

Monitoring the Monitor: Distracted Institutional Investors and Board Governance

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Abstract

While board decisions are crucial to shareholder wealth, the literature often overlooks how shareholder monitoring shapes board governance. Using exogenous variations in investor monitoring intensity caused by unrelated return shocks in portfolio firms, we find that institutional investor distraction weakens board oversight. Distracted institutional investors are less likely to use their votes to discipline ineffective independent directors. As a result, independent directors miss more meetings and boards hold fewer meetings. Further, firms with distracted institutional investors appoint less effective independent directors to their boards, approve higher CEO excess pays and accept greater earnings management, all of which indicate poorer board monitoring quality. Our findings suggest that institutional investor monitoring represents an important determinant of board monitoring incentives.

***Keywords:** Board of directors, Shareholder activism, Institutional investors, Board monitoring, Shareholder voting, Corporate governance.*

***JEL classification:** G23, G34.*

1. Introduction

Large shareholders and the board of directors are two key corporate governance mechanisms. Due to the legal and regulatory limits on the power of large shareholders in the United States¹, large shareholder primarily channeled their efforts through the board of directors. The board serves as both “gatekeeper” of all shareholder proposals to amend the charter, and must approve almost all major corporate decisions. The board is also charged with monitoring management, hiring and firing of CEOs, and setting executive compensation. Thus, Board decisions are crucial to enhancing shareholder value. Yet, since the exchange listing rule changes in 2003, boards of directors are primarily composed of outside directors with limited knowledge of firm operations and weak financial incentives to closely monitor management. This raises an important issue of how reliable are boards of directors in representing shareholder interests.

While the board is a powerful governance mechanism for monitoring managers, what motivates directors to monitor? Who monitors the board monitors? Shareholders have implicit rights to monitor the board given their power to elect directors, but due to the classic free rider problem, few shareholders in diffusely-held corporations have sufficient financial incentives or expertise to closely monitor board decisions (Berle and Means, 1932). The fundamental problem is that a small shareholder bears the full cost of monitoring, but only captures a tiny fraction of the resulting gain in firm value. One major exception to this statement are institutional shareholders, who are financially sophisticated, often hold relatively larger investment positions, and are able to persuasively communicate to other institutional shareholders their assessments of firm performance.

We examine whether institutional investors improve board monitoring. Several recent studies report evidence that institutional investors in general improve corporate decision

¹ In the U.S. shareholders cannot directly initiate business transactions or charter amendments, nor modify those proposed by directors. In contrast, shareholders in the U.K., Japan, and France can force these decisions if the proposals receive a majority vote (Hansman and Kraakman, 2001).

making and thus, firm value.² However, the evidence to date of successful shareholder activism on board governance remains very limited. Moreover, given the significant board powers over major corporate decisions, the success of shareholder activism generally cannot be achieved without investors exerting influence over the board of directors. Yet, strong boards and large outside shareholders are often seen as alternative mechanisms for constraining agency problems (Bebchuk and Weisbach, 2010). Our study helps to further our current understanding of how institutional investors improve firm performance by exerting influence over the board of directors. We show that institutional monitoring affects board incentives to monitor. Reduced institutional monitoring leads to the appointment of weaker new directors, worse board committee structures, and more generally, lowers the effectiveness of board monitoring. As a result, firms with reduced institutional monitoring hold fewer board meetings, approve higher CEO excess pay, and experience greater earnings management, which are all associated with weak board oversight.

The large literature on monitoring by institutional investors often focus on two channels of influence: 1) improve governance through “voice” (active intervention), which usually involves private negotiations with management and boards and voting on governance issues, and 2) improve governance by threat of “exit.” We develop hypotheses below to highlight the possible channels through which institutional investors may or may not actively intervene in board governance.

There are several reasons why institutional investors may actively intervene to improve board governance. Studies that go “behind-the-scenes” generally report evidence that institutional investors actively intervene by engaging management and directors in active discussions.³ Less is understood about whether such interventions result in changes in board structure and director incentives. A board of directors is the only representative that

² For instance, Doidge, Dyck, Mahmudi and Virani (2015); Appel, Gormley and Keim (2016); Kempf, Manconi and Spalt (2016); and Li, Liu, and Wu (2016).

³ See e.g., Becht et al. (2010); Carleton, Nelson, and Weisbach (1998); McCahery, Sautner, and Starks (2016).

shareholders have in the firm that makes or approves major corporate decisions. Thus, the incentives of boards to act in shareholder interests is very important in minimizing agency problems within the firm. It is unclear, however, whether the labour market for directors sufficiently punishes poorly-performing directors (Fahlenbrach, Low, and Stulz, 2016).⁴ Furthermore, independent directors may have insufficient financial incentives to actively monitor a firm's management on a consistent basis (Yermack, 2004). Moreover, the existing literature documents that certain types of directors are ineffective monitors. For example, independent directors who are more socially dependent on the CEO, busy directors, non-domestic directors, and co-opted directors tend to be less effective monitors.⁵ In the absence of effective board monitoring, institutional investors can be exposed to severe agency problems and experience significant losses. Thus, monitoring boards to ensure they perform their fiduciary duties should be a critical channel through which investors can seek to maximize their returns on investments.

On the other hand, institutional investors may not actively intervene to improve board governance for various reasons. First, shareholder monitoring is subject to the classical free-rider problem as discussed in Grossman and Hart (1980) and Shleifer and Vishny (1986). Specifically, institutional investors bear all the costs of intervention, but only realize a fraction of the benefits. Even if an institutional investor has a stake large enough to justify its monitoring costs, it may still not intervene or potential intervention can be deterred for various other reasons (Kahn and Winton, 1998; Edmans and Manso, 2011). Second, the threat of exit makes active intervention less important as the potential stock underperformance resulting from a blockholder's exit may be a sufficient threat to motivate

⁴ Past literature on the directorial labor market impact of poor monitoring by directors mostly focuses on extreme events such as earnings restatements (Srinivasan, 2005), financial fraud lawsuits (Fich and Shivdasani, 2007), bankruptcies (Gilson, 1990), and option backdating (Ertimur, Ferri, and Maber, 2012).

⁵ See for example, Chidambaran, Kedia and Prabhala (2011), Coles, Daniel, and Naveen (2014), Falato, Kadyrzhanova, and Lel (2014), Fich and Shivdasani (2006), Fracassi and Tate (2012), Hwang and Kim (2009) (2012), Masulis and Mobbs (2014), and Nguyen (2012).

managers to work hard (Kahn and Winton, 1998; Maug, 1998).⁶ Third, certain types of institutional investors do not have the appropriate incentives to pursue costly intervention. For example, passive investors may simply track the index and invest in many firms to diversify their portfolio risks. Similarly, “grey investors” may not have incentives to monitor the board, but to be manager-friendly, so as to continue to sell their companies’ products to the firm (Davies and Kim 2007).

Finally, even if institutional investors actively intervene to change firm policies, it is unclear whether shareholder monitoring and board monitoring are close substitutes for mitigating shareholder-manager agency conflicts. Institutional shareholders can directly monitor management and thus, obtain direct influence over major corporate decisions, which negates the need to intervene in board governance. Also, activist institutional investors can join the boards to directly effect changes (Gow, Shin, and Srinivasan, 2014) without the need to influence monitoring by other board members. Thus, it is unclear whether institutions actively intervene to affect board governance.

We construct an investor distraction measure to test the above hypothesis. As Edmans (2014) observes, identifying a causal effect of shareholder activism on firm governance is difficult since changes in ownership structure may be the result of changes in expected firm profits, instead of being the cause of them. Following Kempf, Manconi, and Spalt (2016), we address such endogeneity concerns by utilizing the exogenous variations in institutional shareholder attention caused by exogenous return shocks to other portfolio firms in unrelated industries to capture reductions in the level of institutional shareholder monitoring. Consider the following example to illustrate how a monitoring distraction can occur. Suppose there are two large stock holdings in a mutual fund investor’s portfolio, namely a bank, and a pharmaceutical firm. When the pharmaceutical industry is experiencing a large return shock,

⁶ Recent models have however shown that the exit mechanism may sometimes complement and strengthen the voice mechanism (e.g., Edmans and Manso, 2012).

the mutual fund manager needs to allocate more time and effort to monitoring the pharmaceutical firm. Assuming the attention and effort of a fund manager is in limited supply, we expect the bank to receive less attention, hence reducing the monitoring intensity the mutual fund manager gives to the bank.⁷ To the extent that shocks to a fund's portfolio firms in other industries are unrelated to the focal firm's fundamentals, this measure captures the exogenous variation in institutional investor monitoring intensity that is orthogonal to the focal firm's fundamentals.

Generalizing on this idea, we aggregate industry shocks using the weights of the shocked industries in an institutional shareholder's portfolio, to construct an investor-level measure of the exogenous distraction experienced by each institutional shareholder towards a given firm in a given quarter. Next, we construct a focal firm-level investor distraction measure by summing the distraction levels of all the firm's institutional shareholders, weighting them by each institution's importance in the focal firm's ownership structure, since institutional shareholders with small shareholdings are unlikely to exert much monitoring effort, even in the best of times. Kempf, Maconi, and Spalt (2016) convincingly show that this distraction measure is negatively related to the amount of attention institutional investors spend on monitoring the firm's activities such as participating in conference calls and initiating governance-related proposals.

Shareholder voting in director elections represents a primary mechanism for owners to exert influence over boards and ultimately corporate decisions. While directors rarely fail to be re-elected, except in proxy fights, experiencing relatively fewer yes votes can be embarrassing to a director and adversely affect the director's reputation. To the extent that

⁷ In a similar manner, Kacperczyk, Van Nieuwerburgh, and Veldkamp (2016) model how mutual fund managers, due to their finite mental capacity, optimally choose to allocate their limited attention to different information depending on the business cycle. Consistent with the idea of limited resources on the part of institutional investors, in their survey of institutional investors, McCahery, Sautner, and Starks (2016) find that limited resources (personnel) and "too many firms in our portfolio" rank as important impediments to shareholder activism.

directors value their reputations, shareholder voting may motivate directors to act in shareholder interests. To investigate whether investor distraction affects director incentives to monitor, we first examine the voting behavior of institutional investors in director elections. Using an investor-level measure of mutual fund distraction, we find that mutual funds are less likely to challenge directors with negative votes or withhold their votes when they are distracted. Economically, a 1% rise in a mutual fund investor's distraction level is associated with a decline in the likelihood that the investor votes against an independent director candidate in the annual shareholder meeting by 2.8%. Moreover, the results are stronger for the subset of directors who tend to be less effective monitors: a 1% rise in a mutual fund investor's distraction level leads to a 4.3% fall in the likelihood of the investor voting against directors who are either busy or socially-connected to the CEO.

Further, we examine how the distraction by multiple institutional investors of a firm affects director voting outcomes. We find that independent directors with a negative ISS voting recommendation receive significantly more favourable votes from institutional shareholders when these investors are distracted. Economically, a 1% increase in investor distraction raises the percentage of favourable votes received by an independent director with a negative ISS recommendation by 1.5%. Institutional investor distraction also significantly increases the proportion of favourable votes received by all independent directors, after we exclude firms that have dual-class shares structures and closely-held firms where institutional investors have weak voting power. We further decompose total distraction and find that the effect of a distraction at institutions that actively monitor is more pronounced, while a distraction at a grey institution has no significant effect. In addition, the sensitivity of director departures to negative ISS recommendations and poor voting results is also significantly lower when institutional shareholders are distracted.

Taken together, the above voting results indicate that independent directors are significantly less likely to be disciplined by proxy voting outcomes when institutional shareholders are distracted. This result is more pronounced for controversial director candidates such as busy and socially dependent directors, and directors with negative ISS recommendations. We thus examine how weakened board oversight by institutional shareholders affects director monitoring intensities. We find that independent directors miss more board meetings when institutional shareholders are distracted. Specifically, a 1% rise in the distraction level leads to about 0.3% increase in the probability that a director attends less than 75% of board meetings. Consistent with Masulis and Mobbs (2014) who find that independent directors expend less effort in smaller and less prestigious firms, the distraction effect on independent director voting is weaker in larger firms and stronger in smaller firms.

We also find that investor distraction is significantly associated with lower board meeting frequencies. Specifically, we find that a 1% rise in the institutional investor distraction is associated with a decline in the number of board meetings over the year by up to 6%. To the extent that the meeting attendance record and frequency of board meetings are important signals of director monitoring efforts, these findings suggest that the institutional investor monitoring has important implications for director efforts and monitoring incentives.

