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The Dynamic Impact of Corporate Governance on Investment Decisions of Non-Financial Companies in Sri Lanka

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Abstract

This research examines the influence of corporate governance on investment decision of 198 non-financial companies listed on the Colombo Stock Exchange of Sri Lanka, over the period from 2009 to 2016. This study used four corporate governance variables such as managerial ownership, board size, board independence, and CEO duality. Moreover, this study considers three control variables such as profitability, firm size, and corporate tax. This study employed the Generalized Method of Moments (GMM) model to estimate the regression models on panel data study. The main contribution of this study is sightseeing the insight of the effect of corporate governance factors on investment decisions. Findings reveal that managerial ownership is positively significantly influence on investment decision. Board size is insignificantly positive on investment decision. The existence of positive effect between board independence and changes in total assets was found in the study and a significant negative influence on Tobin's Q.CEO duality is significantly and negatively related to changes in total assets and it is significantly and positively connected to Tobin's Q. Therefore, except for board size, all the other corporate governance factors have influence on the investment decision of a firm.

Keywords: investment, corporate governance, non-financial firms, GMM, Sri Lanka

1. INTRODUCTION

Corporate governance refers to how a corporate board is making authenticable decision for organization with the guidelines, and approval of board is usually necessary for making investment, issuing shares and declaring dividends. Corporate governance can also be defined as the procedure and structure to be used to direct and manage the business activities of the company uplifting business wealth and accountability of the corporation with the eventual objective of grasping shareholder value in the long term whilst considering the interest of the other stakeholders. Practices of better corporate governance may be having noteworthy

influence on the strategic decision making of a firm, e.g. financing, dividend and investment. Therefore, corporate governance variables like board size, board independent and CEO duality may have direct impact on financial decisions. Corporate governance holds a key mechanism to protect outside investors through legal system. Responsible firms extend the corporate governance practices that impact positively on the environment and society at large, whilst enhancing shareholders' value in long term.
Investment opportunity is an element which is known to take part in important positions in formative dividend policy. Investment opportunities can be considered to be potentially profitable and firms attempts to capitalize the opportunity for economic benefits (Myers, 1977). Opportunities for investment are very important factors that induce the company's growth and if a company has potential growth opportunities will have higher price of the share. Researchers reckon that investment opportunity set is affecting the firm's dividend payout policy. It was also found that increase in investment opportunity set creates an increase of dividend payout ratio and rise in their dividend yield (Abbott, 2001).

Investment opportunities play a key role in corporate finance of the organization and it indicates the future growth of the firm, which is invaluable in the prediction of the shareholders' wealth. Myers (1977) categorizes firm value into two, the present value of the assets in place and future investment and growth opportunities. The difference between the two is that the former does not depend on future discretionary investments while the latter does. Instances of discretionary investments are; investments in new projects, advertising, marketing, research and development (R&D) and product development. Discretionary investments are often referred to as an option, which value is deemed to be a representation of future investment required for asset acquisition. Therefore, the investment opportunity set (IOS) concept, which was pioneered by Myers (1977) is described as the level to which firm value is dependent on the firm's future discretionary expenditures.

It is pertinent to distinguish between over investment and under investment when exploring the concept of investment. Under investment refers to the liquidity effect of a firm which has a debt commitment but invests less regardless of its growth opportunities. Theoretically, leverage creates potential under investment incentives. However, the firm can minimize the influence through certain measures. On the other hand, the theory of over investment is described as an expenditure spent on an investment that goes over what is needed.

This study examines the influence of corporate governance on investment decision of the listed non-financial companies in Sri Lanka. Hence, the main objective of this study is to explore the role of corporate governance factors in influencing on investment decisions for the companies listed in Sri Lanka.

The remainder of this paper is organized in the following manner. The next section of the paper reviews prior research and develops the hypotheses, followed by discussion of the data, variables, method and procedures used for this empirical study. The findings and conclusion then follow.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This section presents a literature review on the relationship between corporate governance and decision on investment and development of hypotheses. The followings detail discussion on the empirical evidence of the influence of corporate governance factors on investment decision making of a few selected researches in the literature.

In the case of association between managerial ownership and investment decision, two schools of thoughts are existing. In response to the incentives, most of the studies show that management control and managerial ownership have a positive effect investment decision making of the firm (Aghion & Howitt 2009). In contrast, corresponding to the effect of entrenchment, managerial ownership is felt to have an inverse effect on investment decision making of a firm's (Hassan & Ali Butt 2009; Wahla et al. 2012).

