BOARD DILIGENCE, DIRECTOR BUSINESS AND CORPORATE GOVERNANCE

Saibal Ghosh*

Abstract

The paper examines the association between financial performance and boards of non-financial firms. Using data on over 200 listed manufacturing firms in India for 2005, the findings indicate that, after controlling for various firm-specific factors, board diligence as well as director busyness exerts a positive influence on corporate performance.

Keywords: firm performance, board diligence, director busyness, manufacturing, India

**Department of Economic Analysis and Policy, Reserve Bank of India, Central Office Building, Fort, Mumbai 400001 INDIA mail: saibalghosh@rbi.org.in. The views expressed and the approach pursued are, however, solely the author's personal opinion.*

1. Introduction

Over the past decade-and-a-half, particular attention in both the academic literature as well as in policy circles has been devoted towards understanding the role of corporate governance in company administration, and more so, following the outbreak of high profile corporate irregularities in several developed economies. The culmination of these interests has resulted in the formulation of corporate governance codes in several countries. [3] The perceived importance of these measures is based on the premise that, with widely dispersed ownership, shareholders designate managers to administer the operations of the company in line with the objective of maximizing shareholder wealth (Jensen and Meckling, 1976; Ajinkya *et al.*, 2005). In this context, the agency theory suggests that because shareholders are not involved in the daily affairs of the company, corporate governance mechanisms act as an important check in monitoring managers, thereby aligning their interests with those of shareholders.

An important facet of corporate governance that has gained prominence of late has been the board of directors of the firm (Hermalin, 2005). As early as the 1980s, Fama and Jensen (1983) had suggested that the board plays an important role in alleviating agency costs that arise from the separation of ownership and decision making in corporations. Jensen (1993) had described the board of directors as the apex of the internal control system in an organization. This suggests that the board of directors exists to protect the interests of shareholders from where it receives its authority for internal control from the shareholders.

Two important aspects of board functioning relate to the 'diligence' and the 'busyness' of the board of directors. As Vafeas (1999) has argued, size and independence of the board cannot in themselves lead to effectiveness in the monitoring role unless it is diligent or active. When boards hold regular meeting and is adequately attended, is it likely to remain informed about the relevant performance of the company leading them to take or influence and direct the appropriate action to address the issue (Blue Ribbon Committee, 1999; Abbott *et al.*, 2003). Empirical evidence suggests that such diligence can come into conflict with the busyness of the directors (Ferris *et al.*, 2003). The theoretical literature posits that such busyness can act as an important signal of a director's reputation and proxy for high director quality (Fama, 1980). Such over-extension of commitment on the part of directors can, however, lead to reduced attendance in board meetings. Therefore, the net effect of busyness versus diligence on firm performance needs to be weighted against the relative strengths of over-commitment and quality effects associated with multiple directorships.

The present paper examines this issue in the Indian context, drawing upon available theoretical and empirical literature. In particular, the study explores whether busyness of directors and board diligence leads to an improvement in the performance of non-financial firms. Empirical literature on this topic has been confined largely to the US (Hermalin and Weisbach, hereafter, HW 1991; Yermack, 1996) and other developed economies (Brunello *et al.*, 2001; Dahya and McConnell, 2005) for two main reasons. First, until recently, corporate balance sheets were exceedingly opaque with limited disaggregated information being provided on the board of directors. Second and more importantly, the accounting irregularities in the US and elsewhere have heightened

[3] Salient among these include the Blue Ribbon Committee (1999) in the US, the Cadbury Committee (1992) and Higgs Committee (2003) in the UK, the Vienot Report (1995) in France and the Peters Report (1997) in the Netherlands.

the awareness about optimally designing board structures to ameliorate the agency problems between management and stakeholders. These developments have, as a consequence, prompted the need for greater transparency in annual accounts of corporate entities.

Using a sample from an emerging economy serves several purposes. First, it enables to examine whether mechanisms that are effective in developed markets are also effective in emerging economies. In contrast to the scenario in the US and other developed countries where there is a relatively long history of institutional investor organizations actively seeking to influence corporate governance policies of individual companies, such influences are relatively uncommon in emerging economies. While mandatory limits have been placed in the number of directorships that can be accepted, these limits are set at relatively high levels, making them largely non-binding and yet providing them the flexibility to hire directors with already high number of directorships. This is automatically reflected in a higher average level of busyness as well as greater variation in the extent of busyness, providing an ideal setting for analyzing the impact of multiple directorships on the efficacy of monitoring in a cross-section of companies. Second, there is very little empirical evidence in respect of such countries that would help policymakers evolve best practices that are in consonance with the institutional context. Illustratively, while in the US, less than three multiple directorships are often considered best practice, the existing limit on multiple directorship in emerging economies are typically higher, often in double digits (see, for instance, OECD, 2003). Understanding the nuances that exist in the context of comparisons to developed markets can enable investors to utilize such findings to determine how best to evaluate firms for effective governance since a different set of factors might be at play in different markets.

The rest of the study is structured as follows. Section II gives an overview of the literature. The Indian experience with multiple directorships is enumerated in section III. The dataset are detailed in section IV, while section V describes the empirical strategy. The results of the analysis are discussed in section VI. The final section concludes.

