

# Impact of Corporate Governance on Operating Performance of Non-Bank Financial Institutions (NBFIs): Empirical Evidence from Bangladesh

Chandon Kumar Pal\*  
Tazrina Farah\*\*

**Abstract:** *Corporate governance is a buzzword in this world where due diligence is not being followed everywhere. The performance of the firm depends on corporate control. Due to the lack of good governance, the financial crisis occurred many times. Non-Bank Financial Institutions (NBFIs) are more sensitive in the financial sector. This paper aims to find out the relationship between the operating performances with the corporate governance variables which are done by collecting the data within the time frame from 2011 to 2017 of 23 NBFIs listed in Dhaka Stock Exchange (DSE) in Bangladesh. The governance index has been developed by collecting the qualitative data as per the guideline of BSEC. Governance index and corporate controlling variables such as board size, independent director, internal audit member, number of the board meeting held, age, institutional shareholdings and CEO duality of the firm have been considered as corporate governance factors. The study finds that the governance index and age of the firm have a positive impact on the firm's operating performance, and the number of independent directors has a negative influence on the operating performance of the firm. Adopting governance code by firms of NBFIs stimulates the operating performance. Good governance helps to establish a good structure for accountability which helps to increase the operating profitability of the firm.*

**Keywords:** *Corporate governance, Operating performance, NBFI, Governance index, Board size, Institutional shareholding, CEO duality, Net interest margin.*

## 1.0 Introduction

Financial institutions are established to conduct the financial transactions of the client with a motive to earn profit. The ultimate goal of wealth maximization of any institution can be achieved based on several factors including proper business strategy, quality of assets, a sustainable market capitalization of product and services, easy access to fund, an effective and strong internal controls system and risk management and the mostly key

---

\*Lecturer, Department of Finance & Banking, Jatiya Kabi Kazi Nazrul Islam University, E-mail: paulchandand54@yahoo.com

\*\*Assistant Professor, Department of Finance, Faculty of Business Studies, University of Dhaka, E-mail: tazrinaf@gmail.com

factor is a robust corporate governance framework. In the Berle and Means (1932) corporate governance of the firm, shareholders can influence on the organization through voting rights where the election of boards of directors for the firm and debt holders restrict management decision through bond covenants.

Governance is literally the process of decision making and the process by which the decision is executed. Corporate governance is the set of rules, regulations, and guidelines, by which the private and public companies can be controlled and directed. Corporate governance principles define different roles and responsibilities for different parties of the companies. Under the corporate governance guidelines, there are specific directions for different stakeholders like shareholders, board of directors, managers, creditors, regulators, auditors and many other stakeholder groups. The corporate governance guidelines are not constant and same for all, based on the situation, nature of stakeholders, corporate governance implications differs. According to the report of Zingales (1998), corporate governance is the allocation of ownership, company's capital structure, board of directors, managerial incentive schemes, organizational structure, which all are considered as the organizations that affects the different procedures by which quasi-rent are allocated. While analyzing about the corporate governance of the Bangladesh, Rezwana, Rehana and James (2010), reveals that in the listed companies of Dhaka Stock Exchange Limited have the practice of maintaining the corporate governance guidelines and in the annual reports, the researchers have shown a positive picture about the corporate governance practice.

Operating performance measures the efficiency of a firm. NBFIs can capture the market share over bank by providing more services after developing the governance system. Different measurements are used to measure the operating performance. Gross margin is one of them which represent operating efficiency mostly as mentioned earlier. Any reader of financial statements always tries to find out the gross and net profit made by the NBFIs for any particular year. So, profitability measurement is more important than any other metrics. Managing the gross margin is pretty important for the analysis of operating efficiency on a regular basis.

In the recent times, there are numbers of collapses in the corporate at the different countries around the world. By considering this collapse, different considerable number of researches has been made on the corporate governance, in the different developed countries. But with this comparison, corporate governance has not been researched that much in the developing countries (Denis and McConnel, 2005). However, the introduction of Sarbanes-Oxley Act, 2002 of the United States specifies different guidelines for the developed markets as the preventive measures to resist such happenings. But the emerging countries have not been taken any steps in this concern. In this case, this study is conducted based on the emerging markets of Bangladesh. As the

part of corporate governance, different sides of corporate governance have been discussed and analyzed here. Over the past decade, the sector of the non-bank financial institutions (NBFIs) has grown in importance in terms of financial stability, as reflected in its strong increase in size and growing interconnectedness with the banking sector. The recent financial crisis severely affected the financial system with the NBFIs sector at the centre of the crisis, experiencing significant losses. In response to this, governments focused on providing substantial rescue measures with the aim of restoring financial stability. However, non-bank financial institutions (NBFIs) also played an important role in the build up and transmission of risks leading up to the financial crisis. As a result, since the onset of the financial crisis, policy makers have focused on gaining a better understanding of the nature and role played by NBFIs and their potential contribution to systemic risk. The literature identifies four key-risk originating and transmission channels.

### **1.1 Research Questions**

The questions to be answered after the study-

- i) Has good corporate governance any impact on the performance of non-bank financial institutions?
- ii) Should non-bank financial institutions follow the compliance on corporate governance guideline efficiently?

