Business Analyst, ISSN 0973-211X, 37(1) 147-173, © SRCC

TOWARDS THE DEVELOPMENT OF INSIGHTS INTO BOARD FUNCTIONING-FIRM PERFORMANCE RELATIONSHIP IN INDIAN CORPORATE SECTOR: AN ANALYTICAL APPROACH

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ABSTRACT

The core intendment of the present analysis is to gauge the effects of board functioning on the firm performance in Indian corporate sector. Relying upon the data set of Indian corporates listed on BSE, different model specifications have been designed and tested in an OLS regression framework wherein the impact of board functioning has been tested with respect to firm accounting as well as market performance from two interlinked standpoints, i.e. board activity level and board diligence level. Analysis has announced significant denouements of board activity and diligence (on the part of independent and executive directors) for current firm accounting performance. In particular, board meeting has negative and significant impact whilst higher diligence of independent and executive board members is found to be positively associated with current firm accounting performance. However, analysis has unveiled the insensitivity of board functioning indicators towards the firm market performance. Since the ample amount of research in India till now has concentrated upon the structural aspect of the corporate boards (board size, composition, leadership structure), it presents the first research evidence which deals with the unification of structural as well as functioning aspect of corporate boards.

KEYWORDS: Board functioning, board activity, board diligence, firm performance, OLS regression framework.

INTRODUCTION

The highlighted concerns over the working of the corporate boards in the backdrop of Asian financial crisis and corporate scandals tends to be increasing over time. A large amount of extant research literature has been circumscribed with the testing of structural aspects of corporate boards, such as board size, composition, leadership structure etc. However, the operational efficiency of the boards cannot be exclusively judged from these structural aspects. In fact, the extent of discourse amongst the directors also tends to determine their level of effectiveness in performing different operations of the board. These set of discourses are, however, scheduled by means of board meetings and attendance in these meetings reflects the diligence level of directors which, in turn, demonstrates their level of involvement in decision-making. The agendas of the predetermined set of meetings are deliberated between the board members and

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thus, prepares the foundation of the board decision-making process. However, the economic feasibility of outcomes of the decision making process ultimately rests upon the inputs employed in terms of time, skills and expertise of directors during the discourse in board meetings. It encompasses the firm-level expertise of the executive board members as well as the wider range of expert knowledge held by the outside board members. Amongst the outside directors, the independent board members also adds the input of objectivity in the decision-making so as to ensure effective board oversight. All in all, the frequency of board meetings must be determined in light of the comparison of inputs involved (costs) and output generated (benefits).

It is the fiduciary duty of the board members to attend the meetings of the board. In fact, the attendance in meetings discerns the level of participation of directors in making strategic as well as operational decisions. In the present study, the involvement in the decision-making process has been operationalized through the attendance pattern of the directors in the board meetings.

In the present study, board functioning has been proxied by following indicators: a) Board activity: the frequency of board meetings (BMEET) b) Board diligence measures: (i) average percentage of board meetings attended by the total number of directors on the board, (ii) average percentage of board meetings attended by executive directors only, (iii) average percentage of board meetings attended by non-executive directors (iv) average percentage of board meetings attended by non-executive independent directors, and (v) average percentage of board meetings attended by non-executive gray (affiliated) directors.

This section presents the literature background of the board functioning indicators employed in the study.

a) Board Activity (BMEET):

The ability of a corporate board to effectively exercise its oversight function is largely determined by the level of intensity of board activity (Brick and Chidambaran, 2010). Board activity, as a proxy for monitoring quality of the board (Vafeas, 1999) facilitates the platform for the directors to discuss the issues and deliberate over the crucial decisions (Conger, Finegold and Lawler II, 1998). The significance of board activity in the monitoring function of the board members has been highlighted in the past research (Jiraporn et al. 2009; Ntim and Osei. 2011; Lin, Yeh and Yang, 2013). In addition, it also represents the level of effort and involvement made by the directors' in board operations (Andres, Azofra and Lopez, 2005). Further, it is to be noted that the adequate frequency of board meetings enhances the effectiveness of corporate boards (Conger, Finegold and Lawler II, 1998). There is literature available expressing positive effect of board activity on the firm performance (Ntim and Osei, 2011; Al-Matari, Al-Swidi & Bt Fadzil, 2014), whilst few studies have reported insignificant effect of board activity in determining the firm performance (Andres, Azofra and Lopez, 2005; Jackling and Johl, 2009). Viewing the lack of consistency in the empirical findings concerning the relationship between board activity and firm performance (Vafeas, 1999; Andres, Azofra and Lopez, 2005;

Jackling and Johl, 2009; Brick and Chidambaran, 2010, Sharma, 2013) has lead the researcher to formulate the hypothesis with no direction assumed.

Hypothesis 1: Board activity is related to the firm performance

b) Board Diligence/Attendance in board meetings:

The variable, board meeting attendance has been used in the corporate governance research as a proxy for determining the supervising quality of the corporate boards, thus determines the board behavior (Lin, Yeh and Yang, 2013). In other terms, it is the medium through which board members perform their monitoring role by having recourse to the firm-specific information (Johl, Kaur and Cooper, 2015). Moreover, it has been viewed that agency problem also emerges when directors do not fulfill their responsibilities effectively by remaining absent from the board meetings (Lin, Yeh and Yang, 2013). Conger, Finegold and Lawler II (1998) also added that effective utilization of time spent in meetings is an indicator of board effectiveness. However, increasing frequency of board meetings tends to decrease the attendance rates decrease for both outside and inside directors (Gray and Nowland, 2013). As far as its linkage with firm performance is concerned, efforts have been started making from the researchers' side in the recent past (Berkman, Cole, Lee & Veeraraghavan, 2005; Ghosh, 2007; Francis, Hasan and Wu, 2012; Chou, Chung and Yin, 2013; Lin, Yeh and Yang, 2013). Some of the studies such as Ghosh (2007) and Lin, Yeh and Yang (2013) have observed positive relationship between board meeting attendance and firm performance. Additionally, Francis, Hasan and Wu (2012) also indicated significant worse performance in firms experiencing poor board attendance in the meetings during the crisis. Supporting the above view, Chou, Chung and Yin (2013) also showed improvement in the firms' performance with the increasing self-attendance of directors in board meetings. Thus, attendance in meetings by the directors reflects their level of commitment or participation (Prasanna, 2005) in the board activities which ultimately influences the performance of the board and the firm as a whole.

