Searching For Directors

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Abstract: Does it matter who identifies and proposes a new board member? We exploit a 2003 Securities and Exchange Commission (SEC) disclosure rule to identify the source recommending new independent directors (NID) appointed to corporate boards. We document that disclosure of the source of recommendation is missing for 74% of NID – suggesting a high degree of non-compliance. Among those with disclosed sources, 44% are recommended by search firms, 30% by current independent directors, and 20% by CEO and other executives – with the role of search firms increasing in recent years as the push for board diversity intensified. Next, we explore whether the "origin" of the NID is systematically associated with their characteristics and their subsequent progression on the board. We find that boards turn to search firms when they need to go beyond their immediate network and look for candidates with greater executive expertise, or to diversify the board along dimensions of gender and race. As for candidates recommended by the CEO, there is some support for the notion that CEOs try to bring on the board loyal directors. For example, CEO-recommended NID tend to receive higher shareholder voting dissent during their tenure (i.e., they take a more management-friendly stance). Notably, three years after their appointment CEO-recommended NID tend to enjoy greater progress on the board and its committees (e.g., in terms of chair positions), relative to search firm-recommended NID. Our results are generally robust to the selection bias issue due to non-compliance. Overall, our evidence suggests that the "origin" matters, in that it affects the characteristics of NIDs appointed, as well as their subsequent behavior and their ability to gain influence on the board. We discuss implications for policy makers and investors.

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1. Introduction

Board of directors play a central role in the U.S. corporate governance system. As such, boards have been the focus of policy reforms and the subject of a large body of research examining board composition, election, independence, expertise, diversity, and other aspects. [1] However, surprisingly little is known about *who* first identifies and recommends a candidate to the board (e.g., another independent director, the CEO, a search firm), and whether and how such "origins" shape the characteristics of new directors and their subsequent actions.

To fill up this gap, we exploit a little-known Securities and Exchange Commission (SEC) 2003 rule requiring firms to disclose in their proxy filing whether a new independent director (NID) was identified and recommended by current independent directors, the CEO, other executives, a search firm, a shareholder, or other sources. We exploit these requirements to identify the recommending source(s) and examine whether it is systematically associated with NID characteristics and their subsequent progression on the board.

Using a tailored keyword search, we extract and read the relevant portions of the proxy filing and we identify the recommending source for 5,330 of the 20,746 NID reported in the BoardEx database between 2010 and 2020. Thus, the first striking result is that the recommending source is disclosed for only 25.7% (5,330 out of 20,746) of the NID in our sample, suggesting a high degree of non-compliance with the SEC requirements – about 74% of the NID. At the firm level, 60.6% (2,623 out of 4,327) of the sample firms never disclose the recommending source, but there is also significant variation in the degree of compliance among disclosing firms because most disclosing firms do not disclose the source for all the NID appointed during the sample period.

[1] Examples of these studies include Linck, Netter and Yang (2008), Adams and Ferreira (2009), Duchin, Matsusaka, and Ozbas (2010), Kim, Mauldin and Patro (2014), Adams (2017), Adams, Akyol and Verwijmeren (2018), Ertimur, Ferri and Oesch (2018), among others.

Among the sample of 5,330 NID with disclosed recommending source, search firms are the most frequent source (44.0% of NID), followed by independent directors (29.8%), CEO (15.1%), shareholders (10.0%), other executives (5.2%) and other sources (6.2%). The fraction of NID recommended by search firms has been trending upward as the push for board diversity intensified.

Next, we compare the NID recommended by different sources in terms of their (i) characteristics at the time of their appointment (demographic traits, executive and board experience, connectedness, market reaction around their announcement) and (ii) their subsequent actions and progressions on the board (e.g., votes when up for re-election, leaderships positions on committees and the board). Ultimately, the goal is to understand whether the "origin" of the NID matters, and if so, how.

While our analysis is largely exploratory and descriptive in nature, we organize it around the following conceptual framework. Our starting point is that identifying new candidates for the board institutionally is a board responsibility, usually delegated to a nominating and governance committee made of independent directors. Thus, we view the case of NID recommended by independent directors (hereinafter "ID-recommended NID) as the "default" or benchmark case. That is, we envision a process where independent directors try to identify a candidate with the required skills and experience within their referral network. Then, we make predictions as to why the NID ultimately appointed may instead be one proposed by a search firm (hereinafter SF-recommended NID), or by the CEO and other executives (hereinafter CEO-recommended NID) and use the comparisons with the "benchmark" case (the ID-recommended NID) to infer which predictions are most supported by the empirical evidence. [2]

[2] As for NID recommended by shareholders or other sources, it turns out that they are mostly NID appointed as a result of some agreement with the shareholder (e.g., hedge fund activist) or some transaction (merger, spin-off). Thus, many of the NID in this category are not truly 'recommended' to the board. Hence, our analysis focuses on ID-, CEO- and SF-recommended NID.

Starting with SF-recommended NID, we consider three (not mutually exclusive) hypotheses.[3] The first – which we label as the *certification* hypothesis – is that search firms are called in to identify the same type of directors from the same network as those usually recommended by independent directors, while providing the client (and its shareholders) with a third-party certification. The second hypothesis – labeled as the *diversify pool* hypothesis – is that search firms are hired to identify "different" directors, whether in terms of gender and race, or in terms of unique expertise, experience or any other characteristic that is otherwise infrequent among the population of independent directors. The third hypothesis – labeled as the *expand pool* hypothesis – is that search firms are recruited to go beyond the immediate network of current independent directors while still searching for 'traditional' candidates.

Based on our analyses, we find little support for the *certification* hypothesis. This hypothesis would predict no differences between SF-recommended and ID-recommended NID, whereas our data reveal numerous and significant differences on many dimensions. Notably, the proportion of SF-recommended NID with a 1st-degree connection to the board is significantly lower than for ID-recommended NID (26% vs. 42%), suggesting that search firms draw from a broader talent pool, beyond the immediate network of the board's independent directors. That said, 26% of SF-recommended NID do have a 1st-degree connection to the board, and in 70% of those cases the connection is with the CEO. That is, in about one quarter of the sample where the board choose SF-recommended NID, search firms pick a candidate already close to the board and, especially, to the CEO, suggesting that in these cases search firms may play mostly a certification role.

[3] We refer to our predictions as 'hypotheses', but we acknowledge these are not hypotheses derived from an analytical framework. Rather, they represent "conjectures" based on arguments and prior literature. We use the term hypotheses for ease of exposition.

Partially in support of the *diversify pool* hypothesis, the frequency of female and non-white directors is higher among SF-recommended NID, consistent with anecdotal evidence that search firms are employed to diversify the board in terms of gender and race. However, if this hypothesis was prevalent (beyond gender and race), SF-recommended NID should be more likely to come from outside the circle of "usual suspects", i.e., they should be more likely to be rookie directors, without 1st or 2nd degree connection to the board, and with limited CEO/C-suite experience. The evidence, however, suggests exactly the opposite.

Finally, and relatedly, we find greater support for the *expand pool* hypothesis. This is especially evident when comparing SF-recommended NID to ID-recommended NID: SF-recommended NID are substantially less likely to have a 1st-degree connection to the board but are more likely to have served on boards before (non-rookie directors) and have stronger executive experience. Interestingly, conditional upon having served on board, they have less board experience (as captured by cumulative years on boards, number of past board seats and committees, frequency of leadership positions on board or committees). [4]

Overall, it appears that independent directors tend to recommend candidates within their immediate network (1st-degree connection) and with more board experience, whereas they use search firms when they need to go beyond their immediate network and look for candidates with greater executive experience, or occasionally, to diversify the board in terms of gender and race.

Next, we consider CEO-recommended NID and examine two hypotheses. The first – labeled as the *loyal directors* hypothesis – is that powerful CEOs inject themselves in the director

[4] We recognize that the characteristics of SF-recommended NID may reflect not only specific mandates of the companies hiring the search firm, but possibly also search firms' preferences. For example, our findings are also consistent with search firms preferring to push "safer" candidates (such as non-rookie directors with strong executive experience in publicly traded firms) to minimize the risk of ex post clients' disappointment with the candidate. See discussion in Section 4.

recruiting process by proposing candidates expected to be favorable to the CEO, and use their influence on the board to get such candidates approved. The second hypothesis – referred to as the *access to CEO network* hypothesis – is that independent directors solicit and approve CEO-recommended candidates because CEOs can exploit their personal network to tap into a pool of high-profile candidates with superior traits relative to those identified by independent directors.

Our analyses find little support for the *access to CEO network* hypothesis. While CEO-recommended NID are more likely to be distant in the network (beyond 2-degrees of distance) – which may reflect an attempt to reach beyond the independent directors' immediate network – they do not appear to have superior executive or board experience, nor a larger network, relative to ID-recommended NID. Further, they do not display a higher score in the director-specific quality (DSQ) metric developed by Bhattarai et al (2022) nor does their announcement elicit a more positive market reaction. If anything, they have somewhat less board experience (if they served on boards).

We find stronger support for the *loyal directors* hypothesis. For example, when CEO-recommended NID have a 1st-degree connection to the board, in 83% of the cases they have a 1st degree connection to the CEO (this figure is only 49% for ID-recommended NID). Furthermore, after being appointed to the board, CEO-recommended NID are significantly more likely to experience shareholder voting dissent relative to ID-recommended NID. This does not appear to be a selection effect, i.e., CEOs proposing candidates with a history of standing up to shareholder pressure and supporting management position, since these NID were not more likely to experience voting dissent when sitting on other boards in the past. Rather, this finding suggests that the recommending source consciously or unconsciously affects the behavior of NID at focal firms. Along the same lines, SF-recommended NID experience similar voting dissent (to both CEO- and

ID-recommended NID) when sitting on other boards in the past but are *less* likely to experience voting dissent after their appointment, perhaps because SF-recommended NID care about building a reputation as independent, shareholder-friendly candidates selected by third-party firms. Again, these findings suggest that the "origin" of the NID matters.

Another piece of evidence consistent with the *loyal directors* hypothesis is that, in the 3 years post-appointment, CEO-recommended NID enjoy greater progress on the board of the focal firm relative to SF-recommended NID (in terms of likelihood of remaining on the board, likelihood of chairing the board or its committees and number of committees they sit on) – in spite of experiencing higher voting dissent during their tenure, as noted earlier. That is, the recommending source seems to affect the NID's ability to gain influence on the board. Finally, it is noteworthy that CEO-recommended NID are substantially less likely to be female (23% vs. 30% for ID-recommended NID and 38% for SF-recommended NID), suggesting that the recommending source of NID is an important (and neglected) factor in explaining gender diversity on boards.

While above we discuss univariate comparisons, we recognize that firm characteristics are systematically associated with the different recommending sources. For example, SF-recommended ID are more frequent in larger firms, who can afford to pay for the service of search firms. However, all the results described above generally hold in multivariate tests when controlling for a set of firm characteristics.

The study is subject to three caveats. First, the high non-compliance implies that our examination is subject to the standard selection bias problem. Additional analyses suggest that smaller firms are less likely to comply and disclose, consistent with these firms employing resource-constrained legal teams that may have ignored the disclosure requirements. Indeed, when we split our sample with disclosures based on size, the frequency of SF-recommended ID is smaller

among small firms (while the frequency of all other sources is higher). Thus, we conclude that our data based on the sample with disclosures over-state the prevalence of SF-recommended NID.[5] However, all the results regarding characteristics and performance of NID persist in a sample of smaller disclosing firms (closer in size to never disclosing firms), cautiously suggesting that such results may be generalized to non-disclosing firms.

The second caveat is that we only focus on director-level outcomes. The limited compliance with the rule prevents us from building a firm-level measure of board composition by recommending source and test its association with firm performance and other outcomes.

Finally, we do not observe the pool of candidates considered by the board. Thus, we can only compare the "winners" of the contest (the candidates appointed to the board) and cannot speak to why a certain candidate was chosen over others (an important, but different research question). Relatedly, we acknowledge that the study is not suited to make causal inferences on the impact of various recommending sources. This is because ultimately this is an endogenous "matching" process, where the board chooses the candidate best suited to join the firm. We view our study as a first attempt to describe the results of such endogenous process and try to infer its objectives.

Our study contributes to a limited literature that speaks to how directors are appointed to the board. Cai, Nguyen and Walkling (2022) report that over 80% NID have a 1st or 2nd degree professional connection to the board they are joining – implying that referrals between board members are the dominant channel by which NID are identified. Our study complements Cai et al (2022) by examining a novel dimension: the recommending source leading to the NID appointment.[6] While most NID are indeed connected to the board, there is substantial variation in

[5] We also find some evidence that the use of CEO-recommended NID is understated, consistent with firm's incentive to avoid revealing that a new director was recommended by the CEO.

[6] To the best of our knowledge, the only study collecting data on the frequency of recommending sources is Akyol and Cohen (2013). However, they do not examine whether the recommending source is associated with differences in

the recommending source, and such variation is associated with different director characteristic and outcomes. Second, our novel examination of the role of search firms may stimulate future research on the market for directors (Levit and Malenko 2016). Third, we document that CEOs and executives are the recommending source for about 20% of the NID, and thus they continue to play an important role in director nominations even at a time when only independent directors can sit on the nominating committee (Shivadasani and Yermack 1999; Fracassi and Tate 2012). In doing so, we contribute to the research on CEO influence on boards (Baldenius, Melumad and Meng 2014; Coles, Daniel and Naveen 2014). Fourth, we contribute to a growing literature on board diversity (e.g., Adams and Ferreira 2009; Gul, Srinidhi and Ng 2011; Bernile, Bhagwat and Yonker 2018) in that we show that the recommending source affects gender representation on boards. Finally, our findings should be of interest to the SEC and investors: the recommending source of NID matters, yet most firms do not comply with requirements to disclose it.

2. Institutional Setting and Sample Construction

2.1 Disclosure requirements regarding new nominees to the board

The governance scandals of the early 2000s led to a series of reforms aimed to improve directors' accountability. In this context, in 2003 the Securities and Exchange Commission (SEC) issued Release Nos. 33-8340, "Disclosure Regarding Nominating Committee Functions and Communications Between Security Holders and Boards of Directors". Among other things, this rule requires that for each new independent director nominated to the board the proxy filing must include "a statement as to which one or more of the following categories of persons or entities

director characteristics and director-level outcomes, not they document or study the degree of non-compliance with the disclosure requirements.

recommended that nominee: security holder, non-management director, chief executive officer, other executive officer, third-party search firm, or other, specified source" (Item 407(c)(2)(vii)).[7]

Further, in disclosing the category of persons or entities that initially recommended a candidate to (or otherwise brought to the attention of) the nominating committee, firms should "identify also any person or entity that caused a particular candidate to be recommended. For example, if the CEO asks a third party to evaluate a potential candidate, and that third party ultimately recommends the candidate to the nominating committee, both the CEO officer and the third party should be identified as recommending parties in the company's disclosure". More generally, in case of multiple sources for a nominee the rule explicitly calls for disclosure of all sources.[8]

2.2 Sample construction

Our initial sample includes all new independent directors (NID) joining a board of a publicly traded firm covered in BoardEx between 2010 and 2019 and with available financial data in CRSP and Compustat. We start in 2010 because in 2009 the SEC required firms to disclose the experience, qualifications, attributes, or skills that led the nominating committee to choose an individual as a director (Regulation S-K; Adams et al. 2018). This choice allows us to have a homogenous sample period in terms of director-related disclosure requirements.