### **1.2 Rationale for the study**

Recent corporate scandal and existing corporate governance literature gap motivates this study. For doing the study, to develop governance index in accordance with the BSEC compliance for NBFIs of Bangladesh is reviewing the firm's practice of corporate governance. This study focuses on the company's operating performance for accepting the corporate rules. By taking the internal and external governance factor in the study is to determine the interaction of governance factors with firm's performance. It extends the existing literature by giving the analysis of internal and external governance factor with NBFIs performance. Corporate governance has a social and economic need to reduce the mismanagement of people's fund. Besides, this study helps the regulators and firm to improve the governance factors. And the governance helps the investors and all stakeholders to provide fair and transparent information.

### **1.3 Research Hypotheses**

In order to determine whether there is a relationship between Non-Bank Financial Institutions performance with the corporate governance.

**H<sub>0</sub>:** Corporate governance has not significantly improved the operating performance of non-banking financial institution of Bangladesh.

**H<sub>1</sub>:** Corporate governance has significantly improved the operating performance of non-bank financial institutions (NBFIs) of Bangladesh.

#### **1.4 Research Outline**

The study delineates the relationship of operating performance with the corporate governance variables. The study is organized as the introduction in first section where there is an overview of corporate governance and operating performance of NBFIs. In the second section, it has shown the work of other researcher on this above mentioned related topic. Methodology of the study has been explained in the third section. Data analysis and findings are shown in the fourth section. Fifth section concludes the analysis. Deductive approach has been used for this study. Deductive approach refers the researcher bases their research on already existing theories in order to create a number of hypotheses which later will be tested against empirical data. Both qualitative and the quantitative methods are used for collecting data and analyzing the data.

#### **2.0 Literature Review**

Cho and Kim (2003) firm should enhance the corporate governance structure if the operating performance of the firm is poor because the change in corporate governance can bring out better quality of operating performance. Claessens et al., (2003) argued that good corporate governance builds high investor confidence which helps to create strong goodwill in the market. And poorly governed firms are expected to be weak in nature and would be less profitable. The researchers also argued that strong corporate governed firm has easy access to low cost financing, higher operating performance and more favorable decision for all stakeholders.

Combined Code (2003) the 'comply or explain' process infers that it is harder to find out a defined set of governance structure within the firm that is practiced to increase the performance of the firm. There is a variety of governance practice in the firm where a well defined code is not suitable for all firm but the core variable must be same. Most empirical study has shown the relation between the governance mechanisms, such as corporate boards, with operating performance of the firm. Yermack (1996) and Eisenberg, Sundgren and Wells (1998) found that board size was negative relation with the firm performance and value. Board composition was measured as the ratio of outsiders to insiders, and board independence, had been found to be positively relationship to firm performance (Rosenstein and Wyatt, 1990).

Klapper and Love (2004) conducted the study on the corporate governance and firm performance and found a strong influence of corporate governance on the operating performance of the firm. For conducting the study, they used return on assets (ROA) as a proxy for the operating performance by taking 14 emerging stock market. Moreover they have affirmed that the outcome may vary form country to country.

Muriithi (2004) conducted a study on the relationship between corporate governance mechanisms and performance of firms quoted on the Nairobi Stock Exchange. The author found that the board size and board composition had high impact on the operating performance of the firm when the management and board had separate control.

Ricart et al., (2005) conducted a study on the relationship between corporate governance systems and sustainable development of DJSI leading companies. Bauer et al., (2004) argued that whether good corporate governance helps to higher common stock returns, firm value or operating performance by taking a sample of 269 firms from the FTSE Eurotop 300 over the period 2000-2001. The researchers used Deminor's corporate governance ratings in order to measure the quality of corporate governance of the firm. Deminor's rating are attributed to four categories: shareholder rights, takeover defenses, disclosure on corporate governance and board structure and functioning. They found that investors trust is influenced by good quality of corporate governance which leads to lower corporate risk and a lower expected rate of return on stock and a lower expected rate of return leads to a higher firm valuation.

According to Clacher et al., (2007) conducted a lot of research where they found a strong correlation between the corporate governance adoption and firm performance. They concluded that firm's performance was high when corporate governance structure was strong. In Kenya, the legal and governance systems have a great impact to protect the interest of the shareholders. From these researches, corporate governance variables are monitoring the function of the management team which leads to a strong firm performance.

Matengo (2008) studied on the relationship between corporate governance practices and operating performance the of bank companies in Kenya. The researcher found that good corporate governance helps to lead to lower risk magnitude of the firm which reduces the cost of capital and increase the stock value. The researcher also found that more adoption of corporate governance means increases firm's operating performance and it is the place of financial resources attraction by the investors.

Bhagat and Bolton (2008) conducted a lot of study to find out the relationship among corporate governance, performance of the firm, capital structure of the firm and corporate ownership structure. The researchers found that board independence has a significant negative impact on the performance of the firm. They concluded that higher board independence may replace the CEO of the firm in the time of bad performance of the firm in the market.

