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Shareholder Activists and Frictions in the CEO Labor Market

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Shareholder Activists and Frictions in the CEO Labor Market *

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Shareholder Activists and Frictions in the CEO Labor Market

Abstract

Using hand-collected data on CEO appointments during shareholder activism campaigns, this

study examines whether shareholder involvement in CEO recruiting affects frictions in CEO hiring

decisions. The results indicate that appointments of CEOs who are recruited with shareholder

activist influence are followed by more favorable stock market reactions and stronger profitability

improvements than CEO appointments that also occur during activism campaigns but without the

influence of activists. I find little evidence that shareholder activists increase hiring frictions by

facilitating the recruiting of CEOs who will implement myopic corporate policies. Analyses of

recruiting process characteristics reveal that activist influence is associated with more resources

being dedicated to the CEO search process and with a higher propensity to recruit CEOs from

outside the firm. These findings contribute to the CEO labor market literature, which tends to focus

on the decision to remove incumbent CEOs but provides limited insights into CEO recruiting.

Keywords: Executive labor market, corporate governance, shareholder activism

JEL classification: G23, G32, G34, M12, M51

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I. INTRODUCTION

A large body of research examines CEO layoff decisions and the frictions in these decisions resulting from uncertainty about firm-CEO match quality and CEO entrenchment (e.g., Engel, Hayes, and Wang 2003; Coles, Daniel, and Naveen 2014; Dikolli, Mayew, and Nanda 2014). However, empirical evidence on CEO recruiting decisions is scant, which is surprising given the importance of CEOs for corporate policies, performance, and disclosure quality (e.g., Bertrand and Schoar 2003; Jia, van Lent, and Zeng 2014; Dikolli, Keusch, Mayew, and Steffen 2020).

Notable exceptions highlight the importance of frictions in the CEO recruiting process. For example, Cheng, Groysberg, Healy, and Vijayaraghavan (2021) find that corporate directors rate their effectiveness in evaluating and selecting CEOs lowest among boards' major responsibilities. Ertimur, Rawson, Rogers, and Zechman (2018) find long employment gaps between externally recruited CEOs' appointments and their prior executive positions. Turning to intermediaries who should mitigate recruiting frictions, Khurana (2000) documents the growing importance of executive search firms and Rajgopal, Taylor, and Venkatachalam (2012) examine the influence of executive talent agents.² Despite this recent, growing body of work, much remains unknown about the CEO hiring process and about how boards overcome recruiting frictions. This study attempts to fill this void in the literature by focusing on the role of shareholders in the recruiting process.

Several important frictions arise in CEO hiring decisions. The first is uncertainty among board directors about which skills and experiences the new CEO should have. These desired CEO characteristics depend on the challenges and opportunities facing the firm (see, Gerstein and Reisman 1983; Guay, Taylor, and Xiao 2015). Informed and motivated shareholders such as hedge

¹ I refer to "firm-CEO match quality" to describe the extent to which the CEO selects and executes strategies that increase shareholder value at her current firm. Thus, the same CEO can be a good match for one firm but a poor match for another firm.

² CEO recruiting frictions have been shown to affect executive compensation design (Cadman, Carrizosa, and Peng 2019; Carter, Franco, and Tuna 2019) and prior literature examines the impact of other intermediaries who influence CEO pay, such as compensation consultants (e.g., Murphy and Sandino 2020) and proxy advisors (Ertimur, Ferri, and Oesch 2013).

fund activists can reduce board uncertainty about desired CEO characteristics as they routinely provide detailed analyses of corporate performance, capital allocation, and leadership in private meetings with corporate directors or in public white papers.

A second friction arises from board members' difficulty of identifying candidates who possess these desired characteristics. Shareholder activists can mitigate this friction by identifying suitable CEO candidates via their own networks, through their interactions with executives during previous activism campaigns, and by researching the focal firm's competitors and their executives.

A third recruiting friction occurs if directors favor promoting a new CEO from inside the firm rather than conducting a time-consuming external search that could upset internal candidates. Shareholders can mitigate this friction, especially after gaining board representation, by monitoring the recruiting process to ensure that external candidates are given sufficient consideration.

Finally, a fourth friction arises if convincing talented candidates to join the target firm is difficult for example because structural or political problems within the firm reduce the odds that a new CEO can execute a successful turnaround. Shareholders with a strong influence on the board of directors can mitigate this friction by providing the new CEO with a clear mandate for change.

While the above discussion suggests that shareholder involvement in the recruiting process should reduce CEO hiring frictions, this is *ex ante* unclear for at least three reasons. First, unless they gain board representation shareholders cannot obtain the internal information to which corporate directors have access. Second, boards can retain executive search firms and CEO candidates can hire talent agents to reduce recruiting frictions. Third, activism campaigns may be an uninformed distraction or activists may attempt to temporarily increase earnings and share price to the detriment of long-run shareholder value, thereby *increasing* CEO recruiting frictions.

Given the importance and difficulty of CEO selection, as well as shareholder activists' controversial impact on companies, shareholder involvement in CEO recruiting has received

surprisingly little attention in the literature. A potential reason is that it typically remains unobservable to the researcher. In this study, I use hand-collected data on hedge fund activist influence on CEO recruiting to examine whether and how shareholders affect frictions in hiring decisions. Hedge fund activists' campaigns offer a powerful setting to examine these questions because their involvement becomes observable when they publicly propose CEO candidates, negotiate the right to interview candidates, or join corporate boards prior to CEO hiring decisions.

I identify shareholder involvement in recruiting for 24 percent of CEO appointments that occur during hedge fund activism campaigns and the evidence is consistent with positive performance effects. Specifically, the average abnormal stock market reaction to CEO appointment announcements during activism campaigns is about 310 basis points higher when activists are involved in CEO recruiting compared to CEO appointments during campaigns without activist influence on the hiring process. I find no evidence that the positive market reaction reverses in the ensuing three years, which would likely have occurred had the new CEOs implemented myopic policies to the detriment of shareholder value in the long run. In contrast, CEO appointments with activist involvement are followed by improvements in return on assets from the year before the appointment to three years afterwards that are 3.6 percentage points greater compared to CEO appointments during campaigns without shareholder influence on the recruiting process. Consistent with these long-run performance results, I find little evidence that CEOs recruited with activist involvement make policy changes that critics of hedge fund activism consider myopic.

To better understand *how* shareholder activists affect CEO hiring frictions, I examine the characteristics of the search process and of new CEOs. I find evidence consistent with the search, especially for external candidates, being more thorough when activists are involved. Specifically, the probability that firms disclose the hiring of an executive search firm, which increases the resources available for the search, is eleven percentage points higher for CEO appointments

influenced by shareholder activists than for those without shareholder involvement. Shareholder influence is also associated with a nine percentage point increase in the likelihood that firms disclose the creation of a CEO search committee on the board, which facilitates the formal assignment of search responsibilities. Subject to the caveat that these disclosures are voluntary, which gives rise to selection concerns, the findings suggest that the recruiting process is more thorough when shareholder activists are involved. In line with this, I find that CEO search takes more time when influenced by shareholder activists.

Consistent with a more thorough search for external CEO candidates, activist involvement in CEO recruiting is associated with a 22 percentage point increase in the propensity to recruit new CEOs from outside the firm. I also find some evidence that shareholders facilitate the hiring of more experienced CEOs: the probability that the new CEO held a CEO position in the past is marginally higher when shareholder activists are involved in the recruiting process.

Collectively, these results are consistent with activist influence alleviating CEO recruiting frictions by ensuring a more resourceful search, especially for external candidates. However, this interpretation is subject to the caveat that activist influence is not randomly assigned. While I attempt to rule out alternative explanations using many control variables and different control groups, the findings are ultimately of a descriptive nature and present interesting associations.

This study is the first to examine shareholder involvement in the CEO recruiting process and contributes to the literature on CEO labor markets. In contrast to firing decisions, the CEO hiring process is still not well understood. While theories of the CEO labor market assume frictionless matching of CEOs with firms (Gabaix and Landier 2008), recent empirical evidence suggests that hiring frictions are important (Ertimur et al. 2018; Carter et al. 2019; Cheng et al. 2021). However, it is not clear from prior work what exactly these frictions are, how they arise, or how firms overcome them. These questions are critical because CEO hiring frictions are distinct from firing

frictions and require different remedies. While it is impossible with available data to disentangle all recruiting frictions empirically, the results in this study suggest that directors' preference for internal candidates represents one important friction. The evidence is consistent with shareholder activist involvement in recruiting being one remedy for this and other hiring frictions. Moreover, this study adds to the CEO labor market literature by examining the important but understudied role of executive search firms and how they interact with shareholder activists. An insight that may be surprising at first is that activists complement search firms rather than acting as substitutes.

The merits of hedge fund activism campaigns are the subject of an ongoing debate in the shareholder activism literature.³ Many studies find an increase in share price and profitability of target firms relative to untargeted companies, suggesting that activists *create* value (e.g., Brav, Jiang, Partnoy, and Thomas 2008; Klein and Zur 2009). However, recent evidence challenges this view and argues that these findings reflect activists' stock-picking abilities rather than beneficial intervention (deHaan, Larcker, and McClure 2019; Cremers, Giambona, Sepe, and Wang 2021). Given this debate, it is not obvious that hedge fund activist influence is associated with a reduction in CEO recruiting frictions. I contribute to this debate by examining CEO recruiting as a specific mechanism through which activists can create value. While I cannot rule out the stock-picking explanation entirely, it is less likely to apply in this setting for two reasons. First, the control group in this study is also comprised of activism target firms. Second, activists usually influence CEO recruiting by gaining board seats, which is very costly to them (Gantchev 2013), and thus more indicative of costly active intervention than passive stock picking.

The remainder of this study is organized as follows. The next section presents the institutional background and hypothesis development. Section III discusses the sample and data. Section IV presents the empirical analyses, and Section V concludes.

³ Ferri (2012) and Denes, Karpoff, and McWilliams (2017) provide excellent reviews of the shareholder activism literature.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Overview of the CEO Recruiting Process

In theory, CEOs are optimally matched to firms in equilibrium when the labor market is competitive and free of hiring and firing frictions (e.g., Gabaix and Landier 2008). Prior empirical work has extensively studied CEO firing decisions and potential frictions related to uncertainty about firm-CEO match quality and entrenchment (Engel et al. 2003; Dikolli et al. 2013; Coles et al. 2014). CEO recruiting decisions have received far less attention.

The recruiting process consists of several steps (see, Khurana 2000). First, the board decides whether it creates a CEO search committee to ensure that CEO search is given a high priority and that responsibilities for CEO recruiting are clearly defined. This committee also reduces the risk of free-riding, miscommunication, and confidentiality breaches compared to when all directors are involved. To ensure that the networks and expertise of other directors are not neglected, all directors are typically invited to suggest candidates and participate in the final vote. CEO search committees are arguably less important when boards have already identified a preferred internal candidate and have little interest in conducting an extensive search for external candidates.