For the resulting sample of 20,746 NID, we perform a keyword search of the relevant proxy filing to identify whether the recommend source is disclosed. The process and its likely accuracy

[7] Initially, the proposed rule required to specifically identify the person recommending the nominee. However, commenters objected that naming the specific source could have a "chilling effect on the search process" or could imply that a nominee was unqualified to serve on the board based solely on the position held by the individual who originally recommended the nominee (SEC 2004). Thus, the final rules only require disclosure of the general category of persons who recommended the nominee, except when a nominee is recommended by the chief executive officer.

[8] The rule also states that "if the company pays a fee to any third party or parties to identify or evaluate or assist in identifying or evaluating potential nominees, [it must provide] disclosure of the function performed by each such third party". This means that the firm must disclose whether it retained a search firm (only) to vet a candidate proposed by the CEO or another director, etc.

are described in Appendix 1. After reading proxy filings' excerpts for over 8,000 NID, we identify the source for 5,330 of the 20,746 NID, suggesting a compliance rate of 25.7%.

When disclosed, we hand code the identity of the recommending source using the categories indicated in the SEC Release 33-8340: search firms, independent directors, CEO, other executives, shareholders, or other sources. Appendix 3 provides examples of the six categories. Two categories require some explanation. As for the "shareholders" category, firms generally describe in the proxy filing the process by which any shareholder can send recommendations for nominees to the board. However, cases of such recommendations (mostly from large shareholders) are not frequent. In contrast, most cases under this category refer to special agreements under which a shareholder (e.g., an activist or a large shareholders) has the right to nominate a certain number of board members. As for the "other sources" category, it mostly includes NID appointed via some transactions (merger agreement, spinoffs), with a few cases where the NID was recommended by other parties (industry sources, outside counsel, etc.). In brief, these two categories do not capture "recommendations", but, rather, NID appointments due to contractual agreements. As such, we will focus our predictions and main analyses (Table 3 and 4) on the other categories.

3. Descriptive statistics

3.1 Compliance rate

Table 1 reveals a high degree of non-compliance with the SEC disclosure requirement. The recommending source appears to be disclosed for only 25.7% of the NID in our sample (Panel A), with the compliance rate generally stable over time (see Figure 1). Over 60% of the sample firms never disclose the recommending source of NID (Panel B). Interestingly, among firms disclosing the source for at least one NID (hereinafter "disclosing firms"), the recommending source is disclosed for only 52% of the NID. Panel C sheds further light on consistency in disclosures,

showing that among the 1,704 disclosing firms, only 42% (24%) disclose their recommending sources for at least 2/3 (100%) of their NID. If we limit the analysis to the 1,050 firms with at least 5 NID (to reduce the effect of firms with very few NID), the above percentage is even lower at 33% (13%), while about 1/3 of the firms disclose the recommending source for less than 1/3 of their NID. Thus, there is significant cross-sectional variation in the compliance rate.

One potential explanation for such variation is that firms learned about the disclosure requirement with delay and thus did not disclose the source for some time, but then always disclosed it. For most firms, though, this does not appear to be the case. Among disclosing firms with at least two (five) NID, only 27% (19%) exhibit a pattern of "always disclosing" after the first disclosure, while the rest exhibits varying compliance over time (untabulated analysis).

Finally, Panel D examines disclosure consistency across multiple NID within the *same* firm-year. Among 1,479 firm-years with multiple NID *and* disclosed recommending source for at least one NID, the recommending source is disclosed for *all* NID in 75% of the cases, implying that in the remaining 25% of the cases the source is disclosed only for some, but not all, of the NID nominated to the board in the same year.

To sum up, Table 1 reveals that the high non-compliance rate at the director level is driven not only by never complying firms, but also by firms complying in some years, but not others, and (to a lesser extent) by firms complying only for some of the NID nominated in the same year.

3.2 Is the low compliance rate surprising?

The high rate of non-compliance may appear surprising since under Section 408 of the Sarbanes-Oxley Act the SEC reviews companies' filings at least once every three years, and thus the non-compliance should have been detected and cured via SEC comment letters. However, it is well known that SEC reviews tend to focus on 10-Ks and financial information. In fact, we

searched SEC comment letters and since 2004 we found only a dozen letters urging firms to comply with the disclosure requirements (see Appendix 2 for examples). In addition to scheduled reviews, the SEC can perform unscheduled, targeted reviews. For example, after mandating new executive compensation disclosure rules in 2006, the SEC reviewed the proxy filings of 350 firms and issued comment letters highlighting defective disclosures, leading firms to substantially raise their (low) rate of compliance with the new rules (Robinson, Xue and Yu 2011; Gipper 2020). Since then, compensation disclosures continue to be the focus of SEC comment letters related to proxy filings (Geoffroy, Hamm and Schmidt 2023). We are not aware of a similar enforcement initiative regarding the rule examined in this study, possibly due to the SEC facing resource constraints (especially in the aftermath of the Sarbanes-Oxley Act). It should be also noted that the cost of non-compliance is negligible (i.e., SEC reviews typically only ask firms to correct their deficient disclosures, without imposing sanctions). Combined, lack of SEC enforcement initiatives and low/no cost of non-compliance provide a plausible explanation for the low rate of compliance.

In the next sections we will examine the sample of NID with disclosed recommending source, essentially performing a "conditional upon disclosure" analysis. An important implication of the low compliance rate is that our inferences are affected by any selection bias arising from the limited compliance with the rule. For ease of exposition, we first present the results *as if* the sample of NID with disclosures was a random sample from the universe of NID. Then, in Section 6 we will assess the potential selection bias and discuss how it may affect the interpretation of our findings.

3.3 Frequency of recommending sources

Table 2 details the recommending source for the 5,330 NID where the source is disclosed. Search firms are the most frequent source (44.0%), followed by independent directors (29.8%), CEO (15.1%), shareholders (10.0%), other executives (5.2%) and other sources (6.2%). As

shown in Figure 2, the fraction of NID recommended by a search firm (35% in 2010) has been trending upward mostly at the expense of NID recommended by independent directors and CEO, perhaps a reflection of higher pressure to diversify the board. Table 2 also reports that 92.5% of NID are recommended by a single source, with 7.5% identified by multiple sources (these figures are generally stable over the sample period). When multiple sources are involved (400 NID), the most frequent combinations (untabulated) are independent directors and CEO (133), independent directors and search firms (62), independent directors and executives (52 cases), and CEO and executives (28). A comparison of column (1) (frequency of each source among all NID) and column (3) (frequency of each source among NID recommended by a single source) confirms that SF usually act as the single recommending source for a NID.[9]

Overall, Table 2 provides two key insights. First, search firms are the most frequent recommending source. Prior research indicates that over 80% NID have a 1st or 2nd degree connection to the board they are joining, implying that referrals between board members are the dominant channel by which NID are identified (Cai et al. 2022). Our data suggest that search firms play an important role as well, which provides further motivation for our study. Second, CEOs and other top executives, combined, are the recommending source for about 20% of the NID. Reducing the CEO influence on the director nomination process was part of the reasons for the NYSE/Nasdaq 2003 rules mandating that only independent directors can sit on the nominating committee (Shivdasani and Yermack 1999). While such committee has the final word (CEOs and executives can only propose certain candidates, if consulted), our figures suggest that NID

[9] When a search firm is the recommending source, its name is mentioned only in about 25% of the cases (such disclosure is not mandatory), with the five largest search firms (Spencer Stuart, Heidrick Struggles, Russell Reynolds, Korn-Ferry and Egon Zehnder) representing over 83% of such mentions (untabulated analysis). As for the other categories, sometimes firms voluntarily disclose the names of the specific independent director, executive or shareholder recommending the NID (see examples in Appendix 3), but this is not frequent.

proposed by the top management represent a sizeable fraction of all NID, making the investigation of the characteristics of these candidates even more salient.[10]

4. Recommending Source and Characteristics of New Independent Directors (NID)

4.1 Director-level characteristics by recommending source

Table 3, Panel A, compares the characteristics of NID identified by different sources along five dimensions: demographic and education background, executive experience, board experience, connectedness, and a measure of director-specific quality (DSQ) developed by Bhattarai, Serfling and Woidtke (2022). The variables are described in Appendix 4. To make the comparisons cleaner, we exclude NID recommended by multiple sources, though the inferences are generally similar when using the entire sample of 5,330 NID (untabulated). We group together the categories "CEO" and "other executives" from Table 2, on the ground that the incentives of these sources (and the potential conflicts of interest) are likely to be similar.[11] Also, as discussed earlier, we do not report the categories "shareholders" and "other sources" because in both groups most cases refer to NID appointed through special agreements or transactions, rather than being "recommended". Thus, in columns 1-3 we present the characteristics of NID by three recommending sources: search firms (hereinafter SF-recommended NID), independent directors (ID-recommended NID), and CEO/executives (CEO-recommended NID). In columns 4-6 we report a significance test for the differences between these three groups. We will first describe

[10] A caveat, as noted earlier, is that we only observe the frequency of recommending sources when firm comply with the SEC rule and disclose this information. The frequency of NID recommended by CEO may be understated if firms strategically omit this information to avoid shareholders' scrutiny over the NID potential conflicts of interest. By the same token, the frequency of NID recommended by search firms may be overstated if firms believe that disclosing the involvement of a search firm credibly conveys to shareholders that the nomination process is transparent and independent. We will go back to this discussion in Section 6.

[11] Untabulated analyses indicate that NID recommended by CEO and NID recommended by executives are similar along all characteristics in Table 3, Panel A.

such differences (focusing on the ones that are both statistically and economically relevant) and then discuss their combined interpretation in Section 4.2 and 4.3.

Demographic and Education Background

The first, striking piece of evidence is that SF-recommended NID are significantly more likely to be female (38%), relative to ID-recommended NID (30%) and, especially, to CEO-recommended NID (23%). When we split NID recommended by CEO and those recommended by other executives (untabluated), only 20.5% of the NID recommended by CEOs are women, versus 30.6% of those recommended by other executives. Thus, as the debate about reasons for lower women representation on board continues, our data suggest that the source of recommendation is an important factor: when the board relies on CEO recommendations, women are less likely to be appointed to the board. SF-recommended NID are also more likely to be non-white, relative to the other two sources (9% vs. 7%) and less likely to be older than 70 (1% vs. 4%). Finally, they are more likely to have an MBA or other master (44% vs 33-36%).

Executive Experience

14% (33%) of SF-recommended NID are (have been) CEO of a publicly traded firm, versus 6-8% (21-23%) for the other two sources (variables *CEO - Current* and *CEO - Ever*). These differences are even larger when examining C-suite experience more generally (variables *C-suite - Current* and *C-suite - Ever*). In brief, SF-recommended NID have higher executive experience in publicly traded firms. These differences are markedly smaller if one considers executive experience in both public and private firms (untabulated), suggesting that search firms tend to focus on candidates with experience in publicly traded firms, either because expressly requested by their client or because they view such candidates as a superior (or perhaps safer) choice. Interestingly, CEO- and ID-recommended NID do not differ in terms of executive experience.

Board Experience

In terms of board experience, a notable difference is that SF-recommended NID are much less likely to be a *Rookie Director* relative to both other sources (31% vs. 46-49%), i.e., they are less likely to serve on a board for the first time.[12] This is counter to the conventional wisdom that search firms are hired to recruit "new" candidates to boards and suggests a search firms' preference for (or a client mandate to seek) candidates with proven board experience.

Conditioned on having served on boards, relative to ID-recommended NID, SF-recommended NID have less board experience. In particular, they (i) served on fewer boards in the past (2.6 vs. 2.8; *# Board Seats – Ever*); (ii) spent less time on boards cumulatively (9.3 vs. 11.5 yrs; *# Cumul Yrs on Boards*); (iii) served on fewer board committees (4.3 vs. 5.0; *# Committees - Ever*); (iv) served less frequently as chair of the committees they sat on (0.13 vs. 0.18; *% Committees as Chair - Ever*); and (v) served less frequently in a board leading role – that is, as independent chairman or lead independent director (12% vs. 15%; *Indep Chair/Lead ID - Ever*).

CEO- and ID-recommended NID are equally likely to be rookie directors (though CEO-recommended NID are more likely to be serving for the first time as outside director: 0.61 vs. 0.56 - untabulated). Conditional upon having served on boards, CEO-recommended NID have somewhat lower board experience (fewer committees, fewer current board seats). Notably, they held a leadership position on the board less frequently (10% vs.15% for ID-recommended NID). Relative to SF-recommended NID, though, they have slightly higher board experience.

Connectedness

[12] The difference remains statistically significant, but it is smaller in magnitude when we measure the frequency of rookie *outside* directors, i.e., those serving for the first time as outside directors (51% vs. 56%). This is because SF-recommended NID are more likely to have served as CEO or C-suite executives in publicly traded firms, and thus more likely to have served as inside director on the board.

The percentage of NID with 1st-degree connection to the other members of the board they are joining (*1st-Degree Connection to Board*) is 26% among SF-recommended NID, 30% among CEO-recommended NID, and a significantly larger 42 % among ID-recommended NID.[13] This is consistent with independent directors preferring candidates with direct referrals from one of their own. We next consider NID with a *1st-Degree Connection to CEO* and those with a *1st-Degree Connection to ID only* and compute the ratio of these two variables. Essentially, we ask the question: among NID with a 1st-degree connection to the board, what fraction has a 1st-degree connection to the CEO? The answer is significantly different across the three sources: 83% among CEO-recommended NID, 70% among SF-recommended NID and only 49% among ID-recommended ones (variable % *1st-Degree Connection to CEO*). That is, while CEO and SF are less likely to recommend NID close to the board, when they do so they tend to focus on candidates with a close connection to the CEO (we will discuss the implication of these figures later).

Interestingly, SF-recommended NID are more likely to have a *2nd-Degree Connection to Board* (57% vs. 32-35%) relatively to the other two sources. Thus, most SF-recommended NID are not too 'close' but neither too 'far' in the network from the board they are joining. Combining the 1st and 2nd degree figures, it turns out that SF-recommended NID are those more likely to have a *1st or 2nd Degree Connection to Board* at 82%, followed by ID-recommended NID at 75% and CEO-recommended NID at 65%. That is, boards are more likely to appoint "farther away" candidates when the recommendation comes from the CEO, reflecting either CEO's power over the board, or the board's reliance on the CEO to find candidates outside the board network.

[13] The NID are classified as having a first-degree connection with the board they are joining if they worked at the same company, or sat on the same board, as the existing directors. They are classified as having a second-degree connection if they worked or sat on the same board as directors who in turn worked with or sat on the same board as the existing directors. See Appendix 4 for details.

Finally, SF-recommended NID have a larger *Network Size* (defined as the number of 1st-degree connections to *all* other directors in BoardEx) relatively to the other two sources, partly because of the lower frequency of rookie directors (who have lower network size; untabulated analysis). Among the other two sources, CEO-recommended candidates have the smallest network.

Director-specific quality (DSQ)

The last variable we examine is the director-specific quality (DSQ) metric developed by Bhattarai et al. (2022), which aims to capture the unique, time-invariant transferable "soft" attributes of directors (such as critical thinking skills, grit, creativity, interpersonal skills, work ethic, etc.) that contribute to firm value across all the boards they sit on and that are distinct from time-varying director and firm-related aspects.[14] We find no difference in DSQ among NID based on their recommending source.[15]

4.2 Director-level characteristics: implications for the role of search firms

Overall, what does this analysis tell us about the reason why boards would choose candidates recommended by a search firm over those recommended by independent directors?