Finally, we examine how institutional investor distraction affects board monitoring effectiveness. We first test whether institutional investor distraction leads poorer board composition. We find strong evidence that when institutional investors are distracted, firms appoint significantly more controversial directors, who are busy directors or have social ties with the CEOs. Economically, a 1% rise in institutional investor distraction leads to nearly 2% rise in the likelihood of controversial directors serving on the board. Institutional investor distraction also leads to significantly greater CEO excess pay. Economically, 1% increase in investor distraction is predicted to raise the chance of high excess CEO pay by 3.6%. In

addition, firms with distracted investors exhibit significantly greater earnings management. Taken together, institutional shareholder distraction leads to significantly poorer board monitoring quality and effectiveness.

Our paper contributes to the literature on corporate governance in several ways. First, our paper extends our understanding of what motivates independent directors to do their job well and monitor management carefully. While it is well known that boards make important corporate decisions which have economically large impacts on shareholder value, director incentives to monitor managers are not well-understood. It is unclear why directors with limited financial incentives are willing to exert effort to monitor managers (Yermack, 2004). Fama and Jensen (1983) argue that director reputational concerns provide a strong motivation, and recent studies show that reputational concerns affect director incentives to perform their roles as effective monitors.⁸ We improve our understanding of director incentives by showing that monitoring by institutional investors matters for effective director monitoring incentives.

Second, our study shows that institutional shareholder monitoring enhances board effectiveness, and furthers our understanding of how institutional investors intervene to improve board governance and firm value. Existing studies that examine shareholder interventions in corporate governance emphasize the actions of shareholder activists, including the use of proxy contests and law suits.⁹ However, such observable shareholder activism is rare and only happens to a relatively small group of firms, and is conducted by a very select group of activist institutional investors such as hedge funds.

⁸ For instance, Jiang, Wan, and Zhao (2016); Masulis and Mobbs (2014); Levitt and Malenko (2016).

⁹ See e.g., Brav et al. (2008) on hedge fund activism, Del Guercio and Hawkins (1999) on the impact of shareholder proposals put forward by public pension funds, Doidge et al. (2016) on the activities of Canadian Coalition for Good Governance, a formal collective action organization of institutional investors, Del Guercio, Seery, and Woitke (2008) on vote-no campaigns, Gillian and Starks (2000) on detailed analysis of shareholder proposal voting outcomes. See also Gillian and Starks (2007), Denes, Karpoff, and McWilliams (2016) for reviews on shareholder activism.

Given that board powers are large and wide-ranging, a well functioning board can improve corporate decisions and firm value. Thus, we argue that board monitoring is a much more important channel through which shareholders can maximize their share value. Given its importance, evidence on shareholder actions to improve board functioning is surprisingly scarce.¹⁰ We help fill this gap in the existing literature, and show that monitoring by institutional investors in general significantly improves board effectiveness. We find that institutional monitoring affects board monitoring effectiveness on a regular basis, and not just on an ad-hoc basis. Furthermore, we show that the impact of institutional investor monitoring goes well beyond simply engaging management and boards of directors to change firm policies. We show that reduced institutional investor monitoring leads to poorer board effectiveness, in part due to poorly chosen board appointments and in part due to the existing directors reducing their own monitoring efforts in response to reduced pressure from institutional investors.

Our study is also related to the literature that explores how corporate governance mechanisms interact with each other. Existing evidence is mixed as to how governance mechanisms interact with each other (Agrawal and Knoeber, 1996; Cremers and Nair, 2005; Gillan, Hartzell, and Starks, 2011), and it remains unclear whether the monitoring roles of the board and institutional shareholders are complements or substitutes. We contribute to this literature by showing that the monitoring function of corporate boards, a key internal governance mechanism, depends crucially on the effectiveness of institutional investor shareholder monitoring, which acts as a complementary internal governance mechanism.

¹⁰ Outside shareholders can submit Rule 14a-8 shareholder proposals relating to board independence and other board issues but they are often ineffective in eliciting change (Gillan and Starks, 2007; Denes, Karpoff, and McWilliams, 2016). Activist shareholders can also organize “just vote no” campaigns to withhold votes from directors but Del Guercio, Seery, and Woidtke (2008) show that such campaigns are often targeted at large, poorly performing firms and are typically sponsored by public pension funds. The frequency of such campaigns are also not frequent, they find only 112 publicly announced campaigns for the 13 year period from 1990 to 2003.

Lastly, we contribute to the literature that examines the impact of institutional investor monitoring on firm policies and governance outcomes. Monitoring by institutional investors is found to have a positive impact on a firm's governance indices, CEO compensation, mergers and acquisitions profitability, firm risk-taking and reduced earnings management.¹¹ However, endogeneity makes it difficult to assess their causal effects. For example, Chung and Zhang (2011) conclude that the positive association between institutional ownership and good governance structure is driven by institutional investors gravitating towards firms with good governance so as to minimize their own monitoring costs. Recent studies have used the annual reconstitution of the Russell 1000 and 2000 indexes as an exogenous shock to examine how changes in passive institutional ownership affect firm governance and policies.¹² Our study differs from theirs in that we focus on how institutional shareholder monitoring intensity affects board monitoring intensity and we examine a wide range mutual fund classes, not just passive index investors.

2. Variable constructions, data, and descriptive statistics

2.1. Distraction measure

We follow Kempf, Manconi, and Spalt (2016) to construct a distraction measure for each institutional investor i in a given firm f . We first identify industry sectors that are unrelated to firm f in investor i 's portfolio which suffer serious return shocks to determine when investor i is likely to be distracted by these exogenous events in other industries and is thus likely to shift his attention away from firm f . These industry shocks are then aggregated across all the industry sectors in the institutional investor's portfolio. Second, we aggregate

¹¹ Examples include: Hartzell and Starks (2003), Aggarwal et al. (2011), Chen, Harford, and Li (2007), Cornett, Marcus, Tehranian (2008 Aghion), Van Reenen, and Zingales (2013), and Kim and Lu (2011).

¹² Appel, Gormley, and Keim (2016) find that an increase in passive institutional ownership increases board independence while Schmidt and Fahlenbrach (2016) find no change in board independence and appointments of independent directors are met with worse announcement returns when passive institutional ownership increases.

the investor-level distraction measure across all institutional investors of the firm to arrive at a firm-level distraction measure.

To calculate these two distraction measures, we define the level of distraction experienced by the institutional investors of firm f in a given quarter q as:

$$Total\ Distraction_{f,q} = \sum_{i \in f} \sum_{IND \neq IND_f} w_{i,f,q-1} \times w_{i,q-1}^{IND} \times IS_q^{IND}$$

where i denotes firm f 's institutional investor at the end of quarter $q-1$, IND denotes Fama-French 12 industry sector, and IND_f denotes the industry sector in which firm f belongs. IS_q^{IND} is an indicator variable equal to one if industry IND experiences a shock in quarter q , and zero otherwise. An industry is deemed to have experienced a shock if the industry's return for the quarter is either the highest or lowest across all the Fama-French 12 industry sectors. Next, we weight these shocks to capture their economic importance. The variable $w_{i,q-1}^{IND}$ denotes the weight of industry sector IND in investor i 's portfolio in the prior quarter $q-1$, which represents the importance of industry sector IND in institutional investor i 's portfolio.

The two terms, $w_{i,q-1}^{IND}$ and IS_q^{IND} , capture investor i 's level of distraction away from firm f , when events occur in unrelated industries of investor i 's portfolio. To aggregate across institutional investors of a firm, we weight the level of distraction of each investor i in firm f by $w_{i,f,q-1}$ which denotes the importance of investor i in firm f in the prior quarter, $q-1$. Investor i have more weight if 1) firm f has more weight in i 's portfolio and 2) investor i owns a larger fraction of firm f 's shares. Following, Kempf et al. (2016), we compute $w_{i,f,q-1}$ as:

$$w_{i,f,q-1} = \frac{QPFWeight_{i,f,q-1} + QPercOwn_{i,f,q-1}}{\sum_{i \in F,q-1} (QPFWeight_{i,f,q-1} + QPercOwn_{i,f,q-1})}$$

where $PFweight_{i,f,q-1}$ is the weight of the market value of firm f in investor i 's portfolio, and $PercOwn_{i,f,q-1}$ is investor i 's percentage ownership in firm f . The former measures how much time the investor is likely to spend in analyzing firm f , and the latter measures how much influence investor i can have in the firm. We sort all stocks held by investor i into quintiles by $PFweight_{i,f,q-1}$ and all investors of firm f into quintiles by $PercOwn_{i,f,q-1}$. $QPFweight_{i,f,q-1}$ and $QPercOwn_{i,f,q-1}$ take the values of 1 to 5 depending on which quintile $PFweight_{i,f,q-1}$ and $PercOwn_{i,f,q-1}$, respectively, falls in. The weights $w_{i,f,q-1}$ sum to 1 for each firm f after scaling by the denominator. It follows that higher values of *Total Distraction* indicates that the institutional shareholders in firm f are more distracted by attention-grabbing returns from unrelated industry sectors, and therefore their overall monitoring intensity of firm f 's board is temporarily reduced.¹³

There are several important advantages of using this distraction measure. First, to the extent that the shock to the portfolio firms in another industry are unrelated to the focal firm's fundamentals, this measure captures the exogenous variation in institutional shareholder monitoring that is orthogonal to the focal firm's fundamentals. Moreover, the shareholder distraction measure accounts for the importance of the shocked industries to the institutional shareholder by using their portfolio weights, and for the firm-level distraction measure, we further adjust for the importance of each institutional shareholder's distraction using their percentage ownership in firm f . Thus, we are able to measure the *magnitude* of the distractions experienced by individual institutional shareholders and the resulting impact of the distraction on the monitoring intensity of firm f 's board in a given period. These features allow us to further investigate the cross-sectional variation of their effects. Finally, as we are able to measure the distraction level of each institutional shareholder, we are able to

¹³ Kempf, Manconi, and Spalt (2016) argue that although the distraction measure is based on quarterly industry returns, but such temporary short-term events may have prolonged impact on the monitoring capacity of an institutional investor towards a certain firm.

differentiate among institutional investors whose distraction is likely to matter most for monitoring of boards, which provides us with natural counterfactuals where the distraction measure is least likely to have any discernible impact.

In addition to our main distraction measure, we also calculate several alternative distraction measures. Since we have the voting data on individual mutual fund, we can analyze the voting behavior of mutual fund investors when they become distracted. We calculate a mutual fund distraction metric using a similar approach as above, except that we do not aggregate up the fund-level measures across all the mutual funds holding shares in the firm. To construct a fund-level distraction measure, we merge the CRSP mutual fund sample with the Thompson-Reuters mutual fund holding database (S12 filings).¹⁴ We also construct distraction measures focusing on institutional investors that are most likely and least likely to monitor. In addition, we construct distraction metrics based on the firm's largest 5, 10, or 20 institutional shareholders to capture only the largest and therefore most influential shareholders. Additionally, we calculate distraction measures differentiating between positive and negative industry shocks, where positive (negative) shocks refer to situations where the industry sector has the highest (lowest) stock returns across all 12 Fama-French industry sectors.

2.2. Data and sample formation

Our main sample comes from the intersection of several databases. We start with firm-years in the RiskMetrics director database, which contains information on board structure and director characteristics. We obtain information on institutional investors' shareholdings from Thomson-Reuters Institutional Holdings (13F) database to construct the

¹⁴ Since the fund number from S12 filings is reused, we use the WFICN from MFLINKS file as the unique fund identifiers to merge CRSP mutual fund sample and S12 datasets.

distraction measure. We then merge the director and institutional holding data with the firm accounting and stock returns data from Compustat and CRSP, respectively.

In the initial merged dataset, firm-years with missing information on board structure, missing values for the distraction measure, and missing values for the main control variables from Compustat are deleted. Financials and utilities are also excluded. We include all outside directors in our merged sample. In our main analysis, we focus on independent directors and use grey directors as a control group for the placebo tests.¹⁵ Requiring information on major control variables results in a sample that consists of 114,293 independent director-firm-years from 16,391 firm-year observations for 17,032 unique directors in 2,155 unique firms for the period 1996 to 2013.

We also obtain shareholder voting data from ISS Voting Analytics for the period 2003 to 2012 and director social ties data from BoardEx since 2004. We merge ISS Voting Analytics and BoardEx with RiskMetrics director data using company and director names. After requiring director election results data from Voting Analytics and director-CEO social ties data from BoardEx, we end up with 45,966 director elections in 6,952 shareholder meetings of 1,408 unique firms for the period 2004 to 2012. In these elections, we observe 7,848 mutual-fund-years casting 1,717,725 votes.