Till now, researches conducted in India have explored the impact of multiple directorships on board meeting attendance (Sarkar and Sarkar, 2009). Surprisingly, the studies upon the investigation of board meeting attendance in relation to firm performance has not been largely conducted in India (Prasanna, 2005; Ghosh, 2007). Therefore, more research work is warranted in India on this aspect to develop new insights into the effectiveness or level of functioning of the boards. The present study has followed Ghosh (2007) which has employed the average percentage of board meetings attended by independent directors as a proxy to represent the level of board diligence. Other studies such as Chou, Chung and Yin (2013) have measured the board meeting attendance in the analogous manner. In the initial analysis, board meeting attendance has been tested using continuous measures, for example, average percentage of board meetings attended by the total number of directors (BMEETATTALL) /executive (BMEETATTEXEC) /non-executive (BMEETATTNEXEC) /non-executive gray (BMEETATTGRAY) /non-executive independent (BMEETATTIND) directors on the board. For the purpose of empirical testing, the hypothesis for board meeting attendance has been framed as follows:

Hypothesis 2: Board meeting attendance is related to the firm performance

c) Other Variables

The present study has also included some board structural characteristics namely board size, chairman status and CEO duality in addition to the board functioning indicators. Moreover, certain firm-specific factors (such as size, leverage, research and development expenditure, volatility, inside ownership, diversification, institutional shareholdings and beta) that can influence the performance of the firms have also been added. The impact of such factors needs to be conditioned/controlled in the model(s) developed for investigating the relationship between board functioning and firm performance.

Refer to Appendix-1 for the operationalization of the variables employed in the study.

SAMPLE SELECTION AND RESEARCH METHODOLOGY

Period of the Study and its Justification

Given the level of inadequate compliance on the part of corporates as regards the provisions of master circular (SEBI/CFD/DIL/CG/1/2004/12/10), the date for its compliance had been extended for the companies till December 31, 2005 by SEBI vide circular number SEBI/CFD/DIL/CG/1/2005/29/3. Therefore, the financial year 2005-06 has been taken as a starting point for the present study which ranges up to the financial year 2009-10.

Sample Selection Criterion

The universe of the study belongs to the companies listed on Bombay Stock Exchange in India. The sample set has been selected on the basis of ranking of market capitalization of BSE-listed companies. In this manner, a list of top 200 companies had been drawn out of which finance companies, banking companies and companies that are not listed during the overall time frame work (2005-06 to 2009-10) of the present study have been excluded. After the initial level screening, the companies that have not followed the criterion of April to March as their reporting year were also screened out. Thus, the final sample consists of 114 companies over the five-year period from 2005-06 to 2009-10.

Data as regards the board functioning indicators have been gleaned from the governance reports of sampled companies. The number of board meetings convened in a company has been counted from the beginning point (1st April) till the ending point (31st March) of the financial year. For the purpose of empirical analysis, the present paper has employed Pooled OLS regression analysis wherein the parameters of the variables have been estimated with reference to the robust standard errors clustered at the firm level. The regression results have been presented with the respective coefficients of the parameters along with the standard errors (in the parentheses) whereby each model specification encompasses the effect of year and industry dummies.

EMPIRICAL RESULTS

Results for Firm Accounting Performance

The results with regard to the impact of board diligence measures on the current firm accounting performance have been presented in Table 1.1. It shows that the coefficient of board activity (LBMEET) is negatively and significantly related to firm performance. Moreover, this significantly negative relationship has been obtained after employing the logarithmic term of the board activity (LBMEET) variable. Thus, this finding suggests that change in the board meeting frequency is inversely tied to the change in firm performance (as measured by Return on Assets), meaning thereby, increasing abnormally high number of board meetings tends to have dampening effect on the firm performance. This finding is in conformance with the findings of Johl, Kaur and Cooper (2015). In contrast to it, various researches including Andres, Azofra and Lopez (2005), Jackling and Johl (2009) etc. have identified insignificant impact of board activity on the firm performance. Moreover, studies such as Ntim and Osei (2011) had exhibited significant positive relationship with Return on Assets (ROA) which too contradicts with the negative result observed in the present study.

As far as board diligence is concerned, the analysis has initially been performed using continuous variables (BMEETATTALL, BMEETATTEXEC, BMEETATTNEXEC, BMEETATTIND & BMEETATTGRAY), however, the coefficients of all these variables have exhibited insignificant results. Therefore, the earlier model specification has been altered by replacing the continuous nature of variables with the dichotomous ones. Thus, the transformed variables (i.e. binary variables) are assigned two values, '1' and '0', whereby value 'one' denotes if the average attendance percentage of all (*ALLMEETDUM*)/ executive (*EXMEETDUM)*/ non-executive (*NEXECMEETDUM*)/ independent (*INDMEETDUM*)/gray (*GRAYMEETDUM*) directors crosses 75 percent (more than 75 percent) and 'zero' otherwise.

