Corporate Governance and its Impact on Profitability of the Pharmaceutical Industry in Pakistan
Khurshed Iqbal* and Shahid Jan Kakakhel**

Abstract
This paper examines the relationship between corporate governance and profitability of the national and multinational pharmaceutical firms in Pakistan. Corporate Governance has extensively debatable topic for researchers, corporate managers, financial analyst, academicians and strategists. This study has measured corporate governance dimensions in terms of board size, independent director, board committees, board remuneration, and firm size. whereas, profitability of the pharmaceutical firms are measured in terms of return on assets, return on equity and return on sales. The result of this study exhibits that board size, independent director, board committees, board remuneration and firm size are positively associated with corporate performance. By and large corporate governance has a strong impact on the corporate performance. Thus, the study has concluded that corporate governance has a strong significant impact on the profitability of the pharmaceutical firms in Pakistan.

Keywords: Corporate governance, Profitability, ROA, ROE, ROS, Pharmaceutical firm

Introduction
In the last few decades, there has been a growing interest in Corporate Governance (CG). Corporate Governance has been extensively debatable issue for researchers, corporate managers, financial analyst, academicians, and strategists. Therefore, in the last decade, there has been failure of many renowned organizations around the world such as Polly Peck in 1990; Nordbanken in 1991; Bre-X in 1997; Equitable Life Assurance Society in 2000; HIH Insurance in 2001; WorldCom in 2001; Enron in 2001; Refco in 2005; Lehman Brothers in 2008; and Banco Espirito Santo in 2014.

The structure of Corporate Governance deals with duties and rights among different stakeholders. The term governance has used in different context such as good governance, bad governance, local governance and corporate governance. However, according to Pacy Sifuna (2012), corporate governance is a mechanism of rights and duties by which firms are controlled and directed. The meaning of corporate governance may be varies from country to country and even from firm to firm. Furthermore, New Zealand Securities Commission (2003) has set of structures by which company is directed and managed. On the other
hand, in the Continental European countries, it refers to all stakeholders while, in the Anglo-American countries, it focuses on stockholders valuation.

Good corporate governance (GCG) practices are necessary in attracting investors; reduce risk, by defending shareholders concern and improving efficiency of the company. A good practice of Corporate Governance leads to better performance and enhance decision-making procedure in the company. Hence, efficient governance means the slight expropriation of company funds by managers, which lead to better utilization of assets and improved financial and operational performance of the firm.

Corporate Governance is indispensable for emergent economies like Pakistan. The code of Corporate Governance has established by Securities and Exchange Commission of Pakistan. These codes are finalized in March 2002, and then it updates in 2012. The fundamental goal of corporate governance is to protect all stakeholders of the firm. In advance countries, the relationship between governance and corporate performance has been examined therefore, fewer studies carrying out

Objectives of the Study
i). To investigate the association between corporate governance and performance of Pharmaceutical Industry in Pakistan.
ii). To measured the dimensions of Corporate Governance in terms of board size, independent directors, board committees, board remuneration and firm size.

Literature Review

Board Size
Jensen (1993) has found that firm having more board members, which could lead to poor performance of the firm. He finds that there are a contradictory relationship between size of board and value of the firm. However, the result has demonstrated that the major portion of failure in firm value occurs due to the inclination of the board size. Moreover, the study also reveals that the firm with lesser board members tends to have better operating productivity. Eisenberg, Sundgren and Wells (1998), have reported negative association between size of board and profitability of the firms. Vafeas (1999), shows that frequency of board meeting is negatively associated with value of the firm. Thus, the board has the responsibility to monitor, discipline, and hold ineffective management.

