CEO Succession Roulette[♦]

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ABSTRACT

Despite intense scrutiny from investors, markets, and regulators, many public companies have no formal succession plans. Anecdotal evidence links succession risk to significant value destruction, but there is limited academic research evaluating the effects of succession planning on CEO turnover outcomes. We provide evidence that succession planning reduces the cost of management transitions by improving their efficiency. Firms with succession plans experience not only lower uncertainty around turnover events but also a faster reduction in uncertainty over the incoming CEO's tenure, consistent with faster learning about CEO-firm fit. Succession planning also raises the quality of the CEO-firm match, as evidenced by longer CEO tenure, and improves the board's readiness to replace an underperforming CEO, increasing turnover-performance sensitivity.

Keywords: CEO turnover, succession planning, executive labor market, CEO-firm match, CEO turnover-performance sensitivity

JEL classification: G34, J24, J41

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1. Introduction

Succession planning is a key responsibility of corporate boards. The Council of Institutional Investors strongly urges boards to "approve and maintain a detailed CEO succession plan and publicly disclose the essential features in the proxy statement."[1] The Securities and Exchange Commission (SEC) views poor succession planning as "a significant business risk,"[2] even though it does not mandate a specific type of succession planning disclosure. Investors, banks, and rating agencies increasingly review the robustness of succession planning as one of the critical aspects of a firm's governance.

Despite this intense scrutiny, a 2014 survey by the National Association of Company Directors (NACD) reveals that most public companies have no formal succession plans, and only 17% of companies are judged by their directors to be effective at succession planning. Worryingly, an estimated 43% of global large-cap company CEO turnovers do not follow a pre-established succession process.[3] This high level of succession risk is allegedly very costly as "companies forced into successions in recent years have lost […] about \$1.8bn per company more than if the successions had been planned".[4]

In this paper, we study the effects of formal succession planning on leadership stability and the efficiency of CEO turnover decisions. We find that having a succession plan facilitates a smooth management transition by reducing the likelihood of forced CEO turnovers, the incidence of interim CEO appointments, and the frequency of non-CEO executive departures. Our results also demonstrate a positive impact of succession planning on the efficiency of executive turnovers. First, firms with succession plans experience not only lower uncertainty around turnover events but also a faster reduction in uncertainty over the tenure of the incoming CEO,

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[1] See https://www.cii.org/files/policies/09_22_20_corp_gov_policies.pdf
[2] SEC Staff Bulletin from October 27, 2009, available at https://www.sec.gov/interps/legal/cfslb14e.htm.
[3] See "2014 NACD Public Company Governance Survey".
[4] See "Change at the top comes with a cost", *The Financial Times*, April 13, 2015.

consistent with faster learning about CEO-firm fit. In addition, we find that succession planning improves the quality of the match between the firm and the incoming CEO, as evidenced by longer CEO tenure. Finally, succession planning helps CEO dismissal decisions by raising the board's preparedness to remove an underperforming CEO, thus increasing turnover-performance sensitivity.

To study the relationship between succession planning and CEO turnover outcomes, we hand-collect data from regulatory filings to identify a firm's first disclosure of a succession plan and manually verify whether subsequent turnover events adhere to the pre-disclosed succession guidelines. We note two common features of succession planning disclosures. First, perhaps due to the intense pressure on boards to provide details of their succession planning efforts and demonstrate that their oversight adds value, succession planning disclosures are not boiler-plate in nature.

Second, typical succession plans aim to provide general guidelines for executive turnovers and are not adopted to replace a specific CEO. A firm's succession plan can be revised through time but is not modified to fit a particular turnover event. For example, Pfizer Inc. has been disclosing its succession planning procedures since 1998 and followed these procedures in its 2006 deliberations on a successor to its then CEO, Hank McKinnell. The company argued that "[o]ver the last several years, the board has been focused on an orderly process of succession planning" and that the decision to replace McKinnell "is a continuation of that process…"[5]

In a sample of more than 3,000 U.S. public firms undergoing executive transitions between 1994 and 2010, we find that only 12.9% of CEO turnover events follow succession plans. Comparing firms with and without pre-disclosed succession plans reveals that succession

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[5] See Pfizer's 1998 proxy filing at https://www.sec.gov/Archives/edgar/data/78003/0000930413-98-000326.txt and the account of its 2006 turnover in "Raising Issue of Succession at Pfizer", *The New York Times*, July 28, 2006.

planning has important consequences for turnover outcomes. In particular, firms with succession plans have a 6.6% lower probability of experiencing a forced CEO turnover. In addition, we find that firms with succession plans are about 7.1% less likely to choose an interim CEO and are also less likely to lose other members of their top management teams following the CEO turnover. However, such firms are not more likely to appoint an insider successor, confirming survey evidence that internal talent development is just one aspect of the succession planning process.

Our analysis continues with an investigation of the effects of succession planning on firm uncertainty around turnover events. Succession planning disclosures are aimed at alleviating investors' apprehension about executive transitions; therefore, we expect that firms with succession plans will experience lower firm uncertainty around CEO turnovers, relative to firms with no succession plans. Using both realized and idiosyncratic stock return volatility to capture firm uncertainty, we indeed find that succession planning is associated with lower uncertainty over the first year of the successor CEO's tenure.

We next turn our attention to studying how market participants update their beliefs about the incoming CEO's fit with the firm and how this learning process is reflected in the firm's level of uncertainty over time. We conjecture that the criteria and general expectations about talent recruitment disclosed in the firm's succession plan should help investors to evaluate the CEO-firm match more quickly. Thus, relative to firms with no succession plans, we expect that firms with succession plans will experience a faster decline in uncertainty over the early years of the new CEO's tenure.

Following Pan, Wang, and Weisbach (2015), we examine stock return volatility during the successor CEO's tenure. We confirm their findings for firms without succession plans; that is, stock return volatility declines faster in the first year of CEO tenure than in the second or third year, consistent with a Bayesian learning model. However, we find that for firms with

succession plans, the market updates its beliefs about the new CEO's qualifications mostly during the first year of CEO tenure. This indicates that succession planning provides market participants with a "head start" to evaluate the match between the incoming CEO's skillset and the company's standards developed during the succession planning process. As a result, investors are able to learn about CEO-firm match more quickly.

Economic theory argues that an efficient hiring decision results in a better match between a firm and its CEO, and that good CEO matches survive while bad matches quit. To assess whether succession planning improves the fit between the incoming CEO and the firm, we use CEO tenure as an ex-post measure of fit and test how succession planning influences the new CEO's tenure at the firm. We show that incoming CEOs have a higher probability of a longer tenure at firms with succession plans, relative to firms with no succession plans. This evidence is consistent with findings in Allgood and Farrell (2003) and Ertimur, Rawson, Rogers, and Zechman (2018) that good CEO-firm matches last longer than poor ones. Moreover, we also show that even conditional on CEO ability, succession planning still exerts positive effects on CEO tenure, in particular for forced turnovers, suggesting that CEO-firm match is a critical channel through which succession planning improves turnover efficiency. This result highlights the importance of the board's role in ensuring optimal *ex-ante* CEO-firm matching (Hermalin and Weisbach, 1998).

Succession planning is also likely to affect the efficiency of executive dismissals. We expect that firms with established succession plans will be better prepared to remove an underperforming CEO; for these firms, we should observe higher turnover for a given level of performance, that is, higher turnover-performance sensitivity. Apart from succession planning disclosures, the availability and quality of performance metrics is another factor that influences firms' turnover-performance sensitivity. Thus, we ask whether the improvement in the precision of disclosed performance measures as a result of a 2006 SEC-mandated change in

disclosures has a differential effect on the turnover-performance sensitivity of firms with and without disclosed succession plans.

We find that the improved disclosure increases the turnover-performance sensitivity of firms without succession plans but does not significantly affect the sensitivity of firms with disclosed succession plans prior to 2006. We interpret this finding as indicating that the expanded disclosure increased the turnover-performance sensitivity for firms without succession plans, whereas the benefit of the rule change was less pronounced for firms that already enjoyed higher readiness to dismiss underperforming CEOs as a result of the additional disclosures during the succession planning process.

We note two main empirical challenges in our study. The first challenge comes from our use of voluntary disclosure data to infer whether a firm has a succession plan in place. We present extensive survey and anecdotal evidence that provides reassurance that most firms choose to disclose their adopted succession plans and follow such plans when faced with a turnover decision. We also perform an event study around the date on which a firm first discloses a succession plan and find positive announcement returns over a variety of event windows, indicating positive net benefits of the joint adoption and disclosure decision for our sample of firms.

The second challenge comes from the concern that firm, CEO, and board characteristics may confound our investigation of the relationship between succession planning and turnover outcomes. In particular, to understand what drives the board's decision to adopt a succession plan, we look at the bargaining game between the CEO and the board in terms of the interplay between CEO entrenchment and board independence (Hermalin and Weisbach, 1998); entrenched managers and less independent boards are more likely to oppose a formal succession plan. To alleviate potential selection concerns from observable firm, CEO, and board

characteristics, we employ a propensity-score matching procedure in our tests of the relationship between succession planning and the outcomes of management transitions.

We make several contributions to the literature on CEO succession. We provide a direct study of the effects of succession planning on the efficiency of turnover decisions. Mostly due to data limitations, previous research has focused on indirect definitions of succession planning. For example, Naveen (2006) studies a firm's propensity for a "relay succession," i.e., grooming an internal candidate. Naveen (2006) defines a firm that has a President or a Chief Operating Officer who is younger than the current CEO as a firm with a succession plan. In contrast, we focus on the broader process of succession planning that includes both developing internal candidates and searching for external talent. We show that controlling for Naveen (2006)'s measure does not impact our results, indicating that relay succession captures a different dimension of succession planning.

Our paper is related to contemporaneous work by McConnell and Qi (2018), who use the 2009 SEC guidance as a quasi-natural experiment to show that succession planning disclosure is "a credible signal for actual planning" and is value-enhancing for some firms. We complement their work by showing that a likely mechanism through which succession planning enhances firm value is by improving the efficiency of CEO transitions.

We also extend prior work on the nature of learning about CEO-firm fit (Taylor, 2013; Pan, Wang, and Weisbach, 2015; Bills, Lisic, and Seidel, 2017) and the efficiency of CEO dismissal decisions. Relative to the existing literature, we draw a sharp distinction between firms with and without disclosed succession plans. Our findings indicate that firms with succession plans make more efficient turnover decisions and may experience less costly management transitions, in line with Taylor (2010).

2. Conceptual framework and hypothesis development

In this section, we describe the process of succession planning from the lens of this study. As we rely on firms' voluntary disclosures of succession planning practices, we implicitly assume that firms that adopt a succession plan also choose to disclose it and adhere to it when faced with a turnover. To support these assumptions, we present extensive survey and anecdotal evidence. We then formulate specific hypotheses about how succession planning affects the efficiency of executive turnovers. We discuss all other empirical challenges in Section 4.