[14] Bhattarai et al. (2022) exploit the time-series and cross-sectional variation in director-firm pairs in Boardex to decompose firm value into variation attributable to (i) time-invariant firm-specific effects, (ii) time-varying firm, board, and director effects, (iii) year effects, and (iv) time-invariant director-specific effects – the latter being referred to as director-specific quality (DSQ). Bhattarai et al. (2022) find that DSQ explains 10% of the total variation in firm value (Tobin's Q). Also, they find that estimates of DSQ are largely unrelated to observable characteristics of the type examined in Table 3, Panel A, consistent with the notion that DSQ may capture those soft, individual personal attributes often viewed as important contributors to director effectiveness but hard to measure using observable characteristics. The authors validate this measure by showing that high DSQ directors receive higher shareholder voting support and trigger a more positive price reaction around their appointment, and that boards with higher average DSQ are associated with better decisions in terms of M&A, innovation, executive compensation, and cash management. While this measure is estimated by the authors over the entire Boardex database (and thus, it is based on data *subsequent* to the NID appointment), we use it as proxy for those "soft" NID traits which presumably existed already at the time of their appointment but are not captured by the other observable characteristics.

[15] We perform two untabulated analyses. First, we re-examine all the comparisons in Table 3, Panel A, separately for the first and second half of our sample period. As expected, the fraction of female NID is significantly higher in the second half of the period (39% vs. 22%), but the documented differences in NID characteristics across recommending sources are generally similar in both periods. Second, we examine the subset of SF-recommended NID where the name of the search firm is disclosed, focusing on the five largest search firms. Subject to the caveat that the sample size is small, we find evidence of a certain degree of specialization, with Egon Zehnder emerging as the search firm utilized to recruit "non-traditional" candidates (e.g., female directors, directors with less executive or board experience but with a certain functional expertise, etc.).

With respect to the role of search firms, we find little support for the *certification* hypothesis, i.e., the notion that search firms are called in to identify the same type of directors from the same network as those usually recommended by independent directors, while providing a third-party certification. Under this hypothesis, we would expect little differences between SF-recommended and ID-recommended NID, whereas our data reveal numerous and significant differences on many dimensions. Also, the proportion of SF-recommended NID with a 1st-degree connection to the board is significantly lower than for ID-recommended NID, suggesting that search firms draw from a broader talent pool, beyond the immediate network of the board's independent directors. The only piece of evidence in support of the certification hypothesis is that 26% of SF-recommended NID do have a 1st-degree connection, and in 70% of those cases the connection is with the CEO. That is, in about one quarter of the sample where the board choose SF-recommended NID, search firms pick a candidate already close to the board and, especially, to the CEO.[16]

We find some evidence in support of the *diversify pool* hypothesis, i.e., the notion that search firms are used to identify "different" directors, whether in terms of gender and race, or in terms of unique expertise, experience or any other characteristic that is otherwise infrequent among the population of independent directors. Supporting this hypothesis, the frequency of female and (to a lesser extent) non-white directors is higher among SF-recommended NID, consistent with anecdotal evidence that search firms are employed to diversify the board in terms of gender and race. However, if this hypothesis was prevalent (beyond gender and race), SF-recommended NID should be more likely to be rookie directors, without 1st or 2nd degree connection to the board, and

[16] In untabulated analyses we examine the subset of NID with a first-degree connection to the board and continue to find that SF-recommended NID differ from ID-recommended and CEO-recommended NID along the characteristics identified in Table 3, Panel A. Thus, even when picking a candidate close to the board, search firms put greater emphasis on executive and board experience.

without CEO/C-suite experience, since (on average) "different" directors should come from outside the circle of "usual suspects". The evidence, however, suggests exactly the opposite.

Finally, and relatedly, we find greater support for the *expand pool* hypothesis, i.e., the notion that search firms are hired to help current board members go beyond their immediate network (e.g., 1st-degree connections) while still searching for 'traditional', highly experienced candidates. This is especially evident when comparing SF-recommended NID to ID-recommended NID: SF-recommended NID are less likely to have a 1st-degree connection to the board but are more likely to have served on boards before and have stronger executive experience.

We acknowledge that the characteristics of SF-recommended NID may reflect not only specific mandates of the companies hiring the search firm, but also search firms' preferences. For example, we find that SF-recommended NID are much more likely to have a 2nd degree connection to the board. This pattern may arise because, among all candidates proposed by search firms, boards choose those for whom they can gather information via common connections; or, because search firms strategically focus on candidates with 2nd-degree connections to the board since they expect the board to be more comfortable with candidates with common connections. By the same token, the prevalence of non-rookie directors with strong executive experience in publicly traded firms among SF-recommended NID may reflect the client's stated preferences or the search firms' decision to focus on "safer" candidates to minimize the risk of ex post clients' disappointment with the candidate and thus protect their reputation.

Whatever the mechanism, our evidence suggests that independent directors tend to recommend candidates within their immediate network and with more experience on boards (conditioned upon having served on boards), whereas they use search firms when they need to go beyond their

immediate network and look for candidates with greater executive experience, or occasionally, to diversify the board along dimensions of gender and race.

4.3 Director-level characteristics: implications for the role of CEO recommendations

The analysis of director level characteristics in Table 3, Panel A, provides some, but limited evidence, for the *access to CEO network* hypothesis, i.e., the idea that boards resort to the CEO-recommended candidates because CEOs can tap into a pool of high-profile candidates with superior traits relative to those identified by independent directors. For example, While CEO-recommended NID are more likely to be distant in the network (beyond 2-degrees of distance) – which may reflect an attempt to reach beyond the independent directors' immediate network – they do not appear to have superior executive or board experience, nor a larger network or higher DSQ, relative to ID-recommended NID. If anything, they have somewhat less board experience (if they served on boards).

As for the *loyal directors* hypothesis, it is hard to provide conclusive evidence without data on personal ties between CEO and CEO-recommended NID. However, it is noteworthy that when CEO-recommended NID have a 1st-degree connection to the board, in 83% of the cases they have a 1st degree connection to the CEO (whereas the figure is only 49% for ID-recommended NID). While this is more speculative, there are three other "clues" potentially supporting the *loyal directors* hypothesis. First, they are more likely to be outside the 1st or 2nd degree connections to the board, which may reflect an attempt to pick candidates not linked to other board members (and thus more loyal to the CEO only). Second, it is somewhat surprising that CEO-recommended NID do not have higher executive experience, since one would expect CEOs to emphasize this trait when looking for strategic partners on the board. One conjecture is that NID with strong executive experience may be perceived as threatening CEO's decision-making authority. Third, and

relatedly, CEO-recommended NID have less experience in leadership positions on the board, which may reflect CEOs' preference to avoid NID with strong leadership traits, potentially challenging their authority. We will go back to the *loyal directors* hypothesis after presenting additional evidence in Section 5.

4.4 Firm characteristics by source of recommendation

Table 3, Panel B, reports firm characteristics by recommending source. The purpose of this analysis is twofold. The first is to understand what type of firms tend to have NID recommended by a certain source. In this respect, Panel B indicates that SF-recommended NID are associated with larger firms ($26.1 billion in total assets, vs $19.5 and 16.8 billion, respectively, for ID-recommended NID and CEO-recommended NID) and firms with better operating performance, consistent with the notion that larger, better performing firms have more resources and thus are more likely to incur the cost of hiring a search firm. Besides, larger firms are subject to greater scrutiny and thus may prefer to involve a third-party in director recruiting.

SF-recommended NID are also associated with firms with higher institutional ownership, more independent and gender diverse boards, and with more connected boards and CEOs (in terms of network size), though these differences may reflect differences in firm size. To examine this possibility, we split the sample based on above and below median total assets. When we do so, as shown in Internet Appendix (IA) Table 1 (Panel A and B), the differences in firm size between SF-recommended NID and the other two sources disappear or become economically marginal. Yet, the differences in governance characteristics persist in both samples.

The other notable result in Panel B is that CEO-recommended NID are associated with firms where CEO power is higher, a measured by the CEO holding the Chairman role and by CEO tenure. The difference in CEO-Chair is economically large. 54% of firms with CEO-recommended

NID have a dual CEO-Chair, versus 40-42% for the other two sources. Again, this difference persists when splitting the sample based on above and below median total assets (IA Table 1).

The second purpose of Panel B is to understand whether the differences in director-level characteristics documented in Panel A are driven by firm-characteristics (e.g., size) rather than by the recommending source. To examine this possibility, we perform a multivariate analysis. Our dependent variables are seven director-level variables that differ the most across recommending sources based on the univariate evidence in Panel A. Our key independent variables are indicators denoting SF- and CEO-recommended NID (ID-recommended NID are the benchmark), with a set of firm-level variables from Panel B included as control variables.

The results (reported in Panel C) indicate that the univariate differences between SF-recommended NID and the other two sources (as well as between CEO-recommended and ID-recommended NID) persist and remain statistically and economically significant. In addition, the higher frequency of rookie director and directors with 2nd degree connection to the board among CEO-recommended NID relative to ID-recommended NID (not significant in Panel A) is now significant at the 10% level.[17]

4.5 Market Reaction to the Appointment of New Independent Directors

In this section we examine whether the market reaction to the announcement of NID varies with the recommending source. In many cases, the appointment of a NID is first publicly disclosed in the proxy filing sent to shareholders with the agenda of the upcoming annual meeting where shareholders will vote on director elections. Because proxy filings contain a large amount

[17] For brevity, we do not comment on the control variables in Panel C. We note that larger firms (better performing) firms are less (more) likely to end up with a rookie director. One interpretation is that past board experience is considered crucial to sit on the board of larger firms, while better performing firms may be in a better position to integrate a rookie director to the board. Not surprisingly, female NID are less frequent at firms with a higher fraction of women on the board (less need/pressure to diversify the board).

of other information, they are not suitable for an event study focused on the announcement of NID (contaminated event problem). However, there is a sizeable number of NID whose appointment is announced prior to the proxy filing. This is the case, for example, when the director is appointed during the year to serve on the board until elected via a shareholder vote at the next annual meeting. Such appointments must be disclosed via an 8-K filing under Item 5.02.

Importantly, the recommending source is *not* disclosed in the 8-K filing (or the underlying press release). Thus, the market reaction does not reflect investors' reaction to news that the NID was recommended by a given source, but, rather, only their assessment of the quality of NID and her "fit" with the firm. As a result, it may speak to the perceived value of the recommendations made by different sources.

To identify the relevant announcement dates for the event study, for each NID we extract and retain the earliest 8-K Form with Item 5.02 mentioning the last name of the NID and filed during the year prior to the proxy filing date. We identify such filings for 3,567 NID and use the 8-K "report date" as announcement date.[18] We also exploit the fact that BoardEx reports an announcement date for 2,412 NID. For NID with both 8-K report date and BoardEx date, we use the earliest date (though in almost all cases the dates are identical). For NID without an 8-K filing but with a BoardEx announcement date (315 NID), we use the latter as announcement date (as long as it is earlier than the proxy filing date). Finally, we remove all cases where the announcement date is contaminated by a concurrent earnings announcement (i.e., we remove all announcement dates with an earnings announcement taking place within 2 days prior to or after the NID announcement date). As a result of this process, we identify "clean" announcement dates

[18] The "report date" for an 8-K is the date of the event disclosed in the 8-K. In our setting, such event is typically the press release announcing the new director (i.e., the announcement date). Firms have up to four days to file an 8-K, after the "report date". Thus, the 8-K "filing date" will either coincide with or follow the 8-K report date.

for 3,297 NID recommended by a single source. As in the previous analyses, we focus on the NID recommended by search firms, CEOs or independent directors (N=2,798).

Next, we compute the cumulative abnormal returns (CAR) during the [-1,1], [0,1] and [0,2] windows around the NID announcement date. The top portion of Table 3, Panel D, reports the univariate results by recommending source. The market reaction is generally insignificant for ID-recommended and CEO-recommended NID, while it is positive and significant at about 0.2% for SF-recommended NID when using the [-1,1] and the [0,1] windows (see columns 1 to 3). As for the comparison across sources (columns 4 to 6), the CAR around announcements of SF-recommended NID is significantly higher than for ID-recommended NID, but only when using the [-1,1] window and only at the 10% level.

Finally, we regress the CAR on indicators for SF-recommended and CEO-recommended ID, with the ID-recommended NID used as benchmark. We also control for whether the firm concurrently announces the departure of another director. We deliberately do not include the director-level variables from Table 3, Panel A, because the purpose of the test is to examine the market reaction to different "bundles" of those characteristics (as well as other, unobservable ones), as proxied by each recommending source. As shown in the bottom portion of Panel D, there is a significant positive coefficient on the indicator for SF-recommended NID, suggesting that investors react positively to the bundle of characteristics that differentiate these NID. However, the effect is statistically significant only at the 10% level when using the [-1,1] window.

Overall, there is some evidence of a positive market reaction to the announcement of SF-recommended NID (at the time when the market ignores the source of recommendation). However, the effect is small (both economically and statistically) and not consistent across the event windows. Thus, we caution against drawing strong inferences from the event study.

5. Recommending Source and Performance of New Independent Directors

In this section we examine whether the post-appointment "performance" of NID varies depending on the source of recommendations. The individual actions of each NID and her contribution to joint board decisions are not observable. Nonetheless, we examine two sets of observable post-appointment individual-level metrics that may speak to the question of whether the recommending source systematically predicts certain director-level outcomes; namely: shareholder votes on NID up for re-election and NID post-appointment progression on the board.

5.1 Univariate analysis

Table 4, Panel A (top portion), examines director-level votes at the annual meetings taking place *after* the meeting where the NID is first elected.[19] Shareholder votes are a useful metric for our analysis both because they are director-specific and because they measure shareholders' (dis)satisfaction with directors' performance (Fischer, Gramlich, Miller and White 2009). In particular, we examine whether the propensity of directors to take pro-management actions opposed by shareholders – as reflected in the percentage of votes cast against the NID when up for re-election – depends on the source recommending their appointment.

As proxy for shareholders' voting dissent, following prior studies (e.g. Cuñat, Gine and Guadalupe, 2012) we report the percentage of post-appointment meetings where the NID experience voting dissent above 20%, and an indicator denoting whether the NID experience voting dissent above 20% at least once after her appointment. We use 20% because it is the

[19] Proxy advisors, such as Institutional Shareholder Services, generally recommend in favor of new nominees in uncontested elections, even when issuing a "withhold" recommendation against existing board members, on the ground that new directors should not be held accountable for boards' actions prior to their appointment (Ertimur, Ferri and Oesch 2018). Thus, virtually all NID are elected with almost unanimous support and the votes at the annual meetings ratifying their elections are not informative about the directors' performance. Hence, we focus on the subsequent votes.

threshold typically viewed as capturing substantial shareholders' opposition (Ertimur, Ferri and Oesch 2018). Results are similar when using a 15% threshold.

