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Busy Directors and Shareholder Satisfaction

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Abstract

Prior research has examined the firm-level performance implications of "busy" boards. Firm-level analysis, however, masks important heterogeneity in the time constraints and expertise of individual busy directors. We develop and validate shareholder voting as a proxy for shareholders' satisfaction. Our director-specific tests provide compelling evidence that the potential costs of busy directors outweigh their benefits. At the same time, we uncover new sources of heterogeneity among busy directors. For example, the downsides are more pronounced for directors who sit on boards where fiscal year ends cluster in the same month. Our analysis highlights the role of shareholder voting in board composition research.

I. Introduction

The job of a corporate director has become increasingly time consuming. For example, the *Wall Street Journal* recently reported that the director of a public firm spends an average of 248 hours a year on each board, up from 191 hours in 2005 (Lublin (2016)).[1] In light of this growing time demand, there is an increasing concern that time-constrained directors may not always acquire the information necessary for effective monitoring and advising. This concern is reflected in a recent policy change by Institutional Shareholder Services (ISS) that lowered the upper limit of board seats on which a director can sit (see https://www.issgovernance.com/file/policy/2016-americas-policy-updates.pdf).

Prior research has examined the firm-level implications of corporate boards that have a large proportion of "busy" directors (frequently defined as directors who serve on three or more boards). However, these studies have several limitations. Adams, Hermalin, and Weisbach (2010) argue that there are underlying

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[1]Lublin (2016) quotes Peter Gleason, the president of the National Association of Corporate Directors, as noting that the role of a board's director is "more of a job now."

agency issues that drive both director busyness and poor firm performance. Further, firm-level analysis masks important heterogeneity in the time constraints and the expertise benefits of busy directors. For example, sitting on three boards might be excessive for a director with other full-time employment, but it might be reasonable, or even optimal, for an individual who is retired.

In this paper, we depart from traditional firm-level tests and instead examine the relations between individual busy directors, their heterogeneous characteristics, and shareholder satisfaction as measured by shareholder voting outcomes in annual director elections. Our approach has several distinctive features that allow us to overcome the limitations of prior studies. First, shareholder voting is measured at the director level, which allows us to incorporate many dimensions of director-level heterogeneity when evaluating busyness.[2] Also, voting differs from existing director-level measures such as board meeting attendance in that it exhibits significant variation across directors and provides a more comprehensive gauge of director performance. Second, we use "within-firm-year" and "within-director-year" research designs. The within-firm-year design uses variation in shareholder voting for directors at a given firm within a given year, which allows us to fully account for the confounding effects of firm characteristics. The within-director-year design allows us to identify differences in shareholder satisfaction across different types of firms for the *same* director in a given year and thus can help isolate the heterogeneity in the effect of busyness as a function of firm characteristics.

Our baseline findings reveal that shareholders perceive that, on average, the costs of busy directors exceed their benefits. The percentage of "for" votes that the average busy director receives is about 1 percentage point lower than that of a nonbusy director. This is 28% of the standard deviation of within-firm-year shareholder voting across firms. Importantly, this lower shareholder satisfaction for busy directors holds when controlling for various observable director characteristics (e.g., age, tenure, gender, retirement status, and committee membership) and all observable and *unobservable* firm characteristics through the within-firm-year design. This distinguishes our finding from prior firm-level analyses of busy boards, which are unable to fully control for individual director characteristics and unobservable firm characteristics.

While our baseline finding indicates that busy directors are on average perceived by shareholders to be less desirable than nonbusy directors, there can be significant heterogeneity in how shareholders perceive certain types of busy directors. Clearly, one of the primary concerns with a busy director is the time constraints that multiple directorships can impose on the individual's ability to diligently monitor and advise management. And one can envision that some directors are in a better position to handle the time commitments stemming from multiple directorships. Consistent with this conjecture, across an array of proxies for director time constraints, we find strong evidence that busy directors with greater

[2] In Appendix B, we validate that shareholder voting outcomes have a tight link with shareholder satisfaction. Specifically, we show that within-firm-year variation in shareholder voting predicts director turnover, that shareholder voting is more negative for directors with low meeting attendance, and directors who sit on the compensation committee when the CEO receives excess compensation.

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(lesser) time demands receive fewer (greater) shareholder votes. Specifically, we find that busy directors who are retired from full-time employment receive more shareholder votes, while busy directors who are sitting executives at another firm receive fewer shareholder votes. Busy directors also receive fewer votes when a greater proportion of their boards have the same fiscal-year-end (FYE) month (a proxy for clustering of time constraints across busy directors' boards) and when they serve as chief executive officer (CEO), board chairman, or on a greater number of committees.

We also examine firm-specific "shocks" to a director's time constraints (i.e., CEO turnovers, high acquisition activity, and significant stock price drops) and whether these shocks have "ripple effects" on shareholder voting at a director's other boards. We find busy directors who experience an increase to their external time demands through these channels indeed receive lower shareholder voting at their other firms. Collectively, the results suggest that there is significant heterogeneity among busy directors' time constraints and that this heterogeneity impacts shareholder perceptions of their monitoring and advising effectiveness.

In our above analyses, we account for how shareholder voting might be influenced by ISS's recommendations. We find that shareholder voting considers various aspects of the heterogeneity in director busyness *beyond* the concerns reflected in ISS's recommendations, suggesting that shareholders' views on "how busy is too busy" is a complex algorithm that may not be captured in one-size-fits-all policies.

Although our main tests focus on shareholder voting as a measure of shareholder satisfaction, we also explore announcement returns to busy director appointments, which prior literature has examined with mixed findings (Ferris, Jagannathan, and Pritchard (2003), Fich and Shivdasani (2006)). Consistent with the takeaway from this prior work, we do not find evidence of a negative reaction to the appointment of busy directors nor evidence of heterogeneity among busy directors using announcement returns. We believe that this result points to some of the potential advantages of using shareholder votes (relative to announcement returns) for examining the efficacy of busy directors and, perhaps, other types of directors. Specifically, shareholder voting allows for a much larger sample because, although a director is generally only appointed once to a given firm, shareholder voting occurs at regular intervals during a director's tenure and can be observed in time series as a director becomes more or less busy, distracted, experienced, etc. Further, shareholder voting allows the researcher to observe shareholders' perceptions of a director's performance over time, as more information is gathered about her characteristics and skills, and how these features may affect performance.

Our final set of tests examines how the strengths of busy directors, namely their experience, contacts, and high-demand skills (Adams et al. (2010)), vary as a function of a firm's advising and monitoring needs. These traits can improve a director's ability to provide useful advice and/or monitor executive behavior (Coles, Daniel, and Naveen (2014a)). Using a within-director-year design, we are able to examine whether certain firms (e.g., less experienced firms) may benefit more from the expertise and advising of the same busy director. We find that shareholders are more supportive of busy directors at younger firms and firms with greater growth opportunities (e.g., firms predicted to demand more advising)

and are less supportive at firms where CEOs hold less equity (firms predicted to demand more monitoring). These results suggest that effective advising, as compared to effective monitoring, may rely more on director ability, whereby the latter may suffer more from director time constraints.[3]

This paper makes several contributions to the literature on board structure. First, our results shed light on the longstanding debate about busy directors' performance and the tradeoffs between their potentially higher ability and tighter time constraints. Prior studies on the costs and benefits of busy directors examine the issue using firm-level performance outcomes. In contrast, we use shareholder voting as a director-level measure of shareholder satisfaction with individual busy directors, allowing us to overcome concerns about omitted firm-level characteristics. In doing so, we provide more compelling evidence that, on average, the potential costs of busy directors outweigh their benefits.

Second, and perhaps just as importantly, our director-level analyses uncover important differences in the costs and benefits of individual busy directors that are absent in prior studies that focus on board-level analyses of busyness. The desirability of individual busy directors depends on many factors that can vary at the director level, firm level, and over time. Many of the factors that we identify, such as the overlap of FYE months, are novel and unstudied. Our analysis of heterogeneity answers the call for more studies that go beyond proposing one-size-fits-all recommendations on corporate governance best practices (Armstrong, Guay, Mehran, and Weber (2016)). By explicitly incorporating and conditioning on director-level and firm-level heterogeneity, our results provide more nuanced statements on the strengths and weaknesses of various types of busy directors.

Third, our approach of using shareholder satisfaction, as measured by shareholder voting to uncover heterogeneity among individual directors, is new to the literature. Our approach can better identify heterogeneity among busy directors than more traditional methods, such as examining announcement returns to director appointments. While we have used this approach to examine busy directors, one could also use it to examine other aspects of board composition.

Finally, our paper connects with the literature on the informational content in shareholder votes. Prior studies have focused on whether shareholder votes capture observable director characteristics (Cai, Garner, and Walkling (2009)), firm performance (Fischer, Gramlich, Miller, and White (2009)), proxy advisory recommendations (Ertimur, Ferri, and Oesch (2013), Ertimur, Ferri, and Oesch (2017)), and managerial influence (Ferri and Oesch (2016)). Our evidence suggests that shareholder votes may contain more nuanced information about directors, namely their external and internal time constraints.

The remainder of the paper proceeds as follows: Section II discusses the prior literature on busy directors. In Section III, we describe the data collection procedure and provide descriptive statistics on the sample. We conduct our main analysis in Section IV. In Section V, we conclude and suggest future research directions.

[3]In additional analyses, we also show that busy directors tend to receive even fewer votes at underperforming firms. This suggests that shareholders may, at least in part, blame busy directors for poor financial performance.

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II. Literature Review

A large literature examines the benefits and costs of busy directors. Adams et al. (2010) present a simple theoretical model to illustrate that there are both "time-constraint" and "quality" effects when it comes to busy directors; a priori, it is unclear which effect dominates. Although busy directors sit on more boards, which lowers their feasible effort per board (time-constraint effect), they are also more likely to be "high-type" directors, who would provide more productive effort for a given number of activities (quality effect).