2.1. Conceptual framework

In the context of this study, the succession planning process consists of three interconnected decisions that face a firm's board: i) whether to *adopt* a formal succession plan, ii) whether to voluntarily *disclose* the plan publicly, and iii) whether to *adhere* to it in the event of a turnover. The intended contribution of our study is to assess the importance of succession planning for the efficiency of executive turnover decisions. Thus, we implicitly assume that the sample of firms disclosing their succession plans adequately reflects that of firms that adopt and follow their pre-disclosed succession plans in the event of an executive turnover. To support the assumption that the three interrelated decisions regarding succession planning – adoption, disclosure, and adherence – largely overlap, we draw attention to the following evidence.

First, survey evidence, which does not rely on voluntary public disclosure, confirms key statistics in our data. A 2009 survey by the Conference Board (Tonello, Wilcox, and Eichbaum, 2009) reports that 34% of S&P 500 corporate boards regularly include succession planning on their agendas, whereas as many as 60% discuss it on at least an annual basis. These statistics are mirrored in our data – in 2009, 30% of the companies in our sample disclose a succession plan in place, and 61% state that they review it annually. In fact, more than 80% of the firms with succession plans in our sample regularly (at least every other year) discuss succession

planning in their proxy statements. Thus, our disclosure data are in line with survey evidence about succession practices.

Second, even though the SEC does not mandate any specific type of succession planning disclosure, other regulators and market participants strongly encourage such information. For example, as of 2003, the New York Stock Exchange (NYSE) asks listed companies to explicitly address CEO succession planning in their organizations' corporate governance guidelines, including policies for the selection and performance review of executives and procedures in the event of an emergency (e.g., a sudden departure or need for executive dismissal)[6]. In addition, scrutiny from investors, proxy advisors, and rating agencies in recent years has turned up the heat on boards to clarify their risk oversight in public filings.

Third, in response to concerns that succession planning disclosures may be just boilerplate "cheap talk", market participants have insisted that the succession process be more than a box-ticking exercise. In particular, investors have put pressure on firms to commit to voluntary disclosures of clear short- and long-term goals regarding the firms' succession planning practices. For example, pension funds (such as LIUNA) seek specific details on their portfolio firms' succession planning efforts. These include whether directors and managers: a) review succession plans annually and place them on the agenda frequently, b) have well-developed criteria for the CEO and C-level positions that reflect the overall business strategy, c) apply a formal assessment process to evaluate candidates, d) maintain a development process for internal candidates, and e) formulate a non-emergency succession plan that begins three years before an expected transition as well as an emergency succession planning procedure.

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[6] See Section 303A.09 of the NYSE Listed Company Manual, which requires that CEO succession planning "be addressed in the corporate governance guidelines." However, it also states that "…no single set of guidelines will be appropriate for every company" and does not prescribe what level of detail needs to be disclosed. To investigate the effect of the NYSE rule further, we compare the proportion of firms on the NYSE versus other exchanges that disclosed succession plans before and after the rule adoption, and find similar trends across exchanges, suggesting that the NYSE rule did not have an outsize effect on succession planning disclosures. Yet, the rule arguably encouraged firms across all exchanges to adopt a formal succession planning process.

Similarly, three of the four credit rating agencies we contacted state that they put substantial weight on succession planning factors in their ratings. For instance, Moody's explicitly considers the impact of succession planning across multiple industries. As an example, in 2007, Moody's updated its global methodology for bank financial strength ratings[7] to focus on "particular aspects of corporate governance […] which [they] consider to be potential 'red flags.'" These factors include ownership and organization complexity, insider and related party risks, and "key man risk," defined as the degree of dependence on "a single executive or group of executives, particularly where these individuals dominate key decision-making positions."

The above survey and anecdotal evidence supports our assumption that most firms choose to disclose their adopted succession plans. In addition, we find that firms adhere to their pre-disclosed plans in virtually all cases, consistent with the idea that corporate boards view succession planning as a long-term strategy. To ensure adherence in our sample, we conservatively code an event as a turnover with a succession plan only if the firm has disclosed a succession plan *at least a year prior* to the specific CEO turnover *and* refers to the succession plan when describing the event. Thus, by construction, firms with succession plans follow them when experiencing a turnover.

2.2. Hypothesis development

In this subsection, we formulate specific hypotheses about how succession planning affects the efficiency of turnover decisions.

Succession planning is aimed at facilitating leadership stability by putting forward a set of policies and procedures that enable boards to monitor CEO performance actively and continuously. As a result, a pre-existing succession plan should lower the likelihood of an

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[7] See https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_143152. Moody's risk scoring of "key man risk" is qualitative, not quantitative, and relies on discussions with management regarding firms' succession planning practices.

abrupt executive dismissal. That is, firms with succession plans should be less likely to experience forced CEO turnovers compared to firms without succession plans.

In addition, having a well mapped-out process for management succession should allow a firm to determine more accurately the essential qualities of a replacement CEO and expand the pool of qualified candidates. This helps the board to avoid delays in the appointment of a permanent replacement and minimize any disruption to the firm's management. Thus, firms with succession plans should be less likely to choose an interim successor.

In terms of non-CEO management turnovers, Fee and Hadlock (2004) find that the rate of non-CEO departures is "at least as great" as that for CEOs, suggesting that "firms continually evaluate these senior executives." Succession planning enhances leadership stability and could improve turnover efficiency by reducing non-CEO departures. Therefore, we expect that firms with succession plans will experience fewer changes to the broader management team after the turnover event.

H1: Firms with succession plans are less likely to encounter forced turnover, appoint an interim successor, and experience non-CEO executive turnover.

Prior work documents an increase in stock return volatility surrounding a CEO turnover due to the disruption in firm leadership. For example, Clayton, Hartzell, and Rosenberg (2005) show that CEO turnovers are associated with higher uncertainty, which should be taken into account in planning a management change. As postulated by hypothesis *H1*, succession planning facilitates a smoother management transition, and hence, firms with succession plans are expected to experience lower uncertainty around executive turnovers. That is, all else equal, we should observe lower stock return volatility for firms that are more prepared for the transition, as evidenced by the adoption of a succession plan.

H2a: Firms with succession plans are more likely to experience lower stock return volatility around CEO turnovers.

The uncertainty about executive leadership is the highest when a firm appoints a new CEO and declines with the CEO's tenure (as shown by Pan et al., 2015). As Bochkay, Chychyla, and Nanda (2019) argue, this uncertainty is due to (i) the unknown ability of the incoming CEO, (ii) the absence of CEO history at the firm, and (iii) the unknown CEO-firm fit which needs to be learned over time. The information disclosed in a succession plan should help with the latter, that is, uncertainty stemming from the unknown CEO-firm fit. Typically, succession plans discuss the general expectations of the leadership team, broad performance standards, goals and objectives for talent recruitment and retention, and how to link talent goals to the firm's strategic business needs and objectives. The disclosure of such information should make it less costly for investors to evaluate whether the incoming CEO fits the pre-determined criteria set by the firm through its succession planning process.

With the appointment of a new CEO, investors start updating their beliefs about the extent to which the qualifications of the incoming CEO meet the firm's strategic needs. The general standards and expectations disclosed in the firm's succession plan should help investors to ascertain CEO-firm match more quickly and thus facilitate a convergence of the firm's overall uncertainty to its fundamental level. That is, we expect that firms with succession plans will experience a faster reduction in investors' perceived uncertainty about CEO-firm fit.

H2b: Firms with succession plans experience a faster drop in stock return volatility in the early years of the incoming CEO's tenure.

Economic theory suggests that there are no good or bad employees, only good and bad matches (Jovanovic, 1979), and hence, an efficient hiring decision would manifest itself in the good fit between the CEO and the firm. According to job match theory (e.g., Garen, 1988), firms and employees learn about the quality of the match early in the employee's tenure, so that only good matches survive because bad matches end quickly. CEOs with long tenures are good matches, as they are less likely to quit due to downward wage rigidity (Allgood and Farrell, 2003).

Following Ertimur, Rawson, Rogers, and Zechman (2018), we expect succession planning to be associated with a higher likelihood of good CEO-firm matches that last longer, and hence, we view CEO tenure as an ex-post measure of fit.

H3: In firms with succession plans, incoming CEOs are more likely to stay longer with the firm, indicating a better CEO-firm fit.

Succession planning is also likely to affect the efficiency of executive dismissal decisions. A typical succession plan is intended to prepare the board for a possible CEO replacement, and hence, should reduce the perceived cost of management transitions. As a result, firms with established succession plans should be more prepared to dismiss an underperforming CEO, and thus, for a given level of performance, we should observe higher turnover at these firms, i.e., higher turnover-performance sensitivity.

H4: Firms with succession plans are more prepared to remove an underperforming CEO, and hence, exhibit higher turnover-performance sensitivity.

We strive to capture several different dimensions of turnover efficiency. However, we acknowledge that there are likely other efficiency definitions outside of the scope of our tests, and hence, our results should be interpreted as a lower bound on the effects of succession planning on management transitions.

3. Data and sample construction

3.1. CEO turnover

The starting point of our study is a sample of 3,280 CEO turnovers between 1994 and 2010.[8] The sample includes firms in the S&P's ExecuComp database, which consists of all firms in

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[8] Dirk Jenter provided the original data, described in Peters and Wagner (2014) and Jenter and Kanaan (2015). Lucian Taylor performed additional cleaning of the data and generously shared the resulting dataset.

the S&P 500, MidCap, and SmallCap indexes. About 900 of the CEO turnovers (27.5%) are classified as forced. As is common in the literature, we exclude CEO turnovers due to mergers or spin-offs.

As described in Table 1, the frequency of CEO turnovers at public firms in the ExecuComp database is relatively steady at around 10.7%, with the exception of 2000-2001 (Internet bubble), which saw higher rates of CEO turnover (see column (2)). As reported in column (4), the rate of forced CEO turnover is increasing slightly from 25.5% in the pre-Sarbanes-Oxley (SOX) period (1994 – 2003) to 30.3% in the post-SOX period (2004 – 2010).

[Insert Table 1]

Note also that even though the average CEO turnover rate is stable over our sample period, it does vary within industry. As shown in Figure 1, the average CEO turnover rate by industry (based on the Fama-French 49 industry classification) also peaks during the Internet bubble but exhibits substantial time-series variation. To control for this, we include industry-by-year fixed effects in our multivariate analysis.

