The effect of director busyness on monitoring and advising: Evidence from a natural experiment

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Abstract

This paper examines whether director busyness affects monitoring and advising in a setting that addresses the endogeneity of the number of directorships. We use mergers and acquisitions (M&A) that terminate target firms' entire boards as a natural experiment to generate variation in workload for directors serving on multiple boards. Using a 2SLS analysis with M&A as an instrumental variable, we find that a decrease in director busyness, measured by the decrease in the number of board seats, is associated with an improvement in both monitoring over financial reporting quality and strategic advising across several measures. We next find that the decrease in the number of board meetings per year, as an alternate measure of busyness, is likewise associated with an improvement in monitoring over financial reporting quality and strategic advising. Finally, we document that our results are stronger for a subsample of directors who serve on multiple boards that are geographically farther apart, consistent with these directors experiencing a greater reduction in workload. Our results suggest that a decrease in director busyness may positively impact both board monitoring and strategic advising. We also provide evidence that board monitoring and advising are not necessarily traded off, and that both may improve concurrently.

1. Introduction

Members of the board of directors are sophisticated experts in their fields who provide essential firm and management oversight through two primary roles. First, board members offer a monitoring role, providing oversight over managerial compensation and financial reporting quality. Second, board members serve an advisory role by guiding and supporting senior management in investment and acquisition decisions.[1] Quality board members are in high demand, and often lend their expertise to multiple boards. Serving on multiple boards may cause board members to be overly busy, limiting the amount of time and effort directors have to devote to each individual board. Conversely, director busyness can be an asset to a firm, as directors who serve on multiple boards gain valuable expertise from their multiple board seats and knowledge from interaction with other board members. Therefore, whether a director's busyness helps or hinders the director's effectiveness in monitoring and advising remains an empirical question.

On one hand, serving on multiple boards may limit the amount of time and effort a board member is able to devote to an individual board. Institutional bodies have expressed concerns that overly busy board members may not have sufficient time to devote to the needs of individual boards and thus have suggested limits on board members' directorships.[2] Sharma and Iselin (2012) find that when audit committee members hold multiple directorships, firms are more likely to experience financial misstatements. In addition, several studies find that multiple directorships are positively associated with CEO compensation (Core, Holthausen, and Larcker,

[1] For example, see Raheja, 2005; Boone, Field, Karpoff, and Raheja, 2007; Linck, Netter, and Yang, 2008; Harris and Raviv, 2008; and Lehn, Patro, and Zhoa, 2009.

[2] The National Association of Corporate Directors, the Council of Institutional Investors, Institutional Shareholder Services, and Spencer Stuart U.S. board index all require or recommend such limitations.

1999)[3] and negatively associated with firm value (Fich and Shivdasani, 2006; Ahn, Jiraporn, and Kim, 2010; Falato, Kadyrzhanova, and Lel, 2014; Hauser, 2013), as board members with multiple directorships are presumably stretched too thin and thus cannot devote adequate time and resources to each individual board.

On the other hand, serving on multiple boards allows board members to gain industry-specific knowledge that may provide synergies for monitoring and advising. A recent Wall Street Journal article cites an Academy of Management Journal study finding that CEOs with outside board seats perform better than CEOs with no outside board seats when the firm is in a low-growth industry or faces intense competition (Light, 2011), which suggests that an executive holding outside board seats can be beneficial for certain types of firms.[4] Numerous studies find that multiple directorships are associated with increased firm value and improved financial reporting quality, as multiple directorships allow board members to gain industry knowledge and expertise that can assist in monitoring and advising (Loderer and Peyer, 2002; Masulis and Mobbs, 2011; Field, Lowry, and Mkrtchyan, 2013).[5]

In this paper, we focus on the association between director busyness and director effectiveness in monitoring over financial reporting quality and strategic advising. A study examining whether director busyness is beneficial or detrimental to director effectiveness in monitoring and advising is subject to endogeneity problems for multiple reasons. First, board members with multiple board seats may have greater ability than board members without multiple seats, and thus may be better at monitoring and advising (the "ability" problem). High

[3] Core et al. (1999) find that busy board members are associated with higher CEO pay, which suggests that busy board members are not effective monitors over managerial compensation.

[4] The effect of multiple directorships on workload may be different for two distinct types of directors: (1) a director who is not otherwise employed, and only works as a director, and (2) a director who is also employed as a CEO/CFO. The second category represents only a small percentage of our sample (approximately 18%). Our results are robust to the exclusion of this category.

[5] Loderer and Peyer (2002) document a benefit to firm value when the chairman of the board of a listed company serves on multiple boards.

quality directors will be sought after to serve on multiple boards. Therefore, although busy directors may have their time and energy stretched thin by multiple directorships, their outstanding ability may still ensure their excellent performance on an individual board. Next, certain types of firms may purposely seek out busy board members because these firms need the knowledge and experience that busy directors accumulate from serving on multiple boards. Still another possibility is that firms with poor performance or opportunistic CEOs may seek out busy directors in hopes that these directors will be too busy to properly monitor and advise them (the "self-selection" problem). These endogeneity problems thus make it very difficult to disentangle the effect of a board member's busyness on the board member's successfully performing her monitoring and advising duties.

In order to address the endogeneity problems listed above, we exploit a natural experiment, mergers and acquisitions (hereafter, M&A) that result in a dissolution of the target firms' boards. We define directors who experience a decrease in directorships because the boards they sit on are terminated by M&A as "shocked directors." The other firms these shocked directors are still serving on are denoted as "director-interlocked firms." M&A usually result in the termination of a target firm's board and thus directors serving on the target firm's board will lose one appointment and obtain extra time and energy to devote to remaining appointments at director-interlocked firms.[6] However, M&A are unlikely to decrease or enhance a director's ability immediately, which means that M&A only generate variation in a director's workload while holding the director's ability unchanged in the short term.[7] For this reason, our research

[6] Bar-Hava, Gu, and Lev (2013) document that board members who lose one board seat due to resignation tend to devote additional time and attention to remaining appointments, for example, by chairing audit and/or compensation committees.

[7] Here we assume that while M&A experience may enhance a director's ability and knowledge base over time, a single M&A experience is unlikely to immediately enhance a director's ability in the short term. We acknowledge that from a single M&A experience, some directors may enhance their ability to advise over acquisitions. However, in this study, we focus on strategic advising on corporate innovation, and not advising over acquisitions. In section 5

design addresses the first potential endogeneity problem listed above, the ability problem. In addition, it would be difficult for director-interlocked firms to predict which directors in the labor market will experience a decrease in directorships due to M&A. Therefore, while firms can initially choose to appoint directors with multiple directorships or not, they are unable to select or avoid appointing directors who will be shocked by M&A. For this reason, our research design successfully overcomes any self-selection bias, the second potential endogeneity problem listed above. M&A therefore introduce variation to the number of directorships for shocked directors, which should be highly correlated with the time and effort that a shocked director is able to devote to a director-interlocked firm. This research design therefore allows us to isolate the effect of director busyness on director effectiveness in monitoring and advising senior management.

We employ three different measures of financial reporting quality to capture director effectiveness in monitoring over financial reporting quality: (1) the standard deviation of discretionary accruals (Francis, LaFond, Olsson and Schipper, 2005), (2) unexpected audit fees (Hribar, Kravet and Wilson, 2013), and (3) discretionary revenues (Stubben, 2010). We next employ three different measures of corporate innovation to capture director effectiveness in strategic advising: (1) the level of research and development expense (hereafter, R&D) (Faleye, Hoitash, and Hoitash, 2011), (2) the return on R&D (Lev and Sougiannis, 1996), and (3) the investment residual (Biddle, Hilary, and Verdi, 2009; Kim, Mauldin, and Patro, 2014). Faleye et al. (2011) argue that when the board of directors successfully advises the CEO, this creates a collaborative and supportive environment where the CEO is able to pursue greater strategic

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we perform several additional analyses in order to strengthen the assertion that our results successfully isolate the effect of director workload on their monitoring and advising roles.

innovation, thus resulting in a higher R&D expense.[8] Similarly, a higher return on R&D and investment residual reflect a more effective investment in innovation, and therefore a greater effectiveness of director strategic advising over innovation.

We employ M&A as an instrumental variable and use two-stage least squares (hereafter, 2SLS) in a sample of 14,884 director-interlocked firm-years and control firm-years from 1996 to 2013 to examine the effect of director busyness on monitoring over financial reporting quality and strategic advising. In the first stage, the change in total directorships of director-interlocked firms and control firms is regressed on the instrumental variable, an indicator variable coded as one for director-interlocked firms, and zero for control firms. This allows us to obtain the predicted change in total directorships. In the second stage, the measures of monitoring and advising are regressed on the predicted change in total directorships. We find that monitoring and advising improve at director-interlocked firms as compared to control firms in the post-M&A period. This is consistent with a decrease in director busyness improving monitoring over financial reporting quality and strategic advising.

We perform several sensitivity tests and additional analyses to assess the robustness of our results. First, we use the number of board meetings per year as an alternate measure of busyness (Vafeas, 1999; Sharma, Naiker, and Lee, 2009; Brick and Chidambaran, 2010). When busy directors experience a decrease in board seats, they should experience a concurrent decrease in the number of meetings they must attend per year. The decrease in the number of meetings per year will be correlated with the reduction in workload as a result of a decrease in board seats. We find that a decrease in the number of board meetings per year is associated with improvements in our measures of monitoring over financial reporting quality and strategic advising.