Given that the theory is ambiguous on the desirability of busy directors for shareholders, many studies have attempted to empirically examine this issue. Several of these studies have found negative performance implications of boards with a greater proportion of busy directors. For example, Fich and Shivdasani (2006) find that busy boards, those where the majority of outside directors sit on three or more boards, have lower market-to-book ratios, profitability, and sensitivity of CEO turnover to firm performance than firms with nonbusy boards. Core, Holthausen, and Larcker (1999) document that CEO compensation is increasing with the proportion of busy directors. Ahn, Jiraporn, and Kim (2010) find that busy boards have lower abnormal returns upon announcements of a merger or acquisition. Further, some prior studies also examine time-constraint issues and find that firms with distracted directors, those who have an attention shock at another board or firm, are associated with lower performance and value (Falato, Kadyrzhanova, and Lel (2014), Stein and Zhao (2019), Hauser (2018), Masulis and Zhang (2019)).

On the other hand, several studies have found that there are also potential benefits of busy directors that may offset the costs of time constraints. For example, Ferris et al. (2003) find no evidence that a director's multiple board appointments harm firm performance, suggesting that reputation incentives alleviate concerns about busy directors' monitoring. Perry and Peyer (2005) show that for firms with few agency concerns, busy directors are associated with higher firm value. Field, Lowry, and Mkrtchyan (2013) find that busy boards are associated with higher firm value in initial public offering (IPO) and Standard & Poor's (S&P) 1500 firms. Larcker, So, and Wang (2013) show that firms where directors have larger networks experience greater firm performance. Dass, Kini, Nanda, and Onal (2014) show that directors who sit on company boards in the firms' upstream/downstream industries can help the firm handle industry shocks and shorten cash-conversion cycles.

Overall, the prior literature examining busy directors is mixed. More importantly, prior work has almost exclusively focused on firm-level analyses, which have several limitations. First, they are likely to mask important variation across individual busy directors in terms of their time constraints and expertise. Second, it is difficult to assert a causal relation between busy boards and firm performance because of potential omitted firm-level characteristics. Adams et al. (2010) argue that underlying agency issues can drive both director busyness and poor firm performance. By focusing on individual directors, we overcome these difficulties of prior studies and provide new insight on busy directors' performance and their heterogeneity.

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III. Sample and Descriptive Statistics

We construct our sample using director data from BoardEx and RiskMetrics, shareholder voting data from ISS Voting Analytics, and firm characteristics data from Compustat and the Center for Research in Security Prices (CRSP). We begin by obtaining director characteristics data from RiskMetrics covering calendar years 2007 through 2016.[4] Director characteristics include independence, financial expertise, retired status, tenure, age, minority status, gender, executive status, board attendance, and whether a director experiences turnover the following year.[5]

Because RiskMetrics covers only S&P 1500 firms, it is not ideal for constructing measures of director busyness, which require a more comprehensive listing of each director's full set of board positions. Thus, we turn to BoardEx, which has much wider cross-sectional coverage, to construct our busyness measures (Adams et al. (2018)). Using the universe of exchange-listed boards on BoardEx, we construct #_BOARDS, which is the number of exchange-listed boards on which a director sits in a given year. From this variable, we then construct BUSY, which is an indicator variable equal to 1 if the director sits on three or more boards, and 0 otherwise. BoardEx also provides data on directors' network size and educational qualifications, which may be important for understanding busy directors' advising capabilities.[6]

We next use BoardEx to construct several characteristics of each director's board "portfolio." The boards on which a director sits could interact to alleviate or exacerbate concerns about a director's busyness. We construct the following variables: SAME_FYE_MONTH, #_EXT_COMM, DIST_CEO_TURNOVER, DIST_ACQUISITIONS, and DIST_STOCK_PRICE_DROP. SAME_FYE_MONTH for a director at Firm A is the proportion of other exchange-listed boards on which a director sits that have the same FYE month as Firm A. If a director does not sit on any other boards, SAME_FYE_MONTH is set to 0. #_EXT_COMM is the total number of committees on which a director serves in her other boards. If a director does not sit on any other boards, #_EXT_COMM is set to 0.

DIST_CEO_TURNOVER is an indicator variable equal to 1 if the director serves on another board that experiences a CEO turnover during the previous year, and 0 otherwise.[7] DIST_ACQUISITIONS is an indicator variable equal to 1 if the director serves on another board whose acquisition expenditure was greater than 0 in the previous year.[8] DIST_STOCK_PRICE_DROP is an indicator variable equal

[4] Although board data is available before 2007 from RiskMetrics, we do not use these data, since RiskMetrics changed the methodology with which it collected data in 2007 (Coles, Daniel, and Naveen (2014b)).

[5] We obtain data about a director's committee responsibilities from BoardEx, which has higher-quality committee data than RiskMetrics (Adams, Ragunathan, and Tumarkin (2018)).

[6] The network size of an individual is computed by the number of overlaps through employment, education, and other organizations in the past or at present. BoardEx only keeps track of a director's current network size and does track changes in a director's network size over time.

[7] The underlying assumption with measuring this variable in year $t-1$ is that the event would have lingering time effects in the following year.

[8] In untabulated analyses, we consider other thresholds for classifying firms with high acquisition activity (e.g., acquisitions greater than 1%, 5%, and 10% of assets). Our findings remain consistent.

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to 1 if the director serves on another board whose stock price drops by more than 10% compared to the prior year. We also measure this variable in year $t-1$.

Finally, we collect data for the annual director elections held by each firm. The voting counts for these elections are disclosed through Forms 10-Q, 10-K or 8-K following the annual meeting. The ISS Voting Analytics Database tracks these forms for firms listed on the Russell 3000 from 2003 onwards. The votes are designated as "for," "against," and "abstain." In addition, there are "broker non-votes" which are shares held in the name of brokers who did not receive voting instructions from the owner of the shares. The data set also contains the recommendations of the Institutional Shareholder Service (ISS), which casts "for" or "withhold" recommendations for directors. Using these data, we construct our main dependent variable: PERCENT_FOR_VOTES, computed as the number of "for" votes a director receives divided by the "vote base" (i.e., the sum of "for," "against," and "abstain" votes). We multiply this ratio by 100 so that it has a percentage interpretation.

Our final director sample, which contains the intersection of RiskMetrics, BoardEx, and ISS Voting Analytics, consists of 70,369 director-firm-year observations. For comparison, Cai et al. (2009) have a sample size of 13,384 director-firm-year observations. The number of unique directors (firms) in our sample is 14,908 (1,971).

Panel A of Table 1 reports summary statistics for director, firm, and voting variables. The mean (median) number of boards on which a director sits is 1.78 (1.00), while the proportion of directors who sit on three or more boards is 0.21. Thus, 21% of the directors in our sample are considered "busy directors." The mean (median) percentage of "for" votes is 95.33 (97.90), consistent with the finding in Cai et al. (2009) and Fischer et al. (2009) that directors typically receive over 90% of votes cast. For the average board, the standard deviation in the percentage of "for" votes is 3.22 percentage points. The percentage of firms in our sample that have at least one busy director is 80%, which is important since most of our regressions use within-firm-year variation in director busyness.

In Panel B of Table 1, we report the within-firm-year variation in shareholder voting by decomposing the shareholder voting variance into the within-firm-year, within-firm, and between-firm levels.[9] To do this, we estimate a hierarchical random effects model given by the following equation, with i denoting the firm, t denoting the year, and d denoting the director:

$$\text{PERCENT_FOR_VOTES}_{itd} = \delta + v_i + r_{it} + \varepsilon_{itd}, \quad (1)$$

and the following random variable structure:

$$\begin{aligned} \varepsilon_{itd} &\sim N(0, \sigma^2), \\ r_{it} &\sim N(0, \tau^2), \\ v_i &\sim N(0, \varphi^2). \end{aligned}$$

[9]Within-firm-year variation is the variation among directors for a given firm-year. Within-firm variation is the variation over time for a given firm. Between-firm variation is the variation across different firms.

TABLE 1
Descriptive Statistics

The sample in Table 1 consists of 70,639 firm-director-year observations covering the years 2007–2016. Panel A reports descriptive statistics for the variables used in this study. All variables are defined in Appendix A. Panel B reports the amount of variation in shareholder voting at the within-firm year, within-firm level, and between-firm level. The amount of variation for each level is measured by its variance component from a hierarchical random effects model.