2.3. Descriptive statistics

Table 1 provides summary statistics for our key variables. Detailed descriptions of each of the variables can be found in Appendix A. Panel A summarizes the means, medians, 25th and 75th percentile, and the standard deviation of the institutional investor distraction measures. For our fund-level distraction measure, the mean and median mutual fund distraction in our sample is 0.15 and 0.14 respectively, with a standard deviation of 0.07. The

¹⁵ Unlike independent directors, grey directors are not viewed as monitors of management. Therefore, if institutional monitoring affects director incentives to monitor management, we expect stronger results for the independent directors compared to the grey directors.

mean and median firm-level distraction measure, *Total Distraction*, in our sample is 0.17, while the 25th percentile and 75th percentile values are 0.13 and 0.21, respectively. The distribution of our distraction measure across firms is in line with Kempf, Manconi, and Spalt (2016). We further decompose the firm-level distraction measure to take into account the type of institutions where *Monitoring Distraction (Grey Distraction)* is calculated based on the distraction levels of institutions who are most (least) likely to monitor such as investment companies, independent investment advisors, and public pension funds (bank trusts, insurance companies, corporate pension funds).

Panel B reports summary statistics for director election voting outcomes at the director-firm-election date level and director characteristics at the director-firm-year level. Among the 45,966 director elections, independent director candidates on average receive 96% of “For” votes and 94% of the proposals are recommended favorably by ISS. These proposal-level statistics are similar to those in Cai, Garner, and Walkling (2009). *Controversial Director* is an indicator variable equals to one if the director holds more than 3 other directorships during the year, or if the director shares common social ties with the CEO, and zero otherwise. Directors who attend the same educational institutions and/ or non-business organization as the CEO are deemed to be socially connected to the CEO.¹⁶ Requiring social ties data from BoardEx restrict the number of observations to 50,205 director-firm-years. 15% of the directors in our sample are identified as controversial directors, out of which 10% are socially linked to the CEO and 6% are busy directors in our sample. Only 2% of the directors

¹⁶ Although BoardEx uses a unique identifier for each of the educational institutions in the database, the same educational institution may appear under different identifiers (e.g. Harvard University and Harvard Business School). To remedy this problem, we manually match the names of the educational institutions and create new identifiers that uniquely identify each educational institution. For shared social ties at non-business organizations, we include connections at charities, social clubs, and armed forces, and exclude those compulsory professional and industrial organizations where social interaction is unlikely due to the compulsory nature of membership in the organizations (e.g. American Bar Association). For social ties, we start our sample from 2004 because BoardEx only covers limited number of firms before 2004.

in our sample have attendance problems and director departures are also infrequent events with only 8% of director-firm-year observations see a director leaving the board.

The mean (median) director age is 62 (63) years old and mean board tenure is 11 years and the median is 10 years. Independent directors have on average 1.7 other directorships, with a median number of directorships of 1. Moreover, independent directors generally have weak financial incentives with the mean (median) director equity stake in the firm being only 0.1% (0.03%). This is consistent with our discussion in the introduction section that independent directors in general may not have sufficient financial incentives to deliver strong performance. In addition, 12% of the directors are females and 84% of the independent directors are members of major committees of the board who make important firm decisions.

We report descriptive statistics for board and firm characteristics in Panel C of Table 1 at the firm-year level. The mean and median percentage “for” votes received by independent directors is 96% and 98% respectively, which is similar to the director-level statistics. For the period 2004-2012, only 13% of firm-years implement majority voting. The information on staggered board and dual-class ownership structure is from RiskMetrics Governance Database and is available for 13,990 firm-years in our sample. 58% of firm-years in our sample have staggered board provisions. By comparison, only 10% of the firm-years have dual-class ownership structures. Also, the median firm in our sample has 9 directors on the board, and 70% of all directors are independent.

In addition, institutional investors on average own 88% of the common shares in our sample firms, where 47% of the ownership comes from monitoring institutions, and 16% comes from grey institutions. Our statistics indicate that monitoring institutions that have better monitoring incentives are also likely to have large positions and significant voting power to influence the firm’s governance.

3. Shareholder distraction and voting

3.1. Mutual fund distraction and fund votes

In this section, we examine institutional investor voting behavior as an observable channel through which institutional investor distraction affects director's incentives to monitor. Director elections are an important mechanism for shareholders to voice their approval or disapproval of directors who are meant to represent their interests. Thus, shareholder votes in director elections serve as a critical channel for shareholder monitoring of director efforts, and a disciplinary mechanism for poorly-performed directors (See e.g., Aggarwal, Dahiya, and Prabhala 2015).

We first look at investor-level distraction and their voting behavior. Since 2003 mutual funds must publicly disclose their votes through N-PX filings to the Securities and Exchange Commission (SEC). Therefore, our analysis of mutual fund voting begins in 2003. We focus on actively-managed equity funds as such funds are most likely to gain from active intervention. Further details regarding the formation of the sample can be found in Appendix B. For each director election proposal, depending on whether it is plurality or majority voting, a mutual fund can vote "For", "Against," or withhold their vote.¹⁷ According to Cai, Garner, and Walkling (2009), shareholders can express their dissatisfaction by withholding votes, thus "Withhold" is functionally equivalent to "Against." Therefore, we classify "Withhold" as well as "Against" votes as negative votes because withholding votes is functionally equivalent to voting against a proposal.

We observe 1,710,792 votes by mutual funds for 47,319 unique director election proposals over the 2003-2012 period. On average, about 7% of mutual fund votes are either "Against" or "Withhold" votes. We first examine the link between investor distraction and

¹⁷ We include director elections involving plurality voting and majority voting. Under plurality voting, shareholders can vote "For" or withhold their votes while in majority voting, shareholders can vote "For" or vote "Against" a director (Ertimur, Ferri, and Oesch 2015).

mutual fund voting in director elections. Our dependent variable is *Oppose Director*, which is an indicator variable that equals 1 if the mutual fund votes against or withholds its vote for a particular director in a given annual election. The key dependent variable is the natural log of *Mutual Fund Distraction*, which is level of distraction experienced by the mutual fund towards the firm in the quarter immediately preceding the voting date. We use ordinary least squares (OLS) regressions with standard errors clustered at the fund level.

A crucial advantage of this set-up is that it allows identification from within a director election proposal, i.e., variations in voting outcomes across mutual funds for the same director election proposal, by allowing us to include director election proposal fixed effects, which allow us to control for the characteristics of each election proposal, including time-varying director characteristic, time-varying firm characteristics and performance, and the ISS recommendation for the director candidate. However, another level of variation is present, the mutual fund distraction measure may capture time-varying fund characteristics including fund performance and fund flows. Since each mutual fund has different levels of distraction towards each of its portfolio firms at each point in time, we can include *interacted* fund and year fixed effects, which allows us to compare the vote outcomes of directors at firms where the fund is more likely to be distracted against vote outcomes at firms where the *same* fund is more likely to be attentive due to attention-grabbing events in the firms' industries. We report our OLS regression results in Table 2.

Not all outside directors are the same. Independent directors are considered to be more effective monitors than grey directors, and we expect shareholders to use their votes to exert control of the board primarily through independent directors, and not grey directors. Therefore, grey directors serve as a natural placebo test and we expect to find little impact of investor distraction on the voting outcomes of grey directors. In Panel A of Table 2, we report mutual fund voting results for all outside directors, and also compare the effects of fund

distraction on the shareholder votes for grey directors versus independent directors.¹⁸ In Model (1) where we focus on all outside directors, we find that the coefficient on $\text{Ln}(\text{Mutual Fund Distraction})$ is -0.002 and statistically significant at the 5% level. This suggests that when a mutual fund pays less attention to a firm due to other more pressing events happening to other firms in the fund's portfolio, it is significantly less likely to challenge the management's recommendation on outside director elections. Economically, a 1% increase in the investor's distraction reduces the chance that the investor votes against an outside director candidate in the election by 2.8% ($0.002/0.07$), adjusting for the unconditional probability of voting against the director (0.07). Most of the significant effects come from the independent directors in Model (2), as we observe no significant effects for grey directors in Model (3). This is consistent with our expectation that funds primarily use their votes to discipline board monitors, who are primarily independent directors.

We expect that when mutual funds are distracted, they are less likely to oppose director candidates who are ineffective compared to when the funds are more attentive. In Panel B, we focus on independent directors and split them into controversial and non-controversial candidates. Given that the vast majority of votes support directors, we should not expect a difference in the voting patterns of attentive and inattentive investor when they are evaluating a non-controversial independent director. However, controversial directors are more likely to attract negative votes due to their ineffectiveness (Cai, Garner, and Walkling 2009; Hwang and Kim 2009), especially from investors who are more attentive and who are monitoring the firm intensively. Consistent with our predictions, we find that the coefficient on $\text{Ln}(\text{Mutual Fund Distraction})$ is significant only when we focus on the group of controversial director candidates. This indicates that mutual funds are significantly less likely

¹⁸ Number of observations in Models (2) and (3) do not add up to those in Model (1) because 702 observations are dropped due to perfect collinearity between the *Oppose Director* dependent variable and the fixed effects in Models (2) and (3).

to discipline ineffective directors when they are distracted, but distraction has no effect on the votes for non-controversial directors.

Another way to measure ineffective directors is to use ISS recommendations. Cai, Garner, and Walkling (2009) find that directors with negative ISS recommendations generally have fewer positive votes. However, Iliev and Lowry (2014) find that most mutual fund investors are active voters and place little weight on ISS recommendations. It is possible that when mutual funds are distracted, they may place more weights on ISS recommendations as they do not have time to do their own research, therefore, we expect that when mutual funds are more distracted, they are more likely to vote according to ISS recommendations especially when the recommendation is negative. In Models (3) and (4), we separate the directors based on whether they have negative

Although negative ISS recommendations can capture some ineffective director candidates, they have important limitations and have been accused of making “blanket recommendations” that are uniform recommendations for or against certain director or firm characteristics. We expect mutual funds to reduce their own research on director elections, and to be more likely to vote in favor of the ISS recommendations when they are distracted. Although the coefficients of fund distraction in model (3) and (4) of Panel B are not significant, we will further exploit voting behaviors by separating out active monitoring institutional investors in Table 3.

We also expect that the monitoring role of institutional investors on the board is stronger when they have more voting powers in the firm. In Panel C, we explore the mutual fund votes in the subsample firms where their votes are more powerful. In Model (1), we exclude firms that have dual-class shares structures or have more than 50% insider ownerships, since the voting rights of shareholders are significantly constrained. In Model (2),

we further exclude family firms,¹⁹ but the requirement of family firm data also significantly reduces our sample size. We find that the coefficient on *mutual fund distraction* is -0.006 in model (1) and statistically significant at the 5% level, indicating a much stronger effect of fund distraction in firms where the effectiveness of their voting is stronger. In an untabulated analysis, we examine fund distraction in the sample of all mutual funds covered by ISS Voting Analytics without requiring the fund to be actively-managed. We obtain qualitatively similar results.

3.2. Firm investor distraction and director election results

We further examine the impact of distractions by a firm's institutional investors on the director election outcome and report these OLS results in Table 3. Although independent directors on average receive 96% favorable votes in our sample, which is much more than sufficient to be elected or re-elected, poor voting results still serve as an effective mechanism to punish ineffective directors (Fischer et al., 2009; Aggarwal, Dahiya, and Prabhala, 2015). Our dependent variable is *Percent "Yes" Votes for a Director*, which is the natural logarithm of the number of "for" votes received by a particular director candidates divided by the sum of the "for", "against" and "withhold" votes. We also control for director and firm characteristics that are likely to affect the director's vote result, and the average percentage of "Yes" votes received by all the independent directors in the firm for a given year. All the estimates in Table 3 are based on OLS regressions with director, firm and year fixed effects, and standard errors clustered by director.

In Model (1) – (4) of Panel A in Table 3, we test investor distraction on director election results in the full sample of firms. Although ISS recommendations have important limitations in identifying ineffective directors, Cai, Garner and Walking (2009) find that ISS

¹⁹ Family firm data is from David Reeb's personal webpage and available for 2000 largest firms for 2001-2010. <http://www.ronandersonprofessionalpage.net/data-sets.html>

recommendations have significant economic impacts on shareholder votes. Thus, we also interact negative ISS recommendations with distraction in Model (2), to test whether the effect of the ISS recommendation is strengthened or weakened when investors are distracted. We find that coefficient on total distraction is not significant in Model (1), but the coefficient on *Negative ISS* is negative and significant, which is consistent with Cai, Garner and Walking (2009)'s findings. Moreover, while the coefficient of the interaction term in Model (2) is significantly negative, suggesting that directors with less favourable ISS recommendations receive significantly more "Yes" votes when institutional investors are distracted. Economically, directors with negative ISS recommendations receive 1.5% more "Yes" votes when there is a 1% increase in the institutional investor distraction. This result indicates that institutional investors in general tend to ignore ISS recommendations, and are less likely to use their votes to discipline potentially problematic directors.

In Model (3) and (4) of Panel A, we decompose total director distractions into monitoring and grey distractions. Monitoring distraction measures the distraction by institutional investors who are likely to be better monitors of the firm, including investment companies, independent investment advisors, and public pension funds. Grey distraction captures the distraction by institutional investors who tend to be less independent from the management due to potential business ties, including banks, insurance companies, and corporate pension funds. We find no significant distraction effect by monitoring and grey institutional investors in Model (3). However, we do observe a significant distraction effect for monitoring and grey institutional investors for directors receiving negative ISS recommendations in Model (4).