The analysis (using binary variables for board diligence) has indicated significantly higher firm performance in cases where the attendance percentage of all board members (*ALLMEETDUM*) crosses 75 percent (Model 1 and 2). However, when *ALLMEETDUM* variable has been decomposed into *EXMEETDUM* and *NEXECMEETDUM*, analysis reveals significant positive coefficient of *EXMEETDUM* variable only, thus implied that the better accounting performance of firms is mainly driven by the diligence level of executive board members only. The further decomposition of *ALLMEETDUM* into *EXMEETDUM, INDMEETDUM and GRAYMEETDUM* has displayed more interesting results. More specifically, significantly better firm performance is observed when the diligence level of independent board members (*INDMEETDUM*) in attending the board meetings is higher (i.e. more than 75 percent) as compared to the cases where the diligence level is less than (or equal to) 75 percent. In other words, higher board meeting attendance of independent directors leads to greater firm performance. This is in consonance with the study by Ghosh (2007) which too had demonstrated positive impact of board diligence measure on firm performance as measured by Return on Assets (ROA). Similar to the above, the

coefficient of *EXECMEETDUM* also comes out to be positive and statistically significant which implies that boards where average percentage of board meetings attended by the executive directors is more than 75 percent have significantly better firm performance than their counterparts. In other words, it connotes that greater diligence on the part of executive directors is also linked to improved firm performance. It implies that executive (inside) directors have greater firm-specific knowledge and thus, can contribute better towards the board-level decision-making. In contrast to the above, the coefficient of third indicator, *GRAYMEETDUM*, has been found to be insignificant with a negative sign, thus, showed that diligence level of gray directors is not associated with the firm performance.

As far as board structural indicators are concerned, the coefficient of CEO duality (*DUALITY*) comes out to be negative and statistically significant at percent level. This indicates that boards where the positions of CEO and Chairman of the board are combined or handled by one individual, experience significantly lower firm performance in comparison to their counterparts having separated positions of CEO and Chairman of the board. It highlights the agency theory argument that the concentration of power in one individual by combining the positions of CEO is detrimental to the interests of the firm (Davis, Schoorman and Donaldson, 1997) and thus, refutes the observations of Donaldson and Davis (1991). This negative and significant relationship matches with the observations of Haniffa and Hudaib (2006), but is in contrast to the findings of Jackling and Johl (2009) wherein insignificant results have been obtained.

In contrast to CEO duality, the coefficient of Chairman Status (*EXECCHAIR*), has come out to be insignificant, thus could not yield any statistical evidence of the relationship between Chairman Status and firm performance (ROA). The insignificance of *EXECCHAIR* variable also leads to the inference that Chairman Status, whether executive or non-executive, is immaterial to bring any significant change in the firm performance, rather it is the holding of dual titles of Chairman as well as Chief Executive Officer (CEO) which influences the level of firm performance.

Impact of Board Functioning on the Future Firm Accounting Performance

The analysis demonstrated above deals with ascertaining the impact of board functioning measures on the current firm performance. However, it has been argued that board meeting attendance can be related to the future (subsequent) firm performance (Chou, Chung and Yin, 2013). To test this argument, regression on empirical model specifications have been performed by using one-period lead values of the dependent (performance) variable. For this testing, Return on Assets (ROA) for the period t+1 is regressed on the current (period t) values of all independent variables listed above.

Findings of Table 1.2 reveal that initially, the coefficient of *LBMEET* is significantly negative in some of the models but could not remained consistent thereafter (Model 6 and 7). Moreover, the

coefficients of all board diligence) measures, *LBMEET, EXMEETDUM, INDMEETDUM, GRAYMEETDUM,* are found to be insignificant, and thus suggests that neither board meeting (*LBMEET*) nor attendance behavior of directors (*INDMEETDUM, EXMEETDUM, GRAYMEETDUM*) is associated with the subsequent firm performance as measured by Return on Assets of period t+1 (ROA_{t+1}). The only significant variable in this regression specification is duality (DUALITY) which is again in the negative direction. This connotes that concentration of power in one individual by way of holding the positions of CEO as well as Chairman of the board has inverse effect on firm future/subsequent performance (ROA_{t+1}), thus, in contrast to the findings of Chou, Chung and Yin (2013) which had observed insignificant effect on Return on Assets (ROA).

With regard to the control variables, firm size (LSIZE), leverage (LEVERAGE) and stock return volatility (VOL) has been found to be negative and statistically significant for both current and future accounting performance while rest of the control variables are found to be immaterial for firm current as well as future accounting performance.

Table 1.1: Impact of Board Functioning on Current Firm Accounting Performance									
Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Constant	0.3600*** (0.0675)	0.3959*** (0.0697)	0.3712*** (0.0701)	0.3710*** (0.0697)	0.2990*** (0.0831)	0.3030*** (0.0834)	0.3388*** (0.0821)	0.3344*** (0.0814)	0.3345*** (0.0816)
LBSIZE					0.0177 (0.0242)	0.0151 (0.0248)	0.0138 (0.0250)	0.0144 (0.0245)	0.0147 (0.0243)
LBMEET		-0.0281* (0.0159)	-0.0307* (0.0161)	-0.0303* (0.0163)			-0.0289* (0.0162)	-0.0269* (0.0161)	-0.0267* (0.0162)
ALLMEETDUM	0.0214* (0.0123)	0.0212* (0.0120)							
NEXECMEETDUM			0.0098 (0.0093)						
EXMEETDUM			0.0401** (0.0174)	0.0398** (0.0174)	0.0399** (0.0171)	0.0420** (0.0173)	0.0477*** (0.0177)	0.0460** (0.0182)	0.0463** (0.0182)