Vincent Aebi, Gabriele Sabato and Markus Schmid (2011) made a research on Risk Management, Corporate Governance, and Bank Performance in the Financial Crisis and found out that bank performance has influenced by corporate governance mechanisms,

such as the presence of a Chief Risk Officer (CRO) in a bank's executive board and whether the CRO reports to the Chief Executive Officer (CEO) or directly to the board of directors during the financial crisis 2007. The research found the results which indicate that banks, in which the CRO directly reports to the board of directors and not to the CEO, exhibit significantly higher stock returns, ROA, and ROE during the crisis. In contrast, standard corporate governance variables are mostly in significantly or even negatively related to the banks performance during the crisis.

Denis Cormier and Michel Magnan (2014) argued that there is a strong relationship between both corporate social responsibility (CSR) disclosure and corporate governance with the financial analysts' information environment. It indicates that the higher the disclosure and the better corporate governance which turns a more consensus in operating performance with less dispersion. Corporate governance is substituted for corporate social responsibility disclosure for improving the forecast of the analyst, and supporting a complete form of corporate governance that encompasses disclosure. After all, the finding was that CSR disclosure and good corporate governance influence analysts which improve their ability to forecast the earnings of the firm.

Onu, Akinlabi, and Fakunmoju (2014) conducted a study on the impact of corporate control on the performance of non- bank financial intermediaries in Nigeria by using cross sectional secondary data which was obtained from the financial reports of non-bank institutions for a period of ten years (2001-2010). Analyzing the model by using panel regression analysis, they found that corporate governance has positive impact on the performance of firms. They also concluded that poor asset quality and corporate control and loan deposit ratios negatively affect financial performance and vice visa.

Recent studies and discussion in corporate governance is a burning topic from issues relating to financial crises and high profile corporate scandals. The growth potentials of NBFIs are impeded by a myriad of problems that are systemic while others are endogenous. Some these problems are inadequate capitalization, poor management and illiquidity. The harsh economic environment and the distress of banks which some of them had dealings with also fasten immensely to the problems of NBFIs.

### **3.0 Methodology**

#### **3.1 Data Collection and Sampling**

For conducting the study primary and secondary data is necessary. Primary data has been collected from questionnaire given to the employees of the non-bank financial institutions. The secondary sources of information were collected from the Annual Report, DSE library and several publications like books, magazines, trade journals & websites of the company etc. Corporate governance index data is collected through a semi structured questionnaire with a "Yes" and "No" based questions. For this analysis,

23 NBFIs have been considered from the population of 32 NBFIs where only 23 NBFIs are listed in DSE and the time frame of the study is 2011 to 2017.

### 3.2 Model for the research

To measure the impact of corporate governance on firm performance, the study model is as follows-

$$Y = \alpha + \beta_1 X_{1i,t} + \beta_2 X_{2i,t} + \beta_3 X_{3i,t} + \beta_4 X_{4i,t} + \beta_5 X_{5i,t} + \beta_6 X_{6i,t} + \beta_7 X_{7i,t} + \beta_8 X_{8i,t} + \varepsilon$$

Where;

$Y$  = Net interest margin (NIM) in percentage form for firm  $i$  at time  $t$ ;

$\alpha$  = Constant value

$X_{1i,t}$  = Governance Index (GI) for firm  $i$  at time  $t$ .

$X_{2i,t}$  = Board size (BDSZ) for firm  $i$  at time  $t$ .

$X_{3i,t}$  = Independent Director (INDIR) for firms  $i$  at time  $t$ .

$X_{4i,t}$  = Number of member of internal audit committee (ADCOM) for firm  $i$  at time  $t$ .

$X_{5i,t}$  = Number of Board meeting held (BDMET) for firm  $i$  at time  $t$ .

$X_{6i,t}$  = Age (AGE) of the firm  $i$  at time  $t$ .

$X_{7i,t}$  = Institutional Investors Shareholdings (INIV) for firm  $i$  at time  $t$ .

$X_{8i,t}$  = CEO Duality (CEOD) of the firm  $i$  at time  $t$ .

$\varepsilon$  = Error variable

### 3.3 Definition of the variables

#### 3.3.1 Dependent variable

##### 3.3.1.1 Net Interest Margin (NIM)

Operating profitability refers how profitable a company relative to its assets size. Net interest margin infers how much the company earns net interest from its invested capital in asset. The net interest earning is derived from the difference of interest income and interest expense.

$$\text{Net interest margin (NIM)} = \frac{\text{Net Interest}}{\text{Total Asset}}$$

NIM indicates the profitability from core operating activity of a company related to its investment in total asset in where the firm is focusing on wealth maximization goal.

### **3.3.2 Variable Independent**

#### **3.3.2.1 Governance Index (gi)**

Governance index has been developed by considering the qualitative variables of the corporate governance. The company which is complied the guideline is categorized as dummy variable for satisfying as '1' and unsatisfactory as '0'. Governance index includes the compliance of board structure, disclosure, accountability & audit, ownership structure, shareholders & their voting rights, compensation policy and general policy issues etc.

The corporate governance index was developed by Gompers, Metrick and Ishii (2003) and Gonecher (2008) to proxy for the level of shareholder rights within Kenyan unlisted firms. For constructing the corporate governance index, 1 point is awarded for compliance with the model of the CMA Code (2002), SOX (2002) or the Combined Code (2003) is observed and 0 for non-compliance or absence of satisfactory procedures relating to the discussed governance mechanism. The index is also compliance with Corporate Governance Guidelines as set by Bangladesh Securities & Exchange Commission (BSEC) by the notification # SEC/CMRRCD/2006-158/134/Admin/44 dated 07 August 2012 and subsequently amended through their notification # SEC/CMRRCD/2006-158/147/Admin/48 dated 21 July 2013 issued under section 2CC of the Securities and Exchange Ordinance, 1969.