As pointed out by Iliev and Lowry (2014), most monitoring institutions like mutual funds are active voters who independently analyze the voting issues, and tend to place little weight on ISS recommendations. Thus, we expect monitoring institutions to have fewer

independent assessments of director candidates and exhibit increased reliance on ISS recommendations when they are distracted. Consistent with this prediction, we find that the coefficient of the interaction of monitoring distraction and negative ISS recommendation in Model (4) is negative and significant, indicating a stronger effect of ISS recommendations on director voting outcomes. By comparison, grey institutions have opposite responses to ISS recommendations when they are distracted. We find that the coefficient of the interaction of grey distraction and negative ISS recommendation is positive, indicating that grey institutional investors are likely to ignore ISS recommendations when they are distracted. Overall, the effect of grey institutions on the relation between ISS recommendation and director vote results dominates that of monitoring institutions, leading to the positive interaction coefficient of total distraction and negative ISS as reported in Model (2).

In Model (5) and (6), we exclude firms that have dual-class shares structures or have more than 50% insider ownerships (closely-held firms), since the voting rights of institutional shareholders are significantly constrained. After the exclusion, we find a significantly stronger effect of total distraction and monitoring distraction. The coefficient of firm distraction in Model (5) is positive and statistically significant at the 5% level. Economically, one standard deviation (a 1%) increase in investor distraction will increase the percentage of favourable votes received by a director by 0.1% (0.003%). The coefficient of monitoring distraction in Model (6) is positive and statistically significant at the 5% level, while the distraction by grey institutions is not statistically significant. Economically, one standard deviation (a 1%) rise in the distraction by monitoring institutions increases the percentage of favourable votes received by a director by 0.2% (0.006%). This economic magnitude is twice as large as the average investor reported in Model (5).

In Panel B of Table 3, we further exclude family firms from our sample and find consistent results where the family firm data requirement produces a much smaller sample.

Importantly, our results are most pronounced in this sample, suggesting that impact of shareholder distraction on director election is more significant for firms where institutional investors have more voting power. Similar to Table 2, we use grey director voting results as counterfactuals to independent directors, and show that institutional investor distraction has no significant effect on grey director voting. This result confirms that voting for independent directors is a more effective channel for investors to exert control of the board and ultimately corporate decisions.

Overall, we findings support the view that directors generally face less pressure to perform in director elections when institutional investors are distracted, and this effect is more pronounced for directors with negative ISS recommendations.

3.3. The sensitivity of director departures to negative ISS recommendation and shareholder voting

We examine the impact of shareholder distraction on the sensitivity of director departures to negative ISS recommendations and director election results. In this section, the dependent variable in all columns is *Director Departure*, an indicator variable equals 1 if the director leaves the board in the following year and 0 otherwise. We first examine the firm distraction and the sensitivity of director departures to negative ISS recommendations. The focal variable of our analysis is the interaction term of firm distraction and negative ISS recommendations.

We estimate OLS regressions with *interacted* industry and year fixed effects and the results are reported in Table 4. Standard errors are clustered by directors in all specifications. In Model (1) of Panel A, we include all outside directors in our sample and find that the coefficient on firm distraction is negative and the coefficient on the interaction term between firm distraction and negative ISS recommendation is positive. Although these coefficients are

not statistically significant, the sign of the interaction coefficient suggests that the investor distraction weakens the sensitivity of director departure to negative ISS recommendations for that specific director.

We further perform subsample analysis to identify the scenarios where investors distraction matter the most. Specifically, in Model (2) and (3) of Panel A in Table 4, we include only independent directors in our sample and find that the results are more pronounced compared with Model (1), suggesting that the role of shareholder distraction is particularly important for the departure decision of independent directors. Economically, 1% rise in institutional investor distraction will weaken the chance for a director with unfavorable ISS recommendations to depart by 3.5%. We find a stronger effect of the distraction by monitoring institutions. Consistent with prior results, investor distraction has no effect on the departures of grey directors as reported in Model (4) of Panel A.

Since poor vote results can serve as an effective mechanism to embarrass or punish ineffective directors (Fischer et al., 2009; Aggarwal, Dahiya, and Prabhala, 2015), we further examine whether in the sensitivity of board turnovers to vote results changes as a result of investor distraction. These results are reported in Panel B of Table 4. The results in Model (1) suggest that the investor distraction significantly weakens the sensitivity of outside director departures to vote results. Economically, 1% rise in investor distraction will weaken the vote-departure sensitivity by 8%. In Model (3), we find the effect of investor distraction on director departure decisions mainly comes from the distraction by monitoring institutions in the subsample of independent directors, but not from the subsample of grey directors.

4. Shareholder distraction and board monitoring intensity

4.1. Board meeting attendance

In this subsection we examine whether following a rise in institutional investor distraction, there is a change in the likelihood of outside directors missing a board meeting. Attendance records can serve as an important indicator of the role of outside directors for at least two reasons. One is that attendance records are an observable measure of director performance, which allows us to investigate whether directors behave differently after one or more major shareholders becomes distracted. Another reason is that attending board meetings is a direct way for directors to obtain the information necessary to carry out their duties and exert influence over firm managers. Thus, to the extent that the shareholders' monitoring intensities decrease when they shift attention away from the firm, we would expect that outside directors would miss more board meetings.

Our director sample consists of 126,778 director-firm-year observations after requiring information on director characteristics and firm financial information, and declines to 60,558 director-firm-years if we further require data on director meeting fees. We estimate linear probability model where our dependent variable is an indicator variable that equals one if a director attends fewer than 75% of a firm's board meetings during the past fiscal year and zero otherwise.²⁰ The explanatory variables are based on the control variables used in Adams and Ferreira (2009), Masulis, Wang, and Xie (2012) and Masulis and Mobbs (2014). The key explanatory variable in the regressions is *firm distraction*, which is the weighted average of the institutional shareholder level distractions weighted by each institution's ownership percentage in the firm. To account for the time invariant firm and director characteristics, we include firm and director fixed effects in the OLS regressions and industry fixed effects in the logit regressions. We also include year fixed effects to account for possible time trends in the OLS and logit

²⁰ Public firms in the U.S. are required to disclose directors' attendance records at board meetings in their annual proxy statement. In particular, they are required to disclose if any director has attended fewer than 75% of the board meetings during a fiscal year. We obtain this information from the Riskmetrics (formerly IRRC) database and match it with director information from BoardEx. We also obtain from ExecuComp database information about director meeting fees. Unfortunately, the meeting fee and board meeting frequencies information is only available for 1996-2006.

regressions.²¹ We follow Petersen (2009) and use robust standard errors clustered at the director level.

Our results are reported in Panel A of Table 5. In Model (1), we include all outside directors in our sample and find that the coefficient on *firm distraction* is positive and statistically significant at 10%, suggesting that outside directors miss more board meeting once institutional shareholders become distracted. Economically, a 1% rise in the distraction level leads to about 0.3% increase in the probability that the director will attend fewer than 75% of the board meetings. In Model (2) - (3), we perform subsample analysis and find the impact of shareholder distraction on meeting attendance is concentrated in the independent directors. Importantly, in Model (3), we include an interaction term between *distraction* and the book value of value of total assets and find that the coefficient is negative and significant, suggesting that the impact of shareholder distraction on director meeting attend is more pronounced in smaller firms. This result is consistent with those reported in Masulis and Mobbs (2014) that directors distribute more efforts toward their larger and more prestige firms due to personal reputation concerns, and thus allocate less time and energy in smaller firms when they are busy. In Panel B of Table 4, we estimated logit models with industry and year fixed effects and obtain qualitatively similar results.

For control variables, we find that directors holding a greater number of directorships tend to miss more board meetings. We also find that directors at smaller boards, female directors and directors with major committee memberships tend to miss fewer meetings. These findings are in line with previous studies, such as Adams and Ferreira (2009) and Masulis and Mobbs (2014). Overall, we find strong evidence that the existing directors become less attentive when institutional investors become distracted, highlighting the important impact that institutional shareholder monitoring has on director monitoring

²¹ In untabulated tests, we find that the distraction's effect on director attendance is significantly weakened in the Post-SOX period. This result is consistent with findings from Masulis and Mobbs (2014).

intensities. This effect is stronger for smaller firms and weaker for larger and more prestige firms.

4.2. Board meeting frequencies

In Table 6, we examine the impact of institutional shareholder distraction on board meeting frequencies. Prior literature suggests that board meeting time is an important board attribute that can raise firm value. Directors are likely to perform their monitoring duties more diligently if they meet more frequently (Lipton and Lorsch, 1992, Conger et al., 1998). In the regression analysis, our dependent variable is the natural logarithm of number of board meetings at the firm in the prior financial year and we cluster standard errors at the firm level. We present results for OLS regressions using industry and year fixed effects in Model (1) and (2), and firm and year fixed effects in Model (3) and (4). Economically, a 1% rise in the institutional investor distraction is associated with a decline in the number of board meetings over the year by up to 6% using industry and year fixed effects, and by up to 3% using firm and year fixed effects.

5. Shareholder distraction and board monitoring effectiveness

5.1. Board structure

In this section, we examine whether a rise in institutional investor distraction reduces the longer term monitoring intensities of boards, by examining whether the board nominates new directors who are less effective monitors. The prior literature documents that board composition is a key determinant of board monitoring qualities. By appointing effective monitors on the board, shareholders can more effectively exert their influence over major corporate decisions, and ultimately improve firm performance.

We identify two types of “controversial directors” whose monitoring incentives are likely to be compromised. The first type of problematic directors are those who are socially connected to the CEO. It is well established in the existing literature that socially dependent directors tend to be friendlier to management and thus, are less aggressive and less effective monitors (Hwang and Kim 2009, 2012; Chidambaran, Kedia and Prabhala, 2011; Fracassi and Tate, 2012; Nguyen, 2012). CEO-director ties lead to a decline in CEO turnover-performance sensitivity, and CEOs also extract more private benefits from the firm, which significantly reduce firm values. The second type of problematic directors are those directors who are excessively busy due to having more than three external directorships. Several studies show that busy directors are more likely to be distracted and tend to be less effective firm monitors. In particular, busy directors who have limited time and energies are more likely to miss more board meetings and are detrimental to firm value (Fich and Shivdasani, 2006; Falato, Kadyrzhanova, and Lel, 2014; Masulis and Mobbs, 2014).

The dependent variable in Table 7 is *controversial director*, an indicator variable equals one if the director-year is either a busy director or a director who has social ties with the CEO and zero otherwise. We also include firm fixed effects to control for the time-invariant firm characteristics that could potential affect the board structure. Our OLS regression results are reported in Table 7.

In Models (1) and (2), we focus on a firm’s independent directors and find that the coefficient on shareholder distraction is positive and significant, suggesting controversial directors are more likely to be appointed to the board as independent directors when the institutional investors are distracted. This result remains statistically significant at the 1% level using industry and year fixed effects and significant at the 5% level using firm and year fixed effect. Economically, a 1% rise in the investor distraction leads to a 1-2% increase in

the likelihood that a controversial director is appointed to the board as an independent director.

In Models (3) and (4), we include an interaction term of investor distraction and a dummy variable for CEO-chairman duality and find that the coefficient is positive, suggesting that the impact of institutional investor distraction on board composition is more pronounced when the CEO has more board power. In Models (5) and (6), we separately examine the appointment of grey directors and find insignificant results, suggesting that the impact of investor distraction is again more pronounced for independent directors.

Overall, we find strong evidence that investor distraction adversely affects the selection of board members. More specifically, directors with lower monitoring intensities are more likely to be elected or re-elected when institutional investors shift their attentions away from the firm. These results also suggest that entrenched CEOs make use of the opportunity during which outside institutional investors are distracted to change the board structure, further weakening board governance. It is also possible that existing board members are less vigilant during periods when institutional investors are distracted, which allows the CEO to nominate friendlier directors to the board.

In an untabulated test, we repeat this analysis in the subsample of new director appointments and director departures. We find that the effect of total distraction is significant in the subsample of director appointments but not departures, indicating that the changes in board structures is driven by new director appointments.

5.2. *CEO pay*

We study the impact of shareholder distraction on CEO pay in this section. In our regression analysis, the dependent variable *High CEO Pay*, a dummy variable that equals 1 if the abnormal CEO compensation is greater than the sample median. We define abnormal

CEO compensation as the residual from a regression where the dependent variable is the natural logarithm of the total CEO compensation and independent variable include log assets, total firm risk, and interacted industry and year fixed effects. Across all regressions, we include firm fixed effects to control for the time-invariant unobservable firm characteristics that could potentially affect CEO pay. Our results are reported in Table 8. We find that the coefficient of institutional investor distraction is positive and statistically significant at the 5% level, suggesting that CEO pay is abnormally high when an institutional shareholder is distracted. Economically, a 1% increase in investor distraction is predicted to increase the likelihood of excess CEO pay by 3.6%. This result is stronger for firms with CEO-chairman duality and when there are more busy directors on the board. The above results remain robust as we add additional firm controls in Models (4) – (6).

