

CORPORATE GOVERNANCE AND FIRM PERFORMANCE: A STUDY ON FOOD AND ALLIED COMPANIES

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Abstract

The purpose of the paper is to assess relationship between corporate governance and the performance of firms on Food and Allied companies in Bangladesh. In this study, corporate governance is considered to consist of the following elements : (i) board size; (ii) presence of female board members; (iii) duality of the chief executive officer (CEO); (iv) education level of board members; (v) board working experience; (vi) independent directors; (vii) board ownership; and (viii) CEO's tenure. correlation matrix for testing hypothesis is used on 18 listed Food and Allied companies during the period of 2014-2015. It is found that board size, presence of female board members, education level of board members, board age, independent directors and CEO tenure are negatively correlated with Return on Assets (ROA). However, duality of the CEO and board ownership are positively correlated with ROA. In contrast, board size, presence of female board's members, board working experience, independent directors and CEO tenure are found negatively correlated with return on equity (ROE). However, duality of the CEO, education level of board members, board ownership are found positively correlated with ROE. This study aims to reflect the gap in terms of firm's performance in the absence of proper governance.

Key words: Corporate Governance, Firm performance, Return on Assets, Return on Equity.

Introduction

Corporate governance has been the center of focus in the industrialized world. Organization for Economic Co-operation and Development (OECD) (1999) defines corporate governance as the system by which business corporations are directed and controlled. Corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation such as the board, managers, shareholders and other stakeholders, and spells out the rules and procedures. It is widely believed that good governance is an influential factor in improving the performance of the firm in developing countries. However, the relationship between corporate governance and the value of the firm differs in the different countries due to disparate corporate governance structure resulting from the dissimilar social, economic and regulatory conditions in these countries. It is needed to understand the differences which affect the value of the firm for academic investigation, financial and management practices and public regulation of market and corporations (Abdur Rouf et al., 2010). The relationship between corporate governance and the value of the firm is important in

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formulating efficient corporate governance management and the public regulatory policies. According to Black (2001), Klapper and Love (2004), Gompers et al. (2003) and Beiner and Schmid (2005), corporate governance plays an important role in improving the value of the firm. Fama and Jensen (1983) argue the market is the most powerful force toward effective Corporate Governance (CG).

However, David et. al. (2002) investigate on corporate governance, board diversity, and firm value. Their research examines the relationships among corporate governance, board diversity, and firm value for Fortune 1000 firms. Rob et. al. (2003) had found a stronger relationship between governance and firm value. Corporate board is considered as the zenith of internal corporate governance mechanism (Brennan, 2006).

Brown and Caylor (2004) add to this literature by showing that firms with board sizes of between 6 and 15 have higher returns on equity and higher net profit margins than do firms with other board sizes. Conyon and Peck (1998) also conclude that the effect of board size on corporate performance (ROE) is generally negative.

Numerous literature from past academic studies confirmed the effect of corporate governance on a firm's performance (Klapper and Love, 2004; Black et. al. 2003). Recently academic studies have started to bring together more wide-ranging measures of corporate governance. Gompers et. al. (2003) with many others reported positive governance effect on firm performance.

However, very few of them focused so extensively on various indices of corporate governance issue in this emerging economy like Bangladesh. This paper identifies a wide range of indices of corporate governance and examines their association with performance for listed companies of Bangladesh. Various research hypotheses based on a sample of 18 Dhaka Stock Exchange (DSE) listed food and allied companies.

Reviewing all the above discussion, the article aims with the following objectives:

- To understand the core concept of corporate governance;
- To find out variables of corporate governance which affects the firm value;
- To find out the relationship between corporate governance and firm value.

As many prior studies have noted, the relationship between corporate governance and company performance is subject to endogeneity or reverse causality. Specifically, it is not clear whether performance causes governance or whether governance causes performance. After analysing the previous literature and research gap, the problem statement may be the following:

- Does corporate governance has any effect on firm's performance in Food and Allied companies?