A second important decision is whether the board hires an executive search firm. Boards' increasing reliance on search firms has been a major trend in CEO recruiting (Khurana 2000; AESC 2018). Through their research and networks, search firms substantially increase the resources available for CEO recruiting. They can assist boards with the third step in the process: drafting the ideal candidate's curriculum vitae, reflecting the skills and experience required.

Fourth, the board identifies and contacts candidates and creates and reviews extensive dossiers about their past positions and experience, including reference checks. Choosing the right search firm, if any, is critical for this step because they are typically not allowed to poach employees from their former clients due to 'hands-off limitations' and do not present candidates who are already

short-listed at other clients (Cepin 2012). Thus, executive search firms usually present an incomplete menu of CEO candidates. In addition to hiring a search firm, the third and fourth step can be facilitated through ongoing CEO succession planning.

The board then interviews finalist candidates and holds a vote. The final steps involve the contract negotiation and onboarding of the new CEO.

Frictions in the CEO Recruiting Process

The hiring process outlined above can give rise to at least four distinct but related types of friction. The first arises if directors are uncertain about the skills and experience the new CEO should have. These are usually determined based on directors' perceptions about the firm's challenges and opportunities (Gerstein and Reisman 1983; Guay et al. 2015). This requires directors, and especially independent directors, to be well-informed about the firm. The governance literature suggests that the cost of getting informed about a firms' opportunities and challenges is higher when the firm's operations and strategy are more complex or dynamic (Bushman, Chen, Engel, and Smith 2004; Coles, Daniel, and Naveen 2008; Duchin, Matsusaka, and Ozbas 2010). Uncertainty about the firm's challenges and opportunities in turn increases directors' uncertainty about what characteristics the new CEO should have.

The second friction relates to directors' difficulty identifying candidates who have the required characteristics to be a good match with the firm. Uncertainty about job seekers' characteristics has been incorporated into labor market search models (e.g., Jovanovic 1979; Diamond 1981) and has been studied empirically in relation to the likelihood of early CEO firing (Zhang 2008) and CEO compensation (Cadman et al. 2019; Carter et al. 2019). Directors acknowledge that evaluating prospective CEO talent is difficult because even for candidates who meet all criteria in terms of previous work experience it is still hard to tell whether they would be successful CEOs given the unique and complex nature of the CEO job (Larcker, Donatiello, and Tayan 2017). Their ability to

find promising candidates is reduced if directors are not well-connected and hence unlikely to identify candidates through their own networks (Khurana 2000). Well-connected directors will know executives or directors at other companies who would be suitable for the CEO position or learn about such candidates through other people in their networks. Consistent with this, the labor economics literature views social networks as an important mechanism in the rank-and-file labor market to reduce information asymmetry and uncertainty about employer-employee match quality (Montgomery 1991). The supply of CEO candidates is substantially lower than the supply of rank-and-file employees, with directors estimating that fewer than four executives have the skills to take the CEO position in their companies or in industry peer firms (Larcker et al. 2017). This emphasizes the importance of directors being well positioned to identify suitable candidates. Succession planning may also help boards identify candidates with the requisite skills and experience, but few firms conduct succession planning on a regular basis (Larcker, Miles, and Tayan 2014; Schloetzer, Tonello, and Larkin 2018; Cvijanovic, Gantchev, and Li 2020).

A third friction arises if directors prefer to promote a new CEO from within the firm rather than to conduct a time-consuming external search, particularly if they have developed strong professional or personal ties with an internal candidate. This friction is likely even more pronounced if directors delegate to the outgoing CEO the choice of her successor (Zajac and Westphal 1996). Executive search firms indeed report that they are frequently hired by corporate boards merely to legitimize the promotion of an internal candidate that the board preferred all along. Once that preference is clear, the search firm will only conduct a superficial external search (Khurana 2000). In line with this, survey evidence indicates that directors view search firms unnecessary in internal succession (Schloetzer, Tonello, and Larkin 2019).

A fourth friction arises if attracting talented CEO candidates is impractical or too costly for the target firm. One reason is that target firms' substandard productivity, profitability, capital

allocation and governance may signal internal structural and political problems that make the firm less attractive to talented CEO candidates (see, Brav et al. 2008; Brav et al. 2015). Such problems often prevent new CEOs from making the necessary changes for a successful turnaround. Failure to do so would increase the odds that the target firm continues to perform poorly during the new CEO's tenure, which would in turn hurt her reputation (Fama 1980). A second reason why the target firm may be unable to attract CEO candidates is that non-compete clauses prevent external candidates from taking CEO positions at rival firms (Ertimur et al. 2018). In addition, when joining the target firm, external candidates would have to forfeit unvested holdings of their current employers' stock and options, thereby making the target firm's job offer less attractive (Jochem, Ladika, and Sautner 2018). An experienced candidate, for example someone who is or has been CEO of another firm, may be particularly difficult to attract because she likely has greater reputation concerns and greater unvested holdings of her (former) employer's stock when she considers taking the CEO job at an activism target firm.

Importantly, the frictions in CEO recruiting decisions are different from those in CEO layoff decisions.4 One widely studied CEO firing friction is the incumbent CEO's entrenchment (e.g., Coles et al. 2014). While this friction is important in firing decisions, it is less impactful in hiring decisions because by the time the board selects a new permanent (i.e., non-interim) CEO, the incumbent CEO has often left. Thus, the effect of the incumbent CEO's entrenchment on the selection of a successor is likely to be small.⁵ Another friction in CEO firing decisions – uncertainty about whether the incumbent CEO is (still) a good match – is resolved during a CEO's tenure as performance realizations such as earnings are observed (Dikolli et al. 2013). While this firing

An ex-CEO might have created recruiting frictions indirectly by preventing regular CEO succession planning during her tenure or by holding back relevant information about the firm that would have helped the board better understand the characteristics the new CEO should have.

⁴ CEO labor market models assume that CEO firing and hiring decisions are made simultaneously, suggesting that hiring and firing frictions are the same (e.g., Gabaix and Landier 2008). However, this assumption is unlikely to be true (especially if incumbent CEOs are fired rather than retire voluntarily) given that firms typically appoint interim CEOs after firing incumbent CEOs until a permanent CEO is found (see, Mooney, Semadeni, and Kesner 2017) and since the lower-bound estimate of CEO search process duration is 60 days (see DEPART_TO_APPOINT in Table 3).

friction is similar to directors' uncertainty about *candidates*' match quality (a hiring friction), the latter is more severe because directors cannot easily rely on performance realizations to judge CEO candidates' match quality. This is because candidates often hold non-CEO executive positions in the recruiting firm or other companies while few candidates have already been CEO (of another firm). Performance realizations such as earnings are less informative about a non-CEO executive's quality. Even if a candidate was formerly CEO of another firm, performance realizations of that firm during the candidate's tenure are not necessarily informative about the quality of the match between the candidate and the recruiting firm due to differences in corporate culture, strategy, or external environment (Larcker et al. 2014).

How Shareholder Activists Can Alleviate Recruiting Frictions

Activism by hedge funds has received considerable attention from academics and practitioners due to the rising number of campaigns each year and their influence on corporations. Activism campaign announcements lead to significant positive market reactions (Klein and Zur 2009), followed by operating performance improvements (Brav, Jiang, and Kim 2015) and changes in disclosure quality (Cheng, Huang, Li, and Stanfield 2012; Cheng, Huang, and Li 2015; Bourveau and Schoenfeld 2017; Guo, Lin, Masli, and Wilkins 2020).

Prior research also shows that hedge fund activists are more likely to target underperforming and poorly governed firms and to demand and gain board seats in such firms (Brav et al. 2008; Gow, Shin, and Srinivasan 2014; Bebchuk, Brav, Jiang, and Keusch 2020). These studies also document an increased CEO turnover probability and turnover-performance sensitivity following activism campaign launches. However, the shareholder activism literature does not examine the next step: recruiting the new CEO. Since activism target firms tend to be underperforming and poorly governed, hiring frictions such as the board not being well-informed about the firm, can be important obstacles in target firms' recruiting processes.

How might shareholder activists alleviate the first recruiting friction – directors' uncertainty about CEO candidates' required skills and experience? Hedge fund activists can reduce this uncertainty by providing a detailed analysis and outside view of the challenges and opportunities facing the firm. Prior research indeed suggests that these shareholders engage in costly monitoring and do not refrain from pointing out companies' weaknesses and (missed) opportunities regarding corporate strategy, operations, and governance in private meetings with corporate directors and in public presentations (see, Gantchev 2013; Bebchuk et al. 2020).

Hedge fund activists may also mitigate the second CEO hiring friction – directors' difficulty identifying candidates with desired characteristics – since they have large professional networks. Most activists launch their fund after having established a successful track record in the finance industry and then conduct several activism campaigns each year. Thus, they can identify suitable CEO candidates via their own network, through their interactions with executives during past campaigns, and by researching the focal firm's competitors and those competitors' executives. Such activist involvement may be valuable even if the board intends to hire an executive search firm. First, activists can help to select the search firm based on which companies it cannot poach from. Second, activists can monitor the menu of candidates that the search firm proposes by comparing it with candidates (or with companies that presumably employ promising candidates) that activists identified through their own research and networks.

Activists are also well positioned to mitigate the third friction – directors' preference for promoting the new CEO from within the firm rather than conducting an extensive external search. This preference is important in the context of activism target firms, which typically underperform their peers (Brav et al. 2008), because new CEOs hired externally have been found to be more effective at executing turnarounds (Farrell and Whidbee 2003). Activists, especially after gaining board seats, can monitor the recruiting process and intervene if other directors settle on an internal

candidate without proper consideration of external candidates. Activists can counteract attempts to

hire a search firm merely to legitimize the promotion of an internal candidate whom the board

preferred all along, and ensure that external search is thorough rather than window-dressing.

Shareholder activists can also mitigate the fourth recruiting friction – the target firm's difficulty

of attracting a talented CEO. Activists can convince boards to compensate a candidate for forfeited

unvested equity as illustrated by the example of Mantle Ridge Capital pressuring the board of CSX

to hire Hunter Harrison (see Table 2). In addition, if a CEO candidate is concerned about structural

or political problems inside the target firm constraining her ability to execute a turnaround, an

influential activist shareholder can provide the new CEO with a clear mandate for change.

Based on the above discussion, I propose the following hypothesis.

H1a: Shareholder activist influence on CEO search alleviates recruiting frictions.

