

## **Directors' Career Concerns and Investor Outreach**

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**ABSTRACT:** This paper examines whether and to what extent directors' career concerns influence firms' investor outreach efforts. Directors experiencing proxy fights face serious career concerns due to the prospect of losing their board positions. Using a staggered difference-in-differences design, we find that directors whose careers are threatened by a proxy fight in a given firm increase investor outreach efforts in interlocked firms where they also hold board positions. The increase in investor outreach efforts is more pronounced when the director is up for election or receives an unfavorable recommendation from a proxy advisor as well as when more shares of the interlocked firm are held by long-term institutional investors. Such outreach activities improve shareholder perception of directors and reduce the likelihood of future proxy contests. Overall, our results suggest that directors rely on investor outreach as an effective mechanism to alleviate career concerns.

**Keywords:** investor relations; investor outreach; director career concerns; proxy contests; board interlocks; staggered difference-in-differences

## I. Introduction

Given directors' profound influence on corporate governance, it is crucial to understand what incentivizes directors and how they respond to the incentives. Because they receive only a modest amount of direct payment, directors' motivation often comes from developing their careers and reputations in the labor market (Fama and Jensen 1983; Jiang et al. 2016). Prior literature finds that following negative firm events (e.g., proxy contests), directors tend to lose their positions not only at the focal firm but also at other firms where they also hold board seats ("interlocked firms").<sup>1</sup> Anticipating such adverse career outcomes, directors tend to optimize their behaviors by preemptively adopting superior governance policies in the interlocked firms (e.g., reduce excess cash holdings, increase dividend payouts, etc.) (Zhang 2021). While these measures appease shareholders, they can be costly to implement and slow in generating desired outcomes. A recent study by Chapman et al. (2022) highlights the role of firms' investor outreach in developing shareholder support for current management and the board.<sup>2</sup> Importantly, involving directors in firms' shareholder engagement activities has also become more common in practice. According to PwC's Corporate Directors Survey, the percentage of directors who meet with shareholders jumped to 60% in 2022 from 42% in 2017.<sup>3</sup> Such evidence suggests that increasing firms' investor outreach can provide directors with an alternative, perhaps more cost-effective, way to respond to their career concerns. In this study, we examine whether career concerns arising from adverse events at one firm motivate directors to increase investor outreach at interlocked firms.

There are two reasons why career-concerned directors would increase interlocked firms' investor outreach. First, directors have strong personal incentives to interact with shareholders,

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<sup>1</sup> See Gilson (1990), Harford (2003), Srinivasan (2005), Fich and Shivdasani (2007), Brochet and Srinivasan (2014), Bereskin and Smith (2014), Fos and Tsoutsoura (2014), for example.

<sup>2</sup> We use investor outreach, shareholder engagement, investor relations, and IR, interchangeably.

<sup>3</sup> Typically, 700-800 directors in US public firms participate in this annual survey (PwC 2022).

because such interactions will help directors secure shareholders' vote support at reelections. Numerous anecdotes indicate that director-to-shareholder communication is a key conduit through which directors can better understand shareholders' demands and build trust with them (e.g., The New York Times 2014; Wong 2016). For example, Kingsdale Advisors, an activism defense advisory firm, encourages directors to engage with large shareholders regularly, emphasizing that, "Meeting with shareholders and building a relationship on an individual director basis helps to build personal capital, which serves to deepen shareholder support and investment and will work in [directors'] favor when issues arise." (Freeman et al. 2019) Accordingly, to alleviate the career consequences of adverse events at one firm, directors will have incentives to engage with shareholders at other interlocked firms. Second, although firms' investor relations activities are traditionally viewed as the function of management and IR officers (Chapman et al. 2019), the role of directors in firms' IR program has been increasingly recognized by practitioners and regulators (e.g., Chudoba and Dennig 2018). For example, SEC Chair Mary Jo White highlighted the importance of a shareholder-director relationship by stating, "the board of directors is—or ought to be—a central player in shareholder engagement." (SEC 2013). As a key player in firms' IR function, directors should have the ability to design firm IR activities in a way that helps their career prospects as well.<sup>4</sup> Thus, directors have both incentives and the ability to increase interlocked firms' investor outreach activities, when faced with career concerns.

Alternatively, directors may not increase interlocked firms' investor outreach activities in response to their career concerns. First, given constraints on directors' time and attention, a career shock at one firm can distract directors, reducing their ability to focus on matters at other

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<sup>4</sup> While recent surveys and anecdotes suggest that direct interactions with shareholders have become commonplace, these interactions are inherently private and unobservable. Thus, we are agnostic about whether directors increase investor outreach by personally communicating with shareholders or by directing firms' officers to do so at the appropriate time.

interlocked firms (Falato et al. 2014).<sup>5</sup> Second, utilizing firms' IR resources for directors' personal career gains may pose a conflict of interest to directors. Investor outreach activities are costly and hence require careful planning and execution to maximize shareholder value. Thus, even the perception of violating this fiduciary duty can deter directors from interfering in firms' IR resource allocation for personal benefits. Finally, even if certain career-concerned directors increase firms' investor outreach activities, sophisticated investors may see through directors' personal incentives and vote on director elections based mainly on firm performance and prospects rather than their relationship with these directors. Therefore, it is unclear whether career-concerned directors increase interlocked firms' investor outreach activities, and to what extent such actions help their careers.

We use proxy contests as a laboratory to examine our research question, because proxy contests impose a significant risk of director dismissal at interlocked firms (Fos and Tsoutsoura 2014) and the directors do respond to this risk (Zhang 2021). Following Zhang (2021), we utilize the board interlock structure at the time of proxy contests ("treatment events"); we compare interlocked firms (or "treatment firms") that share a director with the target firm of the proxy contest to industry- and size-matched control firms that do not share a director with the target firm. In a staggered difference-in-differences (DID) design, we examine whether interlocked firms increase investor outreach activities relative to control firms following proxy fights at the target firm. This design ensures that any differential change in the investor outreach activities of the treatment firms relative to control firms around the proxy fights is likely due to interlocking directors' career concerns. We measure firms' investor outreach with firms' attendance at investor conferences where participants can engage in face-to-face interactions (e.g., Bushee et al. 2011;

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<sup>5</sup> For example, the CEO of Mondelez International, in an interview with The Wall Street Journal, stated that addressing the concerns of two of her major activist investors consumed almost one-quarter of her time (Langley 2015).

Green et al. 2014). We choose this in-person setting because investor conferences typically include one-on-one meetings and social events, allowing corporate officers and directors to effectively learn about shareholders' demands and build trust with important investors.

We obtain the list of proxy contests from Securities Data Company (SDC) Platinum, individual director information from Institutional Shareholder Services (ISS) Director, and firms' investor outreach events from Bloomberg Corporate Events. Our final sample, determined by availability of data for all variables included in our main models, consists of 9,113 firm-year observations corresponding to 1,155 treatment events and 1,113 firms over the period 2004-2020.

We find that following the treatment event, treatment firms attend 0.65 more investor conferences (i.e., 16% of the sample median) compared to matched set of control firms. This is consistent with the idea that directors facing career concerns increase interlocked firms' investor outreach activities to retain their board seats. We note that this finding is robust to inclusion of a suite of control variables, conservative fixed effect structures, and alternative estimation methods and samples.

To support our inference, we conduct several cross-sectional analyses. First, we predict and find that the main effect is greater for interlocking directors who: (i) face reelection at the target firm during the year of the proxy contest, or (ii) receive a negative vote recommendation from a proxy advisor (ISS) at the interlocked firm. These results indicate that directors are more likely to reach out to investors when the risk of losing current directorships is higher. Second, we examine whether the investment horizon of interlocked firms' shareholders moderates the main effect. We expect that directors will be more incentivized to build relationships with long-term investors who can be their allies in the event of a potential activist threat in the future (Nili 2015). We find that the increase in investor outreach at interlocked firms is more salient when the firms

are held by more long-term focused institutional investors. Overall, these cross-sectional results support our inference that directors facilitate firms' engagement with shareholders when their career concerns are heightened and when such efforts are likely to be effective in retaining their current/future board seats.

While the previous analyses support our inference that directors' career concerns increase the frequency of firms' investor outreach activities, it is not clear whether these efforts benefit directors and firms. We examine the consequences for directors and firms, and find that the increase in investor outreach at interlocked firms is positively associated with more favorable ISS vote recommendations for interlocking directors' reelections as well as a lower likelihood of proxy fights at interlocked firms. Thus, the increased focus on investor relationships seems to not only benefit career-concerned directors but also help firms avoid hostile shareholder activism.

A natural question arising is *how* firms' investor outreach benefits career-concerned directors. Identifying this mechanism can be challenging because neither firms' decisions to participate in investor conferences nor interactions among participants at the conferences are observable (Brown et al. 2019). Specifically, we do not observe whether interlocking directors talk with key shareholders at investor conferences. Nevertheless, to shed light on the potential mechanism, we examine one empirically testable link: the timing of a firm's investor outreach. If firms' attendance at investor conferences, on average, helps increase shareholder support for firms and directors, career-concerned directors would want to strategically time firms' conference attendance when they need shareholders' support the most. We find that interlocked firms are more likely to participate in conferences when interlocking directors are up for reelection at the firms,

suggesting that directors benefit by concentrating firms' IR efforts in those periods when they need shareholders' support for maintaining their board seats.<sup>6</sup>

We conduct two supplementary analyses. First, we investigate whether an increase in IR events following proxy fights is due to knowledge spillover (unrelated to career concerns) from target firms to the interlocked firms through director interlocks. We do not find that the magnitude of our treatment effects varies depending on an interlocked firm's and its board's prior experience of defending shareholder activism/proxy fights, suggesting that our findings are not driven by interlocking directors' importing incremental knowledge to interlocked firms after observing proxy fights at the target firms. Second, we explore whether increased investor outreach by treatment firms conveys additional firm-specific information to investors. We measure the aggregate informativeness of conference attendance in a given firm-year by summing short-horizon absolute abnormal returns around these events. Using a DID framework, we find that the aggregate information that treatment firms provide to investors at investor conferences does not differentially change compared to control firms following proxy fights. This suggests that the increase in firms' attendance at investor conferences is focused on building relationships with shareholders (i.e., facetime) or understanding their demands rather than conveying more value-relevant information.

