“Why banks should consider ESG risk factors in bank lending?”

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WHY BANKS SHOULD CONSIDER ESG RISK FACTORS IN BANK LENDING?

Abstract

Why banks should be concerned about incorporating environmental, social and governance (ESG) criteria in the lending process? What is the motivation? This study aims to find the motives for considering environmental, social and governance (ESG) criteria in bank lending process. A primary survey has been conducted to know the current status and motivation for incorporating ESG factors in investment decisions. Sample comprised 30 private commercial banks (PCBs) operating in Bangladesh. Data collected were analyzed with graphs, descriptive statistics, and regression analysis. Findings of the study indicate that banks are mostly considering basic environmental, social and governance factors set by regulators qualitatively. They are lagging behind in considering the advanced ESG criteria needed for sustainable and efficient credit risk management. Based on motivation for incorporating ESG factors, it was found that banks pioneering in incorporating ESG factors in lending decisions are compensated through better financial performance. Findings of the study are expected to encourage practitioners and policy-makers to take more pragmatic steps to incorporate ESG risk factors quantitatively in lending decision-making process.

Keywords ESG risk, private commercial banks, financial performance, Bangladesh

JEL Classification G21, G23, G34, Q51

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INTRODUCTION

The rising concerns regarding various forms of environmental issues, starting from global warming to air, land and water pollution, have got enormous attention from the researchers, academics and relevant policy actors in the past few decades. While investigating environmental issues, the initial focus was on the forces of industrialization where manufacturing firms have been accused for releasing various forms of pollutants in the environment. Naturally, the banking sector was out of the suspicion list as it does not produce anything hazardous to the environment (Ahmed & Uchida 2012; Cowton & Thompson, 2000; Sahoo & Nayak, 2008). However, banks could not be in disguise for long as their direct association to the industrialization came into forefront. Specifically, banks are linked to environmental degradation through their financing activities with the manufacturing firms (Smith, 1993) that directly pollute the land, air and water through contested production process (Sarokin & Schulkin, 1991). Eventually, in relation to the environmental issues, argument regarding sustainability and good governance practices surfaced in the regulatory discourse in light of banks' credit management where any imprudent act on lending process might be perceived as banks' failure to act responsibly. Any irresponsible lending might have negative impact on them in terms of criticisms, adverse publicity and imposition of penalty.

In search for a responsible credit management, a great deal of effort has been given integrating environmental, social and governance (ESG) factors within lending process of the banks. Responsible lending is not only a concern of the regulators and banks anymore, investors are also aware about the ESG issues and implications of these factors for their businesses. Specifically, it is to be noted that the accommodation of ESG factors within banks' lending process should not be perceived as another dimension of CSR (corporate social responsibility). Actually, failure to address ESG issues by the banks will jeopardize sustainability of the businesses that are financed through them and, subsequently, the respective banks will be in risk as well (Wanless, 1995). Particularly, poor ESG performance of the clients can be costly to a firm in terms of negative profitability, public feedback, consumer response, penalty and strict regulation. This will ultimately reduce profitability and value of the bank. However, in pursuing banks to manage ESG risk and incorporate them in lending, one obvious question might arise regarding what is the trade-off for banks? Or simply what is the motivation for banks to be ESG responsible? The complex multi-dimensional functionality of ESG concept makes it difficult to analyze whether firms can capitalize on it in terms of better performance (Manescu, 2010). Nevertheless, there is a dearth of researches that explore such relationships in the banking sectors in the context of the developing countries. Hence, considering banking sector of a developing country, this study took a modest attempt to investigate the possible association between ESG performance and financial performance in order to motivate banks to consider ESG factors in their lending decisions.

1. LITERATURE REVIEW

There are various studies examining the relationship between environmental, social and governance performance (ESG) and firm performance (FP) for over four decades. Some of the studies looked into these three factors separately and related them with company performance (Gompers et al., 2003; Waddock & Graves, 1997; Benabou & Tirole, 2010). While other studies tried to integrate these three factors together and related them with performance (Gilina et al., 2010). A number of studies have found both positive and negative relationships between them. Still there is lack of clarity and ambiguity with regard to the nature of the ESG-FP relationship, though most of the studies found this to be positive (Friede et al., 2015). Also there is a continuing debate on the influence of financial sector on environment and society (Weber, 2014).