[Insert Figure 1]

3.2. Succession planning disclosures

For each of the firms in the ExecuComp database, we examine regulatory filings from 1993 (when EDGAR becomes available) onwards to identify whether a firm has publicly disclosed an executive succession planning process. Specifically, we use computer script and read through all ExecuComp firms' proxy filings to identify the disclosure of succession plans. We start with a list of keywords and phrases associated with succession planning, including "management development," "leadership development," "succession plan(s)," and "succession planning," "plan(s) for succession," together with "CEO," "chief executive," "president," or

13

"key executive" in the same paragraph. Then, we manually read through the selected filings to verify that the information indeed refers to an executive succession plan.

We collect and code several variables for our empirical analysis (see Table A1 for detailed definitions). First, we get the general description of a firm's succession plan and code an indicator variable – *SP_disclosure* – equal to one if the firm has disclosed such a plan. We also identify the date of the regulatory filing in which the firm first discusses the plan. For the subsample of firms that experience turnover events during our sample period, we read through their 8-K reports to collect the detailed description of the CEO turnovers and code an indicator variable – *Discussion of current turnover* – as one if such description is disclosed (93% of our sample of turnovers).

Most importantly, we code our main variable of interest – the indicator *SP* – as one if a firm has disclosed a succession plan *at least a year prior* to the specific CEO turnover[9] *and* refers to the succession plan when describing the turnover event. That is, for all firms with *SP_disclosure,* we first identify the ones with CEO turnovers and then manually read through the regulatory filings around the turnover events to verify that the pre-disclosed succession plans were indeed followed.

As the examples in Table A2 illustrate, firms refer to their pre-disclosed succession plans in a variety of different ways when describing their executive turnovers; for example, First Midwest Bancorp Inc. states that its succession is "in accordance with the Company's long-standing succession plan", whereas Texas Instruments Inc. mentions that they "follow a very deliberate and thorough approach having had the benefit of its prior annual succession planning discussions." Finally, we also code a third indicator – *CEO stays during transition*, when the

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[9] Among the firms with succession plans in the turnover sample, fewer than 10% of firms adopted the plan less than two years before the turnover event, and more than 70% of firms adopted the plan at least three years before the turnover. As a result, requiring that the succession plan be adopted at least two years before a turnover (instead of one year, as we do currently) does not materially affect our results.

disclosure mentions that a departing CEO will remain at the firm in a different function (e.g., chairman, director, etc.) to aid with the executive transition.

Naturally, firms vary in the level of detail provided in their succession planning disclosures, but they never name potential candidates, discuss specific performance evaluation thresholds for CEO turnover, or refer to detailed timelines. A typical succession plan describes the general steps of the succession process and frequently mentions the role to be performed by the current CEO, other executives, board committees, and sometimes external recruiters. Thus, succession planning disclosures balance the board's need for strategic flexibility and stakeholders' demands for transparency. While investors do "understand that strategic, competitive and talent retention issues may take precedence over full transparency, […] [t]here needs to be sufficient information to ease shareholder anxiety around the issue – that (the boards) have a thoughtful plan in place – without compromising the strategic position of the company."[10]

In addition, it should be emphasized that typical succession plans are not adopted to replace a specific CEO, as the Pfizer Inc. example illustrates. Instead, they capture a set of general procedures about finding a suitable internal or external successor. Note that our definition of *SP* requires that a plan consists of a pre-defined set of broad guidelines adopted at least a year before a CEO turnover event, which should further mitigate concerns that a firm's succession plan may be correlated with a specific CEO transition. For example, First Bancorp's succession planning disclosure in 2010 provides an updated description of their "regular succession" process:

> *With respect to regular succession of the chief executive officer and senior management, the Board evaluates internal, and, when appropriate, external, candidates. To find external candidates, we seek input from the members of the Board and senior management and/or from recruiting firms. To develop internal candidates, we retained*

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[10] See https://www.corporatesecretary.com/articles/boardroom/30461/survey-companies-avoiding-ceo-succession-plan-disclosure

Caliper during 2008 to develop a corporate succession plan that identifies and prepares certain selected officers to benefit from mentoring, training, and job rotation, in order to eventually replace key executives of the Corporation in an unforeseen event or due to other specific circumstances. Succession management is the planning, execution, and ongoing management of our critical future people needs. The focus is on developing today's talent into tomorrow's leaders. We began our management succession process with the identification and development of high-potential employees for executive positions. In order to build a succession plan that will create a strong talent pool, we went through a five-step process:

Step One: Assess our business strategy and define leadership objectives. The process began with an assessment of our current and future business strategy. An understanding of our competitive position in the marketplace, along with growth goals, allowed for a better definition of future leadership needs.

Step Two: Develop the model for an integrated talent management system. During Step Two, we defined future leadership needs and the competencies required for success.

Step Three: Assess and align the talent in the Corporation with the business strategy. In Step Three, we began to assess and identify people with the most leadership potential. To be certain the process is objective, and to avoid overlooking those not currently in management roles, assessments were used along with current performance data. Current employees were rated against the established leadership competencies, and individual gap analyses were used to determine their developmental needs.

Step Four: Provide leadership feedback and development planning. In Step Four, we provided individual feedback and coaching to each of the individuals identified as having high potential including a development plan. These plans, along with ongoing mentoring, will support the high-potential employees and help them reach shared goals.

Step Five: Implement, monitor, measure and report developmental strategies. During this phase, specific strategies to address particular business needs can be implemented — including, but not limited to action learning, executive coaching and team-based projects.[11]

As seen in column (5) of Table 1, 16.4% of ExecuComp firms have disclosed succession plans. Importantly, the tendency to disclose such plans has quadrupled over our sample period, from

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[11] See First Bancorp's proxy filed on April 6, 2010, at
https://www.sec.gov/Archives/edgar/data/1057706/000095012310032503/g22621ddef14a.htm.

7.7% in 1994-2003 (pre-SOX) to 28.8% in 2004-2010 (post-SOX). Succession plan disclosures more than tripled between 2002 and 2004 (from 8.8% to 27.0%), coinciding roughly with the adoption of the Sarbanes-Oxley Act. About 36% of the firms in our sample have disclosed succession plans by 2010, with a pronounced increasing trend over the sample period. A recent 2019 Conference Board report on CEO succession practices[12] finds that this upward trend has continued to the present time – 71.5% (69.2%) of surveyed manufacturing (non-financial) companies have "formalized the CEO succession plan in an internal document outlining tasks and responsibilities." While encouraging, this evidence still suggests that almost a third of surveyed companies are yet to adopt and disclose formal succession plans.

Panel A of Table 2 reports the characteristics of executive turnovers and incumbent/successor CEOs in our sample. The frequency of forced turnover is 28%, whereas 20% of turnover events involve appointing an interim successor. Interestingly, more than half of CEO turnovers are followed by non-CEO executive departures, in line with findings in Fee and Hadlock (2004) that firms evaluate their management teams in groups.

[Insert Table 2]

We also observe that in the majority (57%) of turnovers, the departing CEO remains in a supporting function during the management transition. This is not surprising; a sample of recent CEO successions done right (e.g., Apple, Disney, General Electric, JPMorgan Chase, McDonald's, Microsoft, Procter & Gamble, United Technologies) highlights one key ingredient in common – the CEO's active participation in succession planning. As discussed by Russell Reynolds Associates[13], good succession planning is an ongoing process and relies on a high level of trust and communication between the board and the CEO.

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[12] See https://www.conference-board.org/publications/publicationdetail.cfm?publicationid=8857.
[13] See http://www.russellreynolds.com/sites/default/files/ceo_succession_-_a_framework_for_boards.pdf

Panel B compares firm characteristics and CEO turnover outcomes between firms with and without succession plans – *SP firms* and *Non-SP firms*, respectively. A few interesting differences emerge. First, firms with succession plans are less likely to experience a forced CEO turnover and marginally less likely to appoint an interim successor or lose non-CEO executives, suggesting that the presence of a succession plan may have important consequences for the nature of management transitions.

Second, firms with succession plans are not more likely to appoint an insider successor. This may not be surprising as having a succession plan typically involves both grooming internal candidates and searching through the external CEO talent pool. As discussed in a 2014 report by Stanford's Rock Center for Corporate Governance, "succession planning and internal talent development are treated as distinct activities rather than one continuous program to gradually develop leadership skills in the organization."[14]

In terms of firm characteristics, we see that firms with succession plans tend to be larger (*Ln Assets*), have higher leverage, higher return on equity (*ROE*), and lower market-to-book (*MTB*) ratios. Such firms are also more likely to experience lower realized and idiosyncratic volatilities in the CEO turnover year.

4. Empirical design

4.1. Empirical challenges

We first discuss the two main empirical challenges in our study and our efforts to address them. The first type of selection we face is due to our reliance on voluntary disclosure data to infer whether a firm has a succession plan. In addition to the extensive survey and anecdotal evidence supporting our assumptions that most firms choose to disclose their adopted succession plans

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[14] The 2014 Report on Senior Executive Succession Planning and Talent Development is available at
https://www.gsb.stanford.edu/sites/gsb/files/publication-pdf/cgri-survey-2014-senior-executive-succession.pdf.

and follow them when faced with a turnover (subsection 2.1), we conduct an event study to evaluate whether the net benefits of succession planning adoption and disclosure are positive.[15]

Specifically, we estimate cumulative abnormal returns (CARs) around the date of the regulatory filing in which a firm first discloses its succession plan (*SP_disclosure)*. As shown in Table A3, we find that announcement CARs – raw and market-adjusted – are positive and statistically significant in the three days around the event (-1, 1) and non-negative across all event windows we consider. Noting that this test captures the joint effects of succession planning adoption and disclosure, we interpret the non-negative announcement returns as suggesting that the benefits of disclosure outweigh its costs for the disclosing firms in our sample.[16]

The second type of selection that may confound our results comes from the concern that firms with particular characteristics may be more likely to adopt succession planning and also experience certain turnover outcomes. To address this concern, we first describe succession planning as a function of the interplay between CEO power and board independence (subsection 4.2) and then implement a propensity score matching approach (subsection 4.3).

4.2. Determinants of succession planning

Shareholders and other stakeholders are generally in agreement that succession planning is one of the key responsibilities of the board. To gain an insight into what drives the board's decision to adopt a succession plan, one needs to understand how corporate directors and executives are

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[15] The benefits of disclosure include lower costs of information acquisition by shareholders (Diamond, 1985), lower information asymmetry and cost of capital (Diamond and Verrecchia, 1991), high price efficiency and managerial incentives (Kanodia, 1980; Fishman and Hagerty, 1989). Potential costs include competitive harm and reduced board flexibility.

[16] We note that the results of the event study do not capture the costs and benefits of succession planning adoption/disclosure at firms that do not disclose their succession plans. These firms are one of two types – (i) firms that have no succession plans or (ii) firms that have such plans but choose not to disclose them in order to retain flexibility or because their succession plans are not well developed. In the latter case, firms keep the option of deviating from their succession plans and should be viewed as having no pre-established succession plans; thus, such firms should not bias our results. For our tests of the role of succession planning on turnover efficiency, it should also be noted that if a firm has a succession plan but chooses not to disclose it, it would erroneously be classified as a firm without a succession plan, which would create a bias against finding any results.

appointed. Even though corporate law postulates that shareholders are the ones to choose directors, in practice, the set of directors is most often proposed by the firm's management whom directors are responsible for monitoring. Thus, to understand what drives the board's decision to adopt a succession plan, one needs to look at the bargaining game between the board and the CEO.

