

The impact of Corporate Social responsibility on profit and deposit: A study on commercial banks of Bangladesh

¹Mohammad Hassan, ²S. M. Ashraf Siddiqi

^{1,2}Department of Economics & Banking, International Islamic University Chittagong Bangladesh

Abstract: This paper is an effort to study the causal relationship between Corporate Social responsibility (CSR) expenditure of commercial banks Bangladesh and their profits and deposits. We applied OLS estimation on the panel data of seven commercial banks of Bangladesh from 2011 to 2015. We find a neutral relationship between CSR expenditure and profit, and a positive relationship between CSR and total deposit.

Keywords: Bangladesh, Commercial Banks, CSR, Deposit, OLS, Profit.

I. INTRODUCTION

There has been much talk and some lively debate over whether a firm should involve in social activities. Advocates of CSR hold that a firm should alleviate society's problems and the opponents of CSR maintain that business is not to handle social activities and firm managers should merely try to maximize the shareholder wealth.

The two major theories that support these two opposing camps are the stakeholder theory and the shareholder theory. The stakeholder theory suggested that a firm should satisfy not just the owners of the firms, but the customers, suppliers, general public, employees, and others who have an interest in the corporation (Freeman & Evan, 1979), and those satisfied stakeholders would support the firm's operations and they, in turn, would contribute in maximizing the profits of the shareholders or the owners of the firms (Deng, Kang, & Low, 2013). They further argue that a firm can operate in long-run if the society in which it operates has a better economic condition.

Standing to a sharp contrast to the stakeholder theory, the stockholder theory maintains that the firms engaged in social activities incur costs and face the disadvantages in market, thereby bring down the profits of stockholders. They claim a trade-off between interest of society and that of owners, and propose a firm should not try to transfer the resources from owners to others (Carroll & Shabana, 2010). The early opponents of CSR such as Friedman (1970) argued that social problems are not the concern of business firms and that social issues should be settled by a free market system.

Apart from the theoretical debates, empirical works also provide conflicting evidences, ranging from a positive to a negative relation between CSR and profitability of firms. Some empirical studies show, however, no relationship between them. Some authors such as a McWilliams & Siegel (2000) and others argued that the conflicting results might be due to the flawed empirical analysis such as misspecification of the model and lack of theoretical supports to their models and different motives of firms in spending for CSR activities.

39 private commercial banks, listed in the local stock exchange and operating in Bangladesh, constitute a considerable share of large firms of Bangladesh and they spend a large amount of money in CSR (4461.8 million BDT, according to Bangladesh Bank report 2013-14).

However, there has been, to our best knowledge, no empirical investigation so far to analyze the effects of CSR on profitability for private commercial banks in Bangladesh. This study tries to fill this gap applying an econometric method on some selected private commercial banks in Bangladesh. Our study also investigates the relationship between deposit and CSR of the selected banks.

The remainder of the paper is organized as follows: section II presents an overview of the literature on CSR-profitability relationship. Section III deals with hypothesis followed by section IV that discusses the data model and methodology. Section V presents the estimated results. Section VI contains discussion on our findings and at the end, section VII presents conclusion and the limitation of this study.

II. A BRIEF OVERVIEW OF THE LITERATURE

Since the early work of Bragdon & Marlin (1972) and Moskowitz (1972) the empirical literatures on the relation between social responsibility and company's performance has expanded substantially. Margolis, Walsh, & Margolis, Joshua D.; Walsh (2003) provide a summary 127 empirical studies on CSR and financial performance relationship dating from 1972-2002. About half of the studies, according to that summary, found positive relation between them while, only 9 studies reveal a negative relation. 28 studies reported no relationship, while 20 studies concluded a mixed set of results. Wu & Shen (2013) claimed the difference in motives of companies in conducting CSR could be the reason for the conflicting results.

The empirical studies of CSR-FP link on banking industry are still rare. Using data from banking industry, Simpson & Kohers (2002) found a positive CSR-FP relationship. Wu & Shen (2013) used the data of 162 banks in 22 countries and found that CSR positively associates with FP in terms of return on assets, return on equity, net interest income, and non-interest income and in contrast, CSR and non-performing loans have a negative relationship. Bolanle, Olanrewaju (2012) applying time series estimation technique with the data of First bank of Nigeria Plc. found a positive CSR-FP relationship. Majority of the literatures on CSR do not address the issue of CSR relationship. However, the study of Samina (2012) on 6 Islamic banks indicates a positive correlation between profits and CSR and between deposits and CSR.