Contrasting results (positive and negative) have been found from several studies regarding association between performances of firms and good governance. A US-market based comparative study revealed that the firms having weak governance suffer from lower equity returns from that of the companies having good governance (Gompers et al., 2003). With similar vein, positive association between value of firms and corporate governance was also found in Russia (Black, 2001), Netherlands (De Jong et al., 2005) and Germany (Drobetz et al., 2004). In contrast, negative association between performances of firms and standard of corporate governance was identified in the European market (Bauer et al., 2004).

Several studies have also been conducted to understand the nature of relationships between performances of firms and corporate social performance (CSP) and mixed results were reported by these studies. Particularly, Benabou and Tirole (2010), Baron (2008), and Besley and Ghatak (2007) argued that higher corporate social responsibility (CSR) leads towards higher corporate performance. Similarly, evidence regarding positive association between CSP and financial performances also prevails (McWilliams & Siegel, 2000; Waddock & Graves, 1997). Although there are some studies which report that CSR may affect performance adversely (for example, Fisher-Vanden & Thorburn, 2010), but these are insignificant in numbers (Margolis & Elfenbein, 2008).

These studies have mainly concentrated either on corporate governance or corporate social responsibility. In this particular study, the authors are focusing on ESG and considering all three components of Socially Responsible Investment (SRI): Environment, Social and Governance. Numerous studies have been conducted to examine the link of ESG performance with different aspects of firm

efficiency. Findings of these studies are somewhat mixed. Earlier studies like Fama and MacBeth (1973) examining the cross-sectional relationship between ESG factors revealed positive impact on investment returns. Also a lot of studies, such as those conducted by Derwall et al. (2005) and Statman and Glushkov (2009) later suggest that firms having high ESG scores can earn positive abnormal investment return. Gilina et al. (2010) found that stronger ESG performance increases firm operating performance, efficiency and value. In similar vein, out of seven ESG factors, it was found that the stock returns are often positively influenced by community relations (Manescu, 2010). However, there are few studies revealing contrasting results as well. For example, compliant firms with abnormal negative investment returns have been detected by a study conducted by Derwall and Verwijmeren (2007).

As mentioned earlier, not many studies could be found in the context of developing countries while assessing above mentioned relations. A study examining association between performances of firms and governance in the Bangladeshi banking sector was conducted by Uchida et al. (2011) who found such relation as positive though evidence did not support the relations to be statistically significant. Weber et al. (2015) reported that incorporation of environmental, social and governance criteria helped banks to reduce credit defaults and improve lending efficiency in Bangladesh. This particular study aims to examine ESG-FP linkage more closely to better understand the interaction.

2. RESEARCH HYPOTHESIS

The following hypothesis may be proposed on the basis of the theoretical understanding. ESG performance can be viewed as having positive association with the performance of the banking firms.

Hypothesis: Higher environmental, social and governance performance leads to better financial performance.

The hypothesis can be converted into the following functional model:

$$ROA = f\left(ESG, Control\ Variables\left(\ age,\ size\right)\right).$$

3. DATA AND METHODS

3.1. Calculating ESG score

In order to derive the ESG score, a primary survey has been conducted by developing a questionnaire to judge the current status, practices and future prospect of environmental, social and governance (ESG) risk incorporation in bank lending decision-making processes (Ahmed et al., 2014). The questionnaire is developed based on the guidelines provided in EP (2009), UNEP-FI-ATF (2007), BB (2011A), AIMH (2011), and the studies by Thompson and Cowton (2000). The questionnaire contains questions ranging from general status to specific questions on ESG risk incorporation status of each bank (Ahmed & Rahman, 2014).

