



## **Board size, board composition and firm performance of Sri Lankan listed companies**

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### **Abstract**

*This study examines the impact of selected corporate governance measures on corporate performance of listed non-financial companies in Sri Lanka. This study uses the return on assets and Tobin Q as proxy measures for corporate performance. The study employs a cross sectional analysis of 125 firms listed in Colombo Stock Exchange for the financial year ending 2013 and multivariate analyses are used to test the hypotheses. The results reveal that board size is negatively associated with return on assets. The study also finds that board independence is not significantly associated with return on assets. Furthermore, control variables of firm size and dividend yield are positively linked with return on assets and chief executive officer duality is negatively associated with return on assets. However, leverage has no any significant relationship with return on assets. None of the corporate governance measures was statistically significant in explaining corporate performance based on Tobin Q. Implications of the findings are also discussed in the paper.*

**Keywords:** *Board independence, board size, corporate governance, corporate performance, return on assets (ROA), Tobin Q.*

### **1. Introduction**

Corporate governance is one of the most important areas, widely studied and enhanced by many researchers for increased corporate performance. It is generally known that if corporate governance improves then firm performance will also get better. There are different dimensions of corporate governance such as board composition, audit committee, Chief Executive Officer (CEO) compensation, CEO duality and ownership structure. To mitigate the agency problem, Rose (2005) argues that the corporate board plays a key role in supervising management and aligning with the interest of shareholders. The board is considered to be a most important internal corporate governance system

(Brennan, 2006) as the board monitor and supervise management, and gives management strategic guidelines. A board works to boost the corporate performance and ratify legally vested responsibilities and fiduciary duties (Zahra & Pearce, 1989). There is a gap of studies as to whether the board composition can meet these stated responsibilities in the same ways in differing market contexts and jurisdictions in which they manage.

The board is a key element in corporate governance mechanisms that monitor and instruct management in carrying responsibility to protect and increase shareholders' wealth (Fama & Jensen, 1983). Ruigrok et al. (2006) state that boards also have important roles to play with respect to activities such as designing and implementing strategies and fostering links between the firms and its external environment. In theory, the board is responsible to the shareholders and is supported to govern a company's management. The task of the board of directors has increasingly come under inspection in glow of corporate scandals such as those at Enron, WorldCom and HealthSouth, in which the board of directors failed to act investors' best interest.

Board size refers to the number of directors on the board. From an agency viewpoint, it can be argued that a larger board is more likely to be watchful for agency problems simply because a greater number of people will be reviewing management events. Jensen (1993) suggests that board limit at around eight directors, as any larger number will obstruct with group dynamics and slow down board performance. Much research carried out to determine the suitable number of directors in a board to obtain better performance and has been regarded as one of the important corporate governance variable (Bonn, 2004; Dalton et al., 1999). Bonn (2004) concludes that effectiveness of the board depends on the level of expertise and knowledge of the members in the board. It has been suggested by the scholars that neither too big nor too small, the members of the board gain better performance. Cheng (2008) states that larger board are less efficient and slower in decision making, because it is more difficult for the firm to organize board meetings and for the board to reach a consensus.

In relation to board composition, a board of directors commonly consists of two types of directors such as executive directors and non executive directors. Executive and non executive directors have same responsibilities in law. An executive director is a director who has separate responsibilities within the company as an executive. They perform operational and strategic business functions such as managing people, looking after assets, hiring and firing, entering in to a contract. They are usually employed by the company and paid salary. In contrast, non executive directors are not usually involving with day to day management activities. They use their experience and expertise to provide independent advice and objectivity, and they usually have a role in monitoring executive management. Furthermore, they bring an objective view of the business, can improve the boards' effectiveness at relatively low cost and provide valuable business connections.

According to agency theory, effective boards will be comprised of outside directors. These directors are believed to give better performance benefits to the firm as a result of their independence from firm management. There is near consensus in the conceptual literature that effective boards will be comprised of greater proportion of outside directors (Lorsch & Young, 1990; Zahra & Pearce, 1989).