The findings reveal an interesting pattern: relative to ID-recommended NID, CEO-recommended NID (SF-recommended NID) are significantly more (less) likely to experience voting dissent. For example, 20% of CEO-recommended ND experience voting dissent above 20% at least once, versus 13% of ID-recommended NID, and 8% of SF-recommended NID. These figures may reflect either the fact that CEOs recommend directors with a history of standing up to shareholder pressure and supporting management position (hence the dissent), or the fact that CEO-recommended NID become "loyal" to management out of gratitude for the appointment. Similarly, it is possible that search firms propose candidates with a history of low voting dissent or that SF-recommended NID – once appointed – try to build a reputation as independent, shareholder-friendly candidates carefully selected by third-party firms. To disentangle these two explanations, Panel A (center portion) reports the same voting data for any other boards the NID sat on *prior* to their appointment to the focal firm (this analysis can only be done for directors with past board experience). Interestingly, there is no difference in voting dissent among CEO-, ID- and SF-recommended NID.[20] Thus, while we cannot establish causality in this setting, it appears that the voting pattern documented above is not the result of "director effects" but, rather, the result of the recommending source consciously or unconsciously affecting the behavior of NID at focal firms. Put it differently, the recommending source "matters" – making the high non-compliance with the SEC disclosure requirements more salient.

Finally, the bottom portion of Panel A presents four variables measuring the progress of NID on the board of the focal firm 3 years after their appointment. We report whether the NID are still

[20] Unfortunately, in most cases we cannot determine who recommended these directors at other firms they sat on in the past because of the low compliance with the disclosure requirements reported in Table 1.

on the board after 3 years (*On Board After 3Yrs*) and, if so, how many committees they sit on (*# Committees After 3 Yrs*), how frequently they hold a committee chair (*Committee Chair After 3 Yrs*), and how frequently they sit as independent chair or lead independent director (*Indep Chair/Lead ID After 3 Yrs*).

We focus on two specific questions. The first relates to the concern that SF-recommended NID may not "fit" as well as ID-recommended or CEO-recommended NID because they are less connected to the current board members (recall that SF-recommended directors are less likely to have 1st-degree connections to the board; see Table 3, Panel A). Such lower fit would predict higher turnover for these directors. Also, to the extent that SF-recommended directors differ along dimensions that may affect their chemistry with the rest of the board (along the diversifying pool hypothesis), they may be more likely to leave the board or be replaced. The second question is whether NID recommended by an "external" party (the search firm) are given equal opportunity to join committees and take leadership positions on the board as NID proposed by the other two "internal" sources.

The key insight (column 6) is that CEO-recommended NID are more likely to remain on the board and (conditioned upon staying on the board) to sit on committees and serve in leadership positions, especially relative to SF-recommended NID (all differences are significant at the 5% level). One potential explanation is that support from the CEO allows CEO-recommended NID to remain on the board and gain more influence – in spite of receiving less shareholder voting support – consistent the *loyal directors* hypothesis. In contrast, the progression of SF- and ID-recommended NID is generally similar, except that ID-recommended NID are more likely to serve as committee chair (40% vs. 33%).

Finally, we perform a multivariate analysis to ensure that the above differences are not driven by difference in firm characteristics. Our dependent variables include one of the voting dissent variables (*Indicator for Dissent >20%*, measured at the focal firm), and all the four variables on the progression of NID on the board (*On Board After 3Yrs, Indep Chair/Lead ID After 3 Yrs, # Committees After 3 Yrs, Committee Chair After 3 Yrs*). Our independent variables include indicators for SF-recommended and CEO-recommended NID, firm financial characteristics and industry and year fixed effects. The results, reported in Table 4, Panel B, indicate that post-appointment voting dissent for SF-recommended continues to be lower than for the other two sources, though the magnitude and statistical significance are smaller. As for the proxies for progression on board, we continue to find that CEO-recommended NID are more likely to stay on board and to become an independent chair or lead independent director, relative to SF-recommended NID, while the committee-related variables are no longer different. As in the univariate tests, SF-recommended NID continue to be less likely than ID-recommended NID to serve as committee chairs.

Overall, the multivariate tests confirm that CEO-recommended (SF-recommended) NID make greater (lower) progress on the board after their appointment, but the effects are smaller than in the univariate tests.

6. Non-compliance: reasons and potential impact on the findings

The high degree of non-compliance documented in Table 1 implies that our setting is subject to the standard selection bias problem. To assess its implications for our findings in Section 4 and 5 we focus on the two types of non-compliance revealed by Table 1: (i) the firm-level decision to "never disclose" and (ii) the decision to disclose "selectively", i.e., disclose the recommending source for some, but not all, NID.

6.1 Determinants of "never disclosing"

As reported in Table 1, over 60% of the sample firms never disclose the NID recommending source. We examine two potential explanations. The first is that "never disclosers" are smaller firms, with resource-constrained legal teams who "missed" this rule because entirely absorbed by other, major disclosure requirements (in the aftermath of Sarbanes-Oxley, small firms were burdened with numerous compliance requirements).[21] Combined with the negligible cost of non-compliance, lack of specific enforcement initiatives by the SEC and paucity of SEC comment letters (Section 2), this argument would predict limited compliance by smaller firms. In other words, under this explanation non-compliance was not opportunistic but not random either, in that "ignorance" of the rule was more widespread among smaller firms. The second explanation is that non-compliance was a deliberate, opportunistic choice. Anticipating that most of their NID would be CEO-recommended (and thus potentially trigger scrutiny and criticism), some firms chose to never disclose the recommending source, out of concerns that disclosing it for some NID might have led investors to push for disclosure for all NIDs (ex post, the evidence in Table 1 Panel C, suggests this should not have been a concern, since many firms were able to disclose the source selectively for some NID but not others).

To test the first explanation, we examine whether "never disclosers" (hereinafter Never Disclosers) are smaller firms. As for the second, we examine whether Never Disclosers are more likely to exhibit characteristics associated with the likelihood of a CEO-recommended NID (based on Table 3, Panel B), namely, whether they have powerful CEOs (longer tenure, dual CEO-Chair role) and whether they have at least one independent director with a 1st-degree connection to CEO.

[21] We do not believe the issue was cost of compliance. Gathering and disclosing the information on the recommending source is virtually costless, both for small and large firms.

Table 5, Panel A, presents a univariate comparison of Never Disclosers to Disclosers, defined as firms disclosing the recommending source for at least one NID. It is immediately apparent that Never Disclosers are substantially smaller (mean total assets: $6.4 vs. $18.0 billion in total assets). Since the difference in size is likely to drive other differences in Panel A (e.g., institutional ownership, board characteristics, etc.), we next move to the multivariate analysis in Panel B. This analysis suggests that size remains the key economic determinant: a one standard deviation increase in total assets increases the probability of disclosing by 10.8% (which represents a 22.3% increase over the unconditional probability of 48.5%). Importantly, we fail to find evidence that never disclosers are more likely to have powerful CEOs or independent directors with first-degree connection to the CEO. In brief, our results are more consistent with the "limited resources" explanation than the opportunism one. Interestingly, after controlling for size, we find that more independent and gender diverse boards are more likely to disclose, consistent with studies linking these characteristics to better disclosures and/or greater compliance, though the economic effect of these variables is smaller.[22]

The evidence that Never Disclosers are significantly smaller firms raises two questions about our "conditional upon disclosure" analyses in Section 4 and 5. First, is the frequency of recommending sources reported in Table 2 generalizable to smaller firms? Search firms are more likely to be employed by larger firms, as suggested by Table 3 Panel B ("deep pockets" argument). If so, Table 2 may overstate the frequency of SF-recommended NID. To examine this possibility, in Table 5, Panel C, we split the sample in 'large' and 'small' firms based on sample median total assets (note that the size of small firms is close to the size of never disclosers; see second and last

[22] In Table 5, Panel A and B, "Discloser" includes *all* firm-year observations of firms that disclose the NID recommending source at least one during the sample period. The results are similar if we only include the subset of firm-year observations with disclosure of the NID recommending source.

row in Panel C). We find that the frequency of SF-recommended NID is much greater in large firms (51% vs 37%) – an increase which comes at the expense of all other sources, approximately in similar proportions. Thus, we conclude that the frequency of SF-recommended NID in Table 2 is over-stated, relative to the 'true' frequency in the universe of firms.[23]

The second, perhaps more concerning, question is whether the comparison of NID characteristics across sources in Table 3 and 4 is generalizable to Never Disclosers. IA Table 2 replicates the analyses in Table 3 and Table 4 for 'small' firms (i.e., firms with total assets below the sample median). With few exceptions, the results are similar as those in Table 3 and 4.[24] Thus, it appears that the "bias" toward larger firms arising from greater non-compliance with the disclosure rule among small firms does not affect our qualitative inferences about the relation between the recommending source and the characteristics and performance of NID.

6.2 Determinants of disclosing the recommending source for some, but not all NID

Another potential source of selection bias arises from the fact that even among discloser firms, the recommending source is disclosed for some, but not all NID (see Table 1, Panel C). To understand the direction and magnitude of this bias, in this section we aim to identify the type of directors for whom the recommending source is not disclosed.

[23] If Never Disclosers were firms opportunistically withholding disclosure of recommending sources to hide their frequent use of CEO-recommended NID, then the frequency reported in Table 2 would also under-state the true frequency of CEO-recommended NID. However, as noted earlier, our evidence in Table 5, Panel A and B, is not consistent with the "opportunism" story.

[24] Most of the exceptions involve variables where the differences documented in Table 3 (Panel A) and Table 4 (Panel A) are economically small. For example, among smaller firms (IA Table 2, Panel A), the fraction of *Non-White NID* is no longer different across the three sources. Also, the differences between CEO- and ID-recommended NID in terms of board experience are no longer significant. As for shareholder votes and progression on the board, in smaller firms (IA Table 2, Panel B) CEO-recommended NID are no longer more likely to become Chair or lead independent director after 3 years, relative to the other two sources. For completeness in IA Table 3, we also report the data for firms with total assets above the sample median. We find that among larger firms (Panel A) the frequency of *Age 70+* is no longer smaller among SF-recommended NID. Also, the (small) difference in frequency of *1st-Degree Connection to Board* between SF- and CEO-recommended NID is no longer significant. Finally, IA Table 3, Panel B, shows that the differences in terms of progression on the board between CEO-recommended and SF-recommended NID become smaller or insignificant, perhaps because CEO's influence on progression of CEO-recommended NID is more limited in larger firms.

For this purpose, Table 6 examines the likelihood of disclosing the recommending source at the NID level, as a function of director-level and firm-level characteristics. Namely, we include selected director-level variables from each of the sub-categories in Table 3, Panel A, with a focus on avoiding obvious multicollinearity issues (e.g., we only include one of the four executive experience variables). Note that we include firm fixed effects to examine why the recommending source is disclosed for some NID, but not others, *within* the same firm. Therefore, for parsimony we only include firm characteristics likely to exhibit significant variation within firm over time (e.g., performance variables and CEO tenure). Also, by including firm fixed effects we effectively drop "always disclosing" firms (the firms disclosing the recommending source for 100% of the NID). In other words, we focus on the variation within firms which disclose the source "sometimes", but not always.

Before presenting (and interpreting) the results, it is useful to discuss how firms may approach the disclosure choice at the NID level. We assume that firms' disclosure "rule" is only (or mostly) a function of the recommending source (e.g., disclose only if SF-recommended).[25] Importantly, under this scenario, the frequency of recommending sources reported in Table 2 will not be representative of the true population, but our "conditional upon disclosure" comparisons (Table 3 and 4) would remain valid and generalizable. What would such disclosure rule look like? A

[25] We acknowledge that firms may follow two alternative rules. First, firms' disclosure rule may be only a function of the "type" of NID (e.g., only disclose the recommending source for high-quality directors), regardless of the recommending source. In this case the frequency of recommending sources reported in Table 2 may or may not be representative of the true population (depending on whether those "types" of NID are more frequent for certain recommending sources than others), and our within-sample comparisons in Table 3 and 4 would be 'conditionally' valid, i.e., they would be valid only within the subset of NID of the "type" that triggers the disclosure. Second, firms' disclosure choice may be a function of the *combination* of recommending source and "type" of NID (e.g., always disclose the source for SF-recommended NID, but only disclose it for CEO-recommended NID if the NID is of a certain type). In this case, the bias affects both the frequency of recommending sources and - importantly – our within-sample comparisons in Table 3-4. For example, if firms disclosed the recommending source for all SF-recommended NID (and thus we observe their full distribution) while they disclose it for CEO-recommended NID only for NID of a certain type, our analysis (based on disclosed recommending sources) would bias the comparison between SF-recommended NID and CEO-recommended NID. Of course, it is possible that all three decision rules are at play.

reasonable conjecture is that firms will generally prefer to disclose the source for SF-recommended NID (because these NID would be perceived as more "independent" and perhaps of higher-quality as they are drawn from a broader pool and selected through a more structured vetting process), and not to disclose the source for CEO-recommended NID (on the ground that CEO-recommended NID may be viewed by shareholders as too loyal to the CEO). Then, we would expect that variables systematically associated with these sources would predict the disclosure decision.

Column (1) provides some evidence in support of this interpretation. For example, firms are more likely to disclose the recommending source for NID with greater executive experience (*C-suite – Ever*) and larger *Network Size*, two attributes more frequently associated with SF-recommended NID (see Table 3 Panel A). Similarly, Column (1) indicates lower likelihood of disclosure for NID with 1st degree connection to CEO and in firm-years with longer CEO tenure, two features associated with CEO-recommended NID. Thus, one could infer that the frequency of SF-recommended (CEO-recommended) NID presented in Table 2 is overstated (understated). However, other variables strongly associated with SF-recommended NID or CEO-recommended NID (e.g., gender, rookie directors), do not seem to predict the disclosure decision, suggesting caution in making the above inferences.

Column (1) also shows lower likelihood of disclosure for NID with a 1st degree connection to independent directors only, a feature generally associated, respectively, with ID-recommended NID (see Table 3, Panel A). The result is economically significant: NID with a 1st degree connection to independent directors only have a 10.4% lower probability of having the recommending source disclosed (this represents a 24.4% decrease from the unconditional probability of 42.7%). However, it is hard to identify a reason why firms would prefer not to

disclose the source of ID-recommended NID.[26] Ultimately, the responsibility of identifying new board members falls with the independent directors. Thus, disclosing that the NID was ID-recommended should not carry any negative connotation. Besides, based on our earlier discussion, investors may assume that the undisclosed source is the CEO. Given shareholders' potential concerns with CEO-recommended ID, independent directors would be better off by disclosing that the NID was ID-recommended, rather than not disclosing the source.

Overall, Table 6 suggests that the frequency of recommending sources presented in Table 2 is likely biased towards (away from) SF-recommended (CEO-recommended) NID, but the extent of the bias may not be very large.

7. Conclusions

(to be written…)

[26] We consider the possibility that some firms may naively interpret the SEC rule as requiring disclosure only when they deviate from the 'default' case, i.e., the case of ID-recommended NID (as noted earlier, independent nominating committee members are responsible for identifying and recommending nominees to the board). However, the rule language is clear: all sources must be disclosed. Besides, under this scenario, we should see some firms always and only disclosing the NID for CEO-recommended and SF-recommended NID. We do not observe this pattern in the data.

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Appendix 1 – Identification of NID Recommending Source

Our initial sample includes all new independent directors (NID) joining a board of a publicly traded firm covered in BoardEx between 2010 and 2019 and with available data in CRSP and Compustat.[27] For 97.5% of the NID we identify the proxy filing first reporting information about the NID.[28] For the resulting sample of 20,746 NID, we then proceed in three steps.