Panel A. Director, Firm, and Voting Variables

	N	Mean	Median	Std. Dev.
Director Characteristics				
#_BOARDS	70,369	1.78	1.00	1.08
BUSY	70,369	0.21	0.00	0.41
4_OR_MORE_BOARDS	70,369	0.06	0.00	0.25
INSIDE	70,369	0.20	0.00	0.40
FINANCIAL_EXPERT	70,369	0.21	0.00	0.41
RETIRED	70,369	0.27	0.00	0.44
AGE	70,369	62.34	63.00	8.20
TENURE	70,369	8.67	7.00	7.54
MINORITY	70,369	0.23	0.00	0.42
FEMALE	70,369	0.15	0.00	0.36
EXECUTIVE	70,369	0.27	0.00	0.44
CEO	70,369	0.11	0.00	0.31
CHAIRMAN	70,369	0.12	0.00	0.32
OUTSIDE_EXECUTIVE	70,369	0.12	0.00	0.32
ON_AUDIT_COMM	70,369	0.45	0.00	0.50
ON_COMP_COMM	70,369	0.42	0.00	0.49
ON_NOM_COMM	70,369	0.44	0.00	0.50
#_COMM	70,369	2.24	2.00	1.68
AUDIT_CHAIR	70,369	0.11	0.00	0.31
COMP_CHAIR	70,369	0.10	0.00	0.31
NOM_CHAIR	70,369	0.10	0.00	0.31
#_EXT_COMM	70,369	1.96	0.00	3.52
SAME_FYE_MONTH	70,369	0.28	0.00	0.43
LOW_ATTENDANCE	70,369	0.00	0.00	0.07
DIRECTOR_TURNOVER	59,744	0.05	0.00	0.22
NETWORK_SIZE	70,369	1.40	0.95	1.47
#_QUAL	70,369	2.15	2.00	1.16
RECENT_RETIREMENT	70,369	0.03	0.00	0.17
EXECUTIVE_HIGH_ROA	70,369	0.04	0.00	0.20
EXECUTIVE_LARGE_FIRM	70,369	0.07	0.00	0.25
DIST_CEO_TURNOVER	70,369	0.16	0.00	0.37
DIST_ACQUISITIONS	70,369	0.22	0.00	0.42
DIST_STOCK_PRICE_DROP	70,369	0.15	0.00	0.36
DIST_COMBINED	70,369	0.34	0.00	0.47
Firm Characteristics				
FIRM_SIZE	67,990	8.56	8.46	1.78
BOARD_SIZE	70,369	10.17	10.00	2.50
BOOK_TO_MARKET	67,837	0.57	0.47	0.53
ROA	67,990	0.05	0.04	0.09
ANNUAL_RETURN	67,525	0.14	0.11	0.40
HAS_BUSY_DIRECTOR	70,369	0.80	1.00	0.40
PROP_BUSY	70,369	0.21	0.20	0.17
CEO_OWNERSHIP	64,881	17.08	17.05	1.71
FIRM_AGE	67,990	29.49	23.00	20.45
STAGGERED	70,361	0.21	0.00	0.41
EXCESS_CEO_COMP	66,752	0.01	0.09	0.80
Voting Characteristics				
PERCENT_FOR_VOTES	70,369	95.34	97.90	7.60
ISS_FOR_REC	70,369	0.94	1.00	0.23
BOARD_PERCENT_FOR_VOTES	70,369	95.33	97.24	6.15
STD_DEV_PERCENT_FOR_VOTES	70,248	3.22	1.75	4.01

Panel B. Sources of Variation in Shareholder Voting

	PERCENT_FOR_VOTES
Within-firm-year variance (σ^2)	24.84
Within-firm variance (φ^2)	25.94
Between-firm variance (τ^2)	16.18

The "fixed" part of the model is given by δ. The random parts of the model are given by v_i, r_{it}, and ε_{itd}, the residuals at the between-firm,

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within-firm, and within-firm-year levels, respectively and the variations in PERCENT_FOR_VOTES at the between-firm, within-firm, and within-firm-year levels are given by their variance, φ^2, τ^2, and σ^2, respectively. To estimate the model, we use restricted maximum likelihood (Gumedze and Dunne (2011)).

The estimated variance at the within-firm-year level is 24.84, compared to 16.18 at the between-firm level and 25.94 at the within-firm level. This indicates that there is important variation in within-firm-year shareholder voting in a given year relative to variation in voting between firms and variation for the same firm over different years.

Before examining the impact of director busyness on shareholder voting, we first examine the sources of heterogeneity among busy directors. That is, what factors lead individuals to add directorships and eventually become "busy"? We posit that some directors become busy because they have additional time, perhaps due to a recent retirement. Individuals may also be asked to serve on more boards if they perform well as executives at their primary firm or are executives at large, visible firms. Finally, directors with larger networks and greater expertise may also be asked to serve on multiple boards.

We explore the merits of these possibilities in Table 2. We find that directors tend to sit on more boards when they are retired and with an incremental positive effect upon a recent retirement. This positive relation between retirement and board seats is not just a result of individuals mechanically serving on more boards as a function of age, as we control for director age in the regressions.

TABLE 2
Which Types of Directors Become "Busy"?

Table 2 examines the types of directors who tend to sit on many boards. The regressions are estimated using ordinary least squares (OLS). All variables are defined in Appendix A. *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by director. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	#_BOARDS			
	1	2	3	4
RETIRED	0.197***		0.179***	0.228***
	(7.45)		(6.56)	(8.72)
RECENT_RETIREMENT		0.134***		
		(4.88)		
AGE	0.005***	0.008***	0.005***	0.006***
	(4.49)	(6.97)	(3.56)	(5.19)
EXECUTIVE			−0.059**	0.065***
			(−2.50)	(2.66)
EXECUTIVE_HIGH_ROA				−0.197***
				(−8.13)
EXECUTIVE_LARGE_FIRM				−0.182***
				(−7.25)
NETWORK_SIZE				0.131***
				(13.54)
#_QUAL				0.058***
				(5.95)
MINORITY				−0.063***
				(−2.96)
FEMALE				0.089**
				(2.31)
Clustered SE	Yes	Yes	Yes	Yes
No. of obs.	70,369	70,369	70,369	70,369
R^2	0.010	0.004	0.010	0.058

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Directors who are sitting executives are less likely to serve on multiple boards; moreover, this negative relation is concentrated among individuals who are executives at either high-performing firms or large firms. Although these individuals are likely to be valuable board members, they are also likely to be more time constrained and unable to sit on many boards. We also find that female directors and directors with larger network sizes and stronger educational backgrounds tend to serve on more boards. Interestingly, minority directors (measured as non-Caucasians) serve on fewer boards. Overall, the results highlight several potential sources of heterogeneity among busy directors. We will explore the importance and implications of this and other heterogeneities for understanding the performance of busy directors in the next section.

IV. Results

A. Research Design

Because shareholder voting is observed for each director and for multiple directors at a given firm within a given year, we estimate director-level regressions to investigate the relation between shareholder voting and director busyness. This contrasts with most prior literature, which primarily estimates firm-level regressions (e.g., Fich and Shivdasani (2006), Ferris et al. (2003)). An important feature of our empirical tests is the inclusion of firm-year fixed effects as opposed to firm fixed effects and/or year fixed effects. To illustrate the merits of this approach, suppose we observe director-level characteristics and voting for firms k and l across the years 2007 through 2009. Below, in the left column, we show the indicator variables when using firm-year fixed effects; in the right column, we show the indicator variables when using firm fixed effects and year fixed effects.

Firm-Year FE	Firm FE and Year FE
k, 2007	k
k, 2008	l
k, 2009	2007
l, 2007	2008
l, 2008	2009
l, 2009	

With firm-year fixed effects, we can control for time-invariant and time-variant observable and unobservable firm-level characteristics, allowing us to isolate director-level characteristics. This research design is particularly useful for understanding board composition, since firm-level omitted variables are often a concern in this setting (Adams et al. (2010)).[10] To the best of our knowledge, the inclusion of firm-year fixed effects has not been used in prior studies involving busy directors.

Our base specification is

$$(2)\quad \text{PERCENT_FOR_VOTES}_{ijt} = \beta_1 + \beta_2 \text{BUSY}_{ijt} + \overline{Controls}_{ijt}\boldsymbol{\gamma} + \delta_{jt} + \epsilon_{ijt},$$

[10] While there are other ways to control for firm-level heterogeneity (e.g., subtracting the firm-level mean from the dependent variable), the firm-year fixed effects estimator is the only one that is unbiased (Gormley and Matsa (2014)).

where BUSY is an indicator variable equal to 1 if a director serves on three or more boards, and 0 otherwise, and δ_{jt} are firm-year fixed effects. Index i refers to a director identifier, index j refers to a firm identifier, and index t refers to the year. This model allows us to examine the net effect of a busy director and answer the question of whether, on average, busy directors receive lower shareholder satisfaction. The control variables include independence, financial expertise, retired status, tenure, age, minority status, gender, number of educational qualifications, network size, executive status, an indicator for CEO, an indicator for chairman, and committee responsibilities (see their definitions in Appendix A). In a separate model, we also include a control variable for whether a director receives a "for" recommendation from ISS. Prior work documents that ISS recommendations have a significant influence on shareholder voting (Cai et al. (2009)), but, at the same time, ISS voting recommendations are based in part on the number of boards on which a director sits. Including a control for ISS recommendations allows us to assess whether shareholder voting considers aspects of director busyness beyond the concerns reflected in ISS recommendations.[11]

Next, while most studies use the three-board criterion to define a busy director, Fich and Shivdasani ((2006), p. 695) acknowledge that "the three-directorship criterion is admittedly somewhat arbitrary." We relax this assumption by estimating the "nonlinear" model[12]

$$\text{PERCENT_FOR_VOTES}_{ijt} = \beta_1 + \sum_{k=2}^{5} \beta_k Ind(k)_{ijt} + \beta_6 Ind(\geq 6)_{ijt} + \overline{Controls}_{ijt}\boldsymbol{\gamma} + \delta_{jt} + \epsilon_{ijt}, \quad (3)$$

where $Ind(k)$ is an indicator variable equal to 1 if a director sits on k boards, and 0 otherwise, and $Ind(\geq 6)$ is an indicator variable that is one if a director sits on 6 or more boards, and 0 otherwise. The interpretation for β_k $(k \geq 2)$ is the average difference in the percentage of "for" votes between a director on k boards and a director on one board. As in the base specification (equation (2)), we also include director controls.

To examine heterogeneity in shareholder approval across busy directors as a function of time constraints, we add interaction terms to equation (2):

$$\text{PERCENT_FOR_VOTES}_{ijt} = \beta_1 + \beta_2 \text{BUSY}_{ijt} + \beta_3 \text{CHAR}_{ijt} + \beta_4 [\text{BUSY} \times \text{CHAR}]_{ijt} + \overline{Controls}_{ijt}\boldsymbol{\gamma} + \delta_{jt} + \epsilon_{ijt}, \quad (4)$$

where CHAR is a director-level proxy for a director's external or internal time demands. We proxy for external time demands using a number of different variables including (but not limited to) RETIRED, OUTSIDE_EXECUTIVE, SAME_FYE_MONTH, and #_EXT_COMM. We proxy for internal time demands using the variables CEO, CHAIRMAN, AUDIT_CHAIR, COMP_CHAIR, NOM_CHAIR, and #_COMM. Variable definitions can be found in Appendix A.