Although there exist several studies on corporate governance in less developed and emerging economies (Shleifer & Vishny, 1997; Shah et al., 2011), in the context of Sri Lanka there are very few studies on corporate board practices and governance (Fernando,

2012; Senaratne & Gunaratne, 2012; Kajanathan, 2012). These studies focused some selected sectors. The present study extends the literature on corporate board practices such as board size, board composition and corporate performance by providing evidence from this emerging economy.

The aim of this study is to identify the impact of board characteristics namely board size and board composition on the performances of selected Sri Lankan listed companies while answering the questions: does board size can influence a company's performance?, is there any association between number of non executive directors in the board and the company' performance?

The remainder of the paper is structured as follows. Section two presents the related literature review and hypotheses development of this research. Section three explains the data collection and research method used. Section four presents data analysis and discussion. Finally, section five gives the conclusion of this study.

## 2. Literature and hypotheses

According to the resource dependency theory, bigger board size will guide to better corporate performance because of the different skills, knowledge, experience and exposure brought into boardroom discussion. Hermalin and Weisbach (2003) argue that larger boards can be less successful than small boards. The earlier literature in relation to board size is argued that the favorite for smaller board size stems from technological and organizational change which eventually leads to cost cutting and downsizing (Lipton & Lorch 1992; Jensen, 1993). Regardless of the previous findings, it is still arguable whether the effectiveness of a firm can be achieved from a small board or large board.

The majority of US empirical studies have documented a negative relationship between board size and corporate performance, leading Hermalin and Weisbach (2003) to conclude that this relation is one of the prominent empirical regularities in the literature using data from 452 large U.S. industrial corporations between 1984 and 1991. Yermack (1996) documents a negative relationship between board size and corporate performance, as measured by Tobin's Q and profitability. Other US studies have found very similar results (Cheng, 2008). In addition, Eisenberg, Sundgren and Wells (1998) and Mak and Kusnadi (2005) also conclude that there is a strong negative association between board size and corporate profitability. In the case of Sri Lanka, Fernando (2012) finds a negative association between the board size and corporate performance in Sri Lankan largest companies.

Only two US studies (Adams & Mehran, 2005; Dalton et al., 1999) find a positive effect of board size on performance. In the similar perspective, Zubaidah et al. (2009) find that the board size has a positive impact on corporate performance with the sample of 75 listed companies in Bursa Malaysia. As the majority of prior studies emerge to suggest a negative association between board size and corporate performance, it is hypothesized that companies with small board size attain better performance than others.

H<sub>1</sub>: There is a negative association between board size and corporate performance

It is broadly debated in the corporate governance literature with regard to whether board composition in the form of representation of outside independent directors may add any profitable value to the firm (Hermalin & Weisbach, 2003). Yermack (1996) concludes

that there is a significant positive relationship between ROE, board composition and audit committee. Shah et al. (2011) find that more independent and efficient board of directors accelerates or boosts a firm's performance. In the similar perspective, Zubaidah et al. (2009) find that independent non-executive directors contribute significantly in the long term performance of the company. Dehaene et al. (2001) conclude that there is a significant positive relationship between the independent directors' percentage in a firm and return on equity (ROE) among Belgian companies. Similar results were found by O'Connell and Creamer (2010).

In contrast, Agrawal and Knoeber (1996) find a significant negative association between outside board members and corporate performance. This result is also supported by Bhagat and Black (1999) with the findings of firms having more outside directors performs poorer than other firms.

However, Forsberg (1989) finds no relation between the outside director proportion in the board and different firm performance measures. Bhagat and Black (1999) find no significant relationship between board composition and performance. Empirically, research on non-executive director in relation to firm performance is inconsistent.

H<sub>2</sub>: There is a positive association between the proportion of independent non-executive directors and corporate performance.