This paper tries to shed light on the causal relationship between CSR and profitability, and between CSR and deposits of the seven private commercial banks of Bangladesh.

III. HYPOTHESIS

Hypothesis 1: CSR positively affect the profitability of banks

Hypothesis 2: CSR positively affects the deposit collection of banks.

The second hypothesis was motivated by the argument of, (Wu & Shen, 2013), that the CSR creates a sense of trust among the depositors and they are, more likely, ready to accept even lower deposit rate, hence, a CSR bank can draw depositors away from its competitors.

IV. DATA AND METHODOLOGY

This study used annual data (2011-2015) of total CSR expenditure, total deposit and total profit before tax for 7 commercial banks of Bangladesh. Data are collected from annula report of each bank. The 7 banks are: NCC Bank Ltd. AB Bank Ltd. Islami Bank Bangladesh Ltd. Mercantile Bank Ltd. South East Bank Ltd. Social Islami Bank Ltd. Dutch-Bangla Bank Ltd. the selection of the banks was determined by the availability of the data ; the CSR expenditure data (balanced) could not be traced back to the years before 2011 for rest of the banks.

We applied regression analysis on panel data of 7 banks, where we regressed CSR on deposit. One important point to note that there could be other factors other than CSR that might affect both dependent variables—deposit and profit— but we ignored those factors, as our central focus on this study is to investigate relation between CSR and deposit, following Bolanle, Olanrewaju (2012), and conducted bivariate analysis. Moreover, we argue, as the sample size is quite small we followed Bolanle, Olanrewaju (2012) and conducted bivariate analysis. We also examined effect of CSR on deposit with the same bivariate analysis.

The relationship between CSR and profit; and between CSR and deposit can be examined with the following models

Model 1

$$Profit = \alpha_i + \beta_1 CSR + \hat{\epsilon} \quad (1)$$

Model 2

$$Deposit = \alpha + \beta_1 CSR + \hat{\epsilon} \quad (2)$$

Where, α represents the intercept and $\hat{\epsilon}$ represents the error term.

After transforming all the series to the natural logarithm following Bolanle, Olanrewaju (2012), the model 1 and model 2 can be estimated through 3 different estimation techniques, namely the pooled regression, fixed effect and the random method.

(i) The pooled regression method: The pooled regression model estimates a common constant for all cross section (i. e bank) assuming data set is a 'p priori homogeneous' that is it assume no differences between the estimated cross-sections.

$$\ln Profit_{it} = \alpha + \beta_1 \ln CSR_{it} + \hat{\epsilon}_{it} \quad (3)$$

$$\ln Deposit_{it} = \alpha + \beta_1 \ln CSR_{it} + \hat{\epsilon}_{it} \quad (4)$$

Where, $i = 1, \dots, N$ for each bank in the panel and $t = 1, \dots, T$ refers to the time period. α and $\hat{\epsilon}$ a represent the intercept and error term, respectively. $\ln Profit$, $\ln CSR$ and $\ln Deposit$ stand for logarithm of total profits before tax, logarithm of total expenditure on CSR activities and logarithm of total deposits collected, respectively.

(ii) The fixed effects method: estimates different constant for each cross section (i. e bank)

$$\ln Profit_{it} = \alpha_i + \beta_1 \ln CSR_{it} + \hat{\epsilon}_{it} \quad (5)$$

$$\ln Deposit_{it} = \alpha_i + \beta_1 \ln CSR_{it} + \hat{\epsilon}_{it} \quad (6)$$

The subscriptions and variables are as defined above.

(iii) The random effects method: estimates different constant for each cross section (i. e bank) not as fixed as in fixed effects method, but as random parameters

$$\ln Profit_{it} = (\alpha + v_i) + \beta_1 \ln CSR_{it} + \hat{\epsilon}_{it} \quad (7)$$

$$\ln Deposit_{it} = (\alpha + v_i) + \beta_1 \ln CSR_{it} + \hat{\epsilon}_{it} \quad (8)$$

Where α represent population average, and v_i represents individual differences from the population average and is a standard random variable. And the subscriptions and variables are as defined above.