Methodology of the Study

To attain the aforesaid objectives, primary data are collected through a questionnaire. Secondary data are collected through annual report and company websites of Food and Allied industry and DSE website. Data of 18 listed Food and Allied companies on DSE for the period of 2014-2015 were used for the analysis. It is noted that formats of annual reports and financial statements of these 18 listed firms are not similar. As such, there prevails some missing data. As a result, listed firms missing any required data are excluded from the final sample of the study.

Research Framework

Evidence from previous empirical studies from academic literature has sought to confirm the effect of corporate governance on a firm's performance. Relevant literature of academics like David et. al. (2002), Rob et. al. (2003) have indicated the following characteristics applied to corporate governance such as: (i) board size; (ii) presence of female board members; (iii) duality of the CEO; (iv) education level of board members; (v) board working experience; (vi) independent directors; (vii) board ownership; and (viii) CEO tenure . Each of these characteristics are discussed below.

Board's size: Every public company form large or small Board to run the company. Under these undertakings, companies want to check whether there prevails any effect on company performance by a large or small board's size? So the Null and alternative hypotheses are the following;

Hypothesis H₀₁: *There is no negative relationship between board's size and a firm's performance.*

Hypothesis H₁: *There is a negative relationship between board's size and a firm's performance.*

Female board member: Whether a firm's performance is improved directly and indirectly with the presence of female board members or not? So the Null and alternative hypotheses are as follows;

Hypothesis H₀₂: *There is no positive relationship between female board members and firm's performance*

Hypothesis H₂: *There is a positive relationship between female board members and firm's performance.*

Duality: Whether duality affects the firm's performance directly or indirectly? It is usually seen that closely held family business approves the duality function. So the Null and alternative hypotheses are as follows;

Hypothesis H₀₃: *A duality positively affects a firm's performance.*

Hypothesis H₃: *A duality negatively affects a firm's performance.*

Board's educational qualification: A board of directors supervising management decisions in an efficient manner will improve firm's performance. This requires each board member to be fully equipped with management knowledge such as finance, accounting, marketing, information systems, legal issues and other related areas of decision making. Analyzing the above ground, a research hypothesis is developed as follows:

Hypothesis H₀₄: *Board's educational level will not positively contribute to the firm's performance.*

Hypothesis H₄: *Board's educational level will positively contribute to the firm's performance.*

Board's level of experience: It is argued that board members with a higher age average will have much more experience compared to the younger. This experience is expected to contribute positively for the better performance of a firm. However, older-age board member appears to be more aggressive and dictatorial with decisions. So the hypothesis is as follows:

Hypothesis H₀₅: *Board's level of experience is not positively correlated with a firm's performance.*

Hypothesis H₅: Board's level of experience is positively correlated with a firm's performance.

Independent directors: Empirical results by Kesner (1987), Oswald and Jahera (1991), Eng and Mak (2003) bear evidence of that insider ownership has a positive relation with firm's performance. As such, research hypotheses are presented below.

Hypothesis H₀₆: Independent directors will not contribute positively to a firm's performance.

Hypothesis H₆: Independent directors will contribute positively to a firm's performance.

Board's ownership: Whether the ownership has any effect on firm performance? To check so, we developed following hypotheses:

Hypothesis H_{07a}: Board's ownership is not positively related to a firm's performance.

Hypothesis H_{07b}: There is a linear relationship between a board's ownership and a firm's performance.

Hypothesis H_{7a}: Board's ownership is positively related to a firm's performance.

Hypothesis H_{7b}: There is a nonlinear relationship between a board's ownership and a firm's performance.

CEO's tenure: CEO is the think tank and the ultimate decision maker of the company. So it is really important who is the CEO of the company and how many years he / she holds position in the company. Before implementing each decision in the company, CEO holds the ultimate key. On the ground of the above analysis, research hypotheses are developed as follows.