Step 1: Identify NID recommended by a search firm

We extract all portions of the proxy filing where the last name of the NID and certain keywords appear in the same sentence or in two adjacent sentences. The keywords we use are "search firm(s)", "recruiting firm(s)", as well as the names of the top five search firms: Spencer Stuart, Russell Reynolds, Heidrick Struggles, Korn Ferry, and Egon Zehnder. We read all these sentences to determine whether the NID was recommended by a search firms. When (voluntarily) disclosed, we also collect the name of the search firm. Then, we add to our list of keywords all the names of other 51 search firms identified in this process and repeat the search described above. Overall, this process identifies 2,303 NID recommended by search firms.

Step 2: Identify NID recommended by other sources

Based on the sentences read in Step 1, we identify the verbs typically used to describe how a NID was selected, such as 'recommend/recommended' and 'identify/identified'. Then, we extract the sentence including the last name of the NID and one of these verbs, plus the two adjacent sentences. Finally, we read all these sentences to determine whether the source of recommendation was disclosed. When disclosed, we hand code the identity of such source using the categories indicated in the SEC Release 33-8340: independent directors, CEO, other executives, shareholders, or other sources. Note: for 1,432 NID the proxy filing states that the nominating and governance (N&G) committee recommended the NID to the board of directors. Because ultimately a nominee is always recommended by the N&G committee to the board (no matter who proposed the nominee), we classify these cases as "source of recommendation not disclosed" (Table 1, Panel A). In contrast, if the language suggests that one (or more) of the N&G committee members identified or recommended the NID, then the NID is included in our final sample of 5,330 NID with disclosed recommending source (the source being independent directors).

Step 3: Firm-years where recommending source is disclosed only for some NID

For all firm-years with multiple NID where in Step 1 and Step 2 we identify the source for some but not all NID, for each NID without an identified recommending source we search for the NID name in the entire proxy statement to determine whether the recommending source for such NID is disclosed. When disclosed, we hand code the identity of such source as in Step 2.

Overall, we read potentially relevant sentences for over 8,000 NID and identify the source for 5,330 NID.[29] The results of this process are summarized in Table 1.

[27] More precisely, we include NID of firms with an annual report date (fiscal year end) between January 2010 and June 2020 in BoardEx, thus we have few observations for 2020 (since most firms have a December fiscal year end). We only include publicly traded firms listed on NYSE, Nasdaq or the American Stock Exchange with at least $1 million in total assets, $3 million in market value of equity, and end-of-year stock price of $1 or more.

[28] We search the NID's last name in the firm's DEF 14A proxy filings with a filing date within one year (before or after) of the annual report date in BoardEx (which typically corresponds to the end of the fiscal year), and we retain the earliest proxy filing mentioning the NID. We fail to identify the corresponding proxy filing for about 2.5% of NID. Manual inspection of these cases suggests that the reason is slight differences in the way the last name is reported in the proxy statement versus BoardEx. For example, for Ana Botín (a new director of Coca Cola Company in 2013) her last name appears in the proxy statement as "Botín", versus "Botin" in BoardEx.

[29] There are many cases of "false positives". For example, the sentence of interest may simply state that no "search firm" was used to "identify" the director.

Validation of search process

One concern is that our search may fail to detect all cases where the recommending source is disclosed, causing us to overstate the rate of non-compliance. We examine a random sample of 300 NID (each from a unique firm) for whom our search (as described above) failed to identify the recommending source. We read all mentions of the NID in the relevant proxy filing and find that the recommending source was disclosed only in 11 cases (3.7%). In these cases, the source was a large or activist shareholder. Our search did not capture these cases because the relevant sentence does not use words such as "identified" or "recommended" but rather states that the NID was appointed as part of an agreement with a shareholder. Thus, our 'false negative' rate appears to be low and limited to the case of NID identified by shareholders. Our "false negative" rate is equally low –at about 5% – in Step 3 of our search process, when we condition on firm-years with one NID recommended by a search firm, and we examine other NID in the same firm-year not captured by Step 2. Since in this sample by construction the source is disclosed for at least one NID, the "false negative" rate of 5% is likely over-estimating the true rate.

Appendix 2 – SEC Comment Letters and Firms' Responses

"Please provide the information required by Item 407(c) (2) (vii) of Regulation S-K with respect to Mr. Weiss." (*SEC Comment Letter to Natus Medical Inc., May 9, 2018*)

"Mr. Weiss was brought to the attention of the Nominating and Governance Committee for its consideration by Mr. Hawkins, our director and President and Chief Executive Officer." (*Natus Medical, Proxy Filing, May 11, 2018*)

"Please state which one or more of the following categories of persons or entities recommended Mr. Ryan as a nominee: Security holder, non-management director, chief executive officer, other executive officer, third-party search firm, or other specified source. See Item 7(d) of Schedule 14A and Item 407(c) (2) (vii) of Regulation S-K (*SEC Comment Letter to Essex Rental Corp., May 5, 2015*)

"Mr. Ryan was recommended to the Committee by industry sources whom the Committee reached out to when previously searching for candidates for Chief Executive Officer of Essex (*Essex Rental Corp. Response Letter to SEC, May 7, 2015*)

"Please provide to us and undertake to include in your future filings, revision of this section to comply with Item 407 as follows:…with regard to the two nominees that are not standing for re-election state which category of person or entity recommended each nominee as required by Item 407(c)(2)(vii)" (*SEC Comment Letter to Popular Inc., September 24, 2010*)

"Messrs. Ballester and Unanue were recommended as nominees for directors by non-management directors." (*Popular Inc. Response Letter to SEC, November 12, 2010*)

"Ensure that you include the disclosure specified in Item 407(c)(2)(vii) of Regulation S-K regarding nominees for director that at the time of their nomination are not standing for re-election and are not executive officers…We note, for example, that it is not apparent what category of persons or entities recommended to the committee that William Kerr in particular be considered as a director candidate" (*SEC Comment Letter to Whirlpool, August 21, 2007*)

"The non-management directors recommended Mr. Kerr to the Corporate Governance and Nominating Committee as a director nominee (*Whirlpool Response to SEC Comment Letter, October 20, 2007*)

"We note that, regarding Lawrence Nussdorf, you have not included the additional disclosure specified in Item 407(c)(2)(vii) of Regulation S-K" (*SEC Comment Letter to CapitalSource Inc., August 21, 2007*)

"The Company acknowledges this comment and will include disclosures responsive to Item 407(c)(2)(vii) in future proxy statements when required." (*CapitalSource Inc. Response to SEC Comment Letter, September 21, 2007*)

Appendix 3 – Examples of Source of Recommendation

Recommending Source: Search Firm

"Ms. Carter was newly elected to the Board in fiscal year 2011. She was recommended to the Company by its third-party recruiting firm." *(Air Products & Chemicals Inc, Proxy Statement, December 14, 2011)*

"Ms. Koellner was initially identified to the Board as a potential director by Spencer Stuart, an executive search consulting firm retained by the Board." *(Nucor Corp, Proxy Statement, March 3, 2016)*

Recommending Source: Independent Directors

"Mr. Mark T. Schroepfer…was recommended for nomination by a non-Management member of the Board." *(Winnebago Industries, Proxy Statement, October 25, 2011)*

"Mr. Alvarez was identified as a potential director candidate to the Governance Committee by Mr. Berkowitz." [an independent director]. *(St Joe Co, Proxy Statement, April 5, 2012)*

Recommending Source: CEO or other executives

"Dr. Rothman was first identified as a possible director candidate by the Company's CEO."

(Schering-Plough, Proxy Statement, April 11, 2016)

"The Board appointed Ms. Messemer as a director in January 2019. Ms. Messemer was initially identified as a potential candidate by an executive officer." *(Paypal Holdings Inc, Proxy Statement, April 10, 2019)*

"Ms. Hoskins was initially recommended for consideration by Raymond A. Ritchey, our Senior Executive Vice President, and Mr. Walton was initially recommended for consideration by Mr. Thomas, our Chief Executive Officer." *(Boston Properties Inc, Proxy Statement, April 5, 2019)*

Recommending Source: Shareholders

"In 2013, consistent with the Shareholder Agreement dated June 6, 2013 between the Company and Marubeni…the Nominating and Corporate Governance Committee determined to add two new members to the Board [and]…recommended Messrs. Konto and Toya (each of whom was designated by Marubeni) to be elected to the Board." *(Aircastle Ltd, Proxy Statement, April 8. 2014)*

"Mr. Hamill was recommended to the Nominating and Corporate Governance Committee as a director candidate by a stockholder." *(Arch Resources Inc, Proxy Statement, March 18, 2019)*

Recommending Source: Others

"Prior to the Spin-Off, Myra M. Hart, Peter B. Henry, Terry J. Lundgren, Mackey J. McDonald and John C. Pope served as directors of our Former Parent. In connection with the Spin-Off, they resigned as directors of our Former Parent and joined our Board." *(Kraft Foods Group Inc, Proxy Statement, April 5, 2013)*

"Mssrs. Spoehel and Pirnat were recommended by a financial advisor to the Company."

(Profire Energy Inc, Proxy Statement, January 17, 2014)

Appendix 4 – Variables Definitions

Variable	Definition	Source
Demographics and Education Background:		
Age	The age of the new independent director (NID) when joining the board.	BoardEx
Age 70+	Indicator variable equal to 1 if *Age* of the NID is greater than 70, 0 otherwise.	BoardEx
Female	Indicator variable equal to 1 if the NID is female, 0 otherwise.	BoardEx
Non-White	Indicator variable equal to 1 if the NID is non-white, 0 otherwise. The race is identified based on the NID's last name using Python ethnicolr package which classifies the predicted the race into four categories: White, Black, Asian, and Hispanic. We classify categories Black, Asian, and Hispanic as non-white.	BoardEx
MBA/Master	Indicator variable equal to 1 if the NID has an MBA or other Master degree, 0 otherwise.	BoardEx
Executive Experience:		
CEO - Current	Indicator variable equal to 1 if the NID is currently CEO of a publicly traded firm, 0 otherwise.	BoardEx
CEO - Ever	Indicator variable equal to 1 if the NID has ever served as CEO of a publicly traded firm, 0 otherwise.	BoardEx
C-suite - Current	Indicator variable equal to 1 if the NID is currently a C-suite executive of a publicly traded firm, 0 otherwise.	BoardEx
C-suite - Ever	Indicator variable equal to 1 if the NID has ever served as a C-suite executive of a publicly traded firm, 0 otherwise.	BoardEx
Board Experience:*		
Rookie Director	Indicator variable equal to 1 if the NID has never sat on a board as inside (employee) or outside (non-employee) director before, 0 otherwise.	BoardEx
*# Board Seats - Current***	Number of other boards the NID currently sits on.	BoardEx
*# Board Seats - Ever***	Number of other boards the NID has ever sat on.	BoardEx
*# Cumul Yrs on Boards***	Number of cumulative years spent by the NID as director across all board seats ever held.	BoardEx
*# Committees - Ever***	Number of committees the NID has ever served on across all board seats ever held.	BoardEx
*% Committees as Chair - Ever***	Percentage of committees where the NID has served as chair, calculated as the number of committee chairs ever held by the NID divided by the number of committees the NID has ever served on.	BoardEx
*Indep Chair/Lead ID - Ever***	Indicator variable equal to 1 if the NID has ever served as independent chair or lead independent director before, 0 otherwise.	BoardEx
Connectedness:		
1st Degree Connection to Board	Indicator variable equal to 1 if the NID and any existing director of the board they are joining have worked (in	BoardEx

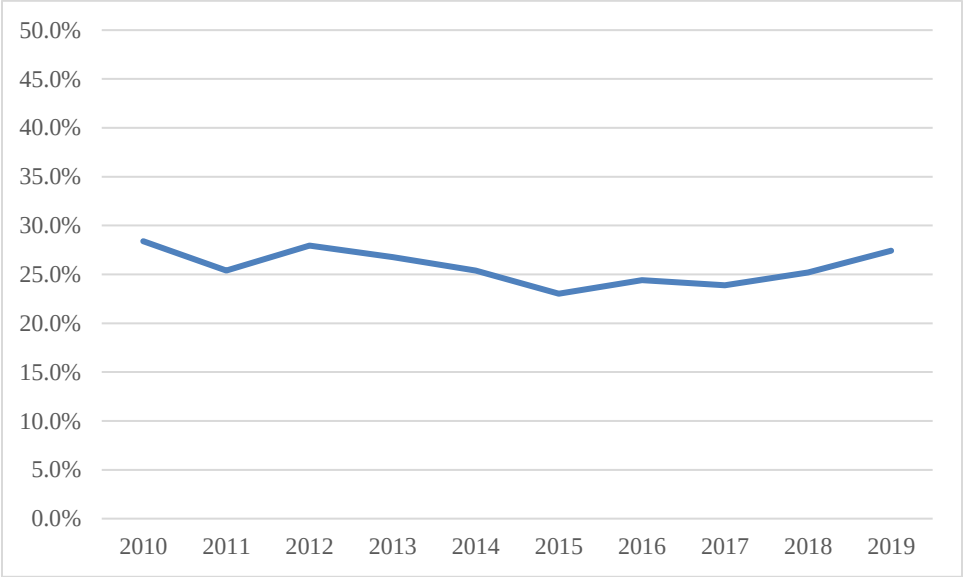
	either director or executive capacity) at the same company during an overlapping period of time, 0 otherwise.	
1st Degree Connection to ID Only	Indicator variable equal to 1 if the NID has a first-degree connection to any existing independent director of the board they are joining but does not have a first-degree connection to the CEO or any other executives of the firm, 0 otherwise.	BoardEx
1st Degree Connection to CEO	Indicator variable equal to 1 if the NID and CEO (or other executives) of the firm they are joining have worked (in either director or executive capacity) at the same company during an overlapping period of time, 0 otherwise. In Table 5 (Panel A and B), the variable is redefined at the firm-year level as equal to 1 if there is at least one NID in that firm-year with a 1st degree connection to the CEO, 0 otherwise.	BoardEx
% 1st Degree Connection to CEO	Ratio of *1st Degree Connection to CEO* to *1st Degree Connection to Board*, capturing the fraction of NID with first-degree connection to the board who have a first degree connection to the CEO.	BoardEx
2nd Degree Connection to Board	Indicator variable equal to 1 if the NID and any existing director of the board they are joining have a first-degree connection to the same third person, 0 otherwise.	BoardEx
1st or 2nd Degree Connection to Board	Indicator variable equal to 1 if NID has the *1st Degree Connection to Board* or *2nd Degree Connection to Board*, 0 otherwise.	BoardEx
Network Size	Number of first-degree connections of the NID to other directors in BoardEx.	BoardEx
Director-Specific Quality (DSQ)	Director-Specific Quality (DSQ) is a director-specific measure that captures the collection of value-relevant transferable attributes unique to a director, developed by Bhattarai, Serfling, and Woidtke (2022).	Bhattarai, Serfling, and Woidtke (2022)
Firm Financial Characteristics		
Total Asset	Total assets at the end of the fiscal year.	Compustat
Book-to-Market	The book value of common equity divided by the market value of common equity at the end of the fiscal year.	Compustat, CRSP
ROA	Return on assets, calculated as operating income divided by the total assets at the beginning of the fiscal year.	Compustat
Abnormal Returns	Annual abnormal returns during the prior fiscal year, measured as the difference between raw returns and value-weighted market returns.	Compustat, CRSP
Firm Governance and Board Characteristics		
Institutional Ownership	Percentage of institutional ownership at the beginning of the fiscal year.	Thomson Reuters
Board Size	Number of directors on the board at the beginning of the fiscal year.	BoardEx
Board Independence (%)	Percentage of independent directors on the board at the beginning of the fiscal year.	BoardEx

