Are Busy Boards Effective Monitors?

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Eliezer M. Fich
Drexel University, Philadelphia

Anil Shivdasani
University of North Carolina

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Abstract

We present evidence that busy outside directors are associated with weak corporate governance based on a sample of U.S. industrial firms from 1989 to 1995. When a majority of outside directors serve on three or more boards, firms exhibit lower market-to-book ratios as well as weaker operating profitability. Appointments of busy outside directors appear unrelated to company performance, but such directors are more likely to depart boards following poor firm performance. When a majority of outside directors are busy, the sensitivity of CEO turnover to performance is significantly lower than when a majority of outside directors are not busy. Investors applaud departures of busy outside directors, and this effect is more pronounced for firms where the departure results in the majority of the remaining outside directors being not busy. When directors become busy as a result of acquiring an additional board seat, firms where they serve as directors experience negative abnormal returns.

Keywords: Directorships, Board of directors, Corporate governance, Firm performance

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Eliezer M. Fich
LeBow College of Business
Drexel University
Philadelphia, PA 19104
phone: (215) 895-2304
e-mail: efich@drexel.edu

Anil Shivdasani
Kenan-Flagler Business School
University of North Carolina
Chapel Hill, NC 27599
phone: (919) 962-6124
e-mail: Anil. Shivdasani@unc.edu

On December 28, 2000, *the Wall Street Journal* reported that Elaine L. Chao would be a nominee for President-elect George W. Bush's cabinet.[1] Only a few days prior to Ms. Chao's confirmation as labor secretary, another *Journal* article described a growing trend among firms to limit the number of board seats their directors sit on because serving on too many boards may be detrimental to the quality of corporate governance. Coincidentally, this article also featured Ms. Chao as one of the 10 busiest directors among large U.S. corporations.[2] As expected, upon her cabinet confirmation, Ms. Chao resigned her directorships at C.R. Bard, Clorox, Columbia/HCA Healthcare, Dole Foods, Northwest Airlines, and Protective Life.

Ms. Chao's cabinet appointment permits a case-study experiment to test the increasingly popular notion among shareholder activists, institutional investors, regulators, and many corporations, that serving on several boards causes directors to be busy, rendering them ineffective monitors of corporate management. Using standard event-study methodology, we find that Ms. Chao's impending departure from the six boards where she served on as an outside director was viewed enthusiastically by investors. Panel A of Table I shows that the mean two-day *CAR is 3*.8 percent (*t*-statistic = 2.2) and the median *CAR* is 3.05 percent (Wilcoxon $Z = 1.8$). All six firms in the study elicit positive investor reactions at announcement.[3]

While illustrative, this case-study evidence is subject to a number of caveats. Investors might expect the six firms whose boards she vacated to benefit from her new political influence. Even if the stock-price effect reflects the departure of a busy director, it is likely that its magnitude is exaggerated due to her status as one of America's busiest directors. Nonetheless, the evidence is suggestive of a negative impact of busy directors on firm value and whether this effect holds in a systematic fashion across a broad sample of firms is the focus of this paper.

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1. Cummings, J. and Jaffe, G. 2000. A floated name for cabinet lands with a thud. *The Wall Street Journal.* Eastern Edition, December 28. Page A.12.

2 . Lublin, J.S. 2001. Multiple seats of power – Companies are cracking down on number of directorships board members can hold. *The Wall Street Journal*, January 23. Page. B.1.

3. We check for whether other news events might explain the observed abnormal returns. However, a Lexis-Nexis search around the announcement date fails to uncover release of other significant corporate news.

There is a growing literature that shows that serving on multiple boards can be a source of valuable experience and reputational benefits for outside directors. As Fama and Jensen (1983) note, reputational effects in the market for directorships can be an important source of incentives for outside directors. However, there is comparatively little evidence on the costs associated with serving on multiple boards and the prior research on this topic is inconclusive. Beasley (1996) reports that the probability of committing accounting fraud is positively related to the average number of directorships held by outside directors. Core, Holthausen, and Larcker (1999) report that busy directors set excessively high levels of CEO compensation, which in turn, leads to poor firm performance. In contrast, Ferris, Jagannathan, and Pritchard (2003) find no relation between the average number of directorships held by outside directors and the firm's market-to-book ratio.

We extend this literature along several dimensions. We show that inferences on whether multiple board seats held by directors affect firm performance are sensitive to how busy directors are identified. Specifically, we show that firms where a majority of outside directors hold three or more board seats have significantly lower market-to-book ratios than firms where a majority of outside directors hold fewer than three board seats. Our findings differ from those reported by Ferris et al. (2003) who claim that busy boards are equally effective monitors than non-busy boards. We argue that methodological choices and the econometric specification of their tests lead to low statistical power for detecting the relation between performance and busy outside directors that we document.

The negative relation between market-to-book ratios and busy outside directors is robust to a wide range of sensitivity tests. We conduct extensive tests to examine the potential endogeneity of busy outside directors with respect to firm performance. Using data on director appointments and departures, we are unable to detect any pattern indicating that poor firm performance influences board composition in a manner that cause a board's outside directors to become more busy.

We are sensitive to the concern that the market-to-book ratio tests are potentially misspecified since this ratio is also often used as a measure of growth opportunities (Smith and Watts, 1992) and as a systematic

risk factor (Fama and French, 1992). Therefore, we conduct several additional tests that are relatively immune to this specification issue. Using panel-data regressions, we also find that an inverse relation holds between several accounting-based measures of operating performance and a majority of busy outside directors on the board.

Additional evidence that boards dominated by busy outside directors contribute to weaker corporate governance comes from an analysis of forced CEO turnover in our sample. We show that boards where the majority of outside directors hold three or more directorships are less likely to remove a CEO for poor performance. We confirm results of prior research that finds that independent boards are more likely to remove CEOs for poor performance than non-independent boards. We augment these findings by showing that this pattern holds largely when a majority of outside directors on the board are not deemed to be busy. Our tests reveal that forced CEO turnover is insensitive to firm performance when the majority of outside directors are busy. Therefore, the extent to which outside directors are busy appears to be an important determinant of the effectiveness of outside-dominated boards in corporate governance.

Another piece of evidence comes from analysis of announcements of outside director departures in our broader sample. Like the case-study evidence for Ms. Chao, abnormal returns related to the announcement of departure of busy outside directors are significantly positive. In fact, these returns are significantly higher than the abnormal returns for departures of non-busy outside directors. In addition, results also indicate that departures of busy outside directors are viewed particularly favorably when a majority of the remaining outside directors on the board is not busy. Finally, we also examine how stock prices respond when an incumbent director acquires an additional board seat. We find that when directors become busy as a result of obtaining a new board seat, stock prices tend to drop for the firms where they are incumbent directors. Moreover, we also find that the stock price drop tends to be larger for firms where the appointment causes the majority of the board's outside directors to be reclassified as busy.

Collectively, our results indicate that when a majority of outside directors are busy, firm performance suffers. However, we stop short of endorsing the recent efforts of institutional investors and corporate

governance policy advocates in curbing the directorships held by outside directors for at least two reasons. First, there is substantial evidence that outside directorships tend to be correlated with a director's reputational capital and that the market for outside directorships provides an important source of incentives for outside directors to serve as monitors. Therefore, attempts to limit the number of outside directorships may reduce the strength of the incentives for some outside directors to engage in effective corporate governance. Second, our results relate primarily to the costs faced by firms that appoint busy outside directors, but we are silent on the benefits that appointing companies might obtain when their executives join other boards as outside directors. Recent work by Perry and Peyer (2004) shows that sending firms benefit when their executives receive additional directorships if measures of agency costs in these firms are relatively low. While our paper points to the potential benefits of limiting the number of board seats held by outside directors, policy recommendations on this issue should also incorporate the expected costs of curtailed director incentives and those borne by sending firms.

Our paper proceeds as follows. Section I reviews the relevant literature and formulates our research questions. Section II describes our sample. Section III studies whether busy boards affect firm performance. Section IV details our empirical tests on appointments and departures of outside directors. Section V investigates whether busy boards play a role during events of CEO turnover. Section VI analyzes investors' reactions related to the departure of busy outside directors and also provides evidence on the impact of additional board seats for firms where the director serves as an incumbent outside director. Section VII provides our conclusions.

I. Prior literature on directorships

Fama (1980) and Fama and Jensen (1983) argue that the market for outside directorships serves as important source of incentives for outside directors to develop reputations as monitoring specialists. Mace (1996) suggests that outside directorships are perceived to be valuable because they provide executives with prestige, visibility, and commercial contacts.

Support for the reputational capital view of directorships comes from several studies that show that the number of boards that outside directors sit on is tied to the performance of the firms where these directors are incumbents, either as CEOs or outside directors. This pattern is documented for financially distressed companies (Gilson, 1990), for firms that cut dividends (Kaplan and Reishus, 1990) and opt out of stringent state anti-takeover provisions (Coles and Hoi, 2003), for companies that fire their CEOs (Farrell and Whidbee, 2000), for firms that are sold (Harford, 2003), for CEOs following retirement (Brickley, Linck, and Coles, 1999), as well as for broad samples of firms (Yermack, 2004). Accordingly, several studies have used the number of board seats held by an outside director as a proxy for their reputation in the external labor market (Shivdasani (1993), Vafeas (1999), and Brown and Maloney (1993)).

While the number of directorships appears to be closely linked with to directors' reputational capital, other studies suggest that too many directorships may lower the effectiveness of outside directors as corporate monitors (see, for example, Core, Holthausen, and Larker (1999), Shivdasani and Yermack (1999)). Core et al. (1999) find that busy outside directors provide CEOs with excessive compensation packages, which in turn leads to weaker firm performance. Consistent with such a view, the National Association of Corporate Directors and the Council for Institutional Investors have adopted resolutions calling for limits on the number of directorships held by directors of publicly traded companies.[4]

Ferris et al. (2003) test whether multiple board appointments by directors harm firm performance. They fail to detect any evidence of a systematic relation between the market-to-book ratio and the average number of board seats held by directors; they conclude that proposals calling for limits on multiple board appointments are misguided. However, several aspects of their research design prevent them from detecting the relation between multiple directorships and firm performance that we document.