#### **3.3.2.2 Board size (bsz)**

Board size of a public limited company refers to the number of board of directors of an institution. Big size of boards are better for profitability for the company because the large boards have different types of expertise which help to make better strategy and good decision for the firm where CEO has less dominance on decision making. For NBFIs, board size may be big for changing nature of financial decisions.

#### **3.3.2.3 Independent Director (indir)**

Board independence is the percentage of independent directors on the board of directors. Independent directors are independent in thought and attitude and there is no relation with the firm except for their seat of the board. Generally the outside directors are specialist in business, law, engineering etc.

#### **3.3.2.4 Number of member of internal audit committee (adcom)**

Internal audit committee is a committee of board of directors to oversight financial reporting to the stakeholders. Number of member of internal audit committee infers the total person to appoint to oversight the financial reporting and disclosure. Highly accountable internal audit committee stimulates the firm's operating performance.

### ***3.3.2.5 Number of Board meeting held (bdmet)***

Number of board meeting refers to the total number of board meeting held in a accounting or fiscal year. It varies company to company. Board meetings are held to settle special problems and take strategic decision for the firm. Generally all board members are attended the meeting and discussed the pros and cons of that decision which is going to be taken.

### ***3.3.2.6 Age of the company (age)***

Age of the firm infers that how many years the business has successfully completed its operation. Firms that have been in business for long times are positioned to have a good reputation for themselves against companies with short period in business. The research seeks to test this by using age of the firm due to the apparent variation. Age is considered as follows: Age = Current Year- Date of Incorporation of the firm.

### ***3.3.2.7 Institutional Shareholdings (iniv)***

Institutional shareholdings indicate the position of holding a company's publicly traded share by institution such as financial institutions (Banks, Insurance etc). Only free floating shares are considered as total shareholdings of the firm which are traded in the market. The owners of large blocks of shares may have influence of decision making and other matters.

### ***3.3.2.8 CEO Duality (ceod)***

CEO duality indicates the dual performance of the company as CEO and chairman. CEO duality is checked as a dummy variable whether CEO is also the chairman of the board of directors or not. There is a benefit for the company by taking separate person for CEO and chairman position which leads to more accurate decision making.

## **4.0 Result Discussion**

### **4.1 Data Stationary Test: Unit Root Test**

A unit root is the character of processes that evolve through time that can cause problems in statistical inference involving time series models. In Stata unit root test is the test for unit roots or stationary in panel datasets with xtunitroot.

Ho: All panels are stationary

H1: Some panels contain unit roots

**Table 1: Hadri LM unit root test**

Hadri LM test for nim		
Ho: All panels are stationary	Number of panels = 23	
Ha: Some panels contain unit roots	Number of periods = 7	
Time trend: Not included	Asymptotics: T, N → Infinity	
Heteroskedasticity: Not robust	sequentially	
LR variance: (not used)		
	Statistic	p-value
z	9.6008	0.0000

Here the z value is 9.6008 where the p value is less than 5% which indicates the model is significant. There the null hypothesis is rejected. So the datasets is free from unit root problem.

#### 4.2 Correlation Matrix

**Table 2: Correlation matrix**

	nim	gi	bdsz	indir	adcom	bdmet	age	iniv	ceod
Nim	1.0000								
Gi	0.1607* (0.0417)	1.0000							
Bdsz	0.1407 (0.0750)	0.1219 (0.1235)	1.0000						
Indir	-0.491* (0.0000)	0.1771* (0.0246)	-0.0145 (0.8554)	1.0000					
Adcom	-0.0142 (0.8585)	-0.0401 (0.6137)	0.0604 (0.4465)	0.0355 (0.6545)	1.0000				
Bdmet	-0.212* (0.0068)	0.0176 (0.8247)	0.0847 (0.2852)	0.3596* (0.0000)	-0.0382 (0.6304)	1.0000			
Age	-0.164* (0.0371)	0.1932* (0.0141)	-0.1482 (0.0606)	0.6076* (0.0000)	-0.0730 (0.3576)	0.0828 (0.2965)	1.0000		
Iniv	-0.1268 (0.1088)	-0.194* (0.0135)	0.0667 (0.4003)	0.3600* (0.0000)	0.1627* (0.0392)	0.1072 (0.1757)	0.2932* (0.0002)	1.0000	
Ceod	-0.0273 (0.7309)	0.0087 (0.9132)	0.0546 (0.4919)	0.0115 (0.8851)	0.0267 (0.7368)	0.0966 (0.2230)	-0.0945 (0.2333)	0.0388 (0.6250)	1.0000

\* Significant at the 5% level.  
Notes: Probability of each variables correlation is reported in parentheses.

The correlation matrix shows the relation with other variables which is used for the model to conduct the research. It shows the positive or negative relation with other selected variable. The correlation of each variable considers 5% level of significance. Only governance index and board size of the firm are positively correlated with the net interest margin. Other six selected variable is negatively correlated with net interest margin.