2. Related literature

Corporate governance can broadly be classified into external and internal mechanisms (Denis and McConnell, 2003). External mechanisms relate to the market for corporate control: the takeover market and the shareholder protection offered by the legal environment in which the business operates. The latter, on the other hand, comprises of those related to board structure, executive compensation and monitoring by large shareholders.

We focus specifically on internal mechanisms and within that, on corporate boards. As Goodstein *et al.* (2004) has observed, corporate boards fulfill three roles. First, boards play an *institutional* role: providing a link between the organization and its environment. Second, boards discharge a *governance* role: monitoring and disciplining of inefficient management. The third role of the board is *strategic*: chartering the future growth path of the firm in a competitive setup. The present study focuses essentially on the second role.

The early literature on multiple directorships observes that outside directorships signify reputation. Fama (1980) and Fama and Jensen (1983) contend that the market for directorship functions as an important source of incentives for outside directors to develop reputation as monitoring specialists. Mace (1986) argues that outside directorships are regarded as valuable because they provide executives with prestige, visibility and commercial contracts. Empirical support in favor of the reputation argument can be found in several studies. The number of outside directorships is found to be related to firm performance for financially distressed firms (Gilson, 1990), for firms that cut dividends (Kaplan and Reishus, 1990), for firms that opt out of stringent anti-takeover provisions (Coles and Hoi, 2003) and for companies that fire their CEO following retirement (Brickley *et al.*, 1999). As a consequence, the number of board seats held by an outside director has been used to represent the director's reputation in the external labor market (Shivdasani, 1993).

The more recent literature, however, questions the wisdom of holding too many board seats. Multiple directorships may lower the efficacy of outside directors as corporate monitors (Core *et al.*, 1999; Shivdasani and Yermack, 1999). Ferris *et al.* (2003) examine whether firm performance is adversely affected by multiple board appointments. Their empirical analysis does not uncover any convincing evidence between the market-to-book value ratio and the average number of board seats held by directors. However, Fich and Shivdasani (2005) question the methodology of Ferris *et al.* (2003) and re-examine the relation between firm performance and multiple directorships. Their analysis reports that busy directors can hurt firm performance. Specifically, they find that firm with boards where the majority of outside directors are busy (i.e., holding three or more directorships) are associated with weak corporate governance, lower market-to-book value ratios and weaker profitability.

Another salient aspect of board functioning relates to the diligence of the directors. The rationale for including the diligence measure lies in the conventional wisdom that the most commonly shared problem by directors is the lack of sufficient time to discharge their professional responsibilities, thereby compromising on their decision-making quality (Lipton and Lorsch, 1992). Multiple board appointments therefore, while being a necessary condition for weak monitoring, might not be a sufficient condition. In case multiple directorships lead to over-commitment, is it likely to have an adverse effect on monitoring capabilities.

In our study of Indian corporate boards, the main hypothesis of interest is that corporate performance depends on the quality of monitoring as proxied by the diligence of the board and the busyness of directors. In this respect, we concentrate primarily on the functioning of the board. In a companion paper, Ghosh (2006) focuses on the size of the board and its interface with CEO remuneration.

3. Indian corporate governance and multiple directorships

Multiple directorships in India evolved in the initial stages of industrial development in the 1950s driven by a combination of several factors, including a paucity of leadership with solid commercial and industrial experience, to pool in the expertise of specialists with domain knowledge to guide the company as also the institution of the managing agency system, who floated new companies and sought to control their management by being on their boards. As Mehta (1955) had documented, during the initial years following independence in 1947, individual directors held as high as 50 directorships spanning across a wide spectrum of industries. The Company Law Committee (Bhabha Committee) which was set up in 1950 in the context of amending the extant Companies Act, 1913, observed that, while multiple directorships in the UK and US rarely exceeded single digits, a holding of 15 to 20 directorships was usually the norm for individual directors in India. In view of its pervasiveness and the associated concentration of managerial power that such multiple directorships might engender, the Committee recommended setting legal limits on the maximum number of directorships which an individual director can accept. In recognition of these concerns, the Companies Act which came into effect in 1960, repealed the erstwhile Companies Act, 1913 and set the legal limits at 20 along with provisions for excluding from this number the directorships of private companies, unlimited companies and non-profit organizations. The proposed limit was considered 'desirable' by the committee in view of the 'paucity of high-grade business ability in the country' at that time.

Since the 1990s coinciding with the adoption of economic reforms program in India, public concerns have become more focused on the effective protection of investors' interests, the promotion of transparency of operations and the need to move towards international standards in terms of disclosure by the corporate sector. A need was increasingly felt that some statutory governance codes be instituted in view of several malpractices (like insider trading) that inflicted losses on small investors and undermined investor interests in capital markets. Accordingly, several committees were appointed by the Government to examine these aspects in their totality. Following from these recommendations, the Securities and Exchange Board of India (SEBI), the stock market regulator, made certain mandatory provisions for listed companies through the route of listing agreement since 2002.[4] Accordingly, it was mandated that one-half of board members should comprise of independent directors.[5] With regard to the directorship issue, the stipulations made the recommendatory provision regarding the lowering of the number of companies in which a person can hold directorship from 20 to a maximum of 15, although no legal stipulation of this effect had been instituted. As it stands at present, the listing agreement of major stock exchanges do not contain any explicit provision regarding the total number of directorships on which an individual director can be represented, although companies typically abide by recommendatory provisions.