As Hermalin and Weisbach (1998) argue, the more the board values the incumbent CEO, irrespective of her ability, the less intensely they will monitor and scrutinize CEO performance, the less independent future boards will be, and the lower the (minimum) CEO ability at which she would be replaced. This implies that more entrenched CEOs, or alternatively less independent boards, are more likely to resist adopting a formal succession plan, as the total value that the CEO yields to the board would be the sum of the CEO's ability and the additional idiosyncratic value the CEO brings to the board.

In addition to CEO entrenchment, if the skillset of the CEO is scarce in the labor market, the board will find it costly to lose the CEO and will want to devise a contingency plan in case the CEO needs to be replaced. Hence, the interaction between the operational complexity of the firm (Berger, Ofek, and Yermack, 1997) and its human capital requirements (Naveen, 2006) will determine how attentive the board will be when it comes to CEO successions.

The CEO's power in this bargaining game comes from her perceived ability relative to her potential successors (Hermalin and Weisbach, 1998). At the same time, the bargaining dynamic determines the level of board independence. That is, less independent boards monitor less; therefore, CEOs have a higher probability to survive longer in the job due to less scrutiny. Hence, the power of the board in this bargaining game is likely to increase with the board's level of independence.

Thus, the CEO-board bargaining game can be viewed in terms of the interplay between CEO power, as captured by her entrenchment and scarcity of talent, and board independence.[17] Firms with less entrenched CEOs, which are likely governed by more independent boards, will be the most likely ones to adopt a succession plan.

4.3. Propensity score matching

As evident from the above discussion, firms with certain characteristics may be more likely to adopt a succession plan, confounding our investigation of the relationship between succession planning and the outcomes of management transitions. To alleviate such concerns, we employ propensity score matching and create a control sample for our subsequent tests.

We use proxies for CEO entrenchment and board monitoring from prior literature. Following Berger, Ofek, and Yermack (1997), we measure CEO entrenchment by *Ln CEO tenure* and *CEO ownership*. To proxy for CEO ability, we use *Ln CEO fixed pay*, which is the sum of cash salary and bonus payments. Finally, we also include *CEO-Chairman duality* (as in Fahlenbrach, 2009)[18] and *CEO pay slice* (as in Bebchuk, Cremers, and Peyer, 2011), defined as the fraction of the aggregate compensation of the firm's top-five executives captured by the CEO.

As proxies for board monitoring (Coles, Daniel, and Naveen, 2014), we use the fraction of independent board members (*Independent dir pct*) as well as the voting ownership of directors (*Dir voting shares pct*). Finally, to capture how the firm's level of operational complexity and human capital requirements affect its propensity to groom an internal candidate, we include the indicator *SP_Relay* (as in Naveen, 2006).

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[17] In the parlance of Hermalin and Weisbach (1998), changes to the long-term bargaining strength of either side should be "permanent" in the sense that history matters in corporate governance. This suggests that once bargaining power is in the hands of an (independent) board, it will not change hands. Put differently, once a firm adopts a succession plan, it will adhere to it.

[18] Core and Guay (1999) argue that when the CEO also chairs the board, agency problems are more severe. Goyal and Park (2002) show that the sensitivity of CEO turnover to firm performance is significantly lower when the CEO and chair positions are held by the same individual.

Table 3 reports multivariate models of succession planning as a function of the above firm, board, and CEO characteristics. The sample includes all ExecuComp firms with CEO turnovers between 1994 and 2010, and the observations are firm-year. Columns (2) to (5) include year fixed effects, whereas column (6) includes year and industry fixed effects.

[Insert Table 3]

The results indicate that larger firms and more mature firms are more likely to have succession plans. Additionally, firm performance appears to be negatively correlated with the propensity to adopt succession planning, but the coefficients are only marginally significant. We also confirm that CEO entrenchment is negatively associated with succession planning, as seen by the negative coefficients on *Ln CEO tenure, CEO ownership,* and *CEO-Chairman duality* (insignificant). As expected, independent board monitoring is positively related to succession planning, whereas director entrenchment – measured by director ownership – is negatively related. Importantly, the disclosure of succession planning is also positively correlated with the relay succession measure of Naveen (2006), suggesting that firms with higher operational complexity and more specific human capital requirements are more likely to adopt a succession plan.

Overall, the results in Table 3 show that CEO entrenchment, board monitoring, and corporate governance practices are significant in predicting succession planning. Therefore, we construct a control sample of non-SP firms among all ExecuComp firms with at least one CEO turnover event between 1994 and 2010. Specifically, using the regression in column (5) of Table 3, we estimate a propensity score of adopting a succession plan for each firm. Then, we match each SP firm to five non-SP firms in the same industry that experience a turnover in the same year and have the closest propensity scores. This approach results in a sample of 427 CEO turnover events at SP firms and 1,103 turnover events at matched control firms. We confirm that our results and conclusions are not affected if we use one-to-one match.

5. Results

5.1. Succession planning and leadership continuity

We start by investigating the effects of succession planning on turnover outcomes. Specifically, we examine *Hypothesis H1* and relate forced CEO turnover, interim succession, and non-CEO executive turnover to the presence of a succession plan.

In columns (1)-(3) of Table 4, we present regressions of turnover outcomes on an indicator – *SP* – for whether a firm has a pre-disclosed succession plan. As firm controls, we include lagged values of firm size (log of total assets), ROA, market-to-book ratio (MTB), leverage, cash flow, and sales growth (Gao, Harford, and Li, 2017). As CEO controls, we include CEO age and tenure. All models include industry-by-year fixed effects.

We find that firms with succession plans have a 6.6% lower probability of experiencing a forced CEO turnover event (column (1)) in comparison to firms without succession plans. In economic terms, this effect is equal to about one-quarter of the probability of a forced turnover in our sample. We also see that firms with succession plans are about 7.1% less likely to choose an interim CEO (column (2)), representing about one-third of the probability of an interim succession in the sample. Moreover, the results in column (3) show that firms with succession plans are marginally less likely to lose other members of their top management teams following the CEO turnover. In unreported results, we also find that firms with succession plans are not more likely to appoint an insider successor. This may not be surprising as having a succession plan typically involves both grooming internal candidates and searching through the external CEO talent pool.

To illustrate that a well-defined succession planning process is broader in scope than the process of grooming internal candidates, we include an additional control for relay succession (based on Naveen, 2006) in all regressions. Specifically, we code an indicator variable – *SP_Relay* – equal to one if the firm has a President or Chief Operating Officer (COO) who is younger than

the current CEO. This control is not significant in any of the specifications, confirming that having a formal succession plan plays a broader role in ensuring leadership stability, whereas relay succession has a narrower focus on grooming internal candidates.

In columns (4)-(6) of Table 4, we repeat this analysis in the propensity-score matched sample. It is comforting that our results remain virtually the same. To mitigate the selection concern that our results could be driven by firm and industry characteristics, we report all subsequent tests in the propensity-score matched sample.

5.2. Succession planning and firm uncertainty

5.2.1. Uncertainty around CEO turnovers

As postulated by *Hypothesis H2a*, firms with disclosed succession plans should experience lower volatility around CEO turnovers, relative to firms with no succession plans.[19] We test this hypothesis in Table 5, where the dependent variable is realized stock return volatility in column (1) and idiosyncratic return volatility in column (2). Both volatility measures and the Fama-French factors (included as additional controls) are estimated using daily stock returns over the year of CEO succession. The main independent variable – *SP* – is an indicator for whether the firm has disclosed a formal succession planning process prior to the turnover.

[Insert Table 5]

The results reveal lower realized and idiosyncratic stock return volatility (columns (1) and (2), respectively) for firms with succession plans, relative to firms with no succession plans. It is interesting that conditional on the adoption of a formal succession plan, having an internal relay successor (*SP_Relay*) is not associated with lower uncertainty around the turnover event, indicating that this measure captures a different dimension of succession. In addition, both

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[19] The market reaction to a CEO turnover event does not vary with succession planning, as seen in Table A4, suggesting that a firm's use of succession planning is reflected in its valuation upon disclosure.

indicator variables *Discussion of current turnover* and *CEO stays during transition* have negative and statistically significant associations with stock return volatility. These findings suggest that investors value the additional disclosure about the current turnover and the assistance provided by the departing CEO in ensuring a smooth management transition.

In sum, the evidence in Table 5 provides support for *Hypothesis H2a* that firms with succession plans experience lower stock return volatility around CEO turnovers, compared to firms with no succession plans.

5.2.2. Firm uncertainty over the CEO's tenure

In this subsection, we study how market participants update their beliefs about the incoming CEO's fit with the firm and how this learning process is reflected in the firm's level of uncertainty over the CEO's time in office. Our analysis follows recent work by Pan, Wang, and Weisbach (2015), who empirically investigate Taylor (2013)'s prediction of a decline in stock return volatility with CEO tenure. Pan et al. (2015) show that the uncertainty about CEO leadership is the highest at the beginning of a CEO's appointment and declines with CEO tenure. As Bochkay et al. (2019) argue, a major source of uncertainty about a new CEO is her unknown match with the firm, which needs to be ascertained over time.

Succession plans typically discuss the general expectations and standards for talent recruitment and should help investors evaluate whether the incoming CEO fits the criteria set by the firm, thus learning about CEO-firm fit more quickly. As a result, stock volatility is expected to decline faster with the tenure of the incoming CEO and approach more quickly its fundamental level (*Hypothesis H2b*).

We test this hypothesis in Table 6, where we examine the evolution of stock return volatility during the successor CEO's tenure. We closely follow the estimation approach in Pan et al. (2015) and include the same control variables, calendar month fixed effects to control for the

common time trend in volatility, and CEO-firm fixed effects to control for endogenous CEO-firm matching due to both unobserved time-invariant CEO heterogeneity (e.g., ability) and firm heterogeneity. The firm-CEO fixed effects help us isolate deviations in volatility within the same CEO-firm pair. Thus, by comparing otherwise identical CEO-firm pairs, which differ by their adoption of a succession plan, we can attribute changes in volatility over time to succession planning.

[Insert Table 6]

In Table 6, we present piecewise linear spline regressions, where tenure in year i is the spline for the twelve months in the i-th year following the turnover. We report both realized (first three columns) and idiosyncratic (last three columns) monthly volatilities. Columns (1) and (4) present results for all firms in our turnover sample, whereas columns (2) and (5) focus on firms without succession plans, and columns (3) and (6) study firms with succession plans.

