Impact of Board Structure and Board Activity on Corporate Performance - A study of Indian companies

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ABSTRACT

The aim of this paper is to measure the relationship between board structure and board activity and the financial performance of BSE listed 58 Indian companies. To measure corporate performance ROCE and EPS are the key variables. On the other hand board structure and board activity is measured through board size, board independence, CEO duality and frequency of board meetings respectively. With the help of multiple regression and Pearson correlation, this study found significant and positive relationship between board size and EPS. On board composition average 55 per cent board is independent which is above the corporate governance requirement. The study concludes that larger the boards better is the performance when measured through EPS .On CEO duality the study found that when CEO serves as the board chairman performance worsens so it is suggested that CEO and chair positions should be separate and companies should encourage larger boards.

Keywords: *Board Structure, CEO Duality, Board Meetings.*

I. Introduction

In recent years, some high profile business frauds both at national and international levels (such as Enron, World.com, HIH, Harris Scarf, One tel and Satyam, etc.) and questionable business practices have led to doubts being cast on the integrity of business managers. The need for strong governance is evidenced by the various reforms and standards developed not only at the country level, but also at an international level (e.g., the Sarbanes-Oxley Act in the US, CLERP 9 in Australia, Combined Code in the UK, and the Organization for Economic Development [OECD] Code and revised clause 49). Ensuring better governance practices in the corporations will result in boosting investor's confidence as investors have the belief that a company with good corporate governance will perform better over a period of time and that good governance can reduce the risk and attract further investment (Agrawal and Knoeber,1996). There is growing need to examine the corporate governance practices of India from emerging economies as the listing of Indian companies on international stock exchanges is taking place. To attract foreign investment these companies have to follow more transparent approach to corporate operations. Board of directors considered an important internal mechanism to ensure good corporate governance as it shoulders the serious responsibility of monitoring, evaluation and rewarding the executive management. Various governance reforms have specifically emphasized on appropriate changes to be made to the board of directors in terms of its composition, structure and ownership configuration. It is anticipated that these changes bring effectiveness in the operations of the board of directors and improve corporate governance.

Even though there is a growing literature on governance issues such as board composition, board leadership structure, but the results are inconclusive with respect to firm performance (Dalton et al., 1998). It is believed that board of directors influence corporate performance. Such influence may be direct, e.g., through boards monitoring management, or indirect; through the actions of a CEO selected by the board (Fox, 1998). Board structure is often argued to influence - either positively or negatively - corporate financial performance. Larger boards may increase the quality of decision-making and financial performance since they offer a broader array of perspectives, but their size may hinder the ability to reach a consensus (Forbes and Milliken, 1999). Higher proportion of outside directors should be associated with stronger financial performance suggested by (Stiles and Taylor, 2001). CEO duality is expected to provide a strong leadership to the firm (Donaldson and Davis, 1991). Board meetings are used as a measure of intensity of board activity (Vafeas, 1999). The key factors such as the independence of the board, Chief Executive Officer (CEO) duality status and active participation of strategic decision making are identified to increase the effectiveness of board and its impact on financial performance (Bathula, 2008). Studies related to the impact of board structure on firm performance are not conclusive in nature. So there is a need for stronger test to discern whether the board structure have any effect on firm performance. The purpose of this study is to examine the relationship between the board structure measured through board size, board independence, CEO duality and board activity and financial performance of 58 Indian companies listed with BSE.

II. Review of literature

Board Size and Corporate Performance

Kathuria and Dash (1999) investigated the board size, with corporate financial performance using data of 504 corporations belonging to 18 industries and found that

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the size of the board played an important role in influencing the financial performance of corporations. Same results were predicted by Kiel and Nicholson (2003), Bathula (2008), Sanda et al. (2005) and Jackling and Johl (2009). Even according to resource dependency theory larger boards are preferred due to wider pool of expertise and greater links with the outside world. On the other side it is considered larger boards bring coordination problems so smaller boards are preferable due to close interactions and debates. Ghosh (2006) observed that board size exerts a negative influence on corporate performance, irrespective of whether performance-based or market-based measure is considered. Garg (2007) established that the results were consistent with the theory that when boards get to be too big, agency problems increase. Juras and Hinson (2008) concluded that larger boards lead to a slowing of decision making, a tendency toward passivity that leads to adverse impact on performance. Connell and Cramer (2010) also found negative correlation between board size and firm performance. But Connelly and Limpaphayom (2004), Ma and Tian (2009) concluded that Board size does not have any relation with firm performance.