[8] On the other hand, when the board of directors act primarily as monitors, or "watchdogs," they compromise this collaborative and supportive environment. For this reason, monitoring and advising are often viewed as trade-offs.

Next, we partition our sample into two subsamples ("near" and "far) based on the median geographic distance between the target firm whose board is terminated and the director-interlocked firms (Alam, Chen, Ciccotello, and Ryan, 2014; Hauser, 2013). A greater geographic distance between board appointments is likely correlated with a larger shock to the busy director's time and workload because a director with multiple appointments that are far apart presumably spends ample time travelling to and from board meetings. We find that monitoring over financial reporting quality only improves in the "far" subsample, and not the "near" subsample, consistent with directors in the "far" subsample experiencing a greater reduction in workload and obtaining more time to devote to monitoring at remaining board appointments. While strategic advising improves in both the "near" and "far" subsamples across two of the three measures, the level of R&D expense only improves in the "far" subsample.

Finally, we test the effect of multiple directorships on firm operating performance. Kim et al. (2014) argue that improved operating performance is a likely outcome of improvements in both monitoring and advising. We document that operating performance improves at director-interlocked firms as compared to control firms across three measures: (1) ROA, (2) ROE, and (3) Tobin's Q, providing additional evidence that monitoring and advising improve as a result of a decrease in director busyness.

Our paper makes several contributions to the literature. Endogeneity issues have resulted in mixed findings in prior studies examining the relationship between director busyness and director effectiveness in monitoring and advising. We exploit M&A as a natural experiment to generate variation in director workload to provide evidence on the relationship between director busyness and director effectiveness in monitoring and advising. In addition, we effectively distinguish between the measurement of two primary roles of the board of directors: monitoring

over financial reporting quality and the strategic advising role. Prior studies suggest that there is a trade-off between these two roles, with strong monitoring coming at the expense of advising, or vice versa (Faleye et al. 2011; Field et al., 2013). We provide evidence of a setting where additional time and resources allow a director to improve concurrently across both roles. Finally, our paper builds on prior literature suggesting that improvements in monitoring and advising are linked to improved operating performance (Kim et al., 2014) to provide a plausible mechanism for this association. We propose that directors obtaining more time to devote to board appointments do a better job at monitoring financial reporting quality and advising over innovation; these improvements are then linked to superior operating performance.

The rest of the paper is structured as follows. Section 2 reviews the prior literature and develops our hypotheses. Section 3 develops our proxies for monitoring over financial reporting quality and strategic advising. Section 4 describes the research methodology and presents the results of empirical tests. Section 5 presents additional analyses, and section 6 concludes and discusses the limitations of our study.

2. Prior literature and hypothesis development

2.1 Monitoring and Advising Roles of the Board of Directors

Board members serve two primary roles in their interaction with firm senior management. First, board members perform a key monitoring role, providing oversight over managerial compensation and financial reporting quality. Second, board members serve an advisory role by guiding and supporting senior management in investment and acquisition decisions. Prior research suggests that there is a trade-off whereby directors excel in either monitoring or advising. Adams and Ferreira (2007) argue when managers disclose information to

the board, the board gives better advice, but also monitors the manager more intensely; for this reason manager have low incentives to share information with directors. Faleye et al. (2011) propose that an increasing focus on board independence has brought about a board of directors that monitors the CEO heavily, resulting in lower executive compensation and reduced earnings management. However, the authors find that this improvement in monitoring comes with a deterioration in advising over investment and acquisition decisions, and ultimately a subsequent decrease in firm value.

Field et al. (2013) document that busy boards contribute positively to firm value for IPO firms and newly established public firms, who likely require significant advising, but not for well-established firms, who likely require stronger monitoring. An essential takeaway from these results is that there is a trade-off whereby board members either act as strong monitors or strong advisors, but not both. Finally, Kim et al. (2010) provide evidence that strong advising may occur concurrently with strong monitoring over CEO compensation, but not strong monitoring over financial reporting quality.

2.2 Director Busyness and Monitoring and Advising

The issue of director busyness has received considerable attention among academics and policy makers. Despite numerous studies examining the effect of director workload on firm outcomes, findings are mixed as to whether multiple directorships are beneficial or harmful to director monitoring and advising effectiveness. On one hand, holding directorships on multiple boards can provide directors with a wider range of accounting and industry expertise. This expertise likely helps directors in strategic advising as well as monitoring over financial reporting quality. Field et al. (2013) find that busy board members positively contribute to firm

value for firms that are likely to need sophisticated advisory services. Loderer and Peyer (2002) find that holding multiple board seats positively contributes to firm value for listed firms. Masulis and Mobbs (2011) document that firms with inside directors holding outside board seats tend to make better acquisition decisions and overstate earnings less often as compared to inside directors holding no outside board seats. They further document a positive stock market reaction to outside board appointments, consistent with these appointments improving shareholding wealth.

Moreover, directors are likely to be concerned about penalties for poor performance, in the form of litigation risk, as well as rewards for excellent performance, in the form of reputational benefits and additional board seats. Srinivasan (2005) finds that directors of firms that misstate their financial reports are penalized by a loss of board positions, while Helland (2006) suggests that directors credited with preventing fraud are rewarded in the director labor market. The penalties for poor performance and rewards for excellent performance may be sufficient to ensure a board member's adequately performing her duties, even while holding multiple seats.

Conversely, directors with multiple directorships have been widely criticized for being too busy to perform their monitoring and advising duties. Core et al. (1999) document that CEO compensation is higher when board members are busy, consistent with busy board members being less effective at monitoring over compensation. Sharma and Iselin (2012) document a significant positive association between multiple directorships for audit committee members and financial misstatements after SOX. Falato et al. (2014) find a negative stock market reaction to increased director busyness and conclude that the market perceives busy directors to be detrimental to firm value. Finally, Fich and Shivdasani (2006) document that busy board

members are associated with lower firm value, and Ahn et al. (2010) find that busy board members are associated with value-destroying M&A.

One concurrent study uses M&A that terminate a target firm's board of directors as a shock to director busyness. Hauser (2013) uses this shock to examine the effect of director busyness on firm performance, and finds that the reduction in director busyness at director-interlocked firms is associated with higher market-to-book ratios, higher earnings, and higher pay-performance sensitivity in CEO compensation contracts. These results are consistent with a reduction in director busyness positively contributing to firm value. However, Hauser does not address the monitoring and advising roles of the board, and whether director effectiveness in performing these roles is affected by a change in director workload.

In sum, as the direction of the association between director busyness and monitoring over financial reporting quality and strategic advising is unclear, our two hypotheses are stated in the null form:

H1: There is no association between director busyness and monitoring over financial reporting quality.

H2: There is no association between director busyness and strategic advising.

3. Proxies for Monitoring Over Financial Reporting Quality and Strategic Advising

3.1 Proxies for Monitoring over Financial Reporting Quality

We employ three main proxies of financial reporting quality to capture director effectiveness in monitoring over financial reporting quality. First, we measure the standard deviation of discretionary accruals (σDA). Accruals measures estimate how well current accruals capture past, current, and future operating cash flows (Dechow and Dichev, 2002) and financial

statements will be more representative of the firm's underlying performance when there is lower estimation error embedded in the accruals process or less earnings management. For this reason, a larger standard deviation of discretionary accruals is indicative of poorer financial reporting quality and therefore poorer director effectiveness in monitoring over financial reporting quality. Following Francis et al. (2005), we use the model of accruals quality developed by Dechow and Dichev (2002) to calculate the discretionary accruals. *σDA* is the standard deviation of the residual from Dechow and Dichev (2002) regression over 5 years.

Next, we measure unexpected audit fees. Auditors will suffer substantial litigation and reputational costs when their clients have financial misstatements (e.g., Palmrose, 1987; Thompson and McCoy, 2008; Hennes, Leone, and Miller, 2010). To decrease reputation and litigation risks, auditors will increase working hours and/or charge higher risk premiums when they perceive financial reporting quality to be low. Both actions will lead to higher fees. Therefore, unexpected audit fees capture the auditor's perception of financial reporting quality and serve as a measure of director effectiveness in monitoring financial reporting quality.

Hribar et al. (2013) use a regression-based approach to remove the expected amount of audit fees based on the determinants of the audit that are unlikely to capture accounting quality. Following their approach, we isolate the unexpected audit fees from the total audit fees. The signed unexpected audit fees (*UAF*) serves as our second measure of financial reporting quality, where higher values of *UAF* are reflective of poorer financial reporting quality.

Finally, our third measure of financial reporting quality is discretionary revenues. Stubben (2010) measures discretionary revenues to capture premature revenue recognition, which is indicative of aggressive application of GAAP and therefore poorer financial reporting quality. The unsigned discretionary revenues (*DISCREV*), conditional on a firm's credit policy,

serves as our third measure of financial reporting quality, where higher levels of *DISCREV* reflect poorer financial reporting quality. We calculate it as the absolute value of the residual from a regression of the change in annual receivables on the change in annual revenues, controlling for variations of firms' credit policies. In order to allow the relation between receivables and revenues to vary depending on firms' credit policies, we include as control variables proxies for financial strength, operational performance relative to industry competitors, and the stage of the business cycle.