The results in columns (1) and (4) of Table 6 closely mirror the findings of Pan et al. (2015); stock return volatility declines faster in the first year of CEO tenure than in the second or third year. Columns (2) and (5) confirm these findings in the subsample of firms without succession plans. However, the results for firms with succession plans – *SP firms*, reported in columns (3) and (6) – point to a different pattern of decline in volatility. The coefficient on year one of CEO tenure is the only statistically significant one, indicating that the market updates its beliefs about the qualification of the new CEO mostly during the first year of CEO tenure. These results can be interpreted as evidence that succession planning provides market participants with a "head start" to evaluate the match between the incoming CEO's skillset and the company's general expectations and standards for executive recruitment. That is, in the presence of a pre-disclosed succession planning process, investors are able to learn about CEO-firm match more quickly.

Overall, the results in Table 6 provide support for *Hypothesis H2b* and suggest that the adoption and disclosure of a formal succession plan improve investors' ability to evaluate the incoming

26

CEO's fit with the firm. As a result, volatility declines faster and converges to the firm's fundamental volatility over the first year of CEO tenure.

5.3. CEO-firm fit

An intuitive way to measure the quality of the fit between the CEO and the firm is to focus on the tenure of the incoming CEO. As postulated by *Hypothesis H3*, we expect that good CEO-firm matches will last longer than poor ones, and hence, we employ CEO tenure (or time-to-turnover) as an ex-post measure of goodness of fit.

We test *Hypothesis H3* in Table 7, where we report regressions of the incoming CEO's tenure on succession planning (*SP*). The model in column (1) includes industry-by-year fixed effects, whereas the models in columns (2) and (3) include CEO fixed effects to absorb CEO ability and provide more direct evidence on the effect of CEO-firm fit on turnover efficiency. All models cluster standard errors by firm.

[Insert Table 7]

The positive and statistically significant coefficient on *SP* in column (1) reveals that incoming CEOs have a higher probability of surviving longer in the job at firms with succession plans, relative to firms with no succession plans. The coefficient on *SP_Relay* is also positive and statistically significant, indicating that having an internal candidate increases the likelihood that the successor CEO will stay longer in the job.

To provide additional insights, we include CEO fixed effects in columns (2) and (3); thus, these results speak more directly to how succession planning impacts the incoming CEO's tenure by ensuring a better CEO-firm fit. We find that in column (2), the coefficient on *SP* is positive and marginally statistically significant, suggesting that controlling for her unobserved ability, the CEO still has a higher probability of surviving longer in her position at firms with succession plans. More interestingly, in column (3), the interaction between *SP* and *Forced* is positive and

27

statistically significant, indicating that the positive effect of succession planning on the tenure of the successor CEO is driven by CEO-firm match, particularly in forced turnovers. Note that the coefficient on *SP* is positive but statistically insignificant, which we interpret as evidence that after conditioning on CEO ability, succession planning has less of a differential effect on the successor's tenure in voluntary turnovers. Thus, the evidence suggests that succession planning is particularly important for ensuring a good CEO-firm fit in forced turnover events when uncertainty is high.

The results in Table 7 suggest that succession planning helps ensure a good CEO-firm match in the case of forced CEO turnover, providing evidence in support of *Hypothesis H3*.

5.4. Succession planning and the efficiency of CEO dismissals

In this subsection, we study the effects of succession planning on executive dismissals. Intuitively, a succession plan prepares the board for a CEO replacement, and hence, should reduce the perceived cost of management transitions. As a result, firms with established succession plans should be more willing to replace an underperforming CEO, and thus, for a given level of performance, we should observe higher turnover at these firms, i.e., higher turnover-performance sensitivity (*Hypothesis H4*).

Another important factor in determining firms' turnover-performance sensitivity is the availability and quality of performance metrics (Engel, Hayes, and Wang, 2003). Thus, we ask whether the improvement in disclosed performance measures as a result of a 2006 SEC-mandated change in disclosures has a differential effect on the turnover-performance sensitivity of firms with and without succession plans.

As of December 2006, the SEC mandates expanded Compensation Discussion and Analysis (CD&A) disclosures, including more detailed information about specific performance metrics and targets, both for cash and equity incentive plans. As argued by Ferri, Zheng, and Zou

(2018), the 2006 CD&A disclosures "caused a substantial increase in the quality and precision of information relevant to investors' assessment of managers' compensation incentives." In addition, Ertimur, Ferri, and Muslu (2011) and Ertimur, Ferri, and Oesch (2013) find a higher incidence of "compensation-related activism" after 2006, suggesting increased institutional investor scrutiny of compensation disclosures.

We expect that the 2006 change in mandated disclosures should have a stronger impact on firms without pre-disclosed succession plans. This is because in the absence of succession planning, these firms are less prepared to replace an underperforming CEO and face higher costs of dismissal decisions. In contrast, firms with succession plans have already disclosed extensive information regarding the CEO replacement process as part of their succession planning, which should facilitate more efficient dismissal decisions.

This is indeed what we find in Table 8, where we compare the turnover-performance sensitivity of firms with and without succession plans in the three years before and after the SEC rule change at the end of 2006. The dependent variable in all columns is an indicator for forced CEO turnover. The indicator *Post* is set to one for years after 2006 and set to zero before 2006. All models include industry-by-year fixed effects and cluster standard errors by firm. We measure performance by value-weighted (VW) market-adjusted stock returns over the current and prior fiscal years in columns (1)-(2) and by industry-adjusted ROA in columns (3)-(4).

[Insert Table 8]

For firms with succession plans, the coefficient on *Performance* is statistically significant and negative for both measures of performance, whereas the interaction between *Post* and *Performance* is insignificant (columns (1) and (3)). This is consistent with our conjecture that SP firms exhibit higher turnover-performance sensitivity throughout the sample period and the change in disclosure rules does not have a significant effect on increasing the efficiency of their CEO dismissal decisions. In contrast, the interaction between *Post* and *Performance* is negative

29

and significant (in columns (2) and (4)) for firms without succession plans as of 2006, indicating that the enhanced performance metrics as a result of the rule change improved the efficiency of their CEO dismissal decisions, as seen by their increased turnover-performance sensitivity.

In summary, the evidence presented in this subsection supports the view that succession planning improves the board's preparedness to dismiss an underperforming CEO. Thus, firms with succession plans appear to make more efficient dismissal decisions and may experience less costly management transitions, as in Taylor (2010).

6. Conclusion

Using succession planning disclosures in a large sample of public firms undergoing executive transitions over 1994-2010, we provide novel evidence on the role of formal succession planning in CEO turnover decisions. We find that succession planning facilitates leadership stability by reducing the likelihood of forced CEO turnovers, the incidence of interim CEO appointments, and the frequency of non-CEO executive departures.

In addition, we present evidence that succession planning increases the efficiency of managerial turnover. First, firms with succession plans not only exhibit lower uncertainty around CEO turnovers, but also experience a faster reduction in uncertainty over the first few years of the new CEO's tenure, consistent with faster learning about CEO-firm fit. Second, succession planning helps ensure a good CEO-firm match, as evidenced by longer CEO tenure. Finally, succession planning also improves CEO dismissal decisions by raising the board's preparedness to dismiss an underperforming CEO, and thus, increasing turnover-performance sensitivity.

Taken together, our results speak to the often-overlooked role of corporate boards in promoting optimal *ex-ante* CEO-firm matching. While most existing work focuses on the *ex-post* monitoring role of boards, our results indicate that the two mechanisms should be considered hand-in-hand.

30

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Figure 1. Industry trends in CEO turnover events (1994-2010)

This figure plots the average CEO turnover rate by industry between 1994 and 2010. Included are CEO turnover events at public firms in the ExecuComp database. Industries are defined based on the Fama-French 49 classification.
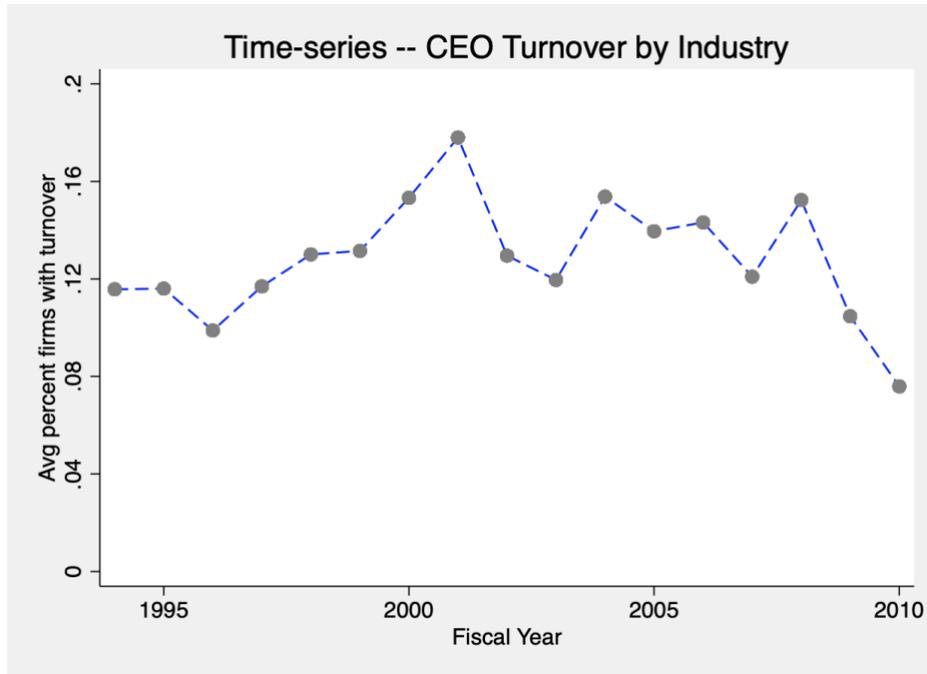
Table 1. CEO turnover events (1994-2010)

This table reports the number of CEO turnover events in column (1), the percentage of ExecuComp firms with CEO turnovers in column (2), the number and percentage of forced CEO turnovers in columns (3)-(4), the number of ExecuComp firms with disclosed succession plans in column (5), and the percentage of CEO turnovers adhering to pre-disclosed succession plans in column (6). The last two rows report aggregates over 1994-2003 (pre-Sarbanes-Oxley (SOX) period) and 2004-2010 (post-SOX period).