### 4.3 Multicollinearity Tests

**Table 3: Variance Inflation Factor**

Variable	VIF	1/VIF
Independent Director	2.03	0.492357
Age of the firm	1.81	0.551085
Institutional shareholdings	1.34	0.744944
Number of Board meeting held	1.21	0.825325
Governance index	1.19	0.840011
Board size	1.09	0.920313
Number of member of internal audit committee	1.06	0.947615
CEO Duality	1.03	0.973150
Mean VIF	1.34	

The variance inflation factor (VIF) measures the problem of multicollinearity in regression analysis model. The standard size of VIF that is considered as multicollinearity is  $VIF > 10$ . Then multicollinearity is high and the model is biased by the multicollinearity problem. By using the Stata command, all the variables VIF is less the 10 which infers that the model is free from multicollinearity problem.

To detect and exclude multicollinearity, we need to investigate the correlation between the independent variables. A correlation higher than 0.70 (in either case positive or negative) percent indicates that multicollinearity may be a problem. There is no multicollinearity problem among the variables if the correlation value is 0.70. From the correlation matrix no independent variable is correlated more than 0.70.

#### 4.4 Regression result

**Table 4: OLS Pooled Regression Model**

Independent Variables	Net interest margin
Governance index	0.1040401*** (0.02955)
Board size	0.0019271* (0.0010743)
Independent Director	-0.0095757*** (0.0013021)
Number of member of internal audit committee	0.0003352 (0.00225)
Number of Board meeting held	-0.0000295 (0.0003476)
Age of the firm	0.0007335** (0.0003385)
Institutional shareholdings	0.0118529 (0.0086294)
CEO Duality	-0.0018124 (0.0085872)
Constant	-0.0919374** (0.0312912)
N (Observations)	161
F	10.27
R-squared	0.3508
Adjusted R-squared	0.3166
*** Significant at the 1% level, ** significant at the 5% level, * significant at the 10% level. Notes: Robust standard errors are reported in parentheses.	

The R square for the OLS regression is 35.08%. It infers that 35.08% of the variation in the net interest margin is explained by the eight selected variables included in the test.

Here the F-Test is at 95% confidence level which states that the result is significant as it is less than 5% of significance level. Adjusted R square adjusts all effect to the model. Adjusted R square is more reliable to explain dependent variable of net interest margin with the change of independent variable. The adjusted R square for the OLS model is 31.66% which indicates that operating performance measured by net interest margin will be affected 31.66% due to the change in corporate governance selected independent variables.

Here the independent variables governance index, independent director and age of the firm have significantly influence on the net interest margin at p-value is less than 5%. The model indicates that 10.4% increase in governance index matrix value has increased 1% net interest margin if other things are constant. Governance index and age of the firm has positive impact on the firm's operating performance and independent directors has negative impact of operating performance because independent directors are appointed from government officials or university teachers. Firms are appointed them to get favor and most of the time independent directors are not concerned about the shareholders interest. Board size of the firm is also significant variable at 10% level of significance which infers that board member ensures accountability which helps to increase firm's profitability. Other independent variables like number of board meeting, institutional investors are affecting the operating performance although these variables are not statistically significant for this study. So the overall fit of the model is good because its p-value is 0.0000 which is less than 5%.

#### **4.5 Fixed Effect and Random Effect**

The fixed effect model considers the individual random variable effect on the explanatory variables. Here, the probability of F is less than 5% level of significance which indicates that the model is significant where the independent variables governance index has positive impact on operating performance of the firm. Number of independent director and age of the firm have negative relationship with the net interest margin. Fixed effect indicates that the within the variable there is a correlation.

Random Effect is not considered the individual-specific effect of a random variable with the explanatory variables. In this model, the chi-square is less than 5% which indicates that the model is significant. Here the two independent variables are statistically significant where governance index has positive relationship and number of board of director has negative relationship with the net interest margin. The overall R square is 33.01% that explains the independent variables.

#### 4.6 Hausman Test

**Table 5: Hausman Test**

Coefficients				
	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
gi	.1292253	.0956165	.0336087	.0121646
bdsz	.0002541	.0008639	-.0006098	.0007542
indir	-.009964	-.0103387	.0003747	.0014197
adcom	-.0013249	.0002893	-.0016142	.0009894
bdmet	.0000277	.0001024	-.0000747	.0003581
age	-.002271	.0002955	-.0025665	.00078
iniv	.0113181	.0151457	-.0038276	.0050409
ceod	.008625	.0026625	.0059625	.0054643
b = consistent under Ho and Ha; obtained from xtreg				
B = inconsistent under Ha, efficient under Ho; obtained from xtreg				
Test: Ho: difference in coefficients not systematic				
$\chi^2(8) = (b-B)'[(V_b-V_B)^{-1}](b-B)$ $= 26.20$				
Prob>chi2 = 0.0010				

Hauseman Test is the test of hypothesis that between the random effect model and the fixed effect model which one is appropriate. The Hausman test identifies the best fitting model for the study. The hypothesis of Hausman test is as follows-

Ho: Random Effect is appropriate

H1: Fixed Effect is appropriate

In the table, the chi-square is less than 5% which indicates that the alternative hypothesis can't be rejected. So the fixed effect is appropriate for this model where the independent variable's individual-specific effect is correlated with the dependent variables. To view the relationship operating performance with the corporate governance variable, the single variable can be explained the whole research model. So in fixed effect model, governance index, number independent directors and age of the firm have explained the research model significantly.