While studies on board diligence in the Indian context are limited, in a recent analysis covering over 120 firms for 2003, Ghosh (2006) finds a dampening influence of larger boards on firm performance, judged in terms of both accounting as well as market-based measures of performance. The study, however, did not examine the effect of board diligence and director busyness on performance, presumably owing to the paucity of data on these variables (see fn. 5), and this becomes a major concern of the present study. In the light of these developments in corporate governance practices in India, the question arises as to how far have been these developments been reflected in company financials?

4. Data description

The data employed for the study is cross-sectional information for the year 2005, extracted from the *Prowess* database (Release 2.4), generated and maintained by the Centre for Monitoring the Indian Economy (CMIE), a leading private think-tank in India.[6] The dataset contains financial information on around 8,000 companies, which are either listed on the stock exchanges as well as major unlisted public limited companies having sales exceeding Rs.200 million (≈US $4.2 million). Accordingly, the firms in the sample generally do not include the smallest firms

[4] The activities of the stock market are regulated by the Securities and Exchange Board of India (SEBI), whose functions are similar in scope to the Securities Exchange Commission in the US. The SEBI Act, 1992 imparted SEBI with statutory powers to protect the interests of investors in securities and to promote the development of, and regulate, the securities market.

[5] An independent director, as defined by SEBI, is a director who, apart from receiving a director's remuneration, does not have any other material pecuniary relationship or transactions with the company, its promoters, its management, or its subsidiaries, which in the judgement of the Board may affect the independence of judgement of the director.

[6] Detailed information on the activities of a firm's board of directors, as provided in *Prowess*, became available since 2003. Updation of the information in *Prowess* takes the form of replacing the earlier data with revised information, which is typically available with a half-yearly lag. Consistent information on the firm's board of directors is available for 2005. Hence, the analysis is based on cross-sectional data.

due to the requirements for firms to be included in *Prowess.*[7] Thus, in effect, the sample is skewed towards large Indian firms. There is detailed information on the financial performance of these companies culled out from their profit and loss accounts, balance sheets and stock price data.

The selection of the sample is guided by the availability of data. We proceed in several stages for the selection of sample firms. In step one, we cull out information on all manufacturing firms for 2005 that are listed on the National Stock Exchange.[8] This, in effect, provided us with aggregate information on 677 firms.

We subsequently delete a number of firms from the sample. First, we exclude firms which do not report any board characteristics, reducing the sample to 239 firms. In stage two, we delete firms which do not provide information on their share prices.[9] The final sample, therefore, comprises of 219 manufacturing firms, belonging to eleven industries for the year 2005.[10]

According to Clause 49 Listing Agreement, listed companies are required to file a corporate governance report as part of their Annual Report. The report contains among other things: (a) the composition of the board and the number of independent directors, (b) the number of directorships held by the directors in other listed companies, and (c) the number of board meetings held by the company during the financial year. This information has to be filed with SEBI and is reported under the Electronic Data Information Filing and Retrieval (EDIFAR) system on its website. We matched the name of the firm with the composition of the board of directors. In this fashion, we arrived at the disaggregated information on the corporate governance characteristics of the company.

For the purpose of the analysis, we employ one accounting measures and one market-based measure. Drawing from the literature, we use return on asset (RoA) as the performance-based measure (Khanna and Palepu, 2000). Following from Morck *et al.* (1998), we also re-estimate our regression with a market-based measure, defined as adjusted Tobin's Q (Adjusted Q).[11] The computation of Tobin's Q is rendered difficult owing to the paucity of information on the market value of debt.

Among the independent variables, our primary focus is on the measures of diligence and busyness. With regard to the former, we use the standard measure of the average percentage of board meetings attended by the independent directors of the board (Carcello *et al.*, 2002). We hypothesize that less diligent boards, manifested in lower number of meetings attended, are less equipped to demand accountability from the management, presumably with a dampening effect on performance.

There are several ways to ascertain how 'busy' a director is. We employ three such measures. First, following Ferris *et al.* (2003), we compute the average number of outside board seats held by each director (Busy 1). This measure therefore includes multiple directorships by not only the independent directors, but also executive directors as well, a feature quite pervasive in the Indian context. However, as Fich and Shivdasani (2005) remark, this measure might not adequately capture directors' busyness and therefore, calls for a distinction between the busyness of executive and independent directors. To address this aspect, we focus specifically on the monitoring role of independent directors and compute the number of outside directorships per outside director (Busy 2). Third, we employ the median number of directorships held by the directors on the board (Busy 3). It is of note that this measure of busyness is at variance with that employed by Ferris *et al.* (2003). However, as observed by Fich and Shivdasani (2004) and as our data reveals, the mean is not an appropriate measure in our case, since the distribution of directorships is positively skewed, so that a high mean might be driven by the presence of a few directors with large number of multiple appointments, while the remaining majority may not be busy.[12] A description of the variables is contained in Table 1.