Finally, we check whether treatment and control firms exhibit parallel trends in the period before proxy fights. We do not find significant differential pre-trends between treatment and control firms. We also note that the increase in investor outreach at the interlocked firms does not persist beyond three years, suggesting that such extra efforts may be costly to continue and thus manifest only when directors face imminent concerns regarding retaining board seats at the firms.

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<sup>6</sup> Our results collectively suggest that directors may derive career benefits from firms' increased shareholder engagement even if they are unable to personally participate in such activities.



We make several contributions to the accounting and finance literatures. First, our study is related to the literature on directors' career concerns. Although the idea that career concerns motivate directors dates back to the seminal work of Fama and Jensen (1983), whether and how directors respond to specific career incentives are examined in relatively recent and fewer studies (e.g., Jiang et al. 2016; Zhang 2021). We contribute to this literature by documenting that directors increase shareholder engagement in order to alleviate their career concerns and protect their value and reputations in the labor market.

Second, our research speaks to the growing research on IR. Most studies in the IR literature examine the role of IR in improving firm valuation, visibility, and reducing uncertainties in capital markets (e.g., Bushee and Miller 2012; Kirk and Vincent 2014; Chapman et al. 2019; Kim, Sethuraman, and Steffen 2021). We complement these studies by providing evidence that IR activities are not just about transferring firm-specific information to the capital markets but also about building shareholders' trust in the firm, which benefits individual directors and firm officials. Furthermore, our results speak to the role of directors in firms' IR functions. Although director-to-shareholder communications have become increasingly important in recent years (e.g., Suvanto 2015; Chudoba and Denning 2018), directors' involvement with IR activities is understudied in the existing literature. Our evidence highlights that directors' incentives are an important determinant of firms' IR activities. Finally, we show that investor outreach efforts are often strategically timed to shape future outcomes for the firm and its officers.

## **II. Background and Research Question**

### **2.1 Directors' Career Concerns**

Given directors' crucial role in corporate governance, researchers have been studying what motivates directors to excel in being good corporate monitors. In terms of direct incentives,

directors receive only a modest amount of compensation, relative to the managers they monitor (e.g., Yermack 2006; Adams and Ferreira 2008). However, directors' reputational concerns provide a strong motivation for them to perform well in their function because they are rewarded with more career opportunities and recognition in the labor markets. Fama and Jensen (1983) notes that "outside directors have incentives to develop reputations as experts in decision control. [...] The signals are credible when the direct payments to outside directors are small, but there is substantial devaluation of human capital when internal decision control breaks down and the costly last resort process of an outside takeover is activated." Supporting this notion of reputational/career costs, prior studies document that directors experience negative career consequences (e.g., losing board positions) following events such as securities litigation, internal control weaknesses, outside takeover attempts, and negative media/analyst coverage (e.g., Gilson 1990; Harford 2003; Srinivasan 2005, Fich and Shivdasani 2007; Brochet and Srinivasan 2014; Bereskin and Smith 2014; Fos and Tsoutsoura 2014).

In response to such significant labor market penalties, directors optimize their behaviors. Directors may choose to quit directorships to protect their reputation before firms experience negative events (e.g., Dou 2017; Fahlenbrach et al. 2017). Additionally, directors facing negative consequences at one firm can preemptively adopt superior governance practices at other firms where they also hold board seats in order to mitigate the risk of losing other directorships (Zhang 2021). Another way that directors may respond to the heightened risk of removal is to gain trust from existing shareholders through effective communication. Despite lack of systematic evidence regarding the communication between directors and shareholders, anecdotal evidence and survey reports suggest that directors meet with shareholders and strive to build strong relationships with them (e.g., The New York Times 2014; Wong 2016; PwC 2018). For example, PwC's 2018

Annual Corporate Directors Survey notes that “Shareholder engagement continues to be on the rise, and for many boards, having directors involved in those conversations has become commonplace. Almost half (49%) of directors say a member of their board (other than the CEO) engaged directly with investors in the past year—up seven percentage points from 2017” (p. 23). Also, law firms and financial intermediaries advise directors to build personal relationship capital, which serves to deepen shareholder support and eventually works in directors’ favor when issues arise (e.g., Nili 2015; Chudoba and Denning 2018). We focus on this relatively unexplored response to directors’ career risk: firms’ investor outreach.

## **2.2 Investor Outreach (Investor Relations)**

A growing literature examines firms’ incentives to engage in IR activities and whether such efforts benefit the firms. Prior research documents that firms initiating IR programs enjoy larger institutional ownership, greater analyst following, higher firm valuation, and lower uncertainties in the equity and debt markets (e.g., Bushee and Miller 2012; Kirk and Vincent 2014; Chapman et al. 2019; Kim et al. 2021). Recently, Chapman et al. (2022) highlights that the benefits of IR activities extend beyond the capital markets. They find that firms with a dedicated IR department are associated with a lower likelihood of shareholder activism, indicating that firms’ IR efforts help build mutual understanding and trust between the firm and its shareholders.

Firms’ IR function facilitates the “communication among corporate management, shareholders, securities analysts, and other financial community constituents.”<sup>7</sup> Because corporate communication occurs in a variety of platforms, firms’ IR function covers both public (e.g., earnings conference calls, press release, etc.) and private venues (e.g., road shows, investor conferences, private phone calls) (Brown et al. 2019). Among these various venues for corporate

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<sup>7</sup> <https://www.niri.org/about-niri>

communications, we focus on investor conferences (i.e., company presentations at investor conferences), because conference presentations allow face-to-face interactions among managers, directors, investors, analysts, and other stakeholders (e.g., Bushee et al. 2011, 2017; Green et al. 2014). Since only a selective audience are typically invited to this in-person social setting, conference presentations are particularly suitable for corporate officers and directors to listen to the demands of large shareholders and build trust.

### **2.3 Research Question**

The primary objective of this paper is to examine whether and to what extent directors facing career concerns increase firms' investor outreach activities. On one hand, these directors may increase investor outreach activities to build trust and personal relationships with shareholders (Brown et al. 2019) and prevent potential shareholder activism that threatens directors' careers (Chapman et al. 2022). These efforts are likely to improve investors' faith in corporate governance, future firm prospects, and the board of directors, leading to favorable outcomes for incumbent directors at reelections.

On the other hand, directors have a fiduciary responsibility to represent shareholders' best interests and hence may choose not to interfere in firms' IR function (that typically involve costly resources in terms of time, money, and attention) simply to advance their personal careers. If a firm's participation in investor outreach is maintained at the optimal to begin with, a shock to a director's career concerns unrelated to the firm will not result in substantial changes in the firm's IR activities. Furthermore, even if career-concerned directors are able to direct managers to deploy firm resources towards investor outreach, sophisticated and rational shareholders may vote on director reelections based on what is beneficial to the firm rather than what will help individual

directors' careers. Ultimately, whether directors increase firms' investor outreach when facing career concerns and whether such actions indeed benefit them is an empirical question.

### **III. Data and Sample**

#### **3.1 Data and Sample Selection**

We utilize proxy contests as a laboratory for investigating the effects of directors' career concerns on investor outreach. Prior studies find that proxy contests significantly increase the likelihood that directors lose seats on the targeted board as well as other boards (Fos and Tsoutsoura 2014). We view a proxy contest at the target firm as an exogenous shock to the non-target firm ("interlocked firm") that shares a common director ("interlocking director") with the target firm, because any changes in the interlocked firm's actions around the proxy contest should be related to the interlocking director who links the two firms.

We obtain the list of proxy contests from the SDC Platinum database and individual director information from the ISS Director database. Our sample construction starts with US firms targeted by proxy contests ("target firms"). For each firm-year observation pertaining to proxy contests at target firms, we use the ISS Director database to obtain the list of directors on its board in the year of the proxy contest. We then identify the interlocked firms that share directors with target firms and define those as "treatment firms" (also referred to as "interlocked firms"). For these treatment firms, we define the year of the proxy contest at the corresponding target firm as the treatment year. For each treatment firm, we follow Zhang (2021) to obtain a matched control firm in the same Fama-French 48 industry that does not share directors with any target firm and has the closest market capitalization as of the year before the treatment year. We use the indicator variable *Treat* to differentiate between treatment ( $Treat = 1$ ) and control ( $Treat = 0$ ) firms. We consider a seven-year window  $[-3, +3]$  centered on the treatment year ("test window") for our matched sample analyses. We define the period corresponding to  $[-3, -1]$  and  $[0, +3]$  as the pre-

period and the post-period, respectively.<sup>8</sup> We use the indicator variable *Post* to denote the pre- ( $Post = 0$ ) and post- ( $Post = 1$ ) periods corresponding to each treatment event. Our matched sample contains treatment and control firm-year observations corresponding to the test windows.<sup>9</sup> A seven-year test window ensures that directors of interlocked firms with a staggered board structure are up for re-election at least once during the post-period.

We obtain data on investor outreach activities for the period January 2004 to December 2020 from the Bloomberg Corporate Events database (e.g., Green et al. 2014; Bradley et al. 2021).<sup>10</sup> The database provides details on a wide range of corporate events such as earnings releases, sales releases, annual shareholder meetings, investor conferences, etc. Among these events, we focus on corporate presentations at investor conferences wherein direct and private interactions between firms (i.e., managers and directors) and shareholders can occur. The dataset includes information on the conference name, conference date, hosting organization (i.e., brokerage firm or industry organization), and presenting companies. We compute the number of investors conferences corresponding to each firm-year observation in our sample and rely on stock tickers to merge the Bloomberg data with the rest of our dataset.