Hypothesis H₀₈: There is no positive relationship between CEO's tenure and a firm's performance.

Hypothesis H₈: There is a positive relationship between CEO's tenure and a firm's performance

To test the above hypotheses we used multiple regression analysis at 1%, 5% and 10% level of significance. The test used for the Regression is $b_{xy} = r \frac{\sigma_x}{\sigma_y}$. Where, r = coefficient of correlation.

To find out the relation among the variables the following test statistics of coefficient of correlation is used $r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \times \sum(y_i - \bar{y})^2}}$

Measurement of variables

Variables used in this empirical study includes: i) dependent variable (firm's performance); ii) independent variables and iii) control variables. Concepts and measurements of these variables are summarized below.

Table 1. Dependent variables

Variables	Definition	Measurement
ROA	Return on asset	Earnings Before Tax and Interest/Total Asset
ROE	Return on equity	Earnings Before Tax and Interest/Total Equity

Table 2. Control variables

Variables	Definition	Measurement
Industry	Industry	Industry dummies
Year	Fiscal year	Year dummies

Table 3. Independent variables

Variables	Definition	Measurement
Board's size	Board members	Number of inside and outside directors on the board
Gender	Female board members	Number of women present on the board
Duality	CEO Dual	Coded "1" if Chairman also holds the position of CEO and "0" otherwise
Education	Board's educational level	Number of directors holding postgraduate degrees
Board's age	Board's working experience	Average age of all directors on the board
Out_Dir	Outside Director	Number of non-executive directors on the board
Own	Board's ownership	Ratio of shares held by director divided by total outstanding shares
CEO tenure	CEO's tenure	Number of year CEO holds the position

Result and Discussion

The following table shows the descriptive statistics, which includes minimum, maximum, mean, standard deviation from the sample data.

Table 4. Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Board's size	18	5.00	9.00	6.6667	1.41421
Gender	18	0.00	3.00	0.6111	0.84984
CEO's duality	18	0.00	1.00	0.8889	0.32338
Education	18	2.00	6.00	3.0556	1.30484
Board's age	18	35.00	56.00	46.4444	6.09939
No. of Outside Director	18	1.00	3.00	1.6111	0.50163
Board's ownership	18	1.00	40.00	16.5750	10.84482
CEO's tenure	18	1.00	3.00	2.2778	0.75190
Return on Asset	18	2.00	10.00	5.5161	2.15955
Return on Equity	18	3.00	18.00	10.6511	3.94813
Valid N (list wise)	18				

Table 4 shows the descriptive statistics of all the variables used in the study. The inherent features of data can be summarized by the following information.

The mean of ROA of the sampled companies is about 5.51% and the mean of ROE is 10.65% in Taka. The average board's size is 6.66 with a standard deviation of 1.41 and its ranges from 5 to 9. It means that on an average the board's size comprise with seven members. The average independent directors are 1.61 or 2 members per company. The board members average age is 46. On an average 3 person in the board obtained master's degree from university or college. 61% companies have female director. The result also indicates that 89% are separate person's occupying the post of CEO and the post of board of director. While 11% are the same person's occupying the posts. Directors hold an average of 16.57% ownership of the companies.

Correlation and Regression analysis: Table 5 and Table 6 indicate a correlation matrix between dependent variables and independent variables in respect of ROA and ROE respectively.

Table 5. Correlation Matrix

	ROA	Board's size	Gender	CEO's duality	Education	Board's age	No. of Outside Director	Board's ownership	CEO's tenure
ROA	1								
Board's size	-.369 .132	1							
Gender	-.018 .944	.326 .186	1						
CEO's duality	.181 .473	-.214 .393	-.595** .009	1					
Education	-.050 .844	.085 .738	-.214 .395	-.247 .323	1				
Board's age	-.150 .552	-.302 .223	-.509* .031	-.003 .990	.085 .739	1			
No. of Outside Director	-.116 .647	.138 .584	-.652** .003	.081 .751	.550* .018	.310 .211	1		
Board's ownership	.167 .508	-.082 .748	-.249 .320	.271 .277	.131 .603	.008 .976	-.133 .598	1	
CEO's tenure	-.279 .262	.664** .003	.295 .235	-.141 .578	.205 .414	-.230 .358	.091 .720	.174 .489	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 5 shows board's size, presence of female board members, education level of board members, board's age, independent directors and CEO's tenure are negatively correlated with ROA. However, duality of the CEO, board's ownership positively correlated with ROA.