### 3. Methods

*Data and sample:* The study basically employs secondary data on the financial statements of 125 listed non financial firms on Colombo Stock Exchange (CSE). The use of listed firms is due primarily to data availability and reliability because these are required by law to provide their financial statements at the end of each financial year. The banks and the other financial institutions are excluded because of their massive debt structure. The data and other related information for this study were collected from the published annual reports, CSE website and publications.

The total listed companies in the CSE enclosed 293 companies including the financial sector in 2015 and have been categorized with 26 different sectors. The sample of this study consists of 125 non-financial public listed companies in Sri Lanka

*Model specification:* An ordinary least square regression model was used to test the hypotheses of this study. The regression model utilized to test the relationship of board size and board composition with corporate performance is as follows:

$$\text{Corporate Performance} = \alpha + \beta_1 \text{Board Size} + \beta_2 \text{Board Composition} + \beta_3 \text{CEO Duality} + \beta_4 \text{Firm Size} + \beta_5 \text{Dividend Yield} + \beta_6 \text{leverage} + e_i$$

*Dependent variables:* Corporate performance represents the return on assets (ROA), and Tobin Q as a proxy to measure firm performance. ROA is calculated using the formula of Net Income / Total Assets. Tobin Q is the ratio of the market value of a company's debt and equity to the current replacement cost of its assets.

*Independent variables:* Board size is the number of directors on the board and board composition refers to the percentage of membership held by the outside independent directors.

*Control variables:* The considered control variables are as follows; CEO duality, firm size, dividend yield and leverage. CEO duality is considered as a binary, which is equal to be one (1) if the CEO and Chairman are held by the same person, otherwise zero (0).

The natural logarithm of total assets is considered as the firm size. And also, dividend yield is measured by the cash dividends paid as a percentage of total shareholder equity. Finally, Leverage is calculated using the formula of Total debt / total equity.

#### 4. Results and discussion

Descriptive statistics were calculated to obtain sample characteristics. Table 1 provides descriptive statistics of dependent and independent variables.

Table 1  
Descriptive Statistics

Statistics	ROA	Tobin Q	Board size	Board Indp	CEO dual	Firm size	Dividend yield	Leverage
Mean	0.059	0.699	7.888	0.712	0.144	9.657	0.053	0.368
Median	0.056	0.716	8.000	0.714	0.000	9.661	0.016	0.153
Std. Dev.	0.119	0.193	1.981	0.205	0.353	0.634	0.226	0.754
Skewness	2.188	-0.471	0.137	0.257	2.028	-0.053	9.529	6.791
Kurtosis	25.569	2.693	2.698	2.216	5.113	2.897	98.940	61.133

Of the firm studied, the mean board size is about eight (8) directors with a minimum of 3 and maximum of 12 directors. It is suggesting that firms in Sri Lanka have comparatively moderate board sizes. This result is consistent with the findings of Jensen (1993), Mark and Kusnadi (2005) and Lipton and Lorch (1992). The mean percentage of non executive directors of the board is 71.2 percent. This is higher than the 39 percent reported by Vafees and Theodorou (1998) for UK companies. In addition, descriptive statistics indicate that the majority of firms in the sample separate the position of the board chairman and CEO, thus about 86 percent of the firm practice dual leadership and balance 14 percent of the firm have their CEO and chairman positions combined in one personality.

Table 2  
Correlation matrix

	A	B	C	D	E	F	G
A. ROA	-						
B. Tobin Q	-0.136	-					
C. Board Size	-0.087	0.000	-				
D. Board Indp	-0.129	0.116	-0.127	-			
E. CEO duality	-0.167*	-0.083	-0.081	-0.171**	-		
F. Firm size	0.239***	-0.266***	0.288***	-0.261***	0.029	-	
G. Dividend yield	0.491***	-0.204**	-0.058	-0.078	-0.032	0.103	-
H. Leverage	-0.097	-0.031	0.036	0.068	-0.003	0.196**	-0.054