	(1)	(2)	(3)	(4)	(5)	(6)
Year	# CEO turnovers	% ExecuComp firms with CEO turnovers	# Forced CEO turnovers	% Forced CEO turnovers ((3)/(1))	% ExecuComp firms with succession plans	% CEO turnovers with succession plans
1994	118	7.6%	19	16.1%	4.8%	3.4%
1995	183	11.4%	42	23.0%	5.5%	3.8%
1996	168	10.2%	30	17.9%	6.3%	4.2%
1997	187	11.2%	49	26.2%	5.6%	5.9%
1998	222	12.8%	51	23.0%	5.9%	5.9%
1999	217	12.0%	51	23.5%	6.1%	5.5%
2000	253	14.1%	75	29.6%	6.9%	6.7%
2001	263	15.7%	59	22.4%	8.1%	8.0%
2002	179	10.7%	64	35.8%	8.8%	11.2%
2003	166	9.5%	62	37.3%	18.6%	15.7%
2004	172	9.8%	57	33.1%	27.0%	20.3%
2005	200	11.4%	73	36.5%	26.5%	18.5%
2006	189	10.1%	70	37.0%	26.9%	13.8%
2007	190	8.5%	77	40.5%	27.5%	19.5%
2008	245	11.3%	60	24.5%	28.3%	22.4%
2009	191	8.9%	41	21.5%	29.9%	17.8%
2010	137	6.5%	26	19.0%	35.5%	36.5%
Total	3280	10.7%	906	27.5%	16.4%	12.9%
1994-2003 (pre-SOX)	1956	11.5%	502	25.5%	7.7%	7.0%
2004-2010 (post-SOX)	1324	9.5%	404	30.3%	28.8%	21.3%

Table 2. Summary statistics

Panel A of this table reports executive turnover outcomes and CEO characteristics at public firms in the ExecuComp database between 1994 and 2010. Panel B compares the average values of succession outcomes and selected firm characteristics between firms with and without disclosed succession plans – *SP firms* and *Non-SP firms*, respectively. All variables are defined in Table A1.

Panel A.

Variables	N	Mean	S.D.	25th	50th	75th	Min	Max
Executive turnovers								
SP	3197	0.13	0.34	0.00	0.00	0.00	0.00	1.00
Forced CEO turnover	3280	0.28	0.45	0.00	0.00	1.00	0.00	1.00
Insider successor	3196	0.78	0.42	0.00	0.00	1.00	0.00	1.00
Interim successor	3196	0.20	0.40	0.00	0.00	1.00	0.00	1.00
Non-CEO exec turnover	3185	0.55	0.50	0.00	1.00	1.00	0.00	1.00
Ln CEO age	3001	3.95	0.13	3.87	3.95	4.04	3.61	4.26
Ln CEO tenure	3119	1.58	0.55	1.10	1.61	1.95	0.69	2.71
Discussion of current turnover	3061	0.94	0.25	1.00	1.00	1.00	0.00	1.00
CEO stays during transition	3061	0.57	0.50	0.00	1.00	1.00	0.00	1.00

Panel B.

Variables	SP firms		Non-SP firms			
	N	Mean	N	Mean	Difference	t-stat
CEO turnover sample						
Forced CEO succession	520	0.22	2623	0.29	-0.07***	-3.05
Insider successor	509	0.78	2554	0.78	0.00	0.05
Interim successor	509	0.18	2554	0.20	-0.02	-1.20
Non-CEO exec turnover	509	0.53	2554	0.55	-0.02	-0.45
Ln CEO age	482	3.96	2396	3.95	0.01*	1.7
Ln CEO tenure	507	1.79	2491	1.56	0.24***	8.85
Discussion of current turnover	509	0.65	2550	0.99	-0.34***	-32.95
CEO stays during transition	509	0.60	2550	0.57	0.04	1.5
Market beta	497	1.10	2532	1.06	0.03	1.05
SMB beta	497	0.50	2532	0.65	-0.15***	-3.40
HML beta	497	0.40	2532	0.28	0.12**	2.19
Ln Assets	518	8.12	2657	7.24	0.88***	10.20
ROA	517	0.03	2653	0.01	0.02	0.50
MTB	516	1.71	2645	1.93	-0.22**	-2.00
Leverage	517	0.26	2657	0.23	0.03***	2.80
Cashflow	517	0.08	2653	0.07	0.01	0.20
Sales growth	517	0.05	2647	0.08	-0.04	-1.35
ROE	509	0.07	2552	0.00	0.07**	2.00
Realized return volatility	497	0.43	2532	0.52	-0.09***	-5.15
Idiosyncratic return volatility	496	0.32	2525	0.41	-0.09***	-6.20
Dividend payer	508	0.66	2549	0.56	0.10***	4.00

Table 3. Determinants of succession planning

This table reports estimates of OLS regressions of (disclosed) succession planning as a function of firm, CEO, and board characteristics. The sample includes CEO turnover events at public firms in the ExecuComp database between 1994 and 2010. All explanatory variables are lagged by one year and defined in Table A1. The specification in column (5) is used to construct a propensity score matched sample for subsequent tests. t-statistics, reported in parentheses, are calculated with standard errors clustered at the firm level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
			SP_disclosure			
Ln Assets	0.033***	0.033***	0.029***	0.029***	0.029***	0.042***
	(26.310)	(26.895)	(20.451)	(20.451)	(18.988)	(24.029)
ROA	-0.001	0.009	-0.003	-0.003	-0.001	-0.048**
	(-0.057)	(0.419)	(-0.165)	(-0.165)	(-0.046)	(-2.123)
Firm Age	0.002***	0.003***	0.002***	0.002***	0.002***	0.002***
	(21.352)	(22.176)	(21.262)	(21.262)	(18.932)	(13.427)
Return	-0.005	-0.008*	-0.009**	-0.009**	-0.009*	-0.006
	(-1.225)	(-1.699)	(-2.098)	(-2.098)	(-1.880)	(-1.212)
Ln CEO age		-0.006	-0.006	-0.006	-0.006	0.001
		(-0.455)	(-0.419)	(-0.419)	(-0.398)	(0.061)
Ln CEO tenure		-0.032***	-0.033***	-0.033***	-0.030***	-0.033***
		(-8.696)	(-8.633)	(-8.633)	(-7.518)	(-8.301)
Ln CEO fixed pay			0.016***	0.016***	0.019***	0.013***
			(4.946)	(4.946)	(5.497)	(3.619)
CEO pay slice			0.028	0.028	-0.009	-0.023
			(1.611)	(1.611)	(-0.461)	(-1.263)
CEO ownership			-0.059***	-0.059***	-0.038***	-0.032***
			(-6.297)	(-6.297)	(-3.747)	(-3.202)
CEO-Chairman duality					-0.002	-0.002
					(-0.300)	(-0.363)
SP_Relay					0.008*	0.011**
					(1.660)	(2.343)
Independent dir pct					0.238***	0.214***
					(12.367)	(11.057)
Dir voting shares pct					-0.001***	-0.001***
					(-4.492)	(-4.813)
Constant	-0.086***	-0.020	-0.099*	-0.099*	-0.254***	-0.303***
	(-9.554)	(-0.363)	(-1.752)	(-1.752)	(-3.794)	(-4.484)
Observations	36820	36741	36502	36502	33592	33592
Adjusted R-squared	0.169	0.171	0.172	0.172	0.165	0.177
Fixed effects	None	Year	Year	Year	Year	Year & Ind

Table 4. Succession planning and leadership continuity

This table reports estimates of OLS regressions of turnover outcomes on an indicator for whether the firm has disclosed a formal succession planning process prior to the turnover. Columns (1) – (3) include the sample of ExecuComp public firms with CEO turnovers between 1994 and 2010; in columns (4) – (6), firms with succession plans are matched to ExecuComp firms with no succession plans based on the year of turnover, industry (Fama-French 49), and a propensity score estimated as in column (5) of Table 3. Firm controls are as of the latest fiscal year-end prior to the CEO succession and are defined in Table A1. All models include industry-by-fiscal year fixed effects and report (in parentheses) *t*-statistics, calculated with standard errors clustered at the firm level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Forced turnover	Interim successor	Non-CEO exec turnover	Forced turnover	Interim successor	Non-CEO exec turnover
	Full turnover sample			*Matched sample*		
SP	-0.066***	-0.071***	-0.075*	-0.056**	-0.081***	-0.100**
	(-2.570)	(-2.616)	(-1.848)	(-2.112)	(-2.721)	(-2.272)
SP_Relay	-0.008	-0.010	-0.028	0.037	-0.020	-0.012
	(-0.427)	(-0.528)	(-1.200)	(1.215)	(-0.716)	(-0.322)
Ln Assets	-0.012**	-0.006	0.031***	-0.011	-0.006	0.037***
	(-1.995)	(-0.901)	(3.967)	(-1.191)	(-0.621)	(3.020)
ROA	-0.341	-0.271	-0.144	-0.630*	-0.408	-0.602
	(-1.610)	(-1.297)	(-0.592)	(-1.941)	(-1.469)	(-1.519)
MTB	0.002	0.001	-0.001	-0.012	0.010	0.022
	(0.243)	(0.123)	(-0.054)	(-0.770)	(0.524)	(1.129)
Leverage	0.014	0.009	-0.070	-0.011	0.242**	0.022
	(0.266)	(0.153)	(-0.991)	(-0.132)	(2.431)	(0.190)
Cashflow	-0.181	0.062	-0.051	-0.011	0.493	0.490
	(-0.834)	(0.288)	(-0.201)	(-0.033)	(1.632)	(1.183)
Sales growth	-0.006	0.036	0.031	-0.050	-0.024	-0.076
	(-0.150)	(0.937)	(0.751)	(-0.624)	(-0.308)	(-0.852)
Discussion of current turnover	-0.092**	-0.021	-0.047	-0.086*	-0.006	-0.068
	(-2.201)	(-0.451)	(-0.820)	(-1.837)	(-0.096)	(-0.994)
Ln CEO age	0.289***	0.086		0.064	0.167	
	(3.982)	(1.182)		(0.531)	(1.410)	
Ln CEO tenure	-0.092***	-0.092***		-0.064**	-0.090***	
	(-4.726)	(-4.544)		(-2.155)	(-2.975)	
CEO stays during transition	-0.245***	-0.083***		-0.233***	-0.126***	
	(-12.843)	(-4.528)		(-7.748)	(-4.278)	
Constant	-0.389	0.102	0.408***	0.437	-0.289	0.305***
	(-1.309)	(0.350)	(4.380)	(0.897)	(-0.591)	(2.311)
Observations	2,619	2,625	2,834	2,182	2,195	2,299
R-squared	0.340	0.302	0.219	0.455	0.437	0.396
Fixed effects	Ind*Year	Ind*Year	Ind*Year	Ind*Year	Ind*Year	Ind*Year