Women on Board (%)	Percentage of female directors on the board at the beginning of the fiscal year.	BoardEx
ID Avg Network	The average *Network Size* of existing independent directors at the beginning of the fiscal year.	BoardEx
CEO Network	The *Network Size* of CEO at the beginning of the fiscal year.	BoardEx
CEO/ID Avg Network	Relative network size of the CEO, computed *as CEO Network* divided by *ID Avg Network.*	BoardEx
CEO-Chair	Indicator variable equal to 1 if a CEO is also the Chairman of the board at the beginning of the fiscal year, 0 otherwise.	BoardEx
CEO Tenure	Number of years the incumbent CEO has been in her position as of the beginning of the fiscal year.	BoardEx
Market Reaction Around Appointment News		
Appointment Announcement Date	The earlier date between the Report Date of the first Form 8-K filing mentioning the NID and the BoardEx Announcement date for that NID (when available in Boardex), subject to the date being prior to the proxy filing date where the NID is up for election.	BoardEx, Compustat, Edgar
CAR (-1,1)	Cumulative abnormal returns around the NID announcement, calculated as the stock return of the appointing firm over the three trading days centered around the NID *Appointment Announcement Date*, minus the CRSP value-weighted market return over the same period.	CRSP
CAR (0,1), CAR (0,2)	Defined as *CAR (-1,1),* but over, respectively, the (0,+1) and the (0,+2) windows around the NID *Appointment Announcement Date*.	CRSP
Market Reaction to NID Appointment by Recommending Source		
SF-recommended	Indicator variable equal to 1 if NID is recommended by a search firm, 0 otherwise.	Edgar
CEO-recommended	Indicator variable equal to 1 if NID is recommended by the CEO or other executives of the firm, 0 otherwise.	Edgar
Concurrent Departure	Indicator variable equal to 1 if the firm announces the departure of another director during the (-2,2) window around the *Appointment Announcement Date*, 0 otherwise.	BoardEx
Shareholder Votes at Focal Firm Post-Appointment		
# Annual Meetings with a Vote	Number of shareholder annual meetings at the focal firm where the NID is up for election after joining the board.	ISS
% Meetings with Dissent >20%	Percentage of meetings at the focal firm where the NID receives voting dissent greater than 20% after joining the board. Voting dissent is defined as the sum of against and abstention votes scaled by all votes cast (against, for, abstain)	ISS
Indicator for Dissent >20%	Indicator variable equal to 1 if the NID ever receives voting dissent greater than 20% when up for election at	ISS

	the focal firm after joining the board, 0 otherwise. Voting dissent is defined as the sum of against and abstention votes scaled by all votes cast (against, for, abstain)	
Shareholder Votes at Other Firms Pre-Appointment		
# Annual Meetings with a Vote	Number of shareholder annual meetings at other firms where the NID was up for election before joining the board of the focal firm.	ISS
% Meetings with Dissent >20%	Percentage of meetings where the NID received voting dissent greater than 20% when up for election at other firms before joining the board of the focal firm. Voting dissent is defined as the sum of against and abstention votes scaled by all votes cast (against, for, abstain)	ISS
Indicator for Dissent >20%	Indicator variable equal to 1 if the NID ever received voting dissent greater than 20% when up for election at other firms before joining the board of the focal firm, 0 otherwise. Voting dissent is defined as the sum of against and abstention votes scaled by all votes cast (against, for, abstain)	ISS
Progression on the Board		
On Board After 3 Yrs	Indicator variable equal to 1 if the NID sits on the board 3 years after the appointment, 0 otherwise.	BoardEx
Indep Chair/Lead ID After 3 Yrs	Indicator variable equal to 1 if the NID serves as independent chair or lead independent director 3 years after the appointment, 0 otherwise. This variable is constructed only for the subset of NID with *On Board After 3 Yrs* = 1.	BoardEx
# Committees After 3 Yrs	Number of committees the NID serves on 3 years after the appointment. This variable is constructed only for the subset of NID with *On Board After 3 Yrs* = 1.	BoardEx
Committee Chair After 3 Yrs	Indicator variable equal to 1 if the NID serves as a committee chair 3 years after the appointment, 0 otherwise. This variable is constructed only for the subset of NID with *On Board After 3 Yrs* = 1.	BoardEx

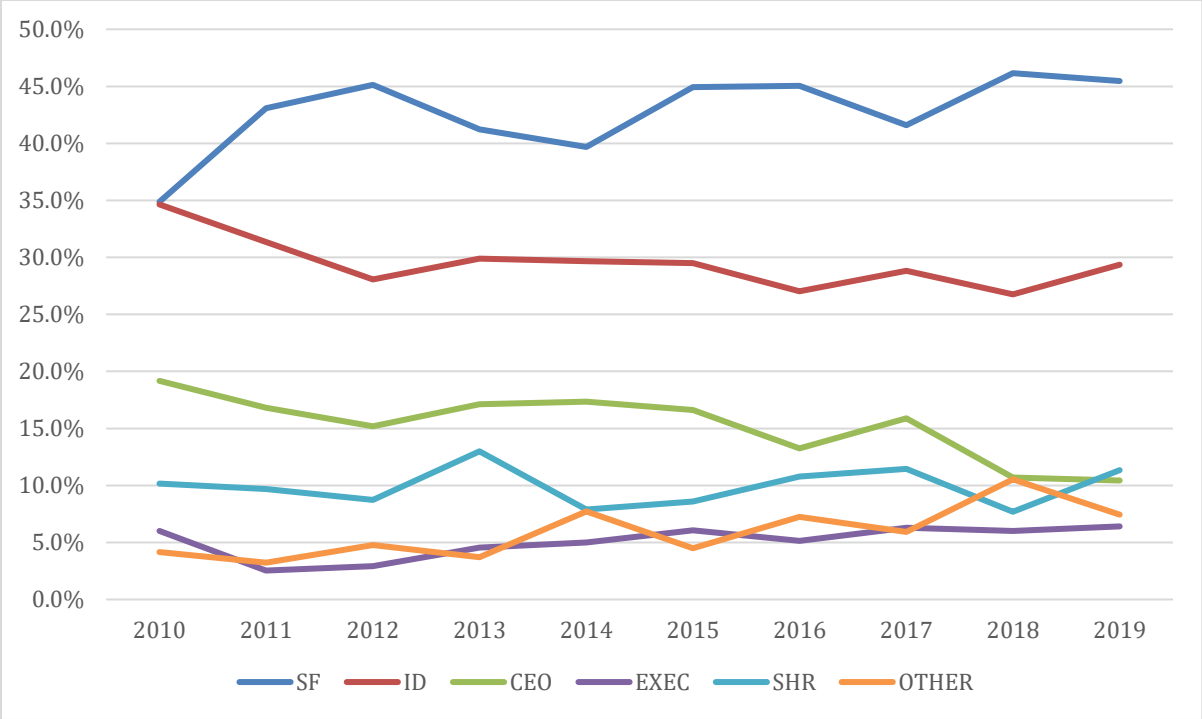
* All the Board Experience variables refer to the experience on boards of publicly traded companies.
** These variables are only defined for NID who are not classified as *Rookie Director*.

Figure 1 Frequency of NID with disclosed source of recommendations (2010-2019)



Notes: The dark blue line shows the percentage of NID with disclosed recommending source between 2010 and 2019 based on the search described in Appendix 1.

Figure 2 Frequency of (disclosed) recommending sources (2010-2019)



Notes: The dark blue line shows the percentage of NID recommended by search firms (SF). The red line shows the percentage of NID recommended by independent directors (ID). The green line shows the percentage of NID recommended by CEO (CEO). The purple line shows the percentage of NID recommended by other executives (EXEC). The light blue line shows the percentage of NID recommended by shareholders (SHR). The orange line shows the percentage of NID recommended by other sources (OTHER).

Table 1 Disclosure of Recommending Source of New Independent Directors (NID)

Panel A. Frequency of Disclosure at the Director Level

Description	*Number*	*% Total*
New Independent Directors (NID) in BoardEx [2010-2020]	20,746	
Source of recommendation not disclosed	15,416	74.3%
Source of recommendation disclosed	5,330	25.7%

Panel B. Frequency of Disclosure at the Firm Level

Description	*# Firms (%)*	*# NID*
Unique firms with NID in Boardex [2010-2020]	4,327	20,746
Firms never disclosing recommending source of NID	2,623 (60.6%)	
Firms disclosing recommending source for at least 1 NID	1,704 (39.4%)	
NID with disclosure		5,330 (52.2%)
NID without disclosure		4,872 (47.8%)

Panel C. Disclosure Consistency Over Time Among Disclosing Firms

Recommending source disclosed…	*All Disclosing Firms*		*Disclosing Firms with at least 5 NID*	
	# Firms	*%*	*# Firms*	*%*
…for <1/3 NID	426	25%	350	33%
…for >=1/3 and <2/3 NID	577	34%	360	34%
…for =>2/3 NID and <100% NID	300	18%	208	20%
…for 100% NID	401	24%	132	13%
Total	**1,704**	**100%**	**1,050**	**100%**

Panel D. Disclosure Consistency across NID Among Disclosing Firms

# Firm-years with multiple NID and disclosure for at least one NID	1,479	
#Firm-years with disclosure for all NID		1,105 (75%)
#Firm-years with disclosure for some NID		374 (25%)

Notes: This table reports descriptive statistics on the source of recommendations of new independent directors (NID). Panel A and Panel B report the frequency of disclosure of the NID recommending source, respectively, at the director level and at the firm level. Panel C examines the subset of firms disclosing the NID recommending source at least once during the sample period ("disclosing firms") and reports in column 1 and 2 the number and percentage of disclosing firms which disclosed the recommending source for a certain percentage of their NID. For example, the first row reports the number and percentage of disclosing firms which disclosed the recommending source for less than 1/3 of their NID. Columns 3 and 4 report the same figures for the subset of disclosing firms with at least 5 NID during the sample period. Panel D examines the subset of firm-years with multiple NID and disclosure of the recommending source for at least one of the NID and reports the percentage of such firm-year observations with disclosure of the recommending source for all vs. some NID.

Table 2 Frequency of NID Recommending Sources (when disclosed)

Description	*One of the sources*	*% NID with disclosure*	*Unique source*	*% NID with disclosure*
Single source			**4,930**	**92.5%**
Search Firm	2,303	44.0%	2,183	41.7%
Independent director(s)	1,559	29.8%	1,250	23.9%
CEO	792	15.1%	583	11.1%
Other executive(s)	274	5.2%	148	2.8%
Shareholders	526	10.0%	463	8.8%
Others	325	6.2%	303	5.8%
Multiple sources			**400**	**7.5%**
Total NID with disclosed source			**5,330**	**100.0%**

Notes: This table reports the frequency of the source of recommendations (search firm, independent directors, CEO, etc.) of new independent directors (NID), for the subset of NID where the recommending source is disclosed. In the first two columns the NID recommended by multiple sources are counted within each of the recommending sources. Thus, the sum of the first (second) column is higher than 5,330 (100%), i.e., the total number of NID with disclosed recommending source. In the third and fourth column, all the NID recommended by multiple sources are reported in a separate line (Multiple sources)

Table 3 Recommending source and characteristics of new independent directors (NID)
Panel A. Recommending source and characteristics of NID

	Mean			*Diff. in Means*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Source of recommendation	*ID*	*SF*	*CEO*	*(2)-(1) SF vs.*	*(3)-(1) CEO vs.*	*(2)-(3) SF vs.*
Variables	*(n=1250)*	*(n=2183)*	*(n=759)*	*ID*	*ID*	*CEO*
Demographics and Education Background						
Age	57.89	56.82	57.64	-1.07***	-0.26	-0.82***
Age 70+	0.04	0.01	0.04	-0.03***	-0.01	-0.03***
Female	0.30	0.38	0.23	0.08***	-0.07***	0.15***
Non-White	0.07	0.09	0.07	0.02***	0.00	0.03**
MBA/Master	0.36	0.44	0.33	0.08***	-0.02	0.11***
Executive Experience						
CEO - Current	0.06	0.14	0.08	0.08***	0.01	0.07***
CEO - Ever	0.21	0.33	0.23	0.12***	0.02	0.10***
C-suite - Current	0.11	0.26	0.11	0.15***	0.00	0.15***
C-suite - Ever	0.38	0.62	0.35	0.24***	-0.03	0.27***
Board Experience						
Rookie Director	0.46	0.31	0.49	-0.15***	0.03	-0.18***
# Board Seats - Current	1.04	1.01	0.90	-0.03	-0.14**	0.11**
# Board Seats - Ever	2.83	2.57	2.68	-0.26**	-0.15	-0.11
# Cumul Yrs on Boards	11.51	9.25	10.74	-2.25***	-0.76	-1.49**
# Committees - Ever	5.02	4.31	4.26	-0.71***	-0.76***	0.05
% Committees as Chair - Ever	0.18	0.13	0.16	-0.05***	-0.02	-0.03**
Indep Chair/Lead ID - Ever	0.15	0.12	0.10	-0.03*	-0.05**	0.02
Connectedness						
1st Degree Connection to Board	0.42	0.26	0.30	-0.16***	-0.12***	-0.04**
1st Degree Connection to ID Only	0.21	0.08	0.05	-0.14***	-0.16***	0.03***
1st Degree Connection to CEO	0.21	0.18	0.25	-0.03**	0.04**	-0.07***
% 1st Degree Connection to CEO	0.49	0.70	0.83	0.21***	0.34***	-0.13***
2nd Degree Connection to Board	0.32	0.57	0.35	0.24***	0.03	0.21***
1st or 2nd Degree Connection to Board	0.75	0.82	0.65	0.08***	-0.09***	0.17***
Network Size	246.33	329.72	211.39	83.40***	-34.94***	118.33***
Director-Specific Quality (DSQ):	0.04	0.04	0.04	0.01	0.01	0.00

Panel B. Recommending source and firm characteristics

	Mean			*Diff. in Means*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Source of recommendation	*ID*	*SF*	*CEO*	*(2)-(1) SF vs.*	*(3)-(1) CEO vs.*	*(2)-(3) SF vs.*
Variables	*(n=1250)*	*(n=2183)*	*(n=759)*	*ID*	*ID*	*CEO*
Firm Financial Characteristics						
Total Asset	19,544.41	26,113.08	16,831.09	6,568.67***	-2,713.32	-9,281.98***
Book-to-Market	0.54	0.46	0.51	-0.08***	-0.03	0.05***
ROA	0.02	0.06	0.02	0.05***	0.01	-0.04***
Abnormal Return	0.03	0.05	0.05	0.02	0.02	-0.01
Governance and Board Characteristics						
Institutional Ownership	0.70	0.80	0.68	0.09***	-0.02*	-0.12***
Board Size	9.42	9.69	8.97	0.28***	-0.45***	-0.72***
Board Independence (%)	0.85	0.87	0.83	0.02***	-0.02***	-0.04***
Women on Board (%)	0.14	0.17	0.13	0.04***	-0.01	-0.04***
ID Avg Network	286.61	372.31	260.74	85.70***	-25.87**	-111.58***
CEO Network	199.84	256.79	212.28	56.96***	12.45	-44.51***
CEO/ID Avg Network	0.76	0.71	0.84	-0.05**	0.08**	0.13***
CEO-Chair	0.40	0.42	0.54	0.02	0.13***	0.12***
CEO Tenure	4.72	4.45	5.56	-0.27*	0.84***	1.11***

