

The Impact of Corporate Governance on the Financial Performance of a Firm (A DuPont Analysis)

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ABSTRACT

The purpose of this study is to identify a quantitative relationship between corporate governance and firm's financial performance, or financial outcomes. Extensive literature was sought to determine the most significant corporate governance factors impacting the financial performance of firms. For this research, authors studied three factors namely (i) size of a firm's board (ii) the number of women members on board and (iii) the duality of a firm's CEO. Statistical techniques were used to present financial outcomes of 9 listed pharmaceutical firms trading over the period from 2011 to 2015 in Pakistan Stock exchange. The research findings indicate that corporate governance factors like board size, number of women board members and duality of CEO holds a negative relationship with financial metrics like return on equity (ROE).

Keywords: Corporate Governance, Firm Performance, Listed Firms in Pakistan, Return on Equity

INTRODUCTION:

In recent years, large interest has been shown in corporate governance studies. Some studies claimed one developed capital market corporate governance model as being superior to another model. Because corporate governance reduces the agency problems, therefore it is the most valuable area for management and shareholders, because the weak corporate governance system can allow the managers to take actions in personal interest, ultimately contribution to economic development is the result, although varieties of studies has been tested the effectiveness of corporate governance and firm's performance.

Good corporate governance has key constituent elements (including corporation actions requiring shareholders' approval, share ownership pattern, regulatory framework, the composition of the board of directors, etc.) to serve shareholders objective, minimize the operating cost, maximize the profitability, players — that why the study of corporate governance is important to make any financial decision in a corporation.

In today economic world, a good and bad business has a big differences of competent governance of its business, corporate governance has a big impact on value maximization of shareholders, satisfaction of shareholders, creditors, management and other stakeholders generate positive directions for firm and thereby increase the return on assets and return on equity, and possibly cutting in operational cost.

Mathematically DuPont is the result of multiplication of profit margin, assets turnover, and equity multiplier. Past studies have been conducted to show the correlation between corporate governance and ROA, or some other studies show the correlation between corporate governance and ROE. No doubt, in our result ROA is also included, but it will not neglect the impact of profitability, till now limited hard evidence are identified.

A good corporate governance developed the better and reliable relationship between firm and customer, ultimately increase in sales, production, and decrease the cost of sales, operational cost and other costs (due to economies of scale) are results, then profit margin will be increased, and earnings per share will be increased.

LITERATURE REVIEW:

In the context of the topic, we have studied literature written by different researchers from Vietnam, Bangladesh Saudi Arabia, Ghana, and Turkey, etc. composition of the board of directors vary from country to country as the corporate governance structure varies. The impacts of the composition of the board on the probability of firms in different countries are studied and finally summarizes below.

In one study, an inverse relationship was found to exist between a company's board size and its financial metrics (European journal of finance, a study in the United Kingdom). In another study, the existence of women board member and duality of CEO has been found to positively correlate with financial metrics of a firm however the size of a company's board is found to impact financial metrics (DucVo and thuyphan 2013) negatively.

An empirical study from the experience of the Bahrain stock exchange found that corporate governance variables significantly correlate with factors such as return on assets and return on equity. However, if the board of directors exercised a great deal of independence, ROA and ROE were found to have a positive and significant impact (Esra Ahmed and AllamHamdan 2015). A Ghanaian study revealed that presence of smaller board sizes and two-tier board structures up to eight members was critical (anthiny and nirholas), however, board size is noted to have no effect on return on assets (Muhammad ahid 2012, Saudi Arabia, non-financial firms),

A Malaysian study reveals that board companies head by non-executive directors performed relatively well. The author has concluded that there is significance relationship between board size and financial metrics of the firm (Wan fallziahWanyousoff and iris, 2012). Another study, however, refutes this claim, saying that the presence of non-executive directors may not significantly improve financial or economic metrics of the firms (Rashid, Zoya, S.Ldh, Rudkin. 2010, the study of Bangladesh).

The literature regarding the influence corporate board on firm's financial outcomes in the new era of Sarbanes-Oxley indicates that the duality of CEO/COB has a positive effect return on asset growth, further board size is positively related to revenue growth (Raymond, Paul, Jaeyong 2010), an investigation on Turkish banks suggests that board size held a strong relationship between executive directors and performance of the firm (Ozcan.Ali Raza 2016).