Along with the increase in the board size, the monitoring of the board also increases and therefore, the cost of outcome will also be exceeding the benefits. Large number of ideas and opinions will be helpful to find alternatives to a problem enabling to make decisions. This is also a result of higher number of directors of the board (Lipton & Lorch, 1992). Therefore, it is evident that directors in a small board are effectively responding to the dynamic competitive environment. However, Kyereboah-Coleman (2008) express that a greater board offers mechanism for an effective monitoring. This infers that decision on investment is being made with the best interest of owners. This finding exhibits that growth opportunities of the firm will significantly be affected by the board size.

Managerial Domination Theory stipulates that external directors are obedient to management. They are responsible for their appointment and arguably depend on directors for information (Coles et al. 2008). Bathala and Rao (1995) and Hutchison (2002) find that portion of the directors in outside and growth of the firm have negatively associated. However, Munter and Kren (1995) argue that board composition mitigates managerial opportunism and urges proper supervision of management. Brickley et al. (1997), Conyon and Peck (1998) and Hossain et al. (2000) report that the share of the outside board directors is positively connected to opportunities for investment of the firm.

Chief Executive Officer plays an imperative character in the investment decision of the firm. CEO duality has an effect on the investment decision as evidently proved by Hutchinson and Monroe (2010) who find that there is a significant positive association between capital expenditure and separating the roles of CEO and chairman for Australian firms. In addition, Chen et al. (2009) also find a similar result that the roles of CEOs will have a favorable effect on corporate investment decision. This finding also means that when there are separated roles of CEO and Chairman, favorably impact on investment decision. This finding is also indicating that capital expenditures will be higher when there are separated CEO and a Chairman for a board. Another study has done by Chang et al. (2008) conclude that corporate governance variables investment influence the decisions of the firm.

Therefore, researcher hypotheses that;

H1: There is a relationship between Managerial Ownership and Investment Decision of a firm.

H2: There is a relationship between Board Size and Investment Decision of a firm.

H3: There is a relationship between Board Independence and Investment Decision of a firm.
H4: There is a relationship between CEO Duality and Investment Decision of a firm.

3. METHODOLOGY

3.1. Sample and Data Collection

This study aims to investigate study the relationship between selected CG variables and investment decisions of a firm. Quantitative approach is employed. The population of the study is 287 listed companies in the Colombo Stock Exchange (CSE) as at 2016. The sample data for this study consists of 198 firms listed on Colombo Stock Exchange after excluding the financial sector of 75 listed companies. The sample period of the study was 8years from 2009 to 2016. The reason for exclusion of financial firms is they have to confirm to strict legal requirement pertaining to their financing. The data and other related information for this study are collected from the published annual reports, (CSE) Colombo Stock Exchange websites, magazines and CSE publication.

3.2 Model Specification and definition

Investment $= \gamma_0 + \gamma_1$ Managerial ownership $+ \gamma_2$ Board size $+ \gamma_3$ Board independent $+ \gamma 4$ CEO duality $+ \gamma_5$ Profitability $+ \gamma_6$ Firm size $+ \gamma_7$ Corporate tax $+ \varepsilon$

Table 1. Operational definition of the variables

Variables	**Definition**
INVESTMENT $_i$	Percentage increment in total assets from previous year to current year Tobin Q
Managerial ownership	Percentage of number of ordinary shares owned by board of directs of the company
Board size	Number of directors on the board
Board independent	Ratio of number of independent directors (non-executive directors) to total number of directors
CEO duality	A dummy with 1 if the CEO and chairman is the same person, 0 otherwise
Profitability	Earnings before interest and tax to total assets
Firm size	Natural logarithm of total assets.
Corporate tax	Percentage or ratio of corporate tax paid to profit before tax

4. RESULTS AND DISCUSSION

4.1. Descriptive Analysis

Table 2 presents descriptive statistics of the variables which have been used in the study. With a view to explain the general characteristics of the sample drawn for the study, this table reports the minimum, maximum, mean and standard deviations.