[Table 1 here]

Table 2 reports the mean and standard deviation of the independent and control variables. Profitability, on average, was the highest in food and beverages, although in terms of market-based measure, the chemical industry was perceived as exhibiting highest growth opportunities. As regards control variables, which we use to condition the performance indicators in the regression model, it is evident that diversified firms are the largest, defined in terms of size. Most industries, particularly plastic, cement and metal exhibited high leveraging, although they also had high asset tangibility. Finally, several industries such as metal and diversified witnessed, on average, the highest increase in their share price over the previous year.

[Table 2 here]

[7]The small and medium-sized firms (SME), as classified by the Indian Ministry of Industry, are those with gross fixed assets less than Rs.100 million (appx. US$ 2.5 million).

[8] The National Stock Exchange is the state-of-the-art exchange for listed corporates in India.

[9] The information is employed in the computation of Tobin's Q.

[10]These include, in alphabetical order: Automobiles, Cement, Chemicals, Diversified, Food and beverages, Electrical and machinery equipment, Electronics, Metal and metal products, Plastic and rubber products, Textile and Others (which includes glass and ceramics, refined petroleum products and nuclear fuel, paper and printing, mining and quarrying, extraction of crude petroleum and natural gas, gems and jewellery, manufacture of coke and cosmetics).

[11]We also employed the market-to-book value ratio (MBVR) as a measure of company performance. The results (not reported) are similar to those obtained using adjusted Q.

[12]The skewness of the busyness measures, Busy 1, Busy 2 and Busy 3 are 0.613, 1.311 and 0.109, respectively.

Table 3 presents the board characteristics of the sample firms. The average board size was typically higher for diversified, cement and chemical firms with an adequate representation of independent directors, in line with the stipulated requirements. As regards board functionalities, across all firms, on average, there were 6.2 board meetings during the year, with the same being particularly high for chemical and food industries. Board diligence, on average, was the highest for diversified firms and the lowest in electronics. Finally, the measures of busyness suggest that the correlation between Busy 2 and Busy 3 is 0.72 (p-Value of 0.00), suggesting that busyness defined solely in terms of independent directors, as has been adopted by most empirical studies is justified.[13]

[Table 3 here]

5. Research design

A typical problem in estimating the association between performance and board characteristics is the endogeneity of both groups of variables. Following Demsetz and Lehn (1985), if governance impacts firm performance and the choice of this structure is endogenous (like the size of the board), value-maximizing firms will choose the optimal structure. In that case, controlling for conditioning variables would imply there is no variation in the values of the performance and governance variables. As a consequence, identifying any relationship between performance and governance could prove difficult.

Only if firms fail to optimize their governance structure, are we able to observe and identify the relevant parameters. Moreover, if firms are constrained, for example by other variables representing governance issues, it is possible to use such variables to instrument the nexus between corporate performance and board characteristics. The instrumental variables chosen for the analysis were based on this consideration. This is expected to statistically address the endogeneity problem mentioned earlier.

Addressing this deficiency, following HW (2003), can be delineated in the following manner. The empirical research on the impact of board variables on performance can be based on the following specification:

$$\alpha_t = \theta\, c_t + \xi_t, \quad \textbf{(1)}$$

where $c_t = \eta Z_t + \varepsilon_t$ **(2)**

where α is the measure of corporate performance, c denotes board characteristics variables (size and functionalities), Z signifies (other) governance variables, η and θ are parameters and ε and ξ are the error terms. To address this endogeneity problem, we employ the instrumental variable approach. The reported estimation results can, therefore, be taken as the regression results of the first equation, using the instrumental variables that come from (2).

The estimation strategy proceeds as follows. We employ two dependent variables, RoA and adjusted Q. The control variables act as proxies for product and financial market performance. As regards the former, we include firm size, age and tangible assets. To control for financial market performance, we consider the leverage ratio and share price change. Finally, we employ dummy variables to control for firm ownership and also take into account the industry-specific characteristics of the firm.[14]

Accordingly, (1) can be written as follows:

$$Depvar_j = b_0 + b_1 * \log(Board) + b_2 * (board\ functionality\ measure) + b_j * [Controls_j] + d_j * IND_j + e_j \quad \textbf{(3)}$$

where for firm *j*, *Depvar* is the dependent variable (RoA or adjusted Q), $IND_j=1$ if a firm belongs to industry *j*, else zero and finally *e* is the residual. The sign, significance and magnitude of b_2 is the central theme of the paper.

We basically have two sets of variables under the control of the firm (performance and board size/functionality). Following from our earlier discussion, we consider the choice of board characteristics to be intertwined with other governance issues (the second equation). Therefore, akin to Chirinko *et al.* (2000), we instrument the board variables with the following factors: holding by the largest shareholder, dividend outlays and two anti-investor protection measures: a dummy variables which assumes value 1 if a firm issued preference shares, zero, otherwise; and a dummy variable which assumes value 1 if a firm made an Euro issue and zero, otherwise.

6. Results and Discussion

The results of the estimation are presented in Table 4 (panel A). Among the control variables, it is evident that larger, leveraged firm with high levels of tangible asset have higher profitability and market valuation. Intuitively, larger firms with high asset tangibility, which are less prone to informational asymmetry, are likely to exhibit better performance. An increase in share price, by raising the market value of equity, exerts a positive influence on adjusted-Q. Summing up, firms that are larger, leveraged and high tangible assets tend to display better performance.