In a nutshell, the size and the structure of a board significantly impact the financial outcomes of the firm. Companies that have a diverse and large number of people in the board will generally have clashes and conflicts in decision-making, acting detrimentally to a firm's financial performance. It has been found that inside ownership within small boards is high which leads to a positive impact on a firm's performance. Further, Zahra and Pearce (1989) established that the size of the board had a positive relationship with firm performance. This is also confirmed by a study by Kiel and Nicholson (2003), which proved that larger board sizes were related to the better financial performance of the firm and smaller board sizes invite low corporate performance.

Another conclusion by Bacon in 1973, reveals that a larger board implies members with different expertise and thinking skills, reached the decisions at fewer errors position and include the brightness in decisions. The relation between board composition and financial scandals, worked by Beasley in 1996, directed that manipulating financial reports proved the higher scandals with respect to the ratio of independent directors in the firms.

The CEO duality reflects the positive shade for the firm's performance, argued by Boyd in 1995. While Dahya, Lonie, and Power in 1996 argued that CEO duality could be the reason for negative effects for corporate performance. Huson et al. in 2001, draw the light that the higher ratio between positive relations of independent director's accounts for boards and the better firm performance. Empirical results by Kesner in 1987, reveals evidence that insider ownership has a positive relationship with firm performance.

Empirical evidence from research literature extensively establishes that corporate governance holds significant impacts on the financial outcomes of a firm. Combining the literature from earlier research, we consider the following corporate governance elements or characteristics worth taking into account: (i) Size of a company's board (ii) The number of women members in the board (iii) The duality of the CEO (executive versus non-executive) (iv) Academic qualification of board members (v) Experience of Board members (vi) presence of

independent directors (vii) Compensation to board members (viii) Ownership structure of the board (ix) block holders.

These characteristics are discussed in depth below.

RESEARCH METHODOLOGY:

Research Hypotheses

1. Size of a Company's Board

Two different schools of thought strive to explain how the size of a company's board effects on financial performance. The first approach maintains that the smaller the size of a company's board, the better will be the financial and business financial outcomes (Lipton and Lorsch, 1992; Jensen, 1993; Yermack, 1996). The second approach maintains that the larger the size of a company's board, the better will be the financial and business financial outcomes (Pfeffer, 1972; Klein, 1998; Coles and ctg, 2008). Studies are supporting the second school of thought state that larger board sizes are expected to bring greater support and advice for a company's management, especially in situations where the firm faces a complex business environment and a diverse organizational culture (Klein, 1998). In addition, the large size of a board also indicates a large amount of information which can effectively impact the financial outcomes of the company (Dalton and ctg, 1999).

Truong et al. (1998) studied the corporate governance practices in Vietnam and compared their management cultures with international practices. The research found that Vietnamese firms relatively shared less managerial power compared with firms in other countries, reflecting a gap of power in Vietnamese firms. The findings of the research point that in Vietnam, a large board size implied a reduced delegation of power. Based on this study, the present research can formulate the following hypothesis:

Hypothesis1: A negative relationship exists between the size of the board and a firm's performance.

2. Women board members

Various researchers have also studied the presence of women board members. Women board members show how much diversity exists within a board (Dutta và Bose, 2006).

Moreover, a study by Smith et al. (2006) studied the various reasons to determine the importance of women on board. The first reason is that women members have better knowledge of a market in relation to male members of a board, effectively helping the decision-making process of the board. Next, women members of the board improve a community's perception about a company, contributing significantly to the financial outcomes of a firm. Last, male members also get an improved understanding of the business environment through guidance and information from women board members. In all, the study indicates that women board members can positively affect the career development of junior women working in a company. Consequently, the financial outcomes of the firm are improved when women board members are present.

Hypothesis H2: A positive relationship exists between the presence of women board members and financial outcomes of the firm.