Table 6. Correlation Matrix

	ROE	Board's size	Gender	CEO's duality	Education	Board's age	No. of Outside Director	Board's ownership	CEO's tenure
ROE	1								
Board's size	-.362 .140	1							
Gender	-.076 .766	.326 .186	1						
CEO's duality	.085 .738	-.214 .393	-.595** .009	1					
Education	.139 .581	.085 .738	-.214 .395	-.247 .323	1				
Board's age	-.227 .365	-.302 .223	-.509* .031	-.003 .990	.085 .739	1			
No. of Outside Director	-.088 .728	.138 .584	-.652** .003	.081 .751	.550* .018	.310 .211	1		
Board's ownership	.188 .454	-.082 .748	-.249 .320	.271 .277	.131 .603	.008 .976	-.133 .598	1	
CEO's tenure	-.355 .148	.664** .003	.295 .235	-.141 .578	.205 .414	-.230 .358	.091 .720	.174 .489	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 6 shows board's size, presence of female board members, board's working experience, independent directors and CEO's tenure are negatively correlated with ROE. However, duality of the CEO, education level of board members and board's ownership are positively correlated with ROE.

Table 7. Model Summary (In case of ROA)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.954 ^a	.910	.847	1.68807	.910	14.407	7	10	.000	1.334

- a. Predictors: (Constant), CEO's tenure, Board's size, CEO's duality, Number of Outside Directors, Gender, Board's age, Education
 b. Dependent Variable: Return on Assets

From table 7, it is inferred that the coefficient correlation (R) is 0.954. This suggests a strong positive correlation between ROA and board size, presence of female board members, board working experience, independent directors and CEO tenure, duality of the CEO, education level of board members, board ownership as the value of R lies between +0.5 to +1.0. The coefficient of determination (adjusted R square) is approximately 0.847. This indicates that the independent variable and firm performance can explained by ROA at 85%. The Durbin Watson statistic is a number that tests for auto correlation in the residuals from a statistical regression analysis. The Durbin-Watson statistic is always between 0 and 4. A value of 2 means that there is no auto correlation in the sample. Values approaching 0 indicate positive autocorrelation and values toward 4 indicate negative autocorrelation. In this study, Durbin-Watson is 1.334 that means positive auto correlation.

Table 8. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	287.377	7	41.054	14.407	.000 ^a
	Residual	28.496	10	2.850		
	Total	315.873	17			

- a. Predictors: (Constant), CEO's tenure, Board's size, CEO's duality, Number of Outside Directors, Gender, Board's age, Education
 b. Dependent Variable: Return on Assets

According to the table 8, it can be seen that the F value of 14.407 with a significance level 5%. This shows that the regression model can be used to predict the dependent variable, namely ROA.

Table 9. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	8.392	15.293		.549	.595	-25.682	42.466
Board's size	.520	1.331	.258	.391	.704	-2.445	3.485
Gender	.869	.943	.231	.922	.378	-1.231	2.969
CEO's duality	-2.571	2.692	-.305	-.955	.362	-8.570	3.427
Education	.756	1.361	.331	.555	.591	-2.278	3.789
Board's age	-.289	.293	-.318	-.988	.346	-.942	.363
Number of Outside Director	.798	.886	.202	.900	.389	-1.176	2.772
CEO's tenure	.439	.689	.075	.637	.538	-1.096	1.974

a. Dependent Variable: Return on Assets

According to table 9, it can be seen that dependent variable and independent variable positively correlated because it showed T value of 0.549.