[Table 4 here]

Focusing specifically on the board variables, it is clear that the size of the management board exerts a negative influence on performance. In other words, larger boards may be less cohesive in decision making (Lipton and Lorsch, 1992), less candid in discussion of

[13]The correlation between Busy 1 and Busy 2 works out to -0.05 (p-Value of 0.439) and that between Busy 1 and Busy 3 is -0.04 (p-Value of 0.519). This suggests that incorporating busyness of executive directors might be less than ideal.

[14]As regards firm ownership, the dummy variable (D_State) is omitted, whereas with respect to industry groups, the dummy variable for 'Others' is the omitted category.

managerial performance (Vafeas, 1999) and more difficult to coordinate (Forbes and Milliken, 1999). The results in support of inefficiencies in Indian management boards are in line with Yermack's (1996) and Bhagat and Black's (2001) results for US board size that coordination, communication and decision-making problems increasingly hinder performance when board size increases.[15]

Coming to the core of the paper, it is evident that board diligence has a significant and positive impact on firm performance. In terms of magnitudes, an increase in board diligence by 10% translates into a profitability increase of roughly 1%. Greater diligence implies increased ability of directors to attend board meetings, the Annual General Meetings of the firm and the forums in which outside directors are formally nominated and demand accountability from the management, keeping the management 'on their toes', which translates into improved performance. This is all the more relevant in emerging economies as India where, given the finite talent pool at the top, multiple directorships is quite commonplace, which could often limit the ability of directors to attend board meetings. Similar results are obtained with *adjusted Q* as the performance measure.

Subsequently, we analyze director busyness. Following from our earlier discussion, we include the three measures of busyness described earlier. The results, displayed in panels B to D, reveals that 'busyness' defined in terms of the number of directorships held by independent directors or alternately, the median number of directorships of independent directors positively influences performance. The findings support the view that multiple directorships can be an important reflection of the quality of independent directors, where directors with competence and domain knowledge are able to exercise their expertise and positively influence firm performance. These comparisons seem to be consistent with the contention of Fama and Jensen (1983) that multiple directorships relate positively to firm performance. If the market for directors works efficiently, the best directors should receive the greatest number of offers to serve as a director. These quality directors might generate higher levels of performance from the firm. Alternately, Bhagat and Black (1999) argue that successful firms are able to attract directors who serve on multiple boards.

Finally, an aspect not addressed in the literature is whether diligent boards with busy directors influence firm performance. To address this aspect, we interact the busyness measure with the diligence variable. [16] Looking at the coefficient on the interaction term, it is clear that the diligent, busy boards exert a positive influence on firm performance (panels E and F). As observed by Vafeas (1999), board diligence acts as a proxy for the time directors spend monitoring managerial performance. Combined with 'busyness', this suggests that diligent directors are able to bring in their expertise associated with multiple directorships to bear on the firm's performance.

7. Concluding remarks

The paper evaluates the nexus between corporate performance and board functionalities for India. The empirical results suggest that, after controlling for board size and various firm-specific controls, both board diligence as well as director busyness exerts a positive influence on corporate performance, irrespective of whether performance-based or market-based measure is considered.

The analysis generates interesting implications. First, the analysis suggests the need for rationalizing the size of the board, since present board sizes are found to exert a negative influence on performance. Second, the regressions support the idea that busyness is a useful proxy for director quality. Third, busyness needs to be integrated with diligence: to the extent that busy directors are diligent towards firms which they represent, they are able to exercise their expertise to positively influence firm performance. The analysis, however, does not throw much light on the 'threshold' levels of multiple directorship beyond which over-extensions can compromise on directorial diligence. Addressing such issues remains part of future research.

References

1. Ajinkya, B., S.Bhojraj and P.Sengupta (2005), "The association between outside directors, institutional investors and the properties of management forecasts", *Journal of Accounting Research*, 43: 343-76.
2. Bhagat, S and B.Black (2001), "The non-correlation between board independence and long-term firm performance", *Journal of Corporation Law*, 27: 231-74.
3. Bhagat, S and B.Black (1999), "The uncertain relationship between board composition and firm performance", *Business Lawyer*, 54: 921-63.
4. Blue Ribbon Committee (1999), *Report and recommendations of the Blue Ribbon Committee on improving the effectiveness of corporate audit committees*, New York: New York Stock Exchange.
5. Brickley, J., J.Linck and J.Coles (1999), "What happens to CEOs after they retire? New evidence on career concerns, horizon problems and CEO incentives", *Journal of Financial Economics*, 40: 81-104.
6. Brunello, G., C.Graziano and B.Parigi (2001), "Executive compensation and firm performance in Italy", *International Journal of Industrial Organization*, 19: 133-61.
7. Cadbury A. (1992), *The Cadbury Committee Report: Financial Aspects of Corporate Governance*, Burgess

[15] BB (2001) reports a negative relation between board size and Tobin's Q in some (but not all) specifications.

[16] Since our first measure of busyness (Busy 1) is insignificant, we report the results employing the interaction of diligence with the other two busyness measures. The results (not reported) confirm that the interaction of Busy 1 with diligence is insignificant at conventional levels.

