social welfare as Corporate Social Responsibility (CSR) activities.

Corporate social responsibilities mean releasing the social obligations of the corporate citizens by contributing to the social welfare beyond their own self interests. According to Ruggie (2002) [3], CSR is a strategy for demonstrating good faith, social legitimacy, and a commitment that goes beyond the financial bottom line. The modern concept of CSR started to evolve by the seminal idea of social responsibilities by Bowen (1953) [4] which was further formalized in 1960 and proliferated in 1970 (Carroll, 1999) [5]. Although CSR was more common phenomenon in western developed countries like USA and UK (Chapple & Moon, 2005) [6] but now a day’s many organizations of developing countries like Bangladesh are focusing on this issue from their moral stand. Banking sector stands first in contributing CSR more than any other sectors in Bangladesh. They have been carrying out these responsibilities by funding the education of poor students, beautifying different cities, donating to distressed people during natural calamities etc with tremendous glory since the very early adoption of CSR concept by corporate organizations in Bangladesh. But in recent years there is a significant growth in CSR expenditure by commercial banks due to the guidelines issued by Bangladesh Bank from time to time beginning from 2008.

In this study we investigated whether the profitability of the banks listed in the Dhaka Stock Exchange (DSE) has impact on the CSR expenditure. Banking sector of Bangladesh specially is historically profit earning industry. So, there lies a scope for research whether this strength of profitability is being deployed to the social development and how significantly it is being deployed in relation to the profitability.

2. Prior Literature

A number of empirical studies have been conducted to oversee the relationship between the Corporate Social Responsibility Expenditure (CSRE) and the profitability of the organizations. There are some studies which revealed positive relationship between the two constructs, CSR and profitability (Shen & Chang, 2009 [7]; Griffin & Mahon, 1997 [8]; Choi, Kwak, & Choe, 2010 [9]; Waddock & Graves, 1997 [10]). Some other studies found
negative relation (Pan, Sha, Zhang & Ke, 2014 [11]; Bromiley & Marcus, 1989 [12]; Wright and Ferris, 1997 [13]) and even some others showed no relationship between CSR and profitability of the organizations (Teoh, Welch & Wazzan, 1999 [14]).

A study by Andersen & Olsen (2011) [15] was undertaken to understand the relationship between corporate social performance and financial performance that exists for corporations. Using canonical correlation, the study revealed a strong relationship between an organization’s social performance and its financial performance.

Another study by Mcwilliam & siegel (2010) [16] also revealed positive relationship corporate social performance and financial performance of the organizations while they used the statistical regression to emphasize the relationship between this two variables. Mujahid & Abdullah (2014) [17] found positive relationship between CSR and financial performance in a study with 10 organizations highly rated for CSR activities and 10 other non-CSR organizations in Pakistan. Findings of Siddiq & Javed (2014) [18] and Kiran, Kakakhel & Saheen (2015) [19] also confirmed the positive impact of CSR activities on the profitability of the organizations.

Carlsson and Akerstom (2008) [20] conducted a study based on the sample of pricewater house cooper for the period of year 2000 to 2007. This study found that if an organization engages itself in CSR it results in increased financial performance and competitive advantage. Wang and Hsu (2011) [21] also found positive relationship between the CSR and firm performance in study in Taiwan based on two ideas, socially responsible investment and contributions of the organizations to the stakeholders.

Odetayo, Adeyami & Sajuuyigbe (2014) [22] examined the CSR expenditure of six Nigerian Banks over 10 years (2003-2012) data and concluded about the positive relationship between this two construct which also align with the findings of Babola (2012) [23]. Shehu (2013) [24] examined the influence of CSR on profit after tax of some selected deposit money banks in Nigeria. He also found that CSR has significant effect on profitability. Another study undertaken by Weshah et al. (2012) [25] showed positive relationship between corporate social responsibility and financial performance in the Jordanian banking companies.

CSR for banking industry of Bangladesh is very important mainly due to three reasons (Das, Dixon & Michael, 2015) [26]. Firstly; there is a growing demand of stakeholders (Belal, 2001) [27]. Lack of concern for CSR may expose threats to the reputations of the banks. Secondly, CSR expenditure enhances the status of the organizations and increases the return of stakeholders (Kabir, 2003) [28]. Finally, there is an urge by Bangladesh Bank, Central Bank of Bangladesh, to engage the Banks in CSR activities which are vivid from different circulars and regulations issued from time to time.

In most of the studies positive relationship prevailed between CSR and Profitability considering CSR as the Independent variable and profitability as the dependent variable but this findings still remain inconclusive (Margolis and Walsh, 2003 [29]; Vogel, 2005 [30]) which provoke the researcher for further investigation. This study is one of the very few ones that seek for the impact of profitability on the CSRE considering profitability as dependent and CSRE as the independent variable.