First, the market-to-book ratio can measure both the value-added by management as well as the value of intangible assets such as future investment opportunities. Ferris et al. (2003) estimate cross-sectional regressions

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4. See the Report of the National Association of Corporate Directors Blue Ribbon Commission on Director Professionalism (1996), and the Core Policies, Positions and Explanatory Notes from the Council of Institutional Investors (1998).

of the market-to-book ratio on director attributes but their regressions do not control for growth opportunities, which confounds the interpretation of their results.

Second, unlike Ferris et al. (2003) who estimate a cross-sectional model using 1995 data, we analyze panel data using fixed-effects regressions. The fixed-effects approach is robust to the presence of omitted firm-specific variables that would lead to biased estimates in an ordinary least squares framework. Given the high correlation between the market-to-book ratio and corporate governance variables with numerous other company attributes, we view the fixed-effects framework as offering significantly more reliable estimates than ordinary least squares regressions. [5]

A third distinction between our paper and Ferris et al. (2003) is in the identification of busy boards. They employ four measures to capture busy boards – three of these focus on directorships held by both inside and outside directors, while only one relates specifically to outside directors. For measuring busy outside directors, they calculate the average number of board seats held by outside directors. Unlike Ferris et al. (2003), our variables focus exclusively on whether outside directors are busy under the premise that inside and gray directors sit on the board for reasons other than the monitoring of management. Further, as we describe below, there is wide dispersion in the number of board seats held by outside directors making the average number of directorships a noisy measure of whether outside directors as a group are busy. We therefore employ an alternative metric that treats boards to be busy if a majority of the outside directors sit on three or more boards.

Our paper is complementary to recent work by Perry and Peyer (2004) who examine announcement effects of outside director appointments for sending firms. They find that when executives join other boards as outside directors, the announcement return for the sending firm is positive when the executive has high stock ownership or the firm has an independent board. They argue that when executives have strong incentives to

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5. Ferris et al. (2003) also use the average return on assets (ROA) over 1993 to 1995 as a measure of performance. As with their market-to-book ratio regressions, the ROA specifications do not control for firm-specific effects.

enhance shareholder value, accumulation of board seats by these executives has a positive impact on firm value.

In sum, there is substantial evidence supporting the view that outside directorships serve as a measure of a director's reputational capital. However, there is disagreement on whether sitting on numerous boards detracts from the ability of outside directors to perform as effective monitors. Our tests are designed to address the question of whether directors that serve on numerous boards tend to contribute to weaker corporate governance at these firms.

II. Sample and data

A. Sample selection

Our sample consists of firms that appear in the 1992 *Forbes* 500 lists of largest corporations based on assets, sales, market capitalization, or net income during the seven-year period from 1989 to 1995. We impose three screening criteria. First, we require each company in the sample to have at least two consecutive years of financial data available in CRSP and COMPUSTAT. Second, relevant SEC filings have to be available on the Edgar data retrieval system. Third, as is typical for other studies of this type, utility and financial companies are excluded from the sample since regulatory effects may lead to a more limited role for their boards of directors. These criteria yield a final sample of 3,366 observations for 508 industrial companies across the seven years.

For each firm, we collect data on corporate governance variables from proxy statements filed for each company during the sample period. Each director is classified according to his/her principal occupation. Full-time employees of the firm are designated as insiders. Directors associated with the company, former employees, those with existing family or commercial ties with the firm other than their directorship, or those with interlocking directorships with the CEO are designated as "gray." Directors that do not fit the description for inside or gray are classified as outside directors. We categorize boards as being interlocked if the CEO sits on the board of an outside director.

Descriptive statistics for key variables for the 508 companies are presented in Panel A of Table II. On average, outside directors hold 3.11 directorships (the median is 2.89). We count directorships held in publicly-traded firms but do not consider directorships held in non-public firms, not-for-profit and charitable organizations, trusts, and associations.

We consider outside directors to be busy if they serve on three or more boards. Although the three-directorship criterion is admittedly somewhat arbitrary, we choose this cutoff for several reasons. First, the mean and median number of directorships in the sample is close to three, resulting in a roughly even split between busy and non-busy outside directors. Second, it reflects the recommendation by the Council for Institutional Investors that directors should sit on no more than two boards. Finally, our definition is consistent with prior work by Core et al (1999) and Ferris et al (2003) who also use the three-directorship benchmark for classifying executives as busy.

Using this definition, 52% of the outside directors in the sample are classified as busy. Perry and Peyer (2004) report a comparable frequency of busy outside directors in their sample. To measure the prevalence of busy outside directors on the board, we construct a (0,1) indicator that takes the value of "one" if 50 percent or more of the board's outside directors are busy. Throughout the paper we refer to this variable as the "busy board" indicator. Panel A shows that 21% of the firms in the sample have "busy boards."

A typical board has approximately 12 directors, 55.33 percent of whom are outsiders. The average board meets just under eight times a year. These statistics are comparable to other recent studies such as Hallock (1997), Perry (1999), and Vafeas (1999). In Table II, we also present the correlation of certain firm characteristics with the "busy board" indicator. This variable exhibits a positive correlation with the average directorships held by outside directors, the presence of a board interlock, director fees, the frequency of board meetings, firm age, operating profit margin, and total sales. We observe a negative correlation between "busy board" and the percentage of inside and gray directors, ownership by insiders, and CEOs from founding families.

We track annual appointments of outside directors to the boards of the 508 firms during the seven-year period. Panel B of Table II presents key characteristics for the 2,314 individuals who are appointed as independent directors to the boards of these companies. A typical outsider is in her mid 50s and owns very little equity in the other boards she serves on. Most of the appointees (52 percent) replace another independent director. These characteristics are comparable to those reported by Shivdasani and Yermack (1999) who study director appointments between 1994 and 1996. About 20 percent of all outside directors are current *Forbes* 500 executives, and almost 14 percent have no prior board experience. This last statistic is comparable to that reported by Ferris et al. (2003) who study director data for firms during the 1995 proxy season.

B. Average directorships vs. busy boards

Understanding what constitutes a "busy board" is a central issue underlying our tests. We consider boards to be busy if 50% or more of the outside directors hold 3 or more board seats instead of using the average number of directorships by outside directors to identify busy boards. At issue is the extreme skewness in the distribution of board seats held by outside directors. An example is helpful in illustrating this measurement issue.

Panels A through D of Table III report board appointments held by outside directors at Host Marriott, Gannett Newspapers, The Clorox Company, and MGM Grand, Inc as disclosed in their 1993 proxy statements. While the ratio of total directorships to outside directors for Host Marriott and Gannett Newspapers is similar at 3.5 and 3.4, respectively, we consider Host Marriott to have a "busy board", but not Gannett Newspapers. Conversely, a comparison of MGM Grand and Clorox demonstrates that a high average number of directorships does not necessarily indicate that a majority of outside directors are busy. The average ratio of directorships by outside directors is 3.66 for MGM Grand and only 2.66 for Clorox. However, 50% of the outside directors at Clorox are busy as compared to only 33% at MGM.

Panel E of Table III shows that a one-to-one correspondence between the average number of directorships and "busy boards" also fails to hold in the full sample. We divide the sample into 4 groups based on the percentage of outside directors that are classified as busy. When more than 75% of outside directors are busy, the average number of directorships per outside director is 3.35. However, when only 25% to 50% of outside directors are busy, the average number of directorships held by outside directors is 3.41. Our measurement treats boards in the first group as busy, while Ferris et al. (2003) would consider firms in the second group to have busier boards. As we illustrate later, our measurement appears to illuminate a stronger link between busy boards and firm performance than using the average number of board seats variable.

III. Busy boards and firm performance

Our first set of tests involves panel-data estimates relating the market-to-book ratio to "busy boards" and other corporate governance and financial attributes. Because the market-to-book ratio also proxies for growth opportunities, we also estimate the relation between firm performance and busy boards using several measures of accounting performance. We report the results of several sensitivity checks to test the robustness of our findings.

A. Market-to-book ratio tests

We estimate firm-fixed effects regressions using the market-to-book ratio as the dependent variable. We calculate the market-to-book ratio as the market value of the firm's equity at the end of the year plus the difference between the book value of the firm's assets and the book value of the firm's equity at the end of the year, divided by the book value of the firm's assets at the end of the year. This calculation closely follows that of Smith and Watts (1992). The regressions control for corporate governance and financial characteristics likely to affect firm performance. Gilson (1990) finds that during periods of financial distress, firms reduce board size, and Yermack (1996) documents a negative and significant association between company valuation

and board size. We include the log of board size in our tests. We control for firm size using the natural log of sales. Board composition is controlled for scaling the number of outside directors by board size. We also control for the percentage of the firm's common shares beneficially owned by company insiders because several studies have linked share ownership with factors that influence firm value. As Vafeas (1999) does, we include the natural log of meetings and the number of board committees as independent variables in the estimation. We also control for the presence of interlocking directorships between outside directors and the CEO using an indicator variable that takes the value of one to denote an interlocked board. Our regressions include the ratio of depreciation expenditure to sales as a measure of the firms' investment opportunity set (tests using alternative measures are described later) and also control for firm age. Throughout, the fixed-effects specification is employed to control for unobservable attributes such as company's history, culture, and product mix that potentially affect firm performance.

The results of the multivariate models are reported in Table IV. Model (1) shows that the coefficient for the "busy board" indicator is negative and statistically significant at the 1% level. In model (2), we use the percentage of outside directors that are busy and find a negative and significant coefficient on this variable as well. Therefore, both specifications indicate a negative and statistically significant relation between the presence of busy outside directors and the market-to-book ratio. Our estimates suggest that the impact of busy outside directors on firm performance is economically non-trivial. The coefficient estimate in model (1) indicates that a "busy board" reduces the market-to-book ratio by about 0.04.