\*Correlation is significant at the 0.1 level (2-tailed), \*\* Correlation is significant at the 0.05 level (2-tailed),  
\*\*\* Correlation is significant at the 0.01 level (2-tailed)

Correlation analysis was carried out to find the inter-relationship within the variables. Table 2 presents the coefficients of correlations and the results indicate that board size and board independence are negatively correlated with ROA and positively correlated with Tobin Q but not significant. Control variable of CEO duality is significantly and negatively associated with ROA at 0.10. Furthermore, firm size and dividend yield are significantly positively and inversely related with ROA and Tobin q respectively.

In addition, to test the impact of independent variables on the dependent variables, the study used regression analysis. Table 3 exhibits the regression results of the association between the independent variables and ROA.

Table 3  
Results of regression analysis- ROA

Variable	Coefficient	t-Statistic	Prob.
C	-0.224307	-1.28772	0.2008
Board size	-0.012047	-2.281122	0.0246
Board indp	-0.047054	-0.945184	0.3468
CEO duality	-0.058354	-2.065002	0.0415
Leverage	-0.017093	-1.364922	0.1753
Firm size	0.043362	2.49465	0.0142
Dividend yield	0.225094	5.518886	0.0000
R-squared	0.351963		
Adjusted R-squared	0.313843		
F-statistic	9.23305*		

The board size is significantly negatively correlated with ROA. Hence, in line with prior work of Yermack (1996) and Eisenberg et al. (1998), current study offers some support for the view that a negative relation between board size and corporate performance is also obvious in the Sri Lankan setting. Therefore, Hypothesis 1 is accepted. In relation to board independence, the results show that there is a weak negative relationship between the percentage of non executive director and firm performance. This result is consistent with the results of Agrawal and Knoeber (1996) and Bhagat and Black (1999). Hence, Hypothesis 2 which stated a positive correlation between the proportion of independent non-executive director and firm performance is rejected. In keeping with earlier works on this topic, present study includes control variables in the regression analysis. Table indicates that CEO duality is significantly negatively correlated with ROA. In contrast, firm size and dividend yield are positively strongly associated with ROA. Relating to leverage the result shows that there is an inverse impact on ROA.

Table 4 exhibits the regression results of the independent variables on Tobin Q. The results reveal that board size and board independency have no any significant effect on Tobin Q. However, both firm size and dividend yield have significant positive effect on Tobin Q.

Table 4  
Results of regression analysis- Tobin Q

Variable	Coefficient	t-Statistic	Prob.
C	-0.51416	-1.316927	0.1908
Board size	-0.007026	-0.594667	0.5534
Board Indp	-0.060904	-0.54687	0.5857
CEO duality	-0.013365	-0.211412	0.8330
Leverage	-0.034191	-1.220455	0.2251
Firm size	0.073756	1.896751	0.0607
Dividend yield	0.941808	10.32207	0.0000
R-squared	0.548965		
Adjusted R-squared	0.522434		
F-statistic	20.6911		

## 5. Conclusion

The study examines the impact of corporate governance measures such as board size and board composition on corporate performance of listed non financial companies in Sri Lanka. This study uses the ROA and Tobin Q as proxies for corporate performance. The results of the study show that board size is significantly negatively correlated with ROA. With regards to board independence, there is no significant relationship between the percentage of non- executive directors and corporate performance. The results also show the negative relationship between these two dependent and independent variables. This means that non-executive directors do not add economic value to the firms.

The major limitations of this study are as follows: Firstly, the study is based on the cross sectional study which concerns about one year period and it may not provide more generalized result. Secondly, this study used only ROA and Tobin Q as performance measures. Return on equity, return on capital employed and return on investment are also used in this purpose. Thus, it is highly recommended that future research should use panel data and a wider range of performance measures to validate the findings of the present study. Future studies should also consider on non-financial aspects of performance such as customer satisfaction, employee satisfaction, and managerial satisfaction.

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