Table 1. Factors considered in calculating ESG score

ESG indicators	Minimum score	Maximum score
Environmental issues		
Compliance with environmental laws	1	5
Project location vulnerability	1	5
Protection against climate change impacts	1	5
Commitment for environmental management	1	5
Provision for solid waste management	1	5
Provision for wastewater management	1	5
Provision for management of hazardous materials	1	5
Air emission prevention and control measures	1	5
Noise pollution control measures	1	5
Fire or explosions prevention and control measures	1	5
Provision for genetic resource management	1	5
Provision for bioethics	1	5
Appropriate measures to control dust pollution	1	5
Provision for odour prevention and control	1	5
Environmental requirement of the buyer or importer	1	5
Periodic environmental monitoring arrangements	1	5
Energy and resource consumption	1	5
Environmental impacts associated with products and services	1	5
Potential for new regulations to have negative impact	1	5
Potential new markets for environmentally friendly products	1	5
Total score in environmental issues	20	100

Table 1 (cont.). Factors considered in calculating ESG score

ESG indicators	Minimum score	Maximum score
Social issues		
Workplace health, safety and working conditions	1	5
Equal opportunity in employment	1	5
The use of forced or child labor	1	5
Involvement of employees in management	1	5
Freedom of association in union / society activities	1	5
Profit sharing, performance bonuses and stock option	1	5
Caring activities for the employee family and children	1	5
Training and development of human resources	1	5
Handling of transfer and dismissal	1	5
Preparation for retirement of employees	1	5
Community relations	1	5
Charitable donations	1	5
Total score in social issues	12	60
Governance issues		
Board size, structure and composition	1	5
Frequency and quality of board meeting	1	5
Meeting with stakeholders and proper records of minutes	1	5
Disclosure of performance through financial statements	1	5
Disclosure of Corporate Social Responsibility (CSR) activities	1	5
Audit committee structure and independence of auditors	1	5
Total score in governance issues	6	30
Total ESG score	38	190

In calculating ESG score, 5-point Likert Scale was used to differentiate between banks having high, moderate and low ESG performance (see Table 1). For a particular sample bank the maximum score can be 190 (environment 100, social 60, and governance 30) and minimum 38 (environment 20, social 12, and governance 6).

3.2. Sample

Out of 40 private commercial banks (PCBs) operating in Bangladesh 10 are relatively new. This study covers all the 30 PCBs founded before 2012. The questionnaires are filled by four key officials working in the credit departments of respective banks. Four from thirty banks make the total sample 120. A representative case has been selected from each bank to conduct the analysis. Final questionnaires were cross-matched with available public information on each bank, e.g., annual reports, websites, regulatory notifications and newspaper articles.

3.3. Variables

Return on assets (ROA) has been selected as the proxy for financial performance. This has been calculated by dividing net income by total assets. Return on equity (ROE) is not used, as there are major differences among Bangladeshi firms with respect to calculation of equity. Whereas, calculation of total asset used in ROA is fairly straightforward and uniform across firms and industries. Also, stock-market-based measures, such as, market-to-book-ratios, are also used by researchers as measure of financial performance. Given the highly volatile nature of the stock market in Bangladesh, it will be biased to use the market-based measures. Hence, we are left with ROA as the proxy to represent financial management performance of the firms, which was also used in studies such as McGuire et al. (1988), Waddock and Graves (1997), Berman et al. (1999), and Johnson and Greening (1999).

Bank's age and size are taken as control variables, since profitability of banks may vary due to these factors. These variables have to be controlled to single out the unique contribution of ESG scores on firm financial performance. Firm size is measured by total asset and turnover. ESG score has been derived from Ahmed et al. (2014).

4. FINDINGS

4.1. Current measurement of ESG risk

About the question regarding the current way the banks are measuring ESG risk, 90% of the banks were found to be doing it qualitatively. Whereas, only 10% stated that they are quantifying it, but the method of quantification is not clear.