Independent Directors
Various studies conclude that boards dominated by externals tend to act in the best interest of shareholders. Hermalin and Weisbach (1988), have
exhibited that boards with more autonomous directors have higher possibilities to remove poorly presented CEOs. Chen et al. (2006), have revealed that corporations with higher proportion of autonomous directors on board are chances of financial fraud. Beasley (1996), conducts a comparative study of seventy five firms that practise fraud and seventy five non-frauds. Moreover, the findings suggest that larger proportions of external directors has selected on the boards of non-fraud firms. On the other hand, Size of board shows significant association with the possibility of financial fraud. Hence, it is concluded that non-fraud firms having more earning as compared to the financially fraud firm. Uzun et al. (2004), have documented that more numbers of independent directors on the compensation and auditing committee leads to reduce in the frequency of financial fraud and therefore, profit of the firm is increases. Firth, et al. (2006) has concluded that companies with dominate boards by autonomous directors are most excellent quality of accounting. Lai and Tam (2007), signify on their study that board composed by self-governing directors reduces financial scandals, which leads to increase profit.

**Board Committees**

Many organizations around the world has been criticised due to bad governance. Therefore, various companies have established audit committee, remuneration committee and nominating committee. Significance of these committees has recognized in the modern business world (Petra 2007). Cadbury Committee report in 1992, is suggested that boards should make sub-committees to deal with the following three tasks:

- To supervise the accounting measures and outdoor audits;
- To make a decision about the remuneration of corporate managers;
- To appoint officers and directors.

These committees should be autonomous, have access to information, and members of the committees are financially literate, otherwise these committees will be just like a window dressing (Peters and Bagshaw 2014). These committees could be included independent non-executive directors to strengthen the internal control systems of firms (Davis 2002; Laing & Weir 1999).

**Board Remuneration**

Lewellen and Huntsman (1970) found strong evidence between corporate managers and board compensation. Their study reveals that board remuneration is dependent upon profits generation. Main et al. (1996) analysed the impact of compensation on firm performance by utilise panel data from 1981 to 1989. They concluded that there is a significant association between board compensation and corporate performance.

**Firm Size**

The empirical study of Chandler (1990) reveals that large firms are producing product at low cost because of economies of scale, therefore, this stratify incline the profitability of the firm. Yang & Chen (2009) has found that large size of firm could create credit as compared to smaller size firms. Furthermore, they has folded in their same article that large size of firm has more employees that are professional therefore, these firms earn more income than other firms do. Vijayakumar & Tamizhselvan (2010), have reported significant relationship between firm size and corporate performance. Artikis et al. (2009), have explored that large firms are more profitable than the smaller firms.

**Research Methodology**

**Source of Data**

The data of corporate governance are collected from the annual reports and other documents of the sampled companies in the period of 2003 to 2013.

**Sample Size**

A total of one hundred and ten national and multinational pharmaceutical firms are selected for the study. Pharmaceutical firms are selected through convenience sampling technique.

**Econometric Models**

The study uses correlation and regression models to test the relationship of corporate governance and corporate performance. Moreover, the five independent variables are board size, board committees, board remuneration and firm size whereas, return on asset, return on equity and return on sales are dependent variables. Regression models have been developed for return on assets, return on equity and return on sales as below:

Model 1:

\[
\text{ROA}_{it} = \beta_0 + \beta_1 \text{BSIZE}_{it} + \beta_2 \text{BINDIRECTOR}_{it} + \beta_3 \text{BCOMM}_{it} + \beta_4 \text{BREMUNERATION}_{it} + \beta_5 \text{FSIZE}_{it} + \varepsilon_{it}
\]
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Model 2:

\[ \text{ROE}_i = \beta_0 + \beta_1 \text{BSIZE}_i + \beta_2 \text{BINDDIRECTOR}_i + \beta_3 \text{BCOMM}_i + \beta_4 \text{BREMUNERATION}_i + \beta_5 \text{FSIZE}_i + \epsilon_i \]

Model 3:

\[ \text{ROS}_i = \beta_0 + \beta_1 \text{BSIZE}_i + \beta_2 \text{BINDDIRECTOR}_i + \beta_3 \text{BCOMM}_i + \beta_4 \text{BREMUNERATION}_i + \beta_5 \text{FSIZE}_i + \epsilon_i \]

