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Empirical Relationship between Corporate Governance and Profitability: Evidence from Pakistan Pharmaceutical Sector

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Abstract— *Firms' performance operating in Pakistan and the corporate governance, identification of the relationship between both, basically the main purpose of this study. Author tried to identify the basic elements for corporate governance through the review of literature, resulting (i) the Size of Board of Directors, (ii) Female as a part of Board of Directors (iii) the Duality of CEO were found as corporate governance elements. By using the statistical techniques on 9 listed pharmaceutical firm trading over the period from 2011 to 2015 in Pakistan stock exchange. The findings of this study indicate that elements of corporate governance such as the presence of female board members, the duality of the CEO, the board size have negative effects on the performance of firms, as measured by the return on equity (ROE).*

Keywords—* *Firm's Ownership Structure, Performance of Firm, firms Listed in Pakistan Stock Exchange, Corporate Governance.

I. INTRODUCTION

In recent years, much interest has been shown in corporate governance studies. Some studies claimed to be superior of one developed capital market corporate governance model from another model. As corporate governance reduces the agency problems, therefore it is the most valuable area for management and shareholders. On the other hand weak corporate governance system can allow the managers to take actions in personal interest which destroys company's progress. Avarieties of studies has been conducted to test the effectiveness of corporate governance and firm's performance.

A good corporate governance has key constituent elements (including corporation actions requiring shareholders' approval, share ownership pattern, regulatory framework, composition of board of directors etc.) to serve shareholders objectives, to minimize the agency cost and maximize the profitability. That's why the study of corporate governance is important to make any financial decision in a corporation. In today's economic world, a good and bad business has a big differences of competent governance.Corporate governance has a big impact on value maximization for 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 possible cutting in operational cost.

The determinants of a good corporate governance are: (i) Educational level of Board members; (ii) Duality of the CEO; (iii) Presence of female board members Duality of the CEO;(iv)Size of board;(v) Number of Independent directors;(vi)Board working experience; (vii) Board compensation; (viii) Block holders; and (ix) Board Ownership. Butthe most important of all these as we have commonly found in our literature review are Board size, duality of CEO/COB, and Gender.

we have experienced that the composition of board 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, culture of decision making, advising and monitoring, provided that what is the legal framework of that country.

We studied many previous researches regarding the relationship of corporate governance and profitability of firms. There are three factors which seems very important as the determinants of Corporate Governance. These factors are kept explanatory variables in this paper. So the study basically examines the relationship between profitability

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measured by return on equity and corporate governance indicated by Board size, duality of CEO/COB, and Gender forpharmaceutical companies listed inPakistan stock exchange for five years period of time from 2011 to 2015.
With the reference of the topic a detailed literature is presented in the next section.

II. 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. The composition of board of directors vary from country to country as the corporate governance structure varies. What are the impacts of composition of board of directors on profitability of firms in different countries are studied and finally summarized below.

According to the study of U.K by Duc Vo and Thuy phan (2013) there is a negative relationship between board size and firm's performance and the existence of female board member and duality of CEO has positive impacts on firm's performance.

Esra Ahmed and Allam Hamdan (2015)'s empirical study from the experience of Bahrain stock exchange found that corporate governance variables are significantly correlated with return on equity and return on assets. The independency of board of directors were found to have a positive significant impact on ROE and ROA (Esra Ahmed and Allam Hamdan 2015).

The study of Anthony and Nicholas in Ghana reveals that efficient performance of firm, the adoption of two tier board structure and maintain small board sizes that hovers around eight members is critical.

SimilarlyMuhammad Ahid (2012) researched on the non-financial firms of Saudi Arabia that board size has no effect on return on assets.

A Malaysian study byWan fauziah, Wan yousoff and idrisAdamu alhaji (2012) reveals that a board dominated withnon-executive director's results in high performance. The author has concluded that there is a significant relationship existing between board size and performance of firms.