4.2. Environmental issues

Figure 1 summarizes the banks' current checklist status of various environmental issues arising from a particular project. From the figure

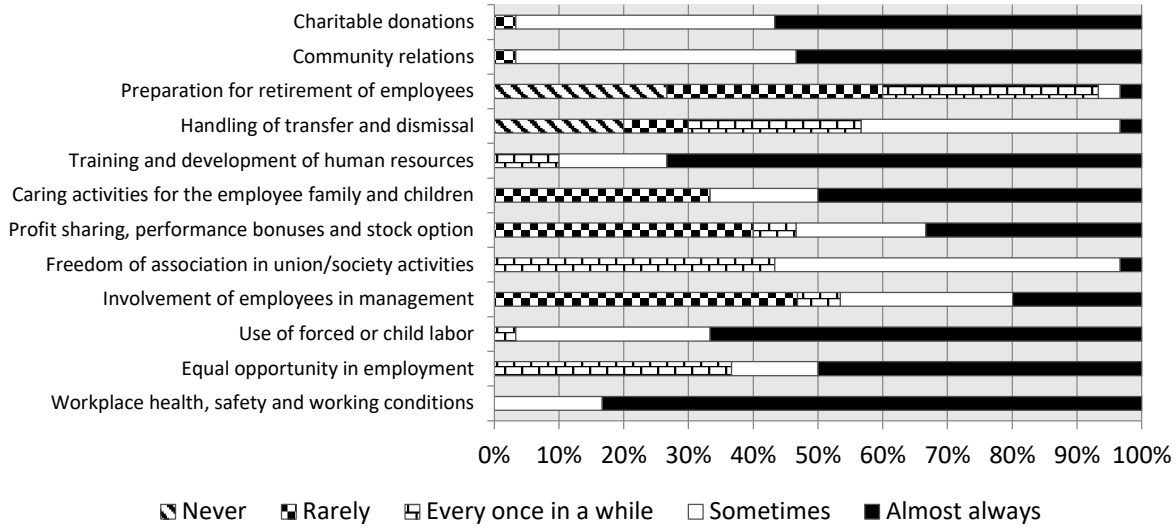

Figure 1. Environmental issues considered in lending (respondents were allowed to pick multiple choices)