Panel C. Multivariate analysis of NID Characteristics

	Dependent Variables						
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
	Female	*C-suite - Ever*	*Rookie Director*	*1st Degree Connection to Board*	*% 1st Degree Connection to CEO*	*2nd Degree Connection to Board*	*Network Size*
Variable							
Source of Recommendation							
SF-recommended	0.063***	0.185***	-0.069***	-0.191***	0.213***	0.207***	34.675***
	(3.45)	(8.87)	(-3.33)	(-8.89)	(5.76)	(9.61)	(2.72)
CEO-recommended	-0.070***	-0.030	0.047*	-0.120***	0.320***	0.042*	-28.396*
	(-3.02)	(-1.14)	(1.76)	(-4.73)	(7.59)	(1.75)	(-1.94)
Firm Financial Characteristics							
log(Total Asset)	0.002	0.023***	-0.045***	0.003	-0.039**	0.028***	42.766***
	(0.27)	(3.48)	(-6.70)	(0.37)	(-2.56)	(3.48)	(9.63)
Book-to-Market	0.010	-0.033	0.028	-0.031	-0.027	-0.021	-51.200***
	(0.46)	(-1.30)	(1.19)	(-1.16)	(-0.59)	(-0.80)	(-3.75)
ROA	0.093**	0.004	0.110**	0.035	0.322***	-0.154***	-63.505**
	(2.31)	(0.08)	(2.14)	(0.65)	(2.84)	(-2.73)	(-2.49)
Abnormal Return	0.035*	-0.005	0.020	0.013	0.019	0.026	-9.881
	(1.82)	(-0.25)	(0.90)	(0.62)	(0.45)	(1.15)	(-0.81)
Governance and Board Characteristics							
Institutional Ownership	0.048	0.118***	-0.154***	-0.068	-0.054	0.191***	-25.531
	(1.17)	(2.65)	(-3.49)	(-1.36)	(-0.67)	(3.93)	(-0.97)
Board Size	0.013**	-0.009*	0.004	-0.009	-0.006	0.012**	-1.863
	(2.53)	(-1.72)	(0.79)	(-1.63)	(-0.56)	(2.06)	(-0.52)
Board Independence (%)	0.105	0.198	0.046	0.177	0.004	0.069	103.857
	(0.75)	(1.40)	(0.32)	(1.13)	(0.02)	(0.42)	(1.08)
Women on Board (%)	-0.795***	0.377***	-0.203**	0.014	0.146	0.106	128.215**
	(-9.34)	(4.26)	(-2.36)	(0.15)	(0.83)	(1.15)	(2.47)
CEO/ID Avg Network	-0.025**	-0.004	0.015	0.016	0.026	-0.038***	4.649
	(-2.17)	(-0.32)	(1.11)	(1.20)	(1.10)	(-2.84)	(0.59)
CEO-Chair	0.034*	0.002	0.012	0.005	0.006	-0.019	-4.278

	(1.89)	(0.10)	(0.62)	(0.23)	(0.18)	(-0.89)	(-0.38)
CEO Tenure	0.002	-0.005**	0.007***	-0.003	0.001	-0.001	-0.701
	(1.06)	(-2.44)	(3.26)	(-1.16)	(0.33)	(-0.24)	(-0.51)
Constant	0.165	0.032	0.782***	0.396***	0.844***	-0.158	-122.773*
	(1.46)	(0.28)	(6.74)	(3.07)	(3.91)	(-1.20)	(-1.71)
F-Test (SF = CEO)	0.00***	0.00***	0.00***	0.00***	0.01**	0.00***	0.00***
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,401	3,401	3,401	3,401	1,026	3,401	3,401
Adj. R-Square	0.104	0.097	0.081	0.150	0.282	0.134	0.136

Panel D. Recommending source and market reaction to NID appointment

Univariate Test	***Mean***			***Diff. in Means***		
Source of recommendations	***(1) ID (n=742)***	***(2) SF (n=1602)***	***(3) CEO (n=454)***	***(4) (2)-(1) SF vs. ID***	***(5) (3)-(1) CEO vs. ID***	***(6) (2)-(3) SF vs. CEO***
Market reaction around appointment news						
CAR (-1,1)	-0.06	0.2**	0.14	0.26*	0.20	0.06
CAR (0,1)	0.04	0.17**	0.06	0.13	0.01	0.12
CAR (0,2)	0.11	0.11	0.11	0.00	0.00	-0.01

Multivariate Test	***Dependent Variables***		
Variable	***(1) CAR(-1,1)***	***(2) CAR(0,1)***	***(3) CAR(0,2)***
SF-recommended	0.261*	0.132	0.000
	(1.83)	(1.15)	(0.00)
CEO-recommended	0.205	0.014	0.007
	(1.07)	(0.09)	(0.04)
Concurrent Departure	0.392**	0.214	0.240
	(2.03)	(1.37)	(1.22)
Constant	-0.106	0.019	0.081
	(-0.88)	(0.20)	(0.66)
Observations	2,798	2,798	2,798
Adj. R-Square	0.002	0.000	-0.001

Notes: Panel A (Panel B) reports director-level (firm-level) characteristics across various source of recommendation. Column (1) to (3) reports the mean of such characteristics when the source of recommendation is independent director(s) (ID), search firm (SF), or CEO and executives (CEO), respectively. Column (4) reports the difference in mean characteristics between NID recommended, respectively, by SF and ID. Column (5) reports the difference in mean characteristics between NID recommended, respectively, by CEO and ID. Column (6) reports the difference in mean characteristics between NID recommended, respectively, by SF and CEO. Note that the N reported in the top row refers to the variable with the highest number of observations. Panel C presents a multivariate analysis where in each column the dependent variable is one director-level characteristic from Panel A. The independent variables include indicators for SF-recommended and CEO-recommended NID, the firm characteristics in Panel B, as well as industry and year fixed effects. The F-Test row reports the p-value for a significance test of the difference between the coefficients of SF-recommended and CEO-recommended. *, **, *** represent significance levels of 0.1, 0.05, 0.01, respectively, for two-tailed tests of differences from zero. Standard errors are clustered by firm. Panel D in the top portion of the panel (univariate test), reports mean cumulative abnormal returns (CAR) around NID appointment news by recommending source. Columns 1-6 are defined as in Panel A and B. Panel D in the bottom portion present a multivariate test where in each column the dependent variable is CAR defined over different windows and the independent variables include indicators for SF-recommended and CEO-recommended NID, and an indicator denoting whether the firm concurrently announced the departure of another director. See Appendix 4 for variable definitions. *, **, *** represent significance levels of 0.1, 0.05, 0.01, respectively. Standard errors are clustered by NID appointment (following Cai et al. 2022).

Table 4 Recommending source and performance of new independent directors (NID)
Panel A. Univariate analysis

	Mean			*Diff. in Means*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Source of recommendation	*ID*	*SF*	*CEO*	*(2)-(1) SF vs.*	*(3)-(1) CEO*	*(2)-(3) SF vs.*
Variables	*(n=1250)*	*(n=2183)*	*(n=759)*	*ID*	*vs. ID*	*CEO*
Shareholder Votes at Focal Firm Post-Appointment:						
# Annual Meetings with a Vote	4.74	4.90	4.92	0.16	0.18	-0.02
% Meetings with Dissent >20%	0.05	0.03	0.08	-0.02***	0.03***	-0.05***
Indicator for Dissent >20%	0.13	0.08	0.20	-0.05***	0.06***	-0.11***
Shareholder Votes at Other Firms Pre-Appointment:						
# Annual Meetings with a Vote	6.60	6.30	5.46	-0.30	-1.14***	0.84**
% Meetings with Dissent >20%	0.03	0.03	0.04	0.00	0.01	-0.01
Indicator for Dissent >20%	0.15	0.16	0.17	0.01	0.02	-0.01
Progression on the Board:						
On Board After 3 Yrs	0.69	0.68	0.73	-0.01	0.04*	-0.04**
Indep Chair/Lead ID After 3 Yrs	0.04	0.04	0.06	0.00	0.02*	-0.03**
# Committees After 3 Yrs	1.88	1.86	1.95	-0.02	0.07	-0.09**
Committee Chair After 3 Yrs	0.40	0.33	0.38	-0.07***	-0.02	-0.05**

Panel B. Multivariate analysis

	Dependent Variables				
	(1) Indicator for Dissent >20%	***(2) On Board After 3 Yrs***	***(3) Indep Chair/Lead ID After 3 Yrs***	***(4) # Committees After 3 Yrs***	***(5) Committee Chair After 3 Yrs***
Variable					
Source of Recommendation					
SF-recommended	-0.026*	-0.022	-0.002	0.009	-0.047**
	(-1.91)	(-1.31)	(-0.27)	(0.25)	(-2.16)
CEO-recommended	0.047**	0.012	0.018	0.056	-0.037
	(2.35)	(0.60)	(1.43)	(1.11)	(-1.34)
Firm Financial Characteristics					
log(Total Asset)	-0.021***	0.022***	-0.003*	-0.009	-0.026***
	(-5.29)	(4.24)	(-1.70)	(-0.69)	(-4.34)
Book-to-Market	0.024	-0.063***	0.004	0.227***	0.067**
	(1.11)	(-2.79)	(0.38)	(4.34)	(2.52)
ROA	-0.115***	0.103**	-0.023	0.247***	-0.090
	(-2.86)	(2.20)	(-1.35)	(2.68)	(-1.59)
Abnormal Return	-0.006	-0.021	0.005	-0.059	-0.007
	(-0.39)	(-1.05)	(0.43)	(-1.37)	(-0.27)
Constant	0.286***	0.551***	0.066***	1.823***	0.576***
	(7.90)	(11.61)	(3.35)	(16.45)	(10.71)
F-Test (SF = CEO)	0.00***	0.08*	0.09*	0.30	0.69
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	3,752	4,027	2,797	2,797	2,797
Adj. R-Square	0.061	0.274	0.004	0.103	0.021

Notes: Panel A reports three sets of data: (i) shareholder voting dissent experienced by NID at the focal firm subsequent to their appointment; (ii) shareholder voting dissent experienced by NID at other firms where they held a board seat, prior to their appointment to the focal firms; and (iii) measures of progression of NID on the board of the focal firm subsequent to joining it. Column (1) to (3) reports the mean of variables when the source of recommendation is independent director(s) (ID), search firm (SF), or CEO and executives (CEO), respectively. Column (4) reports the difference in mean variables between NID recommended, respectively, by SF and ID. Column (5) reports the difference in mean variables between NID recommended, respectively, by CEO and ID. Column (6) reports the difference in mean variables between NID recommended, respectively, by SF and CEO. Note that the N reported in the top row refers to the variable with the highest number of observations. *, **, *** represent significance levels of 0.1, 0.05, 0.01, respectively, for two-tailed tests of differences from zero. Panel B presents a multivariate analysis where in each column the dependent variable is a selected variable from Panel A, and the independent variables include indicators for SF-recommended and CEO-recommended NID, firm financial characteristics, as well as industry and year fixed effects. The F-Test row reports the p-value for a significance test of the difference between the coefficients of SF-recommended and CEO-recommended. See Appendix 4 for variable definitions. *, **, *** represent significance levels of 0.1, 0.05, 0.01, respectively. Standard errors are clustered by firm.

Table 5 Determinants of decision to "never disclose" the NID recommending source
Panel A. Univariate Analysis

	Mean		*Diff. in Means*
	(1)	*(2)*	*(3)*
	Never Discloser (n=5,541)	*Discloser (n=5,222)*	*= (1) - (2)*
Firm Financial Characteristics			
Total Asset	6,372.41	17,944.61	-11,572.20***
Book-to-Market	0.56	0.52	0.04***
ROA	-0.01	0.05	-0.07***
Abnormal Return	0.04	0.04	0.00
Governance and Board Characteristics			
Institutional Ownership	0.64	0.75	-0.10***
Board Size	8.39	9.38	-0.99***
Board Independence (%)	0.83	0.86	-0.03***
Women on Board (%)	0.11	0.15	-0.04***
1st Degree Connection to CEO	0.21	0.22	-0.02**
CEO-Chair	0.39	0.43	-0.04***
CEO Tenure	4.70	4.91	-0.21**

Panel B. Multivariate analysis

	Dependent Variables	
	(1)	
Variable	***Discloser***	***Marginal Effect***
Firm Financial Characteristics		
log(Total Asset)	0.053***	10.8%
	(7.92)	
Book-to-Market	0.019	
	(1.04)	
ROA	0.056*	1.4%
	(1.80)	
Abnormal Return	-0.015	
	(-1.49)	
Governance and Board Characteristics		
Institutional Ownership	0.017	
	(0.46)	
Board Size	0.012***	2.9%
	(2.74)	
Board Independence (%)	0.358***	2.9%
	(3.62)	
Women on Board (%)	0.410***	4.5%
	(5.61)	
1st Degree Connection to CEO	0.020	
	(1.23)	
CEO-Chair	-0.003	
	(-0.20)	
CEO Tenure	0.001	
	(0.76)	
Constant	-0.399***	
	(-4.99)	
Industry FE	Yes	
Year FE	Yes	
Observations	10,763	
Adj. R-Square	0.145	

Panel C. Sources of recommendation of NID: Frequency

Single source	***Total Asset ($billion)*** *Mean (Median)*	***(1) ID*** *# NID (%)*	***(2) SF*** *# NID (%)*	***(3) CEO*** *# NID (%)*	***(4) SH*** *# NID (%)*
Full Sample (NID with disclosed source)	21.1 (3.4)	1,250 (25.2%)	2,183 (44.0%)	759 (15.3%)	773 (15.6%)
Subsample (total asset below median)	1.2 (0.8)	693 (28.0%)	915 (37.0%)	420 (17.0%)	445 (18.0%)
Subsample (total asset above median)	40.3 (13.3)	557 (22.4%)	1,268 (50.9%)	339 (13.6%)	328 (13.2%)
Never Discloser (NID-level)	6.9 (0.9)				

Notes: Panel A reports the mean of firm financial and governance characteristics for Never Disclosers (all firm-year observations of firms that never disclosure the NID recommending source during the sample period; column 1) and Disclosers (all firm-year observations of firms that disclose the NID recommending source at least once during the sample period; column 2), as well as a univariate test for the difference in means (column 3). *, **, *** represent significance levels of 0.1, 0.05, 0.01, respectively, for two-tailed tests of differences. Panel B presents a multivariate analysis (linear probability model) where the dependent variable is equal to one if Discloser is equal to one, and 0 otherwise. The control variables include the firm characteristics in Panel A, as well as industry and year fixed effects. For the independent variables with a statistically significant coefficient, the Marginal Effect column reports the increase in the probability of Discloser for a one standard deviation increase in the independent variable. See Appendix 4 for variable definitions. *, **, *** represent significance levels of 0.1, 0.05, 0.01, respectively. Standard errors are clustered by firm. Panel C reports mean and median total assets and the frequency of each recommending source for the full sample of NID with disclosure (first row), as well as for the subset with total assets below (second row) and above median (third row). The last row reports the mean and median total assets for Never Disclosers. The unit of analysis for mean and median total assets is at the director level (i.e., the mean total assets in the first row is the mean total assets across all firm-year-NID observations).