How Shareholder Activists Can Exacerbate Recruiting Frictions

It is unclear ex ante whether activist influence on CEO hiring reduces frictions. Critics argue

that hedge fund activists create uninformed distraction at best and contribute to managerial myopia

at worst by forcing CEOs to implement policies that induce temporary increases in earnings and

share price to the detriment of long-term shareholders (see, deHaan et al. 2019). Consistent with

CEOs giving in to myopic investor pressure, prior literature shows that companies reduce

discretionary investment, such as R&D, to beat earnings benchmarks, especially when shareholders

have a short investment horizon (Bushee 1998; Graham, Harvey, and Rajgopal 2005;

Roychowdhury 2006). In line with this, Brav, Jiang, Ma, and Tian (2018) find that companies

reduce R&D expenditures after activism campaign announcements.

⁶ Also see Lipton (2013) and Bebchuk, Brav, and Jiang (2015) for discussions of myopia in the context of hedge fund activism campaigns.

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Other allegedly myopic corporate policies that critics attribute to activism pressure include increasing payout and leverage. These policies can reduce financial flexibility and increase bankruptcy risk. Klein and Zur (2011) find that target firms' cost of debt increases during activism campaigns and Sunder, Sunder, and Wongsunwai (2014) show that this is especially the case when activists demand higher payout and leverage. Another concern is that the increased rate of firms being acquired during activism campaigns reflects myopic activist pressure on executives to initiate the sale of the company so that activists can quickly reap the acquisition premium even though the firm would be better off in the long run as a standalone business (see, Greenwood and Schor 2009).

If hedge fund activists indeed have incentives that conflict with those of other shareholders, activist influence should exacerbate – rather than reduce – frictions in the CEO recruiting process. Specifically, they might convince directors to select a CEO not because she is the best match with the firm but because the activist expects her to implement policies that will inflate the share price in the short run. This leads to the following hypothesis.

H1b: Shareholder activist influence on CEO search exacerbates recruiting frictions.

There are also several reasons to believe that shareholder activists do not affect CEO recruiting frictions at all. The first is that unless they gain board representation, shareholders are not privy to the internal information that incumbent directors can access. This puts shareholders at a disadvantage when trying to assess the firm's opportunities and challenges, and, in turn, the characteristics the new CEO should have. Obtaining board seats, which often involves a proxy contest, is costly to activists. Gantchev (2013) estimates that proxy fights cost activists \$10 million on average. In addition, activists bear the cost of the time commitment of serving on a board.⁷

⁷ Another reason why an activist might not influence recruiting is that he expects the board to select the 'right' CEO. In addition, there are likely cases where the activist wants to influence CEO recruiting but fails to do so because the target firm fends him off (see, Boyson and Pichler 2019). I attempt to identify these cases and find in untabulated analyses that the main results are robust to using them as the control group.

Second, boards can retain search firms and CEO candidates can hire talent agents whose networks and resources significantly reduce recruiting frictions. Executive search firms cultivate large networks and can rely on comprehensive databases of CEO candidates across different industries and companies. Third, boards increasingly integrate CEO succession planning into their ongoing activities to screen internal and external CEO candidates in case the incumbent CEO has to be replaced unexpectedly (Schloetzer et al 2018; Cvijanovic et al. 2020). If shareholders provide little incremental information and resources over what directors and their advisors already have, their involvement will be of little consequence to the outcomes of CEO hiring decisions.

Consistent with this, recent evidence challenges the view that hedge fund activists *create* value, suggesting instead that they are savvy at identifying firms that will improve their performance in the future (deHaan et al. 2019; Cremers et al. 2021). Thus, if hedge fund activism does not create value on average, it is questionable whether activist influence improves CEO hiring decisions.

Implications for Performance, Policies, Process Characteristics, and CEO Characteristics

In case shareholder activists reduce (hypothesis H1a) or increase (H1b) CEO recruiting frictions, their influence should increase or reduce firm-CEO match quality. Recruiting process frictions and firm-CEO match quality are difficult to observe directly, however. I therefore discuss in this section the implications of hypotheses H1a and H1b for observable indicators of recruiting frictions and firm-CEO match quality. These include firm performance, corporate policies, recruiting process characteristics and new CEOs' characteristics.

Prior research relies on the performance consequences of CEO turnover to draw inferences about firm-CEO match quality (e.g., Hayes and Schaefer 1999; Bennedsen, Nielsen, Pérez-González, and Wolfenzon 2007; Rajgopal et al. 2012). The idea is that more severe recruiting frictions lead to worse firm-CEO matches and, in turn, to poorer firm performance following a

CEO appointment. Hypothesis H1a (H1b) thus implies that shareholder influence on CEO recruiting should lead to better (worse) firm performance outcomes following CEO appointments.

Hypothesis H1b also has implications for corporate policies if activists increase recruiting frictions by selecting CEOs primarily based on whether they expect them to implement policies that will temporarily increase earnings and share price. In that case, activist influence may be associated with investment cuts (Brav et al. 2018), increases in leverage and payout (see, Sunder et al. 2014), and with an increased rate of target firms being taken over (Greenwood and Schor 2009). In contrast, if H1a holds, I do not expect to find the implementation of such potentially myopic policies following CEO appointments with activist influence.

Hypothesis H1a implies that the CEO search process is more thorough when influenced by shareholder activists. As explained above, the creation of a CEO search committee and the hiring of an executive search firm establish clear responsibilities and increase the resources available, especially for external search. Given these advantages and activists' interest in considering external candidates, if H1a holds, I expect activist influence on CEO recruiting to be associated with a higher likelihood of firms disclosing the creation of a search committee and the hiring of an executive search firm. More diligent search processes that give serious consideration to external candidates should also take more time to complete compared to when the board immediately proceeds to the default of promoting an insider. Therefore, H1a also implies that shareholder activist influence is positively associated with the duration of the CEO recruiting process.⁹

Hypotheses H1a and H1b also have implications for the characteristics that new CEOs are expected to have. Specifically, if shareholder influence mitigates directors' bias against external candidates or makes the target firm's job offer more attractive to such candidates, H1a predicts a

⁸ This assumes that such policy changes are indeed myopic, as activism critics claim, in that they extract value from long-term shareholders.

⁹ Unfortunately, it is impossible to observe the amount of time that directors dedicate to the recruiting process or how many candidates they consider.

higher probability of a new CEO being hired from outside the firm when activists influence recruiting. Similarly, if activists make the CEO job more attractive by giving the CEO the room for maneuver that is required for a successful turnaround, activist involvement in CEO recruiting should increase the likelihood that the target firm can attract more experienced candidates who also have stronger reputation concerns regarding a potential failure of the turnaround.

Conversely, if H1b holds, the probability of a CEO candidate being selected should increase in her willingness to implement the myopic policies that activists desire. In that case, I would expect activists to hire older CEOs, who have a shorter time-horizon and are more likely to sell the firm (Jenter and Lewellen 2015). Similarly, I would expect activists to select CEOs who have demonstrated their willingness to sell a firm in the past.

III. DATA AND SAMPLE

The dataset construction starts with a comprehensive sample of hedge fund activism campaigns launched between 1994 and 2016. The data is collected primarily from SEC Schedule 13(d), which shareholders must file within ten days of acquiring ownership of more than five percent of the voting shares of a publicly listed company with the intention of influencing operations or management. The data also includes campaigns with less than five percent activist ownership that are identified through news searches. The sample period ends in 2016 to be able to identify CEO appointments within two years of the start of a campaign.

Using data on CEOs from ExecuComp and Equilar, I identify for 1,584 campaigns whether CEO turnover occurs within two years of activism campaign launch.¹⁰ As documented in Panel A of Table 1, 700 CEO appointments take place during 655 of these 1,584 campaigns. I exclude 11 appointments that became effective following activism campaign launch but were announced prior

¹⁰ Standard and Poor's ExecuComp covers the S&P 1500 starting in 1992 while Equilar covers the Russell 3000 starting in 1999.

to campaign launch. Some campaigns include two appointments, for example when a firm first names an interim CEO before appointing a permanent CEO. I exclude 71 appointments of interim CEOs who are *not* promoted to the permanent CEO job later during the recruiting process. I also drop 77 CEO appointments for which basic control variables such as assets, profitability, sales growth, investment, leverage, and dividends and repurchases are unavailable. The maximum sample size is therefore 541 (700-11-71-77) CEO appointments during activism campaigns.

In the analyses of stock return performance around CEO appointment announcements, I further exclude *all* interim CEOs because at the time of the interim CEO appointment announcement the stock market is unlikely to have an informed expectation about which interim CEO will later be promoted to the permanent CEO position, which introduces noise. In all other analyses, I retain interim CEOs who are eventually named permanent CEOs during the recruiting process. Other reasons for differences in sample sizes across analyses include that for some CEO appointments I am unable to a) identify the appointment announcement date, b) calculate Fama and French (1993) and Carhart (1997) adjusted stock returns due to missing return information, or c) calculate changes in profitability and changes in firm policies due to delistings. I do not require the CEO appointment *announcement* date to identify profitability and policy changes as these are measured relative to the fiscal year the new CEO starts working for the focal firm (which is known).

In addition to announcement dates and information on whether an appointment is interim or permanent, I hand-collect many other information about CEO appointments. The first is whether an activist was involved in CEO recruiting, which occurs in 132 of the 541 appointments in the final sample (24 percent) as shown in Panel B of Table 1. In 120 of the 132 CEO recruiting events in which activists are involved (91 percent) their influence stems from board representation. In the remaining cases, activist influence is identified because the activist proposes the new CEO, the new CEO is an activist fund employee, or the activist negotiates the right to interview CEO

candidates. I collect this information from proxy filings, 13(d) filings, FactSet Shark Watch, press releases, 8-K filings, news articles, activists' white papers, and settlement agreements between activists and target firms. A disadvantage of this data collection process is that shareholder activist influence on CEO search may take place entirely behind the scenes in some cases (see, McCahery, Sautner, and Starks 2016). These cases would be misclassified into the control group of CEO appointments without activist influence, which would reduce the power of the tests and therefore decrease the likelihood that I can reject the null hypothesis. This also implies that the observed rate of activist involvement in CEO recruiting of 24 percent is likely a lower bound.

For each CEO appointment for which I can identify the announcement date, I also collect from SEC filings, news stories, press releases and Equilar, information on whether the firm discloses the creation of a CEO search committee or the hiring of an executive search firm on, or prior to, the CEO appointment announcement date. I also hand-collect the date on which the target firm announced the predecessor CEO's departure. This allows me to estimate the duration of the search process as the difference between the announcement of the CEO appointment and of the predecessor's departure. In addition, it allows for controlling in the market reaction analysis for whether the predecessor's departure is announced concurrently with the new CEO's appointment. Similarly, I also collect from Capital IQ and SEC filings information on whether the intention to sell the firm, the withdrawal from a sale process, the intention to explore 'strategic alternatives', which is often used as a synonym for the informal solicitation of interest from potential acquirers, a restructuring initiative, a new buyback program, a special dividend, or the increase of a buyback program or dividend, are announced concurrently with the new CEO's appointment.