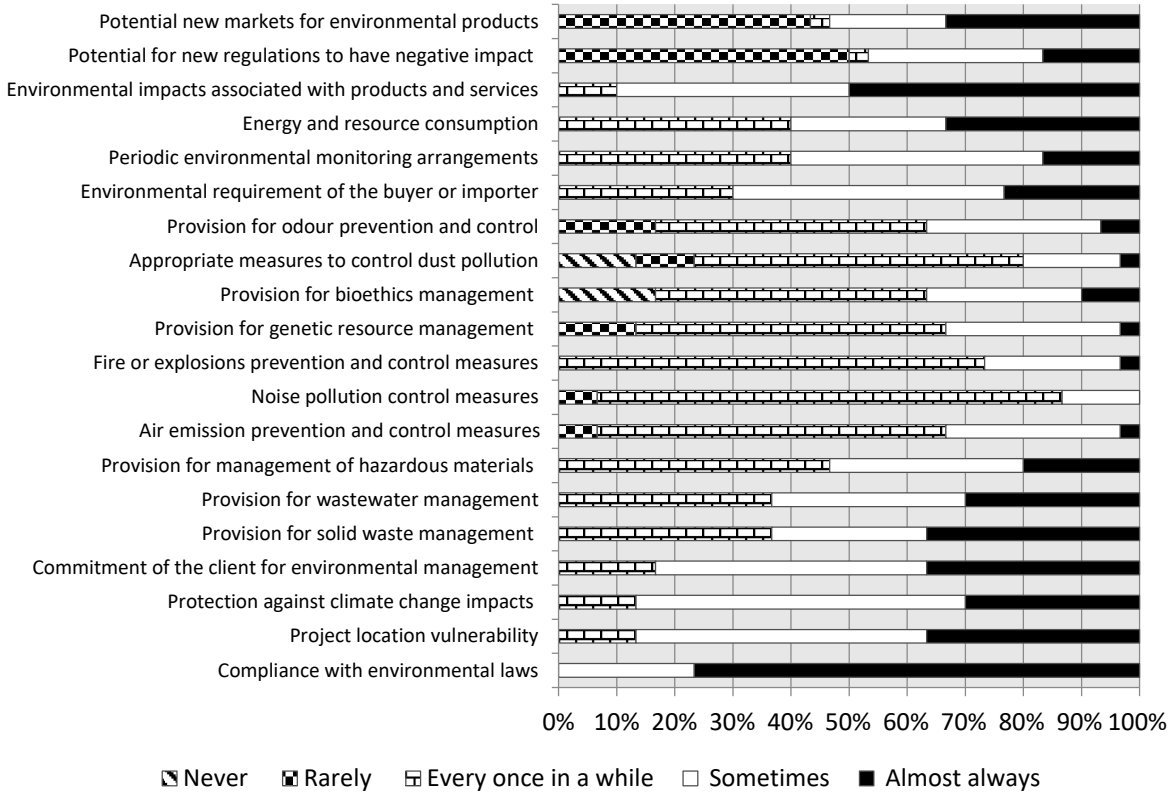

Figure 2. Social issues considered in lending (respondents were allowed to pick multiple choices)

one can see that banks are considering the basic environmental compliance criteria, such as compliance with laws, project location vulnerability, and waste management, more frequently. However, high-tech and more sophisticated environmental issues, such as bioethics and genetic resource management, air and noise pollution, etc., are largely ignored. This may partly be due to the unavailability of appropriate expertise and logistics to consider such issues.

4.3. Social issues

Bangladesh Bank is stressing banks to put more emphasis on socially responsible investment since 2008 by issuing the Guideline on Corporate Social Responsibility (BB, 2008). The positive results of this guideline have also been reflected in the survey results. As one can see in Figure 2, social factors, such as workplace condition, human resource development, use of child labor, etc., are commonly considered by the surveyed banks. However, more advanced social factors, such as employee transfer, dismissal, and retirement planning, are yet to be taken into account by the banks.

4.4. Governance issues

To ensure good governance standards, Securities Exchange Commission (SEC) introduced Corporate Governance Guidelines in 2006 (SEC, 2006). The positive effect of this regulation has also been reflected in the survey results. As revealed from the survey, banks consider disclosure and financial discipline of the prospective borrowers quite seriously (see Figure 3), though they are lagging behind in considering client's board structure and efficiency.

4.5. Descriptive statistics and correlation analysis

Table 2 shows the descriptors of the dependent and independent variables, and correlation coefficients. From the table, one can see that banks are having an average ROA of 1.13%. Some banks are also having negative ROAs.

ESG scores are having an average of 132 out of 180 total score. Average age of the banks is found to be about 20 years, average turnover is found to be approximately BDT (Bangladesh Taka) 6.37 billion and average assets are about BDT 106.85 billion.

From the correlation analysis, a moderate degree of positive correlation has been found between return on assets and ESG factors, indicating that being environmentally, socially and governance responsible might lead to more profitability for the companies in the sample. Also, all the control variables, such as age, turnover and assets, are showing positive correlation with return on assets. This might indicate that profitability is positively influenced by ESG factors or the control variables. This relationship is further clarified in the regression analysis.

4.6. Regression analysis

The hypothesis developed is tested using regression analysis. Tables 3-5 present the results of the regression analysis. The authors have constructed several models to test the impact of switching the independent and control variables on the dependent variable. In all the models, return on total asset has been used as the dependent variable, and ESG and its components as the principal independent variables. In all the equations, age and size, measured by turnover or assets, are used as control variables.

In Model 1, TRN (Turnover) is taken as the proxy for size of the banks. As shown in Table 3, this model shows significant positive relationship ($p < 0.01$) between return on total asset and ESG score when other factors are held constant. The coefficient of determination (Adj. R2) is 0.33. Bank