Science Press: UK.
8. Carcello, J., D.R.Hermanson, T.L.Neal and R.Riley Jr., (2002), "Board characteristics and audit fees", *Contemporary Accounting Research* (Fall), 365-84.
9. Centre for Monitoring the Indian Economy, *Prowess Database* (Release 2.4), CMIE: Mumbai.
10. Chirinko, R., H.van Ees, H.Garrestsen and E. Sterken (2004), "Investor protections and concentrated ownership: assessing corporate control mechanisms in the Netherlands", *German Economic Review* 5: 119-38.
11. Coles, J., and C.K..Hoi (2003), "New evidence on the market for directors: board membership and Pennsylvania Senate Bill 1310", *Journal of Finance,* 58: 197-230.
12. Core, J., R.Holthausen and D.Larcker (1999), "Corporate governance, chief executive officer compensation and firm performance", *Journal of Financial Economics,* 51: 371-406.
13. Dahya, J. and J.J.McConnell (2005), "Outside directors and corporate board decisions", *Journal of Corporate Finance,* 11: 37-60.
14. Demsetz, H and K.Lehn (1985), "The structure of corporate ownership: causes and consequences", *Journal of Political Economy,* 93: 1155-77.
15. Fama, E (1980), "Agency problem and theory of the firm", *Journal of Political Economy,* 88: 288-325.
16. Fama, E.F. and M.C.Jensen (1983), "Separation of ownership and control", *Journal of Law and Economics,* 26: 301-25.
17. Ferris, S.P., M.Jagannathan and A.C.Prichard (2003), "Too busy to mind the business? monitoring by directors with multiple board appointments", *Journal of Finance,* 58: 1087-1111.
18. Fich, E., and A.Shivdasani (2005), "Are busy boards effective monitors?", *Journal of Finance,* 61: 689-724.
19. Ghosh, S. (2006), "Does board characteristics affect corporate performance? Firm-level evidence for India", *Applied Economics Letters,* 13: 435-43.
20. Gilson, S. (1990), "Bankruptcy, boards, banks and shareholders: evidence on changes on corporate ownership and control when firms default", *Journal of Financial Economics,* 27: 355-87.
21. Goodstein, J., K.Gautam and W.Boeker (1994), "The effects of board size and diversity on strategic change", *Strategic Management Journal*, 7: 241-50.
22. Hermalin, B. and M.Weisbach (1991), "The effects of board composition and direct incentives on firm performance", *Financial Management*, 20: 101-112.
23. Hermalin, B. and M.Weisbach (2003), "Boards of directors as an endogenously determined institution: a survey of the economic literature", Federal Reserve Bank of New York, *Economic Policy Review*, April: 7-26.
24. Jensen, M.C. (1993), "The modern industrial revolution, exit and failure of internal control systems", *Journal of Finance,* 48: 831-80.
25. Jensen, M.C. and K. Murphy (1990), "Performance pay and top management incentives", *Journal of Political Economy,* 98: 225-64.
26. Jensen, M.C. and W.H. Meckling (1976), "Theory of the firm: managerial behavior, agency costs and ownership structure", *Journal of Financial Economics,* 3: 305-60.
27. Kaplan, S., and D.Reishus (1990), "Outside directorship and corporate performance", *Journal of Financial Economics,* 27: 107-38.
28. Khanna, T and K.Palepu (2000), "Is group affiliation profitable in emerging markets: an analysis of diversified Indian business groups?",. *Journal of Finance,* 55: 867-91.
29. Lipton, M., and J.Lorsch (1992), "A modest proposal to improve corporate governance", *Business Lawyer,* 48: 59-77.
30. Mace, M., (1986), *Directors: Myth and Reality*. Harvard University Press: Boston MA.
31. Mehta, M.M., (1955), *The Structure of Indian Industries*, Popular Book Depot: Mumbai.
32. Morck, R., A.Shleifer and R.Vishny (1988), "Management ownership and market valuation: an empirical analysis", *Journal of Financial Economics,* 31: 239-315.
33. Organization for Economic Cooperation and Development (2003), *White paper on corporate governance in Asia*. <www.oecd.org/dataoecd/4/12/2956774.pdf>
34. Shivdasani, A. (1993), "Board composition, ownership structure and hostile takeovers", *Journal of Accounting and Economics,* 16: 167-98.
35. Shivdasani, A., and D.Yermack (1999), "CEO involvement in the selection of new board members: an empirical analysis", *Journal of Finance,* 54: 1829-53.
36. Vafeas, N. (1999), "Board meeting frequency and firm performance', *Journal of Financial Economics,* 53:113-42.
37. Yermack, D. (1996), "A higher market valuation of companies with a small board of directors", *Journal of Financial Economics,* 39: 185-211.