We obtain financial data from the Compustat database, stock return data from the Center for Research in Security Prices (CRSP) database, and proxy voting data from the ISS Voting Analytics database. We exclude firms from the financial services (SIC 6000–6999) and utilities

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<sup>8</sup> We require that control firms do not share directors with any proxy contest target firms during the window  $[-6, +6]$  to ensure that treatment and control firm-years do not overlap. We also require that treatment and control firms are not targeted in any proxy contest in the window  $[-3, 0]$ .

<sup>9</sup> If multiple treatments occur for a given interlocked firm within any consecutive seven-year period (i.e., the seven-year test window of a treatment overlaps with that of another treatment), we keep both treatments and, for those overlapping years, we define the *Post* indicator variable based on the earlier of the two treatments. Our main results are robust to the alternative approach of eliminating the second treatment altogether from our sample. See Section 5.3.2 for a detailed discussion.

<sup>10</sup> The sample begins in 2004 because prior to this point in time, there were relatively few IR events recorded in the Bloomberg database.

(SIC 4900–4999) industries and firms with the dual-class ownership structure. Our final matched sample, determined by the availability of data for all variables included in our baseline regression models (see Section IV for details), consists of 9,113 firm-year observations corresponding to 1,155 unique treatment events and 1,113 unique firms, spanning the period 2004-2020 (see sample construction details in Appendix B).

### 3.2 Sample Descriptive Statistics

Panel A of Table 1 reports summary statistics for the matched sample. Appendix A provides definitions of the variables reported in Table 1. We winsorize all continuous variables at the 1 and 99 percent levels to mitigate the influence of outliers. On average, 5.3 corporate events for investor outreach (*IREvents*) occur annually. Our sample firms are large with a median market capitalization of about \$2.9 billion and a median board size of nine members. Panel A shows that the median firm has a market-to-book ratio of 1.7 and is followed by about 11 analysts. Summary statistics for firm and board characteristics are comparable to that reported in Zhang (2021).

In Panel B of Table 1, we present the mean and variance of key regression variables and report the differences between treatment and control groups. The difference in the number of observations between the treatment and control groups is primarily attributable to using controls with replacement and missing data.<sup>11</sup> We observe that treatment and control firms, despite being comparable, generally differ statistically in several characteristics, leading to an unbalanced sample.<sup>12</sup> To control for any confounding effects stemming from such observed differences, we implement entropy-balancing to achieve covariate balance on both the first and second moments

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<sup>11</sup> Given a seven-year window centered on the treatment year, some firm-year observations can be missing due to lack of data availability for the main variables described in Table 1. On average, we observe more missing observations for the control firm-years, relative to the treatment firm-years.

<sup>12</sup> Given that control firms are matched to treatment firms as of the year before the treatment year, firm characteristics between the two groups are allowed to differ over the seven-year test window.

between treatment and control firms (Hainmueller 2012). In Panel C of Table 2, we present the resulting entropy-balanced sample and show that all differences between treatment and control firms become indistinguishable from zero. We use this balanced sample in all our OLS regression analyses.

## IV. Empirical Results

### 4.1 The Effects of Proxy Contests on Interlocked Firms' Investor Outreach

To test the effects of directors' career concerns on firms' investor outreach, we adopt a staggered DID approach using the matched sample of treatment and control firms over the seven-year period around proxy contests occurring at target firms. Specifically, we estimate the following specification:

$$IREvents_{it} = \beta_0 + \beta_1 Treat_{it} \times Post_{it} + \Gamma Ctrl_s + FixedEffects + \varepsilon_{it} \quad (1)$$

where  $i$  and  $t$  indicate a firm and a year, respectively. *IREvents* refers to the frequency of the firm's attendance at investor conferences where direct and private interactions between firms and shareholders occur. *Treat* is an indicator variable that takes the value of one if the firm shares at least one common director with the target firm in the year of a proxy contest, and zero otherwise; *Post* is an indicator variable equal to one for the year of and after a proxy contest, and zero otherwise. The coefficient of interest is  $\beta_1$ , which captures the differential changes in investor outreach activities of interlocked firms relative to control firms around the year of proxy contests at target firms. If career concerns caused by proxy contests at target firms increase interlocked firms' investor outreach, we would observe a greater increase in *IREvents* in interlocked firms compared to control firms subsequent to the proxy contest (i.e.,  $\beta_1 > 0$ ).

In a staggered DID estimation, it is possible that some firms may serve as both treatment and control in different time periods and that treatment effects may vary across groups or over



time. The combination of staggered treatment timing and treatment effect heterogeneity could introduce bias in the DID estimates. To address any potential bias, we follow the approach suggested by recent studies by estimating  $\beta_I$  within clean  $2 \times 2$  cohorts (e.g., Goodman-Bacon 2021; Baker et al. 2022). Specifically, we define *Cohort* based on the year of a proxy contest and include *Cohort* $\times$ *Firm* and *Cohort* $\times$ *Year* fixed effects in model (1).<sup>13</sup> This way, we not only alleviate concerns associated with treatment effect heterogeneity but also control for unobserved time-invariant firm characteristics and time trends affecting firms' IR activities within each cohort. *Ctrls* includes known determinants of firms' IR activities as well as the characteristics of the board of directors (Chapman et al. 2019, 2022, Zhang 2021) listed in Table 1 and defined in Appendix A. Standard errors are clustered at the firm level.

Table 2 presents the results from estimating model (1). In columns (1) and (2), we perform OLS regressions using the matched sample of treatment and control firms without and with control variables, respectively. Our main finding is that in both columns, the coefficients of interest are positive and significant (e.g., 0.645,  $t = 2.80$  in column (1)). The magnitude of the effects indicates that treatment (interlocked) firms, following proxy contests at target firms, attend 0.645 more investor conferences annually (about 16% of the sample median value of *IREvents*), relative to the control firms. Because our outcome variable, *IREvents*, is a count variable, we additionally estimate model (1) using Poisson regressions and report the results in columns (3) and (4). We find that the coefficients of interest ( $\beta_I$ ) are comparable in statistical significance to those in columns (1) and (2). In terms of economic significance, interlocked firms experience a 12% ( $= e^{0.113} - 1$ ) increase in *IREvents* after the proxy contests, compared to control firms. Overall, results in Table

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<sup>13</sup> The standalone variables *Treat* and *Post* are subsumed by the *Cohort* $\times$ *Firm* and *Cohort* $\times$ *Year* fixed effects, respectively.

2 suggest that interlocked firms with career-concerned directors tend to reach out to their shareholders more often by attending investor conferences.

## **4.2 Heterogeneous Effects Tests**

Our main analysis suggests that interlocked firms are on average more likely to interact with investors when their directors are concerned about retaining their board seats and avoiding future proxy contests. While our identification strategy suggests that this effect is likely driven by interlocking directors' career concerns, we conduct several cross-sectional analyses to further substantiate this inference.

### **4.2.1 Interlocking directors' career concerns**

To measure the intensity of interlocking directors' career concerns, we exploit variations along the following dimensions: (i) interlocking directors' election year at the target firms, (ii) the outcome of the proxy fight at the target firms, (iii) ISS vote recommendation that interlocking directors received at the interlocked firms, (iv) interlocking directors' tenure at the interlocked firms, and (v) recent stock performance of interlocked firms. In generating our first proxy, we utilize variation in the predetermined election years of interlocking directors at target firms.

In a staggered board structure, only a subset of directors is up for reelection each year. Prior study finds that directors who are scheduled to be voted in the same year of the proxy contests suffer the most adverse career consequences (Fos and Tsoutsoura 2014). We expect that any impact of directors' career concerns on interlocked firms' investor outreach will be greater if the directors are up for reelection at the target firm in the year of the proxy contest. In a similar spirit, we create the second proxy to capture the *ex-ante* intensity of directors' career concerns based on the *ex-post* outcomes of proxy fights at target firms, expecting that the negative impact of the proxy fight on interlocking directors' careers will be more severe when the target firm ends up losing the

fight to shareholder activists. Third, we consider ISS vote recommendation for/against interlocking directors at the interlocked firms. We expect that interlocking directors will be more concerned about their career consequences at interlocked firms if the recent ISS vote recommendations they received are unfavorable at the time of treatment. The fourth proxy is interlocking directors' tenure at the interlocked firms. Because the labor market is usually uncertain about the ability of newly appointed officers (Gibbons and Murphy 1992), managers and directors are likely to have stronger incentives to exert greater efforts in the early years of their service when returns to ability are more convex (Holmstrom 1999). Given the greater career concerns of short-tenured directors, we expect the main effects to be more pronounced for short-tenured interlocking directors. Finally, we create a proxy based on the recent 3-year stock returns of interlocked firms. Because shareholder activists typically target firms with poor stock performance (Brav et al. 2008), interlocking directors' concerns about keeping their board seats will be heightened at the interlocked firms that experience poor recent stock returns.

To test whether the effects observed in Table 2 are stronger when the interlocking directors' career concerns are heightened, we alter model (1) by decomposing the treatment group into two subgroups based on the intensity of directors' career concerns (high vs. low), as follows:

$$IREvents_{it} = \beta_0 + \beta_1 TreatHigh_{it} \times Post_{it} + \beta_2 TreatLow_{it} \times Post_{it} + \Gamma Ctrl_s + FixedEffects + \varepsilon_{it} \quad (2)$$

where  $i$  and  $t$  indicate a firm and year, respectively.  $TreatHigh$  ( $TreatLow$ ) is an indicator variable that equals one (zero) if: (i) interlocking directors are up for reelection at the target firm in the year of the proxy contest, (ii) the target firm loses the proxy fights, (iii) ISS recommended interlocked firms' shareholders to vote against directors in the most recent elections measured at the time of treatment, (iv) interlocking directors' tenure at the interlocked firm is below sample median, or (v)

interlocked firms' recent 3-year stock return is below sample median; and zero (one) otherwise.<sup>14</sup> If the greater increase in *IREvents* in interlocked firms following the proxy fight is due to interlocking directors' career concerns, we expect to observe a positive difference between  $\beta_1$  and  $\beta_2$  (i.e.,  $\beta_1 - \beta_2 > 0$ ).