5.3. Earning management

In Table 9, we follow Dechow, Sloan, and Sweeney (1995) to calculate discretionary accruals and examine the relation between shareholder distraction and earning management. Our dependent variable is the natural logarithm of 1 plus discretionary accruals. Across all the regressions, we include firm fixed effects to control for the time-invariant unobservable firm characteristics that could potentially affect CEO pay. We find that the coefficient on shareholder distraction is positive and statistically significant, suggesting that firms undertake more earning management when institutional investors are distracted. The economic magnitude is also large. A 1% increase in institutional investor distraction yields more than a 2% increase in discretionary accruals. This effect is stronger in firms with more socially dependent directors, and robust to adding additional firm controls.

6. Conclusion

We examine whether shareholder distraction causes poorer board governance. Using exogenous variations in institutional monitoring intensity caused by time-variations in the level of attention allocated to stocks in the institutional investor's portfolio, we find that decreased institutional monitoring intensity weakens board oversight. Distracted institutional investors are less likely to use their votes as disciplining device for ineffective independent directors. Independent directors on average receive significantly more favorable votes, and this effect is stronger for directors with negative ISS recommendation and poorer vote results. This leads to lower board monitoring intensity. Specifically, independent directors miss more meetings and firms with distracted institutional investors also hold fewer board meetings. Further, firms with distracted institutional investors allow the appointment of more conflicted directors to the board, approve abnormally higher CEO pay and accept greater earning management, which all indicate poorer board monitoring quality.

Overall, we find strong evidence that distracted institutional investors cause poorer board governance through fewer disciplinary votes in director elections. Our study shows that institutional investors in general improve board governance, and thus, we further our understanding of how institutional investors affect corporate governance. Moreover, we also show that shareholder monitoring provides strong incentives for directors to exert more monitoring effort and perform their own monitoring duties effectively.

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Table 1: Summary Statistics

The main sample comes from the intersection of RiskMetrics director database, Thomson-Reuters Institutional Holdings (13F) database, Compustat, and CRSP. The main sample consists of 114,293 director-firm-years and 16,391 firm-year observations for the period 1996 to 2013. Appendix A provides detailed variable descriptions.

| Variable | N | Mean | Median | 25% | 75% | STD |
|---|----------|-------------|---------------|------------|------------|------------|
| <i>Panel A: Distraction Measures</i> | | | | | | |
| Mutual Fund Distraction | 7,848 | 0.15 | 0.14 | 0.1 | 0.18 | 0.07 |
| Total Distraction | 16,391 | 0.17 | 0.17 | 0.13 | 0.21 | 0.06 |
| Monitoring Distraction | 16,391 | 0.06 | 0.06 | 0.04 | 0.07 | 0.02 |
| Grey Distraction | 16,391 | 0.02 | 0.02 | 0.02 | 0.03 | 0.01 |
| <i>Panel B: Director Characteristics (Director-firm-year level)</i> | | | | | | |
| Percent "Yes" Votes for a Director | 45,966 | 0.96 | 0.98 | 0.96 | 0.99 | 0.08 |
| Negative ISS | 45,966 | 0.06 | 0 | 0 | 0 | 0.25 |
| Controversial Director | 50,205 | 0.15 | 0 | 0 | 0 | 0.36 |
| Attendance < 75% | 114,293 | 0.02 | 0 | 0 | 0 | 0.13 |
| Director Departure | 107,816 | 0.08 | 0 | 0 | 0 | 0.28 |
| Director Age | 114,293 | 62.40 | 63.00 | 57.00 | 68.00 | 8.23 |
| Director Tenure | 114,288 | 11.32 | 10.00 | 5.00 | 16.00 | 7.49 |
| Number of Directorships | 114,293 | 1.67 | 1 | 1 | 2 | 1.03 |
| Director Own (%) | 114,293 | 0.1 | 0.03 | 0.01 | 0.11 | 0.15 |
| Female Director | 114,293 | 0.12 | 0 | 0 | 0 | 0.33 |
| Major Committee Member | 114,293 | 0.84 | 1 | 1 | 1 | 0.37 |
| <i>Panel C: Firm Characteristics (Firm-year level)</i> | | | | | | |
| Average Director Percent "Yes" | 12,866 | 0.96 | 0.98 | 0.95 | 0.99 | 0.07 |
| Majority Voting | 12,866 | 0.13 | 0 | 0 | 0 | 0.34 |
| Staggered Board | 13,990 | 0.58 | 1 | 0 | 1 | 0.49 |
| Dual-Class Shares | 13,990 | 0.10 | 0 | 0 | 0 | 0.30 |
| Board Size | 16,391 | 9.01 | 9.00 | 7.00 | 10.00 | 2.32 |
| Board Independence | 16,391 | 70.20 | 72.73 | 60.00 | 83.33 | 16.60 |
| Old Firm | 16,391 | 24.93 | 19.00 | 10.00 | 35.00 | 19.79 |
| Total Assets | 16,391 | 6293.01 | 1237.87 | 492.70 | 3775.89 | 26498.87 |
| Sales Growth | 16,391 | 0.75 | 0.74 | 0.70 | 0.79 | 0.14 |
| ROA | 16,391 | 0.17 | 0.16 | 0.11 | 0.23 | 0.19 |
| Institution Own | 16,391 | 0.88 | 0.85 | 0.68 | 1.00 | 3.16 |
| Monitoring Own | 16,391 | 0.47 | 0.50 | 0.34 | 0.63 | 0.23 |
| Grey Own | 16,391 | 0.16 | 0.17 | 0.11 | 0.22 | 0.09 |
| Tangibility | 16,391 | 0.31 | 0.23 | 0.12 | 0.42 | 0.26 |
| Leverage | 16,391 | 0.24 | 0.21 | 0.05 | 0.35 | 0.24 |
| MTB | 16,391 | 2.20 | 1.68 | 1.27 | 2.45 | 1.80 |
| Meeting Fee | 9,184 | 1.13 | 1.00 | 0.00 | 1.50 | 0.97 |
| Director Retainer | 9,184 | 24.54 | 23.14 | 15.00 | 32.00 | 17.14 |
| Number of Meetings | 8,847 | 7.22 | 6.00 | 5.00 | 9.00 | 3.12 |
| CEO-Chairman Duality | 13,480 | 0.62 | 1 | 0 | 1 | 0.49 |
| CEO Own | 15,005 | 0.03 | 0.00 | 0.00 | 0.01 | 0.06 |
| Excess CEO Pay | 15,158 | 0.00 | 0.07 | -0.38 | 0.49 | 1.10 |
| Discretionary Accruals | 15,346 | -0.01 | -0.02 | -0.09 | 0.05 | 0.40 |

Table 2: Mutual Fund Distraction and Fund Votes for Director Election Proposals.

This table reports the OLS regression results of fund-level distraction on mutual funds' votes for director election proposals. The initial sample consists of 1,717,725 fund votes for 45,966 independent director elections in 6,237 shareholder meetings for the period 2004 to 2012. The dependent variable, *Oppose Director*, is an indicator variable equals to one if the mutual fund votes "against" or "withhold" for a particular director election proposal, and zero otherwise. This variable is at the fund-firm-director-election date level. The key independent variable, $\text{Ln}(\text{Mutual Fund Distraction})$ is the fund-level proxy for how much the mutual fund investor is distracted over the past quarter immediately before the voting date. *Controversial Directors* are independent directors who hold more than 3 other directorships during the year, or if the director attends the same educational institutions and/ or non-business organization as the CEO. Panel A reports fund votes for all outside director candidates. Panel B show results where the sample of independent director candidates are divided based on whether they are controversial or not or whether they have a negative ISS recommendation. Panel C shows results in the subsamples of firms where institutional investor voting are likely to be more effective. Appendix A provides detailed variable descriptions. We use *interacted* fund and year fixed effects to account for time-varying fund characteristics, and director election proposal fixed effects (equivalent to director-firm-year FE) to account for time-varying director and firm characteristics. Standard errors are clustered by fund. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

| <i>Panel A: Outside, Independent, and Grey Director Candidates</i> | | | | |
|---|---|--|------------------------------|----------------------------------|
| | Outside directors | Independent directors | Grey directors | |
| | (1) | (2) | (3) | |
| Ln(Mutual Fund Distraction) | -0.002** (-2.02) | -0.002** (-2.02) | -0.002 (-0.84) | |
| Fund-year FE | Y | Y | Y | |
| Director Election Proposal FE | Y | Y | Y | |
| N | 1,717,725 | 1,597,308 | 119,715 | |
| adj. R-sq | 0.355 | 0.355 | 0.362 | |
| <i>Panel B: Independent Director Candidates Only</i> | | | | |
| | Controversial candidates | Non-controversial candidates | Candidates with negative ISS | Candidates with non-negative ISS |
| | (1) | (2) | (3) | (4) |
| Ln(Mutual Fund Distraction) | -0.003*** (-2.72) | -0.001 (-0.73) | -0.005 (-1.12) | -0.001 (-1.50) |
| Fund-year FE | Y | Y | Y | Y |
| Director Election Proposal FE | Y | Y | Y | Y |
| N | 531,095 | 1,065,957 | 104,580 | 1,491,884 |
| adj. R-sq | 0.345 | 0.363 | 0.646 | 0.248 |
| <i>Panel C: Independent Director Candidates in Non-Dual-Class-Shares & Non-Closely-Held Firms</i> | | | | |
| | Exclude dual-class-shares, closely-held firms | Exclude dual-class-shares, closely-held & family firms | | |
| | (1) | (2) | | |
| Ln(Mutual Fund Distraction) | -0.006** (-2.44) | -0.004 (-0.95) | | |
| Fund-year FE | Y | Y | | |
| Director Election Proposal FE | Y | Y | | |
| N | 1,505,079 | 793,959 | | |
| adj. R-sq | 0.355 | 0.362 | | |

Table 3: Institutional Investor Distraction and Director Election Results

This table reports the OLS regression results of firm-level distraction on director election outcomes. The initial sample consists of 45,966 independent director elections in 6,237 shareholder meetings for the period 2004 to 2012. The dependent variable is the natural logarithm of *Percent "Yes" Votes for a Director*, which is the number of “for” votes received by a particular director candidates divided by the sum of “for”, “against,” and “withhold” votes. *Total Distraction* is the average distraction of the firm’s institutional investors over the past 4 quarters immediately before the meeting date. *Monitoring Distraction* is the distraction by monitoring institutions only, including investment companies, independent investment advisors, and public pension funds. *Grey Distraction* is the distraction by bank trusts, insurance companies, corporate pension funds, and other institutions. Columns (1) to (4) in Panel A present results for all RiskMetrics firms with director votes data from ISS Voting Analytics, and columns (5) and (6) in Panel A present results in the subsample of RiskMetrics firms that do not have dual-class share structures and where the firms’ insider ownership is less than 50%. Panel B present results in the subsample of RiskMetrics firms that are not family firms, do not have dual-class share structures, and the firms’ insider ownerships is less than 50%. Appendix A provides detailed variable descriptions. Standard errors are clustered by directors. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