Table 5. Succession planning and firm uncertainty

This table reports estimates of OLS regressions of stock return volatility measures on succession planning. The sample period is between 1994 and 2010. Firms with (disclosed) succession plans (denoted by the indicator *SP*) are matched to ExecuComp firms with no succession plans based on the year of turnover, industry (Fama-French 49), and a propensity score estimated as in column (5) of Table 3. All firm controls are as of the latest fiscal year-end prior to the CEO succession and are defined in Table A1. Additional controls include the coefficient estimates on the excess market return, the SMB factor, and the HML factor in the Fama and French (1993) three-factor model, estimated yearly using daily stock returns. Both specifications include industry-by-fiscal year fixed effects and report (in parentheses) *t*-statistics, calculated with standard errors clustered at the firm level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
	Realized return volatility	Idiosyncratic return volatility
SP	-0.048***	-0.035**
	(-3.019)	(-2.475)
SP_Relay	-0.013	-0.009
	(-0.780)	(-0.548)
Market beta	0.145***	
	(5.901)	
SMB beta	0.046**	
	(2.106)	
HML beta	0.046***	
	(3.012)	
Ln Assets	-0.017**	-0.025***
	(-2.472)	(-3.478)
ROA	-0.459	-0.521
	(-1.079)	(-1.431)
MTB	0.004	0.001
	(0.439)	(0.067)
Leverage	0.092	0.129
	(1.045)	(1.450)
Cashflow	0.048	0.015
	(0.119)	(0.042)
Sales growth	-0.187***	-0.165**
	(-2.620)	(-2.312)
Ln CEO age	0.011	0.040
	(0.159)	(0.601)
Ln CEO tenure	-0.045***	-0.039**
	(-2.638)	(-2.271)
Discussion of current turnover	-0.048	-0.039
	(-1.618)	(-1.407)
CEO stays during transition	-0.025*	-0.037***
	(-1.739)	(-2.696)
Constant	0.510*	0.511*
	(1.861)	(1.793)
Observations	2,119	2,119
R-squared	0.689	0.591
Fixed effects	Ind*Year	Ind*Year

Table 6. Succession planning and learning about CEO ability

This table reports the nonlinear trend in volatility from the time the CEO takes office to three years after, using (piecewise linear) spline specifications. The sample period is between 1994 and 2010. Firms with (disclosed) succession plans (denoted by *SP firms*) are matched to ExecuComp firms with no succession plans (denoted by *Non-SP firms*) based on the year of turnover, industry (Fama-French 49), and a propensity score estimated as in column (5) of Table 3. The outcome variables are realized return volatility in columns (1)-(3) and idiosyncratic return volatility in columns (4)-(6), calculated over each calendar month using daily CRSP stock returns. Market, SMB, and HML betas are also calculated monthly; other control variables are calculated yearly and are defined in Table A1. CEO tenure (year *i*) is the spline for the 12 months in the *i*-th year after turnover. For the 1st to 12th month since the new CEO takes office, *CEO tenure (year 1)* takes the value of 1/12 to 1, while the other two splines take the value of 0. For the 13th to 24th month, *CEO tenure (year 1)* takes the value of 1, *CEO tenure (year 2)* takes the value of 1/12 to 1, and *Tenure (year 3)* takes the value of 0. All models include firm-CEO and calendar year-month fixed effects and report (in parentheses) *t*-statistics, calculated with standard errors clustered at the firm-CEO level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Realized return volatility			Idiosyncratic return volatility		
	All firms	*Non-SP firms*	*SP firms*	*All firms*	*Non-SP firms*	*SP firms*
CEO tenure (year 1)	-0.764***	-0.756***	-0.833**	-0.624***	-0.601**	-0.759***
	(-3.355)	(-2.809)	(-2.396)	(-3.124)	(-2.538)	(-2.665)
CEO tenure (year 2)	-0.300*	-0.335*	-0.230	-0.278*	-0.307*	-0.106
	(-1.741)	(-1.659)	(-0.797)	(-1.904)	(-1.803)	(-0.389)
CEO tenure (year 3)	-0.575***	-0.627**	-0.307	-0.364**	-0.379*	-0.284
	(-2.790)	(-2.536)	(-1.035)	(-2.163)	(-1.882)	(-1.080)
Market beta	0.518***	0.498***	1.061***			
	(7.210)	(6.992)	(7.783)			
SMB beta	0.083*	0.086	0.314***			
	(1.648)	(1.625)	(4.097)			
HML beta	-0.232***	-0.236***	-0.011			
	(-7.169)	(-7.163)	(-0.213)			
Ln assets	0.130	0.337	-0.922	0.102	0.246	-0.670
	(0.308)	(0.731)	(-1.243)	(0.292)	(0.645)	(-1.138)
MTB	-0.035	-0.006	-0.295	-0.029	-0.024	-0.085
	(-0.266)	(-0.045)	(-1.048)	(-0.289)	(-0.228)	(-0.411)
Leverage	1.417	1.114	2.573	1.626*	1.456	2.337*
	(1.219)	(0.865)	(1.564)	(1.648)	(1.326)	(1.784)
Dividend payer	1.140**	1.243**	0.592	1.047***	1.184**	0.475
	(2.388)	(2.148)	(0.963)	(2.649)	(2.449)	(1.014)
ROE	-0.828***	-0.798***	-1.403*	-0.581***	-0.540***	-1.252**
	(-3.583)	(-3.367)	(-1.823)	(-3.311)	(-3.042)	(-2.099)
Constant	9.006***	7.499**	16.950***	7.025**	5.926*	13.343***
	(2.635)	(2.015)	(2.658)	(2.519)	(1.941)	(2.712)
Observations	50,801	41,906	8,889	50,801	41,906	8,889
Fixed effects	Firm*CEO	Firm*CEO	Firm*CEO	Firm*CEO	Firm*CEO	Firm*CEO
	Year-month	Year-month	Year-month	Year-month	Year-month	Year-month
R-squared	0.644	0.643	0.678	0.548	0.546	0.568

Table 7. Succession planning and incoming CEO tenure

This table reports estimates of OLS regressions of incoming CEO tenure on succession planning. The sample period is between 1994 and 2010. Firms with succession plans (denoted by the indicator *SP*) are matched to ExecuComp firms with no succession plans based on the year of turnover, industry (Fama-French 49), and a propensity score estimated as in column (5) of Table 3. All firm controls are as of the latest fiscal year-end prior to the CEO succession and are defined in Table A1. In column (1), we include industry-by-fiscal year fixed effects, whereas in columns (2) and (3), we include CEO fixed effects. All models report (in parentheses) *t*-statistics, calculated with standard errors clustered at the firm level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	Ln Incoming CEO Tenure		
SP	0.108**	0.181*	0.146
	(2.265)	(1.690)	(1.419)
Forced			-0.120
			(-1.197)
SP # Forced			0.986**
			(1.986)
SP_Relay	0.096**	0.787***	0.919***
	(2.306)	(4.066)	(5.491)
Ln Assets	0.041***	-0.015	0.075
	(2.666)	(-0.146)	(0.829)
ROA	1.008	0.592	1.166
	(1.443)	(0.170)	(0.390)
MTB	-0.010	-0.506*	-0.242
	(-0.395)	(-1.652)	(-0.701)
Leverage	-0.327**	0.692	0.817*
	(-2.307)	(1.609)	(1.859)
Cashflow	-0.174	-1.670	-2.251
	(-0.269)	(-0.480)	(-0.790)
Sales growth	0.161	0.294	0.194
	(1.291)	(1.338)	(0.840)
Ln CEO age	-0.885***	1.723**	1.896***
	(-4.725)	(2.151)	(2.910)
Ln CEO tenure	0.178***	0.495***	0.483***
	(3.830)	(4.589)	(4.247)
Discussion of current turnover	0.124*	0.459*	0.847***
	(1.654)	(1.801)	(2.991)
CEO stays during transition	0.120***	0.042	0.093
	(2.689)	(0.132)	(0.376)
Constant	4.861***	-5.570*	-7.855***
	(6.205)	(-1.722)	(-3.439)
Observations	2,145	1,316	1,308
R-squared	0.449	0.994	0.996
Fixed effects	Ind*Year	CEO	CEO

Table 8. Succession planning and turnover-performance sensitivity

This table reports estimates of OLS regressions of forced CEO turnover on prior firm performance and its interaction with *Post*. *Post* is an indicator that equals one for the three years after the 2006 SEC-mandated change in performance evaluation disclosures, and zero for the three years before 2006. Firms with succession plans (denoted by *SP firms*) are matched to ExecuComp firms with no succession plans (denoted by *Non-SP firms*) based on the year of turnover, industry (Fama-French 49), and a propensity score estimated as in column (5) of Table 3. Performance is measured by stock returns, calculated over the current and prior fiscal years and adjusted by value-weighted (VW) market returns in columns (1)-(2), and by industry-adjusted ROA in columns (3)-(4). Firm controls are as of the latest fiscal year-end prior to the CEO succession and are defined in Table A1. All models include industry-by-fiscal year fixed effects and report (in parentheses) *t*-statistics, calculated with standard errors clustered at the firm level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
	Forced CEO turnover			
	SP firms	*Non-SP firms*	*SP firms*	*Non-SP firms*
	VW market-adjusted returns		Industry-adjusted ROA	
Performance	-0.058***	-0.039***	-0.661***	0.044
	(-2.608)	(-3.371)	(-2.777)	(0.564)
Post # Performance	-0.001	-0.047**	0.115	-0.259***
	(-0.015)	(-2.565)	(0.513)	(-2.800)
Ln Assets	-0.010**	-0.003	-0.011**	-0.002
	(-2.047)	(-1.240)	(-2.060)	(-0.806)
ROA	-0.456**	-0.050		
	(-2.372)	(-0.687)		
MTB	0.024	0.004	0.025	-0.001
	(1.508)	(1.293)	(1.469)	(-0.256)
Leverage	-0.020	-0.026	-0.017	-0.001
	(-0.587)	(-0.952)	(-0.466)	(-0.050)
Cashflow	0.298	-0.093	0.312	-0.137**
	(1.427)	(-1.626)	(1.577)	(-2.397)
Sales growth	0.045	0.009	0.067	-0.002
	(1.115)	(0.482)	(1.252)	(-0.115)
Ln CEO age	0.112	-0.170***	0.119	-0.171***
	(1.277)	(-4.117)	(1.369)	(-4.354)
Ln CEO tenure	0.036**	0.021***	0.035**	0.022***
	(2.545)	(2.847)	(2.556)	(3.149)
Constant	-0.355	0.740***	-0.456	0.734***
	(-1.043)	(4.572)	(-1.336)	(4.713)
Observations	2176	9281	2219	9913
R-squared	0.414	0.183	0.394	0.166
Fixed effects	Ind*Year	Ind*Year	Ind*Year	Ind*Year