Where

ROA = Return on Assets i at period t
ROE = Return on Equity i at period t
ROS = Return on Sales i at period t
BSIZE = Board Size
BINDDIRECTOR = Board Independent Director
BCOMM = Board Committees
BREMUNERATION = Board Remuneration
FSIZE = Firm Size

i = 1 to 110 firms

2003-2013

\( u \text{ it} \) = Error term

Table 1: Notation, Definition and Measurement of Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Notations</th>
<th>Definition</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dep.Variables:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>ROA</td>
<td>Return on Asset</td>
<td>Net Profit/Total Asset</td>
</tr>
<tr>
<td>ROE</td>
<td>ROE</td>
<td>Return on Equity</td>
<td>Net Profit/Shareholder Equity</td>
</tr>
<tr>
<td>ROS</td>
<td>ROS</td>
<td>Return on Sales</td>
<td>Net Profit/Total Sales</td>
</tr>
<tr>
<td>Ind.Variables:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board SIZE</td>
<td>BSIZE</td>
<td>Board Size</td>
<td>Number of Members on the Board</td>
</tr>
<tr>
<td>Board Independent Director</td>
<td>BINDDIRECTOR</td>
<td>Board Independent Director</td>
<td>Total number of independent director on the board</td>
</tr>
<tr>
<td>Board Committees</td>
<td>BCOMM</td>
<td>Board Committees</td>
<td>Dummy Variable: “0” if the Firm have less than three Committees otherwise “1”</td>
</tr>
<tr>
<td>Board Remuneration</td>
<td>BREMUNERATION</td>
<td>Board Remuneration</td>
<td>Average salary of the board</td>
</tr>
<tr>
<td>Size of the Firm</td>
<td>FSIZE</td>
<td>Firm Size</td>
<td>Total assets of the firm</td>
</tr>
</tbody>
</table>

On a ground of the literature review, this study forms a conceptual framework, which is used for empirical purposes. The conceptual framework is presented in Figure 1 as below:
Table 2: Correlation Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>ROE</th>
<th>ROS</th>
<th>Board Size</th>
<th>Independent Director</th>
<th>Board Committees</th>
<th>Board Remuneration</th>
<th>Firm Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>0.123</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROS</td>
<td>0.543</td>
<td>0.214</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Size</td>
<td>0.214</td>
<td>0.138</td>
<td>0.171</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Director</td>
<td>0.610</td>
<td>0.186</td>
<td>0.240</td>
<td>0.237</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Committees</td>
<td>0.345</td>
<td>0.312</td>
<td>0.395</td>
<td>0.419</td>
<td>0.187</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Remuneration</td>
<td>0.196</td>
<td>0.221</td>
<td>0.179</td>
<td>0.337</td>
<td>0.384</td>
<td>0.135</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Firm Size</td>
<td>0.204</td>
<td>0.451</td>
<td>0.175</td>
<td>0.452</td>
<td>0.119</td>
<td>0.174</td>
<td>0.218</td>
<td>1.000</td>
</tr>
</tbody>
</table>

In Table 2, the analysis exhibits the correlation matrix of dependent and independent variables. As presented in above Table there are positive association among board size, board independent directors, board committees, board remuneration and corporate performance. The findings of this study support the findings of Jensen (1993), Vafeas (1999), Beasley (1996), Uzun et al (2004), Davis (2000), and Artikis et al (2009). Furthermore, firm size is also positively associated with return on asset, return on equity and return on sales. Overall, the empirical findings support the prior studies that corporate governance has a strong effect on the financial performance of the national and multinational pharmaceutical firms working in Pakistan.
Table 3 presents variance inflation factors (VIF) that conclude that whether multicolinearity is exist in the model. The correlation among the independent variables should not increase by eight percent. It shows multicolinearity problem, therefore, there is no such problem in the above table of correlation.