Panel A: Vote Results of Independent Directors

| | <i>All Firms</i> | | | | <i>Exclude Closely-held & Dual-class Share Firms</i> | |
|--------------------------------|-----------------------|----------------------|-----------------------|----------------------|--|-----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Ln(Total Distraction): a | -0.000 (-0.27) | -0.001 (-1.38) | | | 0.003** (2.57) | |
| Negative ISS: b | -0.129*** (-37.70) | -0.172*** (-8.63) | -0.129*** (-37.70) | -0.139*** (-9.80) | -0.188*** (-41.62) | -0.188*** (-41.61) |
| a * b | | 0.015** (2.20) | | | | |
| Monitoring Distraction: c | | | 0.001 (0.57) | 0.008*** (4.34) | | 0.006** (2.39) |
| Grey Distraction: d | | | -0.003 (-1.58) | -0.014*** (-6.54) | | -0.004 (-1.11) |
| c * b | | | | -0.060*** (-4.60) | | |
| d * b | | | | 0.112*** (8.07) | | |
| Attendance < 75% | -0.066*** (-7.37) | -0.066*** (-7.33) | -0.066*** (-7.36) | -0.069*** (-7.74) | -0.110*** (-8.89) | -0.110*** (-8.88) |
| Number of Directorships | -0.003 (-1.51) | -0.003 (-1.54) | -0.003 (-1.46) | -0.003 (-1.58) | -0.000 (-0.17) | -0.000 (-0.10) |
| Ln(Director Tenure) | -0.001 (-0.72) | -0.001 (-0.77) | -0.000 (-0.60) | -0.001 (-0.87) | -0.003** (-2.54) | -0.003** (-2.43) |
| Ln(Director Age) | 0.032 (0.92) | 0.031 (0.91) | 0.032 (0.94) | 0.035 (1.02) | 0.046 (0.91) | 0.047 (0.93) |
| Director Own | 0.000 (0.12) | 0.000 (0.10) | 0.000 (0.04) | 0.000 (0.04) | -0.000 (-0.05) | -0.000 (-0.11) |
| Average Director Percent "Yes" | 0.809*** (86.96) | 0.808*** (86.97) | 0.809*** (86.76) | 0.792*** (85.24) | 0.706*** (61.16) | 0.706*** (61.21) |
| Old Firm | 0.000 (0.39) | 0.000 (0.39) | 0.001 (0.51) | 0.001 (0.61) | 0.003** (2.20) | 0.004** (2.34) |
| Ln(Total Assets) | 0.000 (0.34) | 0.000 (0.28) | 0.000 (0.38) | 0.000 (0.37) | 0.002 (1.01) | 0.002 (1.01) |
| Sales Growth | 0.006** (2.44) | 0.006** (2.38) | 0.006** (2.28) | 0.006** (2.36) | 0.006** (2.00) | 0.006* (1.72) |
| ROA | -0.001 (-0.56) | -0.001 (-0.61) | -0.001 (-0.47) | -0.001 (-0.76) | 0.000 (0.09) | 0.000 (0.16) |
| Inst Own | 0.001 (0.89) | 0.001 (0.93) | | | 0.001 (1.55) | |
| Staggered Board | 0.005*** (3.45) | 0.005*** (3.51) | 0.005*** (3.50) | 0.006*** (3.63) | 0.004* (1.91) | 0.005** (1.99) |
| Dual Class | -0.000 (-0.07) | -0.000 (-0.03) | -0.000 (-0.17) | -0.000 (-0.03) | 0.000 (.) | 0.000 (.) |
| Majority Voting | 0.001 (1.46) | 0.001 (1.44) | 0.001 (1.52) | 0.001 (0.95) | 0.001 (1.27) | 0.001 (1.25) |
| Monitoring Own | | | 0.002** (2.49) | 0.002*** (2.69) | | 0.003*** (2.77) |
| Grey Own | | | -0.002 (-1.60) | -0.002 (-1.49) | | -0.002 (-1.51) |
| Director FE | Y | Y | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Year FE | Y | Y | Y | Y | Y | Y |
| N | 45966 | 45966 | 45966 | 45966 | 31566 | 31566 |
| adj. R-sq | 0.808 | 0.808 | 0.808 | 0.811 | 0.837 | 0.837 |

Panel B: Vote Results of Independent and Grey Directors in the Subsample of Firms Excluding Family Firms, Closely-held, and Dual-class Share Firms

| | <i>Exclude Family Firms, Closely-held & Dual-Class Share Firms</i> | | |
|--------------------------------|--|-----------------------|----------------------|
| | Outside Directors | Independent Directors | Grey Directors |
| | (1) | (2) | (3) |
| Ln(Total Distraction) | 0.005** (2.30) | 0.006** (2.55) | -0.013 (-0.40) |
| Negative ISS | -0.217*** (-32.01) | -0.205*** (-30.05) | -0.309*** (-7.42) |
| Attendance < 75% | -0.125*** (-6.45) | -0.125*** (-5.83) | -0.173** (-2.32) |
| Number of Directorships | 0.004 (0.84) | 0.008* (1.82) | -0.020 (-0.32) |
| Ln(Director Tenure) | -0.003 (-1.48) | -0.003 (-1.39) | -0.019 (-0.35) |
| Ln(Director Age) | 0.011 (0.12) | 0.003 (0.03) | 0.552 (0.53) |
| Director Own | -0.000 (-0.35) | -0.001 (-0.45) | 0.007 (0.76) |
| Average Director Percent "Yes" | 0.628*** (34.23) | 0.660*** (36.74) | 0.517*** (6.60) |
| Old Firm | -0.002 (-0.62) | 0.000 (0.14) | -0.073 (-0.80) |
| Ln(Total Assets) | 0.003 (1.13) | 0.003 (1.14) | 0.009 (0.24) |
| Sales Growth | -0.016** (-2.03) | -0.012 (-1.53) | -0.062 (-0.67) |
| ROA | 0.020* (1.91) | 0.019* (1.78) | 0.111 (0.93) |
| Inst Own | 0.000 (0.09) | -0.001 (-0.25) | -0.019 (-0.25) |
| Staggered Board | 0.002 (0.60) | 0.003 (1.00) | 0.020 (0.42) |
| Majority Voting | -0.001 (-0.64) | -0.002 (-0.86) | 0.011 (0.39) |
| Director FE | Y | Y | Y |
| Firm FE | Y | Y | Y |
| Year FE | Y | Y | Y |
| N | 12075 | 11355 | 408 |
| adj. R-sq | 0.852 | 0.860 | 0.670 |

Table 4: Investor Distraction, Director Votes, and Director Departures

This table reports OLS regression results of the effect of institutional investor distraction on the sensitivity of director departures to director election votes. The dependent variable is *Director Departure*, an indicator variable that equals to one if the director leaves the board in the following year and zero otherwise. *Total Distraction* is the average distraction of the firm's institutional investors over the past 4 quarters immediately before the meeting date. *Monitoring Distraction* is the distraction by monitoring institutions only which includes investment companies, independent investment advisors, and public pension funds. *Grey Distraction* is the distraction by bank trusts, insurance companies, corporate pension funds, and other institutions. Appendix A provides detailed variable descriptions. Standard errors are clustered by directors. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

Panel A: Firm Distraction and the Sensitivity of Director Departures to Negative ISS Recommendation

| | <i>All Outside Directors</i> | <i>Independent Directors</i> | | <i>Grey Directors</i> |
|---------------------------|----------------------------------|------------------------------|----------------------|-----------------------|
| | (1) | (2) | (3) | (4) |
| Firm Distraction: a | 0.008 (0.88) | 0.008 (0.89) | | 0.012 (0.32) |
| Negative ISS: b | 0.082* (1.71) | 0.105** (1.96) | 0.055** (2.20) | -0.033 (-0.25) |
| <i>a * b</i> | -0.028 (-1.63) | -0.035* (-1.86) | | 0.003 (0.07) |
| Monitoring Distraction: c | | | 0.005 (0.75) | |
| <i>b * c</i> | | | -0.024** (-2.01) | |
| Grey Distraction | | | -0.017 (-1.35) | |
| Attendance < 75% | 0.131*** (5.35) | 0.131*** (5.08) | 0.131*** (5.08) | 0.148 (1.59) |
| Director Age | 0.144*** (11.23) | 0.149*** (11.21) | 0.149*** (11.21) | 0.134*** (2.83) |
| Number of Directorships | -0.020*** (-3.98) | -0.019*** (-3.77) | -0.019*** (-3.76) | -0.026 (-1.02) |
| Tenure | 0.011*** (4.13) | 0.013*** (4.44) | 0.013*** (4.60) | -0.010 (-0.75) |
| Director Own | 0.011*** (5.84) | 0.008*** (3.93) | 0.008*** (3.82) | 0.007 (1.25) |
| Ln(Institution Own) | 0.001 (0.47) | 0.001 (0.31) | 0.002 (0.65) | 0.005 (0.32) |
| Old Firm | -0.004 (-1.22) | -0.002 (-0.77) | -0.002 (-0.51) | -0.016 (-1.14) |
| Ln(Total Assets) | 0.007*** (4.66) | 0.005*** (3.33) | 0.005*** (3.09) | 0.014*** (2.34) |
| Sales Growth | -0.022 (-1.31) | -0.017 (-0.97) | -0.018 (-1.03) | -0.064 (-0.79) |
| ROA | -0.049*** (-3.28) | -0.051*** (-3.26) | -0.050*** (-3.15) | -0.004 (-0.08) |
| Staggered Board | -0.024*** (-8.72) | -0.022*** (-7.75) | -0.022*** (-7.65) | -0.057*** (-4.20) |
| Ln(Board Size) | 0.041*** (4.73) | 0.036*** (4.05) | 0.036*** (4.06) | 0.063 (1.59) |
| Ln(Board Independence) | -0.003 (-0.35) | 0.012 (1.26) | 0.014 (1.46) | 0.005 (0.40) |
| Monitoring Own | | | -0.001 (-0.36) | |
| Grey Own | | | -0.008 (-1.62) | |
| Industry-year FE | Y | Y | Y | Y |
| Observations | 35378 | 32419 | 32401 | 2903 |
| Adjusted R-squ~d | 0.021 | 0.020 | 0.020 | 0.001 |

Panel B: Firm Distraction and the Sensitivity of Director Departures to Director Vote Results

| | <i>All Outside</i> | <i>Independent Directors</i> | | <i>Grey</i> |
|---------------------------------------|--------------------|------------------------------|-----------|------------------|
| | <i>Directors</i> | (2) | (3) | <i>Directors</i> |
| | (1) | | | (4) |
| Ln(Total Distraction): a | -0.364* | -0.350 | | -0.552 |
| | (-1.71) | (-1.49) | | (-0.94) |
| Percent "Yes" Votes for a Director: b | -0.264** | -0.257* | -0.159*** | -0.361 |
| | (-2.00) | (-1.77) | (-3.11) | (-0.99) |
| <i>a * b</i> | 0.081* | 0.078 | | 0.126 |
| | (1.73) | (1.51) | | (0.98) |
| Monitoring Distraction: c | | | -0.300** | |
| | | | (-2.52) | |
| <i>b * c</i> | | | 0.066** | |
| | | | (2.56) | |
| Grey Distraction | | | -0.017 | |
| | | | (-1.36) | |
| Attendance < 75% | 0.120*** | 0.119*** | 0.121*** | 0.149 |
| | (4.87) | (4.58) | (4.65) | (1.55) |
| Director Age | 0.150*** | 0.153*** | 0.153*** | 0.146*** |
| | (11.61) | (11.46) | (11.44) | (3.06) |
| Number of Directorships | -0.021*** | -0.020*** | -0.020*** | -0.018 |
| | (-4.16) | (-3.99) | (-4.01) | (-0.68) |
| Tenure | 0.011*** | 0.012*** | 0.013*** | -0.012 |
| | (3.91) | (4.30) | (4.42) | (-0.94) |
| Director Own | 0.010*** | 0.008*** | 0.008*** | 0.006 |
| | (5.49) | (3.76) | (3.71) | (1.03) |
| Ln(Institution Own) | 0.001 | 0.001 | 0.001 | 0.006 |
| | (0.41) | (0.23) | (0.51) | (0.37) |
| Old Firm | -0.004 | -0.003 | -0.002 | -0.018 |
| | (-1.44) | (-0.94) | (-0.72) | (-1.29) |
| Ln(Total Assets) | 0.007*** | 0.005*** | 0.005*** | 0.015** |
| | (4.69) | (3.35) | (3.14) | (2.45) |
| Sales Growth | -0.025 | -0.019 | -0.020 | -0.057 |
| | (-1.43) | (-1.10) | (-1.13) | (-0.70) |
| ROA | -0.049*** | -0.050*** | -0.049*** | -0.005 |
| | (-3.22) | (-3.17) | (-3.08) | (-0.10) |
| Staggered Board | -0.024*** | -0.021*** | -0.021*** | -0.062*** |
| | (-8.70) | (-7.66) | (-7.57) | (-4.46) |
| Ln(Board Size) | 0.042*** | 0.036*** | 0.037*** | 0.074* |
| | (4.75) | (4.06) | (4.07) | (1.85) |
| Ln(Board Independence) | 0.001 | 0.016 | 0.018* | 0.008 |
| | (0.12) | (1.59) | (1.78) | (0.61) |
| Monitoring Own | | | -0.002 | |
| | | | (-0.45) | |
| Grey Own | | | -0.008 | |
| | | | (-1.45) | |
| Industry-year FE | Y | Y | Y | Y |
| Observations | 34767 | 31876 | 31858 | 2831 |
| Adjusted R-squ~d | 0.022 | 0.021 | 0.021 | 0.001 |

Table 5: Institutional Investor Distraction and Directors' Meeting Attendance

This table reports results of institutional investor distraction on individual director's attendance at board meetings from Logit and OLS regressions. The dependent variable in all columns is *Attended <75% of Meetings*, an indicator variable that equals to one if a director attended fewer than 75% of a firm's board meetings during the past fiscal year and zero otherwise. *Total Distraction* is the average distraction of the firm's institutional investors over the past 4 quarters immediately before the meeting date. The sample period in Panel A is from 1996 to 2006 because meeting fee-related variables are only available for this period, and the sample period in Panel B is 1996-2013. Appendix A provides detailed variable descriptions. Standard errors are clustered by directors. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