3. Statement of the Problem

Commercial banks of Bangladesh invest a significant amount of money to the CSR. Prior literature found positive impact of CSR on profitability of banks (Mahbuba & Farzana, 2013). But there has not been any study to find out the impact of profitability on the CSRE of respective firms. If an organization cannot earn profit how it can go for CSRE. So, this study tried to seek for the impact of profitability on CSRE of banks.

4. Objectives of the Study

The broad objective of this study is to investigate whether there is any significant relationship between profitability and CSRE of Banks.

Specific objectives are:

i. To investigate whether there is any significant relationship between Net Interest Margin (NIM) and CSRE.

ii. To examine if there is significant relationship between Cost to Income Ratio (CIR) and CSRE.

iii. To establish whether there is significant relationship between Return on Equity (ROE) and CSRE.

iv. To explore if there is significant relationship between Return on Assets (ROA) and CSRE.

v. To examine whether there is significant relationship between Earnings per Share (EPS) and CSRE.

5. Hypothesis

H0: There is no significant impact of profitability on CSRE of banks.

H1: There is significant impact of profitability on CSRE of banks.

6. Data and Variables

<table>
<thead>
<tr>
<th>Independent variable(s)</th>
<th>Dependent Variable</th>
</tr>
</thead>
</table>
Net Interest margin (NIM)  | CSR Expenditure (CSRE)  
Cost to Income Ratio (CIR)  |  
Return on equity (ROE)  
Return on assets (ROA)  
Earnings Per Share (EPS)  

Amount spent by each company as their CSR was used as proxy variable for Corporate Social Responsibility Expenditure (CSRE) while NIM, CIR, ROE, ROA and EPS were used as proxy for firm profitability.

There are thirty commercial banks quoted in the Dhaka Stock Exchange. Secondary data were used for this study collected from the annual reports of fifteen selected banks for the year 2015 based on the availability of organized data about CSRE. Because there were some banks which did not disclose CSRE in detail rather showed under other expenses. The formulas of the ratios are presented in the Table 1 (See Appendix A).

7. Methodology

In order to find out the degree of association between profitability and CSRE, Person’s Correlation Coefficient test was run. Then data were analyzed using multiple regression analysis to see the impact of change in profitability on CSRE. The model is specified below:

\[ \text{CSRE} = f(\text{NIM}, \text{CIR}, \text{ROE}, \text{ROA}, \text{EPS}) \]

Where: CSRE, NIM, CIR, ROE, ROA and EPS stand for CSR Expenditure of Banks; Net Interest Margin; Cost to Income Ratio; Return on Equity; Return on Assets and Earnings Per Share respectively.

The econometric form of the model is as follow:

\[ \text{CSRE} = \beta_0 + \beta_1 \text{NIM} + \beta_2 \text{CIR} + \beta_3 \text{ROE} + \beta_4 \text{ROA} + \beta_5 \text{EPS} + \mu \]

The parameters in this model are \( \beta_0 \), the CSRE intercept; \( \beta_1 \), the regression coefficient of NIM; \( \beta_2 \), the regression coefficient of CIR; \( \beta_3 \), the regression coefficient of ROE; \( \beta_4 \), the regression coefficient of ROA and \( \beta_5 \), the regression coefficient of EPS. Here, \( \mu \) represents the residual error which is an unmeasured variable. The expectation is that CSR expenditure has a positive relationship with the NIM, CIR, ROE, ROA and EPS in the period under study.

8. Data Analysis

Pearson’s correlation coefficient test was run to determine the relationship of CSRE with NIM, CIR, ROE, ROA and EPS. The data shows no violation of normality, linearity and homoscedasticity. Table 2 (see Appendix A) shows statistically significant moderate positive relationship between EPS and CSRE \( r = .504, n = 15, p < .01 \). This study also reveals statistically significant positive relationship between ROA and CSRE \( r = .504, n = 15, p < .05 \). This study reveals statistically significant weak positive relationship of CIR, NIM and ROE with CSRE.

According to Table 3 (See Appendix A), \( R^2 = .743 \) which indicates that the proxy variables of profitability predicts the CSR expenditure of the banks 74.3%. So, NIM, CIR, ROE, ROA and EPS are good predictors for CSRE. Coefficient of determination, \( R^2 = .692 \) dictates that profitability explains only 69.2% variability of the CSRE. Beta coefficient indicates the relative importance of independent variables on CSRE in standardized term. Here, NIM, ROA and EPS have more significant impact on the CSRE according to the Beta. Furthermore, value of Durbin-Watson test shows positive autocorrelation in the residuals of the regression model as it is below 2.

Table 4 (See Appendix A) shows that the regression model is a good fit for the data as \( F (5, 9) = 2.214, P < .05 \). As a result it can be concluded that the profitability statistically significantly predicts the CSRE of the banks.