3. The duality of the CEO

While findings differ across various studies regarding whether duality of the CEO improves or limits firm's performance, there is a vast agreement among institutional investors, policymakers and shareholders that a company's chairperson should be different from its CEO. In a study by Dahya et al. (2009) a period between 1994 and 2003 was studied in which policymaking of 15 advanced nations was compared against the United Kingdom. The study findings point that board chairman or chairwoman should be a different person than the CEO of the company. Likewise, in Europe, 84 percent of the companies have independent CEOs and

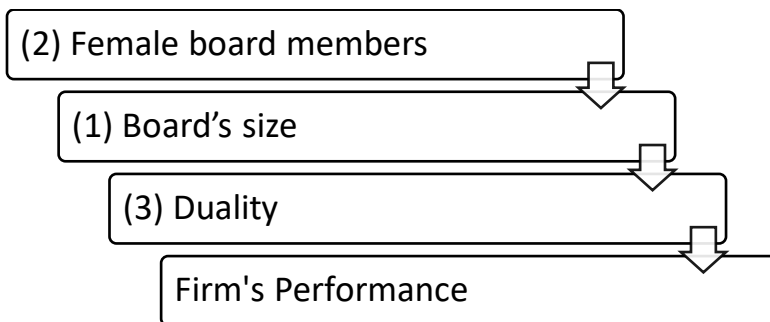
Chairpersons (Heidrick and Struggles, 2009). In another study by Hewa-Wellalage and Locke (2011), corporate governance practices of Sri Lanka were examined. In a study aimed at investigation of corporate governance practices at Sri Lanka, it was suggested that the company should minimize an individual's influence in the process of decision making. The rule provides a recommendation for the duality of a CEO within a firm, leading to a number of independent directors on a board so that a balance operation is ensured.

Many firms have adapted to the non-duality CEO structure as well (Chen, Lin, and Yi, 2008). However, research for non-duality points warns against power abuse by the chief executive officers. According to the advice of the Ministry of Finance (2012), a board chairman should not have the position of chief executive officer without prior approval by shareholders through an annual general meeting. Furthermore, Fama and Jensen (1983) and Jensen (1993) found out that duality would cut down the amount of supervision of the management of a company, resulting in an increased cost of an agency. Keeping this in view, the following hypothesis is developed:

Hypothesis H3: A duality negatively impacts on the financial outcomes of the firm.

The following research framework is developed and presented keeping in view all the hypothesis discussed:

Figure 1. Research framework



The objective of the study:

- To describe what factors effect on return on equity (ROE) when we consider the components of corporate governance as independent variables.
- Review the literature concerning the corporate governance components and ROE.
- Measure the size of the board of director, duality of chairman and CEO and women members on the board.
- Compare the pharmaceutical sector listed companies' ROE statistics
- To study the challenges for corporate governance in Pakistan
- To implement corporate governance in Pakistan companies
- To review different international developed capital market model of corporate governance
- To make policy suggestions and recommendations based on an alternative model for Pakistani corporate environment.

The main objective and motivation of this study are to observe the results / analysis of ROE with corporate governance components.

This study is unique in many aspects; this is the 1st study that examines the relationship between Du Pont analysis and corporate governance for all listed pharmaceutical companies in Pakistani corporate environment for five years' period of time from 2011 to 2015.

Variables Identification:

Variables used in this study include: (1) dependent variable (firm’s performance); and (2) independent variables.

(i) Corporate governance:

As corporate governance we use three variables, i.e. (i) board size (ii) duality of CEO and chairman, and (iii) No. of women in board, with hand to hand of other corporate governance studies, 1st we observe the size of each board, second we measure the duality of CEO and chairman, and then third we measure No. of women in board.

(ii) Firm performance:

Out of many available measurement parameters, we will use Du Pont analysis to measure the firm’s performance, because profitability margin, assets turnover, and as well as equity multiplier are used to calculate Du Pont analysis. The measurements and concepts of the study variables used in the research are presented in the table below:

Table 1 Description of Variables and their Measurements

Variables	Description	Measurements
Dependent variable		
<i>ROE</i>	Return on equity	(Earnings Before Tax and Interest or EBIT as a proportion of Total equity)
Independent variables		
<i>Size of the Board</i>	Number of members	Number of directors on the board, inside and outside
<i>Gender</i>	Women members in a board	Number of women on the board
<i>Duality</i>	CEO also the chairman, i.e., role	If Chairman also has the CEO position, then represented by ‘1’ otherwise represented by “0” otherwise

Variables	Description
Size of the Board	The board of a company is its governing body. The board members, also called directors, are generally voted in by shareholders of a firm in a typical AGM setting.
Profitability Margin	The different of revenues minus the expenditures is represented as a percentage in the form of profitability margin. It shows the dollar value of a company’s profit over its costs.
Assets turnover	This ratio indicates the value of a firm’s sales or revenues in relation to the value of its assets.
Equity Multiplier	The equity multiplier tells how much a company has obtained financial leverage. It is measured a ratio of assets of a firm given by its total equity financed by shareholders.
Return on Equity	Return on equity (ROE) reflected the percentage of return of income from shareholder equity.