We examine if the marginal impact of a busy outside director depends on whether or not a majority of the outside directors are busy. Model (3) includes an interaction term between the percentage of busy outside directors and the "busy board" indicator variable. The interaction term is negative and significant at the 6% level, indicating that, when a majority of outside directors are busy, the market-to-book ratio has a stronger negative association with the percentage of busy outside directors. This suggests that reducing the fraction of busy directors for boards where a majority of outside directors are busy is likely to yield more meaningful valuation improvements.

Coefficient estimates for the control variables are in line with those reported by other studies. We obtain an inverse and statistically significant association between board size and firm performance (Yermack, 1996). The number of business segments is negatively related to performance (Berger and Ofek, 1995), while ownership by officers and directors display positive coefficients (Yermack, 1996). As in Fich and Shivdasani (2003), we find that firm size is positively associated with market-to-book ratios. Market-to-book ratios are also negatively related to firm age and to the presence of a board interlock, though the latter effect is significant at the 10% level in some specifications.

Using the fixed-effects framework, we are able to replicate the cross-sectional results of Ferris et al. (2003) in our sample. Ferris et al. (2003) measure how busy directors are by using the average numbers of directorships per director and directorships per outside director. Models (4) and (5) show that neither of these two variables display a significant association with the market-to-book ratio, similar to the results obtained by Ferris et al. (2003). The contrast between these results and those shown in models (1) – (3) suggest that inferences on the effects of busy boards are sensitive to how the presence of busy directors is measured.

B. Operating performance tests

The market-to-book ratio is also often used as a measure of growth opportunities. Despite our controls for investment opportunities in the regressions, and additional robustness tests described in Section IV, we are concerned about the possible impact growth opportunities have on our coefficient estimates. To address this issue, we estimate the impact of busy boards on accounting measures of current performance, since these measures are less likely to be mechanically driven by growth opportunities. The fixed-effects regressions in Table V replace the market-to-book ratio with three different measures of operating performance.

Models (1) and (2) of Table V use the return on assets (ROA),[6] as the dependent variable. These regressions produce results that are consistent with those in Table IV. For example, in model (1), the coefficient for the "busy board" indicator variable is negative and statistically significant (-0.0024, *p*-value = 0.00). This estimate indicates that ROA is about 0.24 percentage points lower in firms with busy boards. Therefore, while the effect of a busy board on ROA is statistically significant, the economic magnitude of the relation is not particularly large.

We also measure firm performance using two additional financial ratios: sales over assets (asset turnover ratio), and the return on sales, computed as operating income over net sales. We estimate fixed-effects regressions using these ratios as dependent variables, and present them as models (3) and (4) of Table V. The busy board indicator yields a negative and significant coefficient of -0.033 with a *p*-value = 0.02 in the sales over assets regression, and -0.0027 coefficient with a *p*-value = 0.00 in the return on sales regression. These results are consistent with our earlier findings and suggest that companies with busy boards tend to display weaker operating profitability than firms where boards are not busy.

C. Robustness checks

C.1. Alternative hypothesis

While the preceding results support the view that busy outside directors are associated with lower firm performance, the findings could be consistent with other explanations. Gilson (1990) reports that distressed firms revamp their boards by making them more independent and by appointing turnaround specialists. Vafeas (1999) shows a positive association between the average directorships held by outside directors and meeting activity and Jensen (1993) indicates that boards maintain an unusually high level of meeting activity when they face declining performance. It is possible that busy outside directors tend to be

6. We calculate ROA as operating income before depreciation (Compustat item 13) plus the decrease in receivables (Compustat item 2), the decrease in inventory (Compustat item 3), the increase in current liabilities (Compustat item 72) and the decrease in other current assets (Compustat item 68). We scale this measure by the average of beginning- and ending-year book value of total assets (Compustat item 6).

appointed to boards of poorly performing companies if these directors are viewed to be helpful in formulating turnaround strategies. To control for this potential endogeneity, we re-estimate our regressions using one and two year lagged values of the "busy board" indicator and other corporate governance variables. These tests continue to yield an inverse and statistically significant association between firm performance and our busy board measures. We describe more detailed tests of this potential endogeneity in Section IV.

C.2. Size and performance proxies

We repeat the analyses presented in Table IV, using different proxies for firm size, replacing the natural log of sales by the natural log of capital, and by the natural log of assets.[7] These tests also yield an inverse association between "busy board" and performance. Our result is also robust to different constructions of the dependent variable. Instead of the Smith and Watts (1992) market-to-book ratio calculation, we use the Tobin's Q calculation of Perfect and Wiles (1994), and the Q calculation in Shin and Stulz (2000). These different constructions of the dependent variable do not qualitatively alter the results.

C.3. Characterizing busy outsiders

We use a less expansive definition of our key independent variable based on a slightly different procedure to identify busy outside directors. Core et al. (1999), differentiate between outside directors that are currently employed and those that are retired. In their taxonomy, retired outside directors are considered to be busy if they serve on six or more publicly traded boards. We follow their definition and consider employed outside directors as busy when they hold three or more directorships and retired outside directors as busy when they hold six or more directorships. A board is defined as busy when 50 percent or more of its outside directors are individually classified as busy. We construct a (0,1) indicator under this criterion and perform

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7. Total capital adds the market value of the firm's equity, book value, long-term debt, and an estimated market value of preferred stock. We calculate the market value of preferred stock by dividing preferred dividends over the prevailing yield on Moody's index of high-grade industrial preferred stocks.

regressions similar to those in Table IV. The coefficient estimate for a (0,1) independent variable under this taxonomy is -0.0401 (p-value = 0.06). This estimate is slightly smaller in magnitude than that reported in Table IV, but yields qualitatively similar inferences.

C.4. Investment opportunities

Notwithstanding the results in Table V, a concern with the regressions presented in Table IV is whether we appropriately control for the role of the firm's investment opportunity set. As an alternative to using depreciation to control for investment opportunities, we use the ratio of capital expenditures to sales and obtain results similar to those reported. We also recognize the possibility that that in the presence of financial constraints, growth opportunities may not be fully captured by capital expenditures. Following Smith and Watts (1992) and Yermack (1996), we use the ratio of R&D to sales, the earnings-to-price ratio, and the variance of common stock returns as other control variables. The use of these different proxies for investment opportunities does not alter our results. Our proxies for busy outside directors continue to yield a negative and significant association with the market-to-book ratio in all specifications.

D. A sum-up

Results presented in this section indicate that firm performance, measured using both the market-to-book ratio as well as several measures of operating profitability is inversely related to the presence of a majority of outside directors that serve on three or more boards. The inverse association that we document holds for alternative constructs of the market-to-book ratio and for several different controls for investment opportunities. However, like Ferris et al. (2003), we are unable to uncover such a relation using the average number of board seats held by all directors or by outside directors.

IV. Appointments and departures of busy outside directors

Results of Section III show a negative association between "busy boards" and firm performance. In this section, we turn to the potential endogeneity of busy outside directors with respect to performance. We explore whether firms tend to appoint busy directors when performance suffers and/or whether non-busy directors are more likely to depart the board when firms perform well. We therefore conduct tests on the number of board seats held by directors and appointments of new outside directors. We also examine the determinants of outside director departures. Our primary focus in these tests is whether patterns in appointments and departures of outside directors explain the negative relation between firm performance and busy boards described in Section III.

There are several reasons why appointments of directors with multiple board seats might be linked to company performance. It is possible that poorly performing firms are more likely to seek out new outside directors that sit on several boards because they have valuable reputations and experience that can help reverse poor performance. An alternative possibility is that poorly performing firms may find it difficult to attract directors that have high reputations and significant opportunities to serve on other boards. [8]

Similarly, reputational concerns may also affect how firm performance influences departures of outside directors. Brown and Maloney (1999) suggest that directors with significant reputation might choose to protect it by leaving boards of companies that perform poorly. Alternatively, if poor firm performance causes CEOs to favor busy directors that might be weaker monitors, they may choose to reappoint outside directors with multiple board seats, while denying reappointment to those serving on few boards. To understand how firm performance affects changes in board composition, we study board appointments and departures within our sample.

As described in Section II, our sample firms appointed 2,314 outside directors during 1989 to 1995. We track each of these outside directors until the year 2000 to determine which of these directors remain on

8. This potential endogeneity, however, works against uncovering the negative relation between firm performance and busy outside directors that we document.

the board and which subsequently departed the board. For each outside director appointed, we review both the annual report as well as the firm's proxy statements to establish whether the appointed director remains on the board. We search the *Wall Street Journal Index* and *Lexis/Nexis* when we are able to identify a departure, and read newspaper stories and company press releases in order to ascertain the reason for the departure. We identify a total of 1,676 director departures among our sample. Of these, we are able to identify 360 departures as being voluntary. We classify a departure to be voluntary if the reason given for the director's departure is either to pursue other interests or to take a position elsewhere. We also record 490 departures related to board term limits, normal retirements, health problems, or death. In 826 instances, we are unable to precisely establish the reason for the departure. Of the 2,314 appointees, 638 continue serving as directors until the end of year 2000.

We conduct four tests using this sample of outside director appointments and departures. First, we estimate a maximum likelihood model of the number of board seats held by appointees. Second, we examine the factors that affect the likelihood that a busy director is appointed to the board. Third, we estimate a hazard model to understand the determinants of outside director departures. Our fourth test examines the probability that a busy director departs the board. In all tests, our primary focus is to understand whether firm performance has a significant impact on the types of outside directors that join and leave the board.