[11] In addition, ISS monitors potential conflicts of interest, so their vote recommendations help control for the possibility that busy directors are more likely to have a conflict of interest that may lead to lower shareholder voting.

[12] The model allows for a nonlinear relation between shareholder voting and director busyness.

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B. Do Busy Directors Have Lower Shareholder Satisfaction?

Panel A of Table 3 contains ordinary least squares (OLS) estimates for the regression of the percentage of "for" votes on a busy director indicator variable

TABLE 3
Busy Directors and Shareholder Satisfaction

Table 3 examines the relation between shareholder satisfaction and the number of boards on which a director sits. The regressions are estimated using ordinary least squares (OLS) with firm-year fixed effects (FE). All variables are defined in Appendix A. *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by firm-year. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Main Regressions

	PERCENT_FOR_VOTES		
	1	2	3
BUSY	−0.911***	−0.807***	−0.672***
	(−16.60)	(−14.59)	(−16.47)
INSIDE		−3.850***	−0.980***
		(−23.33)	(−8.86)
FINANCIAL_EXPERT		−0.122*	0.111**
		(−1.80)	(2.24)
RETIRED		0.383***	0.261***
		(7.50)	(6.78)
AGE		−0.011***	−0.012***
		(−3.12)	(−4.45)
TENURE		−0.059***	−0.049***
		(−15.42)	(−16.92)
MINORITY		0.007	0.042
		(0.11)	(0.94)
FEMALE		0.063	0.193***
		(1.23)	(5.07)
#_QUAL		0.028	0.013
		(1.53)	(0.98)
NETWORK_SIZE		−0.066***	−0.035***
		(−4.13)	(−2.79)
EXECUTIVE		0.064	−0.054
		(0.87)	(−1.00)
CEO		2.735***	1.072***
		(24.33)	(13.01)
CHAIRMAN		0.215***	−0.079
		(3.04)	(−1.44)
ON_AUDIT_COMM		−0.271***	−0.053
		(−4.06)	(−1.11)
ON_COMP_COMM		−1.549***	−0.847***
		(−23.04)	(−17.63)
ON_NOM_COMM		−0.714***	−0.185***
		(−11.24)	(−3.94)
#_COMM		−0.137***	−0.037**
		(−6.40)	(−2.35)
AUDIT_CHAIR		−0.096	−0.170***
		(−1.39)	(−3.33)
COMP_CHAIR		−0.314***	−0.199***
		(−4.77)	(−4.07)
NOM_CHAIR		−0.816***	−0.751***
		(−11.40)	(−13.70)
ISS_FOR_REC			20.530***
			(55.99)
Firm–year FE	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes
No. of obs.	70,369	70,369	70,369
Within R^2	0.005	0.077	0.492

(continued on next page)

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TABLE 3 (continued)
Busy Directors and Shareholder Satisfaction

Panel B. Nonlinearity

	PERCENT_FOR_VOTES	
	1	2
2_BOARDS	−0.051	−0.094***
	(−1.01)	(−2.68)
3_BOARDS	−0.291***	−0.257***
	(−4.60)	(−5.66)
4_BOARDS	−1.379***	−1.016***
	(−13.28)	(−13.47)
5_BOARDS	−4.743***	−3.817***
	(−20.67)	(−20.14)
6_OR_MORE_BOARDS	−6.748***	−4.526***
	(−11.01)	(−10.40)
Firm–year FE	Yes	Yes
Director controls	No	Yes
Clustered SE	Yes	Yes
No. of obs.	70,369	70,369
Within R^2	0.021	0.500

using equation (2). In column 1, we provide the specification without director controls, and find that on average, busy directors receive 0.91 percentage points fewer "for" votes than a nonbusy director. This difference is highly significant, with a t-statistic of −16.6 when using standard errors clustered at the firm-year level. In column 2, we add director controls for independence, financial expertise, retired, age, tenure, minority, gender, number of educational qualifications, network size, executive, CEO, chairman and committee responsibilities. We find that many of these variables have a statistically significant relation with shareholder satisfaction but have little effect on the relation with BUSY, as the coefficient remains at −0.81 in this regression. In particular, shareholder satisfaction is lower for inside directors, consistent with the literature arguing that outside directors can protect shareholders' interests.

In column 3 of Panel A in Table 3, we include a control for whether a director receives a "for" recommendation from ISS. We add this control variable separately because the ISS recommendation, in part, reflects ISS's concerns about the effectiveness of busy directors (see https://www.issgovernance.com/file/policy/2016-americas-policy-updates.pdf). We find that the coefficient on BUSY decreases somewhat, to −0.67, but is still highly significant. This result suggests that shareholders may penalize busyness over and beyond ISS policy recommendations. Overall, the evidence in Panel A of Table 3 is consistent with the interpretation that busy directors receive lower shareholder satisfaction due to perceived poor performance.

In Panel B of Table 3, we present estimates of the "nonlinear" model (equation (3)), with and without director-specific controls. In column 2, directors on three boards receive 0.26 percentage points fewer "for" votes than a director on one board, and the relation is statistically significant. Moreover, there is also monotonically lower shareholder satisfaction for directors who serve on four boards, five boards, and six or more boards, as the coefficients are −1.02, −3.82,

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and −4.53, respectively. This increase in magnitude is quite large, as the coefficient on 4_BOARDS is more than three times the coefficient on 3_BOARDS, and the coefficient on 5_BOARDS is more than three times the coefficient on 4_BOARDS. These results provide further evidence suggesting that, on average, the time-constraint effect of a busy director dominates the experience and skill benefits, at least with respect to shareholder voting preferences.

To put the economic magnitude of the results in Table 3 into perspective, the −0.91 coefficient on BUSY in column 2 of Panel A in Table 3 is 28% of the average 3.22-percentage-point standard deviation of within-firm-year shareholder voting across firms. Further, the coefficients on 5_BOARDS and 6_OR_MORE_BOARDS exceed this standard deviation, which implies that the number of votes a director who serves on five or more boards receives is over 1 standard deviation lower than the number of votes a director on one board receives.

In Table 4, we examine how the relation between shareholder satisfaction and director busyness has changed over time. Anecdotal evidence suggests that directors' workload has increased over time, which may lead shareholders to be more sensitive to busy directors over time. In column 1, the coefficient on the interaction term BUSY × Y_2012_2016 is −0.22, indicating that busy directors receive lower shareholder satisfaction in the period 2012–2016 than in the period 2007–2011. Further, it appears that this negative relation is primarily driven by directors on four or more boards, as the coefficient on the interaction term 4_OR_MORE_BOARDS × Y_2012_2016 is −0.73 in column 2. The results in Table 4 are consistent with shareholders recognizing the increasing time demands on busy directors over time or perhaps simply becoming more cognizant of the costs associated with having busy directors on the board.

TABLE 4

Effects of Director Busyness Over Time

Table 4 examines how the relation between shareholder satisfaction and director busyness has changed over time. Y_2012_2016 is an indicator variable equal to 1 if the year is 2012, 2013, 2014, 2015, or 2016, and 0 otherwise. The director controls are INSIDE, FINANCIAL_EXPERT, RETIRED, AGE, TENURE, MINORITY, FEMALE, #_QUAL, NETWORK_SIZE, EXECUTIVE, CEO, CHAIRMAN, ON_AUDIT_COMM, ON_COMP_COMM, ON_NOM_COMM, #_COMM, AUDIT_CHAIR, COMP_CHAIR, NOM_CHAIR, and ISS_FOR_REC. All variables are defined in Appendix A. The regressions are estimated using ordinary least squares (OLS) with firm-year fixed effects (FE). *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by firm-year. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	PERCENT_FOR_VOTES	
	1	2
BUSY	−0.544***	
	(−8.47)	
BUSY × Y_2012_2016	−0.221***	
	(−2.71)	
4_OR_MORE_BOARDS		−1.269***
		(−11.43)
4_OR_MORE_BOARDS × Y_2012_2016		−0.725***
		(−4.87)
Firm–year FE	Yes	Yes
Director controls	Yes	Yes
Clustered SE	Yes	Yes
No. of obs.	70,369	70,369
Within R^2	0.492	0.496

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C. Heterogeneity in the Costs of Busy Director Time Constraints

While our baseline finding indicates that busy directors are on average perceived by shareholders to be less desirable than nonbusy directors, there can be significant heterogeneity in how shareholders perceive certain types of busy directors. Clearly, one of the primary concerns with a busy director is the time constraints that multiple directorships can impose on the individual's ability to diligently monitor and advise management. And one can envision that some directors are in a better position to handle the time commitments stemming from multiple directorships. Directors with fewer other time demands could potentially devote more time to each of their boards and make busyness a nonissue. This source of heterogeneity among busy directors has received limited attention in prior studies, in large part due to the focus on aggregate firm-level board composition.

Our first class of proxies for directors' other time demands is based on director-level characteristics. We construct indicator variables for whether a director is retired and whether a director is also a full-time executive at another firm.[13] Retired directors are expected to have more time available, while outside executive directors are expected to have less time available. We also construct variables for whether the director is CEO, chairman, or committee chair or serves on many committees, as such directors are expected to have more board-related duties.

We present our findings in Table 5. In column 1, we find that the interaction term BUSY $\times$ RETIRED is positive and statistically significant, indicating that the negative effects of director busyness are mitigated when a director has more time available. On the other hand, in column 2 the interaction term BUSY $\times$ OUTSIDE_EXECUTIVE is negative and significant, which indicates that busy directors who are also executives at other firms receive lower shareholder satisfaction. In column 3, we find that the coefficient on BUSY $\times$ CEO is -0.83, indicating that the negative effect of busyness more than doubles for CEOs (the main effect on BUSY is -0.63). In column 4, a similar statistically and economically significant negative effect is found for busy directors who also serve as board chairs. On the other hand, no significant negative interaction is found for AUDIT_CHAIR, COMP_CHAIR, and NOM_CHAIR. Finally, there is a negative interaction on #_COMM in column 8, suggesting that internal time demands arising from serving on multiple committees can amplify the negative effects of busyness.