Board Independence and Corporate Performance

Board independence is considered an important instrument for increasing the firm performance. The revised clause 49 of the listing agreement states that a company is required to have an optimum combination of inside and outside directors. Pombo and Gutierrez (2011) investigated the relation of board structure through the appointments of outside directors on a sample of 335 firms. They found a positive relation between the ratios of outside directors with firm's return-on-assets. Kiel and Nicholson (2003) observed the proportion of outside directors has a significant correlation with the market-based measure of performance, but no significant correlation with the accounting-based measure. Prasanna (2005) found no evidence to confirm the relationship between independent board and value maximization. Othman, et al. (2009) suggested that a company's performance does not depend on how much the directors received their compensation, but more on the number of directors in a board or the proportion of executive and non-executive directors in a board. Ponnu and Karthigeyan (2010) found the board composition has a negative relationship with Tobin's q implying that when there were more external board members, performance of the firm tends to be worse.

CEO Duality and Corporate Performance

CEO duality is the long debated issue in board studies. Duality refers to situations in which the Chief Executive Officer (CEO) position is combined with the Board Chair position. It is widely assumed that separating the role of chairman from chief executive would secure a board sufficient power to challenge CEO dominance. Chiang and Lin, (2011) investigated that, in companies with CEO duality, the company performance decreases because independent directors were less able to exert their supervisory capacity under CEO duality. Uadiale (2010) showed a negative association between ROE and CEO duality. Jackling and Johl (2009) found that the CEO's powers have a detrimental effect on performance was not supported. But on the other side considerable benefits of CEO duality also suggested by some researchers like Bathula (2008) who found CEO duality was positively associated with firm performance.

Board Meetings and Corporate Performance

Board Meetings are used as a measure of intensity of board activity. The number of board meetings per year represents the depth of board involvement in monitoring. Ponnu and Karthigeyan (2010) found no relationship between the proportion of independent non executive directors, board size and the frequencies of meetings conducted and corporate performance.

A brief perusal of above studies suggests that voluminous research exists on this topic in both developed and developing economies, but the results are not conclusive. Moreover, in the same country different studies have produced conflicting results. So there is a need for stronger test to discern whether the board variables have any effect on firm performance.

Objectives of the study

1. To examine the impact of board size on corporate financial performance.
2. To examine the relationship between the number of independent directors and corporate financial performance.
3. To investigate the relationship between CEO duality and corporate financial performance.
4. To examine the effect of board meeting on corporate financial performance.

Hypotheses of the study

H_{01}: No significant relationship exists between board size and financial performance of Indian companies.

$H_{02:}$ No significant relationship exists between board independence and financial performance of Indian companies.

H_{03}: No significant relationship exists between CEO duality and financial performance of Indian companies.

H_{04}: No significant relationship exists between frequency of board meetings and financial performance of Indian companies.

III. Research Methodology

Sample and Period of the Study

To investigate the relationship between board structure and firm performance an initial sample of BSE-100 listed Indian companies during the year 2012 has been taken from CMIE-PROWESS database. Final sample includes 58 companies after excluding financial and public sector units due to different regulatory environments. The companies with different financial years, the outliers and the companies for which the data is not available are also excluded from the sample.

Sources of Data

Secondary sources have been used for this study. The data regarding board variables has been taken from the corporate governance reports filed by sampled companies with BSE, Companies websites and CMIE-PROWESS database. Financial data regarding performance variables and control variables has been taken from prowess database. INDIAN BOARDS database maintained by prime group is also used to collect information regarding some board variables.

Empirical model and Variable Definition

Multiple linear regression analysis has been done to test the relationship between board structure and board activity and company performance. The dependent variables are company performance (measured by EPS and ROCE). The independent variables are board size, board independence, and board meeting frequency and whether CEO has board chair simultaneously. Control variables include the age of the firm and leverage. To find out the correlation between board variables and corporate performance, following model is created:

$EPS = \alpha + \beta_1 (BSIZE) + \beta_2 (BIND) + \beta_3 (CEODUA) + \beta_4 (BMEET) + \beta_5 (FIRMAGE) + \beta_6 (LEVRATIO) + \varepsilon$.....(1)