Table 6 Determinants of decision to disclose the recommending source for "some but not all" NID

	Dependent Variables		
Variable	*(1) NID with disclosed recommending source*	*Marginal Effect*	*(2) NID with disclosed recommending source*
NID Characteristics			
Age	-0.001*	-0.8%	-0.001
	(-1.67)	*(one standard deviation increase)*	(-1.37)
Female	0.003		0.003
	(0.20)		(0.20)
C-suite - Ever	0.036**	3.6%	0.037***
	(2.54)	*(from 0 to 1)*	(2.70)
Rookie Director	0.001		
	(0.09)		
# Cumul Yrs on Boards			-0.001
			(-1.08)
% Committees as Chair - Ever			0.008
			(0.19)
Indep Chair/Lead ID - Ever			0.019
			(0.79)
1st Degree Connection to CEO	-0.072***	-7.2%	-0.071***
	(-2.96)	*(from 0 to 1)*	(-2.90)
1st Degree Connection to ID Only	-0.104***	-10.4%	-0.103***
	(-5.38)	*(from 0 to 1)*	(-5.30)
log(Network Size)	0.015***	2.5%	0.015***
	(3.07)	*(one standard deviation increase)*	(3.18)
Director-Specific Quality (DSQ)	0.073		0.072
	(1.21)		(1.19)
Firm Characteristics			
ROA	0.127		0.127
	(1.35)		(1.34)
Abnormal Return	0.029		0.030
	(1.43)		(1.45)
CEO Tenure	-0.011***	-4.5%	-0.011***
	(-3.44)	*(one standard deviation increase)*	(-3.46)
Constant	0.490***		0.481***
	(8.73)		(8.82)
Firm FE	Yes		Yes
Year FE	Yes		Yes
Observations	7,214		7,194
Adj. R-Square	0.124		0.123

Notes: this table presents a multivariate analysis (linear probability model) at the director level where the dependent variable is equal to one for NID with disclosed recommending source, 0 otherwise. The sample includes only firms disclosing the recommending source for at least one NID (see Table 1 Panel C). The control variables include selected director-level and firm-level characteristics Table 1, Panel A, as well as firm and year fixed effects. Because we use firm fixed effects, firms always disclosing the recommending source for all NID are dropped by the analysis. For the continuous independent variables with a

statistically significant coefficient, the Marginal Effect column reports the increase in the likelihood of disclosing the source for a one standard deviation increase in the independent variable. For the indicator independent variables with a statistically significant coefficient, the Marginal Effect column reports the increase in the likelihood of disclosing the source when the indicator variable goes from 0 to 1. See Appendix 4 for variable definitions. *, **, *** represent significance levels of 0.1, 0.05, 0.01, respectively. Standard errors are clustered by firm.

Internet Appendix

IA. Table 1 Recommending source and firm characteristics
Panel A. Subsample with total asset above sample median

	Mean			*Diff. in Means*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Source of recommendation	*ID*	*SF*	*CEO*	*(2)-(1) SF vs.*	*(3)-(1) CEO vs.*	*(2)-(3) SF vs.*
Variables	*(n=557)*	*(n=1,268)*	*(n=339)*	*ID*	*ID*	*CEO*
Firm Financial Characteristics:						
Total Assets	42,495.48	43,874.41	36,657.14	1,378.92	-5,838.34	-7,217.27*
Book-to-Market	0.50	0.49	0.48	-0.01	-0.03	-0.01
ROA	0.08	0.09	0.08	0.01**	-0.00	-0.01***
Abnormal Returns	0.03	0.04	0.02	0.01	-0.01	-0.02
Governance and Board Characteristics:						
Institutional Ownership	0.76	0.79	0.79	0.03***	0.02**	-0.00
Board Size	10.92	10.65	10.37	-0.27**	-0.55***	-0.28**
Board Independence (%)	0.87	0.89	0.86	0.01***	-0.02***	-0.03***
Women on Board (%)	0.16	0.19	0.16	0.03***	0.00	-0.03***
ID Avg Network	393.21	457.59	368.72	64.38***	-24.48	-88.86***
CEO Network	292.56	328.84	335.24	36.28**	42.68*	6.40
CEO/ID Avg Network	0.80	0.73	0.90	-0.07**	0.10*	0.17***
CEO-Chair	0.51	0.52	0.63	0.01	0.13***	0.12***
CEO Tenure	5.06	4.64	5.89	-0.42*	0.82***	1.24***

Panel B. Subsample with total asset below median

	Mean			*Diff. in Means*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Source of recommendation	*ID*	*SF*	*CEO*	*(2)-(1) SF vs.*	*(3)-(1) CEO vs.*	*(2)-(3) SF vs.*
Variables	*(n=693)*	*(n=915)*	*(n=420)*	*ID*	*ID*	*CEO*
Firm Financial Characteristics						
Total Assets	1,103.95	1,449.98	923.05	346.03***	-180.90***	-526.93***
Book-to-Market	0.57	0.42	0.54	-0.15***	-0.03	0.12***
ROA	-0.04	0.02	-0.02	0.06***	0.01	-0.04**
Abnormal Returns	0.03	0.07	0.07	0.04	0.04	0.00
Governance and Board Characteristics						
Institutional Ownership	0.65	0.80	0.58	0.15***	-0.07***	-0.22***
Board Size	8.14	8.33	7.80	0.19**	-0.34***	-0.54***
Board Independence (%)	0.84	0.85	0.81	0.02***	-0.02***	-0.04***
Women on Board (%)	0.11	0.15	0.10	0.03***	-0.01*	-0.04***
ID Avg Network	195.72	251.23	168.77	55.51***	-26.95***	-82.46***
CEO Network	120.27	154.98	107.59	34.71***	-12.68	-47.39***
CEO/ID Avg Network	0.72	0.68	0.79	-0.05	0.07	0.11**
CEO-Chair	0.32	0.29	0.46	-0.03	0.14***	0.17***
CEO Tenure	4.43	4.18	5.28	-0.25	0.86***	1.10***

Notes: This tables replicates Table 3 (Panel B) separately for the subset of firms with total assets above sample median (Panel A) and below sample median (Panel B).

IA. Table 2 Recommending source and characteristics/performance of NID (firms with total assets below sample median)
Panel A. Recommending source and characteristics of NID

	Mean			*Diff. in Means*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Source of recommendation	*ID*	*SF*	*CEO*	*(2)-(1) SF vs.*	*(3)-(1) CEO vs.*	*(2)-(3) SF vs.*
Variables	*(n=693)*	*(n=915)*	*(n=420)*	*ID*	*ID*	*CEO*
Demographics and Education Background						
Age	57.63	56.23	57.23	-1.40***	-0.39	-1.00**
Age 70+	0.06	0.01	0.05	-0.06***	-0.01	-0.04***
Female	0.29	0.38	0.21	0.09***	-0.08***	0.17***
Non-White	0.07	0.08	0.07	0.01	0.00	0.01
MBA/Master	0.34	0.45	0.31	0.11***	-0.03	0.14***
Executive Experience						
CEO - Current	0.04	0.10	0.05	0.06***	0.00	0.06***
CEO - Ever	0.17	0.28	0.18	0.10***	0.01	0.10***
C-suite - Current	0.10	0.22	0.07	0.12***	-0.03	0.15***
C-suite - Ever	0.36	0.60	0.31	0.24***	-0.05*	0.29***
Board Experience						
Rookie Director	0.51	0.36	0.52	-0.15***	0.01	-0.17***
# Board Seats - Current	0.93	0.94	0.87	0.00	-0.07	0.07
# Board Seats - Ever	2.61	2.33	2.76	-0.27*	0.15	-0.42**
# Cumul Yrs on Boards	10.46	8.16	10.51	-2.30***	0.05	-2.35**
# Committees - Ever	4.46	3.85	4.20	-0.62**	-0.27	-0.35
% Committees as Chair - Ever	0.19	0.13	0.17	-0.06***	-0.02	-0.04**
Indep Chair/Lead ID - Ever	0.14	0.11	0.10	-0.03	-0.04	0.02
Connectedness						
1st Degree Connection to Board	0.44	0.27	0.33	-0.17***	-0.12***	-0.06**
1st Degree Connection to ID Only	0.19	0.07	0.05	-0.12***	-0.14***	0.02
1st Degree Connection to CEO	0.25	0.20	0.28	-0.05**	0.03	-0.08***
% 1st Degree Connection to CEO	0.56	0.74	0.85	0.18***	0.28***	-0.10**
2nd Degree Connection to Board	0.27	0.52	0.28	0.24***	0.00	0.24***
1st or 2nd Degree Connection to Board	0.71	0.78	0.60	0.07***	-0.11***	0.18***
Network Size	204.11	260.76	182.27	56.65***	-21.84	78.50***
Director-Specific Quality (DSQ)	0.04	0.04	0.04	0.01	-0.00	0.01

Panel B. Recommending source and performance of NID

	Mean			*Diff. in Means*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Source of recommendation	*ID*	*SF*	*CEO*	*(2)-(1) SF vs.*	*(3)-(1) CEO*	*(2)-(3) SF vs.*
Variables	*(n=693)*	*(n=915)*	*(n=420)*	*ID*	*vs. ID*	*CEO*
Shareholder Votes at Focal Firm Post-Appointment						
# Annual Meetings with a Vote	4.15	4.04	4.48	-0.11	0.33*	-0.44**
% Meetings with Dissent >20%	0.07	0.05	0.09	-0.02*	0.02*	-0.04***
Indicator for Dissent >20%	0.17	0.12	0.24	-0.05***	0.07***	-0.12***
Shareholder Votes at Other Firms Pre-Appointment						
# Annual Meetings with a Vote	6.01	5.88	4.72	-0.13	-1.29**	1.16**
% Meetings with Dissent >20%	0.04	0.04	0.05	-0.00	0.01	-0.01
Indicator for Dissent >20%	0.17	0.19	0.17	0.02	0.01	0.01
Progression on the Board						
On Board After 3 Yrs	0.64	0.64	0.70	0.00	0.07**	-0.07**
Indep Chair/Lead ID After 3 Yrs	0.04	0.05	0.06	0.01	0.02	-0.01
# Committees After 3 Yrs	1.83	1.80	1.95	-0.02	0.12*	-0.14**
Committee Chair After 3 Yrs	0.48	0.35	0.45	-0.13***	-0.03	-0.10***

Notes: Panel A replicates Table 3 (Panel A) for the subset of firms with total assets below sample median. Panel B replicates Table 4 (Panel A) for the subset of firms with total assets below sample median.

IA. Table 3 Recommending source and characteristics/performance of NID (firms with total assets above sample median)
Panel A. Recommending source and characteristics of NID

	Mean			*Diff. in Means*		
Source of recommendation	*(1) ID*	*(2) SF*	*(3) CEO*	*(4) (2)-(1) SF vs.*	*(5) (3)-(1) CEO vs.*	*(6) (2)-(3) SF vs.*
Variables	*(n=557)*	*(n=1,268)*	*(n=339)*	*ID*	*ID*	*CEO*
Demographics and Education Background						
Age	58.21	57.24	58.13	-0.97***	-0.08	-0.89**
Age 70+	0.02	0.01	0.02	-0.01	0.00	-0.01
Female	0.32	0.37	0.26	0.06**	-0.06*	0.11***
Non-White	0.07	0.10	0.06	0.03**	-0.01	0.04**
MBA/Master	0.38	0.44	0.37	0.05**	-0.01	0.07**
Executive Experience						
CEO – Current	0.08	0.17	0.12	0.09***	0.03	0.06***
CEO – Ever	0.25	0.37	0.28	0.11***	0.03	0.08***
C-suite – Current	0.11	0.28	0.15	0.17***	0.03	0.13***
C-suite – Ever	0.40	0.63	0.40	0.23***	-0.00	0.24***
Board Experience						
Rookie Director	0.39	0.27	0.44	-0.12***	0.05	-0.17***
# Board Seats – Current	1.15	1.06	0.94	-0.09	-0.21**	0.12*
# Board Seats – Ever	3.06	2.72	2.60	-0.34**	-0.45**	0.12
# Cumul Yrs on Boards	12.55	9.94	10.99	-2.61***	-1.55	-1.06
# Committees – Ever	5.57	4.62	4.33	-0.95***	-1.24***	0.29
% Committees as Chair - Ever	0.17	0.13	0.14	-0.04***	-0.03	-0.01
Indep Chair/Lead ID – Ever	0.16	0.12	0.11	-0.04*	-0.05*	0.01
Connectedness						
1st Degree Connection to Board	0.40	0.25	0.27	-0.15***	-0.13***	-0.02
1st Degree Connection to ID Only	0.24	0.08	0.05	-0.16***	-0.19***	0.03**
1st Degree Connection to CEO	0.16	0.17	0.22	0.01	0.06**	-0.05**
% 1st Degree Connection to CEO	0.40	0.67	0.82	0.27***	0.41***	-0.15***
2nd Degree Connection to Board	0.39	0.60	0.45	0.22***	0.06*	0.16***
1st or 2nd Degree Connection to Board	0.78	0.85	0.72	0.07***	-0.07**	0.14***
Network Size	298.85	379.49	247.47	80.63***	-51.38**	132.01***
Director-Specific Quality (DSQ)	0.04	0.05	0.05	0.01	0.02	-0.01

Panel B. Recommending source and performance of NID

	Mean			*Diff. in Means*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Source of recommendation	*ID*	*SF*	*CEO*	*(2)-(1) SF vs.*	*(3)-(1) CEO*	*(2)-(3) SF vs.*
Variables	*(n=557)*	*(n=1,268)*	*(n=339)*	*ID*	*vs. ID*	*CEO*
Shareholder Votes at Focal Firm Post-Appointment						
# Annual Meetings with a Vote	5.48	5.51	5.47	0.02	-0.01	0.03
% Meetings with Dissent >20%	0.02	0.01	0.06	-0.01*	0.03***	-0.04***
Indicator for Dissent >20%	0.09	0.05	0.14	-0.03**	0.05**	-0.08***
Shareholder Votes at Other Firms Pre-Appointment						
# Annual Meetings with a Vote	7.09	6.53	6.25	-0.56	-0.84	0.28
% Meetings with Dissent >20%	0.02	0.03	0.03	0.01	0.01	-0.01
Indicator for Dissent >20%	0.14	0.15	0.16	0.01	0.03	-0.02
Progression on the Board						
On Board After 3 Yrs	0.76	0.72	0.76	-0.04*	-0.00	-0.04
Indep Chair/Lead ID After 3 Yrs	0.04	0.03	0.07	-0.01	0.03	-0.04**
# Committees After 3 Yrs	1.93	1.90	1.95	-0.03	0.02	-0.05
Committee Chair After 3 Yrs	0.32	0.32	0.29	-0.00	-0.03	0.03

Notes: Panel A replicates Table 3 (Panel A) for the subset of firms with total assets above sample median. Panel B replicates Table 4 (Panel A) for the subset of firms with total assets above sample median.