In column 9 of Table 5, we include all of the interactions together with director controls. We find that the individual relationships presented in columns 1–8 continue to hold, and the magnitudes of the interaction terms are similar to those obtained in columns 1–8. The regression in column 9 suggests that our proxies for director busyness are incrementally informative to each other, capturing different aspects of a director's time constraints. When all of the time demand proxies are simultaneously included in the regression, the magnitude of the negative coefficient on BUSY decreases significantly, from -0.81 (Table 3, column 2) to -0.37,

[13] Besides retired and executive, a director's main employment category could be consultant, financial services, academic, attorney/counsel, etc.

TABLE 5
Heterogeneity among Busy Directors: Director Characteristics

Table 5 examines how the relation between shareholder satisfaction and director busyness depends on various director characteristics. The director controls are INSIDE, FINANCIAL_EXPERT, RETIRED, AGE, TENURE, MINORITY, FEMALE, #_QUAL, NETWORK_SIZE, EXECUTIVE, CEO, CHAIRMAN, ON_AUDIT_COMM, ON_COMP_COMM, ON_NOM_COMM, #_COMM, AUDIT_CHAIR, COMP_CHAIR, NOM_CHAIR, and ISS_FOR_REC. All variables are defined in Appendix A. The regressions are estimated using ordinary least squares (OLS) with firm-year fixed effects (FE). *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by firm-year. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	PERCENT_FOR_VOTES								
	1	2	3	4	5	6	7	8	9
BUSY	−0.835***	−0.564***	−0.633***	−0.619***	−0.673***	−0.678***	−0.681***	−0.567***	−0.367***
	(−16.49)	(−13.25)	(−15.15)	(−14.47)	(−15.55)	(−15.90)	(−15.87)	(−7.76)	(−4.15)
BUSY × RETIRED	0.502***								0.273***
	(6.49)								(3.31)
BUSY × OUTSIDE_EXECUTIVE		−0.816***							−0.782***
		(−6.39)							(−5.79)
BUSY × CEO			−0.833***						−0.729***
			(−5.56)						(−4.07)
BUSY × CHAIRMAN				−0.531***					−0.445***
				(−4.26)					(−3.13)
BUSY × AUDIT_CHAIR					0.012				−0.125
					(0.10)				(−1.09)
BUSY × COMP_CHAIR						0.048			0.016
						(0.41)			(0.14)
BUSY × NOM_CHAIR							0.082		0.075
							(0.63)		(0.56)
BUSY × #_COMM								−0.040*	−0.080***
								(−1.70)	(−3.16)
Firm–year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Director controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	70,369	70,369	70,369	70,369	70,369	70,369	70,369	70,369	70,369
Within R^2	0.492	0.493	0.492	0.492	0.492	0.492	0.492	0.492	0.494

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suggesting that the main channel through which busy directors negatively impact shareholders is their time constraints.

Next, we develop proxies for board portfolio characteristics that may impact the performance of busy directors. Boards with the same FYE month are likely to be busy at similar times during the year. For example, Lublin (2016) reported that "Edward A. Kangas, a former CEO of Deloitte Touche Tohmatsu Ltd., said he manages his commitments to five boards and three audit committees because two of those companies have odd fiscal years. They end Oct. 31 at Hovnanian Enterprises Inc., and July 31 at Intuit Inc." (https://wsj.com/articles/three-four-five-how-many-board-seats-are-too-many-1453342763).

This leads us to predict that the costs of busy directors are greater for directors who sit on boards with the same FYE month. In addition, we examine the number of external board committees on which a director sits. Since serving on board committees can be time consuming, we expect that busy directors who also serve on many external board committees have greater time constraints, potentially leading to lower shareholder satisfaction. Finally, we further exploit plausibly exogenous variation in director time constraints driven by major distractions at other firms where the director serves as a board member. We focus on three events that may require a significant amount of time and attention: CEO turnovers, acquisitions, and stock price drops (see Section III for details on variable construction).

We present our results in Table 6. In column 1, we find that the coefficient on the interaction term BUSY × SAME_FYE_MONTH is negative and statistically significant, indicating that shareholders are particularly dissatisfied when busy directors serve on boards that have the same FYE month.[14] This finding is especially interesting, since SAME_FYE_MONTH seems like a rather subtle, but potentially important, issue for shareholders to consider when assessing the busyness of directors. In column 2, we find that the interaction term BUSY × #_EXT_COMM is also negative and statistically significant. In column 4, we find that the interaction term BUSY × DIST_STOCK_PRICE_DROP is negative and significant, indicating that greater time demands at one of the director's boards can affect her performance on other boards. We observe similar negative and statistically significant interaction effects between BUSY and DIST_ACQUISITIONS and between BUSY and DIST_COMBINED.[15]

D. Firm-Level Heterogeneity in the Benefits of Busy Directors' Expertise

To this point, we have focused on how the time-constraint costs of busy directors vary as a function of their other time demands. However, busy directors are also expected to convey benefits to some firms. This is not due to their busyness, per se, but rather because busy directors typically have significant expertise that makes them in high demand. To investigate whether these expertise benefits

[14] Another interpretation of this finding is that busy directors who serve on more boards with non-December FYE may perform better, as most firms have December FYE (73% in our sample). In untabulated analyses, we interact BUSY with the proportion of boards on which a director sits that have a non-December FYE and obtain consistent results.

[15] In untabulated analyses, we verify that the inferences are unchanged when interacting the firm-level shocks with the number of boards instead of the BUSY indicator variable.

TABLE 6
Heterogeneity among Busy Directors: Portfolio Characteristics

Table 6 examines how the relation between shareholder satisfaction and director busyness depends on portfolio characteristics. The director controls are INSIDE, FINANCIAL_EXPERT, RETIRED, AGE, TENURE, MINORITY, FEMALE, #_QUAL, NETWORK_SIZE, EXECUTIVE, CEO, CHAIRMAN, ON_AUDIT_COMM, ON_COMP_COMM, ON_NOM_COMM, #_COMM, AUDIT_CHAIR, COMP_CHAIR, NOM_CHAIR, and ISS_FOR_REC. All variables are defined in Appendix A. The regressions are estimated using ordinary least squares (OLS) with firm-year fixed effects (FE). *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by firm-year. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	PERCENT_FOR_VOTES					
	1	2	3	4	5	6
BUSY	−0.504***	−0.186**	−0.582***	−0.549***	−0.543***	−0.403***
	(−7.86)	(−2.14)	(−11.64)	(−11.37)	(−9.21)	(−4.64)
SAME_FYE_MONTH	−0.054					
	(−1.26)					
BUSY × SAME_FYE_MONTH	−0.268***					
	(−2.79)					
#_EXT_COMM		−0.024**				
		(−2.22)				
BUSY × #_EXT_COMM		−0.058***				
		(−3.55)				
DIST_CEO_TURNOVER			−0.121**			
			(−2.06)			
BUSY × DIST_CEO_TURNOVER			−0.103			
			(−1.17)			
DIST_STOCK_PRICE_DROP				−0.104*		
				(−1.79)		
BUSY × DIST_STOCK_PRICE_DROP				−0.225**		
				(−2.51)		
DIST_ACQUISITIONS					0.063	
					(1.33)	
BUSY × DIST_ACQUISITIONS					−0.257***	
					(−3.04)	
DIST_COMBINED						−0.046
						(−1.13)
BUSY × DIST_COMBINED						−0.284***
						(−2.85)
Firm–year FE	Yes	Yes	Yes	Yes	Yes	Yes
Director controls	Yes	Yes	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	70,369	70,369	70,369	70,369	70,369	70,369
Within R^2	0.492	0.493	0.492	0.492	0.492	0.492

are relatively greater for certain types of firms, we use director-year fixed effects, which take advantage of the variation in firm characteristics among the boards on which a director sits in a given year. This approach allows us to identify differences in shareholder satisfaction across different types of firms for the *same* director in a given year and thus can help isolate the heterogeneity in the effects of busyness as a function of firm characteristics.[16]

Specifically, we examine how the relation between busyness and shareholder satisfaction varies as a function of a firm's advising and monitoring needs. Adams et al. (2010) suggest that busy directors are of a "higher quality" than nonbusy directors, which presumably comes from some combination of their greater skill, experience, or wider network of contacts. These traits can improve a director's ability to provide useful advice and/or monitor executive behavior

[16] We run our analysis for the sample of directors on two or more boards and the sample of directors on three or more boards.

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(Coles et al. (2014a)). At the same time, busy directors may be "spread too thin" to effectively provide executives with detailed guidance or to engage in the due diligence necessary to effectively monitor management (Fich and Shivdasani (2006)). Consequently, the advising and monitoring effectiveness of busy directors is an empirical question, which may vary across firms depending on the demands for these roles from directors.

We attempt to identify types of firms where individual directors are likely to have important advisory and monitoring roles using a number of firm-level proxies. We predict that directors have larger advisory roles in early-stage firms and in firms with greater growth opportunities (Field et al. (2013)). Firms with high growth opportunities are also expected to have greater monitoring demands (Smith and Watts (1992)). We also predict that firms with lower CEO dollar ownership (CEO_OWNERSHIP) are likely to demand greater monitoring efforts from directors. Finally, we expect that larger and more complex firms have a greater need for advising from their boards (Coles et al. (2014a)).