Table 4: Regression Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Model 1</th>
<th>Regression Model 2</th>
<th>Regression Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff t P. Value</td>
<td>Coeff t P. Value</td>
<td>Coeff t P. Value</td>
</tr>
<tr>
<td>Board Size</td>
<td>0.217 2.651 0.041</td>
<td>0.516 4.963 0.001</td>
<td>0.764 6.926 0.000</td>
</tr>
<tr>
<td>Independent Director</td>
<td>0.126 3.764 0.001</td>
<td>0.641 6.094 0.000</td>
<td>0.812 3.953 0.001</td>
</tr>
<tr>
<td>Board Committees</td>
<td>0.541 7.952 0.000</td>
<td>0.169 9.543 0.000</td>
<td>0.474 7.471 0.000</td>
</tr>
<tr>
<td>Board Remuneration</td>
<td>0.264 5.645 0.000</td>
<td>0.275 3.875 0.020</td>
<td>0.731 9.473 0.000</td>
</tr>
<tr>
<td>Firm Size</td>
<td>0.213 2.296 0.030</td>
<td>0.762 5.831 0.000</td>
<td>0.638 3.853 0.003</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.534 0.604 0.483</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-Squared</td>
<td>0.516 0.583 0.471</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-Statistic</td>
<td>14.061 11.394 18.153</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob&gt;F</td>
<td>0.000 0.001 0.002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Model 1: 
\[ \text{ROA}_t = \beta_0 + \beta_1 \text{Board Size}_t + \beta_2 \text{Independent Director}_t + \beta_3 \text{Board Committees}_t + \beta_4 \text{Board Remuneration}_t + \beta_5 \text{Firm Size}_t + \epsilon_t \]

Model 2: 
\[ \text{ROE}_t = \beta_0 + \beta_1 \text{Board Size}_t + \beta_2 \text{Independent Director}_t + \beta_3 \text{Board Committees}_t + \beta_4 \text{Board Remuneration}_t + \beta_5 \text{Firm Size}_t + \epsilon_t \]

Model 3: 
\[ \text{ROS}_t = \beta_0 + \beta_1 \text{Board Size}_t + \beta_2 \text{Independent Director}_t + \beta_3 \text{Board Committees}_t + \beta_4 \text{Board Remuneration}_t + \beta_5 \text{Firm Size}_t + \epsilon_t \]

Table 4 presents regression results of return on assets (model 1), return on equity (model 2) and return on sales (model 3). As presented in Table board size is positively affecting the firm performance. The coefficient value of board size is 0.217 in regression model 1, 0.516 in regression model 2, and 0.764 in regression model 3. The significant value of board size is < 0.05 which shows that board size positive significantly impact the performance of the firm. The result is consistent with the study of Vafeas (1999). The finding in the above table depicts that board independent directors are significantly affect the return on asset, return on equity and return on sales. The coefficient value of board independent is 0.126 in regression model 1, 0.641 in regression model 2, and 0.812 in regression model 3. The finding is consistent with Beasley (1996), Uzun et al (2004). The significant value of board committees is < 0.05, which
shows that board committees are positively affect the return on asset, return on equity and return on sales. The coefficient value of board committees is 0.541 in regression model 1, 0.169 in regression model 2, and 0.474 in regression model 3. Hence, study seems to be consistent with Davis (2000) research study. The significant value of board remuneration is < 0.05 in the study. This significant value exhibits that board remuneration has positive impact on the dependent variables. The coefficient value of board remuneration is 0.264 in regression model 1, 0.275 in regression model 2, and 0.731 in regression model 3. The result agrees with the idea of Kato (1997) and Aduda (2011). Furthermore, the t-value of firm size is > 2.00 and its p-value is < 0.05. This positive significant relationship shows that firm size is positively related with ROA, ROE and ROS. The coefficient value of firm size is 0.213 in regression model 1, 0.762 in regression model 2, and 0.638 in regression model 3. These findings are supporting prior research studies of Vafeas (1999) and Artikis et al (2009). By and large, board independent directors, board committees, board size, board remuneration and firm size are positively affect the performance of pharmaceutical firms in Pakistan.

Conclusion
It is concluded that that board size, independent director, board committees, board remuneration, and firm size are positively associated with corporate performance. The study agrees with the idea of Beasley (1996) and Uzun et al (2009), Vafeas (1999) and Artikis (2009). Independent directors, board committees, board size and board remuneration are positively link with return on asset, return on equity and return on sales. By and large corporate governance has a strong impact on the corporate performance. It is recommended to policymakers to make sure that members of the board should be more qualified and professional.
References