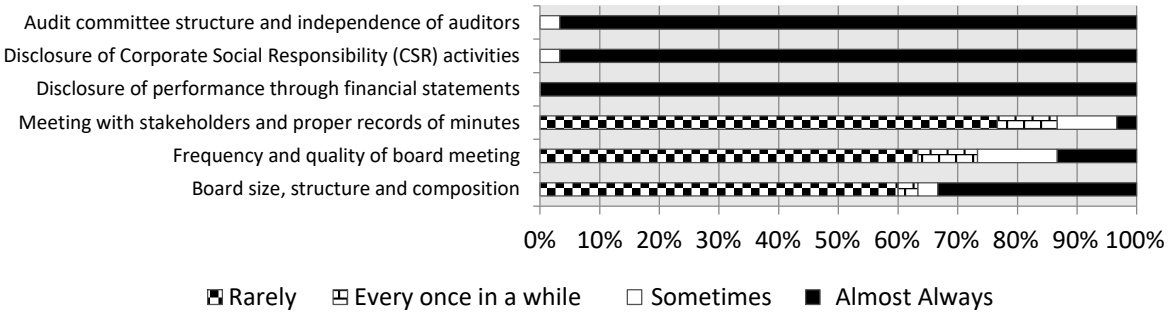

Figure 3. Governance issues considered in ESG risk assessment (respondents were allowed to pick multiple choices)

Table 2. Descriptive statistics and Pearson correlations

Variables		N	Mean	Min.	Max.	S.D.	Correlogram							
							ROA	ESG	ENS	SOS	GNS	AGE	TRN	TOA
ROA	Return on assets	30	1.13	–10.09	3.90	13.41	1							
ESG	Environmental social and governance score	30	132.33	94.00	160.00	20.41	.583**	1						
ENS	Environmental score	30	66.50	42.00	82.00	12.11	.603**	.994**	1					
SOS	Social score	30	45.40	34.00	54.00	6.82	.542**	.983**	.958**	1				
GNS	Governance score	30	20.43	18.00	24.00	1.74	.518**	.961**	.945**	.943**	1			
AGE	Age of the bank	30	20.67	11.00	53.00	10.77	.021	.282	.257	.301	.340	1		
TRN	Total turnover+	30	637.03	43.74	1800.00	328.34	.433*	.467**	.476**	.452*	.394*	.188	1	
TOA	Total assets+	30	10684.53	1503.59	37022.71	6189.15	.348	.397*	.401*	.390*	.337	.266	.962**	1

Notes: Return on assets (ROA) = Ratio of net income divided by total asset; ESG = Environmental social and governance score; ENS = Environmental score; SOS = Social score; GNS = Governance score; AGE = Age of the bank in years; Total turnover (TRN) = Total turnover is equal to interest plus non-interest income in millions of BDT; Total Assets (TOA) = Total assets of the bank in millions of BDT; +Expressed in 10 millions of BDT (Bangladesh Taka); * $p < 0.05$; ** $p < 0.01$.

age shows a negative relationship and turnover shows positive relationship with return on assets. However, they all are statistically insignificant ($p > 0.10$).

Table 3. Results of the regression analysis for ESG as an independent variable

Variables	Model 1(β)	Model 2(β)
Dependent		
Return on total asset (ROA)		
Independent		
Environmental social and governance score (ESG)	.058**	.062**
Control		
AGE	–.035	–.038
TRN	.001	
TOA		.000
Adj. R^2	.33	.32
F	1.587	5.451

Notes: + N = 30 for all the models; ** $p < 0.01$.

In Model 2, TOA (total assets) is taken as the proxy for size of the banks. As shown in Table 3, this model also shows significant positive relationship ($p < 0.01$) between return on total asset and ESG score when other factors are held constant. The coefficient of determination (Adj. R2) is 0.32. Also in this model, banks age shows negative relationship and total asset shows positive relationship with return on assets. However, they all are statistically insignificant, again.

Table 4. Results of the regression analysis for environment, social, and governance as independent variables and turnover as the proxy for size

Variables	Model 3(β)	Model 4(β)	Model 5(β)
Dependent			
Return on total asset (ROA)			
Independent			
Environmental score (ENS)	.100**		
Social score (SOS)		.157*	
Governance score (GNS)			.603*
Control			
AGE	–.032	–.035	–.040
TRN	.001	.002	.002***
Adj. R^2	.35	.29	.29
F	6.109	4.970	4.925

Notes: + N = 30 for all the models; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.10$.