I also hand-collect information on new CEOs' career experience, such as whether they were promoted internally or hired from outside the firm, whether they served as CEO of a company before, whether that company was publicly listed, and whether the CEO sold a company before.

Lastly, I add data on stock prices, accounting fundamentals, board characteristics, and M&A transactions from CRSP, Compustat, BoardEx, and SDC Platinum, respectively.

IV. EMPIRICAL ANALYSES

Shareholder Influence and Firm Performance

Hypotheses H1a and H1b imply that shareholder influence on CEO recruiting is associated with firm performance improvements and declines, respectively. In this section, I attempt to distinguish between these hypotheses by examining short-term market reactions, long-run returns, and long-run profitability changes.

Table 3 presents summary statistics and univariate analyses for the dependent and independent variables used in this study. The Fama and French (1993) and Carhart (1997) adjusted stock market reaction measured from the day before to the day after the CEO appointment announcement (ABRET_{s-1,s+1}) is 3.01% for appointments with activist involvement. An untabulated t-test reveals that this market reaction estimate is significantly different from zero (p-val.<0.01). In contrast, the average market reaction is 0.28% for appointment announcements of CEOs who are also hired during activism campaigns but without the influence of shareholder activists (p-val.>0.1). The difference in means is significant at the 1% level (p-val.<0.01).

In column (1) of Table 4, I test the relation between shareholder involvement in CEO recruiting and the market reaction to CEO appointment announcements by estimating equation (1) for each CEO appointment i using OLS with standard errors adjusted for clustering at the firm-level.

$$DV_i = \alpha + \beta \cdot ACTIVIST \ INFLUENCE_i + \gamma \cdot Controls_{i,t-1} + \varepsilon_i$$
 (1)

¹¹ The sample for the market reaction analysis (n=460) is smaller than the maximum sample size in this study (N=541) because all interim CEO appointments are excluded and because of missing CEO appointment announcement dates or missing stock return data.

where DV is ABRET_{s-1,s+1} and ACTIVIST_INFLUENCE is equal to one if an activist influences CEO recruiting and equal to zero for CEO appointments during activism campaigns without activist influence on recruiting.

Consistent with the t-tests reported in Table 3, I find that ACTIVIST INFLUENCE is positively and significantly (p-val.<0.05) related to ABRET_{s-1,s+1}. ¹² The coefficient of 0.031 implies that the abnormal market reaction to CEO appointment announcements during activism campaigns is 3.1 percentage points higher when shareholder activists are involved in recruiting. This result holds after controlling for the natural logarithms of the number of prior campaigns in which the activist influenced CEO recruiting (LN PAST INFLUENCE), the number of prior which reached campaigns during activist its stated campaign (LN PAST SUCCESS; see, Brav et al. 2008), and total assets (LN ASSETS). In addition, I control for the industry-adjusted return on assets (ROA), which loads negatively, annual sales growth (GROWTH), the book-to-market ratio (BTM), which is negatively related to the market reaction, capital expenditures and R&D expenditures, both scaled by assets (CAPX, R&D), the debt-to-equity ratio (LEVERAGE), and dividends plus share repurchases scaled by market capitalization (PAYOUT). I select these control variables since they capture an activist's reputation or have been shown to be determinants of activism campaign launches and firm performance. 13 Despite these control variables, the positive relation between activist influence on CEO recruiting and the market reaction to CEO appointment announcements may be confounded by investors' expectations prior to appointment announcements about the quality of the match between the firm

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¹² This result is robust to measuring ABRET from *s-1* to *s+5* (ACTIVIST_INFLUENCE p-val.<0.05), using market-adjusted returns (p-val.<0.05), industry-adjusted returns (p-val.<0.05), and size-adjusted returns (p-val.<0.05).

¹³ Table 3 reports two-sample t-tests for the control variables. Activist influence on CEO recruiting is positively correlated with the number of times they have influenced recruiting in the past and the number of successful campaigns, sales growth, book-to-market ratios, and leverage. In untabulated analyses, I find a higher probability that activists influence CEO recruiting when the firm does not have a staggered board, when the prior CEO was not the board chair and when she had coopted the board. I control for these characteristics in robustness tests (see, footnote 17).

and its future CEO. However, this concern does not apply to the profitability analysis described below.¹⁴

Next, I examine whether the positive abnormal market reactions to the appointment announcements of CEOs who are hired with activist influence reverse during the ensuing years. I measure long-run abnormal returns following the market reaction event window, i.e., from two days to three years after the CEO appointment announcement date. Employing the methodology in Jagolinzer, Larcker and Taylor (2011), I measure ALPHA_{s+2,t+3} as the average Fama and French (1993) and Carhart (1997) adjusted daily stock return. I use a three-year window to allow enough time for a potential overreaction correction and for negative consequences of new CEOs' potentially myopic policies to get impounded into share prices. Table 3 shows that ALPHA_{s+2,t+3} is 0.01% per day (or about 2.5% per year) for appointments with activist involvement, which an untabulated t-test confirms to be insignificant (p-val.>0.1). This provides evidence against a reversal of the positive market reaction to appointment announcements of CEOs who were hired with the help of shareholder activists. For CEO appointments unaffected by shareholder influence, ALPHA_{s+2,t+3} is also 0.01%, which is statistically indistinguishable from zero (p-val.>0.1) and from the estimate for CEO appointments that are influenced by activists (p-val.>0.1).

In column (2) of Table 4, I estimate equation (1) using ALPHA_{s+2,t+3} as the dependent variable and continue to find no difference in long-run abnormal stock returns between CEO appointments with and without shareholder involvement. These insignificant results support hypothesis H1a as they indicate that the favorable market reactions to CEO appointments with shareholder activist involvement are unlikely attributable to overreaction. In addition, the insignificant long-run

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¹⁴ In untabulated analyses I control for the stock return between activism campaign launch and CEO appointment announcement. If the market forms its expectation about future firm-CEO match quality during this time window, this control variable should mitigate to some extent the concern that this expectation confounds the stock market reaction analysis. The results are robust (ACTIVIST_INFLUENCE p-val.<0.05 for ABRET).

¹⁵ The sample for the long-run returns analysis is identical to the one for the market reaction analysis so that I can perfectly map long-run returns to the preceding market reactions to make a claim whether market reactions reverse in the long-run. Including interim CEOs who are appointed to the permanent CEO job later during the activism campaign does not affect the long-run return results.

abnormal returns are inconsistent with CEOs hired by activists implementing myopic policies to the detriment of long-run shareholder value.

Turning to the final proxy for the performance consequences of shareholder involvement in CEO search, Table 3 shows that profitability, defined as the industry-adjusted return on assets following Bebchuk, Brav, and Jiang (2015), improves by 4.1 percentage points from the year before to three years after CEO appointments with shareholder activist involvement (ROA_CHG_{t-1,t+3}). This is a stronger performance improvement compared to the 0.95 percentage points increase in industry-adjusted ROA for CEO appointments without shareholder influence, and the difference is marginally significant (p-val.<0.1) in two-sample t-tests. If choose the t-t to t+t time horizon around CEO appointments consistent with Fee, Hadlock, and Pierce (2013) and with the horizon in the long-run stock return analyses. After controlling for past industry-adjusted ROA and other firm and activist characteristics, the effect size increases to 3.6 percentage points in column (3) of Table 4 and is statistically significant at the five percent level. Since the standard deviation of ROA CHG_{t-1,t+3} is 15.73 percent, this finding is also economically significant.

Collectively, the findings in Tables 3 and 4 support hypothesis H1a, not H1b. They are consistent with the interpretation that activist influence on CEO recruiting reduces hiring frictions, which in turn leads to better firm performance following CEO appointments.^{17,18}

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¹⁶ Even though I do not have to restrict the profitability analysis to CEO appointments for which I know the appointment announcement date, because I calculate profitability changes around the fiscal year in which the CEO took office, the sample (n=411) is smaller than the maximum sample size. This is due to missing values for industry-adjusted ROA in year t+3, for example because of firms dropping out of CRSP or Compustat.

¹⁷ I include many additional control variables and find consistent results despite decreasing samples sizes. First, I control for indicator variables capturing whether the predecessor CEO's departure, the intention to sell the firm, the withdrawal from a sale process, the intention to explore 'strategic alternatives', a restructuring initiative, a new buyback program, a special dividend, or the increase of a buyback program or dividend, respectively, are announced in the *s-I* to *s+I* event window around the CEO appointment announcement date. This reduces the sample size for the profitability analysis because for some observations in that analysis the appointment announcement date is unknown (ACTIVIST_INFLUENCE p-val.<0.01 for ABRET, >0.1 for ALPHA, and <0.1 for ROA_CHG). Second, I control for two-digit SIC industry and year fixed effects, which reduces sample sizes due to singleton observations (p-val.<0.1 for ABRET, >0.1 for ALPHA, and <0.01 for ROA_CHG). Third, I control for governance characteristics such as staggered board elections, dual class share structures, board size, board independence, board co-option, board connectedness, board turnover, whether the prior CEO was also board chair, and her total compensation and tenure as CEO, which reduces sample sizes due to missing values for the governance proxies (p-val.<0.05 for ABRET, >0.1 for ALPHA, and <0.1 for ROA_CHG). Performing seemingly unrelated regression also leads to consistent results (p-val.<0.01 for ABRET, >0.1 for ALPHA, <0.1 for ROA_CHG).

¹⁸ The control group used in Table 4 - CEO appointments during shareholder activism campaigns without activist involvement in CEO recruiting likely contains cases in which the activist does not try to influence the hiring process because it expects the board to select the 'right' CEO and cases where the activist wants to exert influence but fails to do so. In untabulated analyses, I restrict the control group to CEO appointments where the activist wants to influence CEO hiring but fails. Since activists typically influence CEO recruiting through board representation, I identify activists'

Shareholder Influence and Corporate Policies

In this section I conduct further analyses of hypothesis H1b. Specifically, I examine whether activist influence on CEO recruiting increases frictions by promoting corporate policy choices that critics of hedge fund activism regard as myopic, such as investment cuts, increases in financial leverage and shareholder payout, and putting the firm up for sale.