Table 5 (See Appendix A) shows the coefficient for the proxy variables of constant and profitability which are \( 721140329, 18361380, 6129752, 8528974, 261376480 \) and \( 35695504 \) for \( \beta_0, \text{NIM}, \text{CIR}, \text{ROE}, \text{ROA} \) and \( \text{EPS} \) respectively.

So, the general form of the equation to predict is:

\[ \text{CSRE} = 721140329 + 18361380 \text{NIM} + 6129752 \text{CIR} + 8528974 \text{ROE} + 261376480 \text{ROA} + 35695504 \text{EPS} \]

If NIM increases by 1% CSRE will grow by 18361380 tk. This study also shows the same positive relationship with CIR and CSRE. If CIR increases by 1% CSRE will experience a rise by Tk. 612975. The effect of change in ROE, ROA and EPS by 1% will affect CSRE by an increase of Tk. 8528974, Tk. 261376480 and Tk. 35695504 respectively.
Based on the above analysis, F (5, 9) = 2.214, P < .05, R² = .692 it can be said that all five variables, NIM, CIR, ROE, ROA and EPS added statistically significantly to the prediction on CSRE, p < .05. So, based on these findings null hypothesis can be rejected and it can be claimed that profitability of banks in Bangladesh has significant positive impact on CSRE.

9. Summary and Conclusion

From the analysis it is obvious that profitability of the banks is a good predictor for CSRE incurred by the organizations. Among the five proxy variables of profitability ROA and EPS has comparatively better association with CSRE than NIM, CIR and ROE. But overall all the proxy variables of profitability show a positive impact on CSRE. If the profitability of the organizations increases the organizations will be more motivated to go for more CSRE. So it can be claimed that the notifications of Bangladesh Bank will not bring any positive outcome if the bank’s profitability falls. Furthermore this can be an interesting analogy to conclude why the govt. owned banks lag behind in CSRE because the profitability of govt. owned banks in Bangladesh is not satisfactory due to huge number of default loan. However, there lie scopes of further study to be more confirmed about this analogy.

10. References


Appendix A

Table 1: Measurement of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Interest Margin (NIM)</td>
<td>(Total Interest Income – Total Interest Expense)/ Average Total Assets × 100</td>
</tr>
<tr>
<td>Cost to Income Ratio (CIR)</td>
<td>Total Operating Expense/ Total Operating Income × 100</td>
</tr>
<tr>
<td>Return on Equity (ROE)</td>
<td>Net Income/ Total Average Equity × 100</td>
</tr>
<tr>
<td>Return on Assets (ROA)</td>
<td>Net Income/ Total Average Assets × 100</td>
</tr>
<tr>
<td>Earnings Per Share (EPS)</td>
<td>(Net Income – Dividend on Preferred Shares)/ Average Total Outstanding Shares</td>
</tr>
</tbody>
</table>

Table 2: Correlations

<table>
<thead>
<tr>
<th></th>
<th>CSRE</th>
<th>NIM</th>
<th>CIR</th>
<th>ROE</th>
<th>ROA</th>
<th>EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson’s Correlation</td>
<td>1</td>
<td>.170</td>
<td>.288</td>
<td>.125</td>
<td>.391</td>
<td>.504</td>
</tr>
<tr>
<td>Sig.</td>
<td>.017</td>
<td>.005</td>
<td>.043</td>
<td>.001</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 3: Summary of the regression output

- Coefficient of regression (R): .743
- Coefficient of determination (R^2): .692
- Adjusted R^2: .502
- Standard Error: 116559504
- Durbin-Watson: 1.530

Table 4: Analysis of Variance

<table>
<thead>
<tr>
<th>Source</th>
<th>D. F</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>5</td>
<td>150382585953202880</td>
<td>30076517190640576</td>
</tr>
<tr>
<td>Residual</td>
<td>9</td>
<td>122275062471149024</td>
<td>13586118052349892</td>
</tr>
<tr>
<td>F ratio = 2.214</td>
<td></td>
<td></td>
<td>sig = .014</td>
</tr>
</tbody>
</table>

Table 5: Variable(s) in the equation

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficient</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>721140329.416</td>
<td>241751183.732</td>
<td>2.983</td>
<td>.015</td>
</tr>
<tr>
<td>NIM</td>
<td>18361380.787</td>
<td>.123</td>
<td>.430</td>
<td>.017</td>
</tr>
<tr>
<td>CIR</td>
<td>6129752.548</td>
<td>.425</td>
<td>2.040</td>
<td>.072</td>
</tr>
<tr>
<td>ROE</td>
<td>8528974.146</td>
<td>.220</td>
<td>.681</td>
<td>.013</td>
</tr>
<tr>
<td>ROA</td>
<td>261376480.201</td>
<td>.565</td>
<td>1.887</td>
<td>.002</td>
</tr>
<tr>
<td>EPS</td>
<td>35695504.863</td>
<td>.841</td>
<td>2.612</td>
<td>.000</td>
</tr>
</tbody>
</table>