A. Multivariate analysis of the determinants of directorships

We estimate a Poisson maximum likelihood regression to investigate the determinants of directorships for the 2,314 appointees. The dependent variable is the count of the directorships held by each outside director. We include the industry-adjusted stock return over the prior year as a measure of the appointing firm's performance as an independent variable. The regression includes appointee-specific characteristics such as age, gender, educational, and professional qualifications. We also include firm-specific attributes relating to the companies where the individual serves as a director. Unless the appointee is the CEO of another firm, we compute the average stock ownership by the outside director for all of the boards

he/she serves on, as well as the average industry-adjusted return on assets (ROA), the market-adjusted stock return, and the average size (natural log of sales) of these firms. If the appointee is a CEO in another firm, we record the stock ownership, industry-adjusted ROA, the market-adjusted stock return, and the size of the firm where he/she serves as CEO.

The results of the Poisson model are reported in the first column of Table VI.[9] We find that the performance of the appointing firm is unrelated to the count of directorships held by outside director appointees. In contrast, the average performance of the firms on whose boards the directors sit on is positively associated with their directorship count. The coefficients on both the average directorship industry-adjusted ROA and the market-adjusted stock return are positive with p-values of 0.03 and 0.07, respectively.

We also observe that being a current or retired CEO of another firm positively affects the number of directorships held as does being a director at larger companies. This latter result is similar to that in Ferris et al. (2003), and suggests that the increased visibility from sitting on boards of large companies may help some directors obtain more directorships. Finally, we find a lower count of directorships when directors have gray status at other boards, suggesting that firms avoid appointing board members that face potential conflicts of interests at other companies. Alternatively, extensive business dealings with a firm may leave gray directors with little time to serve on other boards.

Overall, the results of the Poisson model indicate that the accumulation of directorships is positively related to the performance of the firms where the individual is an outside director, but we do not find

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9. The Poisson model specifies that if λ is defined by $\log(\lambda) = X\beta$, where X is a vector of independent variables and β is a parameter vector, then the probability of n outside directors' obtaining a directorship in a given year is given by: $\lambda^n e^{-\lambda} / \lambda!$ The log-likelihood function of this specification is maximized over β to produce maximum likelihood estimates and is given as:

$$L(\beta) = \sum_{i=1}^{N} \sum_{t=1}^{T} \{ C_1 - e^{(X_{it}\beta)} + n_{it} X_{it}\beta \}$$

where C_1 is a constant that does not change the maximization process, N is the number of firms, T is the number of time periods per firm and n_{it} is the number of outside directors obtaining a directorship in firm i in year t.

evidence that poor performance increases the frequency of appointments of outside directors that serve on several boards.

B. Appointments of busy outside directors

To study appointments of busy outside directors, we estimate a logit model using the 2,314 appointees, where the dependent variable is set equal to "one" if the director holds three or more total directorships (i.e. is busy), and is set equal to "zero" otherwise. Independent variables are similar to those used in the Poisson estimation.

Model 2 of Table VI shows that firm performance for the appointing firm is not significantly associated with the probability of appointing a busy outside director. This result casts doubt on the idea that poor firm performance makes the appointment of a busy outside director more likely. As with the Poisson model estimates, we find that appointments of busy outside directors are more likely when the other firms on whose boards they sit on perform better. The coefficients are positive and statistically significant for variables that measure the average industry-adjusted ROA and the average market-adjusted stock return for companies where the appointees are incumbent directors. In addition, busy outside directors are more likely to be appointed if they tend to sit on boards of larger firms, and are current or retired CEOs of other companies. Appointment of a busy director is less likely if the director is a gray director on another board or if the director is in academia. However, the probability of a busy director appointment is higher if the director is an active or retired politician.

Finally, we find that appointments of busy outside directors are less likely if these directors have relatively high stock ownership on the other boards that they sit on. One interpretation of this result is suggested by the findings in Perry and Peyer (2004) who argue that executives with high stock ownership at their own firms will be reluctant to assume outside board appointments if it detracts from maximizing value at their own companies. Our result suggests a similar interpretation – outside directors with strong ownership

incentives on their current boards might be reluctant to take on additional board seats since that constrains their monitoring effort on their current boards.

C. Departure hazard for outside directors

We use a hazard model to investigate the annual risk of departure for each director. The hazard specification is appropriate because it censors all departures related to board term limits or death as well as the observations for directors that continue serving at the end of our coverage period.[10]

The results of the hazard model are presented in model (1) of Table VII. We find that poor firm performance is associated with a higher likelihood of outside director departure. The coefficient estimate on industry-adjusted stock return is negative and significant at the 1% level, similar to results in Hermalin and Weisbach (1988). The results also reveal that the number of directorships is significantly related to the chance of departure. The coefficient for the number of directorships is positive and significant (0.27, *p*-value = 0.00) indicating that each additional directorship leads to a significant increase in the hazard of voluntary departure. In addition, departures are about 14.4 percent more likely to occur in firms that appoint a new CEO during the year. However, directors that are CEOs of other companies are less likely to depart the board.

D. Firm performance and busy outside director turnover

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10. The statistical significance of a covariate is given by the log-likelihood ratio statistic. Under the null hypothesis that $\beta = \beta_0$, $-2\log\left[\frac{L(\beta_0)}{L(\beta^{MLS})}\right]$ is distributed χ^2 with *K* degrees of freedom, where *K* is the number of elements of β, and $\frac{L(\beta)}{L(\beta^{MLS})}$ is the likelihood ratio statistic. We provide *p*-values for the test that an individual covariate is zero. For each covariate, we also report its risk ratio, a transformation of the estimated coefficient that is easier to interpret. The risk ratio is defined as the ratio of the hazard function under one set of covariates (X') to the hazard under a base-case set of covariates (X^0): $R(X', X^0) \equiv \frac{h_i(t \mid X')}{h_i(t \mid X^0)}$. For example, the percentage change in the hazard given a one-unit change in the *k*'th quantitative covariate is simply estimated as follows: $\frac{h_i(t \mid X_k = \hat{X} + 1)}{h_i(t \mid X_k = \hat{X})} - 1 = \exp[\beta_k(\hat{X} + 1) - \beta_k(\hat{X})] - 1 = \exp[\beta_k] - 1$, which is reported as the risk ratio with the regression results.

Though the results of the hazard model indicate that directors with multiple board seats are more likely to depart, it is unclear whether firm performance affects the probability of departure of busy outside directors. To investigate this issue, we exclude the departures related to board term limits or death and divide the remaining 1,186 departures by whether or not the departing director holds three or more directorships. We estimate a logit model in column (2) of Table VII where the dependent variable takes the value of "one" if the departing outside director holds three or more directorships (i.e. is busy) and takes the value of "zero" otherwise.

The results illustrate a clear link between company performance and departure of busy outside directors. The coefficient estimate for industry-adjusted stock return is negative and statistically significant (*p*-value of 0.05). In terms of the marginal effects implied by the coefficient on stock returns, underperforming the industry by 50 percent increases the probability of busy outside director departure by 1.54 percentage points. Though this effect is not large, it is meaningful when compared to the unconditional frequency of outside director turnover of 6.7 percent in the sample.

In addition to performance measures, we find aspects of the company's governance structure impact the probability of busy outside director departures. Busy directors are more likely to leave smaller boards and when the board is independent. This suggests that their departures are more likely when the board is predisposed to stronger monitoring.

We also find that busy outside directors are likely to depart when a new CEO takes office. In terms of the marginal effects implied by this coefficient estimate, if a new CEO is appointed, the probability of a simultaneous busy director departure increases by 4.78 percentage points. Hermalin and Weisbach (1988), Farrell and Whidbee (2000), and Yermack (2004) have found that outside directors are more likely to leave the board when a new CEO is appointed. Our results illustrate that this effect is more pronounced for busy outside directors. To put our results in perspective, unconditionally, a new CEO increases the probability of an outside director departure in the same year by 2.98 percentage points. Therefore, our estimates suggest that

busy outside directors are substantially more likely to leave the board than non-busy outsiders when new CEOs are appointed.

In summary, we uncover evidence suggesting that the presence of busy outside directors is endogenous with respect to firm performance. However, since busy directors are more likely to depart following poor firm performance, the effect that we find works against our documented results on the inverse relation between performance and a majority of busy outside directors.

V. Busy boards and forced CEO turnover

As an additional test of the impact of busy boards on the quality of corporate governance, we study the sensitivity of CEO turnover to firm performance in our sample. Besides providing direct evidence on how busy directors impact an important board decision, the advantage of this approach is that it is immune to the potentially confounding effect of growth opportunities that might be present in the market-to-book ratio regressions presented earlier.

We estimate logit models for the probability of forced CEO turnover while controlling for several firm and corporate governance attributes. We classify a turnover episode to be forced using a three-part rule similar to that in Parrino (1997). First, we classify turnover as forced if the *Wall Street Journal* reports that the CEO is fired, forced from office, or departs due to policy differences. Second, we classify turnover to be forced if the CEO is not close to retirement (60 years or more) and the *Wall Street Journal* does not report the reason for the departure as being death, poor health, or the assumption of another position (elsewhere or within the firm). Third, we classify a turnover episode as forced if the CEO is not of retirement age and the *Wall Street Journal* reports that the CEO is retiring, but does not announce the retirement at least six months prior to the departure.

CEO turnover episodes occur for 11.28 percent, or 321 events, of the observations in our sample, a frequency similar to those in other studies such as Coughlan and Schmidt (1985) who report a 12 percent frequency using 1978-1980 data, and Mehran and Yermack (1997) who report a 10.8 percent frequency using

1984-1991 data. Approximately 63 percent of departing CEOs (202 executives) leave office due to retirement, and 18 percent (58 executives) are forced out of office, an incidence comparable to that in Parrino, Sias, and Starks (2003) who document a 19 percent frequency using 1982-1993 data.