The univariate analyses in Table 3 suggest that activist influence on CEO search is not related to changes in R&D (R&D_CHG_{t-1,t+3}) or capital expenditures (CAPX_CHG_{t-1,t+3}) from the year before to three years after CEO appointments.¹⁹ However, when estimating equation (1) using OLS with R&D_CHG_{t-1,t+3} as the dependent variable while controlling for lagged R&D, I find in column (1) of Table 5 that activist influence is associated with a 0.8 percentage points decrease in future R&D expenditures (p-val.<0.05). While this finding suggests investment cuts, in column (2), I find weak evidence (p-val.<0.1) that activist involvement in CEO search is associated with a 1.1 percentage point *increase* in capital expenditures after controlling for lagged capital expenditures.

Turning to leverage, payout, and M&A, Table 3 and columns (3) and (4) of Table 5 show no significant relations between activist influence and LEVERAGE_CHG_{t-1,t+3} or PAYOUT_CHG_{t-1,t+3}. However, the linear probability model (LPM) analysis in column (5) and the two-sample t-test in Table 3 indicate that activist involvement is associated with a more than six percentage points *lower* likelihood that target firms are acquired within three years after the new CEO takes office (ACQUIRED_{t+1,t+3}; p-val.<0.05). This result is economically meaningful given an unconditional probability of 10.35% (see Table 3) and is inconsistent with the myopia criticism.

failed attempts at influencing CEO hiring as those where the activist unsuccessfully demands board seats prior to a CEO appointment. I find consistent results using this control group (ACTIVIST_INFLUENCE p-val.<0.01 for ABRET, >0.1 for ALPHA, and <0.01 for ROA_CHG).

19 The sample sizes for changes in investment, leverage, and payout range between 406 and 412 depending on the number of missing values for the policy variables in year t+3, for example due to firms dropping out of CRSP or Compustat. The sample for the analysis of firms being acquired following CEO appointments is the full sample (N=541), which assumes that all corporate acquisitions are captured in SDC Analytics.

Thus, except for the decrease in R&D, the policy changes following CEO appointments are inconsistent with activist influence contributing to new CEOs' short-termism. This confirms the long-run returns and long-run profitability results, which are also inconsistent with activists using their influence on CEO recruiting decisions to increase earnings and share price temporarily at the expense of long-run shareholder value. Collectively, these findings do not support H1b.

Shareholder Influence and CEO Recruiting Process Characteristics

Hypothesis H1a implies that shareholder activist involvement in CEO search is associated with more thorough recruiting processes. ²⁰ Consistent with this, Table 3 reveals a nine percentage points higher likelihood that target companies disclose the hiring of an executive search firm when activists are involved (DISCLOSE_SEARCH_FIRM; p-val. <0.05). In the LPM analysis in column (1) of Table 6, this difference increases to 11.2 percentage points (p-val. <0.01), which is economically large given an unconditional likelihood of 15%. The two-sample t-test for the disclosure of board-level CEO search committees (DISCLOSE_SEARCH_CMTE) is insignificant in Table 3. However, when control variables are added in column (2) of Table 6, the probability of such disclosure is 8.8 percentage points higher when shareholder activists are involved in CEO recruiting. While this estimate is economically significant given an unconditional probability of 25%, it is statistically significant only at the 10% level. ²¹ Nevertheless, these findings indicate that CEO recruiting is more thorough when shareholder activists are involved, since directors' responsibilities for CEO search are clearly defined and extra resources are provided by executive

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²⁰ The samples for the disclosure of the formation of a CEO search committee (DISCLOSE_SEARCH_CMTE, n=503) and the hiring of an executive search firm (DISCLOSE_SEARCH_FIRM, n=503), and the proxies for the length of the CEO search process (LAUNCH_TO_APPOINT, n=503; DEPART_TO_APPOINT, n=500) are smaller than the maximum sample size in this study (N=541) because these variables can only be hand-collected when the CEO appointment announcement date is known. In addition, for DEPART_TO_APPOINT, three observations have missing values because the prior CEO remains with the firm as Co-CEO.

²¹ I try hand-collecting information on whether activists serve on the CEO search committee, but the full list of committee members is rarely disclosed. In most cases either no membership information is available or only the chair of the committee is identified.

search consultants. However, these results are potentially confounded by selection bias as firms disclose the creation of search committees and the hiring of search firms on a voluntary basis.

Therefore, I also examine whether shareholder involvement in CEO recruiting is associated with the duration of CEO search processes because a more thorough process that considers external candidates should take more time to complete. In Table 3, the number of days between predecessor CEO departure announcements and CEO appointment announcements (DEPART_TO_APPOINT) is 61 on average and is not significantly different between CEOs who are hired with and without activist involvement. However, after adding control variables in column (3) of Table 6, this time span is about 50% longer when activists are involved in recruiting. While this estimate is economically large, it is significant only at the 10% level.

The time span between announcements of new CEOs' appointments and predecessors' departures understates the length of the search process if boards start scouting for new CEOs before the predecessor's departure is announced. Thus, I also examine the period between activism campaign launch and CEO appointment announcement (LAUNCH_TO_APPOINT), which is 325 days on average, and is about 58 days (Table 3) or 39% (Table 6 column 4) longer when activists are involved (p-val.<0.01). Collectively, these results further support H1a as they suggest that activists reduce CEO recruiting frictions by ensuring a thorough search, with well-defined director responsibilities, dedicated external resources and sufficient time to consider multiple candidates.

Shareholder Influence and New CEOs' Characteristics

In Table 7, I examine whether activist influence on CEO recruiting is predictably related to new CEOs' characteristics. If activists reduce recruiting frictions by ensuring that the search for external candidates is thorough or by making the target firm's job offer more attractive to such candidates, their involvement should be positively associated with the hiring of CEOs from outside the firm. Consistent with this, the two-sample t-test in Table 3 and the LPM analysis in column (1)

of Table 7 show that the probability of firms hiring a CEO from outside the company is about 22 percentage points higher when shareholders influence CEO recruiting (OUTSIDE_HIRE; p-val.<0.01).²² This effect size is economically large as the unconditional probability in the sample is 58%. This finding provides further support for H1a and suggests that activist influence reduces frictions especially in the recruiting of external CEO candidates.

The results for the second characteristic, whether new CEOs are experienced, are mixed. LPM analyses in columns (2) and (3) of Table 7 show that activist influence is associated with 10 and 4.7 percentage point higher probabilities that new CEOs have previously served as CEOs (WAS_CEO) and as CEOs of publicly listed companies (WAS_LISTED_FIRM_CEO), respectively. While both point estimates are economically meaningful given unconditional probabilities of 48% and 28%, the first is marginally statistically significant (p-val.<0.1) and the second is insignificant. The two-sample t-tests in Table 3 yield similar inferences, implying that there is only weak evidence that an activist's presence makes target firms more attractive to experienced candidates.

Finally, I examine CEO characteristics that might indicate whether activists select CEOs who are more likely to implement myopic policies, which would support H1b. The first characteristic is whether the new CEO has already reached retirement age (63 years or older) because Jenter and Lewellen (2015) show that these CEOs are more willing to sell their firm. The two-sample t-test in Table 3 and the LPM analysis in column (4) of Table 7 show that new CEOs hired with activist involvement are no more likely than CEOs hired without activist influence to have reached retirement age (OLD_CEO). Similarly, in column (5) I find no difference between CEOs hired with and without shareholder involvement regarding whether they have sold firms in the past

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²² I can use the full sample for this analysis (N=541) because I can collect characteristics for all new CEOs from ExecuComp, Equilar or by hand.

²³ In an untabulated analysis, I replace OLD_CEO with the logarithm of the age of the CEO (in years) and also find insignificant results (p-val.>0.1).

(SOLD_PRIOR_FIRM). These results are consistent with those for the policy analyses and provide further evidence against the claim that shareholder activists use their influence on CEO recruiting decisions to put target firms up for sale for a quick profit. Rather, the body of results in this study indicates that shareholder involvement in CEO search is associated with lower recruiting frictions.

V. CONCLUSION

Using detailed hand-collected data, this study sheds light on the CEO recruiting process to examine whether and how shareholder involvement in this process affects recruiting frictions. The findings indicate that hedge fund activist influence on CEO search is associated with improvements in firm performance, suggesting a reduction in recruiting frictions. I find little evidence that activists increase hiring frictions by using their influence to select CEOs who will implement policies that induce temporary increases in earnings and share price. Additional analyses indicate activist involvement is associated with more thorough recruiting processes as reflected in greater resource commitment and more extensive consideration of external CEO candidates.

Subject to two caveats, these findings contribute to the CEO labor market literature, which has mainly focused on the decision to dismiss the incumbent CEO but provides little insight into CEO hiring decisions. The first caveat is that demonstrating causality between shareholder involvement in CEO recruiting and future firm performance and policies is problematic because such involvement is endogenous and sometimes occurs behind-the-scenes and remains unobservable to the researcher. Nevertheless, I hope that this study offers novel insights about CEO hiring decisions and raises new questions, some of which I briefly discuss below. Second, limited data availability constrains the recruiting process characteristics that can be examined in this study. The analysis suggests the need for further research to answer questions such as: How does the relative importance of different recruiting frictions vary with industry, firm, and board characteristics?

What mechanisms (other than shareholder involvement) do boards use to overcome these frictions?

How important is the influence of executive search firms and how does it differ across companies?

While answering some of these questions requires field data, the CEO recruiting process also

presents a fruitful area for future empirical archival accounting research. For example, do more

transparent firms suffer less from CEO hiring frictions as transparency allows candidates to better

understand whether they are a good match with the firm? Finally, this study also suggests the need

for more theory work that explicitly considers recruiting frictions in executive labor market models.