3.2 Proxies for Strategic Advising

Our first proxy for strategic advising is a measure of strategic corporate innovation from Faleye et al. (2011), which focuses, in particular, on corporate investments in innovation.[9] Corporate innovation involves relatively risky investments and therefore requires that management view the board as supportive advisors willing to undertake such risk. When directors excel at advising, this creates a collaborative and supportive environment which allows the CEO to pursue relatively risky innovation. We use the level of R&D scaled by total assets in the previous year (*R&D*) as a measure of corporate investment in innovation, with a positive change in *R&D* indicating higher levels of corporate innovation and thus greater director effectiveness in strategic advising.

Next, we measure the return on R&D following Lev and Sougiannis (1996). If directors are effectively advising the CEO, then not only should the CEO pursue higher levels of R&D, but this R&D should yield a greater return. We estimate the relation between R&D expense and subsequent earnings for a cross-section of firms in order to compute firm-specific R&D capital

[9] Faleye et al. (2011) also look at advising over acquisition decisions by measuring M&A returns. The nature of our research design inhibits such an analysis, as we would need to examine M&A returns before and after our shock, and most firms do not engage in M&A frequently enough to allow us to examine the change in M&A returns.

and the corresponding amortization rate. Earnings can then be adjusted for amortization of R&D; the profitability of R&D can be measured by how much the unamortized R&D contributes to the stock return. Therefore, the return on unamortized R&D (*Return-R&D)* serves as our second measure of strategic advising over corporate innovation.

Finally, our third measure of strategic advising is the absolute value of the investment residual (Biddle et al., 2009; Kim et al., 2014). The investment residual (*InvestResidual)* should capture the degree of over- or under-investment, where a lower over-investment, and therefore a lower value of *InvestResidual*, reflects better advising over investment policy.[10] Following Biddle et al. (2009), we calculate the investment residual as the absolute value of the residual from an industry-year-level regression of investment on the prior year growth in sales, where investment is the sum of capital expenditures, R&D, and acquisitions, less the sales of property, plant, and equipment. Detailed descriptions for how we calculate all measures can be found in Appendix A.

4. Research Design and Empirical Results

4.1 Sample

Our sample originates from RiskMetrics, which provides details on the board of directors for firms that comprise the S&P 1500 index from 1996 to 2013. We obtain M&A data from the SDC Platinum Mergers & Acquisitions Database and include all deals completed between 1996 and 2012 in order to allow our sample to measure director data one year after M&A. We exclude share repurchases, recapitalizations and takeover bids that were withdrawn or not completed. We

[10] *InvestResidual* is an absolute value measure, and therefore lower values of this measure could represent either less over-investment or under-investment. Following Kim et al. (2014), in a robustness test, we separately estimate our analyses on a sample of the top three quartiles vs. the bottom three quartiles. We find that our results are significantly stronger for the top three quartiles (Chi-squared test: p=0.029), confirming that our results are driven by a reduction in over-investment.

require that all deals be above $10 million and that the acquirers control 100 percent of targets' outstanding shares after the acquisition. We also require the target firms to be public firms so that we can obtain director data. To control for the time invariant factors and capture the change in directorships of a firm, all regressions are run in the change form and thus the sample requires the shocked directors to serve on director-interlocked firms from the year of the M&A to one year after the M&A. These restrictions result in 574 M&A deals for S&P 1500 firms.

We next identify directors shocked by the 574 M&A deals (the "shocked directors"). We keep only shocked directors who have multiple directorships and identify their board seats on other firms (the "director-interlocked firms"). The director-interlocked firm-years therefore comprise our sample firms.[11] We then gather the sample of control firms, which includes all S&P 1500 firm-years that do not have directors shocked by M&A. Firms in financial industries (SIC codes 6000—6999) are excluded because their financial reporting and capital structure are likely to be different from other firms. All firm-level financial characteristics come from Compustat, and variables are winsorized at the 1% level. After omitting observations due to missing values, we end up with a final sample that includes 14,884 firm-years from 1996 to 2013.

4.2 Research Design

Our research design employs M&A as an instrumental variable and uses 2SLS to isolate the effect of director busyness on director effectiveness in monitoring over financial reporting quality and strategic advising. Variations in director time and energy generated by M&A provide an ideal setting to examine the effect of director busyness on monitoring over financial reporting quality and strategic advising. In the first stage, we regress the change in total directorships of

[11] All shocked directors are aggregated to the director-interlocked firm level; for this reason it is possible for a director-interlocked firm to have more than one shocked director. 17.88% of our director-interlocked firms have more than one shocked director

director-interlocked firm-years and control firm-years on the instrumental variable, *MA*, and control variables. From this regression we obtain the predicted change in total directorships of director-interlocked firm-years and control firm-years.

$$\Delta TotalDirectorship = \alpha_0 + \alpha_1 M\&A + Controls + Year\ dummies + Industry\ dummies + \varepsilon \quad (1)$$

Δ *TotalDirectorship* measures the change in the number of directorships. *M&A* is the instrumental variable, a dummy variable equal to 1 if the firm-year has directors who are shocked by M&A (director-interlocked firm-years), and 0 otherwise (control firm-years). A list of all variables and their definitions can be found in Appendix A.

In the second stage, we regress the change in the measures of monitoring and advising on the predicted change in total directorships to estimate the effect of multiple directorships on monitoring over financial reporting quality and strategic advising. We use the following regression models:

$$Monitoring/Advising = \beta_0 + \beta_1 EST - \widehat{TotalDirectorship} + Controls + Year\ dummies + Industry\ dummies + \gamma, \quad (2)$$

where the measures of monitoring are $\Delta\sigma DA$, ΔUAF, and $\Delta DISCREV$, and the measures of advising are $\Delta R\&D$, $\Delta Return\text{-}R\&D$, and $\Delta InvestResidual$. A list of all variables and their definitions can be found in Appendix A.

4.3 Descriptive Statistics and Univariate Analyses

Table 1 presents the descriptive statistics (means, standard deviations, and medians) for our sample. To minimize the impact of outliers, we winsorize all variable at the 1st and 99th percentile values. The mean value for *TotalDirectorship* is 15.22, which demonstrates that the total number of directorships for directors on an average firm in our sample is 15; given an

average board size of about 10 directors, this translates to 5 total outside board seats. *TotalBoardMtgs* measures the total number of board meetings attended per year by all directors at a given firm, including the board meetings of that firm, and has a mean value of approximately 102 meetings. Standard deviation of discretionary accruals (*ΔσDA*) have a mean (median) value of 0.23 (0.08), comparable to Kim et al. (2014). The mean unexpected audit fees (*UAF*) is -0.06, similar to Hribar et al., (2013). The unsigned discretionary revenues (*DISCREV*) is 0.02, comparable to Stubben (2010). The mean values of our measures of advising, *R&D Return-R&D* and *InvestResidual*, are 0.04, -0.00 and 0.20, respectively. The statistics for all of our measures of advising are similar to prior literature.

[INSERT TABLE 1 HERE]

Table 2 reports correlation coefficients between our variables. The correlation analyses demonstrate that most of the correlations are less than 0.4, which is considerably less than the 0.8 threshold that would suggest multicollinearity (Gujarati, 2003). We also calculate the Variance Inflation Factor (VIF) for variable pairs with a correlation coefficient higher than 0.4 to detect multicollinearity issues. Untabulated results show that none of the values for VIF is greater than 10, the threshold beyond which multicollinearity may be a concern. As expected, some variables are highly correlated, such as *AQ* and *TotalDirectorship*, *UAF* and *TotalDirectorship*, and *R&D* and *TotalDirectorship*.

[INSERT TABLE 2 HERE]

Table 3 reports the distribution of the change in the number of director's board seats one year after the shocked director board appointments on target firms are terminated by M&A. For directors shocked by M&A, approximately 62% of them lose one directorship after the M&A, while another 8% lose two directorships, indicating that M&A does result in a reduction in their

workload. Even though some directors accept new appointments, as evidenced by the 23% who experience no change in directorships, and the 4% who in fact experience a gain of one directorship, it is likely that some time gap still exists between losing the old appointment due to M&A and accepting new appointments. It is therefore likely that the vast majority of shocked directors experience a reduction in workload after M&A. In contrast, the non-shocked directors in interlocked firms largely do not experience a substantial change in directorships. Approximately 75% of non-shocked directors experience no change in directorships. For directors in control firms, approximately 79% experience no change in directorships. Taken together, Table 3 suggests that M&A results in a substantial decrease in workload for shocked directors; M&A thus provides a good natural experiment to test the effect of director busyness on their monitoring and advising roles.

[INSERT TABLE 3 HERE]

4.4 Multivariate Results

Table 4 presents the results of H1, the test of the effect of multiple directorships on monitoring over financial reporting quality. Column 1 presents the first stage of the IV methodology (equation 1), a cross-sectional regression of the change in total directorships on the M&A dummy variable and control variables in order to predict the change in total directorships. With the exception of dummy variables, all variables in the regression are in change form to capture the time-invariant factors. As expected, this regression demonstrates that the presence of M&A is associated with a significant reduction in directorships of 0.86 (p=0.00).