Table 10. Model Summary (In case of ROE)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.895 ^a	.802	.663	3.37375	.802	5.770	7	10	.007	1.568

a. Predictors: (Constant), CEO's tenure, Board's size, CEO's duality, Number of Outside Director, Gender, Board's age, Education

b. Dependent Variable: Return on Equity

From table 10 it was inferred that the coefficient correlation (R) was 0.895. This suggests a strong positive correlation between ROE and board size, presence of female board members, board working experience, independent directors and CEO tenure, duality of the CEO, education level of board members, board ownership as the value of R lies between +0.5 to +1.0. The coefficient of determination (adjusted R square) is approximately 0.663. This indicates that the Independent variable and firm performance can explained by ROA at 66%. In this study, Durbin-Watson is 1.334 that means positive auto correlation.

Table 11. ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	459.753	7	65.679	5.770	.007 ^a
	Residual	113.822	10	11.382		
	Total	573.575	17			

a. Predictors: (Constant), CEO's tenure, Board's size, CEO's duality, Number of Outside Director, Gender, Board's age, Education

b. Dependent Variable: Return on Equity

According to the table 11, it can be seen that the F value of 5.770 with a significance level lies between .007 below .05. This shows that the regression model can be used to predict the dependent variable, namely ROE.

Table 12. Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-4.881	30.563		-.160	.876	-72.980	63.219
	Board's size	2.436	2.659	.897	.916	.381	-3.489	8.362
	Gender	1.045	1.884	.206	.555	.591	-3.152	5.243
	CEO's duality	-2.774	5.380	-.244	-.516	.617	-14.762	9.214
	Education	-.784	2.721	-.255	-.288	.779	-6.847	5.279
	Board's age	-.201	.585	-.164	-.344	.738	-1.505	1.103
	Number of Outside Director	-.107	1.771	-.020	-.060	.953	-4.052	3.839
	CEO's tenure	1.845	1.377	.233	1.340	.210	-1.223	4.913

a. Dependent Variable: Return on Equity

It is observed that gender, CEO's duality, number of outside Directors are significant at 1% level of significance. Also Board's age is significant at 5% level of significance.

From hypothesis point of view, in case of ROA, H_{02} , H_{03} , H_{04} , H_{05} , H_{06} , and H_{08} are accepted. Because of regression analysis is significant and positively correlated with ROA. In contrast H_{01} , H_{07a} , and H_{07b} are rejected. Because they are negatively correlated with ROA and Regression result is not significant at 1%, 5% or 10% level of significance.

From hypothesis point of view in case of ROE, H_{02} , H_{03} , H_{05} , H_{06} , and H_{08} are accepted. Because of positive correlation with ROE and regression result is significant. In contrast H_{01} , H_{04} , H_{07a} , and H_{07b} are rejected. Because they are negatively correlated with ROE and Regression result is not significant at 1%, 5% or 10% level of significance.

Recommendations

- There should not be too many members on the board because a large board's size will contribute negatively to the firm's performance.
- The post of CEO and the post of director should be separated because it affects firm's performance positively.
- Board should not appoint too many female members in the board because it will contribute negatively to firm's performance.
- Board should appoint experienced persons because these experienced persons positively contribute towards company performance.
- These studies show that CEO's tenure negatively affects the company's performance. So CEO's tenure should be as minimum as possible.

Conclusion

Corporate governance does matter in Bangladesh. This paper sets out to further develop our understanding of corporate governance and its effects on corporate and economic performance. In doing so, it addresses some of the underlying factors that promote efficient corporate governance, and examines some of the economic implications associated with various corporate governance systems. Both insider and outsider systems of corporate governance have their strengths, weaknesses, and different economic implications. Corporate governance mechanism also varies depending on industry sectors and type of productive activity. So the results vary from industry to industry. Single yardstick may not be applicable for all industries.

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