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APPENDIX A Variable Definitions

	Variable Definitions
ACTIVIST_INFLUENCE	Indicator variable equal to 1 if corporate websites, activists' websites, news stories, press releases, SEC filings, or other publicly available information indicate that the hedge fund activist was involved in the recruiting of a new CEO (see Table 2 for examples).
Performance & Policies	
ABRET _{s-1,s+1}	Buy-and-hold stock return measured over a three-day trading window centered on the CEO appointment announcement day adjusted for the expected return predicted by the Fama and French (1993) and Carhart (1997) four-factor model over the same time period.
ALPHA _{s+2,t+3}	Average daily abnormal (i.e., Fama and French (1993) and Carhart (1997) four-factor model adjusted) stock return measured over a three-year window starting two days after the initial CEO appointment announcement. See, Jagolinzer, Larcker, and Taylor (2011).
ROA_CHG _{t-1,t+3}	Change in industry-adjusted ROA measured from the last full fiscal year prior to the year in which the new CEO takes office to the third full fiscal year after the year in which the CEO takes office (see definition for ROA).
CAPX_CHG _{t-1,t+3}	Change in the capx-to-assets ratio measured from the last full fiscal year prior to the year in which the new CEO takes office to the third full fiscal year after the year in which the CEO takes office (see definition for CAPX).
R&D_CHG _{t-1,t+3}	Change in the R&D-to-assets ratio measured from the last full fiscal year prior to the year in which the new CEO takes office to the third full fiscal year after the year in which the CEO takes office (see definition for R&D).
LEVERAGE_CHG _{t-1,t+3}	Change in the debt-to-equity ratio measured from the last full fiscal year prior to the year in which the new CEO takes office to the third full fiscal year after the year in which the CEO takes office (see definition for LEVERAGE).
PAYOUT_CHG _{t-1,t+3}	Change in the payout-to-market-cap ratio measured from the last full fiscal year prior to the year in which the new CEO takes office to the third full fiscal year after the year in which the CEO takes office (see definition for PAYOUT).
ACQUIRED _{t+1,t+3}	Indicator variable equal to 1 if the firm is acquired within three years after the CEO takes office and equal to 0 for all firms that are not identified in SDC Analytics as being acquired.
Recruiting Process Characterist	tics & New CEOs' Characteristics
DISCLOSE_SEARCH_CMTE	Indicator variable equal to 1 if the firm discloses information about a CEO search committee on, or prior to, the CEO appointment announcement date.
DISCLOSE_SEARCH_FIRM	Indicator variable equal to 1 if the firm discloses information about engaging an executive search firm for the purpose of CEO recruiting on, or prior to, the CEO appointment announcement date.
LAUNCH_TO_APPOINT	Number of days between activism campaign launch and new CEO appointment announcement.
DEPART_TO_APPOINT	Number of days between the date on which the permanent (i.e., non-interim) predecessor CEO's departure was announced and the date on which the new permanent CEO is announced.
OUTSIDE_HIRE	Indicator variable equal to 1 if the new CEO is not an executive of the company prior to being appointed CEO.
WAS_CEO	Indicator variable equal to 1 if a new CEO ever was the CEO of another company before becoming the target firm's CEO.
WAS_LISTED_FIRM_CEO	Indicator variable equal to 1 if a new CEO ever was the CEO of a listed company before becoming the target firm's CEO.
OLD_CEO SOLD_PRIOR_FIRM	Indicator variable equal to 1 if a new CEO is at least 63 years old. Indicator variable equal to 1 if a new CEO ever was the CEO of another company before becoming the target firm's CEO and executed the sale of that other company.

APPENDIX A (continued)

Control Variables	
PAST_INFLUENCE	Number of times a hedge fund activist influenced CEO recruiting in the past.
PAST_SUCCESS	Number of past campaigns during which a hedge fund activist achieved its campaign objectives (see, Brav et al. 2008).
$ASSETS_{t-1}$	Total assets (in \$ million) measured for the last fiscal year prior to the fiscal year during which the new CEO takes office.
ROA_{t-1}	EBITDA divided by lagged total assets measured for the last fiscal year prior to the fiscal year during which the new CEO takes office minus the average ROA of the firm's three-digit SIC industry peers measured over the same period.
$GROWTH_{t-1}$	Year-over-year percentage change in net sales revenue measured for the last fiscal year prior to the fiscal year during which the new CEO takes office.
BTM_{t-1}	Ratio of the book value of equity and the market value of equity measured for the last fiscal year prior to the fiscal year during which the new CEO takes office.
$CAPX_{t-1}$	Capital expenditures scaled by total assets measured for the last fiscal year prior to the fiscal year during which the new CEO takes office.
$R\&D_{t-1}$	Research and development expenditures scaled by total assets measured for the last fiscal year prior to the fiscal year during which the new CEO takes office.
LEVERAGE _{t-1}	Total book value of short- and long-term debt scaled by the book value of equity measured for the last fiscal year prior to the fiscal year during which the new CEO takes office.
PAYOUT _{t-1}	Value of dividends plus share repurchases scaled by market capitalization measured for the last fiscal year prior to the fiscal year during which the new CEO takes office.

TABLE 1 Sample

And Trainer	
Panel A. Sample Selection Procedure	
1 # unique shareholder activism campaigns with relevant CEO information in ExecuComp or Equilar	1584
2 # unique shareholder activism campaigns that result in CEO turnover	655
3 # total CEO appointments during activism campaigns (some campaigns include two CEO turnover events)	700
4 # CEO appointments that are effective following activism campaign launch but were announced prior to campaign launch	11
5 Difference between 3 and 4	689
6 # appointments of interim CEOs who are not promoted to the permanent CEO position later	71
7 Difference between 5 and 6	618
8 # CEO appointments for which at least one control variable is missing	77
9 Final sample: Difference between 7 and 8	541
Panel B. Sample Composition	
# appointments of interim CEOs who are appointed permanent CEOs later	45
# appointments of CEOs who are hired with shareholder involvement	132
# appointments of CEOs who are hired with shareholder involvement through shareholder board representation	120

This table presents an overview of the sample of CEO appointments during shareholder activism campaigns. Panel A presents the sample construction procedure and Panel B presents additional sample characteristics. The sample includes CEO appointments between years 1995 and 2018 that occurred during shareholder activism campaigns that were launched between 1994 and 2016. The number of observations in the regression analyses is often less than 541 due to availability of the dependent variables in these analyses and due to the exclusion of CEOs who are initially appointed as interim CEOs and are appointed as permanent CEOs later during the campaign.

TABLE 2

Examples of Activism Campaigns with Shareholder Influence on CEO Recruiting

	Examples of Activism Campaigns with	Examples of Activism Campaigns with Shareholder Influence on CEO Recruiting	
Shareholder: Sherborne Investors	Target: Nautilus	New CEO: Edward Bramson	CEO Appointment: 3/26/2008
Synopsis: In December 2007, Sherbor.	ne Investors, which held an ownership stal	Synopsis: In December 2007, Sherborne Investors, which held an ownership stake of 25% in fitness equipment manufacturer Nautilus, won a proxy fight against	tilus, won a proxy fight against
the company, resulting in the appointn	nent of four Sherborne director nominees t	the company, resulting in the appointment of four Sherborne director nominees to the Nautilus board. Two of the new directors were Sherborne affiliates, among	ere Sherborne affiliates, among
them Sherborne founder Edward Bran	ason, and two new directors were independent	them Sherborne founder Edward Bramson, and two new directors were independent of the fund. In March 2018, Nautilus announced that Bramson would replace	ced that Bramson would replace
Nautilus CEO Robert Falcone.			
Shareholder: Ramius	Target: SeaChange International	New CEO: Raghavendra Rau	CEO Appointment: 5/1/2012
Synopsis: In June 2010, Raghavendra Rau joined the	Rau joined the SeaChange board, together	SeaChange board, together with Edward Terino, as part of a settlement agreement between the company and	ement between the company and
Ramius. Neither Rau nor Terino were	affiliated with the activist fund. In Novem	Ramius. Neither Rau nor Terino were affiliated with the activist fund. In November 2011, Rau took the role of interim CEO and he was formally appointed	ne was formally appointed
permanent CEO in May 2012. Ramius	worked together with Rau on other occasi	permanent CEO in May 2012. Ramius worked together with Rau on other occasions when the fund successfully nominated him as a director to the boards of	s a director to the boards of
Microtune and Aviat Networks in May	Microtune and Aviat Networks in May 2010 and September 2010, respectively.		
Shareholder: Pershing Square	Target: Canadian Pacific	New CEO: Hunter Harrison	CEO Appointment: 6/29/2012
Synopsis: During his campaign agains	t Canadian Pacific Railway (CP), Pershing	Synopsis: During his campaign against Canadian Pacific Railway (CP), Pershing Square Capital founder William Ackman asserted that CP's biggest challenge	ed that CP's biggest challenge
was to reduce its operating cost-to-rev	enue ratio. Ackman therefore proposed to	was to reduce its operating cost-to-revenue ratio. Ackman therefore proposed to hire Hunter Harrison, the retired chief executive of Canadian National Railway	of Canadian National Railway
(CN), as the new CEO. Ackman praise	ed Harrison for inventing 'Precision Sched	(CN), as the new CEO. Ackman praised Harrison for inventing 'Precision Scheduled Railroading', an operational efficiency concept, which Harrison implemented	ept, which Harrison implemented
at CN to achieve the best operating rat	io among Class I North American railroad	at CN to achieve the best operating ratio among Class I North American railroads. While CP's directors initially argued that Harrison was a poor match for the	son was a poor match for the
company, he was appointed CEO shor	tly after Ackman joined CP's board. Durir	company, he was appointed CEO shortly after Ackman joined CP's board. During his tenure, Harrison improved CP's operating cost-to-revenue ratio from 77	cost-to-revenue ratio from 77
percent in 2012 to 59 percent in 2016.	In 2016, Harrison was poached by CSX R	percent in 2012 to 59 percent in 2016. In 2016, Harrison was poached by CSX Railway with the help of another activist investor, former Pershing Square Capital	former Pershing Square Capital
employee Paul Hilal (see below).			
Shareholder: Pershing Square	Target: Air Products & Chemicals	New CEO: Seifi Ghasemi	CEO Appointment: 7/1/2014
Synopsis: Following the campaign lau	nch, Pershing Square Capital founder Will	Synopsis: Following the campaign launch, Pershing Square Capital founder William Ackman privately suggested to the Air Products Board that it should replace	acts Board that it should replace

CEO Appointment: 3/31/2015 CEO Appointment: 2/23/2015 Paull and Seifi Ghasemi, were proposed by Pershing Square with the former being a member of Pershing's advisory board. Both new directors would join a newly three Representatives of the Pershing Square Group, including William A. Ackman, will be permitted to, and may, meet with the candidate for the New CEO at a company's CEO William Ruprecht. Following the settlement of a bitter proxy fight, Sotheby's agreed to appoint three Third Point director candidates, including CEO John McGlade. Pursuant to a settlement agreement, McGlade resigned and the company appointed three new directors to its board. Two of them, Matthew formed CEO Search Committee. The settlement also stipulated that "prior to the Search Committee recommending [a CEO] candidate to the Board of Directors, time and in a manner to be determined by the Search Committee". Seifi Ghasemi, the new director proposed by Pershing Square, became Air Products CEO in Synopsis: After Third Point Capital disclosed a significant stake in the auction house, Third Point founder Daniel Loeb publicly called for the ouster of the Loeb. Following the settlement, Sotheby's CEO resigned and the board picked Tad Smith from Madison Square Garden as the successor. SYNOPSIS. FOLIOWING THE CAMPAIGH FAMILY, FEISHING SQUARE CAPITAL TOURIDE! WITHIN MAKINAH PITVATELY SUBGESTED TO THE ALL FLOUDCES New CEO: Eugene Lee Jr New CEO: Tad Smith Target: Darden Restaurants Target: Sotheby's Shareholder: Third Point Capital Shareholder: Starboard Value July 2014.

later, Darden shareholders voted out the entire Darden board and replaced it with Starboard's director nominees, including Starboard founder Jeffrey Smith. The Synopsis: In September 2014, Starboard Value published a 294-page criticism of Darden Restaurant's business practices, board, and top management. A month new board appointed then-COO Eugene Lee as interim CEO and started the CEO search process. In February 2015, Lee was named permanent CEO.