In addition, board size and the proportion of busy directors may be associated with the need for advising from individual directors. Specifically, larger boards provide greater board-level advising (Coles, Daniel, and Naveen (2008)), which may substitute for the advising benefits provided by *individual* busy directors. Similarly, boards that already have many experienced (but busy) directors may have a lower marginal benefit from the advisory role of an additional busy director. To investigate the heterogeneity in the effects of busyness arising from these firm characteristics, we estimate the following equation:

$$
\begin{aligned}
(5) \qquad \text{PERCENT_FOR_VOTES}_{ijt} \;=\; & \beta_1 + \beta_2 \text{FIRM_AGE}_{jt} \\
& + \beta_3 \text{CEO_OWNERSHIP}_{jt} + \beta_4 \text{BOOK_TO_MARKET}_{jt} \\
& + \beta_5 \text{FIRM_SIZE}_{jt} + \beta_6 \text{BOARD_SIZE}_{jt} \\
& + \beta_7 \text{PROP_BUSY}_{jt} + \beta_8 \text{BOARD_PERCENT_FOR_VOTES}_{jt} \\
& + \overline{\textit{Director Controls}}_{ijt} \boldsymbol{\gamma} + \delta_{it} + \epsilon_{ijt},
\end{aligned}
$$

where i refers to a director identifier, index j refers to a firm identifier, and index t refers to the year, δ_{it} are director-year fixed effects, and the other variables are defined in Appendix A. The director controls are director-firm characteristics capturing the fact that directors may have different roles on their boards that could affect shareholder satisfaction. We include BOARD_PERCENT_FOR_VOTES to control for systematic voting differences across firms.

Table 7 reports the results from estimating equation (5).[17] In columns 1–2, we examine busy directors that sit on three or more boards; in columns 3–4, we extend our results to include directors who sit on two boards. In column 1, we find that FIRM_AGE is negatively related with shareholder satisfaction, consistent with early-stage firms benefiting more from busy directors. In addition, CEO_OWNERSHIP is positively associated with shareholder satisfaction for busy directors, which suggests that busy directors are less helpful in monitoring firms with greater agency problems. We further find a negative

[17]Note that the number of observations drops because we use within-director-year variation, which requires that directors sit on two or more boards in a given year.

TABLE 7

Heterogeneity among Busy Directors: Firm Characteristics

Table 7 uses variation in firm characteristics among the boards on which a director sits in a given year to examine whether certain firms benefit more from a busy director's expertise. The director controls are INSIDE, TENURE, EXECUTIVE, CEO, CHAIRMAN, ON_AUDIT_COMM, ON_COMP_COMM, ON_NOM_COMM, #_COMM, AUDIT_CHAIR, COMP_CHAIR, NOM_CHAIR, and ISS_FOR_REC. All variables are defined in Appendix A. The regressions are estimated using ordinary least squares (OLS) with director-year fixed effects (FE). *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by director-year. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

		PERCENT_FOR_VOTES			
		3 or More Boards		2 or More Boards	
	Predicted Sign	1	2	3	4
FIRM_AGE	−	−0.010***	−0.004**	−0.020***	−0.003*
		(−3.79)	(−2.14)	(−4.74)	(−1.95)
CEO_OWNERSHIP	+	0.125**	0.115***	0.175***	0.132***
		(2.11)	(2.81)	(4.06)	(4.32)
BOOK_TO_MARKET	−	−0.844***	−0.090	−0.677***	−0.100
		(−4.15)	(−0.75)	(−4.45)	(−1.04)
FIRM_SIZE	+	0.017	−0.089*	−0.036	−0.079**
		(0.27)	(−1.93)	(−0.78)	(−2.35)
BOARD_SIZE	−	0.028	−0.019	0.011	−0.048**
		(0.71)	(−0.59)	(0.38)	(−2.14)
PROP_BUSY	−	0.059	0.375	0.066	0.165
		(0.13)	(1.06)	(0.19)	(0.63)
BOARD_PERCENT_FOR_VOTES	+		0.743***		0.710***
			(27.69)		(37.77)
Director–year FE		Yes	Yes	Yes	Yes
Director controls		Yes	Yes	Yes	Yes
Clustered SE		Yes	Yes	Yes	Yes
No. of obs.		13,363	13,363	31,301	31,301
Within R^2		0.505	0.717	0.526	0.729

coefficient on BOOK_TO_MARKET, consistent with firms with greater growth opportunities obtaining greater advisory and/or monitoring benefits from busy directors (although the finding previously noted regarding busy directors being less helpful in monitoring may suggest that the finding on growth opportunities stems mainly from busy directors' advisory role). We do not find consistent significant relations for our tests of FIRM_SIZE, BOARD_SIZE, or PROP_BUSY.

Collectively, these results suggest that shareholder satisfaction regarding busy directors varies as a function of firms' demands for advising and monitoring. To the extent that busy directors have higher ability, as suggested in Adams et al. (2010), our results suggest that effective advising, as compared to effective monitoring, relies more on director ability and suffers less from director time constraints.

E. Announcement Returns to Director Appointments

To better understand the implications and significance of our results, it is useful to examine whether we obtain similar results using announcement returns to director appointments. Announcement returns have been a popular method to test inferences related to busy directors, but they have yielded mixed results. Ferris et al. (2003) find that announcements to the appointment of a director with three or more directorships are met with a positive stock market reaction, while Fich and Shivdasani (2006) find a negative reaction.

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We construct a sample of director appointment announcements from the BoardEx database covering the years 2007–2016. For each appointment, we compute cumulative abnormal returns around the announcement date using the event windows (−1, +1) and (−2, +2). Expected returns are calculated using a market benchmark model that is estimated using the value-weighted CRSP index over days −210 to −11. Our final sample consists of 2,937 director appointment announcements. In 18% of these announcements, directors either become busy or already serve on three or more boards.

Somewhat surprisingly, in column 2 of Table 8, we do not find a statistically significant relation between director busyness and announcement returns. Going deeper, we also examine announcement returns for various types of busy directors, including those who are retired or are executives at other firms. Again, we do not detect statistically significant heterogeneity among these types of directors using announcement returns. These findings are interesting and suggest that our shareholder voting approach can potentially produce new insights not available using announcement returns.[18]

Specifically, we believe that shareholder voting offers certain advantages relative to announcement returns for examining the efficacy of busy directors (and potentially also other types of directors). First, shareholder voting allows us to use a much larger sample. A director is generally only appointed once to a given firm, so one can observe only a single announcement return for each director, with that return coming at beginning of the director's tenure (when the director may or

TABLE 8
Announcement Returns

Table 8 examines announcement returns around days that firms report that a new director joins the board. CAR is the cumulative abnormal returns (%) over the event window. Expected returns are calculated using a market benchmark model that is estimated using the value-weighted Center for Research in Security Prices (CRSP) index over days −210 to −11. The regressions are estimated using ordinary least squares (OLS). All variables are defined in Appendix A. *t*-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	CAR(−1, +1)			CAR(−2, +2)		
	1	2	3	4	5	6
Intercept	0.207***	0.220**	0.191*	0.286***	0.254**	0.256*
	(2.66)	(2.57)	(1.67)	(2.87)	(2.31)	(1.75)
BUSY		−0.075	−0.145		0.179	0.257
		(−0.37)	(−0.47)		(0.68)	(0.65)
RETIRED			0.201			0.074
			(0.92)			(0.26)
BUSY × RETIRED			0.140			−0.109
			(0.30)			(−0.18)
OUTSIDE_ EXECUTIVE			−0.058			−0.077
			(−0.27)			(−0.28)
BUSY × OUTSIDE_ EXECUTIVE			−0.121			−0.273
			(−0.22)			(−0.38)
No. of obs.	2,937	2,937	2,937	2,937	2,937	2,937
R^2	0.000	0.000	0.001	0.000	0.000	0.000

[18] We note that our announcement return results can be viewed as consistent with the prior literature, which has found mixed results when using announcement returns. Our sample of announcements come from the period 2007–2016; Ferris et al. (2003) use a sample from 1990 to 1995 and Fich and Shivdasani (2006) use a sample from 1989 to 1995.

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may not yet be considered busy). In contrast, shareholder voting occurs at regular intervals during a director's tenure and can be observed in time series as a director becomes more or less busy, distracted, experienced, etc. Second, and relatedly, shareholder voting allows us to observe shareholders' perceptions of a director's performance across her tenure. This allows shareholders an opportunity to learn and understand a director's characteristics and how they affect performance, as well as providing researchers the opportunity to observe greater heterogeneity in directors' characteristics and how it affects voting outcomes.

These results with announcement returns help highlight the significance of our findings using shareholder satisfaction as measured by shareholder voting. A priori, both shareholder voting and announcement returns would seem to be plausible mechanisms to uncover shareholders' perceptions about the value of certain directors. Our analysis reveals that shareholder voting can produce new insights about director busyness that are not available using announcement returns, and we conjecture that shareholder voting can be a useful tool for studying the performance implications of board composition more broadly.

F. Additional Analyses

While our prior analyses consider the director voting outcomes of busy directors across all firms, a potentially interesting incremental test is to examine busy director voting outcomes in a sample of underperforming firms. Presumably, shareholders are more attentive to board composition and other corporate governance matters in such settings, so we might expect to see larger negative reactions to busy directors for such firms. Moreover, this analysis could allow us to provide insight into whether shareholders "blame" busy directors for poor firm performance.

Using accounting returns as a measure of underperformance, we document that shareholders do indeed react more negatively to busy directors at underperforming firms. In column 1 of Table 9, we find that the interaction between BUSY and LOW_ROA_{t-1} is negative and statistically significant, indicating that busy directors receive particularly low shareholder satisfaction at firms with low accounting returns. The effect is also robust to including other director-level controls. We find that the negative reaction to busy directors is even larger at firms that are continually underperforming, where continually underperforming firms have an average return on assets (ROA) in years $t-3$ to $t-1$ that is in the bottom quartile. Our results are consistent with the notion that shareholders are particularly attentive to director busyness when the firm is not performing well and tend to hold busy directors accountable for the poor firm performance.