DATA ANALYSIS:

In our course of work, we have selected the pharmaceutical sector of Pakistan stock exchange. There is 9 pharmaceutical corporation working in the pharmaceutical sector. We have analyzed the annual reports of these 9 corporations for the last five years starting from 2011 to 2015. The financial outcomes of these firms have been measured through the return on equity (ROE). Since financial outcomes are the dependent variable and the corporate governance is the independent variable.

The composition of the board of directors has been specified into the area of corporate governance. Several factors are included in the composition of board of directors, i.e., board size, education, experience age, duality of CEO/COB, gender, ownership of board, compensation, independent director, etc. these all thing are critical, but the most important of all these as we have commonly found in our literature review are Board size, duality of CEO/COB, and Gender.

The three elements are used as independent variables throughout our study; we have experience that the composition is boards of directors vary from country to country, the board size is somewhere very small that is only three members; however, is ranging to very large that is 13 members. The duality is some time negligible, but other time very influencing. Finally, it is the country itself, institutional structure, the culture of decision making, advising and monitoring, provided that what is the legal framework of that country. In our case we have collected the history of the board of directors of the 9 listed pharmaceutical corporations for the last five years; it is notable that due to a small number of firms, we have not applied sampling technique to remove the possibility of errors. All 9 firms are included variation have occurred in the financial outcomes of firms (ROE) with the change in the composition of the board of directors, we have interpreted the result after running the data on the E-views software.

Table No. 1

Name of Company	ROE	BOARD SIZE	DUALITY OF CEO AND DIRECTOR	NO. OF WOMEN INBOARD		
	ROE	BS	DCD	WB		
ABBOTT	11	19.35	7	0	1	
	12	22.32	7	0	1	
	13	10.23	7	0	1	
	14	10.61	7	0	1	
	15	20.85	7	0	1	
	SANOFI	11	10.13	9	0	0
12		8.66	9	0	0	
13		6.53	9	0	0	
14		7.82	8	0	0	
15		7.39	8	0	0	
OTSUKA		11	10.38	9	0	1
		12	18.56	9	0	1
	13	0.36	9	0	1	
	14	-68.18	9	0	1	
	15	-104.42	9	0	1	
	WYETH	11	14.98	6	1	0
12		14.69	6	1	0	
13		2.77	6	1	0	
14		-7.73	7	1	0	

	4--				
	15	2.81	7	1	0
	5--				
HIGH NOON	11	16.29	7	0	1
	5--				
	12	16.76	7	0	1
	5--				
	13	21.74	7	0	1
	5--				
	14	29.78	7	0	1
	5--				
	15	36.23	7	0	1
	6--				
FEROZSONS	11	16.77	4	1	1
	6--				
	12	19.9	4	1	1
	6--				
	13	18.24	4	1	1
	6--				
	14	18.94	5	1	1
	6--				
	15	46.32	5	1	1
IBL	7--				
HEALTHCARE	11	15.5	7	1	0
	7--				
	12	24.33	7	1	0
	7--				
	13	27	7	1	0
	7--				
	14	23.83	7	1	0
	7--				
	15	28.93	7	1	0
	8--				
THE SEARLE	11	20	5	0	0
	8--				
	12	22.35	5	0	0
	8--				
	13	26.9	6	0	0
	8--				
	14	26.03	6	0	0
	8--				
	15	27.8	6	0	0
	9--				
GSK	11	62.19	7	0	0
	9--				
	12	65.96	7	0	0
	9--				
	13	84.89	7	0	0
	9--				
	14	48.95	7	0	0
	9--				
	15	179.63	7	0	0

Table No. 2

Descriptive Statistics

	ROE	BS	DCD	WB
Mean	20.74156	6.888889	0.333333	0.444444
Median	18.94	7	0	0
Maximum	179.63	9	1	1
Minimum	-104.42		0	0
Std. Dev.	37.50173	1.368845	0.476731	0.502519
Skewness	0.768156	-0.22812	0.707107	0.223607
Kurtosis	11.41888	2.817493	1.5	1.05
Jarque-Bera	137.3208	0.452753	7.96875	7.504688
Probability	0	0.797418	0.018604	0.023463
Sum	933.37	310	15	20
Sum Sq. Dev.	61880.71	82.44444	10	11.11111
Observations	45	45	45	45