Appendices

Table 1. Variables – definition and notation

Variable	Notation	Definition
Dependent		
Return on Asset	RoA	Operating profit/Total asset
Adjusted Q	Adj-Q	Number of shares outstanding at year-end* Closing share price at year-end *plus* book value of equity at year-end/Total asset
Control		
Log Asset	Size	Logarithm of total asset
Log Age	Age	Logarithm of number of years since incorporation of the firm
Leverage	Leverage	Total borrowing/total asset
Tangible asset	Tangible	Plant, property and equipment/total asset
Change in stock price	SSPI	Share price at end of period t *less* share price at end of period t-1/ share price at end of period t-1
Firm ownership		
Group	D_Group	Dummy=1, if a firm belongs to Indian business group, else zero
State	D_State	Dummy=1 if a firm is state-owned, else zero
Indian private	D_IPvt	Dummy=1, if a firm is Indian private, else zero
Foreign private	D_FPvt	Dummy=1, if a firm is foreign-owned, else zero
Board characteristics		
Board size	Board	Logarithm of total number of directors on the board of the firm
Board meeting	Board meet	Total number of board meetings held by the firm during the year
Independent	ID	Total number of independent directors on the board of the firm
Diligence	Diligence	Board meet/Number of board meetings attended by ID
Busy 1	Busy 1	Total number of other directorships/Board size
Busy 2	Busy 2	Total number of outside directorship held by ID/ID
Busy 3	Busy 3	Median directorships held by ID of the firm
Instrumental		
Euro	D_Euro	Dummy variable=1 if a firm has made an Euro offering during the previous three years, else zero
Preference	D_Pref	Dummy variable=1 if a firm has issued preference shares during the previous three years, else zero
Promoter	Prom	Equity holding by the firm's promoter(s)
Dividend outlays	Div	Dividend paid/cash flows, where cash flows in period t is the sum of net profit at t-1 *plus* depreciation at t-1

Table 2. Firm-specific variables – mean and standard deviation

Industry	No of firms	RoA	MBVR	AdjQ	SIZE	AGE	LEV	Tangible	SSPI
		Dependent variables			Control variables				
Automobiles	15	0.08	139.32	1.35	2.51	1.41	0.25	0.65	0.22
		(0.06)	(8.81)	(0.77)	(0.57)	(0.31)	(0.16)	(0.25)	(0.71)
Cement	11	0.08	2.41	1.15	2.81	1.53	0.45	0.86	1.87
		(0.19)	(3.26)	(0.45)	(0.48)	(0.30)	(0.21)	(0.33)	(2.89)
Chemicals	39	0.06	39.32	1.54	2.64	1.44	0.35	0.56	0.52
		(0.10)	(18.47)	(1.21)	(0.52)	(0.29)	(0.48)	(0.32)	(1.02)
Diversified	12	0.06	2.41	0.94	2.89	1.62	0.37	0.62	2.02
		(0.12)	(2.21)	(0.32)	(0.40)	(0.31)	(0.19)	(0.29)	(3.21)
Food & beverages	22	0.09	31.99	1.10	2.46	1.39	0.38	0.57	1.32
		(0.12)	(17.15)	(0.79)	(0.53)	(0.32)	(0.46)	(0.29)	(1.60)
Electrical &	24	0.03	136.09	1.31	2.37	1.46	0.34	0.48	0.94
machinery equipment		(0.13)	(50.79)	(1.27)	(0.51)	(0.22)	(0.49)	(0.36)	(0.95)
Electronics	12	-0.005	30.89	1.18	2.28	1.36	0.32	0.48	0.96
		(0.18)	(82.20)	(0.87)	(0.41)	(0.24)	(0.31)	(0.41)	(2.83)
Metal & metal products	19	-0.009	11.12	1.08	2.80	1.34	0.48	0.67	2.58
		(0.49)	(61.99)	(0.69)	(0.78)	(0.31)	(0.46)	(0.53)	(6.72)
Plastic & rubber products	13	0.01	12.87	1.14	2.33	1.37	0.57	0.92	0.56
		(0.18)	(56.72)	(1.08)	(0.67)	(0.22)	(1.07)	(0.76)	(0.72)
Textiles	24	0.02	1.96	0.89	2.45	1.36	0.49	0.79	0.83
		(0.09)	(7.43)	(0.73)	(0.42)	(0.29)	(0.46)	(0.38)	(1.28)
Others	27	0.03	80.38	1.05	2.51	1.39	0.31	0.57	0.66
		(0.19)	(68.39)	(0.98)	(0.67)	(0.32)	(0.27)	(0.37)	(1.08)
All firms	219	0.04	53.20	1.18	2.54	1.41	0.37	0.63	0.93
		(0.19)	(45.76)	(0.96)	(0.60)	(0.30)	(0.45)	(0.41)	(2.37)

Standard deviation in brackets

Table 3. Board characteristics of firm-specific variables – mean and standard deviation