INDMEETDUM				0.0128 (0.0090)	0.0163* (0.0087)	0.0156* (0.0086)		0.0140* (0.0084)	0.0141* (0.0085)
GRAYMEETDUM				-0.0003 (0.0099)	-0.0029 (0.0095)	-0.0035 (0.0096)			-0.0029 (0.0097)
EXECCHAIR					0.0240 (0.0166)	0.0254 (0.0160)	0.0205 (0.0160)	0.0234 (0.0158)	0.0233 (0.0158)
DUALITY					-0.0392** (0.0175)	-0.0415** (0.0177)	-0.0353** (0.0175)	-0.0377** (0.0174)	-0.0379** (0.0174)
LSIZE	-0.0167*** (0.0055)	-0.0147** (0.0056)	-0.0146** (0.0054)	-0.0149*** (0.0055)	-0.0172*** (0.0058)	-0.0176*** (0.0058)	-0.0150** (0.0058)	-0.0159*** (0.0057)	-0.0158*** (0.0057)
R&D	-0.1059 (0.2315)	-0.1726 (0.2373)	-0.1977 (0.2300)	-0.1921 (0.2379)	-0.1381 (0.2555)	-0.1194 (0.2552)	-0.1519 (0.2588)	-0.1740 (0.2524)	-0.1779 (0.2548)
LEVERAGE	-0.2286*** (0.0416)	-0.2343*** (0.0415)	-0.2273*** (0.0413)	-0.2275*** (0.0413)	-0.2286*** (0.0401)	-0.2252*** (0.0408)	-0.2318*** (0.0397)	-0.2279*** (0.0399)	-0.2288*** (0.0404)

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VOL	-0.0012** (0.0005)	-0.0012** (0.0005)	-0.0012** (0.0005)	-0.0012** (0.0005)	-0.0013** (0.0005)	-0.0012** (0.0005)	-0.0011** (0.0005)	-0.0011** (0.0005)	-0.0011** (0.0005)
HIGH_75	-0.0119 (0.0197)	-0.0085 (0.0199)	-0.0036 (0.0200)	-0.0034 (0.0202)	-0.0037 (0.0204)	-0.0053 (0.0199)	-0.0024 (0.0201)	-0.0024 (0.0199)	-0.0025 (0.0200)
INSTOWN	0.0000 (0.0004)	0.0000 (0.0004)	0.0000 (0.0004)	0.0001 (0.0004)	0.0000 (0.0004)	0.0000 (0.0004)	-0.0000 (0.0004)	0.0000 (0.0003)	0.0000 (0.0004)
DIVERS						0.0032 (0.0038)	0.0038 (0.0039)	0.0035 (0.0038)	0.0035 (0.0038)
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-value	6.24	5.74	5.55	4.98	5.04	5.09	5.08	4.98	4.87
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-Square	36.84	37.60	37.91	38.08	38.85	39.11	39.29	39.75	39.77

Source: Computations from STATA 11 Software

Table 1.2: Impact of Board Functioning on Future Firm Accounting Performance

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	0.4153*** (0.0671)	0.3985*** (0.0665)	0.3949*** (0.0668)	0.3327*** (0.0781)	0.3746*** (0.0757)	0.3683*** (0.0751)	0.3693*** (0.0757)
LBSIZE				0.0141 (0.0240)	0.0083 (0.0246)	0.0089 (0.0242)	0.0093 (0.0241)
LBMEET	-0.0288* (0.0165)	-0.0308* (0.0165)	-0.0283* (0.0171)		-0.0286* (0.0167)	-0.0260 (0.0167)	-0.0255 (0.0169)
ALLMEETDUM	-0.0024 (0.0146)						
NEXECMEETDUM		0.0000 (0.0104)					
EXMEETDUM		0.0220 (0.0167)	0.0205 (0.0172)	0.0192 (0.0173)	0.0284 (0.0174)	0.0265 (0.0181)	0.0271 (0.0183)

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INDMEETDUM			0.0116 (0.0107)	0.0155 (0.0105)		0.0122 (0.0101)	0.0123 (0.0101)
GRAYMEETDUM			-0.0027 (0.0101)	-0.0052 (0.0095)			-0.0056 (0.0100)
EXECCHAIR				0.0228 (0.0178)	0.0205 (0.0168)	0.0226 (0.0167)	0.0223 (0.0167)
DUALITY				-0.0401** (0.0187)	-0.0383** (0.0179)	-0.0401** (0.0180)	-0.0405** (0.0180)
LSIZE	- 0.0146*** (0.0053)	- 0.0149*** (0.0052)	- 0.0155*** (0.0052)	- 0.0172*** (0.0054)	- 0.0154*** (0.0055)	- 0.0162*** (0.0054)	- 0.0162*** (0.0054)
R&D	0.0026 (0.2215)	-0.0243 (0.2171)	-0.0330 (0.2239)	0.0106 (0.2357)	-0.0015 (0.2410)	-0.0128 (0.2354)	-0.0183 (0.2363)
LEVERAGE	- 0.1862*** (0.0456)	- 0.1807*** (0.0460)	- 0.1777*** (0.0463)	- 0.1813*** (0.0450)	- 0.1818*** (0.0443)	- 0.1781*** (0.0444)	- 0.1800*** (0.0448)

VOL	-0.0017*** (0.0006)	-0.0016*** (0.0006)	-0.0016*** (0.0006)	-0.0017*** (0.0006)	-0.0016** (0.0006)	-0.0016** (0.0006)	-0.0016*** (0.0006)
HIGH_75	0.0028 (0.0215)	0.0041 (0.0218)	0.0041 (0.0220)	0.0050 (0.0220)	0.0047 (0.0213)	0.0050 (0.0211)	0.0046 (0.0213)
INSTOWN	0.0002 (0.0004)	0.0002 (0.0004)	0.0003 (0.0004)	0.0002 (0.0004)	0.0001 (0.0004)	0.0002 (0.0004)	0.0001 (0.0004)
DIVERS					0.0056 (0.0037)	0.0053 (0.0036)	0.0055 (0.0036)
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-value	5.15	4.99	4.74	4.62	4.71	4.83	4.68
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-Square	33.06	33.30	33.67	34.64	35.56	35.93	36.02