We present the estimation results of model (2) in Table 3. Consistent with our expectations, in column (1), we find that the difference between  $\beta_1$  and  $\beta_2$  is positive and significant (1.184,  $t = 2.11$ ), suggesting that an increase in *IREvent* at interlocked firms is more pronounced when interlocking directors' careers are most severely threatened by the proxy contests at the target firms. In terms of economic significance, treatment firms with directors characterized by relatively greater career concerns (*TreatHigh*=1) tend to attend 1.18 more investor conferences annually relative to treatment firms where directors have relatively lower career concerns (*TreatLow*=1). In column (2), we exploit variation in proxy fights' outcomes and find that the main effects are concentrated in the *TreatHigh* subsample ( $\beta_1$ ), albeit the difference between  $\beta_1$  and  $\beta_2$  is not statistically significant at the conventional level. In column (3), we find that the main effects are significantly greater for interlocking directors who received unfavorable ISS recommendation recently. The magnitudes suggest that within the treatment group, an increase in annual *IREvents* following the proxy contests is about three times larger ( $1.544/0.472 = 3.3$ ) for firms with interlocking directors receiving negative ISS recommendations relative to firms with interlocking directors receiving positive ISS recommendations. Finally, in columns (4) and (5), we use interlocking directors' tenure and interlocked firms' stock returns to partition treatment firms. The magnitude of coefficients on *TreatHigh*×*Post* ( $\beta_1$ ) (0.810,  $t = 3.09$  and 0.778,  $t = 2.94$ ) appears to be larger than that on *TreatLow*×*Post* ( $\beta_2$ ) (0.476,  $t = 1.96$  and 0.470,  $t = 1.90$ ) as expected, but

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<sup>14</sup> Note that we set both *TreatHigh* and *TreatLow* as zero to denote control firms.

the difference is not statistically significant. Overall, results in Table 3 strengthen our inference that interlocking directors' career concerns increase firms' investor outreach.

#### 4.2.2 Effectiveness of firms' investor outreach

In the second set of cross-sectional analyses, we explore the circumstances under which investor outreach is more likely to be effective in building a supportive shareholder base for firms and directors. We posit that the benefits of relationship building are greater when a firm's shareholder base is long-term focused because long-term shareholders can be allies for the firm and directors in a potential activist event in the future. Consistent with this idea, a survey conducted by Ernst and Young in 2015 notes that "companies are taking proactive measures to prepare for potential activist investor campaigns, including engaging *long-term* institutional investors."<sup>15</sup> Thus, we expect that interlocking directors will have greater incentives to increase firms' investor outreach activities if the firm is held by more long-term focused institutional investors. Additionally, we expect that such investor outreach activities will be more effective for firms with concentrated ownership (Chapman et al. 2022), because it is easier for managers and directors to forge strong relationships with a smaller set of key investors.

To test these conjectures, we estimate model (2) after partitioning treatment firms based on several measures of investment horizon and concentration of institutional investors. *TreatHigh* (*TreatLow*) is an indicator variable that equals one (zero) if (i) the average holding period of institutional investors is above the sample median, (ii) the ratio of long-term institutional holding (i.e., those who have held shares in the firm for at least 5 years) to total institutional holding is above the sample median, (iii) the ratio of dedicated and quasi-indexing institutional holding (Bushee 1998, 2001) to total institutional holding is above the sample median, or (iv) the ratio of

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<sup>15</sup> <https://corpgov.law.harvard.edu/2015/04/10/shareholder-activism-an-engagement-opportunity/>

the largest ten investors to total institutional holding is above the sample median; and zero (one) otherwise.<sup>16</sup> If interlocking directors have greater incentives or ability to increase investor outreach efforts in the firms with long-term and concentrated shareholder base, we expect to observe a positive difference between  $\beta_1$  and  $\beta_2$  (i.e.,  $\beta_1 - \beta_2 > 0$ ).

We present the estimation results of model (2) in Table 4. In columns (1)–(3), we test whether the investment horizon of institutional investors of interlocked firms moderates the association between directors’ career concerns and firms’ investor outreach. Consistent with our expectations, we find that the increase in *IREvents* is significantly greater in interlocked firms with a long-term focused institutional investor base (e.g.,  $\beta_1 - \beta_2 = 0.667$ ,  $t = 2.62$  in column (1)). In terms of economic significance, interlocked firms’ efforts toward investor outreach following proxy contests increases at a 2.3-3 times greater rate for the firms with longer-term investors, relative to the firms with shorter-term investors (i.e., 0.994/0.327, 0.911/0.409, and 0.972/0.339 in columns (1), (2) and (3), respectively). In column (4), we estimate model (2) after partitioning the treatment firms based on the proportion of shares held by the largest ten institutional investors. We note that both  $\beta_1$  (0.629) and  $\beta_2$  (0.619) are positive and statistically significant. While the difference between the two coefficients ( $\beta_1 - \beta_2$ ) is positive (0.010), it is not statistically significant at conventional levels.<sup>17</sup> Taken together, the results in Table 4 suggest that interlocking directors facing career concerns are more likely to facilitate firms’ investor outreach when they anticipate such efforts to be more effective in thwarting potential shareholder activism and retaining their board seats.

### 4.3 Do Directors and Firms Benefit from Investor Outreach?

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<sup>16</sup> While (i), (ii), and (iii) proxy for the investment horizon of investors, (iv) captures investor concentration.

<sup>17</sup> The average ratio of the largest ten investors to total institutional holding of *TreatHigh* (*TreatLow*) subsample is 58% (44%).

Our results thus far are consistent with our hypothesis that directors’ career concerns lead to an increase in firms’ investor outreach. In this section, we explore whether interlocking directors and interlocked firms benefit from the increased investor outreach. Specifically, we examine whether an increase in *IREvents* (from pre- to post-period) results in more favorable ISS vote recommendations for interlocking directors or a lower likelihood of proxy fights at interlocked firms, by estimating the following model:

$$\Delta Outcomes_j = \beta_0 + \beta_1 \Delta IREvents_j + \Gamma \Delta Ctrls + FixedEffects + \varepsilon_j \quad (3)$$

where  $j$  indicates a treatment event.<sup>18</sup>  $\Delta Outcomes$  can be one of the following two measures:  $\Delta ISS Recommendation$  or  $\Delta Proxy Fights$ .  $\Delta ISS Recommendation$  is defined as the difference in the average likelihood that ISS issues favorable recommendations for interlocking directors’ elections between the post- and pre-periods; we set *ISS Recommendation* to one if ISS recommends voting for electing the director, and zero otherwise.  $\Delta Proxy Fights$  refers to the difference in the average incidence of proxy fights at interlocked firms between the post- and pre-periods. We examine the likelihood of proxy contests at the interlocked firms, because one of the motives behind increasing firms’ investor outreach activities is to proactively prevent future proxy fights (Chapman et al. 2022). We expect a positive (negative) association between  $\Delta IREvents$  and  $\Delta ISS Recommendation$  ( $\Delta Proxy Fights$ ). We similarly generate measures based on changes in variables for all controls stated in model (1) and include them in model (3). We include industry and year fixed effects in the change variables specification.<sup>19</sup> Standard errors are clustered at either the industry or year level.

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<sup>18</sup> In this estimation, our unit of analysis is the interlocking director. We estimate a “change” (i.e., an average in the post-period minus an average in the pre-period) specification using only treatment firms, as interlocking directors exist only for treatment firms by design. Among 1,155 unique treatment events, 736 events are matched to the ISS Voting Analytics database.

<sup>19</sup> Our unit of observation is the interlocked firm in model (3) and hence precludes inclusion of firm fixed effects.

Table 5 reports the results from estimating model (3). In columns (1) and (2), we find that the coefficient on  $\Delta IREvent$  ( $\beta_1$ ) is positive (0.004) and statistically significant, suggesting that an increase in investor outreach improves ISS vote recommendations in favor of interlocking directors.<sup>20</sup> In columns (3) and (4), we find that the association between  $\Delta Proxy Fights$  and  $\Delta IREvents$  ( $\beta_1$ ) is negative and statistically significant, suggesting that the increased investor outreach efforts at interlocked firms tend to decrease the likelihood that the firms experience proxy contests.<sup>21</sup> This role of investor outreach in mitigating potential proxy fights dovetails well with Chapman et al. (2022), who also document the negative associations between IR engagement and hostile shareholder activism. Collectively, the results in Table 5 indicate that firms' engagement with shareholders at investor conferences benefits both interlocking directors' careers and interlocked firms by improving proxy advisors' and shareholders' perception of interlocked firms.

#### **4.4 Potential Mechanism: Strategic Timing of Investor Outreach**

Although results so far support our inference that career-concerned directors increase firms' investor outreach activities and benefit from the activities, they do not speak to *how* these directors achieve such outcomes. For example, interlocking directors may build their personal capital by directly talking with large investors at investor conferences. It is also possible that increased firm-level transparency through firms' conference attendance indirectly helps directors' careers by alleviating investors' concerns about the firms' prospects. Unfortunately, identifying a specific mechanism is challenging, because neither firms' decisions to attend investor conferences nor interactions between investors, management, and directors at the conferences are observable (Brown et al. 2019). Nevertheless, one testable link between interlocking directors' career

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<sup>20</sup> Our results are qualitatively similar if we consider shareholder vote support in lieu of ISS recommendations.