#### 4.7 Fixed Effect Model

**Table 6: Fixed Effect Regression Model**

Variable	Net interest margin
Governance index	0.1292253*** (0.0304909)
Board size	0.0002541 (0.0014395)
Independent Director	-0.009964*** (0.0021315)
Number of member of internal audit committee	-0.0013249 (0.0025276)
Number of Board meeting held	0.0000277 (0.0005546)
Age of the firm	-0.002271** (0.000919)
Institutional shareholdings	0.0113181 (0.010681)
CEO Duality	0.008625 (0.0112831)
Constant	-0.0308524 (0.0337983)
N (Observations)	161
Number of groups	23
R-squared	within = 0.2953 between = 0.2129 overall = 0.1890
sigma_u   .02365102 sigma_e   .01695252 rho   .66060222 (fraction of variance due to u_i)	
*** Significant at the 1% level, ** significant at the 5% level, * significant at the 10% level. Notes: Robust standard errors are reported in parentheses.	

The fixed effect regression model is suitable for this study which has proved by hausman test. The model is statistically significant where the probability of F is less than 5% level of significance. The Value of F is 6.81 for this model. For this study different NBFIs are referred as code. The R-square within the code is 0.2953 which refers that

29.53% of profitability of the NBFIs is explained by the selected variables within the industry. R-square between NBFIs is 0.2129 for the study. The overall R-square is 0.1890. Governance index, independent director and age of the firm are the statistically significant variable for this study. The result shows that governance index has positive impact on the profitability of NBFIs. Independent director and age of the firm have negative influence on the profitability. As the more number of independent is appointed, the expenses occurred and for that reason it has negative impact on the profitability. Governance index helps to improve the internal control, accountability which stimulates the profitability of the firm.

### **5.0 Findings of the study**

The regression analysis of the research model provides a significant result. Corporate governance variables have a positive impact on the firm's operating performance. The findings is consistent with the study of Clacher et al., (2007) who showed that the good quality of corporate governance structure had positive relation on better performance of the firm. From the analysis, governance index, number of independent director and age of the firm are statistically significant for all type of regression model. In Ordinary Least Square (OLS) model, governance index and age of the firm have positive impact on operating performance of the firm. Number of independent director has negative relationship with the net interest margin. The study result is also matched with the expected sign. Although the residual selected independent variables are not statistically significant, they have influential effect on the operating of the firm. Board size and institutional shareholding has positive impact on the net interest margin of the firm. Suehiredo (1993) found that financial institutions have representation on the supervisory board which affects the operating performance of the firm.

The independent director is the most popular and active form of corporate governance. But in NBFIs independent directors are being appointed from government officials, bureaucrats or university teachers. They have been appointed in favor of firm such as license approval not for the advocates of shareholders. For that reason, independent directors have negative impact on operating profitability of the NBFIs. Good corporate governance strengthens the internal control system which helps to achieve the goal of the non- banking financial institution sector. Institutional shareholders are a good form of watchdog for the activity of the firm. They monitor the firm's performance and have high controlling power to change the board composition. Good governance can be ensured through formulating the governance structure in all levels as per the guidelines of the regulators as well as the firm policy. Before providing any task to the employees, there will be a structure of accountability of that work.

For this study, the null hypothesis is rejected and the study model is statistically significant for the model. Board size, institutional shareholding and age of the firm have

influenced the operating performance of the NBFIs. Corporate governance variables have positive impact on the operating performance of the NBFIs. Most importantly the governance index established bases on the BSEC guideline has highly related on the corporate governance structure which stimulates the accountability and performance of the firm. The more adoption of the corporate governance codes provide by BSEC to make the governance structure strong to protect the firm from financial distress or financial scandal. Strong corporate governance doesn't tolerate the inconsistency of the functions of the firm that hampers the goal of shareholders wealth maximization. Good governance derives reduces the financial scam in Bangladesh as well as in the world.

## **6.0 Conclusion**

The performance of NBFIs sector is noticed worthy and also a zeal for entrepreneurship for the wealthy group of entrepreneurs. The operating performance is not only beneficial to the stakeholders but also to the government and the society in total. The operating performance of this huge and growing sector can only be measured by applying some specific tools including statistical analytical tools and software with some accounting and financial ratio analysis with governance variables. The amount of bad debts and proper corporate governance is also much more important in this regard to make a better conclusion over how much better the operating performance of this sector is being made in recent times than previous. Again, the internal controlling body is also an important issue. The profitability is growing and with that the financial scam is also increasing in Bangladesh. That's why the profitability analysis along with corporate governance is very important. Limited numbers of research have been found on the impact of corporate governance on the operating performance of NBFIs in developing country. Especially in Bangladesh, there is no study on this topic for NBFIs.