Panel A: Linear Probability Models

| | <i>All Outside</i> | <i>Independent</i> | | <i>Grey</i> |
|--------------------------|----------------------|---------------------|---------------------|--------------------|
| | (1) | (2) | (3) | (4) |
| Ln(Total Distraction): a | 0.003* (1.71) | 0.002 (1.12) | 0.028* (1.80) | 0.009 (1.24) |
| Ln(Total Assets): b | -0.002 (-1.28) | -0.002 (-1.36) | 0.001 (0.50) | 0.001 (0.30) |
| a * b | | | -0.001* (-1.69) | |
| Number of Directorships | 0.002* (1.65) | 0.002* (1.77) | 0.002* (1.78) | -0.001 (-0.16) |
| Director Own | -0.004*** (-4.47) | -0.002** (-2.15) | -0.002** (-2.20) | -0.005* (-1.76) |
| Ln(Director Age) | -0.060 (-1.27) | -0.111** (-2.06) | -0.113** (-2.09) | 0.107 (0.64) |
| Director Tenure | 0.007*** (3.45) | 0.006*** (2.60) | 0.006*** (2.64) | 0.022*** (2.84) |
| Old Firm | -0.003 (-1.46) | -0.003 (-1.28) | -0.003 (-1.32) | -0.015 (-1.53) |
| Sales Growth | -0.007 (-1.61) | -0.006 (-1.43) | -0.006 (-1.41) | -0.006 (-0.49) |
| ROA | -0.008* (-1.79) | -0.007 (-1.47) | -0.007 (-1.47) | -0.014 (-1.08) |
| Ln(Institution Own) | 0.000 (0.82) | 0.000 (0.03) | 0.000 (0.01) | 0.005* (1.82) |
| Director FE | Y | Y | Y | Y |
| Firm FE | Y | Y | Y | Y |
| Year FE | Y | Y | Y | Y |
| Observations | 60557 | 49625 | 49625 | 10210 |
| Adjusted R-square | 0.035 | 0.038 | 0.039 | 0.048 |

Panel B: Logit Regressions

| | <i>All Outside</i> | <i>Independent</i> | | <i>Grey</i> |
|--------------------------|----------------------|----------------------|----------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| Ln(Total Distraction): a | 0.279** (2.08) | 0.266* (1.78) | 2.519** (2.39) | 0.313 (1.14) |
| Ln(Total Assets): b | -0.077** (-2.33) | -0.094** (-2.50) | 0.210 (1.44) | -0.026 (-0.38) |
| a * b | | | -0.107** (-2.16) | |
| Number of Directorships | 0.089*** (2.94) | 0.077** (2.28) | 0.078** (2.33) | 0.154** (2.43) |
| Director Own | -0.068* (-1.91) | -0.036 (-0.83) | -0.036 (-0.83) | -0.162** (-2.55) |
| Ln(Director Age) | -0.837*** (-2.84) | -1.257*** (-3.98) | -1.266*** (-4.01) | 0.424 (0.72) |
| Director Tenure | 0.011 (0.20) | 0.035 (0.55) | 0.035 (0.55) | -0.112 (-1.13) |
| Old Firm | -0.101 (-1.28) | -0.086 (-1.00) | -0.084 (-0.98) | -0.144 (-0.78) |
| Sales Growth | -0.251 (-1.12) | -0.194 (-0.76) | -0.176 (-0.69) | -0.383 (-0.85) |
| ROA | -0.074 (-0.54) | -0.121 (-0.79) | -0.132 (-0.87) | 0.095 (0.31) |
| Ln(Institution Own) | -0.165 (-1.52) | -0.041 (-0.33) | -0.026 (-0.20) | -0.489** (-2.56) |
| Board Size | 0.864*** (5.19) | 1.030*** (5.42) | 1.028*** (5.41) | 0.390 (1.16) |
| Female Director | -0.220** (-1.96) | -0.204* (-1.73) | -0.206* (-1.75) | -0.353 (-1.05) |
| Major Committee Member | -0.396*** (-4.27) | -0.378*** (-3.18) | -0.375*** (-3.16) | -0.388** (-2.51) |
| Meeting Fee | -0.014 (-1.31) | -0.020* (-1.72) | -0.020* (-1.72) | 0.016 (0.70) |
| Number of Meetings | -0.201** (-2.18) | -0.137 (-1.34) | -0.132 (-1.29) | -0.436* (-1.95) |
| Director Retainer | -0.034*** (-3.27) | -0.031*** (-2.71) | -0.031*** (-2.71) | -0.042** (-1.97) |
| Industry FE | Y | Y | Y | Y |
| Year FE | Y | Y | Y | Y |
| Observations | 126778 | 109879 | 109879 | 15393 |
| Adjusted R-square | 0.153 | 0.128 | 0.128 | 0.227 |

Table 6: Investor Distraction and Board Meeting Frequencies

This table reports results of institutional investor distraction on firm-level board meeting frequencies from OLS regressions. The sample covers the period 1996 to 2006 as data on board meeting frequencies are only available for this period. *Total Distraction* is the average distraction of the firm's institutional investors over the past 4 quarters immediately before the meeting date. The dependent variable is the *Number of Board Meetings* and is equal to the natural logarithm of the number of board meetings over the fiscal year. Standard errors are clustered by firm. Appendix A provides detailed variable descriptions. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

| | Dependent Variable: Ln (Number of Board Meetings) | | | |
|-----------------------|--|----------------------|----------------------|----------------------|
| | (1) | (2) | (3) | (4) |
| Ln(Total Distraction) | -0.062*** (-3.63) | -0.050*** (-2.82) | -0.028** (-2.18) | -0.015 (-1.08) |
| Meeting Fee | 0.002 (0.93) | 0.001 (0.66) | 0.005** (2.47) | 0.005** (2.28) |
| Old Firm | 0.001 (0.09) | -0.014 (-1.12) | 0.044* (1.82) | 0.035 (1.38) |
| Ln(Total Assets) | 0.043*** (9.66) | 0.044*** (8.33) | 0.023* (1.88) | 0.035** (2.47) |
| Sales Growth | -0.141*** (-3.98) | -0.108*** (-2.89) | -0.098*** (-3.63) | -0.080*** (-2.77) |
| ROA | -0.107*** (-2.69) | -0.091** (-2.35) | -0.056** (-1.97) | -0.054** (-2.01) |
| Ln(Institution Own) | 0.038** (2.40) | 0.005 (0.30) | -0.001 (-0.08) | -0.010 (-0.56) |
| Board Size | | -0.000 (-0.17) | | -0.002 (-0.65) |
| Board Independence | | 0.038*** (3.11) | | 0.011 (1.58) |
| CEO-Chairman Duality | | -0.026** (-2.35) | | -0.030*** (-2.83) |
| CEO Ownership | | -0.435*** (-4.34) | | -0.077 (-0.54) |
| Observations | 11,099 | 9,486 | 10,882 | 9,276 |
| Adjusted R-squared. | 0.092 | 0.112 | 0.502 | 0.513 |
| Firm FE | N | N | Y | Y |
| Industry FE | Y | Y | N | N |
| Year FE | Y | Y | Y | Y |

Table 7: Investor Distraction and Board Structure

This table reports results of institutional investor distraction on individual director characteristics from OLS regressions for the period 2004 to 2013 as information on director social ties from BoardEx is available only for this period only. The dependent variable, *Controversial Director*, is an indicator variable equals to one if the director holds more than 3 other directorships during the year, or if the director attends the same educational institutions and/ or non-business organization as the CEO, and zero otherwise. *Total Distraction* is the firm-level proxy for how much institutional investors are distracted over the past 4 quarters immediately before the meeting date. Appendix A provides detailed variable descriptions. Standard errors are clustered by directors. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

| | Dependent Variable = Controversial Director | | | | | |
|--------------------------|---|---------------------|----------------------|----------------------|--------------------|-------------------|
| | Independent Directors | | | | Grey Directors | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Ln(Total Distraction): a | 0.018*** (3.10) | 0.011** (2.23) | -0.011 (-1.25) | -0.005 (-0.71) | 0.030 (1.45) | 0.014 (0.87) |
| CEO-Chairman Duality: b | | | -0.093*** (-2.89) | -0.074*** (-3.09) | | |
| a * b | | | 0.049*** (4.32) | 0.030*** (3.70) | | |
| Old Firm | 0.007 (1.01) | -0.001 (-0.08) | 0.005 (0.72) | 0.003 (0.29) | 0.012 (0.56) | 0.032 (1.03) |
| Ln(Total Assets) | 0.032*** (11.58) | 0.018*** (2.80) | 0.030*** (10.16) | 0.017** (2.35) | 0.036*** (5.35) | -0.009 (-0.37) |
| Sales Growth | -0.069*** (-3.81) | -0.003 (-0.20) | -0.064*** (-3.24) | 0.004 (0.25) | 0.003 (0.05) | 0.125** (2.21) |
| ROA | 0.055*** (2.60) | 0.018 (1.08) | 0.047** (2.10) | 0.008 (0.44) | 0.042 (0.85) | 0.020 (0.41) |
| Inst Own | -0.003 (-1.10) | -0.004** (-2.38) | -0.009 (-0.71) | 0.017 (1.58) | -0.008 (-0.70) | -0.005 (-0.58) |
| Staggered Board | 0.021*** (3.24) | 0.029*** (2.76) | 0.019*** (2.77) | 0.033*** (2.85) | 0.031 (1.42) | 0.043 (1.11) |
| Observations | 52847 | 52746 | 45539 | 45460 | 4762 | 4583 |
| Adjusted R-squ~d | 0.371 | 0.455 | 0.300 | 0.394 | 0.447 | 0.656 |
| Firm FE | N | Y | N | Y | N | Y |
| Industry FE | Y | N | Y | N | Y | N |
| Year FE | Y | Y | Y | Y | Y | Y |

Table 8: Institutional Investor Distraction and Abnormal CEO Pay

This table reports the OLS regression results of institutional investor distraction on the firm's abnormal CEO pay. The dependent variable in all columns is *High CEO Pay*, which is an indicator variable equal to one if the abnormal CEO compensation is greater than median abnormal pay in the sample and zero otherwise. Abnormal CEO compensation is the residual from a regression where the dependent variable is the natural logarithm of the total CEO compensation and independent variables include log assets, total firm risk, and *interacted* industry and year dummies. *Total Distraction* is the firm-level proxy for how much institutional investors are distracted over the past 4 quarters immediately before the meeting date. Appendix A provides detailed variable descriptions. Standard errors are clustered by firm in all regressions. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

| | Dependent Variable: High CEO Pay | | | | | |
|---------------------------------|----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Ln(Total Distraction): <i>a</i> | 0.036** (2.07) | -0.001 (-0.04) | 0.013 (0.49) | 0.049*** (2.78) | 0.023 (0.80) | 0.035 (1.35) |
| CEO-Chairman Duality: <i>b</i> | | -0.108 (-1.53) | | | -0.119* (-1.69) | |
| <i>a * b</i> | | 0.045* (1.84) | | | 0.047* (1.93) | |
| % Busy Directors: <i>c</i> | | | -0.480** (-2.20) | | | -0.534** (-2.47) |
| <i>a * c</i> | | | 0.189** (2.49) | | | 0.204*** (2.72) |
| Old Firm | -0.020 (-0.94) | -0.058** (-2.24) | -0.023 (-0.94) | -0.019 (-0.92) | -0.059** (-2.25) | -0.020 (-0.80) |
| Ln(Total Assets) | -0.074*** (-7.14) | -0.087*** (-6.53) | -0.079*** (-6.14) | -0.058*** (-5.34) | -0.062*** (-4.49) | -0.052*** (-3.84) |
| Sales Growth | 0.026 (0.91) | -0.003 (-0.09) | 0.018 (0.47) | 0.025 (0.82) | -0.006 (-0.16) | 0.017 (0.44) |
| ROA | 0.040** (2.12) | 0.048* (1.73) | 0.079** (2.15) | 0.031* (1.66) | 0.035 (1.30) | 0.043 (1.30) |
| Inst Own | 0.056*** (3.96) | 0.107*** (5.22) | 0.078*** (4.75) | 0.045*** (3.16) | 0.089*** (4.39) | 0.062*** (3.84) |
| Tangibility | | | | -0.062 (-1.56) | -0.072 (-1.50) | -0.087* (-1.87) |
| Leverage | | | | -0.030 (-1.27) | -0.030 (-1.02) | -0.042 (-1.58) |
| MTB | | | | 0.022*** (6.13) | 0.028*** (6.53) | 0.030*** (7.28) |
| Board Independence | | | | 0.064*** (4.19) | 0.063*** (3.69) | 0.059*** (3.42) |
| Ln(Board Size) | | | | -0.026 (-0.96) | -0.042 (-1.33) | -0.046 (-1.39) |
| Firm FE | Y | Y | Y | Y | Y | Y |
| Year FE | Y | Y | Y | Y | Y | Y |
| Observations | 26779 | 19065 | 18652 | 26763 | 19051 | 18652 |
| Adjusted R-squ~d | 0.308 | 0.300 | 0.302 | 0.311 | 0.303 | 0.302 |