In Models 3 to 5, ESG has been segregated into its components: environment, social and governance and controlled size by taking turnover as proxy to test their individual relation with ROA. As shown in Table 4, these models show significant positive relationship between ROA and individual environment, social and governance factors. P vales are less than .05 in all three cases. The coefficients of determination (Adj. R2) are 0.35, 0.29 and 0.29 in Models 3, 4 and 5, respectively. Also, in all these models, banks age shows negative rela-

tionship and turnover shows positive relationship with ROA. However, they all are statistically insignificant, except turnover in Model 5.

Finally, in Models 6 to 8, again the decomposed ESG components: environment, social and governance as independent variables, controlled for size by taking total asset as a proxy. As shown in Table 5, these models also show significant positive relationship between return on assets and individual environment, social and governance factors. The coefficients of determination (Adj. R2) are 0.33, 0.27 and 0.27 in Models 6, 7 and 8, respectively. Also, in all these models, banks age shows negative relationship and total asset shows positive relationship with return on assets. However, they all are statistically insignificant.

Table 5. Results of the regression analysis for environment, social and governance as independent variables and total asset as a proxy for size

Variables	Model 6(β)	Model 7(β)	Model 8(β)
Dependent			
Return on assets (ROA)			
Independent			
Environmental score (ENS)	.107**		
Social score (SOS)		.170**	
Governance score (GNS)			.655*
Control			
AGE	–.035	–.039	–.044
TOA	.000	.000	.000
Adj. R^2	.33	.27	.27
F	5.846	4.610	4.494

Notes: + N = 30 for all the models; * $p < 0.05$; ** $p < 0.01$.

5. DISCUSSION

The major findings of this research are discussed in this section. To address the research hypothesis, the results of the study show that there is a positive relationship between financial performance and environmental, social and governance (ESG) factors. This finding is in conformity with the findings of the study conducted by Gilian et al. (2010), which found a significant positive association between environmental, social and governance scores. The results are also consistent with Baron (2008), Bebabou and Tirole (2010), and Besley and Ghatak (2007). Our results indicate that each ESG score contributes towards 5.8% rise in return on total asset. Thus it can be concluded that more profitable banking firms are more conscious about environment, society and governance and are more adaptive towards long-term sustainability in banking practices.

With regard to the control variables, negative association has been found between ages of the banks and positive association between sizes measured by turnovers or ROA. All these relationships are not statistically significant, except in one case between governance and turnover. This might indicate that relatively the new generation of banks are more profitable and are having positive attitude towards environment, social and governance factors.

Decomposition of the ESG components in Models 6, 7 and 8 using environment, social and governance factors, respectively, as independent variables, provided more significant result when total assets has been used as a proxy for size. Among the ESG factors, governance, social and environment, respectively had the most significant influence on ROA. This may be explained by the fact that green banking policy guidelines issued by the Bangladesh Bank in 2011, and implemented in three phases, dated June 30, 2014; December 31, 2014; and June 30, 2015, respectively, might have contributed towards improving the environmental compliance status of banks. Moreover, Environmental Risk Management Guidelines published by Bangladesh Bank in 2011, which was the first qualitative guideline ranking the environmental risk of lending in Bangladesh, also provided rich dividend. Formulation of Guideline on Corporate Social Responsibility (CSR) in 2008 and consecutive publication of review of CSR Initiatives in Banks by Bangladesh Bank, to certain extent, pressurized the banking sector to become more socially responsible. Also, amendment of Securities and Exchange (SEC) Ordinance in 2012, increasing number of independent directors might have caused significant positive changes in the compliance status of the banks.

CONCLUSION

To sum up, a modest attempt has been made to identify the factors, which might motivate the banks to consider ESG factors in their lending decision-making processes. Results of the study suggest that banks taking initiative to consider ESG risk factors in lending analysis are rewarded through better financial performance. The findings of this study are expected to have some implications for academicians as well as practitioners and policy-makers. For academicians this study makes an addition to the literature on ESG-FP relation of banks in developing countries. Practitioners and policy-makers might find the outcome encouraging to put further emphasis on ESG risk factor consideration. However, the results of the study cannot be generalized for the entire banking industry as it contains only 30 selected private commercial banks in Bangladesh. A more comprehensive study may be conducted by including all the scheduled banks operating in Bangladesh to get a wider and complete picture. This area leaves the scope for future research.

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