We also perform a changes analysis in which we use variation in the number of directorships and voting over time for the same director (which captures new appointments or loss of board seats at other firms). This test provides additional internal validity and robustness to our main results. We also note that we could not conduct such a test using announcement returns because the announcement of a director joining a given board happens only once, which highlights yet another merit of examining shareholder voting. In Table 10, we find a negative relationship between changes in the number of boards and changes in voting, consistent with our prior findings.

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TABLE 9
Busy Directors at Underperforming Firms

Table 9 examines the relation between shareholder satisfaction and director busyness in underperforming firms. LOW_ROA_{t-1} is an indicator variable equal to 1 when the firm is in the bottom quartile of the ROA distribution in year $t-1$, and 0 otherwise. $LOW_ROA_{t-3 to t-1}$ is an indicator variable equal to 1 when the firm's average ROA from year $t-3$ to $t-1$ is in the bottom quartile, and 0 otherwise. The director controls are INSIDE, FINANCIAL_EXPERT, RETIRED, AGE, TENURE, MINORITY, FEMALE, #_QUAL, NETWORK_SIZE, EXECUTIVE, CEO, CHAIRMAN, ON_AUDIT_COMM, ON_COMP_COMM, ON_NOM_COMM, #_COMM, AUDIT_CHAIR, COMP_CHAIR, NOM_CHAIR, and ISS_FOR_REC. All variables are defined in Appendix A. The regressions are estimated using ordinary least squares (OLS) with firm-year fixed effects (FE). *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by firm-year. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	PERCENT_FOR_VOTES			
	1	2	3	4
BUSY	−0.849***	−0.638***	−0.820***	−0.620***
	(−14.02)	(−14.44)	(−13.16)	(−13.89)
$BUSY \times LOW_ROA_{t-1}$	−0.333**	−0.200*		
	(−2.23)	(−1.84)		
$BUSY \times LOW_ROA_{t-3 to t-1}$			−0.421***	−0.250**
			(−2.96)	(−2.34)
Firm–year FE	Yes	Yes	Yes	Yes
Director controls	No	Yes	No	Yes
Clustered SE	Yes	Yes	Yes	Yes
No. of obs.	67,883	67,883	66,903	66,903
Within R^2	0.005	0.491	0.005	0.491

TABLE 10
Changes Analysis

Table 10 examines how changes in the number of boards on which a director sits affects the change in the percentage of "for" votes. Changes are calculated from one election to the next, which may or may not correspond to a year. The regressions are estimated using ordinary least squares (OLS). All variables are defined in Appendix A. *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by director. Statistical significance at the 10%, 5%, and 1% level is denoted by *, **, and ***, respectively.

	ΔPERCENT_FOR_VOTES			
	1	2	3	4
Δ #_BOARDS	−0.291***		−0.289***	−0.191***
	(−3.13)		(−3.12)	(−2.99)
ΔBUSY		−0.279*		
		(−1.81)		
ΔRETIRED			0.277**	0.029
			(2.27)	(0.36)
ΔON_AUDIT			−0.194	−0.097
			(−0.99)	(−0.77)
ΔON_COMP			−1.257***	−0.593***
			(−7.03)	(−5.05)
ΔON_NOM			−0.468**	−0.173
			(−2.48)	(−1.48)
ΔAUDIT_CHAIR			0.073	−0.221
			(0.28)	(−1.26)
ΔCOMP_CHAIR			−0.169	−0.259
			(−0.69)	(−1.56)
ΔNOM_CHAIR			−0.761***	−0.662***
			(−2.83)	(−3.62)
ΔISS_FOR_REC				23.728***
				(81.61)
Clustered SE	Yes	Yes	Yes	Yes
No. of obs.	50,612	50,612	50,612	50,612
R^2	0.000	0.000	0.002	0.533

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V. Conclusion

In this paper, we use shareholder satisfaction and director-level tests to shed new light on the tradeoffs between a busy director's time constraints and potentially greater expertise. We find that busy directors receive lower shareholder satisfaction, suggesting that, on average, the time-constraint effect dominates. However, it also appears that shareholders are able to recognize when the time constraints of busy directors might be less detrimental, as when directors have fewer external time demands. Shareholders also seem to understand busy directors' expertise can be valuable for firms with relatively high advising needs. Our results suggest that shareholder voting is nuanced and warrants further study, particularly on the extent to which it accurately captures the effect of director characteristics on firm value.

We note that the benefits of using director-level tests in combination with shareholder satisfaction are likely to extend to research on other aspects of board composition. It would be useful to use the empirical methods that we develop to investigate other issues of board composition, such as director tenure, diversity, and independence. These methods can allow researchers to design more nuanced and sophisticated studies by considering both director- and firm-level heterogeneity. We also highlight that this approach allows researchers to overcome *unobservable* omitted firm-level variables and isolate director-level characteristics through the use of firm-year fixed effects.

Appendix A. Variable Definitions

Firm Characteristics

ANNUAL_RETURN: 12-month monthly compounded return during the fiscal year.

BOARD_SIZE: The number of directors on the board.

BOOK_TO_MARKET: Book value of equity divided by market value of equity.

CEO_OWNERSHIP: Natural log of the CEO's dollar ownership (number of shares multiplied by stock price).

EXCESS_CEO_COMP: Residuals from a regression of total CEO compensation on firm size, book-to-market ratio, firm sales, annual stock return, industry fixed effects, and year fixed effects.

FIRM_AGE: Number of years that firm has been listed on the Center for Research in Security Prices (CRSP).

FIRM_SIZE: Natural log of total assets.

HAS_BUSY_DIRECTOR: Indicator variable equal to 1 if a board has at least one busy director, and 0 otherwise.

PROP_BUSY: The proportion of directors on a board who are busy.

ROA: Operating income before depreciation divided by total assets.

STAGGERED: Indicator variable equal to 1 if a board is staggered, and 0 otherwise.

Director Characteristics

#_BOARDS: Number of exchange-listed boards on which a director sits in a given year within the BoardEx database.

#_COMM: Number of board committees on which the director serves.

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#_EXT_COMM: Total number of board committees (on other boards) on which a director serves.

#_QUAL: Number of education qualifications at the undergraduate level and above.

4_OR_MORE_BOARDS: Indicator variable equal to 1 if a director sits on four or more boards, and 0 otherwise.

6_OR_MORE_BOARDS: Indicator variable equal to 1 if a director sits on six or more boards, and 0 otherwise.

AGE: Director age.

AUDIT_CHAIR: Indicator variable equal to 1 if a director is the audit committee chair, and 0 otherwise.

BUSY: Indicator variable equal to 1 if a director sits on three or more boards, and 0 otherwise.

CEO: Indicator variable equal to 1 if a director is the chief executive officer (CEO), and 0 otherwise.

CHAIRMAN: Indicator variable equal to 1 if a director is the chairman, and 0 otherwise.

COMP_CHAIR: Indicator variable equal to 1 if a director is the compensation committee chair, and 0 otherwise.

NETWORK_SIZE: Network size of individual, computed as the number of overlaps through employment, education, and other organizations (in thousands).

DIRECTOR_TURNOVER: Indicator variable equal to 1 if a director is not observed on the board in year $t+1$, and 0 otherwise.

DIST_ACQUISITIONS: Indicator variable equal to 1 if the individual is a director at a different firm whose acquisition expenditure is greater than 0 in the previous year. If a director does not sit on any other boards, the variable is set to 0.

DIST_CEO_TURNOVER: Indicator variable equal to 1 if the individual is a director at a different firm with a CEO turnover in the previous year. If a director does not sit on any other boards, the variable is set to 0.

DIST_COMBINED: Indicator variable equal to 1 if any of the three distracted measures is equal to 1, and 0 otherwise.

DIST_STOCK_PRICE_DROP: Indicator variable equal to 1 if the individual is a director at a different firm whose stock price drops by more than 10% compared to the prior year. This variable is also measured in year $t-1$. If a director does not sit on any other boards, it is set to 0.

EXECUTIVE: Indicator variable equal to 1 if a director is an executive of a firm, and 0 otherwise.

EXECUTIVE_HIGH_ROA: Indicator variable equal to 1 if the director was an executive at a firm whose average ROA over the years $t-3$ to $t-1$ was in the top quartile, and 0 otherwise.

EXECUTIVE_LARGE_FIRM: Indicator variable equal to 1 if the director was an executive at a firm whose average firm size over the years $t-3$ to $t-1$ was in the top quartile, and 0 otherwise.

FEMALE: Indicator variable equal to 1 if a director is female, and 0 otherwise.

FINANCIAL_EXPERT: Indicator variable equal to 1 if a director is classified as a financial expert, and 0 otherwise.

INSIDE: Indicator variable equal to 1 if a director is not classified as independent according to RiskMetrics, and 0 otherwise.

LOW_ATTENDANCE: Indicator variable equal to 1 if a director attends less than 75% of the board meetings in a given year, and 0 otherwise.

MINORITY: Indicator variable equal to 1 if a director is not Caucasian, and 0 otherwise.

NOM_CHAIR: Indicator variable equal to 1 if a director is the nominating committee chair, and 0 otherwise.

ON_AUDIT_COMM: Indicator variable equal to 1 if a director serves on the audit committee, and 0 otherwise.

ON_COMP_COMM: Indicator variable equal to 1 if a director serves on the compensation committee, and 0 otherwise.

ON_NOM_COMM: Indicator variable equal to 1 if a director serves on the nominating committee, and 0 otherwise.

OUTSIDE_EXECUTIVE: Indicator variable equal to 1 if a director is an executive at a different firm, and 0 otherwise.

RECENT_RETIREMENT: Indicator variable equal to 1 if the director retired in the prior year, and 0 otherwise.

RETIRED: Indicator variable equal to 1 if a director is retired, and 0 otherwise.