Table No. 3

Correlation:

	ROE	BS	DCD	WB
ROE	1	-0.27014	-0.05574	-0.28196
BS	-0.27014	1	-0.49919	-0.0257
DCD	-0.05574	-0.49919	1	-0.15811
WB	-0.28196	-0.0257	-0.15811	1

Table No. 4

Regression Results:

Dependent Variable: ROE
 Method: Panel Least Squares
 Date: 12/31/16 Time: 00:03
 Sample: 2011 2015
 Periods included: 5
 Cross-sections included: 9
 Total panel (balanced) observations: 45

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	124.9376	33.64457	3.713455	0.0006
BS	-12.1934	4.34777	-2.80451	0.0077
DCD	-26.1649	12.63868	-2.07022	0.0448
WB	-25.8204	10.39276	-2.48446	0.0172
R-squared	0.236324	Mean dependent var		20.74156
Adjusted R-squared	0.180446	S.D. dependent var		37.50173
S.E. of regression	33.95004	Akaike info criterion		9.972344
Sum squared resid	47256.8	Schwarz criterion		10.13294
Log-likelihood	-220.378	Hannan-Quinn criter.		10.03221
F-statistic	4.229235	Durbin-Watson stat		0.927317
Prob(F-statistic)	0.010769			

FINDINGS:

We collect data from selected all pharmaceutical companies working in Pakistan which are recognizable in term of their performance, and period consist of three years from 2011 to 2015. By five year’s investigation, we can judge the impact of corporate governance on return on equity to full fill the aim of this study that to investigate the relationship between corporate governance components and return on equity of in Pakistani corporate environment.

Below in table 1 the five years ROE data, board size, the duality of CEO and Chairman, and No. of women in the board of all 9 listed pharmaceutical companies in Pakistan stock exchange are presented.

Table 2 presents descriptive statistics of the variables, including mean, median and standard deviation. Table 3 presents the correlation found among the variables. A correlation matrix is drawn to present how ROE relates with variables such as DCD, BS, and WB. In table 4, a regression analysis explaining the behavior of independent variables with the dependent variable is presented.

DISCUSSION:

Table 2 is a summary of descriptive statistics and standard deviation. The highest value for the mean is for ROE, which stands at 20.7, compared to the value of board size which is 6.88. The minimum value for the mean

is 0.33, representing duality. The highest standard deviation was for board size, indicating a high degree of volatility in ROE as per board size of firms operating in the pharmaceutical sector of Pakistan.

Table 2 sums up the correlation among variables, with correlation matrix showing the moderately negative relationship of ROE with variables like DCD, BS and WB and significantly negative relation with WB. On the other side, ROE is found to have a weakly negative relation with DCD.

BS and DCD are moderately positively related and hold an insignificant relationship with WB. On the other hand, DCD and WB have a weak positive relationship.

Table 4 presents regression results and coefficients, indicating how various explanatory variables relate to the dependent variable or ROE. The regression coefficient of 1% for BS, DCD and WB result in 12.19%, 26.16% and 25.82% change in ROE respectively.

CONCLUSION:

The research studied how three corporate governance variables (i) board size (ii) presence of women members on board and (iii) CEO's duality impact a firm's performance. Statistical techniques were applied to study how variables impact financial outcomes of 9 listed firms in Pakistani pharmaceutical sector. The period studied ranged between 2011 and 2015. All firms are listed in Pakistan Stock Exchange.

Based on the findings, this research establishes that corporate governance variables such as board size, presence and number of women on the board and duality of CEO negatively impacts a firm's financial outcomes as indicated through their return on investment (or ROE).

FURTHER DIRECTIONS:

Future research in the areas is desired to relate corporate governance variables using Du Pont analysis comprehensively. In particular, further research should have the following objectives:

- ▶ Identifying which strategies are particularly effective in Corporate Governance in obtaining the better firms' financial outcomes in Pakistan".
- ▶ Determinants of how a good Corporate Governance in a country differs from Pakistan's Corporate Governance structure.

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