<sup>21</sup> In terms of economic significance, increasing participation by attending one additional conference results in a 38% increase in the change in the favorableness of ISS recommendation and a 10% decrease in the change in the likelihood of proxy fights, as compared to the respective mean changes between the pre- and the post-periods.



concerns and firm’s investor outreach is the *timing* of firms’ attendance at conferences—that is, interlocking directors could strategically time firms’ investor outreach in a way that benefits their own reelection the most. Given that investor outreach overall enhances shareholders’ support for the firm (Chapman et al. 2022), such strategic timing can specifically benefit interlocking directors, even in the absence of direct interactions between the directors and investors.

We investigate this possibility by exploiting the predetermined schedule of interlocking directors’ election years at the *interlocked* firms (see Section 4.2.1 for a detailed description of a staggered board structure). If a career-concerned interlocking director directs managers and IR personnel to amplify their investor outreach activities specifically in the year when he/she is up for vote, then we should observe that firms’ *IREvents* are concentrated in interlocking directors’ reelection years. To test this hypothesis, we estimate the following model:

$$IREvents_{it} = \beta_0 + \beta_1 UpForElection_{it} + \Gamma Ctrls + FixedEffects + \varepsilon_{it} \quad (4)$$

where  $i$  and  $t$  indicate a firm and year, respectively. *UpForElection* is an indicator variable that equals one for the year that an interlocking director is scheduled to be voted for reelection, and zero otherwise. The controls are the same as those in model (1). Because we are interested in investigating any strategic timing of investor outreach by career-concerned directors, we use the sample of treatment firms (i.e., interlocked firms) subsequent to proxy contests (i.e., in the post-period) in estimating model (4). If interlocked firms’ efforts toward investor outreach coincide with interlocking directors’ election years, we will observe a positive and significant coefficient on *UpForElection* (i.e.,  $\beta_1 > 0$ ).

Columns (1) and (2) of Table 6 report the estimation results based on all treatment firms and treatment firms with a staggered board structure, respectively. In both columns, we find that the coefficients of interest are positive and significant ( $\beta_1 = 0.276$ ,  $t = 1.68$  in column (1) and  $\beta_1 =$

0.317,  $t = 1.90$  in column (2)) suggesting that interlocked firms tend to attend more investor conferences in years when interlocking directors are voted for reelection compared to years when they are not. Overall, results in Table 6 suggest that interlocking directors benefit by leading firms to enhance investor outreach efforts especially during the periods when the directors need shareholders' support to maintain their board seats.

## V. Additional Analyses

### 5.1 Knowledge Spillover through Interlocking Director: An Alternative Explanation?

While our research design and results point to directors' career concerns influencing firms' investor outreach efforts, it is possible that interlocking directors could cause knowledge spillover effects across firms. Specifically, after experiencing proxy fights at target firms firsthand, directors may apply their acquired knowledge about the importance of shareholder engagement in other firms where they also hold board seats.

To ascertain that our main findings in Table 2 are not entirely explained by such knowledge spillover that is unrelated to career concerns, we conduct cross-sectional analyses based on the level of an interlocked firm's or its board's prior exposure to shareholder activism and proxy fights. We estimate model (2) by redefining *TreatHigh* (*TreatLow*) as an indicator variable that equals one (zero) if: (i) the percentage of non-interlocking directors (at the interlocked firm) with any prior experience of shareholder activism/proxy fights is below the median, or (ii) the frequency of proxy fights in the industry of the interlocked firm in the past three years is below the median.<sup>22</sup> If non-interlocking directors at the interlocked firms have prior experience and know-how about handling shareholder activism or proxy fights (*TreatLow*=1), incremental knowledge that interlocking directors can import from the proxy fight to the interlocked board will be relatively

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<sup>22</sup> In this analysis, *TreatHigh* (*TreatLow*) captures circumstances where knowledge spillover from the target firm to the interlocked firm is likely to be high (low).

limited. Similarly, if interlocked firms have observed many proxy fights occurring in the same industry ( $TreatLow=1$ ), such firms should already be better prepared for dealing with proxy fights and thus there will be little room for interlocking directors to add to the body of knowledge at the interlocked firm. If our results are mainly driven by knowledge spillover from the target firm to interlocked firm through the interlocking directors, we expect to observe a positive difference between  $\beta_1$  and  $\beta_2$  (i.e.,  $\beta_1 - \beta_2 > 0$ ). We present the estimation results in Table 7. We note that in all columns,  $\beta_1$  and  $\beta_2$  are both statistically significant and the economic magnitudes of the two coefficients are similar, suggesting that interlocking directors' knowledge import from the proxy fight is unlikely the main force driving our findings. Stated differently, observing positive and statistically significant coefficients on  $TreatLow$  ( $\beta_2$ ) in all columns is consistent with shareholder engagement increasing in interlocked firms despite the absence (or relatively low levels) of the knowledge spillover. These results further strengthen our inference that the increase in IR events is likely driven by career concerns of the interlocking directors.

## **5.2 Informativeness of Investor Outreach Events**

Prior IR literature finds that investor conferences are valuable to investors by providing a platform to engage in interactive communication with corporate officers (e.g., Bushee et al. 2011, 2017; Green et al. 2014). Thus far, we have documented that directors' career concerns incentivize them to make firms participate in more investor conferences. In this section, we explore whether such increased participation in investor conferences improves the information set available to investors (i.e., the informativeness of interlocked firms' investor outreach events). If interlocked firms provide additional (or more precise) information in these investor relation events following treatment events relative to control firms, we will observe a greater increase in the *aggregate* informativeness of *IREvents* attended by interlocked firms. However, it is possible that the

increased participation by interlocked firms in investor conferences following treatment events is aimed at forging better relationships with investors and understanding investors' demands. In the latter case, the total amount of new information that interlocked firms deliver to investors at investor conferences in a given year (i.e., aggregated informativeness of *IREvents*) will not necessarily change following proxy fights. Given that we observe a significant increase in the frequency of *IREvents* occurring in an interlocked firm-year, the informativeness of a *single* event may even decrease over the test window.<sup>23</sup> To explore this, we compute both the aggregate information content of all events in a firm-year as well as the information content of a single event. We then conduct a univariate DID analysis on these information content measures.

Table 8 presents the univariate evidence on the informativeness of *IREvents* based on the short-run three-day absolute stock price reactions (*AbsCAR* [-1, +1]) around the dates of IR events. In Panel A, we first report the aggregate *AbsCAR* calculated by summing the *AbsCAR* corresponding to all *IREvents* that firms attend during a year.<sup>24</sup> While we find no difference in the aggregate informativeness of *IREvents* for control firms between the pre- and post-periods (0.357,  $t=0.83$ ), we note a modest increase for treatment firms (0.871,  $t=2.18$ ). However, our univariate DID estimate (0.514) is not statistically significant. In other words, the fact that interlocked firms attend more investor conferences in the post-period does not translate to a substantial increase in total information conveyed to investors when compared to control firms during the same period. This result is consistent with the idea that the increased attendance at conferences of interlocked

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<sup>23</sup> Bushee et al. (2011) document that the absolute return response to firms' presentations at investor conferences is significantly lower when firms have recently presented in other conferences. Thus, assuming that the total amount of information that a firm delivers to investors at the conferences over a year is constant, attending more investor conferences in the year can decrease the average informativeness of a *single* event.

<sup>24</sup> The units of analysis in Panel A of Table 8 are firm-years.

firms is aimed more at facilitating relationship building with investors (i.e., facetime) rather than conveying additional information.

Next, using each individual event as the unit of analysis, we examine whether the informativeness of a single *IREvents* changes based on the same univariate DID framework. Consistent with findings in prior studies (e.g., Bushee et al. 2011; Green et al. 2014), we observe that on average, the *AbsCAR* around an investor outreach event is statistically significant and positive, for both treatment and control firms in the pre- and the post-periods (Panel B of Table 8). However, we find that the DID estimate is negative and statistically significant (-0.121,  $t = -2.33$ ), suggesting that the informativeness of each investor outreach event for interlocked firms, on average, decreases relative to control firms, following proxy contests at target firms. This again supports our earlier conjecture that the increase in firms' investor outreach observed in our main analysis seems to be focused on relationship building rather than information delivery.<sup>25</sup>

It is worth noting that the results in Table 8 do not necessarily suggest that shareholders at interlocked firms are worse off after proxy contests. If an increase in interlocked firms' IR activities is mostly geared toward building relationships with institutional investors and understanding shareholders' demands and preferences, such interactions may benefit the firm as well as investors in the long run (e.g., Chapman et al. 2019, 2022).

## 5.3 Robustness Tests

### 5.3.1 Parallel trends assumption

A critical assumption of our design, as in any DID analysis, is that no differential trends exist between treatment and control firms prior to the treatment year. To substantiate this assumption and assess the persistence of the treatment effect, we conduct a dynamic analysis and

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<sup>25</sup> Our results (untabulated) are robust to using alternative windows to define *AbsCAR* (i.e., one-day and two-day windows around the dates of *IREvents*).

examine the yearly changes in *IREvents* surrounding the treatment year. Specifically, we modify model (1) by replacing *Post* with six indicator variables (i.e., *Year-2*, *Year-1*, *Year0*, *Year+1*, *Year+2*, and *Year+3*) to capture the dynamic changes in our treatment effects over the window surrounding the treatment event. Firm-year observations that correspond to the period three years prior to the treatment year (i.e., *Year-3*) serve as the baseline period in this modified estimation.

Table 9 reports the results of the dynamic analysis on interlocked firms' IR events. Columns (1) and (2) report the results without and with control variables, respectively. In both columns, the coefficient estimates of *Treat*×*Year-2* and *Treat*×*Year-1* are statistically insignificant, mitigating concerns regarding pre-existing differential time trends on investor outreach between the firms with interlocking directors and those without. For the post-period, we find that the coefficients on *Treat*×*Year0*, *Treat*×*Year+1*, *Treat*×*Year+2* are all statistically significant while that on *Treat*×*Year+3* is not. Consistent with the idea that the impact of proxy contests at target firms on interlocking directors' career concerns likely peaks during the year of the treatment event and subsides over time (Fos and Tsoutsoura 2014), the economic magnitudes of the effects are the largest in the treatment year (e.g., 1.072,  $t = 2.77$  in column (2)) and monotonically decrease over the post-period (e.g., 0.947, 0.632, and 0.464 in *Year+1*, *Year+2*, and *Year+3*, respectively, in column (2)). These results suggest that the increased investor outreach at interlocked firms is likely due to the career concern shock to interlocking directors at target firms rather than confounding factors influencing the interlocked firms' information or disclosure environments.