According to study of Bangladesh firms by Rashid, Zoya, S.Ldh and Rudkin outside independent directors cannot add potential value to the firm's economic performance.

Raymond, Paul, Jaeyong (2010) research regarding the influence of corporate board on firm's financial performance in the new era of Sarbanes-Oxleyindicates that the duality of CEO/COB has a positive effect on the growth of ROA.

FurtheOzcan and Ali raza (2016) said that board size is positively related to revenue growth, an investigation on Turkish banks suggests that board size has significant relationship between outside directors and financial performance.

With regards to connection between the measure of a board and a company's performance, there are two particular schools of contemplations. According to the first school of thought the success of firm is correlated with the smaller board size. (Lipton and Lorsch, 1992; Jensen, 1993; Yermack, 1996). On the other size, the firm's performance is improved by the larger board size. (Pfeffer, 1972; Klein, 1998; Coles and ctg, 2008). According to these studies, a large board can manage, support and advice the business complexities more effectively regarding business environment and organization culture. (Klein, 1998). Moreover, more information can be gather by a large board size. As a result, a large board size appears to be better for firm performance (Dalton and ctg, 1999).

In their study, Truong et al. (1998) considered that, in Vietnam, there is a noteworthy contrast in administration culture contrasted with the worldwide practice. For example, they reasoned that Vietnamese administration does not share administrative power. This philosophy reflects a "gap of power" culture in Vietnamese companies. This culture in Vietnam is totally contrast with the standards of functioning as a gathering and administration appointment.

In empirical studies, the thing often examined is the female board members. The female Board members reflect a diverse feature of the Board (Dutta và Bose, 2006). In addition, Smith et al. (2006) discussed three unique motivations to perceive the significance of females on a board. *First*, female board individuals more often have a superior comprehension of a market in correlation with male individuals, resulting this understanding will support the board decisions positively. *Second*, female board individuals will get better pictures the impression of the network for a firm and this will contribute positively to the performance of firm. *Third*, other board individuals will enhance the nature of the business condition when female board individuals are working with them. Moreover, this investigation likewise showed that female board individuals can decidedly influence profession improvement of junior female staff in a business. As a result, a performance of firm is enhanced specifically and by implication with the presence of female board individuals.

Despite the fact that experimental examinations can't give a concurred see on the commitment of duality of the CEO to a company's performance. However, there is an assertion

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between investors, institutional financial specialists, and policymakers that a director or administrator of a board ought not be the same with the CEO. In their study, Dahya et al. (2009) showed that, from 1994 to 2003, a chairman or chairwoman of a board should not be the same with CEO, recommended by 15 policy makers from advanced nations and from united kingdom. In Europe, 84 for of firms isolate the parts of a seat of a board and a CEO of a firm (Heidrick and Struggles, 2009). According to a Hewa-Wellalage and Locke 2011 study, in Sri Lanka, "*The Sri Lankan code of best practice on corporate governance*", the balance of power within a firm to minimize any one individual's influence to the decision making process. In the light of these rules,in order to provide balance and effective and efficient board's operation, the majority should keep on the side of independent directors in the board if there is a duality in a firm.

To keep recognition between the responsibilities of CEO and chairman, for the period from 1999 to 2003, numerous organizations had modified their current structure of duality to a non-duality structure (Chen, Lin and Yi, 2008). These authors considered that in many organizations of bilateral structure, power was abused at the expense of the company and the shareholders.

In Vietnam, Ministry of Finance (2012) stipulates that "*a chairman/chairwoman of a board should not be in the position of the CEO of a company unless this duality is approved by the annual general meeting of shareholders*". In addition, Fama and Jensen (1983), Jensen (1993) concluded that duality would diminish a board's supervision of the administration of an organization. This diminishment results in an expansion of organization cost.