Our independent variable of interest is the "busy board" (0,1) indicator that takes the value of "one" if 50 percent or more outside directors hold three or more directorships. As a measure of performance, we use the industry-adjusted ROA for the year preceding the turnover. We include a (0,1) variable to indicate an independent board, defined to equal one if 50 percent or more of directors are outside directors. Other control variables include company size, measured as the natural log of sales, the natural log of board size, and the percentage of shares owned by institutional investors, outside directors, and the CEO. The models control for the natural log of the years the CEO has been in office. Finally, Mehran and Yermack (1997) find an inverse association between the probability of voluntary CEO turnover and the value of stock option compensation in relation to total pay. Thus, we add the Black-Scholes value of the options granted to the CEO scaled by total pay as an independent variable in the regression. All models include (0,1) year indicators.

Table VIII presents the results of four logit models based on 2,844 CEO-year observations drawn from our 508 firms from 1989 to 1995. Below each estimate, we report heteroskedasticity adjusted *p*-values in parentheses. Regression (1) confirms results from prior studies that forced CEO turnover is sensitive to firm performance. In terms of the marginal effects implied by the coefficient in model (1), underperforming the industry by 50 percent in the prior year increases the probability of forced CEO turnover by 4.36 percentage points.

Regression (2) includes the control variables discussed earlier. In general, we find these variables to influence CEO turnover in a manner consistent with that reported in previous research. For example, CEOs are less likely to be forced out of office if they own large amounts of stock or belong to the founding family (Denis, Denis, and Sarin, 1997). As in Mehran and Yermack (1997), we find no significant association between forced turnover and stock-option compensation for the CEO. Like Hadlock and Lumer (1997), we find that the tenure of the CEO is not related to a forced departure.

Regression (2) also confirms the effect of independent boards on the turnover-performance relation in our sample by including an interaction term between firm performance and the independent board indicator. The coefficient for this interaction term is negative (-4.12, *p*-value = 0.06), and the sum of the coefficients on industry-adjusted stock return and the interaction term (-7.07 = -2.95 -4.12) is significantly different from zero at the 1% level. This finding indicates that the performance-turnover relation is stronger in the presence of independent boards, a result that is similar to that described in Weisbach (1988).

Regression (3) estimates the impact of the "busy board" indicator by including the interaction between the busy board indicator and firm performance. We find that "busy boards" have a significant impact on the sensitivity of forced CEO turnover to performance. The interaction term yields a positive and statistically significant coefficient (*p*-value = 0.05), implying that the turnover-performance sensitivity is significantly lower when the outside directors are busy than when they are not busy. In fact, inspection of coefficient estimates on firm performance and the busy board interaction variable shows that CEO turnover is completely insensitive to firm performance when a majority of outside directors are busy (-0.08 = -2.90 + 2.82, *p*-value = 0.71). The estimates suggest that a 50% decline in industry-adjusted ROA increases the probability of CEO turnover by about 3.52 percentage points when outside directors are not busy, but only by 0.59 percentage points when outside directors are busy.

Regression (4) explores this result further in the context of Weisbach's (1988) findings on the importance of an independent board on turnover-performance sensitivities. We explore if the effect of independent boards on CEO turnover depends upon whether a majority of the outside directors are busy. We do so by including a three-term interaction between firm performance, the "busy board" indicator, and the independent board indicator. The coefficient on this variable measures whether the turnover-performance sensitivity when the board is both independent and a majority of outside directors are busy, differs from turnover-performance sensitivity in other firms. The interaction term is positive and significant at the 7% level. The coefficient estimate implies that an independent board with busy outsiders weakens the turnover-performance relation (-1.34 = -2.88 + 1.54, *p*-value = 0.23). For a 50% decline in industry-adjusted ROA,

CEO turnover probability rises by 6.94 percentage points when the board is both independent and not busy, but by only 1.54 percentage points when the board is independent and busy. This result shows that busy outside directors severely ameliorate the effect of board independence on the turnover-performance relation.

VI. Valuation impact of busy outside director departures and appointments

The case-study evidence for Elaine Chao described in the Introduction suggests that investors viewed her departure from the boards she served on as favorable news. We use the incidence of outside director departures to study whether this pattern holds in a broader sample. If busy outside directors contribute to weaker corporate governance, we expect that their departure should be associated with a positive market reaction.

To focus on departures that are not perfectly anticipated due to retirements, term limits, etc., we study the 360 voluntary departure episodes in the sample. We drop observations coinciding with other major company announcements and when the exact date of departure cannot be established. To avoid confounding the results with information regarding a new board appointee, we also exclude 36 observations that announce a director's departure and the replacement simultaneously. This screening procedure results in a sample of 243 departures. We use the standard event-study methodology (Dodd and Warner, 1983) to compute abnormal returns (*ARs)* for the announcement date. Market model parameters are computed from one year of trading data preceding the event window.[11]

Results of the event study are reported in Panel A of Table IX. We observe that positive and statistically significant *ARs* are associated with all voluntary departure episodes; however, the mean and median *ARs* (1.33 percent and 0.8 percent) related to the departure of busy outside directors are larger than the *ARs* (0.9 percent and 0.34 percent) for non-busy outside director departures. These differences are statistically significant with a *t*-statistic of 1.99 and a *Z*-statistic of 3.16. These results are in agreement with

11. To control for possible bias on the market model parameters, we re-estimate our *ARs* with simple net-of-market returns in place of market model returns. This estimation generates similar results to those we obtain with the market model parameters.

those presented in Table I, and indicate that, on average, the departure of busy outside directors is welcome news for shareholders.

While the event-study suggests that investors view the departure of busy outside directors favorably, it is possible that the departures trigger other changes that investors also favor. For example, it is possible that the departure changes the balance of power between the CEO and the board (Hermalin and Weisbach, 1998). In some circumstances, the departure may also be advantageous for the firm because the departing director might be able to help the firm in his/her new position. It is also possible that busy outside director departures serve as a signal that additional governance reforms would be forthcoming in the future. Further, since we have focused on departures that are not accompanied by a concurrent replacement, it is plausible that the positive CARs may reflect the valuation impact of a reduction in board size (Yermack, 1996), though this explanation cannot account for the differential valuation effect associated with departures of busy and non-busy directors.

Another explanation for these results, suggested by Shivdasani and Yermack (1999), is that some outside directors acquire conflicts of interests over time and switch status to gray directors. If this pattern is pervasive, our results might instead capture the effect of replacing gray directors on the board. To examine this possibility, we check whether the status of outside directors changed to gray during their tenure. We find that only 5 of the 198 non-busy outside directors and 2 of the 45 busy outside directors in our subsample acquire conflicts of interest during their tenure to warrant a change in classification to gray status. Using a different sample of director appointments, Yermack (2004) also reports that relatively few outside directors change their status to gray over their tenure. When we repeat the event-study excluding these 7 observations, we obtain returns similar to those tabulated.

Another possibility is that the remaining board is less likely to be busy after a busy director's departure. Of the 45 boards that lost a busy outside director, 18 firms switched status from a busy board to a non-busy board. In these firms, the percentage of outside directors that were busy declined from above 50%

to less than 50% after the departure.[12] We conduct an event study for the 45 companies that lost a busy director. Panel B of Table IX summarizes the *ARs* for the 45 firms that lost a busy director, broken down according to whether the majority of the remaining outside directors on the board are busy or non-busy. Mean and median *ARs* for firms where a majority of outside directors are not busy after the departure are 2.2% and 2.1%, respectively. In contrast, *ARs* for the other 27 companies where a majority of outside directors remain busy are 0.7% (mean) and 0.45% (median). The difference between the two subsamples is statistically significant using both the t-test and the Wilcoxon test. This suggests that investors react more favorably to busy outside director departures that have a significant impact on the extent to which outside directors as a group remain busy.

At first glance, our event-study results appear to be at odds with those reported in Ferris et al (2003). Ferris et al. report a significantly positive two-day announcement effect around the first appointment of a busy director to the board. However, this discrepancy arises because Ferris et al. (2003) do not focus on firms that already have busy directors on the board. Specifically, they study 84 firms that announced the appointment of a busy director and report a positive mean announcement return of 0.41% for this sample. Among these 84 firms, 41 observations represent the first appointment of a busy director to the board, and for this subsample, the mean announcement return is 2.12%. Though not reported by the authors, one can therefore infer that the mean announcement return for the remaining 43 firms that already had at least one busy director on the board is -1.22%. Therefore, their data also suggest that director appointments that lead to several outside directors being busy have a negative effect on firm value.

We provide further evidence on the valuation impact of multiple directorships in Table X. We focus on how the stock prices of a director's existing directorship-firms react when the director receives an

12. We consider boards to have switched status from busy to non-busy by focusing on the remaining outside directors on the board. It is, of course, possible that a firm may replace a departing busy director with a busy appointee, leaving the board's status unchanged. To account for this, we also tracked changes in board composition for a six month period following the director's departure and considered these changes in determining the board's busyness status. Using this process, we identify 19 firms that switched to non-busy status and obtain virtually identical results to those reported in the paper.

additional board seat. For this test, we use the sample of 2,314 appointments of outside directors to our sample firms' boards. For each of these appointments, we study the announcement return for the shared-directorship firms (i.e. other firms on whose boards they sit on). For the shared-directorship firms, we are able to identify 818 distinct appointment announcement dates that are uncontaminated by other major news releases. Panel A shows that, for the 818 shared-directorship firms, the average announcement return is -0.22% and is not significantly different from zero. However, the announcement effect depends on whether the outside director becomes busy as a result of the new board seat. In 106 cases, appointed directors held two or more board seats prior to the announcement, and are therefore classified as busy after obtaining the additional board seat. For these 106 shared-directorship firms where the outside director holds three or more board seats following the appointment, the average announcement return is -1.04% (p-value = 0.05). In contrast, when the director is not busy following the appointment, shared firms have a statistically insignificant average announcement return of -0.1%. The negative announcement return for shared-directorship firms when directors end up with three or more directorships suggests that the costs of the additional directorship outweigh the benefits of greater reputation or experience associated with the appointment.