### **5.3.2 Alternative selection of treatment and control groups**

Given that we look at a seven-year window surrounding a proxy contest, it is possible that the test window of a treatment overlaps with that of another treatment. For the main sample, we keep both treatments and, for those overlapping years, we code the *Post* dummy according to the

earlier treatment event, assuming lasting impacts of the treatment over time. In this section, we check whether our main results are robust to the alternative approach of creating a treatment group that only keeps the first treatment event in the case of overlaps. We re-estimate model (1) using this approach and present the OLS regression results in columns (1) and (2) of Table 10. In both columns, the statistical and economic significance of the coefficients on *Treat*×*Post* are almost identical to those in columns (1) and (2) of Table 2, and our inference remains unchanged. Our main results are robust to this alternative sample construction method.

Baker et al. (2022) discusses the estimation issues with a staggered DID design: When already treated units are used as the control group for later treated units, the design can introduce a potential bias to the DID estimates. We note that this occurs in only 5.1% (=469/9,113) of the cases in our sample, suggesting that the potential bias from the “bad comparison” problem is trivial. We also address this issue by including *Cohort*×*Firm* and *Cohort*×*Year* fixed effects in our main specification. Nevertheless, we re-estimate model (1) after eliminating all cases wherein a firm treated earlier is used as a matched control for another firm treated later in the sample. In other words, we ensure that any firm used as a control firm in our matched sample has not been treated earlier. Results, reported in columns (3) and (4) of Table 10, are almost identical to that in our main analysis reported in Table 2. Overall, our inferences are robust to alternative (more conservative) sample construction procedures that help mitigate any potential bias.

## **VI. Conclusion**

We study whether and to what extent directors’ career concerns caused by proxy contests influence firms’ investor outreach efforts. Using the network of board interlocks, we examine whether directors experiencing a proxy contest at the target firm increase investor outreach activities at other non-target firms where they also hold board seats. In DID tests, we find that the

interlocked firms increase investor outreach activities following the proxy contest, suggesting that interlocking directors proactively engage with investors to mitigate any adverse career consequences of the proxy contest. The effects are more pronounced in circumstances where interlocking directors' career concerns are heightened (e.g., the director is up for reelection at the target firm or receives an unfavorable ISS vote recommendation). We also find that the increase in investor outreach at interlocked firms becomes more salient if the firms are held by long-term focused institutional investors, indicating that directors facilitate firms' engagement with shareholders when such efforts are more effective in helping retain their board seats.

In additional analyses, we explore whether interlocking directors and interlocked firms benefit from the investor outreach efforts. We document that, as a result of the increased investor outreach, interlocking directors receive more favorable ISS recommendations for reelection and interlocked firms enjoy a lower likelihood of proxy fights. Finally, to shed light on how investor outreach activities benefit career-concerned directors, we explore whether interlocking directors strategically time firms' investor outreach efforts in the year when they need shareholders' support the most. Our results indicate that the timing of interlocked firms' investor outreach coincides with the year when interlocking directors are up for election at those firms. Our main findings hold to a wide array of robustness analyses including an alternative selection of treatment and control groups, inclusion/exclusion of controls, and adopting a Poisson estimation.

The inferences based on this study are subject to an important caveat. Direct interactions that occur between directors and investors, if any, either during or outside of investor conferences are generally unobservable. Future research capitalizing on alternative methods such as surveys and field studies can perhaps further our understanding of the role played by director-shareholder engagement in mitigating directors' career concerns.



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## Appendix A. Variable Descriptions

Variable	Definition
IREvents	The number of IR events; IR events include firms' attendance at investor conferences and non-deal roadshows [Bloomberg]
Treat	An indicator that equals one if the firm shares common directors with the target firm of the proxy contest, and zero otherwise [ISS Directors, SDC Platinum]
Post	An indicator that equals to one for year of or years after the proxy contest, and zero otherwise [ISS Directors, SDC Platinum]
Marketcap	The natural logarithm of the market value of equity [Compustat]
Mtb	The ratio of the market value of total assets to the book value of total assets [Compustat]
StockRet	The stock return over the year [CRSP]
RetVol	The standard deviation of monthly stock returns over the previous five years [CRSP]
InstOwn	The total percentage of shares owned by institutional investors [Thomson/Refinitiv Institutional Holdings (13F)]
AnaCov	The number of analysts following the firm [I/B/E/S]
R&D	The ratio of R&D expense to total assets (set to zero if missing) [Compustat]
Roa	Net income minus special items divided by total assets [Compustat]
Lev	The sum of long-term debt and debt in current liabilities divided by total assets [Compustat]
BoardSize	The total number of directors on the board [ISS Directors]
BoardIndep	The percentage of independent directors on the board [ISS Directors]
CEOduality	An indicator equal to one if the CEO is also the chairman of the board and zero otherwise [ISS Directors]
DirectorOwn	The total percentage of shares owned by all directors [ISS Directors]
DirectorBusyness	The percentage of directors holding at least three board seats in public companies [ISS Directors]
DirectorCo-option	The percentage of directors appointed after the CEO assumed office [ISS Directors]
AbsCAR [x, y]	The absolute market-adjusted cumulative stock return during the window [x, y] around the IR event date (in percentage) [CRSP]
ISS Recommendation	Indicator variable which takes the value of one if ISS recommends voting for the director election, and zero otherwise [ISS Voting Analytics]
Proxy Fight	Indicator variable which takes the value of one if a firm experiences a proxy contest in the year, and zero otherwise [FactSet Corporate Governance]

## Appendix B. Sample Construction

This table describes how the primary sample was constructed and the composition of subsamples used in each table.

	N	Used in
Firm-years covered by Compustat, ISS Directors, CRSP, IBES, and Thomson Reuters 13F (Primary sample used in empirical analysis)	9,113	Table 2, Columns (4)-(5) of Table 3, Columns (1), (2), and (4) of Table 4, Table 7, Panel A of Table 8, Table 9
Primary sample less: treatment firms with a non-classified board	5,770	Column (1) of Table 3
Primary sample less: unresolved or pending proxy fights	8,104	Columns (2) of Table 3
Primary sample less: observations without voting data	8,648	Columns (3) of Table 3
Primary sample less: observations without Bushee's Institutional Investor Classification data	8,299	Column (3) of Table 4
Treatment events less: observations with a proxy fight (from FactSet) in the pre-period	1,144	Columns (3)-(4) of Table 5
Treatment events less: observations with a proxy fight (from FactSet) in the pre-period and observations without voting data for the interlocking directors	736	Columns (1)-(2) of Table 5
Treatment firm-years in the post period	3,082	Table 6
Investor conferences that the treatment and control firms attend over the test window	39,412	Panel B of Table 8
Alternative definitions of the treatment group	6,701 or 8,642	Table 10

**Table 1. Summary Statistics**

This table reports descriptive statistics for key variables. The sample is based on S&P 1500 firms and spans 17 years from 2004 to 2020. Appendix A provides a description of all variables. All continuous variables are winsorized at the 1 percent and 99 percent levels.

<b>Panel A. Full sample</b>						
Variable	N	Mean	Std Dev	Q1	Median	Q3
IREvents	9,113	5.335	5.560	1.000	4.000	8.000
Marketcap	9,113	8.141	1.521	7.043	7.964	9.137
Mtb	9,113	2.091	1.180	1.325	1.734	2.455
StockRet	9,113	0.144	0.380	-0.086	0.115	0.328
RetVol	9,113	0.105	0.044	0.074	0.096	0.127
InstOwn	9,113	0.821	0.210	0.740	0.857	0.947
AnaCov	9,113	12.310	7.765	6.000	11.000	17.000
R&D	9,113	0.028	0.045	0.000	0.004	0.039
Roa	9,113	0.080	0.073	0.043	0.074	0.116
Lev	9,113	0.228	0.178	0.080	0.218	0.338
BoardSize	9,113	9.183	2.054	8.000	9.000	11.000
BoardIndep	9,113	0.760	0.180	0.714	0.800	0.875
CEOduality	9,113	0.460	0.501	0.000	0.000	1.000
DirectorOwn	9,113	0.060	0.104	0.008	0.021	0.055
DirectorBusyness	9,113	0.239	0.180	0.111	0.222	0.364
DirectorCo-option	9,113	0.490	0.318	0.222	0.455	0.750

  

<b>Panel B. Treatment and control groups (Unbalanced)</b>								
Variable	Treatment (1)			Control (2)			Difference (1) – (2)	
	N	Mean	StdDev	N	Mean	StdDev	Mean	P-value
IREvents	5,140	5.929	5.911	3,973	4.567	4.967	1.362***	(0.000)
Marketcap	5,140	8.537	1.589	3,973	7.629	1.254	0.908***	(0.000)
Mtb	5,140	2.065	1.140	3,973	2.125	1.230	-0.060**	(0.016)
StockRet	5,140	0.145	0.363	3,973	0.143	0.402	0.002	(0.807)
RetVol	5,140	0.100	0.042	3,973	0.112	0.044	-0.013***	(0.000)
InstOwn	5,140	0.813	0.211	3,973	0.833	0.208	-0.020***	(0.000)
AnaCov	5,140	13.750	7.987	3,973	10.440	7.045	3.302***	(0.000)
R&D	5,140	0.027	0.045	3,973	0.029	0.046	-0.002**	(0.011)
Roa	5,140	0.080	0.071	3,973	0.080	0.076	0.000	(0.945)
Lev	5,140	0.245	0.173	3,973	0.207	0.183	0.038***	(0.000)
BoardSize	5,140	9.729	1.989	3,973	8.476	1.917	1.253***	(0.000)
BoardIndep	5,140	0.785	0.176	3,973	0.729	0.180	0.056***	(0.000)
CEOduality	5,140	0.471	0.500	3,973	0.445	0.501	0.027**	(0.012)
DirectorOwn	5,140	0.045	0.092	3,973	0.079	0.115	-0.034***	(0.000)
DirectorBusyness	5,140	0.298	0.173	3,973	0.163	0.160	0.134***	(0.000)
DirectorCo-option	5,140	0.473	0.307	3,973	0.512	0.331	-0.039***	(0.000)