Table 2. Descriptive Statistics of the variables

Variable	Observations	Mean	Std. Dev	Min	Max
Increment in TA	1584	0.097	0.060	0.010	0.410
Tobin's Q	1584	0.832	0.468	0.020	1.990
Managerial ownership	1584	0.108	0.166	0.000	0.710
Board size	1584	7.818	1.994	3.000	15.000
Board independent	1584	0.390	0.124	0.000	0.900
CEO duality	1584	0.422	0.494	0.000	1.000
Profitability	1584	0.075	0.111	-0.390	0.520
Firm size	1584	9.329	0.692	6.870	11.820
Corporate tax	1584	0.021	0.009	0.010	0.140

Increment in total assets is derived by counting the total assets from previous year to current year. Tobin Q is total market value of firm divided by total asset value of firm. Managerial ownership is the number of ordinary shares owned by board of directors to total number of shares. Board size is the number of directors on the board. Board independent is the ratio of non-executive directors to total number of directors. CEO Duality is a dummy variable if the CEO and chairman is the same person. Tangibility ratio is fixed assets to total assets .Profitability is the EBIT to total assets. Firm size is natural logarithm of total assets. Corporate tax is income taxes divided by total assets..

There are two measures of investment decision which are increments in total assets, and Tobin Q. The mean value of increment in total assets shown in Table 2 was 0.097 which indicates the growth rate of investment in total assets (i.e. 9.7%). However, the study of Aivazaian *et al.* (2005) reported a higher mean value of 0.17 for the increment in total assets compared to the current study. The range of increment in total assets was between 0.010 and 0.410 and standard deviation for this measure was 0.060. The other measure of investment decision is Tobin's Q and the mean value was 0.832. It is lower than the mean value of 1.27 reported for a sample of Sri Lankan firms by Guo and UdayaKumara (2012). The main reason for the difference is the duration of the data collected for the study. Guo and UdayaKumara collected data only for single financial year whereas the current study

considered eight financial years. The range of Tobin Q was between 0.020 and 1.990 with a standard deviation of 0.468.

4.2 Correlation Analysis

The bivariate correlations are used to investigate the explanatory variables and to identify independent variables with higher correlation coefficient enabling to diagnose the variable with multicollinearity problem. Table 3 provides the matrix of Pearson correlation measuring the degree of association between the variables under the study. According to the Table 3, correlation coefficients are not greater than 0.8. A value of greater than 0.8 could be considered as having multicollinearity problem (Gujarati, 2003).

Table 3. Correlation Analysis

Variables	1	2	3	4	5	6	7	8
1. Increment in TA								
2. Tobins'Q	-0.019							
3. Managerial Ownership	0.053	0.094						
4. Board Size	0.038	0.053	0.061					
5. Board Independence	-0.036	0.081	-0.068	-0.103				
6. CEO Duality	-0.047	0.062	0.115	-0.187	0.125			
7. Profitability	0.017	0.110	-0.029	-0.014	-0.041	-0.125		
8. Firm Size	0.016	-0.080	0.031	0.095	0.206	0.089	0.065	
9. Corporate Tax	-0.046	-0.067	0.012	-0.049	-0.084	-0.135	0.009	-0.079

In order to determine whether the results of regression analyses are clear from the issues of multicollinearity, the variance inflation factor (VIF) values are examined. VIF values of more than 10 indicate that there is a multicollinearity problem (Gujarati 2003). Tables 4 show the VIF values in the investment model. The results show that there are no issues of multicollinearity in all models since the highest values of VIF were 1.12 in the investment model

Table 4 Multicollinearity Test using VIF in the Investment Models.

Variables	**Investment VIF**			
Based on Increment in Total assets		Based on Tobin's Q		
	Model 1		Model 2	
Model 3	Model 4			
Managerial ownership	1.04	1.04	1.04	1.04
Board size	1.08	1.08	1.08	1.08
Board independent	1.09	1.09	1.09	1.09
CEO duality	1.11	1.12	1.11	1.12
Profitability	1.07	1.05	1.07	1.05
Firm size	1.12	1.11	1.12	1.11
Corporate tax	1.06	1.06	1.06	1.06
Mean VIF	***1.08***	***1.07***	***1.08***	***1.07***

4.3 Regression Analysis

The results of the GMM estimator of investment decision demonstrated about four conditions that are; 1) number of instruments and number of groups for all four models in the investment decision are 148 and 198 respectively; here number of instruments are less than the number of groups. 2) Lag dependent values for net increment in total assets are 0.435, 0.375, and for Tobin's Q are 0.549, 0.524 for all four models developed for investment decision; here all values are significant and less than one. 3) Values of AR (2) for the four models are 0.228, 0.440, 0.276, and 0.305 respectively, hence here all AR (2) values are not significant. 4) Hansen test values also recorded in the regression, they are 0.596, 0.668, 0.176 and 0.236 respectively, and therefore all the Hansen values are not significant. Hence, four conditions of GMM model are satisfied in all four models developed for investment decision, therefore GMM model is appropriate for the regression analysis.