III. RESEARCH OBJECTVES

- The main objective of this study is to know the relationship between profitability measuring with ROE as dependent variable andcorporate governance components i.e.the size of board of directors, duality of chairman and CEO and women members in board as independent variables of the Pakistan Pharmaceutical Sector.
- To review different international developed capital market model of corporate governance
- To make policy suggestions and recommendations based on alternative model for Pakistani corporate environment.

IV. RESEARCH METHODOLOGY

In our course of work we have selected the pharmaceutical sector of Pakistan stock exchange. There are 9 pharmaceutical corporation working in the pharmaceutical sector. We have analyzed the annual reports of all these corporations for the last five years starting from 2011 to 2015. The financial performance of these firms has been measured through return on equity (ROE). 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. So ROE is the dependent variable and the corporate governance components are the independent variables.It is notable that due to small number of firms, we have not applied sampling technique to remove the possibility of errors. Following research hypothesis are developed to check the effectiveness of corporate governance against profitability.

Research Hypothesis

H1: *"Increase in board size of pharmaceutical sector of Pakistan stock exchange decreased the return on equity (ROE) from 2011 to 2015."*

H2:*"The duality of Chief Executive Officer (CEO) and Chairman of Board (COB) in the pharmaceutical sector of Pakistan stock exchange decreased the return on equity (ROE) from 2011 to 2015."*

H3: *"The presence of female board members in the pharmaceutical sector of Pakistan stock exchange increased the return on equity (ROE) from 2011 to 2015."*

The next section will describe the findings of study through statistical techniques.

V. FINDINGS

Table 1 reveals the descriptive statistics with their mean, median and standard deviation of all variables, Correlation among variables mentioned in Table 2. Correlation matrix shows that ROE has moderate negative relationship with board size (BS), duality of CEO (DCD) and Women Board Members (WB). Table 3 showing the regression results of the different explanatory variables with dependent variable.

Table No :1 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

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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: 2 Correlation Matrix:

	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: 3Regression results

Dependent Variable: Return On Equity
Method: Panel Least Squares
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			

VI. ANALYSIS

Table 2 showing the descriptive statistics with their mean, median and standard deviation of all variables. The mean value of ROE is the highest 20.7 while next to this is mean of Board size is 6.88. Duality has minimum mean value of 0.33. Board size has highest standard deviation which shows that the great volatility in ROE by Board size in the pharmaceutical sector of Pakistan stock exchange.

Correlation among variables mentioned in Table 3. Correlation matrix shows that ROE has weaknegative relationship with board size, strong negative relationship with presence of woman in board and possible negative relationship with duality of CEO/COB.

The Regression Line shows the relationship of the board size, duality of CEO/COB and woman board with dependent variable i.e. ROE. The result of regression coefficients indicated that anincrease in board size causes 12% decrease in return on equity so the first hypothesis is accepted. The duality of CEO/COB causes 26% decrease in ROE, the 2nd hypothesis is also accepted. The presence of woman in board causes 25% decrease in ROE, the 3rd hypothesis is rejected in that case.The p-values are significant showing that variables are good for the model.

VII. CONCLUSION

The study presented a closer look on the relationship between corporate governance and profitability. In this study, corporate governance consist of the following elements: (i) the size of the board; (ii) the presence of female board members and (iii) the duality of the CEO/COB. The profitability is measured by the return on equity (ROE).The statistical techniques are applied on the nine listed pharmaceutical firms trading over the period from 2011 to 2015 in Pakistan stock exchange. The findings of this study indicated through descriptive statistics, correlation matrix and regression line. After a detailed analysis it is concluded that all three determinants of corporate governance have negative effects on the profitability of Pakistan Pharmaceutical Industry.

VIII. FURTHER DIRECTIONS

Further researches to broaden the same field could also be conducted to determine the relation between Corporate Governance and ROE to identify:

- The strategies which are particularly effective in Corporate Governance to obtain abetter firm's performance in Pakistan.
- In what aspects a good Corporate Governance differ from Pakistan's Corporate Governance structure.

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