Columns 2 through 7 present our main results for H1, the second stage regression of the IV methodology (equation 2). *EST-TotalDirectorship* represents the predicted change in total

directorships from the first stage regression and is therefore the main test variable. For each dependent variable, the first column represents our main analysis, while the second column adds several additional control variables from Krishnan, Wen, and Zhao (2011). Columns 2 and 3 present the second stage regression using our first monitoring measure, the change in the standard deviation of discretionary accruals (*ΔσDA*), columns 4 and 5 employ our second monitoring measure, the change in unexpected audit fees (*ΔUAF*), and columns 6 and 7 employ our third monitoring measure, the change in discretionary revenues (*ΔDiscRev*). In all tests, consistent with our first hypothesis, the coefficient on *EST-TotalDirectorship* is positive and significant. The positive coefficient indicates that a reduction in director busyness is associated with a reduction in the standard deviation of discretionary accruals, unexpected audit fees, and discretionary revenues. All three measures therefore indicate an improvement in financial reporting quality at director-interlocked firms as compared to control firms, which is consistent with an improvement in the effectiveness of monitoring over financial reporting quality.

[INSERT TABLE 4 HERE]

Table 5 presents the results of H2, the test of the effect of multiple directorships on strategic advising. Column 1 presents the first stage of the IV methodology. Columns 2 through 7 present our main results for H2, the second stage regression of the IV methodology. Columns 2 and 3 use our first advising measure, the change in R&D expense (*ΔR&D*), columns 4 and 5 employ our second advising measure, the change in the return on R&D expense (*Δreturn-R&D*), and columns 6 and 7 use our third advising measure, the investment residual (ΔinvestResidual). For the first two advising measures (3rd advising measure), consistent with our second hypothesis, the coefficient on *EST-TotalDirectorship* is negative (positive) and significant. The negative (positive) coefficient indicates that a reduction in director busyness is associated with an increase

in R&D expense, an increase in the return on R&D, and a decrease in absolute value of investment residuals. All three measures therefore indicate an increase in investment in corporate innovation, which is consistent with an improvement in strategic advising.

[INSERT TABLE 5 HERE]

5. Additional Analyses

5.1 Number of Board Meetings per Year

In Table 6 we present the results of an analysis using the number of board meetings per year as an alternate measure of director busyness. When directors experience a decrease in workload due to a decrease in board seats after the shock of M&A, this decrease in workload should be highly correlated with the decrease in the number of annual board meetings the director must attend. We estimate the first stage regression to predict the total decrease in the number of board meetings after the shock of M&A (*ΔTotalBoardMtgs*). We next estimate the second stage, where we regress the measures of monitoring and advising on the predicted change in total board meetings. In the second stage regressions in Table 6, we document that a decrease in the number of board meetings per year is associated with an improvement in the proxies for monitoring over financial reporting quality as well as strategic advising. This additional analysis therefore provides further evidence that a decrease in director busyness is associated with an improvement in director effectiveness in monitoring over financial reporting quality and strategic advising.

[INSERT TABLE 6 HERE]

Further, the first-stage regression of Table 6 indicates that, on average, director-interlocked firms experience a decrease of about 3 board meetings per year after M&A. In Table

1, we reported that the mean value of *TotalBoardMtgs* is 102 meetings, which reflects that all directors on an average firm's board attend 102 meetings per year. Given that most director-interlocked firms only have one shocked director, this means that the shocked director on each firm experiences an average decrease of 3 board meetings per year, which represents an average 30% decrease in annual meetings.[12] Although this represents a substantial decrease in an average shocked director's workload, most director-interlocked firms (90.8%) only have one shocked director; a natural concern is that it may be difficult to believe that the change in a single director's workload would have a substantial impact on a firm's outcomes. In an untabulated robustness analysis, we estimate our tests of H1 and H2 using the number of shocked directors instead of the M&A indicator variable in the first stage. In these tests, we find that our 2nd stage results hold: a decrease in the number of directorships is associated with improvements in measures of monitoring and advising. We conclude that the number of shocked directors is positively associated with improvements in monitoring and advising, and our results are therefore stronger when a director-interlocked firm has more shocked directors.

5.2 Geographic Distance

In Table 7, we partition our sample based on the median level of geographic distance between the target firm whose board is terminated and the director-interlocked firms each director still serves on (Hauser, 2013). When directors serve on multiple boards that are geographically far apart, the termination of one board appointment should result in even more additional time to devote to existing appointments, as compared to directors serving on multiple boards that are geographically close together. Geographic distance is therefore a proxy for the

[12] The average board size is about 10 directors per board. Based on an average of 102 meetings per year, this means that the average director attends 10 meetings per year. A decrease of 3 meetings per year for a shocked director therefore represents a 30% decrease in annual meetings.

busy director's increase in time and energy available to devote to remaining appointments. We estimate our first stage regressions with indicator variables for director-interlocked firms with "near" and "far" shocked directors, and then use the estimated change in directorships from this first stage to estimate our 2nd stage regressions. Table 7 Panel A presents our analysis of the "near" and "far" subsamples for the tests of monitoring, and demonstrates that only the "far" subsample is associated with an improvement in the three measures of monitoring over financial reporting quality, while the effect on the "near" subsample is largely insignificant. Panel B of Table 7 presents our analysis of the test of advising on our "near" and "far" subsamples. In Panel B, only the "far" subsample indicates an improvement in R&D expense, while both subsamples indicate an improvement in the return on R&D and investment residuals, although the results for investment residuals are only marginally significant in the "near" sample. Table 7 therefore provides additional evidence that a reduction in workload for shocked directors is associated with an improvement in monitoring over financial reporting quality as well as strategic advising.

[INSERT TABLE 7 HERE]

5.3 Operating Performance

Finally, in Table 8, we test the effect of multiple directorships on firm operating performance. Kim et al. (2014) argue that improved operating performance is a likely outcome of improvements in both monitoring and advising. We measure operating performance using the change in ROA (*ΔROA*), the change in ROE (*ΔROE*), and the change in Tobin's Q (*ΔLogQ*). We document that a decrease in director busyness is associated with an increase in all three measures. This test therefore provides further evidence that a decrease in director busyness is

associated with an improvement in both monitoring and advising, reflected in higher firm operating performance.

[INSERT TABLE 8 HERE]

6. Conclusion

This paper exploits variations in director workload due to mergers and acquisitions as a natural experiment to examine the effect of director busyness on director effectiveness in two key roles: monitoring over financial reporting quality and strategic advising. Due to the endogeneity of the association between the number of directorships and director performance, prior literature finds mixed results as to whether multiple directorships benefit or harm firms. M&A that terminate entire boards of target firms therefore provide an ideal natural experiment to test the association between director busyness and monitoring and advising.

Employing a 2SLS methodology using M&A as an instrumental variable, we find statistically significant effects of director busyness on financial reporting quality and strategic advising across several measures. Specifically, we find that a decrease in director's multiple directorships results in a decrease in the standard deviation of discretionary accruals, unexpected audit fees, as well as discretionary revenues, and an increase in R&D, return on R&D, and investment residuals. We next find that using the number of board meetings per year as an alternate proxy of director workload yields similar results across all measures, providing additional evidence that a direct measure of the decrease in director workload is associated with an improvement in monitoring over financial reporting quality as well as strategic advising. In addition, partitioning our sample based on the geographic distance between board seats, we find that our results are larger strongest for the subsample in which director multiple board seats are

geographically farther apart, consistent with geographic distance being an alternate proxy for the workload associated with director busyness. Finally, we find that a decrease in director busyness is associated with an improvement in firm operating performance, consistent with an improvement in both the monitoring and advising roles.

Our study provides several contributions to the literature. First, we exploit a natural experiment to provide evidence of the effect of director busyness on monitoring and advising. In addition, prior literature suggests that board members effectively performing their duties involves an essential trade-off between advising and monitoring (Faleye et al., 2011; Field et al., 2013; Kim et al., 2014). We provide evidence of a setting in which board members obtain additional time and energy to devote to their appointments and are able to improve across both of these two key roles.

Our study is subject to the following caveats. First, M&A is a specific setting, which may restrict the generalization of our findings. While we argue that one M&A deal is unlikely to improve a director's ability to advise on corporate innovation and to monitor over financial reporting quality, we do not examine a director's ability in advising over acquisitions. Therefore our results may not be generalizable to all advising roles. Second, we attempt to control for extraneous effects by including relevant control variables; however, our results may be affected by correlated omitted variables.

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Appendix A

Variable Definitions

Dependent Variables	
TotalDirectorship	The total number of directorship in S&P 1,500 firms that all directors of firm *i* hold including at firm *i*. The sample originates from RiskMetrics database.
EST-TotalDirectorship	The predicted values of the change in the total number of directorships obtained from a first-stage regression of change of multiple-directorships on M&A.
TotalBoardMtgs	The total number of board meetings held in year *t* that all directors of firm *i* attend, including the board meetings during year *t* in firm *i*. The sample originates from 1996 to 2013.
EST-TotalBoardMtgs	The predicted value of the change in the total number of board meetings obtained from a first-stage regression of the change in the number of board meetings on M&A.
M&A	Indicator variable equal to 1 if firm *i* has directors who experience a decrease in multiple directorships because M&A terminates the boards on which they serve, and 0 otherwise.
M&A-Near	Indicator variable equal to 1 if firm *i* has directors who experience a decrease in multiple directorships due to M&A, and the distance between the location of the acquired firm's headquarters and firm *i* headquarters is below the median distance in our sample. The location is based on the zip codes of the headquarters of each firm obtained from Compustat.
M&A-Far	Indicator variable equal to 1 if firm *i* has directors who experience decrease in multiple directorships due to M&A, and the distance between the location of the acquired firm's headquarters and firm *i* headquarters is above the median distance in our sample. The location is based on the zip codes of the headquarters of each firm obtained from Compustat.
σ DA	Standard deviation of discretionary accruals, calculated as the standard deviation of the residual from Dechow and Dichev (2002) regression over 5 years. Total current accruals are regressed on cash flow from operations in year t-1,t, and t+1, the change in revenue, and net property, plant, and equipment: $$TCA_{i,t} = \beta_0 + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta Rev_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{i,t}$$ where $TCA_{i,t} = \Delta CA_{i,t} - \Delta CL_{i,t} - \Delta Cash_{i,t} + \Delta STDEBT_{i,t}$, where TCA is total current accruals in year t; CFO is the firm's cash flow from operations; $\Delta CA_{i,t}$ is the firm's change in current assets from year t-1 to year t; $\Delta CL_{i,t}$ is the firm's change in current liabilities from year t-1 to year t; $\Delta STDEBT_{i,t}$ is the firm's change in short-term debt from year t-1 to year t; $\Delta Rev_{i,t}$ is the firm's change in revenues from year t-1 to year t; and $PPE_{i,t}$ is the gross value of property, plant, and equipment.