In this study the research model is established for getting the relationship the impact of corporate governance on the operating performance. By using statistical tool such as regression model, the research model is tested its validity and reliability. Net interest margin is used for the proxy of operating performance as dependent variable. And governance index, board size, number of independent director, number of member of internal audit committee, number of board meeting held, age of the firm, institutional investors and Chief Executive Officer (CEO) duality are the independent variables for the study. The Stata result shows that governance index, number of independent director, age of the firm are significantly related with the firm's operating performance. Governance index, age of the firm has positive impact on operating performance of the firm and number of independent director has negative impact on the net interest margin of NBFIs. Board size and institutional shareholding has positive impact on the net interest margin of the firm. Although other governance variables are not statistically significant, the operating performance of the firm has influenced by these variables. The suggestion for

the further research is that board size, AGM, corporate reporting can have the impact on the operating performance of the NBFIs. Besides, they can do further research on the insignificant variables.

## Reference

- Abor, J., C. and Adjasi, K. D. (2007). "Corporate governance and the small and medium enterprises sector: theory and implications", *Corporate Governance*, Vol. 7 (2): 111 – 122.
- Aebi, Vincent, Gabriele Sabato and Markus Schmid (2011). "Risk management, corporate governance, and bank performance in the financial crisis". *Journal of Banking and Finance*, pp: 1-38.
- Aerts, W., Cormier, D. and Magnan, M. (2008). "Corporate environmental disclosure, financial markets and the media: An international perspective", *Ecological Economics*, 64(3): 643–659.
- Agrawal, A. and Knoeber, C. (1996). "Firm performance and mechanisms to control agency problems between managers and shareholders", *Journal of Financial and Quantitative Analysis*, Vol. 31(3): 377-98.
- Aguilera, R. V. and Ermoli, I. (2005). "A comparative analysis of corporate governance systems in Latin America", *Journal of World Business*, pp. 151-171.
- Andres P. D. and E. Vallelado (2008). "Corporate Governance in Banking: The Role of the Board Directors", *Journal of Banking & Finance*, Vol. 32: 2570-2580.
- Bauer, R., Guenster, N., & Otten, R. (2004). "Empirical evidence on corporate governance in Europe: the effect on stocks returns, firm value and performance", *Journal of Asset Management*, Vol. 5 (2): 91-104.
- B. D and H. Butler (1985). "Corporate Governance and the Board of Directors: Performance Effects of Changes in Board Composition", *Journal of Law, Economics and Organization*, pp: 650-657.
- Berglof, E. and Claessens, S. (2004). "*Enforcement and Corporate Governance*", Policy Research, Working paper series 309, The World Bank.
- Baghat, S., Bolton, B. (2008). "Corporate governance and firm performance" *Journal of Corporate Finance*, Vol. 14: 257–273.
- Bhat, G., Hope, O. K. and Kang, T. (2006). "Does corporate governance transparency affect the accuracy of analyst forecasts?" *Accounting and Finance*, 46(5): 715–732.
- Cadbury A. (2003). "*Corporate Governance and Chairmanship – A Personal View*", New Delhi (India), Oxford University Press.
- Cho, D.S. and Kim, J. (2003). "Determinants in introduction of outside directors in Korean companies", *Journal of International and Area studies*, Vol. 10 (1): 1-20.
- Clacher, I., Doriye, E., Hillier, D. and Short, H. (2007). "*Does Corporate Governance Improve Firm Performance? Evidence of the United Kingdom*", IFC, Annual Report 2002, pp. 14-15, 23-25, 59, 68.

- Claessens, S. (2006). "Corporate governance and development", *World Bank Research Observer*, Vol. 21 (1): 91-122.
- Combined Code (2003). "*The Combined Code on Corporate Governance*", Financial Reporting Council: London.
- Commonwealth Association for Corporate Governance (1999). *Guidelines - Principles for Corporate Governance in the Commonwealth*.
- Chen, G., Firth, M., Gao, D. N. and Rui, O. M. (2006). "Ownership structure, corporate governance, and fraud: Evidence from China", *Journal of Corporate Finance*, Vol. 12(3): 424-448.
- Denis Cormier, Michel Magnan (2014). "The impact of social responsibility disclosure and governance on financial analysts' information environment", *Corporate Governance*, Vol. 14 (4): 467 - 484.
- Daily, C., Johnson, J., Ellstrand, A., & Dalton, D. (1994). "Compensation committee composition as a determinant of CEO compensation", *Academy of Management Journal*, Vol. 41 (2): 209-20.
- Demsetz, H. and Villalonga, B. (2002). "Ownership structure and corporate performance", *Journal of corporate governance*, Vol. 7: 209-33.
- Doidge, C., Karolyi, G. A. and Stulz, R. M. (2007). "Why do countries matter so much for corporate governance?" *Journal of Financial Economics*, Vol. 86(1): 1-39.
- Drobetz K., Eisenberg, T., Sundgren, S. and Wells, M. T. (2003). "Executive ownership, corporate value and executive compensation: a unifying framework", *Journal of Banking & Finance*, Vol. 20: 1135-1159.
- Denis, D. K. and McConnell, J. J. (2003). "International corporate governance", *Journal of Financial and Quantitative Analysis*, Vol. 38: 1-36.
- Dewing, I. P. (2003). "Post-Enron developments in UK audit and corporate governance regulation", *Journal of Financial Regulation and Compliance*, Vol. 11 (4): 309 - 322.
- Eisenberg, T., Sundgren, S. and Wells, M. (1998). "Larger board size and decreasing firmvalue in small firms", *Journal of Financial Economics*, Vol. 48 (1): 35-54.
- Enriques, L. and Volpin, P. (2007). "Corporate governance reforms in continental Europe", *The Journal of Economic Perspectives*, Vol. 21(1): 117-140.
- Ezzamel, M. A. and R. Watson (1993). "Organizational Form, Ownership Structure, and Corporate Performance: A Contextual Empirical Analysis of UK Companies", *British Journal of Management*, Vol. 4(3): 161-176.
- Foerster, S., & Huen, B. (2004). "Does corporate governance matter to Canadian investors?" *Canadian Investment Review*, Vol. 17 (3): 19-25.
- Foley and Lardner L. L. P. (2006). *The Impact of Sarbanes-Oxley on Private and Non-Profit Companies*, Accessed on March 28th 2012 from [www.foley.com](http://www.foley.com)
- Goncencr, E. (2008). "*Development of corporate governance in the European Union and in Turkey as a candidate country: An assessment of theoretical, legal and practical aspects*",