If there is no heterogeneity among the cross section, the common constant should be used.

If panel is balanced (i.e. contains all existing cross-sectional data), fixed effects model will work best. On the other hand, if cross section is more than the time period then the random effect may perform well Asteriou & Hall (2007) However, almost all of the literature dealing with panel data utilize redundant fixed effects test and Hausman test to decide which method to use. Redundant fixed effects test check an unobserved heterogeneity in the model, under the null hypothesis of $H_0: \alpha_1 = \dots = \alpha_N = \alpha$, against the alternative hypothesis $H_1: \alpha_1 \neq \dots \neq \alpha_N \neq \alpha$. If the null hypothesis does not hold the estimated coefficients from a pooled regression model suffer from serious bias and the model should be estimated with either fixed effect or random effect model. For the estimated coefficients to be consistent, however, random effect, α_i should not be correlated with independent variables. Hausman test can be applied for this purpose. This test examines the endogeneity problem (random effect being correlated with independent variables) under the null hypothesis of $H_0: Corr(\alpha, CSR_{it}) = 0$ against the alternative hypothesis $H_1: Corr(\alpha, CSR_{it}) \neq 0$. Once the null is rejected, the coefficients estimated with random effect can be said to be consistent.

V. EMPIRICAL RESULTS

We transformed all the variables to logarithm form following Bolanle, Olanrewaju (2012)

The fixed effect and random effect estimation of model 1 and model 2, displayed in table I and table II, show that coefficient of CSR of model 1, in both fixed and random effect model, is negative but not significant even at 10% level of significance. This does not support the hypothesis that CSR boosts the profits of selected commercial banks in Bangladesh. Again, the coefficients of CSR of model 2, in both fixed and random, are positive and significant. The estimated coefficient of 0.87 and 0.81 indicate that 1 percent increase in CSR leads to 0.87 and 0.81 percent increase in deposit. This supports our expectation that CSR expenditure can cause the deposit to increase. A bank can attract the depositors if it engages in CSR activities. The p values (0.00) of redundant test indicate that there is heterogeneity in cross sections; the pooled regression could be biased. The chi square p-value of Husman test indicates that there is not enough evidence of inconstancy of estimates parameters with the random effect model.

Table: I results for model 1.

	<i>Model 1 (dependent variable profit)</i>	
	<i>Fixed</i>	<i>Random</i>
<i>Coefficient of CSR</i>	-0.37	-0.4
<i>Intercept</i>	28.97***	29.57***
<i>R-square</i>	0.82	0.038580
<i>P(F-statistics)</i>	0.00	0.258106
<i>DW test</i>	1.87	1.56
<i>Redundant test p(X²)</i>	0.00	
<i>Hausman test p(X²)</i>		0.62

*** represents significant level at 1%. P and X² stand for p-value and Chi-square, respectively.

Table: II results for model 2.

	<i>Model 2 (dependent variable deposit)</i>	
	<i>Fixed</i>	<i>Random</i>
<i>Coefficient of CSR</i>	0.87***	0.81***
<i>Intercept</i>	9.46*	10.62***
<i>R-square</i>	0.90	0.22
<i>P(F-statistics)</i>	0.00	0.00
<i>DW test</i>	1.21	0.88
<i>Redundant test p(X²)</i>	0.00	
<i>Hausman test p(X²)</i>		0.11

***, * represents significant level at 1% and 10%, respectively. P and X² stand for p-value and Chi-square, respectively.

VI. DISCUSSION ON FINDINGS

We found a neutral relationship between CSR and profits. This supports the idea of Ullmann (1985) and others who advocate neutral relationship. One explanation on the favor of the neutral relationship is, as argued by Ullmann (1985), that there are so many intervening variables between social and financial performance, and one should not expect a relationship to exist. Another explanation for the neutral findings can be that because each firm produces at profit maximizing level they expend different amount for unique demand for social activities. The amount of CSP produced by firms will be different but profitability will be maximized and equal, in long-run A. McWilliams & Siegel (2001).

Our results show that the CSR expenditures positively affect the total deposit; as the bank increase the CSR expenditure it gain more deposit from public. This finding is in line with the findings of Samina (2012) who found a positive correlation between CSR and deposits.