UAF	Signed unexpected audit fees, which is calculated as the residual from the regression using Hribar, Kravet and Wilson's (2013) model of audit fees by year and firm size decile. The audit fee model is a regression of the log of audit fees taken from Audit Analytic database (*AUDIT_FEES*) on a big 4 indicator (*AU*), *Size*, the square root of the number of the firm's business segments (Compustat Segment Data File), the ratio of foreign sales (Compustat Segment Data File) to total sales (*SALE*), inventory (*INVT*), receivables (*RECT*), *Debt*, operating income after depreciation (*OIADP), Loss*, modified audit opinion indicator (*AUFOP),* the square root of the number of years that firm has been a client of their current auditor, IPO and SEO indicators (from Compustat), debt issue indicator (from SDC), and *LitigationRisk*.
DiscRev	The absolute value of the residual from a regression of the change in annual receivables on the change in annual revenues and controls for variations of firms' credit policies: $\Delta AR_{it} = \alpha + \beta_1 \Delta R_{it} + \beta_2 \Delta R_{it} \times SIZE_{it} + \beta_3 \Delta R_{it} \times AGE_{it} + \beta_4 \Delta R_{it} \times AGE\_SQ_{it} + \beta_5 \Delta R_{it} \times GRR\_P_{it} + \beta_6 \Delta R_{it} \times GRR\_N_{it} + \beta_7 \Delta R_{it} \times GRM_{it} + \beta_8 \Delta R_{it} \times GRM\_SQ_{it} + \varepsilon_{it}$ where ΔAR is the change in the end of the fiscal year accounts receivable; ΔR_{it} is the change in annual revenues; $SIZE$ is the natural log of total assets; AGE is the natural log of the firm's age in years; GRR_P is the industry-median-adjusted revenue growth (=0 if negative); GRR_N is the industry-median-adjusted revenue growth (=0 if positive); GRM is the industry-median-adjusted gross margin at the end of the fiscal year; and _SQ is the square of the variable to allow for a nonlinear relation between the variable and credit policy.
R&D	Research and development expenditures (*XRD*) during fiscal year t scaled by total assets (*AT*) at the beginning of the year.
Return-R&D	A measure of the stock return on net investment in R&D from Lev and Sougiannis (1996). The residual from the regression: $R_{ir} = \alpha_1 + \beta_1 X_{it} + \gamma_1 R\&D_{it} + \varepsilon_{it}$ where R is the annual stock return from nine months before to three months after the fiscal year-end; X is the reported earnings-per-share; R&D is the net investment in R&D during t, which is equal to the R&D expenses minus the R&D amortization. The annual R&D amortization, RA_{it}, is the sum of current and past R&D outlays, $RD_{I,t-k}$,each multiplied by the appropriate amortization rate, δ_k. ($RA_{it} = \sum_k \delta_k RD_{I,t-k}$) The R&D amortization rate in year k, δ_k, is the ratio of that year's benefits expired, $\hat{\alpha}_{2,k}$, to toal benefirs, $\sum_k \hat{\alpha}_{2,k}$. ($\delta_k = \hat{\alpha}_{2,k} / \sum_k \hat{\alpha}_{2,k}$) $\hat{\alpha}_{2,k}$ is estimated from the following two-stage regression: In the first stage, for every year and two-digit industry, firms' scaled R&D expenditure, (RD/S), are cross-sectionally regressed on the four-digit industry R&D (IRD/S). $(RD/S)_{it} = \mathrm{a} + \mathrm{b}(IRD/S)_{it} + \varepsilon_{it}$ The fitted value of (RD/S) is used in the following second stage. $(OI/S)_{it} = \alpha_0 + \alpha_1 (TA/S)_{i,t-1} + \sum_k \alpha_{2,k} (RD/S)_{i,t-k} + \alpha_3 (AD/S)_{i,t-1} + \varepsilon_{it}$, OI is annual operating income, before depreciation, advertising and R&D expenses, of firm I in year t; S is annual sales; TA is the value of plant and equipment,

	inventory, and investment in unconsolidated subsidiaries and goodwill, in current dollars, measured at the beginning-of-year values; RD is annual R&D expenditures in current dollars; AD is annual advertising expenses, measured at the beginning-of –year values.
InvestResidual	The absolute value of the residual from regressing Investment on the prior year Growth in Sales (*SALE*). Investment is the sum of capital expenditures (*CAPX*), research and development expenditures (XRD), and acquisitions (ACQ) less sales of property, plant, and equipment (SPPE) multiplied by 100 and scaled by prior year total assets (*AT*). The regressions are performed for each industry-year with at least 20 observations. Insutry classifications are based on Fama-French (1997) industry classifications.
ROA	Income before depreciation and amortization (*OIBDP*) during year t scaled by average book value of assets (*AT*).
ROE	Income before depreciation and amortization (*OIBDP*) net of preferred stock dividends (*DVP*)during year t scaled by average book value of assets (*AT*).
LogQ	Natural log of Tobin's Q, calculated as book value of assets (*AT*) less the book value of equity (*CEQ*) and the market value of equity (*PRCC_F * CSHO*) scaled by average book value of assets (*AT*).
	Change in Directorship Controls
Size	The natural log of book value of assets (*AT*).
Debt	Current liabilities (*DLC*) and long-term liabilities (*DLTT*) scaled by lagged book value of assets (*AT*).
Growth	Average sales growth (*SALE*) rate over the previous three years.
PPE-Growth	Net property, plant and equipment (*PPENT)* scaled by lagged book value of assets (*AT*).
σ CFO	The standard deviation of net cash flows from operations (*OANCF*) over five years prior to the M&A.
IndptPercent	The percentage of independent directors on the board (from RiskMetrics database).
MB	Ratio of market value (*PRCC_F * CSHO*) to book value of common equity (CEQ).
Loss	Indicator variable equal to 1 if a firm reports negative income before extraordinary items (*IBQ*), zero otherwise.
BoardSize	The total number of directors on the board(from RiskMetrics database).
	Other Controls
FinancialExpert	The number of directors with financial or accounting expertise divided by the total number of directors on the board (from RiskMetrics database).
Grey	The number of affiliated directors on the board divided by the total number of directors on the board(from RiskMetrics database).

InstOwnership	Percentage of equity owned by institutional investors (from RiskMetrics database).
LitigationRisk	Indicator variable equal to 1 if the firm belongs to one of the following SIC groups: 2833-2836 (pharmaceuticals), 3570-3577 (computers), 3600-3674 (electronics), 7371-7379 (programming), and 8731-8734 (R&D services), and 0 otherwise.

Table 1

Descriptive Statistics

	#Observations (1)	Mean (2)	Std. Deviation (3)	Median (4)
Dependent Variables				
TotalDirectorship	14,884	15.22	7.55	13.00
TotalBoardMtgs	14,884	101.54	62.23	88.00
MA	14,884	0.08	0.27	0.00
σ DA	14,884	0.23	0.42	0.08
UAF	5,609	-0.06	0.34	-0.02
DiscRev	14,884	0.02	0.02	0.01
R&D	14,884	0.04	0.08	0.01
Return-R&D	14,884	-0.00	0.09	0.00
InvestResidual	14,884	0.20	0.31	0.09
ROA	14,884	0.11	0.09	0.10
ROE	14,884	0.23	0.19	0.22
LogQ	14,884	1.83	1.55	1.41
Change in Directorship Controls				
Size	14,884	7.58	1.53	7.43
Debt	14,884	0.23	0.18	0.22
Growth	14,884	0.11	0.2	0.08
PPE-Growth	14,884	0.10	0.40	0.07
σ CFO	14,884	204.09	610.41	55.36
IndptPercent	14,884	0.71	0.17	0.75
MB	14,884	3.42	44.01	2.19
Loss	14,884	0.15	0.36	0.00
BoardSize	14,884	9.32	2.38	9.00
Other Controls				
FinancialExpert	14,884	0.14	0.13	0.12
Grey	14,884	0.11	0.12	0.10
InstOwnership	14,884	0.73	0.15	0.74
LitigationRisk	14,884	0.20	0.40	0.00

This table reports descriptive statistics for director-interlocked and control firm-years. The table provides the mean, standard deviation, and median for each variable. See Appendix A for variable definitions.