$ROCE = \alpha + \beta_1 (BSIZE) + \beta_2 (BIND) + \beta_3 (CEODUA) + \beta_4 (BMEET) + \beta_5 (FIRMAGE) + \beta_6 (LEVRATIO) + \varepsilon$.....(2)

Table I
Variable Definition

Variable type	Variable code	Measurement
Board size	BSIZE	The total no. of directors on the board
Board independence	BIND	Proportion of independent directors to total board size
CEO duality	CEODUA	When CEO is also the board chair, it is defined I, or else 0
Board meeting	BMEET	No. of times of meeting during the financial year
Earnings per share	EPS	Earnings per share during 2012
ROCE	ROCE	Profit after tax/Capital employed Ratio
Leverage ratio	LEVRATIO	Long term debt/shareholders funds ratio
Age of the firm	FIRMAGE	Number of years of existence of company since incorporation.

Table II
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
BSIZE	58	5	20	11.10	3.088
BIND	58	36.36	80.00	55.8114	8.61230
CEODUA	58	0	1	.21	.409
BMEET	58	4	10	5.66	1.596
LEVRATIO	58	.00	4.47	.4645	.68666
FIRMAGE	58	5	105	40.16	25.222
EPS	58	-1.35	147.50	29.5233	36.61216
ROCE	58	-3.65	52.69	15.4524	13.88535

Source: Secondary data for the year 2012

Table II shows the minimum board size is five with a maximum board size of twenty and on an average size are 11.10 on each firm's board of directors. Results showed that maximum of the companies have 10-12 directors on their boards. This suggests that the sample companies having larger boards. On board independence the study shows that minimum board independence is 36.36 per cent and maximum is 80 per cent and on average companies have about 55 per cent independent directors on their boards which are consistent with the corporate governance guidelines. The revised clause 49 states that a company is required to have an optimum combination of inside and outside directors with not less than 50 per cent of boards consisting of outside directors where the chairman is the insider. The requirement for outside directors on the board is reduced to 30 per cent where the chairman is an outsider. Literature also suggested the higher proportion of outside directors associated with stronger financial performance (Stiles and Taylor, 2001). Focusing on leadership structure of the board, only 20 per cent companies have person with the dual role of chairman and CEO. In India managing director and CEO terms are used interchangeably. The results of the role separation between the chairman and CEO suggest that four-fifth of the companies are voluntarily complying with the suggestions for best practices as advocated by various corporate governance codes nationally and internationally. In terms of board activity, the sample companies hold four to ten meetings in the financial year, with a mean and standard deviation of 5.66 and 1.596 respectively.

Turning to company performance variables the sample firms show wide variations in their Return on capital employed (minimum-3.65 and maximum 52.69 with an average of 15.45) and EPS (minimum-1.35 and maximum147.50 with an average of 29.52). The descriptive results also indicate that the firms in the sample are fairly mature as the mean age (from date of incorporation) is 40.16 and ranges between 5 and 105 years of operation.

Table III
Correlation Analysis

		EPS	ROCE
EPS	Pearson Correlation	1	1
	Sig. (2-tailed)	.	.
	N	58	58
BSIZE	Pearson Correlation	.311(*)	.177
	Sig. (2-tailed)	.017	.185
	N	58	58
BIND	Pearson Correlation	.018	.105
	Sig. (2-tailed)	.895	.431
	N	58	58
CEODUA	Pearson Correlation	-.160	.003
	Sig. (2-tailed)	.230	.980
	N	58	58
BMEET	Pearson Correlation	.162	.195
	Sig. (2-tailed)	.224	.142
	N	58	58
LEVRATIO	Pearson Correlation	-.220	-.458(**)
	Sig. (2-tailed)	.097	.000
	N	58	58
FIRMAGE	Pearson Correlation	.061	-.016
	Sig. (2-tailed)	.647	.907
	N	58	58

*correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlations presented in Table III generally suggest that the board independence, board size, board meetings and CEO duality have positive, but not significant relationship with ROCE, but leverage ratio has an inverse and significant relationship with ROCE. On the other hand board size is significantly related at (.017) and CEO duality is inversely related with EPS performance.