In Panel B of Table X we further investigate the 106 appointments where outside directors of shared-directorship firms become busy. In 23 cases, the classification of the overall board for the shared-directorship firms switches in status from non-busy to busy as a result of the outside director's additional appointment. For these firms, the average announcement return is -1.8% and is statistically significant at the 5% level. However, the announcement return is muted in comparison and is statistically insignificant in the 83 cases where the additional appointment does not move the board of the shared-directorship firm to busy status. Thus, the costs of an additional board seat appear to dominate the benefits for firms where a majority of its outside directors are likely to be busy as a result of serving on multiple boards.

VII. Conclusions

In an era of heightened corporate governance scrutiny, substantial debate has focused on the effectiveness of the monitoring by the board of directors in large, publicly traded corporations. A significant element of this debate is centered on whether outside directors serving on several boards should cut back on their directorships or be required to do so. A common view among investors and policy advocates is that serving on numerous boards can result in overstretched directors that may not be effective monitors on any board.

We present evidence confirming this popular view using a panel of large U.S. industrial firms from 1989 to 1995. We focus on boards where a majority of outside directors sit on three or more boards and present several results that highlight the effect that these busy outside directors have on corporate value and governance.

We find that companies with a majority of busy outside directors display significantly lower market-to-book ratios. All else equal, firms with busy outside directors have market-to-book ratios about 4.2 percent lower than other firms. As a basis for comparison, results in Gompers, Ishii, and Metrick (2004) imply that, during the 1990 to 1995 period, a 1 point increase in their composite "Governance Index" reduces the market-to-book ratio by an average 3.37 percentage points. Evidence of weaker performance by companies with busy outside directors is also obtained in measures of operating performance. We show that firms with busy boards display lower operating return on assets, lower asset turnover ratios, as well as lower operating return on sales and that this effect is also economically meaningful.

We show that appointments of directors who hold three or more directorships are not more likely to occur in firms that are performing poorly, casting doubt on the idea that a tendency for poorly performing firms to appoint busy directors is responsible for our findings. In fact, we find that in underperforming firms, outside directors who hold three or more directorships are more likely to leave a board than other outside directors, suggesting that the potential endogeneity of the presence of busy directors might work against us uncovering the inverse relation between busy boards and performance.

Forced CEO turnover-performance sensitivities provide further evidence of the impact of busy outside directors on corporate governance. We find that a 50% decline in industry-adjusted performance increases the probability of turnover by 3.52 percentage points when the board is not busy, but the probability rises by only 0.59 percentage points when a majority of outside directors are busy. The joint impact of a busy board and an independent board is particularly large. Independent boards where outsiders are not busy are associated with a 6.94 percentage points higher likelihood of CEO turnover for a 50% drop in industry-adjusted performance, but the corresponding change in CEO turnover probability is only about 1.5 percentage points higher for independent boards where a majority of outside directors are busy.

Further support for the effects of busy outside directors comes from event-study results of outside director departure announcements. We find that departures of busy outside directors are associated with significantly positive abnormal returns that average 1.33% at the announcement. The abnormal returns are significantly more positive when fewer than 50% of the remaining outside directors are busy after the departure.

While our tests have focused on studying the costs of holding multiple board seats, findings in this paper and in the literature also point to the benefits of multiple directorships. For example, Ferris et al (2003) show that the initial appointment of a busy director to a board without an incumbent busy director is good news for shareholders, implying that the experience or reputational impact of such outside directors can be beneficial. We also show that outside directors that are associated with well-performing firms tend to hold more board seats, consistent with the view that well performing directors get rewarded in the market for directorships. However, results also highlight a cost to holding numerous board seats, suggesting that as directors accumulate more directorships, they may be constrained in being effective monitors and that this effect is likely to be important when a majority of the outside directors are over-committed.

Collectively, our results suggest that boards relying heavily on outside directors that serve on several boards are likely to experience a decline in their quality of corporate governance. However, we are reluctant to conclude with recommendations mandating limits on the number of boards that directors should serve on.

Our analysis does not include other potential effects of such limits, such as the effect on directors' incentives to establish reputations as expert monitors in the market for directorships, and the potential valuation effects for companies that send their executives to serve as outsiders on other boards. Nonetheless, based on the evidence in this paper, we are inclined to suggest that for some firms, the optimal board design entails a lower reliance on outside directors that serve on numerous boards.

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Table I
Investor Reaction to Elaine Chao's Cabinet Nomination

Two-day cumulative abnormal returns (*CARs*) for the firms where Elaine L. Chao served as an outside director. *CAR*s are computed for all firms around December 28, 2000 (day "0"), the day when the *Wall Street Journal* first announced that Elaine L. Chao would join President-elect George W. Bush's cabinet. The sample includes the following firms: C.R. Bard, Clorox, Columbia/HCA Healthcare, Dole Food, Northwest Airlines, and Protective Life. Following her confirmation as secretary of labor Ms. Chao resigned her directorships in these firms. We report *t*-statistics and Wilcoxon rank *Z* statistics, using a two-tailed test for significance.

Panel A							
Returns	**Days**	***N***	**Mean Return**	***t*-statistic**	**Positive: Negative**	**Median Return**	**Wilcoxon *Z***
Raw Return	(-1+0)	6	5.24%	1.99	6:0	4.49%	2.22
Cumulative Abnormal Return *(CAR)*	(-1+0)	6	3.80%	2.22	6:0	3.05%	1.81

Table II
Data description

Panel A provides descriptive statistics for characteristics of ours sample firms. The sample consists of 3,366 annual observations for 508 companies between 1989 and 1995. Companies are included in the sample if they are listed by *Forbes* magazine as one of the largest U.S. public corporations in its 1992 survey of the 500 largest U.S. public companies in any of the categories of market capitalization, sales, net income, or assets. The sample excludes private, utility, and financial companies. The table presents the mean, median, and standard deviation for each variable, as well as the Spearman sample correlation coefficient between all variables and a (0,1) indicator that is "one" if is the board is defined as busy, this occurs when 50 percent or more of the board's outside directors hold three or more directorships. a, b and c denote statistical significance at the 1, 5, and 10 percent level, respectively.

Panel B shows characteristics of 2,314 outside directors appointed to the boards of our sample firms from 1989 to 1995. Outside directors are those that are not current or former employees of the firm, are not relatives of the CEO, have no business deals with the firm other than their directorship, and do not have interlocking directorships with the CEO. We classify boards as being interlocked if the CEO sits on the board of an outside director. Data on director characteristics are obtained from annual proxy statements.

Panel A

Variable	Mean	Median	Standard Deviation	Correlation with "Busy board"
Board Characteristics				
Directorships per outside director	3.11	2.89	2.23	0.22[a]
Percentage of inside directors	29.67	26.05	15.03	-0.07[c]
Percentage of gray directors	15.02	9.21	13.32	-0.12[c]
Percentage of outside directors	55.33	56.23	17.12	0.68[a]
Percentage of directors who are other firms' CEOs	14.96	13.20	11.70	0.56[a]
Percentage of busy directors	52.26	-	-	-
Percentage of busy boards	21.42	-	-	-
Board size	11.88	12	2.95	0.15[a]
Presence of interlocked board	0.36	0	0.72	0.48[b]
Directors' fees (1995 dollars)	35,904	27,601	13,562	0.29[a]
Number of board meetings/year	7.56	7	2.56	0.31[a]
Governance Structure				
CEO from founding family (0,1)	0.26	0	0.39	-0.28[c]
Non-CEO chairman of board (0,1)	0.15	0	0.33	-0.08[c]
CEO's tenure as CEO	8.68	7.5	7.68	0.12[b]
CEO's age	58.06	56	7.04	0.00
Insider ownership (% common)	6.97	2.22	13.67	-0.21[b]
Institutional ownership (% common)	49.13	33.33	13.92	-0.06[a]
Firm Characteristics				
Total sales (1995 $MM)	9,016.01	3,444.72	21,100.23	0.31[a]
EBIT/total assets	0.191	0.150	0.128	0.10[a]
Firm age (years since incorporation)	23.6	12	9.33	0.45[a]

Panel B

	Mean	Median	Standard Deviation
Directorships per director	3.04	2.00	1.99
Percentage of appointees with three or more directorships	17.11	-	-
Age of the appointee	57	55	3.82
Equity ownership appointee (% of common)	0.03	0.07	0.15
Percentage of appointees that represent a board expansion	33.03	-	-
Percentage of appointees that replace an independent director	52.23	-	-
Percentage of appointees that replace an inside director	9.81	-	-
Percentage of appointees that replace a gray director	4.92	-	-
Percentage of appointees without prior board experience	13.56	-	-
Percentage of appointees who are commercial or investment bankers	7.02	-	-
Percentage of appointees who are current *Forbes* 500 executives	20.04	-	-
Percentage of appointees who are current CEOs of other firms	42.05	-	-
Percentage of appointees who are retired CEOs of other firms	18.12	-	-

Table III
Directorships by Outside Directors

Panels A through D report the total number of directorships held by outside directors, the mean directorships per outside director, and the percentage of outside directors holding 3 or more directorships for four companies in our dataset during the 1993 proxy season. The total number of directorships simply counts the number of total boards of publicly traded firms where the outside director serves. We do not count board service in private firms, charitable institutions, or not-for-profit organizations. The last row in each panel provide a (0,1) variable for whether boards are busy. We code boards as busy, with a "one," if 50 percent or more outside directors hold three or more total directorships.

Panel A reports mean directorships per outside director and per board for our sample the firms according to the percentage of outside directors holding three or more directorships. Directorships per outside director are estimated as the total directorships held by outside directors divided by the number of outside directors. Similarly, directorships per director are all directorships held by every director divided by board size.