VII. CONCLUSION AND LIMITATION OF THE STUDY

Taking the data of seven private commercial banks of Bangladesh from 2011-2015, we applied panel regression models. Our regression results show no relationship between CSR and profit. Moreover, the regression results reveal a positive relationship between CSR and deposit.

Moreover, the results of this study do not claim that banks should stop spending on CSR. As the Legitimacy theory suggests a larger firm has the larger responsibility to promote social welfare.

Moreover, because banking industry uses resources of society (i. e scattered savings) more than other industries, it has to provide positive feedback to the society Wu & Shen (2013), no matter what profit they can earn.

Although we used (5x7=35) observations, a larger cross section or more samples of banks in future studies can, perhaps, substantially yield more accurate regression results.

ACKNOWLEDGEMENT

We would like to thank Mr. Cholem Ullah, Assistant Professor, (CENURC), International Islamic University Chittagong to raise this issue. We appreciate the help of Mr. Jakariya Kabir, PO, NCC Bank Ltd. in collecting the data. This research was supported, in part, by a grant from Cholovik.ink.

REFERENCES

- [1] Asteriou, D., & Hall, S. G. (2007). *Applied econometrics: a modern approach*. Palgrave Macmillan. <http://doi.org/10.1017/CBO9781107415324.004>
- [2] Bolanle, Olanrewaju, & M. (2012). Corporate social responsibility and profitability of Nigeria banks - A causal relationship. *Research Journal of Finance and Accounting*, 3(1), 6–18.
- [3] Bragdon, J. H., & Marlin, J. a. . (1972). Is pollution profitable? *Risk Management*.
- [4] Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International Journal of Management Reviews*, 12(1), 85–105. <http://doi.org/10.1111/j.1468-2370.2009.00275.x>
- [5] Deng, X., Kang, J. koo, & Low, B. S. (2013). Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *Journal of Financial Economics*, 110(1), 87–109. <http://doi.org/10.1016/j.jfineco.2013.04.014>
- [6] Freeman, E. R., & Evan, W. M. (1979). *A Stakeholder Theory of the Modern Corporation: Kantian Capitalism. Ethical Theory and Business*. Retrieved from http://www.business.uzh.ch/professorships/strategy/stu/BS/lecture/Evan_Freeman_1988.pdf
- [7] Friedman, M. (1970). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*, (32), September 13. http://doi.org/10.1007/978-3-540-70818-6_14

- [8] Margolis, J., Walsh, J., & Margolis, Joshua D.; Walsh, J. R. (2003). Misery loves companies: Rethinking social initiatives by Business. *Administrative Science Quarterly*, 48(2), 268–305. <http://doi.org/10.1080/10350339209360349>
- [9] McWilliams, a, & Siegel, D. (2000). Research notes and communications. Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal*, 609(January 1999), 603–609. [http://doi.org/10.1002/\(SICI\)1097-0266\(200005\)21](http://doi.org/10.1002/(SICI)1097-0266(200005)21)
- [10] McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*. <http://doi.org/10.5465/AMR.2001.4011987>
- [11] Moskowitz, M. R. (1972). Choosing Socially Responsible Stocks. *Business & Society Review* (08934398). Retrieved from <http://ezproxy.mytyndale.ca:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=6453516&site=ehost-live&scope=site>
- [12] Samina, Q. S. (2012). Practice of Corporate Social Responsibility in Islamic Banks of Bangladesh Samina. *World Journal of Social Sciences*, 2(6), 1–13. Retrieved from <http://www.sciedu.ca/journal/index.php/wjss>
- [13] Simpson, W. G., & Kohers, T. (2002). The link between corporate social and financial performance: Evidence from the banking industry. *Journal of Business Ethics*, 35(2), 97–109. <http://doi.org/10.1023/A:1013082525900>
- [14] Ullmann, A. a. (1985). Data in Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U. S. Firms. *Academy of Management Review*, 10(3), 540. <http://doi.org/10.2307/258135>
- [15] Wu, M.-W., & Shen, C.-H. (2013). Corporate social responsibility in the banking industry: Motives and financial performance. *Journal of Banking & Finance*, 37(9), 3529–3547. <http://doi.org/10.1016/j.jbankfin.2013.04.023>