**Panel C. Treatment and control groups (Entropy balanced)**

Variable	Treatment (1)			Control (2)			Difference (1) – (2)	
	N	Mean	StdDev	N	Mean	StdDev	Mean	P-value
IREvents	5,140	5.929	5.911	3,973	5.550	5.792	0.379***	(0.002)
Marketcap	5,140	8.537	1.589	3,973	8.566	1.597	-0.029	(0.382)
Mtb	5,140	2.065	1.140	3,973	2.071	1.143	-0.006	(0.806)
StockRet	5,140	0.145	0.363	3,973	0.141	0.362	0.004	(0.606)
RetVol	5,140	0.100	0.042	3,973	0.099	0.042	0.001	(0.492)
InstOwn	5,140	0.813	0.211	3,973	0.812	0.212	0.001	(0.779)
AnaCov	5,140	13.750	7.987	3,973	13.890	8.016	-0.143	(0.394)
R&D	5,140	0.027	0.045	3,973	0.027	0.044	0.000	(0.876)
Roa	5,140	0.080	0.071	3,973	0.080	0.071	-0.000	(0.879)
Lev	5,140	0.245	0.173	3,973	0.247	0.175	-0.003	(0.442)
BoardSize	5,140	9.729	1.989	3,973	9.760	1.991	-0.030	(0.468)
BoardIndep	5,140	0.785	0.176	3,973	0.779	0.189	0.006	(0.113)
CEOduality	5,140	0.471	0.500	3,973	0.464	0.500	0.007	(0.516)
DirectorOwn	5,140	0.045	0.092	3,973	0.045	0.092	0.000	(0.929)
DirectorBusyness	5,140	0.298	0.173	3,973	0.300	0.174	-0.002	(0.582)
DirectorCo-option	5,140	0.473	0.307	3,973	0.472	0.306	0.001	(0.839)

**Table 2. The Effect of Proxy Contests on the IR Events at Interlocked Firms**

This table reports the results from estimating model (1) using the matched sample of treatment and control firms over the seven-year period surrounding proxy contests. The sample is based on S&P 1500 firms from 2004 to 2020. All variables are described in Appendix A. The *t*-statistics are presented in parentheses below the coefficients. Standard errors are clustered by firm. Two-tailed *p*-values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

Dependent variable =	OLS		Poisson	
	(1)	(2)	(3)	(4)
	IREvents	IREvents	IREvents	IREvents
Treat × Post	<b>0.645***</b> (2.80)	<b>0.624***</b> (2.82)	<b>0.113***</b> (3.45)	<b>0.112***</b> (3.47)
Marketcap		0.904*** (4.71)		0.156*** (5.31)
Mtb		-0.004 (-0.03)		0.008 (0.45)
StockRet		0.180 (1.47)		0.036* (1.81)
RetVol		1.719 (0.61)		0.573 (1.20)
InstOwn		0.043 (0.10)		0.043 (0.74)
AnaCov		0.061*** (2.77)		0.005* (1.74)
R&D		-1.049 (-0.16)		0.764 (1.34)
Roa		-2.566* (-1.87)		-0.280** (-2.14)
Lev		1.234* (1.65)		0.122 (1.07)
BoardSize		0.056 (1.00)		0.014* (1.78)
BoardIndep		-0.278 (-0.49)		-0.117 (-1.43)
CEOduality		0.276 (1.35)		0.052** (2.04)
DirectorOwn		2.699* (1.67)		0.169 (0.82)
DirectorBusyness		-0.659 (-1.24)		-0.064 (-0.81)
DirectorCo-option		-0.278 (-0.93)		-0.062 (-1.62)
N	9,113	9,113	9,113	9,113
Adjusted R <sup>2</sup>	0.760	0.765		
Pseudo R <sup>2</sup>			0.528	0.530
Entropy balanced	Yes	Yes	No	No
Cohort-Firm FE	Yes	Yes	Yes	Yes
Cohort-Year FE	Yes	Yes	Yes	Yes



**Table 3. IR Events and Interlocking Directors' Career Concerns**

This table reports the results from estimating model (2) using the matched sample of treatment and control firms over the seven-year period surrounding proxy contests. In column (1), the number of observations reduces to 5,770, as the sample includes only treatment firms that are interlocked to target firms with a staggered board. In column (2), the number of observations reduces to 8,104 after excluding unresolved and pending proxy fights. In column (3), the number of observations reduces to 8,648 due to data availability from ISS Voting Analytics. The sample is based on S&P 1500 firms from 2004 to 2020. All variables are described in Appendix A. The *t*-statistics are presented in parentheses below the coefficients. Standard errors are clustered by firm. Two-tailed *p*-values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

Proxy =	Up for election	Proxy fight outcomes	ISS recommendation	Director tenure at interlocked firm	Stock returns at interlocked firm
TreatHigh	Up for election at the target firm	Dissident Victory or Settled	ISS Against	Below p50	Below p50
TreatLow	Not up for election at the target firm	Management Victory or Withdrawn	ISS For	Above p50	Above p50
Dependent variable =	(1) IREvents	(2) IREvents	(3) IREvents	(4) IREvents	(5) IREvents
TreatHigh × Post	<b>1.753***</b> (3.48)	<b>0.818***</b> (3.32)	<b>1.544***</b> (3.28)	<b>0.810***</b> (3.09)	<b>0.778***</b> (2.94)
TreatLow × Post	0.569 (1.60)	0.344 (1.04)	<b>0.472**</b> (2.08)	<b>0.476*</b> (1.96)	<b>0.470*</b> (1.90)
N	5,770	8,104	8,648	9,113	9,113
Adjusted R <sup>2</sup>	0.758	0.767	0.767	0.765	0.765
Controls	Yes	Yes	Yes	Yes	Yes
Cohort-Firm FE	Yes	Yes	Yes	Yes	Yes
Cohort-Year FE	Yes	Yes	Yes	Yes	Yes
Entropy balanced	Yes	Yes	Yes	Yes	Yes
Differences in interaction terms:					
TreatHigh × Post – TreatLow × Post	<b>1.184**</b> (2.11)	0.474 (1.45)	<b>1.072**</b> (2.36)	0.334 (1.40)	0.308 (1.20)

**Table 4. Effectiveness of IR Events: Partition based on Investor Characteristics**

This table reports the results from estimating model (2) using the matched sample of treatment and control firms over the seven-year period surrounding proxy contests. In column (3), the number of observations reduces to 8,299 due to data availability for Bushee's classification of institutional investors. The sample is based on S&P 1500 firms from 2004 to 2020. All variables are described in Appendix A. The *t*-statistics are presented in parentheses below the coefficients. Standard errors are clustered by firm. Two-tailed *p*-values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

Proxy =	Investment horizon of institutional investors			Concentration of institutional holdings
	Average holding period	Proportion of long-term investors (>= 5 years)	Proportion of dedicated investors & quasi-indexers	Proportion of the largest 10 investors
TreatHigh = 1	Above p50	Above p50	Above p50	Above p50
TreatLow = 1	Below p50	Below p50	Below p50	Below p50
	(1)	(2)	(3)	(4)
Dependent variable =	IREvents	IREvents	IREvents	IREvents
TreatHigh × Post	<b>0.994***</b> (3.73)	<b>0.911***</b> (3.29)	<b>0.972***</b> (3.61)	<b>0.629**</b> (2.55)
TreatLow × Post	0.327 (1.33)	<b>0.409*</b> (1.70)	0.339 (1.31)	<b>0.619**</b> (2.38)
N	9,113	9,113	8,299	9,113
Adjusted R <sup>2</sup>	0.765	0.765	0.776	0.765
Controls	Yes	Yes	Yes	Yes
Cohort-Firm FE	Yes	Yes	Yes	Yes
Cohort-Year FE	Yes	Yes	Yes	Yes
Entropy balanced	Yes	Yes	Yes	Yes
Differences in interaction terms:				
TreatHigh × Post -	<b>0.667***</b>	<b>0.502*</b>	<b>0.633**</b>	0.010
TreatLow × Post	(2.62)	(1.90)	(2.34)	(0.04)

**Table 5. Do Interlocking Directors and Interlocked Firms Benefit from IR Events?**

This table reports the results from estimating model (3) using treatment events from the main sample. The sample is based on S&P 1500 firms from 2004 to 2020. All variables are described in Appendix A. The  $t$ -statistics are presented in parentheses below the coefficients. Standard errors are clustered as indicated. Two-tailed  $p$ -values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