Table 2

Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
TotalDirectorship	**1.00**																			
TotalBoardMtgs	**0.78**	**1.00**																		
MA	**0.21**	**0.17**	**1.00**																	
σ DA	0.01	0.02	0.01	**1.00**																
UAF	0.00	-0.01	-0.01	-0.01	**1.00**															
DiscRev	**-0.08**	**-0.08**	-0.01	**0.05**	0.00	**1.00**														
R&D	0.02	0.03	-0.01	-0.01	0.01	**-0.05**	**1.00**													
Return-R&D	0.01	0.01	0.02	0.00	0.00	-0.02	0.04	**1.00**												
InvestResidual	0.04	0.03	0.03	0.01	0.02	-0.01	**0.05**	0.01	**1.00**											
ROA	0.02	**-0.05**	0.03	-0.01	-0.01	0.00	**0.12**	0.01	0.00	**1.00**										
ROE	**0.24**	**0.19**	0.03	**-0.07**	0.01	**-0.11**	**0.05**	0.01	0.01	**0.56**	**1.00**									
LogQ	**0.49**	**0.47**	**0.12**	-0.02	0.00	**-0.08**	0.03	0.01	0.01	-0.04	**0.25**	**1.00**								
Size	**0.61**	**0.58**	**0.13**	-0.02	0.00	**-0.15**	0.04	0.01	0.04	0.00	**0.36**	**0.71**	**1.00**							
Debt	**0.36**	**0.35**	**0.08**	-0.04	0.02	**-0.12**	**-0.10**	0.00	0.02	**-0.23**	**0.26**	**0.38**	**0.53**	**1.00**						
Growth	**-0.11**	**-0.12**	-0.02	-0.03	0.00	**0.10**	**0.13**	0.00	**0.06**	**0.35**	**0.18**	**-0.05**	0.02	**-0.05**	**1.00**					
PPE-Growth	**-0.13**	**-0.14**	-0.03	-0.04	-0.01	0.03	**0.11**	-0.01	**-0.05**	**0.30**	**0.14**	**-0.05**	-0.02	**-0.07**	**0.48**	**1.00**				
σ CFO	-0.04	**-0.08**	0.00	-0.02	0.00	0.00	**0.09**	0.00	0.01	**0.71**	**0.33**	-0.07	-0.02	**-0.28**	**0.23**	**0.26**	**1.00**			
IndptPercent	0.02	0.01	0.01	0.00	0.02	0.01	0.00	-0.02	-0.03	0.02	-0.01	0.00	0.01	0.00	0.00	0.00	0.00	1.00		
MB	**0.11**	**0.06**	**0.05**	0.01	0.00	-0.02	**0.16**	0.02	0.03	**0.57**	**0.24**	**0.06**	**0.09**	**-0.24**	**0.20**	**0.17**	**0.45**	0.00	**1.00**	
Loss	**-0.09**	-0.03	-0.01	**0.09**	0.00	**0.10**	**-0.05**	0.00	0.00	**-0.48**	**-0.59**	**-0.09**	**-0.14**	-0.03	**-0.19**	**-0.19**	**-0.36**	0.00	**-0.23**	**1.00**
BoardSize	**0.81**	**0.64**	**0.15**	-0.01	0.01	**-0.09**	-0.01	0.00	0.04	-0.01	**0.24**	**0.45**	**0.56**	**0.39**	**-0.07**	**-0.10**	**-0.05**	0.03	0.04	**-0.11**

This table presents sample Spearman's correlations. Correlations that are significantly different from zero at the $p<0.05$ level are in bold. See Appendix A for variable definitions.

Table 3

Distribution of Change in Directorships

Panel A: Distribution of Multiple Directorships Held

# of Directorship Held	# of Directors	% of Directors
1 directorship	72,796	62.12%
2 directorships	26,326	22.47%
3 directorships	11,716	10.00%
4 or more directorships	6,348	5.42%
Total	**117,186**	**100%**

Panel B: Distribution of Changes in Directorships

Change in Directorships	Shocked Directors in Interlocked Firms	Non-Shocked Directors in Interlocked Firms	Directors in Control Firms
-8	0.00%	0.01%	0.00%
-5	0.16%	0.00%	0.00%
-4	0.55%	0.01%	0.01%
-3	1.42%	0.10%	0.04%
-2	8.37%	0.58%	0.40%
-1	62.09%	6.22%	4.43%
0	23.22%	74.51%	78.76%
1	4.03%	15.67%	14.03%
2	0.16%	2.18%	1.79%
3	0.00%	0.59%	0.39%
4	0.00%	0.12%	0.12%
5	0.00%	0.02%	0.03%
6	0.00%	0.00%	0.01%

This table presents the distribution of the change in directorships. Panel A presents the distribution of the number of directorships variable in our sample of all firms covered by RiskMetrics database. Panel B reports the changes in the number of boards seats held by directors that were dismissed from the board of an acquired firm (shocked sample), non-shocked directors that served on a director-interlocked firm (non-shocked sample), and directors that served on boards where no director lost directorships due to M&A activity (control sample).

Table 4

The Effect of Multiple Directorships on Monitoring

Dependent Variable:	Δ TotalDirectorship IV 1st Stage	ΔσDA IV 2nd Stage		ΔUAF IV 2nd Stage		ΔDiscRev IV 2nd Stage	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
M&A	-0.9027***						
	(-16.68)						
EST-TotalDirectorship		0.0071**	0.0070***	0.0369**	0.0368**	0.0016**	0.0015*
		(2.56)	(2.63)	(2.27)	(2.19)	(2.04)	(1.95)
				Change in Directorship Controls			
ΔSize	0.3143**	0.0019	0.019	0.1757***	0.1753***	0.0051***	0.0053***
	(3.27)	(0.43)	(0.40)	(4.27)	(4.12)	(4.01)	(4.16)
ΔDebt	-0.4683**	-0.0232**	-0.0228**	0.0213	0.0213	0.0138***	0.0138***
	(-2.06)	(-2.22)	(2.06)	(0.22)	(0.20)	(4.61)	(4.55)
ΔGrowth	-0.0637	-0.0139**	-0.0141**	0.0583	0.0584	0.0011	0.0010
	(-0.50)	(-1.98)	(-2.01)	(0.95)	(0.99)	(0.53)	(0.35)
ΔPPE-Growth	-0.1466*	0.0068*	0.0068*	-0.0209	-0.0210	-0.0038***	-0.0039***
	(-1.89)	(1.91)	(1.89)	(-0.58)	(-0.51)	(-3.67)	(-4.01)
ΔσCFO	0.0192**	0.0001	0.0001	-0.0001	-0.0001	0.0001***	0.0001***
	(2.22)	(0.93)	(0.88)	(-0.61)	(-0.60)	(5.83)	(5.72)
ΔIndptPercent	0.6910***	-0.0079	-0.0077	-0.0282	-0.0281	0.0020	0.0020
	(3.98)	(-0.90)	(-0.62)	(-0.34)	(-0.38)	(0.80)	(0.84)
ΔMB	0.0125**	0.0001	0.0001	0.0017	0.0017	-0.0001	-0.0001
	(2.09)	(0.59)	(0.55)	(0.66)	(0.61)	(-0.29)	(-0.25)
ΔLoss	-0.0338	0.0037**	0.0036**	0.0526***	0.0525***	0.0021***	0.0020***
	(-0.79)	(2.16)	(2.11)	(3.48)	(3.59)	(4.21)	(4.11)
ΔBoardSize	1.6202***	-0.0115***	-0.0115**	-0.1278**	-0.1277**	-0.0024*	-0.0023*

	(11.71)	(-2.58)	(-2.51)	(-2.31)	(-2.25)	(-1.87)	(-1.76)
			Change in Other Controls				
ΔFinancialExpert			-0.0217***		-0.0846**		-0.0080**
			(-2.89)		(-2.46)		(-2.22)
ΔGrey			0.0167*		0.0472**		0.0051*
			(1.85)		(2.11)		(1.76)
ΔInstOwnership			0.0001		0.0008		0.0001
			(0.17)		(0.38)		(0.09)
LitigationRisk			0.0356***		0.1093***		0.0122***
			(4.02)		(3.41)		(5.19)
Industry Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total N	14,884	14,884	14,884	5,609	5,609	14,884	14,884
N for MA = 1	1,266						
Adjusted R-Squared	0.463	0.102	0.109	0.009	0.009	0.083	0.085

This table shows the effect of multiple directorships on the monitoring role of the board. Column 1 reports the first stage regression results where the dependent variable is ΔTotalDirectorship. Columns 2-7 report the second stage regression results, where the dependent variables are Δ σDA (columns 2 and 3), ΔUAF (columns 4 and 5), and ΔDiscRev (columns 6 and 7). All data are winsorized at the 1% and 99% levels. ***, ** and * denote significant at the 0.01, 0.05, and 0.10 level, respectively. See Appendix A for variable definitions.