Source: Computations from STATA 11 Software

Table 1.3: Impact of Board Functioning on Firm Market Performance (Current as well as Future)

	CASE 1							**CASE 2**	
Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
	Current Market Performance							**Future Market Performance**	
Constant	10.8096*** (1.4808)	10.4408*** (1.4931)	10.4668*** (1.5002)	10.1607*** (1.5425)	10.4279*** (1.8765)	11.0040*** (1.8443)	11.3029*** (1.8023)	11.6561*** (1.7759)	11.3334*** (1.7821)
LBSIZE					-0.2187 (0.4529)	-0.4397 (0.4545)	-0.4383 (0.4582)	-0.4409 (0.4063)	-0.4420 (0.4026)
LBMEET	-0.2735 (0.3985)	-0.3350 (0.4026)	-0.3006 (0.4027)	-0.3234 (0.4051)	-0.2863 (0.4263)	-0.3573 (0.4055)	-0.3311 (0.4024)	-0.3052 (0.3819)	-0.3366 (0.3869)
ALLMEETDUM	0.2594 (0.1900)								
NEXECMEETDUM		0.0121 (0.1985)							

EXMEETDUM		0.6699**	0.6646**	0.7138*	0.6618*	0.6752*	0.6280*	0.2227	0.2678
		(0.3269)	(0.3296)	(0.3708)	(0.3677)	(0.3690)	(0.3276)	(0.3171)	(0.3417)
INDMEETDUM			0.2072	0.1960	0.2526	0.1845	0.1977	0.2045	0.1900
			(0.1730)	(0.1727)	(0.1816)	(0.1711)	(0.1713)	(0.1880)	(0.1882)
GRAYMEETDUM			-0.2121	-0.2329	-0.2007	-0.2060	-0.1855	-0.1404	-0.1663
			(0.1866)	(0.1842)	(0.1908)	(0.1883)	(0.1908)	(0.2022)	(0.1978)
EXECCHAIR					0.0948	0.0680	0.0914	0.0933	0.0652
					(0.2826)	(0.2750)	(0.2914)	(0.3325)	(0.3079)
DUALITY					0.0878	0.0968	0.0682	0.0488	0.0877
					(0.3209)	(0.3191)	(0.3269)	(0.3721)	(0.3590)
LSIZE	-0.5895***	-0.5843***	-0.5944***	-0.5712***	-0.6289***	-0.5486***	-0.5721***	-0.5956***	-0.5722***
	(0.1373)	(0.1345)	(0.1330)	(0.1324)	(0.1413)	(0.1325)	(0.1345)	(0.1306)	(0.1270)
R&D	-3.5711	-3.8531	-4.4319	-3.6897	-3.2391	-4.9496	-5.7481	-5.4030	-4.5735
	(6.0594)	(5.9135)	(5.8266)	(5.9366)	(6.2938)	(6.0304)	(5.9428)	(6.0896)	(6.1491)

Continued…

LEVERAGE	-2.5366*** (0.8184)	-2.4489*** (0.8221)	-2.4576*** (0.8141)	-2.6175*** (0.8247)	-2.8024*** (0.8479)	-2.6127*** (0.8355)	-2.4540*** (0.8264)	-2.0290*** (0.8250)	-2.2110*** (0.8456)
VOL				0.0200** (0.0094)	0.0065 (0.0104)	0.0203** (0.0091)			0.0221* (0.0119)
HIGH_75	0.1380 (0.3637)	0.1968 (0.3546)	0.1794 (0.3510)	0.1124 (0.3419)	-0.0597 (0.3617)	-0.0903 (0.3324)	0.1598 (0.3388)	0.2938 (0.3575)	0.2108 (0.3468)
DIVERS	0.0677 (0.0843)	0.0767 (0.0862)	0.0761 (0.0855)	0.0892 (0.0838)	0.0946 (0.0893)	0.0958 (0.0846)	0.0830 (0.0869)	0.0924 (0.0859)	0.1093 (0.0824)
BETA	-0.9317** (0.3808)	-0.9511** (0.3886)	-0.9284*** (0.3802)	-1.0651*** (0.3786)		-1.1231*** (0.3971)	-0.9837** (0.4013)	-1.1303*** (0.3753)	-1.2474*** (0.3560)
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-value	17.90	16.35	15.43	14.55	13.41	14.04	14.56	11.76	11.63
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-Square	35.30	35.58	36.11	36.68	34.00	37.18	36.60	38.69	39.51