- Centre International De Formation Europe en Institut Europeen Des Hautes Etudes Internationales, pp: 9- 34.
- Gompers, A., Ishii, J. and Metrick, A. (2003). "Corporate governance and equity prices", *Quarterly Journal of Economics*, Vol. 118 (1): 107-55.
- Gugler, K., Mueller, D. C. and Yurtoglu, B. B. (2003). "*Corporate Governance and the Returns on Investment*", Finance Working Paper # 02, European Corporate Governance Institute
- Healy, P. M. and Palepu, K. G. (2001). "Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature", *Journal of Accounting and Economics*, 31(1/3): 405–440.
- Heracleous, C. (2001). "Board leadership structure and CEO turnover", *Journal of Corporate Finance*, Vol. 8 (1): 49-66.
- Jensen, M. and Meckling, W. (1976). "Theory of the firm: managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 (4): 305-60.
- Klapper, L. and Love, I. (2003). "Corporate governance, investor protection, and performance in emerging markets", *Journal of Corporate Finance*, Vol. 10 (5): 703-28.
- Kula, V. (2005). "The Impact of the Roles, Structure and Process of Boards on Firm Performance: Evidence from Turkey", *Corporate Governance: An International Review*, Vol. 13(2): 265-276.
- Le Breton-Miller, I. and Miller, D. (2008). "To grow or to harvest? Governance, strategy and performance in family and lone founder firms", *Journal of Strategy and Management*, Vol. 1 (1): 41 – 56.
- Lawrence D. Brown and Marcus L. Cayl (2006). "Corporate governance and firm valuation", *Journal of Accounting and Public Policy*, Vol. 25: 409–434.
- Le Breton-Miller, I. and Miller, D. (2008). "To grow or to harvest? Governance, strategy and performance in family and lone founder firms", *Journal of Strategy and Management*, Vol. 1 (1): 41 – 56.
- MacAvoy and Millstein (2003). "Meta-analytic reviews of board composition, leadership structure, and financial performance", *Strategic Management Journal*, Vol. 19: 269-290.
- Onu, C. A., Akinlabi, B. H. and Fakunmoju, S. K. (2014). "Corporate Control and Non-Bank Financial Intermediaries Performance in Nigeria: Using Panel Regression Analysis", *IOSR Journal of Business and Management*, Vol. 16 (9) (Sep. 2014): 74-81.
- OECD (2003). "*Corporate Governance in Asia*", OECD White Paper. The OECD, France.
- OECD (2004). "*Principles of Corporate Governance*", OECD, Paris.
- Pi, L. and S. G. Timme (1993). "Corporate Control and Bank Efficiency", *Journal of Banking and Finance*, Vol. 17: 515-530.
- Rosenstein, S. and Wyatt, J. C. (1990). "Outside directors, board effectiveness and shareholder wealth", *Journal of Financial Economics*, Vol. 26: 175-191.
- Securities and Exchange Board of India, (2003). "*Report of the Committee on Corporate Governance of the Securities and Exchange Board of India*", India.

- Committee on Corporate Governance, (1998). “*The Combined Code*”, London Stock Exchange Limited, Gee: London.
- Uddin, S. and Choudhury, J. (2008). “Rationality, traditionalism and the state of corporate governance mechanisms: Illustrations from a less developed country”, *Accounting, Auditing and Accountability Journal*, Vol. 21(7): 1026 – 1105.
- Vincent Aebi, Gabriele Sabato and Markus Schmid (2011). “Risk management, corporate governance, and bank performance in the financial crisis”, *Journal of Banking & Finance*, Vol. 36 (12): 3123-3482.
- Wanyama, S., Burton, B. and Helliard, C. (2009). “Frameworks underpinning corporate governance: evidence on Ugandan perception”, *Corporate Governance: An International Review*, Vol. 17(2): 159-175.
- Yermack, D. (1996). “Higher market valuation of companies with a small board of directors”, *Journal of Financial Economics*, Vol. 40: 185-211.
- Young, S. B. (2009). “The ethics of corporate governance: The North American perspective”, *International Journal of Law and Management*, Vol. 51 (1): 35 – 42.