Table 5

The Effect of Multiple Directorships on Advising

Dependent Variable:	Δ TotalDirectorship	ΔR&D		ΔReturn-R&D		ΔInvestResidual	
	IV 1st Stage	IV 2nd Stage		IV 2nd Stage		IV 2nd Stage	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
M&A	-0.9027***						
	(-16.68)						
EST-TotalDirectorship		-4.7153***	-4.5126***	-0.0067**	-0.0062**	0.0057***	0.0052***
		(-2.89)	(-3.10)	(-2.07)	(-1.99)	(3.04)	(2.81)
				Change in Directorship Controls			
ΔSize	0.3143**	32.632***	32.038***	0.0005	0.0005	0.0037*	0.0031*
	(3.27)	(12.46)	(11.73)	(0.11)	(0.14)	(1.79)	(1.68)
ΔDebt	-0.4683**	-12.2703**	-11.9379*	-0.0068	-0.0071	-0.0182	-0.0185
	(-2.06)	(-2.00)	(-1.78)	(-0.56)	(-0.63)	(-0.92)	(-0.88)
ΔGrowth	-0.0637	5.0676	5.1983	-0.0057	-0.0056		
	(-0.50)	(1.22)	(1.42)	(-0.69)	(-0.71)		
ΔPPE-Growth	-0.1466*	6.1948***	6.0032***	-0.0038	-0.0038	0.0036	0.0035
	(-1.89)	(2.95)	(2.88)	(-0.93)	(-0.95)	(1.28)	(1.21)
ΔσCFO	0.0192**	0.0502***	0.0489***	-0.0001*	-0.0001*	0.0001**	0.0001**
	(2.22)	(12.21)	(11.80)	(-1.84)	(-1.88)	(2.13)	(2.01)
ΔIndptPercent	0.6910***	0.5980	0.5980	0.0134	0.0133	-0.0081	-0.0077
	(3.98)	(0.12)	(0.10)	(1.31)	(1.39)	(-1.31)	(-1.23)
ΔMB	0.0125**	-0.0755	-0.0756	0.0007**	0.0009**	-0.0002	-0.0002
	(2.09)	(-0.47)	(-0.41)	(2.29)	(2.35)	(1.14)	(1.10)
ΔLoss	-0.0338	8.5594***	8.5192***	0.0015	0.0014	0.0035**	0.0031**
	(-0.79)	(8.42)	(8.81)	(0.76)	(0.80)	(2.23)	(2.16)

ΔBoardSize	1.6202***	7.5782***	7.0281**	0.0095*	0.0095*	-0.0094**	-0.0089**
	(11.71)	(2.86)	(2.49)	(1.83)	(1.79)	(-2.25)	(-2.31)
Change in Other Controls							
ΔFinancialExpert			2.6932**		0.0092*		-0.0284**
			(2.02)		(1.76)		(-2.17)
ΔGrey			-3.7841		-0.0113		0.0093
			(-1.38)		(-1.58)		(1.13)
ΔInstOwnership			0.9108		0.0021		-0.0002
			(0.39)		(0.07)		(-0.40)
LitigationRisk			5.4912**		0.0042***		0.0283***
			(2.29)		(2.70)		(3.39)
Industry Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total N	14,884	14,884	14,884	14,884	14,884	14,884	14,884
N for MA = 1	1,266						
Adjusted R-Squared	0.463	0.067	0.070	0.004	0.004	0.035	0.033

This table shows the effect of multiple directorships on the advising role of the board. Column 1 reports the first stage regression results where the dependent variable is Δ TotalDirectorship. Columns 2-7 report the second stage regression results, where the dependent variables are Δ R&D (columns 2 and 3), Δ Return-R&D (columns 4 and 5), and Δ InvestResidual (columns 6 and 7). All data are winsorized at the 1% and 99% levels. ***, ** and * denote significant at the 0.01, 0.05, and 0.10 level, respectively. See Appendix A for variable definitions.

Table 6

The Effect of Number of Board Meetings

Dependent Variable:	Δ Total BoardMtgs IV 1st Stage (1)	ΔσDA IV 2nd Stage (2)	ΔUAF IV 2nd Stage (3)	ΔDiscRev IV 2nd Stage (4)	ΔR&D IV 2nd Stage (5)	ΔReturn-R&D IV 2nd Stage (6)	Δ Invest Residual IV 2nd Stage (7)
M&A	-2.7977**						
	(-2.53)						
EST-TotalBoardMtgs		0.0072**	0.0600**	0.0021***	-4.3474**	-0.0067*	0.0043*
		(2.39)	(2.36)	(2.59)	(-2.49)	(-1.94)	(1.71)
				Change in Directorship Controls			
ΔSize	9.4113***	0.0027	0.1885***	0.0053***	33.4521***	0.0001	0.0009
	(4.69)	(0.59)	(4.78)	(4.03)	(12.44)	(0.02)	(0.61)
ΔDebt	8.9286*	-0.0266**	-0.0198	0.0156***	-12.4793***	-0.0075	-0.0156
	(1.88)	(-2.44)	(-0.22)	(5.10)	(-1.98)	(-0.60)	(-1.19)
ΔGrowth	1.1565	-0.0150	0.0464	0.0014	5.1143	-0.0039	
	(0.36)	(-2.05)	(0.77)	(0.72)	(1.20)	(-0.46)	
ΔPPE-Growth	-2.6005	0.0062*	-0.0287	-0.0041***	6.4702***	-0.0040	0.0031*
	(-1.60)	(1.68)	(-0.83)	(-3.95)	(2.99)	(-0.94)	(1.89)
ΔσCFO	0.0015	0.0001	-0.0001	0.0001***	0.0436***	-0.0001*	0.0001**
	(0.50)	(0.96)	(-0.62)	(5.69)	(10.44)	(-1.67)	(-2.05)
ΔIndptPercent	4.3309	-0.0090	-0.243	0.0025	0.8400	0.0125	-0.0073
	(1.10)	(-0.99)	(-0.31)	(0.97)	(0.16)	(1.18)	(0.90)
ΔMB	0.0333	0.0002	0.0016	-0.0004	-0.1050	0.0005	-0.0001
	(0.27)	(0.83)	(0.65)	(-0.58)	(-0.64)	(1.54)	(1.03)
ΔLoss	1.7143**	0.0039**	0.0446***	0.0020***	8.6616***	0.0011	0.0027*
	(2.18)	(2.18)	(3.01)	(4.11)	(8.30)	(0.55)	(1.92)

ΔBoardSize	7.8222***	-0.0118**	-0.1010**	-0.0033**	6.9867**	0.0096*	-0.0062**
	(25.87)	(-2.42)	(-2.44)	(-2.43)	(2.46)	(1.70)	(2.09)
Industry Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total N	14,268	14,268	5,827	14,268	14.268	14,268	14,268
N for MA = 1	1,266						
Adjusted R-Squared	0.076	0.103	0.009	0.087	0.069	0.004	0.027

This table shows the effect of the number of board meetings on the monitoring and advising roles of the board. Column 1 reports the first stage regression results where the dependent variable is ΔTotalBoardMtgs. Columns 2-7 report the second stage regression results, where the dependent variables are Δσ DA (column 2), ΔUAF (column 3), ΔDiscRev (column 4), ΔR&D (column 5), ΔReturn-R&D (column 6), and ΔInvestResidual (column 7). All data are winsorized at the 1% and 99% levels. ***, ** and * denote significant at the 0.01, 0.05, and 0.10 level, respectively. See Appendix A for variable definitions.

Table 7

The Effect of Multiple Directorships Conditional on Geographic Distance

Panel A: The Effect of Multiple Directorships on Monitoring

Dependent Variable:	Δ Total Directorship	ΔσDA	ΔUAF	ΔDiscRev	Δ Total Directorship	ΔσDA	ΔUAF	ΔDiscRev
	IV 1st Stage	IV 2nd Stage	IV 2nd Stage	IV 2nd Stage	IV 1st Stage	IV 2nd Stage	IV 2nd Stage	IV 2nd Stage
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
M&A-Near	-0.9861***							
	(-13.94)							
M&A-Far					-0.6268***			
					(-18.39)			
EST-TotalDirectorship		0.0045*	0.0342	0.0011		0.0083***	0.0391**	0.0019**
		(1.71)	(1.29)	(1.40)		(3.28)	(2.46)	(2.01)
				Change in Directorship Controls				
ΔSize	0.2545**	0.0018	0.1751***	0.0054***	0.2937***	0.0019	0.1758***	0.0050***
	(3.48)	(0.37)	(4.35)	(4.39)	(3.01)	(0.49)	(4.20)	(3.80)
ΔDebt	-0.4127*	-0.0218**	0.0211	0.0133***	-0.4210**	-0.0225**	0.0210	0.0140***
	(-1.89)	(-2.05)	(0.18)	(4.79)	(-2.13)	(-2.17)	(0.16)	(4.41)
ΔGrowth	-0.0683	-0.0133*	0.0580	0.0010	-0.0509	-0.0142**	0.0588	0.0011
	(-0.55)	(-1.91)	(1.02)	(0.39)	(-0.49)	(-2.09)	(0.79)	(0.59)
ΔPPE-Growth	-0.0155**	0.0065*	-0.0215	-0.0036***	-0.0143**	0.0069*	-0.0208	-0.0039***
	(-2.10)	(1.88)	(-0.51)	(-3.51)	(-2.27)	(1.94)	(-0.59)	(-3.90)
ΔσCFO	0.0184**	0.0001	-0.0001	0.0001***	0.0134**	0.0001	-0.0001	0.0001***
	(2.46)	(0.89)	(-0.58)	(5.90)	(2.28)	(0.91)	(-0.65)	(5.63)
ΔIndptPercent	0.7037***	-0.0080	-0.0279	0.0019	0.6972***	-0.0077	-0.0282	0.0020
	(3.85)	(-0.95)	(-0.28)	(0.72)	(4.00)	(-0.82)	(-0.35)	(0.83)
ΔMB	0.0109*	0.0001	0.0016	-0.0001	0.0118*	0.0001	0.0019	-0.0001