TABLE 2 (continued)

		_	
Shareholder: Elliott Management	Target: Arconic	New CEO: Chip Blankenship	CEO Appointment: 1/15/2018
Synopsis: During its campaign against	Arconic, Elliott Management published	ynopsis: During its campaign against Arconic, Elliott Management published a 26-page slide deck titled "New Leadership Is Needed at Arconic" in which the	Needed at Arconic" in which the
fund publicly demanded the ouster of	CEO Klaus Kleinfeld and proposed Larr	und publicly demanded the ouster of CEO Klaus Kleinfeld and proposed Larry Lawson as a successor. Elliott had retained Lawson as a consultant on its Arconic	wson as a consultant on its Arconic
campaign. Kleinfeld ultimately resigne	ed and after Elliott portfolio manager Da	campaign. Kleinfeld ultimately resigned and after Elliott portfolio manager Dave Miller joined the board in December 2017, the board selected Chip Blankenship	e board selected Chip Blankenship
as Kleinfeld's replacement in January 2	2018. Following Blankenship's appointm	as Kleinfeld's replacement in January 2018. Following Blankenship's appointment, Miller was cited saying "[a]fter meeting with Chip and putting extensive time	th Chip and putting extensive time
and resources into understanding both	his background and Arconic's current op	and resources into understanding both his background and Arconic's current opportunities and challenges, we enthusiastically recommended his appointment".	ecommended his appointment".
Shareholder: Icahn Partners	Target: Xerox	New CEO: John Visentin	CEO Appointment: 5/17/2018

individuals to be appointed to the Xerox board, these board appointments happened concurrently with the Visentin CEO-appointment, meaning that Icahn effected Synopsis: During his campaign against Xerox, Carl Icahn hired John Visentin as a campaign consultant. In May 2018, Icahn reached a settlement agreement with the company, which stipulated that Visentin would join Xerox as CEO and Vice Chairman of the Board. While the settlement also provided for Icahn-affiliated the recruitment of his favorite CEO candidate without board representation.

CEO Appointment: 3/7/2017 the CEO position at CSX Corporation. Subsequently, Hilal publicly demanded that CSX replace its incumbent CEO with Harrison. In March 2017, Hilal reached a settlement agreement with CSX, which stipulated that Hunter Harrison would become the new CSX CEO. While the settlement also provided for the appointment become the new CEO of Canadian Pacific Railway (CPR). In January 2017, Hilal paid Harrison \$84 million to resign as CEO of CPR and to be available to take of Hilal to the CSX board, this board appointment happened concurrently with the CEO-appointment, meaning that Mantle Ridge effected the recruitment of the Synopsis: When Mantle Ridge founder Paul Hilal worked for Bill Ackman's Pershing Square Capital in 2012, he was involved in recruiting Hunter Harrison to new CEO without board representation. In June 2017, CSX shareholders approved that the company would fully compensate Mantle Ridge for the \$84 million New CEO: Hunter Harrison Target: CSX Corporation payment it had made to Harrison to entice him to leave CPR. Shareholder: Mantle Ridge Capital

This table presents representative examples of activism campaigns during which principals or employees of shareholder activist funds were directly involved in the selection of a new CEO. "Shareholder" is the name of the shareholder activist fund. "Target" is the name of the target company. "New CEO" is the name of the CEO who is hired during the activism campaign. "CEO Appointment" lists the date when the CEO appointment became effective. The information in this table is collected from shareholder disclosures, target disclosures, press releases, and news reports. TABLE 3
Summary Statistics

			Summar	y Statistics						
		AllCE	O Appointmer	ents		Activist Influence	ence	No Influence	7	ΔMeans
	Mean	SD	25th	Median	75th	Mean	n	Mean	n	p-val.
ACTIVIST_INFLUENCE	0.2440	0.4299	0.0000	0.0000	0.0000	ı		ı		1
Performance & Policies										
$ABRET_{s-1,s+1}$	0.0093	0.0927	-0.0323	0.0005	0.0399	0.0301	109	•	51	0.0069
$ALPHA_{s+2,t+3}$	0.0001	0.0015	-0.0004	0.0002	0.0009	0.0001	109	•	51	9686.0
ROA CHG _{t-1,t+3}	0.0171	0.1573	-0.0377	0.0148	0.0745	0.0410	66	0.0095 3	312	0.0821
R&D_CHG _{-1,t+3}	-0.0009	0.0523	-0.0001	0.0000	0.0000	-0.0066	100	•	2	0.2143
CAPX $\operatorname{CHG_{t-1, t+3}}$	-0.0104	0.0474	-0.0173	-0.0017	0.0061	-0.0044	100	` •		0.1511
LEVERAGE_CHG _{t-1,t+3}	0.2507	2.9208	-0.3044	0.0262	0.5224	0.0924	100	•		0.5338
PAYOUT CHG _{t-1,t+3}	-0.0025	0.0899	-0.0214	0.0000	0.0141	0.0103	26	•	6(0.1091
ACQUIRED _{t+1,t+3}	0.1035	0.3049	0.0000	0.0000	0.0000	0.0530	132	•	6(0.0286
Recruiting Process Characteristics & New CEOs' C	New CEOs' Cha	racteristics								
SEARCH FIRM DISCLOSURE	0.1511	0.3585	0.0000	0.0000	0.0000	0.2188	128	0.1280 37	75	0.0133
SEARCH CMTE DISCLOSURE	0.2505	0.4337	0.0000	0.0000	1.0000	0.3047	128		75	0.1017
DEPART_TO_APPOINT	60.5240	92.8880	0.0000	0.0000	112.5000	70.1984	126		74	0.1767
LAUNCH_TO_APPOINT	325.4195	206.8735	149.0000	309.0000	496.0000	368.7344	128		75	0.0060
OUTSIDE_HIRE	0.5841	0.4933	0.0000	1.0000	1.0000	0.7500	132		409	0.0000
WAS_CEO	0.4806	0.5001	0.0000	0.0000	1.0000	0.5606	132		6(0.0344
WAS_LISTED_FIRM_CEO	0.2773	0.4481	0.0000	0.0000	1.0000	0.3258	132		6(0.1529
OLD_CEO	0.0444	0.2061	0.0000	0.0000	0.0000	0.0455	132		6(0.9442
SOLD PRIOR FIRM	0.1516	0.3589	0.0000	0.0000	0.0000	0.1818	132	-	6(0.2659
Control Variables	1	,	6	6	9		,		9	0
PAST_INFLUENCE	0.7412	1.6135	0.0000	0.0000	1.0000	1.3106	132	4	409	0.000.0
PAST_SUCCESS	5.6451	7.4850	0.0000	2.0000	8.0000	7.8939	132	-	409	0.0001
ASSETS _{t-1}	3959.3333	9632.3443	186.0090	695.8710	2502.0000	4472.8677	132	-	6(0.4817
ROA _{t-1}	-0.0062	0.1572	-0.0724	9600.0-	0.0568	-0.0077	132	-	6(0.9054
$GROWTH_{t-1}$	0.0641	0.4173	-0.0801	0.0077	0.1051	0.0087	132	-	409	0.0793
$\mathrm{BTM}_{\mathfrak{k}\cdot 1}$	0.7178	0.7207	0.3262	0.5803	0.9288	0.8448	132	-	6(0.0197
$CAPX_{t-1}$	0.0486	0.0562	0.0156	0.0302	0.0597	0.0496	132	-	6(0.8131
$R\&D_{t\cdot 1}$	0.0440	0.0839	0.0000	0.0000	0.0548	0.0381	132	-	6(0.3552
$\mathrm{LEVERAGE_{t-1}}$	0.8314	1.8917	0.0052	0.4236	1.1199	1.1446	132	0.7304 40	6(0.0286
PAYOUT _{t-1}	0.0362	0.0505	0.0000	0.0110	0.0551	0.0316	132	٠,	409	0.2365

to missing values and due to the exclusion in some analyses of CEOs who are initially appointed interim CEOs and only appointed permanent CEOs later. See Table 1 and regression table captions for details on the sample construction and the sample sizes for different analyses. Control variables are available for all observations by construction (see Table 1). The sample period is 1995 to 2018. The unit of analysis is the CEO appointment. All variables are defined in Appendix A. influence. The number of observations for the "All CEO appointments" sample is the sum of the "Activist Influence" and "No Influence" sample sizes and varies due This table presents summary statistics separately for all CEO appointments, for those with activist influence on CEO recruiting, and for those without activist

TABLE 4
Firm Performance Following Shareholder Involvement in CEO Recruiting

Firm renormance r	onowing Snareholder in	voivement in CEO Ke	ci uitilig
	(1)	(2)	(3)
	$ABRET_{s-1,s+1}$	$ALPHA_{s+2,t+3}$	ROA_CHG _{t-1,t+3}
ACTIVIST_INFLUENCE	0.031**	-0.00001	0.036**
	(2.47)	(-0.07)	(2.29)
LN_PAST_INFLUENCE	-0.005	0.00021	-0.018
	(-0.55)	(1.62)	(-1.10)
LN_PAST_SUCCESS	0.002	-0.00010	-0.001
	(0.45)	(-1.39)	(-0.10)
LN_ASSETS _{t-1}	0.003	-0.00007	0.005
_	(0.96)	(-1.60)	(0.89)
ROA_{t-1}	-0.106***	0.00104*	-0.269***
	(-2.60)	(1.96)	(-3.24)
$GROWTH_{t-1}$	-0.001	-0.00034*	-0.089***
	(-0.09)	(-1.77)	(-2.94)
BTM_{t-1}	-0.019*	0.00011	-0.024**
	(-1.79)	(0.92)	(-2.23)
$CAPX_{t-1}$	-0.037	0.00038	-0.193
	(-0.43)	(0.25)	(-0.76)
$R\&D_{t-1}$	0.043	0.00184*	0.043
	(0.63)	(1.70)	(0.24)
LEVERAGE _{t-1}	-0.004	-0.00006	-0.006
	(-1.38)	(-0.98)	(-0.76)
PAYOUT _{t-1}	-0.140	0.00224	0.196
	(-1.35)	(1.22)	(1.33)
INTERCEPT	0.002	0.00048	0.015
	(0.11)	(1.34)	(0.30)
Observations	460	460	411
Adjusted R-Squared	0.058	0.031	0.125

This table presents results for OLS regression analyses examining the relation between shareholder involvement in CEO recruiting and firm performance. The sample for the market reaction analysis (column 1; n=460) is smaller than the maximum sample size in this study (N=541) because all interim CEO appointments are excluded and because of missing CEO appointment announcement dates or missing stock returns. The sample for the long-run returns analysis (column 2) is identical to the one for the market reaction analysis so that I can perfectly map long-run returns to the preceding market reactions to make a claim whether market reactions reverse in the long-run. Even though I do not have to restrict the sample for the profitability analysis to CEO appointments for which I know the CEO appointment announcement date because I calculate profitability changes around the fiscal year in which the CEO appointment became effective (which is known), the sample (column 3; n=411) is smaller than the maximum sample size. This is due to missing values for industry-adjusted ROA in year t+3, for example because of firms delisting or dropping out of CRSP or Compustat for other reasons, or due to variable-specific missing values. T-statistics appear below the coefficients. Standard errors are adjusted for clustering at the firm level because a unique firm can be targeted several times during the sample period. *, ***, **** indicate statistical significance at the 10, 5, 1% level, respectively (two-tailed). All variables are defined in Appendix A.