Panel A: Host Marriott – Outside Directors 1993		
Director	**Main occupation**	**Total directorships**
R.T. Ammon	Former Partner, Kohlberg Kravis Roberts & Co.	4
A.D McLaughlin	President, Federal City Council (former U.S. secretary of labor)	8
H.L. Vincent, Jr.	Retired Vice-Chairman, Booz-Allen & Hamilton	1
A.J. Young	Vice Chairman, Law Companies Group, Inc.	1
	Total directorships	14
	Total directorships/outside directors	14/4 = 3.5
	Percentage with three or more directorships	50%
	Is the board busy? (0= No,1= Yes)	Yes
Panel B: Gannett Newspapers – Outside Directors 1993		
Rosalyn Carter	Former First Lady of The United States of America	1
C.T. Rowan	President, CTR Productions	2
D.D. Wharton	CEO, Fund for Corporate Initiatives	3
A.F. Brimmer	Retired officer, Federal Reserve Bank	9
M.A. Brokaw	Owner, Penny Whistle Toys	2
	Total directorships	17
	Total directorships/outside directors	17/5 = 3.4
	Percentage with three or more directorships	40%
	Is the board busy? (0= No,1= Yes)	No
Panel C: Clorox – Outside Directors 1993		
D. Boggan	Vice Chancellor, U.C. Berkeley	1
D.O. Morton	Retired COO, Hewlett Packard	5
E.L. Scarff	Former CEO, Arcata Corporation	1
L.R. Scott	CEO, Carolina Freight	3
F.N. Shumway	Retired Chairman, Allied Signal	4
J.A. Vohs	Retired Chairman, Kaiser Health GP	2
	Total directorships	16
	Total directorships/outside directors	16/6 = 2.66
	Percentage with three or more directorships	50%
	Is the board busy? (0= No,1= Yes)	Yes
Panel D: MGM Grand – Outside Directors 1993		
Willie D. Davis	President, All-Pro Broadcasting	8
Lee A. Iacocca	Chairman, Iacocca Capital GP (Retired CEO, Chrysler)	1
E. Parry	CEO, Valley Capital Corporation	2
	Total directorships	11
	Total directorships/outside directors	11/3 = 3.66
	Percentage with three or more directorships	33.33%
	Is the board busy? (0= No,1= Yes)	No

Panel E

Boards with outside directors holding 3 or more directorships	**Are outside directors busy?**	**Mean directorships per outside director**	**Mean directorships per board**
$x \geq 75\%$	Yes	3.35	1.85
$50\% \leq x < 75\%$	Yes	3.19	1.77
$25\% < x < 50\%$	No	3.41	1.88
$x \leq 25\%$	No	2.36	1.38

Table IV
Busy Outside Directors and Firm Performance

This table presents fixed-effects regressions of firm performance and busy outside directors. All regressions use the market-to-book ratio as the dependent variable. We calculate the market-to-book ratio as the market value of the firm's equity at the end of the year plus the difference between the book value of the firm's assets and the book value of the firm's equity at the end of the year, divided by the book value of the firm's assets at the end of the year. This calculation closely follows that of Smith and Watts (1992). Regressions (1) uses a (0,1) dummy variable that is "one" if 50 percent or more of the board's outside directors individually hold three or more directorships as the key independent variable. Regression (2) uses the percentage of outside directors that hold three or more directorships (i.e., are busy) as the key independent variable. We classify boards as being interlocked if the CEO sits on the board of an outside director; all other variables are self-explanatory or are described in the main text. The sample is described in panel A of Table I. We report White (1980) heteroskedasticity robust *p*-values in parenthesis below each coefficient estimate.

Variable	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
Board Characteristics					
Average directorships by outside directors				-0.077	
				(0.26)	
Average directorships by board					-0.040
					(0.60)
Busy outside directors (0,1)	-0.042				
	(0.00)				
Percentage of busy outside directors		-0.152	-0.083		
		(0.00)	(0.00)		
Percentage of busy outside directors X Busy outside directors (0,1)			-0.071		
			(0.06)		
Log of the directorships held by the CEO	-0.166	-0.169	-0.160	-0.179	-0.177
	(0.16)	(0.13)	(0.13)	(0.09)	(0.12)
Firm has an industry director	0.050	0.049	0.044	0.048	0.049
	(0.28)	(0.54)	(0.60)	(0.32)	(0.23)
Directors' ownership (% of common)	0.187	0.122	0.124	0.188	0.188
	(0.09)	(0.08)	(0.07)	(0.10)	(0.08)
Board interlock (0,1)	-0.009	-0.008	-0.008	-0.014	-0.010
	(0.07)	(0.07)	(0.08)	(0.05)	(0.05)
CEO ownership (% of common)	0.008	0.015	0.016	0.009	0.009
	(0.12)	(0.08)	(0.09)	(0.13)	(0.13)
Log of board size	-0.314	-0.290	-0.298	-0.303	-0.299
	(0.01)	(0.05)	(0.05)	(0.01)	(0.05)
Log of board meetings	-0.091	-0.119	-0.100	-0.093	-0.090
	(0.26)	(0.40)	(0.27)	(0.22)	(0.29)
Board committees	-0.016	-0.013	-0.009	-0.011	-0.015
	(0.68)	(0.58)	(0.47)	(0.56)	(0.64)
Board composition (% outside directors)	0.165	0.147	0.149	0.161	0.161
	(0.06)	(0.24)	(0.20)	(0.06)	(0.06)
Firm Characteristics					
Return on assets	2.002	2.044	2.029	1.996	2.004
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
Firm size (log of total sales)	0.433	0.436	0.441	0.430	0.438
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Firm age	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Growth opportunities (depreciation expense/sales)	0.077	0.093	0.080	0.100	0.079
	(0.24)	(0.27)	(0.25)	(0.31)	(0.26)
Number of business segments	-0.049	-0.051	-0.048	-0.052	-0.049
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year (0,1) indicators	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	37.53%	37.69%	38.11%	33.02%	34.18%

Table V
Fixed-effects coefficient estimates: Busy outside directors and firm profitability

In this table, the dependent variables are return on assets (ROA), sales over assets, and return on sales. We first sum operating income before depreciation (Compustat item 13) plus the decrease in receivables (Compustat item 2), the decrease in inventory (Compustat item 3), the increase in current liabilities (Compustat item 72), and the decrease in other current assets (Compustat item 68). We scale this measure by the average of beginning- and ending-year book value of total assets (Compustat item 6) to find ROA Similarly, we divide this measure by the average of beginning- and ending-year sales to compute ROS. We use the log of total capital as a proxy for firm size. Regressions (1), (2), and (3) use a (0,1) dummy variable that is "one" if 50 percent or more of the board's outside directors individually hold three or more directorships as the key independent variable. Regression (2) uses the percentage of outside directors that hold three or more directorships (i.e., are busy) as the key independent variable. All other variables are self-explanatory or are described in the main text. The sample consists of *Forbes* 500 firms from 1989 to 1995 described in Panel A of Table I. White (1980) heteroskedasticity robust *p*-values appear in parenthesis below each coefficient estimate.

	Dependent Variable			
Independent Variables	**(1) ROA**	**(2) ROA**	**(3) Sales/Assets**	**(4) ROS**
Board Characteristics				
Busy outside directors (0,1)	-0.00235 (0.00)		-0.033 (0.02)	-0.00272 (0.00)
Percentage of busy outside directors		-0.0163 (0.01)		
Log of the directorships held by the CEO	-0.078 (0.27)	-0.071 (0.20)	-0.002 (0.61)	-0.041 (0.33)
Firm has an industry director	0.020 (0.31)	0.015 (0.33)	0.004 (0.40)	0.018 (0.39)
Directors' ownership (% of common)	0.022 (0.17)	0.025 (0.11)	0.222 (0.09)	0.024 (0.11)
Board interlock (0,1)	-0.005 (0.10)	-0.005 (0.13)	-0.004 (0.06)	-0.005 (0.08)
CEO ownership (% of common)	0.003 (0.17)	0.003 (0.29)	0.141 (0.29)	0.005 (0.13)
Log of board size	-0.041 (0.01)	-0.043 (0.01)	-0.139 (0.04)	-0.032 (0.01)
Log of board meetings	-0.129 (0.05)	-0.134 (0.06)	-0.099 (0.11)	-0.138 (0.02)
Board committees	-0.000 (0.40)	-0.000 (0.42)	-0.005 (0.44)	-0.000 (0.39)
Board composition (% outside directors)	0.002 (0.35)	0.002 (0.38)	0.003 (0.45)	0.007 (0.11)
Firm Characteristics				
Return on sales (1) and (2) Return on capital (3) and (4)	1.841 (0.00)	1.967 (0.00)	3.671 (0.00)	4.698 (0.00)
Firm size	0.048 (0.00)	0.047 (0.00)	0.166 (0.01)	0.094 (0.03)
Firm age	-0.0008 (0.03)	-0.0008 (0.04)	-0.0006 (0.14)	-0.0008 (0.03)
Depreciation expense/sales	0.054 (0.06)	0.050 (0.05)	0.063 (0.07)	0.060 (0.13)
Number of business segments	-0.006 (0.05)	-0.006 (0.04)	-0.003 (0.00)	-0.008 (0.03)
Year (0,1) indicators	Yes	Yes	Yes	Yes
Adjusted R^2	26.36%	27.10%	13.90%	25.01%

Table VI
Determinants of Directorships and Appointments of Busy Outside Directors

Model (1) presents Poisson maximum likelihood estimates for the determinants of the number of directorships held by outside directors. The dependent variable counts the number of directorships held by the outside director. Model (2) presents logit estimates for busy directors. The dependent variable takes the value of "1" if the outside director holds three or more total directorships and the value of "0" otherwise. The sample consists of 2,314 outside directors appointed to the boards of our 508 sample firms from 1989 to 1995. Unless the director is a CEO of another firm, we compute the average ownership of the outside director on all of the boards he serves on, as well as the average industry-adjusted ROA and size of these firms. If the appointee is a CEO in another firm, we simply record his ownership, the industry-adjusted ROA, and the size of the firm where he is the CEO. We use the natural log of sales to proxy for firm size in the model (1) and the natural log of the market value of assets in model (2). All industry-adjustments are done by subtracting the median of the variable matching by 2-digit SIC code. We report *p*-values under parentheses.