Table 9: Institutional Investor Distraction and Earning Management

This table reports the OLS regression results of institutional investor distraction on firm's discretionary accruals. The dependent variable in all columns is the natural logarithm of one plus discretionary accruals. *Discretionary Accruals* are calculated using the modified Jones model as in Dechow, Sloan, and Sweeney (1995). *Total Distraction* is the firm-level proxy for how much institutional investors are distracted over the past 4 quarters immediately before the meeting date. Appendix A provides detailed variable descriptions. Standard errors are clustered by firm in all regressions. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

| | Dependent Variable: Ln(1+Discretionary Accruals) | | | |
|--------------------------|--|----------------------|---------------------|----------------------|
| | (1) | (2) | (3) | (4) |
| Ln(Total Distraction): a | 0.028*** (2.79) | -0.097*** (-5.18) | 0.024** (2.43) | -0.098*** (-5.16) |
| % Social Ties: b | | -0.627* (-1.96) | | -0.588* (-1.87) |
| a * b | | 0.192* (1.80) | | 0.180* (1.71) |
| Old Firm | -0.014 (-1.23) | -0.028 (-1.55) | -0.015 (-1.34) | -0.028 (-1.56) |
| Ln(Total Assets) | -0.010* (-1.77) | -0.026** (-2.57) | -0.015** (-2.53) | -0.028*** (-2.61) |
| Sales Growth | -0.018 (-0.92) | 0.077** (2.01) | -0.024 (-1.16) | 0.072* (1.95) |
| ROA | 0.004 (0.36) | -0.059 (-1.34) | 0.006 (0.63) | -0.063 (-1.33) |
| Inst Own | -0.013* (-1.78) | -0.000 (-0.03) | -0.013* (-1.73) | -0.002 (-0.12) |
| Tangibility | | | -0.017 (-0.75) | -0.036 (-0.77) |
| Leverage | | | 0.038** (2.52) | 0.029 (1.00) |
| MTB | | | -0.002 (-0.74) | 0.006 (1.13) |
| Board Independence | | | 0.011 (1.26) | 0.017 (0.82) |
| Ln(Board Size) | | | 0.008 (0.56) | 0.018 (0.71) |
| Firm FE | Y | Y | Y | Y |
| Year FE | Y | Y | Y | Y |
| Observations | 23862 | 9936 | 23848 | 9926 |
| Adjusted R-square | 0.032 | 0.034 | 0.033 | 0.033 |

Table 10: Volume-based Measure of Institutional Investor Distraction and Board Governance

This table reports the OLS regression results of volume-based institutional investor distraction on the firm's various aspects of board governance. *Volume-based Distraction* is the volume-based firm distraction over the past 4 quarters immediately before the meeting date. *Attendance < 75%* is an indicator variable equals 1 if the director has attended less than 75% of the board meetings during the year. *Social tie* is a dummy variable equals 1 if the director is connected with the firm's current CEO through education or other activities and 0 otherwise. Information of social tie is from BoardEx and is available for the 2004-2013 period. *Busy Director* is a dummy variable equals 1 if the director has 3 or more external directorships within the RiskMetrics universe and 0 otherwise. The dependent variable in Panel A is *Percent "for" Votes*, which is the natural logarithm of the number of "for" votes received by a particular director candidates divided by the total outstanding shares. Standard errors are clustered by directors in all columns. ***, **, and * indicates statistical significance of 1%, 5%, and 10% respectively.

| | Attendance < 75% | | Busy Director | Social Tie | "for" Votes% |
|-----------------------------|----------------------|----------------------|----------------------|-------------------|-----------------------|
| | (1) | (2) | | | |
| Volume-based Distraction: a | 0.003 (1.17) | 0.038** (2.21) | 0.014*** (2.94) | 0.006** (2.10) | 0.046* (1.68) |
| a * b | | -0.002** (-2.07) | | | |
| Old Firm | -0.003 (-1.37) | -0.003 (-1.39) | 0.018*** (2.93) | 0.011* (1.80) | 0.028 (1.26) |
| Ln(Total Assets): b | -0.002 (-1.37) | 0.002 (0.96) | 0.017*** (5.29) | 0.005 (1.38) | 0.024 (1.22) |
| Sales Growth | -0.006 (-1.51) | -0.006 (-1.46) | -0.018*** (-2.87) | 0.000 (0.04) | -0.027 (-0.64) |
| ROA | -0.008* (-1.80) | -0.008* (-1.80) | -0.007 (-1.08) | 0.000 (0.05) | 0.035 (1.43) |
| Inst Own | 0.000 (0.68) | 0.000 (0.65) | 0.001 (1.19) | 0.004** (2.26) | -0.012 (-1.17) |
| Number of Directorships | 0.002* (1.65) | 0.002* (1.66) | | | |
| Director Own | -0.004*** (-4.47) | -0.004*** (-4.58) | | | |
| Ln(Director Age) | -0.062 (-1.30) | -0.064 (-1.35) | | | |
| Ln(Tenure) | 0.007*** (3.59) | 0.008*** (3.64) | | | |
| Negative ISS | | | | | -0.291*** (-19.80) |
| Firm FE | Y | Y | Y | Y | Y |
| Year FE | Y | Y | Y | Y | Y |
| Sample Period | 1996-2013 | 1996-2013 | 1996-2013 | 2004-2013 | 2003-2012 |
| Observations | 125191 | 125191 | 155650 | 102011 | 61099 |
| Adjusted R-squared | 0.153 | 0.153 | 0.115 | 0.173 | 0.251 |

Appendix A: Variable Definitions

| Variable | Definition |
|--|--|
| <i>Panel A: Distraction Measures</i> | |
| Mutual Fund Distraction | Fund-level proxy for how much the mutual fund is distracted over the quarter immediately before the voting date. It is the weighted average return shocks across Fama French 12 industries, unrelated to the focal firm, held by the mutual fund. The weights are based on the investor's portfolio weights in the shocked industries. |
| Total Distraction | Firm-level proxy for how much institutional investors are distracted over the past 4 quarters immediately before the annual meeting date/fiscal year end. It is the weighted average distraction of institutional investors in the firm. We calculate the investor-level distraction measure as the weighted average return shocks across industries, unrelated to the focal firm, held by the investor. The return shocks are weighted by the investor's portfolio weights in the shocked industries. |
| Monitoring Distraction | Similar to the firm-level distraction measure, but only accounts for institutional investors classified as monitoring institutions. Monitoring institutions include investment companies, independent investment advisors, and public pension funds. |
| Grey Distraction | Similar to the firm-level distraction measure, but only accounts for institutional investors classified as grey institutions. Grey institutions include bank trusts, insurance companies, corporate pension funds, and other institutions. |
| <i>Panel B: Director Characteristics</i> | |
| Controversial Director | An indicator variable equals to one if the director holds more than 3 other directorships during the year or if the director shares a social tie with the current CEO, and zero otherwise. A social tie exists if the CEO and director attends a common educational institution or are members of the same non-business organization. |
| Attendance < 75% | An indicator variable equals one if the director attended less than 75% of the board meetings during the year, and zero otherwise. |
| Percent "Yes" Votes for a Director | The number of "for" votes received by a particular director candidate divided by the sum of "for," "against," and "withhold" votes. This variable is at the firm-director-election date level. |
| Negative ISS | An indicator variable equals to one if the ISS recommendation for the director candidate is either "against" or "withhold," and zero otherwise. |
| Director Departure | An indicator variable equals to one if the director leaves the board, and zero otherwise. |
| Director Age | Director's age. |
| Director Tenure | Number of years the director has been on the board. |
| Number of Directorships | Number of directorships held by the director within the RiskMetrics universe during the year, excluding the focal firm. |
| Director Own | Director's percentage ownership in the firm obtained from RiskMetrics Director database. |
| Female Director | An indicator variable equals to one if the director is female, and zero otherwise. |
| Major Committee Member | An indicator variable equals to one if the director is a member of either the nominating, audit, compensation, or corporate governance committee, and zero otherwise. |
| <i>Panel C: Firm Characteristics</i> | |
| Average Director Percent "Yes" | The mean percentage of "for" votes received by all the independent directors in the firm in a particular year. This variable is at the firm-election date level. |

| | |
|------------------------|--|
| Majority Voting | An indicator variable equals to one if the firm requires the director to receive more than 50% “Yes” votes from the shareholders to be successfully elected. |
| Staggered Board | An indicator variable equals to one if only part of the directors on the board are elected each year, and zero otherwise. |
| Dual-Class Shares | An indicator variable equals to one if the company has more than one class of common shares, and zero otherwise. |
| Board Size | Number of directors on the board. |
| Board Independence | Percentage of board members who are independent directors. |
| Old Firm | Indicator variable equals to one if the firm's age is greater than the median firm age, and zero otherwise. |
| Total Assets | Book value of total assets in millions of dollars. |
| Sales Growth | $\ln(1 + \text{sale}/\text{lagged sale})$. |
| ROA | Earnings before interest, taxes, depreciation and amortization/Beginning-year total assets. |
| Institution Own | Total percentage ownership from all institutional investors. |
| Monitoring Own | Total percentage ownership from investors that are monitoring institutions which includes investment companies, independent investment advisors, and public pension funds. |
| Grey Own | Total percentage ownership from investors that are grey institutions which includes bank trusts, insurance companies, corporate pension funds, and other institutions. |
| Tangibility | $(\text{Property, Plant and Equipment} - \text{Total (Gross)}) / \text{Lagged Book Value of Assets}$ |
| Leverage | $(\text{Total current debts} + \text{Long term debts}) / \text{Lagged Book Value of Assets}$ |
| MTB | $(\text{Book Value of Assets} - \text{Book Value of Equity} + \text{Market Value of Equity}) / \text{Lagged Book Value of Assets}$ |
| Meeting Fee | Dollar value of fees paid to all the directors to attend the board meetings during the year. This variable is only available for 1996-2006. |
| Director Retainer | Fixed annual payment to the director. |
| Number of Meetings | Number of board meetings held by the firm during the year. |
| CEO-Chairman Duality | An indicator variable equals to one if the CEO is also the chairman of the firm's board, and zero otherwise. |
| CEO Own | CEO's percentage ownership in the firm. |
| High CEO Pay | An indicator variable equals to one if the abnormal CEO compensation is greater than the median abnormal pay in the sample, and zero otherwise. Abnormal CEO compensation is the residual from an OLS regression where the dependent variable is the natural logarithm of the total CEO compensation and the independent variables include log assets, total firm risk, and industry-year dummies. |
| Discretionary Accruals | A proxy for earnings management calculated using the modified Jones model as in Dechow, Sloan, and Sweeney (1995). |

Appendix B: The Mutual Fund Votes Sample in Table 2

We examine how mutual fund investors vote when they are distracted in Table 2. Our initial mutual fund investors sample is drawn from the CRSP survival bias free mutual fund database. Following previously studies including Kacperczyk, Sialm, and Zheng (2008) and Dimmock, Gerken, Ivkovic, and Weisbenner (2016), we focus on actively-managed domestic equity funds and eliminate balanced, bond, international, money market, and sector funds. We also remove funds that hold less than 10 stocks and have less than two million total net assets.²²

We then merge the mutual fund holding data with ISS Voting Analytics database using fund and fund family names. Only since 2003, mutual funds are required to disclose their votes through N-PX filings to the Securities and Exchange Commission (SEC). Therefore, our mutual fund voting data is only available from 2003 onwards.

Our dataset contains information on the number of votes casted by each mutual fund investor for each of the directors up for election during the annual general meeting. For each fund vote, we can observe whether the mutual fund shareholder vote “For,” “Against,” or “Withhold” the vote for each director election proposal in the investee company’s annual meeting.

To obtain information on director classification and characteristics, we further restrict our mutual fund vote sample to votes for director elections. We match companies from ISS Voting Analytics to RiskMetrics using CUSIP, ticker, and company names. Then, we extract director names from the item description in ISS Voting Analytics, and match them to the director names from the same company in the RiskMetrics director database. We manually verify these company and director matches. With these procedures, we are able to match 98% director election proposals from ISS Voting Analytics to RiskMetrics.

²² Following previous studies, we identify the type of fund by Lipper classification, which becomes populated since 1998. For example, we identify actively-managed US equity funds with objective code "G", "GI", "LSE", or "SG", or the classification code "LCCE", "LCGE", "LCVE", "LSE", "MCCE", "MCGE", "MCVE", "MLCE", "MLGE", "MLVE", "SCCE", "SCGE", or "SCVE". To further exclude index funds, we manually checked the fund names to further exclude index funds.