	(1.69)	(0.52)	(0.63)	(-0.23)	(1.76)	(0.62)	(0.72)	(-0.26)
ΔLoss	-0.0227	0.0038**	0.0531***	0.0020***	-0.0338	0.0037**	0.0524***	0.0023***
	(-0.52)	(2.23)	(3.58)	(4.13)	(-0.85)	(2.12)	(3.31)	(4.49)
ΔBoardSize	1.5598***	-0.0112**	-0.1273**	-0.0022*	1.6353***	-0.0117***	-0.1280**	-0.0024*
	(8.49)	(-2.51)	(-2.09)	(-1.95)	(10.92)	(-2.70)	(-2.44)	(-1.81)
Industry Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total N	14,884	14,884	5,609	14,884	14,884	14,884	5,609	14,884
Adjusted R-Squared	0.451	0.100	0.008	0.081	0.468	0.108	0.011	0.086

Panel B: The Effect of Multiple Directorships on Advising

Dependent Variable:	Δ Total Directorship IV 1st Stage (1)	ΔR&D IV 2nd Stage (2)	ΔReturn-R&D IV 2nd stage (3)	Δ Invest Residual IV 2nd stage (4)	Δ Total Directorship IV 1st Stage (5)	ΔR&D IV 2nd Stage (6)	ΔReturn-R&D IV 2nd Stage (7)	Δ Invest Residual IV 2nd stage (8)
M&A-Near	-0.9861***							
	(-13.94)							
M&A-Far					-0.6268***			
					(-18.39)			
EST-TotalDirectorship		-3.9401	-0.0064**	0.0036*		-5.1851***	-0.0066**	0.0067***
		(-1.58)	(-2.01)	(1.80)		(-3.70)	(-2.15)	(3.51)
				Change in Directorship Controls				
ΔSize	0.2545**	33.2923***	0.0005	0.0040*	0.2937***	32.3122***	0.0005	0.039*
	(3.48)	(13.20)	(0.08)	(1.75)	(3.01)	(11.93)	(0.12)	(1.71)
ΔDebt	-0.4127*	-12.1301*	-0.0070	0.0179	-0.4210**	-12.2819**	-0.0068	0.0178
	(-1.89)	(-1.92)	(-0.82)	(0.82)	(-2.13)	(-2.08)	(-0.52)	(0.85)
ΔGrowth	-0.0683	5.1520	-0.0056		-0.0509	5.0641	-0.0059	
	(-0.55)	(1.30)	(-0.64)		(-0.49)	(1.19)	(-0.75)	
ΔPPE-Growth	-0.0155**	6.1910***	-0.0038	0.0029	-0.0143**	6.1813***	-0.0039	0.0030
	(-2.10)	(3.01)	(-0.90)	(0.78)	(-2.27)	(2.88)	(-1.02)	(0.71)
ΔσCFO	0.0184**	0.0513***	-0.0001*	0.0001*	0.0134**	0.0498***	-0.0001*	0.0001*
	(2.46)	(12.41)	(-1.89)	(1.90)	(2.28)	(11.72)	(-1.91)	(1.94)
ΔIndptPercent	0.7037***	0.5968	0.0137	0.0075	0.6972***	0.5988	0.0132	0.0074
	(3.85)	(0.10)	(1.47)	(1.43)	(4.00)	(0.17)	(1.25)	(1.40)
ΔMB	0.0109*	-0.0751	0.0006**	-0.0004	0.0118*	-0.0761	0.0007**	-0.0004
	(1.69)	(-0.41)	(2.13)	(-0.82)	(1.76)	(-0.56)	(2.33)	(-0.90)
ΔLoss	-0.0227	8.5385***	0.0015	0.0029***	-0.0338	8.5589***	0.0015	0.0031***
	(-0.52)	(7.89)	(0.70)	(2.96)	(-0.85)	(9.16)	(0.79)	(3.15)
ΔBoardSize	1.5598***	7.6832***	0.0098**	-0.0084**	1.6353***	7.5701***	0.0094*	-0.0081**

	(8.49)	(2.91)	(1.99)	(-2.17)	(10.92)	(2.69)	(1.76)	(-2.15)
Industry Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total N	14,884	14,884	14,884	14,884	14,884	14,884	14,884	14,884
Adjusted R-Squared	0.451	0.063	0.004	0.018	0.468	0.069	0.004	0.023

This table shows the effect of multiple directorships on the monitoring and advising roles of the board conditional on geographic distance. Panel A presents the effect of multiple directorships on monitoring. Columns 1 and 5 report the first stage regression results where the dependent variable is ΔTotalDirectorship. The instrumental variable *M&A-Near* (*M&A-Far*) is defined as below (above) the median distance between the headquarters of the acquired firm and the headquarters of the director-interlocked firm. Columns 2-4 and 6-8 report the second stage regression results, where the dependent variables are Δ σ DA (columns 2 and 6), ΔUAF (columns 3 and 7), and ΔDiscRev (columns 4 and 8). Panel B presents the effect of multiple directorships on advising. Columns 2-4 and 6-8 report the second stage regression results, where the dependent variables are ΔR&D (columns 2 and 6), ΔReturn-R&D (columns 3 and 7), and ΔInvestResidual (columns 4 and 8). All data are winsorized at the 1% and 99% levels. ***, ** and * denote significant at the 0.01, 0.05, and 0.10 level, respectively. See Appendix A for variable definitions.

Table 8

The Effect of Multiple Directorships on Firm Performance

Dependent Variable:	Δ TotalDirectorship	ΔROA		ΔROE		ΔLogQ	
	IV 1st Stage	IV 2nd Stage		IV 2nd Stage		IV 2nd Stage	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
M&A	-0.9027***						
	(-16.68)						
EST-TotalDirectorship		-0.3973***	-0.3965***	-0.3148***	-0.3118***	-1.5841**	-1.5725**
		(-4.62)	(-4.55)	(-3.19)	(-3.06)	(-2.39)	(-2.33)
				Change in Directorship Controls			
ΔSize	0.3143**	-0.9751***	-0.9705***	-0.6391*	-0.6375*	-1.7384***	-1.7346***
	(3.27)	(-2.86)	(-2.73)	(-1.79)	(-1.72)	(-3.98)	(-3.85)
ΔDebt	-0.4683**	-1.1037***	-1.0861***	-0.7955***	-0.7919***	-2.8279***	-2.8410***
	(-2.06)	(-4.02)	(-3.89)	(-3.28)	(-3.12)	(-3.20)	(-3.11)
ΔGrowth	-0.0637	0.2103**	0.2127**	0.1507*	0.1411*	0.4119	0.3925
	(-0.50)	(2.35)	(2.26)	(1.91)	(1.83)	(1.49)	(1.27)
ΔPPE-Growth	-0.1466*	0.0610	0.0607	0.0438	0.0519	0.1324	0.1173
	(-1.89)	(1.20)	(1.21)	(0.89)	(0.99)	(0.57)	(0.51)
ΔσCFO	0.0192**	0.0372*	0.0368*	0.0254*	0.0236**	0.0873	0.0880
	(2.22)	(1.83)	(1.79)	(1.90)	(1.98)	(1.56)	(1.59)
ΔIndptPercent	0.6910***	-0.3155	-0.3148	-0.3484	-0.3466	0.8373**	0.8265**
	(3.98)	(-0.84)	(-0.77)	(-0.92)	(-0.79)	(2.36)	(2.29)
ΔMB	0.0125**	-0.0148*	-0.0151	-0.0096*	-0.0094*	-0.0275	-0.0231
	(2.09)	(-1.69)	(-1.63)	(-1.77)	(-1.72)	(-1.47)	(-1.41)
ΔLoss	-0.0338	-0.4526***	-0.4505***	-0.4128**	-0.4091**	-1.6395*	-1.6022**
	(-0.79)	(-3.09)	(-2.85)	(-2.43)	(-2.15)	(-1.91)	(-1.97)
ΔBoardSize	1.6202***	-1.1245**	-1.1102**	-0.9621**	-0.9613**	-2.0554**	-2.0284**

	(11.71)	(-2.18)	(-2.02)	(-2.26)	(-2.22)	(-2.10)	(-2.03)
			Change in Other Controls				
ΔFinancialExpert			0.0580*		0.0481		0.3270*
			(1.88)		(1.56)		(1.36)
ΔGrey			-0.0692**		-0.0717***		-0.2327***
			(-2.43)		(-2.82)		(-3.25)
ΔInstOwnership			-0.0058		-0.0052		-0.0184
			(-0.27)		(-0.46)		(-0.92)
LitigationRisk			-0.9846**		-1.0145**		-1.8450**
			(-2.31)		(-2.14)		(-2.61)
Industry Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total N	14,884	14,884	14,884	14,884	14,884	14,884	14,884
N for MA = 1	1,266						
Adjusted R-Squared	0.463	0.236	0.238	0.207	0.211	0.437	0.441

This table shows the effect of multiple directorships on long term firm performance. Column 1 reports the first stage regression results where the dependent variable is ΔTotalDirectorship. Columns 2-7 report the second stage regression results, where the dependent variables are ΔROA (columns 2 and 3), ΔROA (columns 4 and 5), and ΔROE (columns 6 and 7). All data are winsorized at the 1% and 99% levels. ***, ** and * denote significant at the 0.01, 0.05, and 0.10 level, respectively. See Appendix A for variable definitions.