Source: Computations from STATA 11 Software

Results for Firm Market Performance

This section presents the results with regard to the impact of board functioning on the market performance of the firms as measured by Tobin's Q. Table 1.3 represents two cases whereby first case (Case 1) reports the analysis for current market performance whilst the results for future market performance have been shown in second case (Case 2). The testing have exhibited quite different results from those obtained under Return on Assets (ROA) analysis. In the Case 1 analysis, the coefficient of board meeting frequency or board activity (LBMEET) has found to be statistically insignificant, thus showed no relationship with current firm market performance. This result is in line with the observations of Andres, Azofra and Lopez, (2005); Berkman, Cole, Lee & Veeraraghavan, (2005) and Jackling and Johl (2009) which too have noted insignificant relationship but is in stark contrast to the findings of Vafeas (1999) and Azar, Rad and Ehsanbotyari (2014) which have suggested negative and significant relationship with firm market performance measure. Adding to the above, this insignificant relationship have not corroborated the studies exhibiting significant positive relationship between board meetings and market based firm performance (Brick and Chidambaran, 2010; Ntim and Osei, 2011; Francis, Hasan and Wu, 2012; Al-Matari, Al-Swidi & Bt Fadzil, 2014). In fact, other board characteristics such as board size, CEO duality and executive chair status have also been remained insignificant in all the model specifications (Model 5 to 7). As regards the attendance behavior of board members, only the board meeting attendance of executive directors (*EXMEETDUM*) is consistently found to be positive and statistically significant at 10 percent level. This positive relationship has been obtained even after introducing several changes in the model specifications, a) without considering stock return volatility (Model 2 and 3), b) after considering stock return volatility (Model 4), c) adding board characteristics such as board size, CEO duality and executive chair status (Model 5 to 7) and d) removing *BETA* variable (Model 5). However, for other board diligence indicators, i.e. *INDMEETDUM* and *GRAYMEETUM*, the analysis could not yield the significant coefficients in relation to Tobin's Q. This is in contrast to the observations noted by Berkman, Cole, Lee & Veeraraghavan (2005) which had reported significant positive relationship with firm approximate q value. In other words, these results concluded that it is only the higher attendance of executive directors in board meetings which has been valued better by the market.

The results for future market performance (Tobin's Q), as presented in Case 2 analysis, has been found to be largely similar to those obtained under future accounting performance (ROA) analysis. In other words, all the variables of interest (*LBMEET, LBSIZE, EXMEETDUM, INDMEETDUM, GRAYMEETDUM, EXECCHAIR*) have showed insignificant results in relation to subsequent market performance. Even the inclusion or exclusion of stock return volatility (VOL) could not alter the results (Model 8 and 9). The insignificant result for board activity (LBMEET) matches with the findings of Horvath and Spirollari (2012) which had too noted

insignificant relationship between lagged board activity and firm market performance as measured by price to book ratio. Moreover, the variable, i.e. *DUALITY*, which has been statistically significant in the future level of ROA analysis also becomes insignificant for future Tobin's Q. Amongst the control variables, variables such as firm size, leverage, volatility and beta are found to be statistically significant at conventional significance levels.

Additional Evidence of Relationship between Board Meeting frequency and Firm Performance

The results for board meeting frequency (*LBMEET*) analysis have been checked using the board meeting dummy (BMEETDUM1) for both current (Model 1) and subsequent (Model 2) values of firm performance measures. This dummy has been coded as 'one' if the board has held more than 10 meetings in a particular year and 'zero' otherwise. Table 1.4 above reports that the coefficient of BMEETDUM1 is significantly negative and thus, indicates significantly lower current firm performance in cases where meeting frequency is abnormally high, i.e. more than ten. However, this evidence is missing for the future firm accounting performance as the coefficient of board meeting dummy with respect to the future firm accounting performance is insignificant. Similarly, no such evidence has been noticed for current as well as future values of firm market performance which exhibits no variation with the earlier one and thus, confirms that board meeting is not related to the firm market performance.

In order to further probe into the board activity-firm accounting performance relationship, the dummy variable, *BMEETDUM1 (more than ten board meetings)*, has been substituted with a number of other dummy variables, *BMEETDUM2 (eight or more board meetings), BMEETDUM3 (seven or more board meetings), BMEETDUM4 (five or less board meetings)* and *BMEETDUM5 (four or less board meetings)* in the concerned model specification. Findings of table 1.8 highlight that the significant negative board activity-firm performance relationship persists even when the board meeting dummy, *BMEETDUM2*, is employed in the model. However, this significant relationship got disappeared when the dummy variable, *BMEETDUM3*, has been inserted. More interestingly, the analysis of *BMEETDUM4* and *BMEETDUM5* suggests positive but insignificant relation between board meeting frequency dummy and firm accounting performance. All in all, the above analysis points to the observation that the board meeting frequency is negatively related to the current firm accounting performance and this negative relationship occurs when the board meeting frequency reaches to the number eight or above.

Table 1.4: Relationship between Board Activity-Firm Performance: Additional Evidence

	CASE 1						CASE 2	
Variable	Model 1 (Current ROA)	Model 1 (Current ROA)	Model 1 (Current ROA)	Model 1 (Current ROA)	Model 1 (Current ROA)	Model 2 (Future ROA)	Model 1 (Current Tobin's Q)	Model 2 (Future Tobin's Q)
Constant	0.2868*** (0.0853)	0.2946*** (0.0849)	0.2988*** (0.0855)	0.2959*** (0.0865)	0.3019*** (0.0837)	0.3279*** (0.0819)	10.397*** (1.9644)	10.8857*** (1.8815)
LBSIZE	-0.0143 (0.0244)	0.0146 (0.0242)	0.0151 (0.0247)	0.0159 (0.0251)	0.0147 (0.0248)	0.0098 (0.0245)	-0.4466 (0.4560)	-0.4316 (0.4083)
BMEETDUM1 (>10)	-0.0277** (0.0141)					-0.0185 (0.0147)	-0.3131 (0.3107)	-0.0667 (0.3197)
BMEETDUM2 (>/=8)		-0.0190* (0.0105)						
BMEETDUM3 (>/=7)			-0.0082 (0.0103)					
BMEETDUM4 (</=5)				0.0066 (0.0094)				
BMEETDUM5 (</=4)					0.0067 (0.0104)			