SAME_FYE_MONTH: For a director at Firm A, it is the proportion of other exchange-listed boards on which a director sits that have the same fiscal-year-end month as Firm A. If a director does not sit on any other boards, it is set to 0.

TENURE: Number of years that a director has served on the board.

Shareholder Voting Variables

BOARD_PERCENT_FOR_VOTES: Average percentage of "for" votes for a board in a given election.

ISS_FOR_REC: Indicator variable equal to 1 if a director receives a "for" recommendation from Institutional Shareholder Services (ISS) in a given election, and 0 otherwise.

PERCENT_FOR_VOTES: Number of "for" votes divided by the total number of votes cast (number of "for" votes + number of "against" votes + number of "abstain" votes), multiplied by 100.

STD_DEV_PERCENT_FOR_VOTES: Standard deviation of the percentage "for" votes on a board in a given election.

Appendix B. Validation Tests for Shareholder Voting

In our analysis, we interpreted the result that busy directors receive lower shareholder satisfaction as evidence that shareholders are less satisfied with busy directors' performance. In this appendix, we support this interpretation by showing that shareholder satisfaction is informative about many aspects related to director performance (i.e., director turnover, compensation, and meeting attendance). Consequently, we argue that shareholder satisfaction can help address the lack of a performance measure for individual directors (Srinivasan (2005)).

We first show that low shareholder satisfaction is associated with director turnover in the following year. It seems plausible that directors with poor performance are more likely to turn over (Bates, Becher, and Wilson (2017)). Shareholder satisfaction is unlikely to have a causal effect on director turnover since nearly all directors receive more than enough votes to be elected. However, variations in shareholder satisfaction can capture elements that do have a causal effect on director turnover. In Table A1, we estimate a linear probability model of director turnover on shareholder satisfaction using the whole sample and the subsample of directors under the age of 60. We use this subsample because turnover for older directors is more likely to reflect things other than performance that are

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TABLE A1
Shareholder Satisfaction and Director Turnover

Table A1 examines the relation between director turnover and shareholder satisfaction. Columns 1 and 2 use the whole sample, while column 3 uses the subsample of directors who are under the age of 60. The regressions are estimated using ordinary least squares (OLS) with firm-year fixed effects (FE). All variables are defined in Appendix A. *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by firm-year. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	DIRECTOR_TURNOVER		
	All	All	AGE < 60
	1	2	3
PERCENT_FOR_VOTES	−0.0012***	−0.0009***	−0.0013**
	(−5.40)	(−2.92)	(−2.19)
BUSY		−0.0092***	0.0075
		(−3.44)	(1.29)
INSIDE		0.0122**	0.0104
		(2.25)	(1.08)
FINANCIAL_EXPERT		−0.0007	−0.0027
		(−0.21)	(−0.46)
RETIRED		0.0018	0.0011
		(0.64)	(0.17)
AGE		0.0033***	−0.0011**
		(17.66)	(−2.31)
TENURE		0.0021***	0.0013***
		(10.76)	(3.53)
MINORITY		0.0017	−0.0054
		(0.56)	(−1.10)
FEMALE		−0.0056**	−0.0031
		(−2.04)	(−0.71)
#_QUAL		−0.0026***	−0.0024
		(−2.74)	(−1.33)
NETWORK_SIZE		−0.0002	0.0018
		(−0.21)	(1.27)
EXECUTIVE		−0.0062**	−0.0031
		(−2.12)	(−0.69)
CEO		−0.0214***	−0.0331***
		(−4.32)	(−4.05)
CHAIRMAN		−0.0335***	−0.0122**
		(−9.32)	(−2.01)
ON_AUDIT_COMM		−0.0093***	−0.0128**
		(−3.17)	(−2.50)
ON_COMP_COMM		−0.0096***	−0.0050
		(−3.65)	(−1.02)
ON_NOM_COMM		−0.0009	−0.0032
		(−0.31)	(−0.65)
#_COMM		−0.0029***	−0.0022
		(−2.96)	(−1.08)
AUDIT_CHAIR		−0.0302***	−0.0179***
		(−9.05)	(−2.92)
COMP_CHAIR		−0.0238***	−0.0092
		(−7.42)	(−1.50)
NOM_CHAIR		−0.0192***	−0.0231***
		(−5.57)	(−3.42)
ISS_FOR_REC		0.0137	0.0248
		(1.51)	(1.49)
Firm–year FE	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes
No. of obs.	59,744	59,744	21,273
Within R^2	0.001	0.029	0.009

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difficult to control for (e.g., health reasons).[19] The dependent variable in these regressions is an indicator equal to 1 if a director is not observed on the following year's board (i.e., a turnover takes place), and 0 otherwise. Because director turnover occurs at the director level, we are able to include firm-year fixed effects to control for all observable and unobservable firm characteristics. In columns 1–3, there is a significant negative relation between shareholder satisfaction and director turnover, indicating that directors who receive greater (lower) shareholder satisfaction are less (more) likely to turn over. In columns 2 and 3, we include director control variables and we find that the significant negative relation holds even after including these controls. These results suggest that shareholder satisfaction is informative about director performance.

In columns 2 and 3 of Table A1, we also observe a relation between busy directors and director turnover. In column 2, the coefficient is negative, indicating that busy directors are less likely to experience turnover. At first glance, this negative coefficient appears to be inconsistent with our finding that busy directors are detrimental to shareholders. However, it is possible that an unobservable director characteristic (e.g., director health) drives this negative relation. To see this, we examine the relation between busy directors and turnover in the subsample of directors under the age of 60, where turnover due to health reasons is less likely. In this subsample, the sign on BUSY reverses and becomes positive (though not statistically significant), consistent with busy directors performing poorly.

In our second test, we examine the effect of excess CEO compensation on shareholder satisfaction. We expect excess CEO compensation to mainly negatively impact the shareholder satisfaction regarding directors on compensation committees but not directors on audit or nominating committees. Following prior literature, we measure excess CEO compensation by first computing "expected" CEO compensation using the fitted values from a regression of total CEO compensation (obtained from ExecuComp) on economic determinants, industry fixed effects, and year fixed effects (e.g., Faleye, Hoitash, and Hoitash (2011)). The economic determinants are firm size, book-to-market ratio, firm sales, and annual stock return. In untabulated results, we find that our model has an adjusted R^2 of over 0.40, indicating that our model captures a large portion of the variation in CEO compensation. With the fitted values, we then subtract them from the observed total CEO compensation to obtain a measure of "excess" CEO compensation.

In columns 1–3 of Table A2, we show regressions of shareholder satisfaction on excess CEO compensation in the following subsamples: compensation committee members who are not on the audit or nominating committees, audit committee members who are not on the compensation or nominating committees, and nominating committee members who are not on the audit or compensation committees. We do not include firm-year fixed effects here, because excess CEO compensation, as a firm-level characteristic, would drop out of the equation as a result. Instead, we include a control variable for the average shareholder voting on the board in a given year (BOARD_PERCENT_FOR_VOTES). We also include director controls in all regressions. We find that excess CEO compensation leads to lower shareholder satisfaction for compensation committee members but not for audit or nominating committee members. This result suggests that shareholders are able to differentiate through their voting what firm performance measures are likely to be informative about an individual director's performance.

In column 4 of Table A2, we examine whether shareholder satisfaction is lower for directors with poor board attendance. Our measure of board attendance is an indicator variable equal to 1 if a director misses more than 25% of the board meetings (LOW_ATTENDANCE), and 0 otherwise. A director who is missing meetings

[19] We choose 60 years as the threshold based on the CEO turnover literature (e.g., Parrino (1997)). The findings hold with other thresholds (e.g., 65 years).

TABLE A2

Shareholder Satisfaction, Excess CEO Compensation and Board Attendance

Table A2 examines the relation between shareholder satisfaction and excess chief executive officer (CEO) compensation as well as the relation between shareholder satisfaction and board attendance. Column 1 includes directors who serve on the compensation committee but not the audit or nominating committees. Column 2 includes directors who serve on the audit committee but not the compensation or nominating committees. Column 3 includes directors who serve on the nominating committee but not the audit or compensation committees. The director controls are INSIDE, FINANCIAL_EXPERT, RETIRED, AGE, TENURE, MINORITY, FEMALE, #_QUAL, NETWORK_SIZE, EXECUTIVE, CEO, CHAIRMAN, ON_AUDIT_COMM, ON_COMP_COMM, ON_NOM_COMM, #_COMM, AUDIT_CHAIR, COMP_CHAIR, NOM_CHAIR, and ISS_FOR_REC. All variables are defined in Appendix A. The regressions are estimated using ordinary least squares (OLS). Firm-year fixed effects (FE) are included in column 4. *t*-statistics, reported in parentheses, are based on standard errors (SE) clustered by firm. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	PERCENT_FOR_VOTES			
	Only Comp Comm	Only Audit Comm	Only Nom Comm	All
	1	2	3	4
EXCESS_CEO_COMP	−0.209***	0.106**	0.153	
	(−2.62)	(1.86)	(1.30)	
LOW_ATTENDANCE				−8.335***
				(−12.23)
BOARD_PERCENT_FOR_VOTES	0.771***	0.551***	0.760***	
	(26.31)	(17.79)	(18.95)	
Firm–year FE	No	No	No	Yes
Director controls	Yes	Yes	Yes	Yes
Clustered SE	Yes	Yes	Yes	Yes
No. of obs.	6,049	9,691	5,661	70,369
Within R^2	0.787	0.742	0.723	0.502

likely has inadequate performance. Indeed, we find a large negative coefficient on LOW_ATTENDANCE.

Collectively, the tests in this appendix indicate that shareholder satisfaction captures relevant information pertaining to a director's performance. This connection between shareholder satisfaction and director performance supports our interpretation that busy directors are detrimental to shareholders because they receive lower shareholder satisfaction.

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