Industry	Board Size	No. of Non-Executive	Board meetings	Diligence	Busy 1	Busy 2	Busy 3
	Board characteristics			Board functionalities			
Automobiles	9.04 (2.53)	4.67 (1.79)	6.13 (2.09)	1.59 (0.59)	0.39 (0.16)	3.65 (2.59)	0.38 (0.50)
Cement	9.63 (2.77)	6.13 (2.10)	5.88 (1.46)	1.74 (0.70)	0.47 (0.15)	3.67 (1.69)	0.63 (0.52)
Chemicals	9.61 (2.51)	5.02 (1.46)	6.44 (2.18)	1.65 (0.65)	0.38 (0.11)	4.09 (2.92)	0.42 (0.50)
Diversified	10.39 (1.89)	6.08 (1.80)	5.92 (1.66)	1.88 (0.61)	0.39 (0.12)	3.70 (2.18)	0.54 (0.52)
Food and beverages	8.39 (0.32)	4.67 (0.48)	6.50 (0.47)	1.44 (21.60)	0.46 (0.19)	3.23 (16.80)	0.22 (0.23)
Electrical and machinery equipment	8.77 (1.83)	4.69 (1.70)	5.31 (1.32)	1.73 (0.54)	0.37 (0.09)	4.56 (3.45)	0.46 (0.52)
Electronics	6.86 (3.34)	3.71 (2.69)	6.71 (1.98)	1.03 (0.33)	0.37 (0.15)	2.66 (1.50)	0.29 (0.49)
Metal and metal products	9.32 (2.03)	4.42 (1.77)	6.89 (2.47)	1.51 (0.60)	0.36 (0.13)	3.75 (3.87)	0.37 (0.49)
Plastic and rubber products	8.71 (2.16)	4.71 (0.99)	5.08 (1.32)	1.76 (0.44)	0.38 (0.06)	6.37 (4.02)	0.71 (0.47)
Textiles	9.20 (2.39)	5.12 (1.72)	5.80 (1.76)	1.72 (0.65)	0.42 (0.08)	4.59 (3.17)	0.56 (0.51)
Others	8.53 (2.51)	4.69 (1.59)	6.27 (2.69)	1.47 (0.53)	0.39 (0.16)	4.66 (3.07)	0.56 (0.49)
All firms	9.01 (2.46)	4.87 (1.68)	6.17 (2.17)	1.59 (0.60)	0.40 (0.13)	4.22 (3.03)	0.47 (0.50)

Standard deviation in brackets

Table 4. Estimation Result for the Management Board

	RoA	Adj-Q	RoA	Adj-Q	RoA	Adj-Q	RoA	Adj-Q	RoA	Adj-Q	RoA	Adj-Q
Board variables	Panel A		Panel B		Panel C		Panel D		Panel E		Panel F	
Board	-0.638 (0.259)***	-0.970 (0.459)***	-0.727 (0.343)***	-1.162 (0.631)*	-0.311 (0.159)*	-0.749 (0.452)*	-0.440 (0.222)**	-0.507 (0.289)*	-0.465 (0.513)	-0.493 (0.622)	-0.263 (0.256)	-0.473 (0.151)***
Diligence	0.091 (0.039)**	1.571 (0.472)**										
Busy 1			-0.021 (0.319)	2.255 (2.268)								
Busy 2					0.034 (0.014)***	0.669 (0.283)***						
Busy 3							0.254 (0.116)**	0.542 (0.237)***				
Diligence * Busy 2									0.009 (0.004)**	0.195 (0.090)**		
Diligence * Busy 3											0.118 (0.050)**	0.696 (0.282)***
Control variables												
Size	0.006 (0.012)	0.126 (0.226)	0.019 (0.010)*	0.375 (0.137)***	-0.032 (0.023)	0.690 (0.403)*	-0.030 (0.028)	-0.774 (0.569)	-0.015 (0.020)	-0.375 (0.308)	-0.029 (0.026)	0.722 (0.394)*
Age	0.021 (0.033)	0.459 (0.461)	-0.016 (0.030)	-0.275 (0.481)	-0.047 (0.041)	-0.805 (0.694)	-0.074 (0.052)	-0.438 (0.261)	-0.021 (0.032)	-0.292 (0.483)	-0.046 (0.042)	-0.824 (0.769)
Leverage	0.219	-0.507	-0.230	-0.807	0.137	-0.147	-0.098	0.221	0.185	0.238	0.117	0.716

	(0.047	(0.549	(0.049	(0.584	(0.058	(0.108	(0.077	(0.116	(0.048	(0.587	(0.067	(0.395
	)***	)	)	)	)**	)	)	)*	)***	)	)*	)*
Tangible	0.050	-0.271	0.067	-0.060	0.057	-0.179	0.002	-0.391	0.059	-0.145	0.004	0.312
	(0.039	(0.296	(0.035	(0.217	(0.043	(0.484	(0.058	(0.918	(0.028	(0.314	(0.055	(0.184
	)	)	)**	)	)	)	)	)	)***	)	)	)*
SSPI	0.006	0.020	0.004	0.009	0.002	0.062	0.006	0.029	0.003	-0.028	0.006	0.010
	(0.003	(0.009	(0.002	(0.026	(0.004	(0.033	(0.003	(0.013	(0.004	(0.040	(0.003	(0.067
	)**	)***	)**	)	)	)*	)*	)***	)	)	)**	)
Constant	-0.038	-0.778	0.028	-0.565	0.125	2.295	0.197	4.084	0.103	1.902	0.197	3.948
	(0.011	(0.289	(0.012	(0.211	(0.059	(1.028	(0.104	(2.495	(0.046	(0.559	(0.091	(2.117
	)***	)***	)***	)***	)**	)**	)*	)*	)***	)***	)***	)*
Ownership dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of firms	219	219	219	219	219	219	219	219	219	219	219	219
Adjusted R^2	0.098	0.102	0.289	0.054	0.201	0.123	0.187	0.116	0.149	0.086	0.133	0.079

Robust standard errors in brackets
*, ** and *** indicate statistical significance at 1, 5 and 10%, respectively.