TABLE 5
Corporate Policies Following Shareholder Involvement in CEO Recruiting

	T am radina		moraci ini ori cincin in celo is		
	(1)	(2)	(3)	(4)	(5)
	$R\&D_CHG_{t-1,t+3}$	CAPX_CHG _{t-1,t+3}	LEVERAGE_CHG _{t-1,t+3}	PAYOUT_CHG _{t-1,t+3}	ACQUIRED _{t+1,t+3}
ACTIVIST_INFLUENCE	**800.0-	0.011*	0.014	0.008	-0.063**
l	(-2.13)	(1.95)	(0.04)	(1.00)	(-2.26)
LN PAST INFLUENCE	-0.000	-0.003	0.265	-0.003	0.028
I I	(-0.01)	(-0.80)	(1.04)	(-0.49)	(1.05)
LN_PAST_SUCCESS	0.002	0.000	-0.094	-0.007	-0.016
	(0.89)	(0.22)	(-0.49)	(-1.54)	(-1.14)
${ m LN_ASSETS_{t-1}}$	-0.003**	-0.002	-0.054	**900.0	-0.010
	(-2.12)	(-1.15)	(-0.47)	(2.10)	(-1.06)
ROA_{t-1}	0.050**	0.011	0.518	-0.014	-0.152
	(1.97)	(0.79)	(0.53)	(-0.65)	(-1.07)
$GROWTH_{t-1}$	9000	-0.001	-0.482	-0.022**	-0.016
	(0.78)	(-0.27)	(-1.50)	(-2.00)	(-0.69)
BTM_{t-1}	0.003	-0.003	-0.285	0.003	-0.010
	(0.79)	(-1.06)	(-0.93)	(0.34)	(-0.53)
$CAPX_{t-1}$	-0.085***	-0.552***	-0.178	-0.046	-0.168
	(-2.83)	(-5.75)	(-0.04)	(-0.56)	(-0.71)
$R\&D_{t\cdot 1}$	-0.227**	-0.054**	-2.909	-0.076	0.374
	(-2.30)	(-2.14)	(-1.55)	(-1.65)	(1.13)
$ ext{LEVERAGE}_{t-1}$	-0.000	0.002	-0.497**	-0.001	-0.001
	(-0.54)	(0.83)	(-2.43)	(-0.15)	(-0.25)
PAYOUT _{t-1}	0.026	0.001	7.425	-1.109***	-0.267
	(0.50)	(0.03)	(1.19)	(-7.20)	(-0.95)
INTERCEPT	0.027**	0.027***	1.121	0.015	0.204**
	(2.54)	(3.13)	(1.21)	(0.65)	(2.52)
Observations	412	411	411	406	541
Adjusted R-Squared	0.109	0.420	0.099	0.368	0.031

recruiting and corporate policies. The sample for the analysis of whether firms are acquired following CEO appointments is the full sample (N=541), which assumes that all corporate acquisitions are captured in SDC Analytics. The sample sizes for the changes in the other policy variables range between 406 and 412 depending on the number of missing values for the individual policy variable in year t+3, for example because of firms delisting or dropping out of CRSP or Compustat for other reasons. T-statistics appear below the coefficients. Standard errors are adjusted for clustering at the firm level because a unique firm can be targeted several times This table presents results for OLS (columns 1-4) and linear probability model (column 5) analyses examining the relation between shareholder involvement in CEO during the sample period. *, **, ** indicate statistical significance at the 10, 5, 1% level, respectively (two-tailed). All variables are defined in Appendix A.

TABLE 6 CEO Recruiting Process Characteristics

	(1)	(2)	(3)	(4)
	DISCLOSE SEARCH FIRM	DISCLOSE_SEARCH_CMTE	LN DEPART TO APPOINT	LN LAUNCH TO APPOINT
ACTIVIST INFLUENCE	0.112***	*880.0	0.501*	0.387***
I	(2.69)	(1.79)	(1.83)	(3.96)
LN PAST INFLUENCE	0.003	-0.038	0.062	-0.159
ı	(0.09)	(-0.81)	(0.26)	(-1.39)
LN_PAST_SUCCESS	-0.011	0.006	0.008	-0.004
	(-0.62)	(0.25)	(0.06)	(-0.07)
LN_ASSETS _{t-1}	0.011	0.000	690.0	-0.009
ı	(0.95)	(0.04)	(0.90)	(-0.33)
ROA _{t-1}	990.0	0.018	0.113	-0.487
	(0.51)	(0.10)	(0.15)	(-1.38)
$GROWTH_{t-1}$	0.050	-0.001	-0.407	-0.046
	(1.01)	(-0.01)	(-1.53)	(-0.35)
$\mathrm{BTM}_{\mathfrak{t}\text{-}1}$	-0.051**	-0.007	0.030	-0.016
	(-2.25)	(-0.21)	(0.16)	(-0.30)
CAPX _{t-1}	0.382	-0.235	4.975**	-1.109
	(1.03)	(-0.54)	(2.35)	(-1.31)
$R\&D_{t-1}$	-0.102	0.134	2.867*	0.221
	(-0.60)	(0.42)	(1.85)	(0.38)
LEVERAGE _{t-1}	-0.018**	-0.005	-0.058	-0.000
	(-2.24)	(-0.36)	(-0.83)	(-0.02)
PAYOUT _{t-1}	0.516	0.550	0.192	2.355***
	(1.43)	(1.12)	(0.08)	(2.85)
INTERCEPT	0.081	0.225**	1.009*	5.430***
	(0.95)	(2.00)	(1.80)	(26.02)
Observations	503	503	500	503
Adjusted R-Squared	0.035	-0.009	0.012	0.028

This table presents results for linear probability model (columns 1 and 2) and OLS (columns 3 and 4) analyses examining the relation between shareholder involvement in CEO recruiting and CEO recruiting process characteristics. The samples for the disclosure of the formation of a CEO search committee (n=503) and the hiring of date is known. In addition, for LN_DEPART_TO_APPOINT (column 3), three additional observations have missing values because the prior CEO remains with the n=500) are smaller than the maximum sample size in this study (N=541) because these variables can only be hand-collected when the CEO appointment announcement firm as Co-CEO. T-statistics appear below the coefficients. Standard errors are adjusted for clustering at the firm level because a unique firm can be targeted several an executive search firm (n=503), and the proxies for the length of the CEO search process (LN_LAUNCH_TO_APPOINT, n=503; DEPART_TO_APPOINT, times during the sample period. *, **, *** indicate statistical significance at the 10, 5, 1% level, respectively (two-tailed). All variables are defined in Appendix A. TABLE 7

		New CEOs	New CEOs' Characteristics		
	(1)	(2)	(3)	(4)	(5)
	OUTSIDE_HIRE	WAS_CEO	WAS_LISTED_FIRM_CEO	OLD_CEO	SOLD PRIOR FIRM
ACTIVIST_INFLUENCE	0.223***	0.100*	0.047	-0.001	0.045
	(4.65)	(1.93)	(0.95)	(-0.05)	(1.19)
LN PAST INFLUENCE	-0.040	-0.008	-0.033	-0.013	-0.022
I	(-0.87)	(-0.17)	(-0.72)	(-0.70)	(-0.55)
LN_PAST_SUCCESS	0.005	-0.004	0.029	0.002	0.030
	(0.18)	(-0.13)	(1.20)	(0.25)	(1.31)
LN_ASSETS_{t-1}	-0.036**	-0.021	0.008	0.008	-0.016*
	(-2.41)	(-1.44)	(0.59)	(1.46)	(-1.67)
ROA_{t-1}	0.027	0.098	-0.027	-0.175***	-0.071
	(0.16)	(0.61)	(-0.18)	(-2.62)	(-0.62)
$GROWTH_{t-1}$	-0.017	-0.003	0.019	-0.029	0.085*
	(-0.30)	(-0.05)	(0.39)	(-1.42)	(1.69)
$\mathrm{BTM}_{\mathrm{t-1}}$	-0.001	0.016	-0.027	-0.032***	-0.027
	(-0.02)	(0.46)	(-0.73)	(-2.61)	(-1.30)
$CAPX_{t-1}$	-0.114	-0.177	-0.787**	-0.046	-0.337
	(-0.27)	(-0.40)	(-2.27)	(-0.32)	(-1.47)
$R\&D_{t\cdot 1}$	-0.039	0.095	-0.270	-0.164*	0.266
	(-0.12)	(0.28)	(-1.09)	(-1.79)	(0.99)
$ ext{LEVERAGE}_{ ext{t-1}}$	0.009	0.023	0.033**	0.007	0.011
	(0.69)	(1.65)	(2.51)	(1.01)	(1.15)
$PAYOUT_{t-1}$	-1.498***	-0.616	-0.708	-0.285*	-0.317
	(-3.14)	(-1.16)	(-1.51)	(-1.86)	(-0.98)
INTERCEPT	0.828***	0.601***	0.251**	0.027	0.237***
	(7.60)	(5.55)	(2.53)	(0.67)	(3.46)
Observations	541	541	541	541	541
Adjusted R-Squared	0.072	0.007	0.022	0.019	0.018

characteristics. For these analyses, I can use the full sample (N=541) because I can collect this information for all new CEOs either from ExecuComp or from Equilar or by hand. T-statistics appear below the coefficients. Standard errors are adjusted for clustering at the firm level because a unique firm can be targeted several times during the sample period. *, **, *** indicate statistical significance at the 10, 5, 1% level, respectively (two-tailed). All variables are defined in Appendix A. This table presents results for linear probability model analyses examining the relation between shareholder involvement in CEO recruiting and new CEOs'