Table IV
Regression Results

	Model 1(EPS)					Model 2 (ROCE)				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta		
(Constant)	-35.080	42.545		-.825	.413	-8.063	15.112		-.534	.596
BSIZE	4.155	1.567	.350	2.651	.011	.923	.557	.205	1.658	.104
BIND	.374	.555	.088	.673	.504	.226	.197	.140	1.145	.258
CEODUA	-16.701	11.691	-.186	-1.428	.159	.438	4.153	.013	.106	.916
BMEET	1.614	3.365	.070	.480	.634	1.549	1.195	.178	1.296	.201
LEVRATIO	-11.131	6.849	-.209	-1.625	.110	-9.060	2.433	-.448	-3.724	.000
FIRMAGE	-.072	.208	-.050	-.347	.730	-.099	.074	-.180	-1.339	.187
r^2	.195					.294				
Adj-r^2	.100					.211				
F	2.055					3.534				
p value	.075					.005				

Source: Secondary data for the year 2012

Table IV shows the regression results by controlling the two variables i.e. leverage ratio and firm age. The r^2 value which indicates the explanatory power of the independent variables, is .294 for ROCE and .195 for EPS respectively. This means that 29.4 per cent of the variation in ROCE while 19.5 per cent of the variation in EPS is explained by the variation in independent variable. From the output analysis in table IV the ANOVA returns significant p-values of .005 and .075 for ROCE and EPS respectively. This shows that the explanatory variables are linearly related to corporate performance and the model seems to have some validity. Results show board size is significant at p-value$<$.10. Contrary to the studies of Yermack (1996), Juras and Hinson, (2008) this study shows that the large the size of the board the better the performance of the company measured in terms of EPS. These results are supported by the findings of prior studies such as Kathuria and Dash (1999), Kiel and Nicholson (2003), Bathula (2008), Sanda et'al (2005) and Jackling and Johl (2009). Nicholson and Kiel (2007) found that increasing the number of directors provides a larger pool of expertise and knowledge supporting the resource dependency theory, but this hypothesis is not supported by ROCE. The board independence has positive, but not significant impact when measured in terms of ROCE and EPS. The insignificant results on relationship of independent board and value maximization are similar to Prasanna (2005). The number of board meetings is unrelated to performance in both the measures. The insignificance of this finding may suggest that the board activity and performance may not be proven through frequency of board meetings, but to ensure the more participation of board. The coefficient for the variable leverage is negative for both the measures. Relating to CEO duality the results of the study suggest that the one tier board is negatively related to EPS and that when a CEO doubles as the board chairman, EPS decreases. These results are consistent with the studies which have found that that dual board structure faces conflict of interest and agency problems. It is widely assumed that separating the role of chairman from chief executive would secure a board sufficient power to challenge CEO dominance. Chiang and Lin (2011) also found that with CEO duality, the company performance decreases because independent directors were less able to exert their supervisory capacity.

IV. Findings and Conclusion

In today's investment market investors invest in those companies which have better corporate governance mechanism to ensure getting good returns and board of directors considered an important internal mechanism to ensure good corporate governance as it shoulders the serious responsibility of monitoring and evaluation of the executive management. This study evaluates the impact of board structure and board activity on corporate financial performance in Indian companies. Results from the study indicate that there is strong positive association between board size and corporate financial performance. The study also reveals a negative relationship exists between CEO duality and EPS though not significant. Therefore, this study recommends that larger board size should be encouraged. On board composition it is found that average 55 per cent board is independent so it should be sustained and improved upon. The results of the role separation between the chairman and CEO suggest that four-fifth of the companies are voluntarily complying with the suggestions for best practice as advocated by various corporate governance codes nationally and internationally. Furthermore, this study may be improved upon by extending the time period and adding more variables that may affect corporate financial performance.

References :

Agrawal, A.and Knoeber, C. R. (1996). Firm performance and mechanisms to control agency Problems between managers and shareholders. ***Journal of Financial and Quantitative Analysis***, 31, 377-397.

Bathula, Hanoku (2008). ***Board Characteristics and Firm Performance: Evidence from New Zealand,*** (Doctoral Dissertation), Auckland University of Technology, New Zealand.

Chiang, Hsiang-Tsai and Lin, Mei-Chih (2011). Examining Board Composition and Firm performance. ***The International Journal of Business and Finance Research***, 5(3), 15-27.

Clause 49 of the Listing Agreement downloaded from http://www.bseindia.com/whtsnew/Amendments_List.asp

Connell, Vincent, O. and Cramer, Nicole (2010).The Relationship between Firm Performance and Board Characteristics in Ireland. ***European Management Journal*** 28, 387–399.