Variable	**(1)** **Poisson**	**(2)** **Logit**
Constant	-0.197 (0.42)	-2.818 (0.00)
Appointing firm's performance		
Industry-adjusted stock return $(R_t - R_{ind})_{t-1}$	0.108 (0.36)	0.152 (0.34)
Sales growth [Log ($Sales_t/Sales_{t-1}$)]	-0.405 (0.49)	-0.121 (0.53)
Appointee's characteristics		
Age	-0.057 (0.01)	-0.166 (0.28)
Gender (Female = 1,Male = 0)	0.409 (0.20)	0.108 (0.12)
Average directorship ownership (% of common stock)	0.006 (0.59)	-0.105 (0.01)
Average directorship industry-adjusted ROA	0.190 (0.03)	0.377 (0.00)
Average directorship change in the stock return $(R_t - R_{mkt})$	0.095 (0.07)	0.120 (0.01)
Average directorship firm size	0.167 (0.00)	0.219 (0.01)
CEO in another firm	0.202 (0.00)	0.883 (0.00)
Retired CEO in another firm	0.288 (0.00)	1.659 (0.00)
Gray director in another firm	-0.040 (0.05)	-0.199 (0.01)
Law degree	-0.240 (0.50)	0.310 (0.11)
MBA	0.194 (0.25)	-0.004 (0.55)
Academician	-0.521 (0.28)	-0.184 (0.05)
Politician (active or retired)	0.111 (0.12)	0.969 (0.05)
Appointing board's characteristics		
Independent board	-0.329 (0.10)	-0.633 (0.01)
Board size	0.189 (0.04)	0.327 (0.02)
New CEO appointed	-0.041 (0.52)	-0.193 (0.10)
Founder	-0.177 (0.20)	-1.041 (0.28)
Pseudo R^2	0.03	0.11
N	2,314	2,314

Table VII
Outside Director Departure

Estimates for the departure of outside directors appointed to the boards of *Forbes* 500 firms. We follow directors appointed between 1989 and 1995 until the year 2000. We are able to identify a total of 360 voluntary departures during our coverage period. We classify a departure to be voluntary if the reason given for the director's departure is either to pursue other interests or to take a position elsewhere. In 826 instances we are unable to exactly establish the reason for the departure. Excluded from the estimation are 490 departures related to board term limits, normal retirements, health problems, or death; also excluded are 638 executives that continue serving as directors at the end of our coverage period. The sample analyzed consists of 1,186 departures. Model (1) estimates a departure hazard regression where risk ratios appear in parentheses below each covariate estimate. Model (2) estimates a logit regression where the dependent variable is "1" if the departing director holds three or more directorships, and the value of "0" otherwise. We report heteroskedasticity robust *p*-values below each logit estimate. In both models, a, b and c denote significance at the 1, 5, and 10 percent level, respectively.

	(1) **Hazard** **(all departures)**	**(2)** **Logit** **(busy vs. non-busy)**
Constant		-7.200 (0.00)
Departure firm's performance		
Industry-adjusted stock return $(R_t - R_{ind})_{t-1}$	-0.882[a] (0.414)	-0.579[b] (0.05)
Sales growth [Log ($Sales_t/Sales_{t-1}$)]	-0.130 (0.878)	-0.089 (0.39)
Departing director characteristics		
Directorships	0.271[a] (1.312)	
Age (years above 55 in the hazard)	0.078[c] (1.081)	0.085 (0.14)
Gender (Female = 1, Male = 0)	0.213 (1.238)	0.651[b] (0.04)
Ownership (% of common stock)	-0.398 (0.671)	0.332 (0.64)
CEO of another firm	-0.526[b] (0.591)	0.153 (0.26)
Retired CEO of another firm	-0.243 (0.784)	-0.056 (0.45)
Departure board characteristics		
Independent board	-0.108 (0.898)	0.128[a] (0.01)
Board size	0.019 (1.019)	-0.251[b] (0.05)
New CEO appointed	0.135[a] (1.144)	1.055[a] (0.00)
Founder	-0.515 (0.597)	-0.611 (0.15)
N	1,186	1,186
Year (0,1) indicators	No	Yes
Model's *p*-value	0.00	0.00

Table VIII
Busy Outside Directors and Forced CEO Turnover

Logit coefficient estimates of forced CEO turnover. The dependent variable takes the value of "one" if the CEO is forced out of office and the value of "zero" otherwise. The independent variables are as follows. Busy outsiders is a dummy variable that is "one" if 50 percent or more of the outside directors hold three or more directorships. Return on assets (ROA) is operating income before depreciation (Compustat item 13) plus the decrease in receivables (Compustat item 2), the decrease in inventory (Compustat item 3), the increase in current liabilities (Compustat item 72) and the decrease in other current assets (Compustat item 68). This measure is divided by the average of beginning- and ending-year book value of total assets (Compustat item 6). A board is classified to be independent if 50 percent or more of its directors are independent, thus, we construct an indicator that is "one" in these cases and is "zero" otherwise. Firm size is the natural logarithm of total sales (Compustat item 12). CEO stock compensation divides the Black-Scholes value of the options granted during the year by base pay. CEO tenure measures the years the CEO has held the chief executive job. Ownership for the CEO, institutions, and outside directors is measured as a percentage of common. The sample consists of 2,844 CEO-year observations drawn from 508 *Forbes* 500 firms from 1989 to 1995. White (1980) heteroskedasticity robust *p*-values are reported in parentheses below each coefficient estimate.

Variable	**(1) Estimate**	**(2) Estimate**	**(3) Estimate**	**(4) Estimate**
Constant	-3.81 (0.00)	-3.87 (0.00)	-3.88 (0.00)	-3.88 (0.00)
Busy outsiders (0,1) indicator			-0.23 (0.01)	-0.13 (0.13)
Industry-adjusted ROA $_{t-1}$	-3.60 (0.00)	-2.95 (0.00)	-2.90 (0.00)	-2.88 (0.00)
Independent board indicator		0.60 (0.23)	0.64 (0.06)	0.58 (0.30)
Firm size		0.23 (0.00)	0.19 (0.00)	0.22 (0.00)
CEO stock compensation		-0.15 (0.48)	-0.15 (0.46)	-0.17 (0.40)
CEO tenure		-0.00 (0.45)	-0.00 (0.45)	-0.00 (0.56)
CEO ownership		-2.83 (0.00)	-2.92 (0.00)	-2.86 (0.00)
Institutional ownership		0.00 (0.42)	0.00 (0.44)	0.00 (0.42)
CEO is member of the founding family		-2.41 (0.00)	-2.37 (0.00)	-2.39 (0.00)
Outside director ownership		-0.30 (0.06)	-0.32 (0.04)	-0.27 (0.01)
Total number of directors		0.00 (0.28)	0.00 (0.23)	0.00 (0.27)
Independent board indicator * (Industry-adjusted ROA $_{t-1}$)		-4.12 (0.06)		
Busy outsiders indicator * (Industry-adjusted ROA $_{t-1}$)			2.82 (0.05)	
Busy outsiders indicator * Independent board indicator * (Industry-adjusted ROA $_{t-1}$)				1.54 (0.07)
Value of interaction term and Industry-adjusted ROA $_{t-1}$ (*p*-value of F-test in parenthesis)		-7.07 (0.00)	-0.08 (0.71)	-1.34 (0.23)
Year (0,1) indicators	Yes	Yes	Yes	Yes
Number of forced turnovers	58	58	58	58
Pr > $\div^2$	<0.001	<0.001	<0.001	<0.001

Table IX
Investor Reactions to Voluntary Departures of Outside Directors

Panels A and B present Day 0 abnormal returns (*ARs*) associated with announcements of departure of outside directors from the boards of *Forbes* 500 firms. Panel C and D present Day 0 *ARs* in our sample firms, related to the announcement of an additional directorship obtained by sitting outside directors in other publicly traded companies. Reported below each estimate are *p*-values from two-tailed tests using a *t*-test for means, and a Wilcoxon *Z* signed-rank test for medians.

Panel A					
Departure firm	**All departures**	**Director has 2 or fewer directorships before departure**	**Director has 3 or more directorships before departure**	***t*-statistic (mean differences)**	***Z* –statistic (median differences)**
Mean *AR*	0.0098 (0.06)	0.0090 (0.08)	0.0133 (0.00)	1.99	
Median *AR*	0.0053 (0.05)	0.0034 (0.07)	0.0080 (0.00)		3.16
N	243	198	45		

Panel B					
Is board busy after departure?	***N***	**Mean *AR***	**Median *AR***	***t*-statistic (mean differences)**	***Wilcoxon Z*-statistic (median differences)**
YES	27	0.0073 (0.05)	0.0045 (0.04)	2.02	1.98
NO	18	0.0223 (0.00)	0.02145 (0.04)		

Table X
Investor Reactions to Additional Board Appointments for Outside Directors

Panels A and B present Day 0 abnormal returns (*ARs*) for shared-directorship firms around the announcement of an additional board appointment in publicly traded companies obtained by incumbent outside directors. Reported below each estimate are *p*-values from two-tailed tests using a *t*-test for means, and a Wilcoxon *Z* signed-rank test for medians.

Panel A					
Sending firm	**All appointments**	**Director has 2 or fewer directorships after appointment**	**Director has 3 or more directorships after appointment**	***t*-statistic (mean differences)**	***Z* –statistic (median differences)**
Mean *AR*	-0.00224 (0.50)	-0.00102 (0.62)	-0.0104 (0.05)	2.04	
Median *AR*	-0.0025 (0.44)	-0.0010 (0.31)	-0.0093 (0.04)		2.78
N	818	712	106		

Panel B					
Sending board switches to busy status after appointment	***N***	**Mean *AR***	**Median *AR***	***t*-statistic (mean differences)**	***Wilcoxon Z*-statistic (median differences)**
YES	23	-0.018 (0.03)	-0.0146 (0.07)	1.86	1.69
NO	83	-0.0083 (0.19)	-0.009 (0.24)		

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