Dependent variable =	(1) Δ ISS Recommendation (for interlocking director)	(2)	(3)	(4) Δ Proxy fights (at interlocked firm)
Δ IREvents	<b>0.004*</b> (1.70)	<b>0.004**</b> (2.65)	<b>-0.001*</b> (-1.73)	<b>-0.001**</b> (-2.70)
Δ Marketcap	0.019 (0.64)	0.019 (0.95)	-0.008* (-1.71)	-0.008 (-1.60)
Δ Mtb	0.014 (1.00)	0.014 (0.72)	-0.006 (-1.46)	-0.006* (-2.05)
Δ StockRet	-0.047 (-1.58)	-0.047 (-1.67)	-0.000 (-0.02)	-0.000 (-0.03)
Δ RetVol	0.344 (1.06)	0.344 (1.08)	-0.018 (-0.23)	-0.018 (-0.21)
Δ InstOwn	-0.114* (-1.74)	-0.114** (-2.22)	0.033** (2.10)	0.033** (2.62)
Δ AnaCov	0.007** (2.22)	0.007** (2.44)	-0.000 (-0.14)	-0.000 (-0.15)
Δ R&D	-1.226 (-0.73)	-1.226 (-0.80)	0.228 (1.19)	0.228 (1.28)
Δ Roa	0.147 (0.67)	0.147 (0.65)	-0.035 (-0.64)	-0.035 (-1.01)
Δ Lev	0.092 (1.05)	0.092 (1.02)	-0.019 (-1.14)	-0.019 (-0.75)
Δ BoardSize	-0.008 (-1.41)	-0.008 (-0.76)	0.005** (2.24)	0.005*** (3.03)
Δ BoardIndep	0.011 (0.14)	0.011 (0.16)	-0.011 (-0.62)	-0.011 (-0.64)
Δ CEOduality	0.004 (0.14)	0.004 (0.28)	0.003 (0.69)	0.003 (0.44)
Δ DirectorOwn	0.848** (2.37)	0.848* (1.95)	0.136** (2.32)	0.136** (2.77)
Δ DirectorBusyness	-0.071 (-0.79)	-0.071 (-1.09)	-0.019 (-0.85)	-0.019 (-0.98)
Δ DirectorCo-option	-0.005 (-0.17)	-0.005 (-0.14)	-0.006 (-0.71)	-0.006 (-0.64)
N	736	736	1,144	1,144
Adjusted R <sup>2</sup>	0.111	0.111	0.108	0.108
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Clustering	Industry	Year	Industry	Year

**Table 6. Strategic Timing of Investor Outreach**

This table reports the results from estimating model (4) using treatment firms in the post-period following proxy contests. The sample is based on S&P 1500 firms from 2004 to 2020. All variables are described in Appendix A. The  $t$ -statistics are presented in parentheses below the coefficients. Standard errors are clustered by firm. Two-tailed  $p$ -values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

	All treatment firms	Treatment firms with classified boards
Dependent variable =	(1) IREvents	(2) IREvents
Up-for-election	<b>0.276*</b> (1.68)	<b>0.317*</b> (1.90)
Marketcap	0.810*** (2.64)	-0.263 (-0.50)
Mtb	-0.143 (-0.70)	-0.068 (-0.14)
StockRet	0.271 (1.23)	0.174 (0.56)
RetVol	-6.381 (-1.08)	8.634 (0.73)
InstOwn	-0.407 (-0.79)	0.477 (0.39)
AnaCov	0.015 (0.42)	-0.013 (-0.19)
R&D	2.572 (0.22)	4.682 (0.31)
Roa	0.618 (0.34)	2.902 (1.15)
Lev	0.743 (0.65)	-1.381 (-0.90)
BoardSize	0.124 (1.64)	-0.002 (-0.02)
BoardIndep	0.688 (0.66)	-0.142 (-0.11)
CEOduality	0.140 (0.50)	0.230 (0.53)
DirectorOwn	-1.620 (-1.01)	-0.038 (-0.01)
DirectorBusyness	0.092 (0.10)	3.058** (2.14)
DirectorCo-option	-0.127 (-0.29)	-1.651** (-2.00)
N	3,082	1,086
Adjusted R <sup>2</sup>	0.725	0.673
Year fixed effects	Yes	Yes
Firm fixed effects	Yes	Yes

**Table 7. IR Events and Knowledge Spillover through Interlocking Directors**

This table reports the results from estimating model (2) using the matched sample of treatment and control firms over the seven-year period surrounding proxy contests. The sample is based on S&P 1500 firms from 2004 to 2020. All variables are described in Appendix A. The *t*-statistics are presented in parentheses below the coefficients. Standard errors are clustered by firm. Two-tailed *p*-values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

Proxy =	Percentage of Non-interlocking directors with prior experience of		Industry-level frequency of proxy fights in the past three years
	Shareholder activism	Proxy fights	
TreatHigh = 1	Below p50	Below p50	Below p50
TreatLow = 1	Above p50	Above p50	Above p50
	(1)	(2)	(3)
Dependent variable =	IREvents	IREvents	IREvents
TreatHigh × Post	<b>0.619**</b> (2.54)	<b>0.583**</b> (2.53)	<b>0.589**</b> (2.46)
TreatLow × Post	<b>0.632**</b> (2.36)	<b>0.839**</b> (2.42)	<b>0.668**</b> (2.41)
N	9,113	9,113	9,113
Adjusted R <sup>2</sup>	0.765	0.765	0.765
Controls	Yes	Yes	Yes
Cohort-Firm FE	Yes	Yes	Yes
Cohort-Year FE	Yes	Yes	Yes
Entropy balanced	Yes	Yes	Yes
Differences in interaction terms:			
TreatHigh × Post -	-0.013	-0.256	-0.078
TreatLow × Post	(-0.05)	(-0.78)	(-0.30)

**Table 8. Stock Price Reaction to IR events**

This table reports univariate difference-in-differences analyses of the changes in short-run stock returns around the IR events of treatment and control firms from the matched sample. The sample is based on S&P 1500 firms from 2004 to 2020. All variables are described in Appendix A. The  $t$ -statistics are presented in parentheses below the coefficients. Two-tailed  $p$ -values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

<b>Panel A. AbsCAR [-1, +1] around IR Events aggregated at the firm-year level</b>			
	Control	Treatment	Differences
Pre	<b>9.114***</b> (27.86) N=1,605	<b>9.748***</b> (31.07) N=1,829	0.634 (1.40)
Post	<b>9.471***</b> (34.29) N=2,368	<b>10.619***</b> (43.93) N=3,311	<b>1.148***</b> (3.11)
Differences	0.357 (0.83)	<b>0.871**</b> (2.18)	
DID			0.514 (0.87)
<b>Panel B. AbsCAR [-1, +1] around IR Events at the individual event level</b>			
	Control	Treatment	Differences
Pre	<b>2.356***</b> (73.52) N=6,154	<b>2.035***</b> (83.22) N=8,350	<b>-0.320***</b> (-8.09)
Post	<b>2.501***</b> (87.75) N=8,909	<b>2.060***</b> (112.48) N=15,999	<b>-0.441***</b> (-13.58)
Differences	<b>0.145***</b> (3.35)	0.024 (0.79)	
DID			<b>-0.121**</b> (-2.33)

**Table 9. Dynamic Analysis of Interlocking Directors' Career Concerns on IR Events**

This table reports the estimation results from modified model (1) in which we replace *Post* with indicator variables *Year-2*, *Year-1*, *Year0*, *Year+1*, *Year+2*, and *Year+3*. All variables are described in Appendix A. The *t*-statistics are presented in parentheses below the coefficients. Standard errors are clustered by firm. Two-tailed *p*-values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

Dependent variable =	(1) IREvents	(2) IREvents
Treat × Year-2	0.145 (0.54)	0.115 (0.43)
Treat × Year-1	0.393 (1.06)	0.357 (0.98)
Treat × Year0	<b>1.089***</b> (2.73)	<b>1.072***</b> (2.77)
Treat × Year+1	<b>1.001***</b> (2.58)	<b>0.947**</b> (2.53)
Treat × Year+2	<b>0.683*</b> (1.77)	<b>0.632*</b> (1.70)
Treat × Year+3	0.537 (1.42)	0.464 (1.28)
N	9,113	9,113
Adjusted R <sup>2</sup>	0.761	0.765
Controls	No	Yes
Cohort-Firm FE	Yes	Yes
Cohort-Year FE	Yes	Yes
Entropy balanced	Yes	Yes

**Table 10. Alternative Construction of Treatment and Control Groups**

This table reports the results from estimating model (1) using alternative methods of constructing the treatment group. The sample is based on S&P 1500 firms from 2004 to 2020. All variables are described in Appendix A. The  $t$ -statistics are presented in parentheses below the coefficients. Two-tailed  $p$ -values are indicated: \*\*\*  $p > 0.01$ , \*\*  $p > 0.05$ , \*  $p > 0.10$ .

Dependent variable =	Include first treatment event only		Exclude already-treated firms from control	
	(1) IREvents	(2) IREvents	(3) IREvents	(4) IREvents
Treat × Post	<b>0.666***</b> (2.82)	<b>0.635***</b> (2.71)	<b>0.669***</b> (2.66)	<b>0.672***</b> (2.78)
Marketcap		0.500*** (2.65)		0.867*** (4.34)
Mtb		0.144 (1.00)		0.033 (0.22)
StockRet		-0.069 (-0.46)		0.173 (1.35)
RetVol		0.065 (0.02)		1.107 (0.39)
InstOwn		-0.103 (-0.27)		-0.038 (-0.09)
AnaCov		0.073*** (3.08)		0.061*** (2.69)
R&D		-1.209 (-0.17)		-0.647 (-0.10)
Roa		-1.273 (-0.92)		-2.667* (-1.89)
Lev		0.996 (1.33)		1.377* (1.75)
BoardSize		0.004 (0.06)		0.043 (0.76)
BoardIndep		0.326 (0.46)		-0.491 (-0.86)
CEOduality		0.248 (1.62)		0.376* (1.82)
DirectorOwn		2.787* (1.83)		3.018* (1.74)
DirectorBusyness		-0.004 (-0.01)		-0.324 (-0.59)
DirectorCo-option		-0.404 (-1.39)		-0.313 (-0.98)
N	6,701	6,701	8,642	8,642
Adjusted R <sup>2</sup>	0.746	0.748	0.762	0.766
Controls	Yes	Yes	Yes	Yes
Cohort-Firm FE	Yes	Yes	Yes	Yes
Cohort-Year FE	Yes	Yes	Yes	Yes
Entropy balanced	Yes	Yes	Yes	Yes