Connelly,J. Thomas and Limpaphayom, Piman (2004). Board Characteristics and Firm Performance: Evidence from the Life Insurance Industry in Thailand. ***Chulalongkorn Journal of Economics***, 16(2), 101-124.

Dalton, D., Daily, C., Ellstrand, A. and Johnson, J. (1998) Meta Analytic Review of Board Composition, Leadership Structure and Financial Performance. ***Strategic Management Journal***, 19, 269–290.

Donaldson, L. and Davis, J. H. (1991).Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns. ***Australian Journal of Management***, 16(1), 49-64.

Forbes,D. & Milliken, F. (1999). Cognition and Corporate Governance: Understanding Board of Directors as Strategic Decision-making Groups. ***Academy of Management Review***, 24, 489-505.

Fox, Mark A. (1998). Boards of Directors: The Influence of Board Size, Leadership and Composition on Corporate Financial Performance. ***Commerce Division Discussion Paper No***. 45.

Garg, Ajay Kumar (2007). Influence of Board Size and Independence on Firm Performance: A Study of Indian Companies, ***Vikalpa***, 32 (3), 39-60.

Ghosh, Saibal (2006). Do Characteristics affect Corporate Performance? Firm level Evidence for India, ***Applied Economics Letters***, 13(7), 435-443.

Jackling, Beverley and Johl Shireenjit (2009). Board Structure and Firm Performance: Evidence from India's Top Companies. ***Corporate Governance: An International Review***, 17(4), 492–509.

Juras, Paul E. and Hinson, Yvonne L. (2008). Examining the effect of Board Characteristics on Agency Costs and Selected Performance Measures in Banks. ***Academy of Banking Studies Journal***, 7(2), 87-107.

Kathuria, Vinish and Dash, Shridhar (1999). Board Size and Corporate Financial Performance: An Investigation. ***Vikalpa***, 24(3), 11-17.

Kiel, Geoff C. and Nicholson, Gavin J. (2003). Board Composition and Corporate Performance: How the Australian Experience Informs Contrasting Theories of Corporate Governance. ***Corporate Governance: an International Review,*** 11(3), 189-205.

Ma, S. and Tian, G. (2009). Board Composition, Board activity and Ownership Concentration, The Impact on Firm Performance, ***Asian Finance Association Conference Brisbane: University of Queensland Business School***, 1-51.

Nicholson,GavinJ and Kiel,Geoffrey C. (2007). Can Directors Impact Performance? A Case Based Test of Three Theories of Corporate Governance. ***Corporate Governance: An International Review***, 15(4),585-608.

Othman, Rohana, Ponirin, Halimi and Ghani, Erlane K. (2009). The effect of Board Structure on Shareholders' Wealth in Small Listed Companies in Malaysia. ***Management Science and Engineering***,13 (4), 1-15.

Pombo, Carlos and Gutiérrez, Luis H. (2011). Outside Directors, Board Interlocks and Firm performance: Empirical Evidence from Colombian Business Groups, ***Journal of Economics and Business***, 63, 251–277.

Prasanna, P. Krishna (2005). Corporate Governance – Independent Directors and Financial Performance: An Empirical Analysis. ***Ninth Capital Markets Conference paper*** downloaded from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=877807

Ponnu, C. H. and Karthigeyan R. M. (2010). Board Independence and Corporate Performance: Evidence from Malaysia. ***African Journal of Business Management***, 4(6), 858-868.

Sanda, Ahmadu U.,Garba, Tukur and Mikailu, Aminu S.(2005). Board Independency and Firm Financial Performance. ***Paper presented at conference Economic Development in Africa***, University of Oxford

Stiles, P. and Taylor, B. (2001) Boards at Work – How Directors view their Roles and Responsibilities. ***Oxford University Press***, Oxford.

Uadiale, Olayinka Marte (2010). The Impact of Board Structure on Corporate Financial Performance in Nigeria.

International Journal of Business and Management, 5(10), 155-166.

Vafeas, N. (1999). Board Meeting Frequency and Firm Performance. ***Journal of Financial Economics***, 53, 113-142.

Yermack, D. (1996). Higher Market Valuation of Companies with a Small Board of Directors. ***Journal of Financial Economics***, 40(2), 185-212.

Websites

http://www.bseindia.com/

http://www.indianboards.com

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