Continued…

EXMEETDUM	0.0448** (0.0176)	0.0439** (0.0180)	0.0440** (0.0180)	0.0437** (0.0176)	0.0427** (0.0173)	0.0243 (0.0182)	0.6515* (0.3638)	0.2129 (0.3291)
INDMEETDUM	0.0139* (0.0084)	0.0154* (0.0085)	0.0152* (0.0086)	0.0152* (0.0086)	0.0154* (0.0086)	0.0133 (0.0103)	0.1878 (0.1685)	0.2155 (0.1845)
GRAYMEETDUM	-0.0037 (0.0096)	-0.0022 (0.0098)	-0.0029 (0.0098)	-0.0036 (0.0096)	-0.0037 (0.0096)	-0.0066 (0.0099)	-0.2151 (0.1872)	-0.1773 (0.1949)
EXECCHAIR	0.0248 (0.0160)	0.0235 (0.0156)	0.0244 (0.0158)	0.0245 (0.0161)	0.0248 (0.0160)	0.0242 (0.0170)	0.0902 (0.2762)	0.0944 (0.3136)
DUALITY	-0.0387** (0.0174)	-0.0383** (0.0175)	-0.0404** (0.0176	-0.0406** (0.0175)	-0.0412** (0.0177)	-0.0420** (0.0182)	0.0800 (0.3191)	0.0508 (0.3623)
LSIZE	-0.0155*** (0.0057)	-0.0161*** (0.0056)	-0.0170*** (0.0057)	-0.0174*** (0.0058)	-0.0176*** (0.0058)	-0.0166*** (0.0054)	-0.5496*** (0.1335)	-0.5913*** (0.1285)
R&D	-0.1531 (0.2527)	-0.1672 (0.2541)	-0.1406 (0.2573)	-0.1342 (0.2559)	-0.1335 (0.2551)	0.0116 (0.2346)	-4.5620 (5.8654)	-3.9331 (5.9696)
LEVERAGE	-0.2278*** (-0.0406)	-0.2305*** (0.0405)	-0.2258*** (0.0408)	-0.2257*** (0.0409)	-0.2257*** (0.0408)	-0.1780*** (0.0449)	-2.5824*** (0.8277)	-2.1724** (0.8374)
VOL	-0.0012** (0.0005)	-0.0012** (0.0005)	-0.0012** (0.0005)	-0.0011** (0.0005)	-0.0012** (0.0005)	-0.0016*** (0.0006)	0.0199** (0.0092)	0.0215* (0.0122)
HIGH_75	-0.0050	-0.0025	-0.0039	-0.0043	-0.0045	0.0023	0.0737	0.1803

	(0.0195)	(0.0198)	(0.0200)	(0.0199)	(0.0202)	(0.0211)	(0.3369)	(0.3537)
INSTOWN	-0.0000 (0.0003)	0.0000 (0.0004)	0.0000 (0.0004)	0.0000 (0.0004)	0.0000 (0.0004)	0.0001 (0.0004)		
BETA							-1.1207*** (0.3950)	-1.2349*** (0.3515)
DIVERS	0.0036 (0.0038)	0.0033 (0.0038)	0.0033 (0.0038)	0.0032 (0.0038)	0.0033 (0.0038)	0.0054 (0.0037)	0.0957 (0.0847)	0.1059 (0.0829)
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F-value	4.76	4.95	4.97	4.94	4.92	4.71	14.07	11.78
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-Square	39.75	39.83	39.26	39.20	39.15	35.67	37.09	39.24

Source: Computation from STATA 11 Software

IMPLICATIONS AND SUGGESTIONS

The corporate governance research literature is surrounded with several key issues, one of which is related to functioning of the corporate board members. The observations made under this study mainly reflects the performance consequences of participation and activity level of directors in board decision-making process. The overall findings of the analysis highlight that board functioning, whether in terms of board meeting frequency or directors' attendance behavior, affects the current (period t) but not subsequent (period t+1) firm accounting performance. Additional board meeting analysis shows that excessively high number of meetings held by the board members results in lower current firm accounting performance. It conveys that the costs associated with the convening of additional board meetings tends to increase in comparison to the benefits expected. In other words, holding excessively high number of board meetings deteriorates the level of firm performance as it might result in loss of time and resources, thus generate lesser outputs relative to the level of inputs introduced. It might also confers that as number of board meetings tends to increase, the functioning (i.e. effectiveness level) of directors can decrease in terms of lesser (more) attention towards strategic (operational) decisions. Moreover, this negative relationship occurs when the board meeting frequency reaches to the number eight or above, therefore, it points to the suggestion that the limit of the board meeting frequency must be set to the number up to which benefits generated exceeds the costs incurred. Past literature argues that holding meetings very frequently can mismanage the utilization of resources (Evans, Evans and Loh, 2002). Although Clause 49 has stipulated the minimum limit of meeting frequency of the board members but the maximum limit has not been defined. Considering the same, the present study suggests that corporates must set the number of board meetings up to a point where the benefits generated exceeds the costs incurred.

The results as regards the board meeting attendance have also produced noteworthy ramifications. For example, the effects of board diligence varies for current and future level of accounting performance. In other words, the impact of participation of directors in board meetings is greatly reflected in the current accounting performance level of the firms. Moreover, the raptness of the directors in board decision-making has been tested at two levels i.e. absolute and categorial, which has brought into light the nature of contribution of specific directorial category in board decisions. More specifically, the absolute level has exhibited the positive contribution of board members' participation in accelerating the firm accounting performance whilst the indepth investigation at categorial level has proclaimed that it is the contribution of executive and independent directors which significantly ameliorates the current firm accounting performance. Thus, the greater involvement of executive and independent board members is linked to better accounting numbers and thereby, reflects the hard work on the part of these directors in performing the board operations. The above finding also conforms to the Lin, Yeh and Yang (2013) argument that higher attendance of the board members (especially, the independent directors) represent the supervisory quality of the directors as corporate monitors.

Thus, the independence factor introduced by the independent directors in perusing the decisions taken under board meetings has been accounted for in terms of improved accounting numbers.