In relation to corporate governance variables, the results reveal that managerial ownership has significantly positive and consistent impact on investment decision according to the regression Table 5 and the coefficient values were 0.055, 0.052, 0.323 and 0.341. This result was consistent with the findings of Lerner et al. (2010) who found that managerial ownership was positively significant related to investment decision. Therefore, hypothesis H1 stated that there is a relationship between managerial ownership and investment decision of a firm was supported. It indicates that the higher managerial ownership leads to higher investment for Sri Lankan firms.

Board size has insignificantly positive influence on investment decision except model 2 according to the regression Table 5 and the coefficient values were 0.002, 0.002 and 0.000. This finding is in line with and Yammeesri and Herath (2010) who found that the relationship between board size and investment opportunities is not significant. This infers that when the board size increases, it influences the firms to go for more investment. Therefore, hypothesis H2 stated that there is a relationship between board size and investment decision of a firm was not supported.

Table 5. System GMM estimation of Regression Results for Investment decision

	Model 1		**Model 2**		**Model 3**		**Model 4**	
	Changes in total assets				**Tobin's Q**			
	Coef.	**z**	**Coef.**	**z**	**Coef.**	**Z**	**Coef.**	**z**
TA (-1).	0.435***	13.29	0.375***	12.54				
Tobin's Q (-1)					0.549***	28.54	0.524***	30.22
MO	0.055***	3.89	0.052***	3.66	0.323***	3.50	0.341***	3.74
BS	0.002	1.62	0.002**	2.27	0.002	0.32	0.000	0.04
BI	0.023*	1.70	0.044***	3.07	-0.134**	-2.16	-0.089	-1.18
CEOD	-0.027***	-5.92	-0.018***	-3.73	0.076**	2.48	0.099***	2.92
PRO	-0.025**	-2.43	-0.035***	-3.19	0.526***	8.95	0.624***	12.20
Log FS	0.006**	2.48	0.005*	1.90	-0.206***	-8.31	-0.219	-8.44
CT	-0.843***	-4.44	-0.889***	-5.08	-1.199	-1.15	-2.948***	-2.69
constant	0.006	0.28	0.004	0.13	2.281***	9.99	2.437***	10.26
No of groups	198		198		198		198	
No of instruments	148		148		148		148	
AR(2)	0.228		0.440		0.276		0.305	
Hansen test	0.596		0.668		0.176		0.236	

With regard to board independent, it was recorded a significant positive effect on investment decision based on changes in total assets with the co- efficient value of 0.023 for model 1 and 0.044 for model 2. This situation occurs when firms have more independent directors. Because of this reason they tend to strengthen the safeguarding from uncertainties and lead the firm to attract more investments. Board independent has significant negative influence on Tobin's Q only in model 3 with the co- efficient value of -0.134. It means that low percentage of external independent directors leads to higher investments. This result was consistent with the findings of Hutchinson (2002). Thus, hypothesis H3 stated that there is a relationship between board independent and investment decision of a firm was supported.

CEO duality was significantly negative with changes in total assets in model 1 and model 2 with the coefficient value of -0.027 and -0.018 respectively. This result was consistent with the results of Chen et al. (2009). These findings denote that when firm having separate person who play the role of CEO and board chairman may increase their investment. CEO duality was significantly positive impact on Tobin's Q in model 3 and model 4 according to the regression Table 4 and the coefficient values were 0.076 and 0.099 respectively. This finding was consistent with the findings of Gill et al. (2012). The CEO duality has a positive impact on the investment decision of the firm. Therefore, hypothesis H4 stated that there is a relationship between CEO duality and investment decision of a firm was supported. It means that larger board size (large number of directors) is on the side of the firm as they provide assistance to take investment decisions and financial support.

5. CONCLUSION

The objective of the study was to examine the role of corporate governance factors in influencing the firms' investment decisions. Findings reveal that managerial ownership is positively significant with consistent effect on investment decision in the four models. Board size is insignificantly positive on investment decision except for model 2. The existence of positive effect between board independence and changes in total assets was found in the study. Whereas, board independence is with a significant negative influence on Tobin's Q in model 3 and insignificant negative influence on Tobin's Q in model 4. CEO duality is significantly and negatively related to changes in total assets in model 1 and model 2. Whereas, CEO duality is significantly and positively connected to Tobin's Q in model 3 and model 4. Therefore, except for board size, all the other corporate governance factors have influence on the investment decision of a firm.

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