Analysis of firm market performance suggests that variables such as board meeting frequency, executive chair status as well as CEO duality are insensitive to the firm market value. With regard to attendance behavior, it is only the greater participation/attendance of executive directors which has been valued by the market. The insouciance of gray directors' participation in firm performance (accounting as well as market) might be owing to their lack of independence and firm-level expertise in board decision-making process.

In contrast to the board diligence, board leadership structure (i.e. CEO duality) has indicated significant negative relationship with current as well as subsequent firm accounting performance. In other words, the dampening effect of unitary board leadership structure on the firm accounting performance connotes that having excessive power in one's hands implies lesser objectivity in decision-making and thus, lowers the firm accounting numbers. Moreover, the prevalence of combined leadership also tends to impugn the role effectiveness and contribution of outside independent board members. This finding corroborates the conventional wisdom that favors the separated board leadership structure whereby the titles of Board Chairman and CEO are occupied by two different individuals and thus, promote the standpoints of agency theory. Basically, this separation promulgates the level of independent and objective board monitoring and thus, it can be considered as a preferred board leadership structure following which the monitoring effectiveness of the board members can be improved. It is to be noted that the provision with respect to the separated titles of Chairman and CEO has been added in the amendments Revised Clause 49 (2014), yet it has not been made mandatory by nature. In addition, the analysis has revealed no evidence of relationship between executive chair status and firm performance (accounting as well as market). This confers that a Chairman who is an executive director cannot be significantly associated with firm performance unless the concerned executive director is not the CEO of the company.

CONTRIBUTION OF THE PRESENT RESEARCH AND FUTURE DIRECTIONS

Although voluminous amount of research literature is available on the structural aspects of the corporate boards which encompasses board size, its composition, leadership structure etc, this presents the new research evidence which covers both structural as well as functional aspects of corporate boards. In other terms, it offers the broader vision of impact of corporate board indicators on the firm performance. The significance of decomposition of directors into executive, non-executive, gray and independent has also been acknowledged herein in terms of analyzing the categorial contribution of directors in board meetings. Moreover, the performance consequences of board functioning has been analyzed using its current as well as future level unlike earlier researches which has largely focused upon the current level of performance. The

outcomes yielded by this paper have also highlighted the impact of adoption of the requirements of Clause 49 (2004) (w.r.t board meeting frequency) as well as the significant contribution of directors in attending meetings by relying upon the immediate next period of five years, i.e. 2005-06 to 2009-10. This period can be further enhanced in the future studies to gain some more insights into the board dynamics as well as the understanding of board behavioral pattern in performing its duties.

CONCLUSION

The current analysis focuses on investigating the impact of board functioning on the level of firm performance. The significant denouements of board activity and diligence (on the part of independent and executive directors) have been observed for firm accounting performance. In particular, board meeting has negative and significant impact whilst higher diligence of independent and executive board members is found to be positively associated with firm accounting performance. Analysis also suggests to abandon the practice of having unitary board leadership structure as it creates dampening effect on firm performance. The insensitivity of board activity and board diligence and board structural indicators for firm market performance also highlights the observation that the influence of board dynamics indicators on the firm performance depends upon the nature of performance measure being employed. However, the only factor that has exhibited significantly improved market valuation is the higher diligence on the part of the executive board members.

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Appendix-1

1	**Firm Performance**	(i) Return on Assets- Earnings before Interest and Taxes (EBIT) divided by book value of total assets	ROA
		(ii) Tobin's Q- The sum of market value of equity, book value of preference share capital, total borrowings and current liabilities divided by the book value of total assets.	Tobin Q
2	**Board Activity**	Natural logarithm of total number of board meetings of a firm held in a financial year	LBMEET
3	**Board diligence**	Attendance 2: A binary indicator 'one' where average attendance percentage of all directors crosses 75 percent and 'zero' otherwise	ALLMEETDUM
		Attendance 2: A binary indicator 'one' where average attendance percentage of executive directors crosses 75 percent and 'zero' otherwise	EXMEETDUM
		Attendance 3: A binary indicator 'one' where average attendance percentage of non-executive directors crosses 75 percent and 'zero' otherwise	NEXECMEETDUM
		Attendance 4: A binary indicator 'one' where average attendance percentage of gray directors crosses 75 percent and 'zero' otherwise	GRAYMEETDUM

		Attendance 5: A binary indicator 'one' where average attendance percentage of independent directors crosses 75 percent and 'zero' otherwise	INDMEETDUM
4	**Board Size**	Natural logarithm of total number of directors on the board	LBSIZE
5	**Chairman Status**	A dummy variable coded as '1' if the chairman of the board is an 'executive director' or '0' otherwise.	EXECCHAIR
6	**CEO Duality**	A binary variable which equals 'one' if a Chairman of the board is also the Chief Executive Officer (CEO) of the firm and 'zero' otherwise.	DUALITY
7	**Firm Size**	Natural logarithm of book value of total assets.	LSIZE
8	**Growth Opportunity**	Ratio of research and development expenditure to net sales	R&D
9	**Leverage**	Leverage as measured by the ratio of total debt to total assets.	LEVERAGE
10	**Volatility**	Standard deviation of monthly stock returns over the 12 months preceding the financial-year end	VOL
11	**High Inside Ownership**	A binary variable which equals 'one' if the percentage of ownership by the insiders crosses 75 per cent and 'zero' otherwise	HIGH_75
12	**Institutional Ownership**	Percentage of shares owned by the institutional shareholders	INSTOWN
13	**Diversification**	A binary variable is coded as 'one' for a firm belonging to a particular industry and 'zero' otherwise	DIVERS
14	**Risk**	Risk as measured by the beta.	BETA

THE
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