Appendix. Additional tables

Table A1. Variable definitions

Variable	Definition	Data source
Turnover and succession variables		
SP	Indicator equal to one if a firm has a formal succession plan prior to the CEO turnover event.	8-K and DEF-14A
SP_disclosure	Indicator equal to one if a firm discloses a succession plan in year *t*.	8-K and DEF-14A
Forced CEO turnover	Indicator equal to one if a CEO succession is involuntary. The definition of a forced CEO turnover follows Parrino (1997): (i) CEOs who are reported in the press to be fired, forced out, or retiring/resigning due to policy differences or pressure, (ii) CEOs below the age of 60 for whose departures the press does not report the reason as death, poor health, or the acceptance of another position, and (iii) CEOs whose retirement is not announced in the press at least six months before the succession.	ExecuComp and Factiva
Insider successor	Indicator equal to one if an executive has been with the firm for at least one year prior to becoming the CEO.	ExecuComp
Interim successor	Indicator equal to one if the CEO is replaced within one year.	ExecuComp
Non-CEO exec turnover	Indicator equal to one if top non-CEO executives are replaced within two years, and zero otherwise.	ExecuComp
CEO stays during transition	Indicator equal to one if the departing CEO remains with the firm in another position after stepping down, and zero otherwise.	8-K and DEF-14A
Discussion of current turnover	Indicator equal to one if specific details are provided about the departure of the incumbent CEO, and zero otherwise.	8-K and DEF-14A
CEO of retirement age	Indicator equal to one if the CEO is between 63 and 66 years of age, and zero otherwise, as in Jenter and Kanaan (2015).	ExecuComp
Ln CEO tenure	*ln* (number of years the current CEO has served as CEO)	ExecuComp
Ln CEO age	*ln* (current age of CEO)	ExecuComp
Other variables		
Variable	Definition	Data source
CAR	Cumulative abnormal return calculated from day -n to day +n around the announcement of the SP plans. Abnormal returns are calculated with respect to the market and Fama-French three-factor model.	CRSP / Ken French's website
Realized return volatility	Standard deviation of stock returns, calculated over the fiscal year using daily returns (ret), for firm-years with more than 200 non-missing return days; annualized based on 250 trading days.	CRSP
Idiosyncratic return volatility	Standard deviation of residual returns from the Fama-French three-factor model, calculated over the fiscal year using daily returns (ret), for firm-years with more than 200 non-missing return days; annualized based on 250 trading days.	CRSP / Ken French's website
Market beta / SMB beta / HML beta	Coefficient estimate on the excess market return, the SMB factor, and the HML factor in the Fama-French three-factor model, estimated over the fiscal year using daily returns (ret), for firm-years with more than 200 trading days.	CRSP / Ken French's website
Stock returns	Stock returns, calculated over the previous fiscal year using monthly returns (ret), for firm-years.	CRSP
ROA	Net income (ni) / total assets (at) in the previous fiscal year.	Compustat
MTB	(Book value of assets (at) + market value of equity (csho×prcc_f) – book value of equity (ceq)) / book value of assets (at)	Compustat
Ln assets	*ln* (total assets (at) + 1)	Compustat
CF	Operating cashflow scaled by total assets.	Compustat

Sales growth	(Sales(t) – Sales (t-1))/Sales(t-1)	
Leverage	(Total liabilities (lt) + total debt in current liabilities (dlc)) / total assets (at) in the previous fiscal year, winsorized at 1%.	Compustat
Dividend payer	Indicator equal to one if the firm pays dividends (dvt), and zero otherwise.	Compustat
ROE	Operating income before depreciation (oibdp) / book value of equity (ceq) in the previous fiscal year, winsorized at 1%.	Compustat
Ln CEO fixed pay	*ln* (salary and bonus paid to the CEO)	ExecuComp
CEO pay slice	Fraction of the aggregate compensation (TDC1) of the top five executives paid to the CEO, as in Bebchuk, Cremers, and Peyer (2011).	ExecuComp
CEO ownership	Indicator equal to one if the percentage of shares owned by the CEO is in the top quintile in a given year, and zero otherwise. Capped at 100%.	ExecuComp
CEO-Chairman duality	Indicator equal to one if the CEO also chairs the board, and zero otherwise.	IRRC
Independent dir pct	Percent of independent directors sitting on the firm's board.	IRRC
Dir voting shares pct	Percent of voting shares owned by the firm's directors.	IRRC
SP_Relay	Indicator equal to one if a firm has a President or Chief Operating Officer (COO) younger than the current CEO, as in Naveen (2006).	ExecuComp

Table A2. Examples of succession planning disclosures

Company	Description of succession plan	Document type / filing date	SP	Discussion of current turnover
Sysco Corp	On an ongoing basis, the board plans for succession to the position of CEO and other key management positions, and the corporate governance and nominating committee oversees this management development and succession planning process. To assist the board, the CEO periodically provides the board with an assessment of senior executives and their potential to succeed to the position of CEO, as well as perspective on potential candidates from outside the company. In addition, the CEO periodically provides the board with an assessment of potential successors to other key positions.	DEF-14A / Oct. 8, 2009	Yes	No
Citigroup Inc.	The nomination and governance committee, or a subcommittee thereof, shall make an annual report to the board on succession planning. The entire board shall work with the nomination and governance committee, or a subcommittee thereof, to nominate and evaluate potential successors to the CEO. The CEO shall meet periodically with the nomination and governance committee in order to make available his or her recommendations and evaluations of potential successors, along with a review of any development plans recommended for such individuals.	DEF-14A / Mar. 13, 2008	Yes	No
Hershey Co.	The board shall review management succession plans annually. This shall include review by the board of organization strength and management development and succession plans for each member of the company's executive team. The board shall also maintain and review annually, or more often if appropriate, a succession plan for the CEO. If the president, CEO, and/or chairman of the board is unable to perform for any reason, including death, incapacity, termination, or resignation before a replacement is elected, then: (1) if the company is without a chairman of the board, the vice chairman of the board, if any, shall serve as chairman until a replacement is elected or, in the case of temporary incapacity, until the board determines that the incapacity has ended, and in the absence of a vice chairman of the board, the chair of the governance committee or, in his or her absence, the chair of the compensation and executive organization committee, shall serve in such capacity; (2) if the company is without a president and CEO, the interim president and CEO shall be the officer of the company approved by the board, taking into consideration the annual recommendation of the CEO; (3) in the case of incapacity of the president, CEO or chairman, the board shall determine whether to search for a replacement; and (4) the chair of the compensation and executive committee shall lead any search for a replacement.	DEF-14A / Mar. 10, 2008	Yes	No
Brinker International Inc.	The board of directors of Brinker International, Inc. (NYSE: EAT) announced today that Ron McDougall advised the board that he has decided to relinquish his responsibilities as chief executive officer effective January 1, 2004. In accordance with the company's established succession plan, Ron will continue to serve as chairman of the board and Doug Brooks, currently president and chief operating officer, will become CEO on that date and will also continue as president.	8-K / June 6, 2003	Yes	Yes

Company	Description of succession plan	Document type / filing date	SP	Discussion of current turnover
Texas Instruments Inc.	Management succession planning is one of the board's most important functions. TI's board has long had a rigorous process of reviewing at least annually potential successors to its top management positions. In 2003, while considering a transition of the company's chief executive officer, the board was able to follow a very deliberate and thorough approach having had the benefit of its prior annual succession planning discussions. As recently announced, Mr. Templeton will become chief executive officer of the company effective May 1, 2004, taking over from Mr. Engibous, who will remain as chairman of the board. […] The board will continue its succession planning practices, including the annual review of top management positions.	DEF-14A / Mar. 12, 2004	Yes	Yes
First Midwest Bancorp Inc.	On September 13, 2008 our then Chairman and Chief Executive Officer, John M. O'Meara died unexpectedly. In accordance with the Company's long-standing succession plan, on September 14, 2008, the Board elected Michael L. Scudder as its President and Chief Executive Officer, and appointed him a member of the Board; elected Robert P. O'Meara (who formerly served as the Company's Chairman from 1998 through 2007) as the Chairman of the Board; and appointed Thomas J. Schwartz as a member of the Board.	DEF-14A / Sep. 6, 2009	Yes	Yes
Masco Corp.	The Organization and Compensation Committee determines executive compensation, evaluates Masco's management, determines and administers awards and options granted under our stock incentive plan and directs Masco's succession planning process. This Committee exercised its authority to engage outside advisors and, for the past four years, has retained Hewitt Associates. The Company's Board of Directors, through its Organization and Compensation Committee, actively engages in succession planning for the Company's senior management. As part of that process, the Committee has discussed with Mr. Manoogian, the Company's Chairman and Chief Executive Officer, and Mr. Alan H. Barry, the Company's President and Chief Operating Officer, their future intentions with respect to the Company. Mr. Barry has indicated his desire, if compatible with the needs of the Company, to step down as President when he reaches the Company's normal retirement age of 65 in early 2008. Mr. Manoogian has expressed his willingness and intention to remain actively involved in the management of the Company's businesses but his desire, if feasible, to transition from his role as Chief Executive Officer during 2007.	DEF-14A / April 10, 2007	Yes	Yes
Drew Industries Inc.	The Company has a management succession plan, as required by the NYSE. The plan is designed to ensure an effective transition of management of our operations to qualified executives upon the retirement of senior executives. In November 2008, in accordance with the management succession plan, Edward W. Rose, III, Chairman of the Board of Directors since 1984, was appointed Lead Director; Leigh J. Abrams, President from March 1984 until May 2008, and Chief Executive Officer and a Director since 1984, was appointed Chairman of the Board of Directors; and Fredric M. Zinn, Executive Vice President and Chief Financial Officer from 1986 to May 2008, and President and a Director since May 2008, was, in addition to President, appointed Chief Executive Officer. Each of these appointments became effective January 1, 2009.	DEF-14A / April 8, 2009	Yes	Yes

Table A3. Market reaction to the first disclosure of succession planning

This table reports univariate *t*-tests of short-term cumulative abnormal returns (CARs), cumulated from *n* days before to *n* days after the date on which a firm first discloses its succession plan. The top panel reports raw returns, whereas the bottom panel reports market-adjusted returns calculated by subtracting the value-weighted market index. The sample includes public firms in the ExecuComp database with CEO turnover events between 1994 and 2010. Disclosure data are from proxy filings and 8-K reports.

	Window	Num Obs	Mean	Std Err	*t*-statistics	*p*-value
Raw Return	(0,0)	1381	0.064	0.07	0.9	0.358
	(0,1)	1381	0.284	0.097	2.95	0.004
	(0,2)	1381	0.515	0.121	4.25	0.000
	(0,5)	1381	0.866	0.169	5.15	0.000
	(-1,1)	**1381**	**0.226**	**0.067**	**3.4**	**0.001**
	(-2,2)	1381	0.208	0.069	3	0.003
	(-5,5)	1381	0.083	0.068	1.2	0.226
Market-adj Return	(0,0)	1381	0.072	0.06	1.2	0.233
	(0,1)	1381	0.192	0.085	2.25	0.025
	(0,2)	1381	0.275	0.111	2.5	0.013
	(0,5)	1381	0.424	0.153	2.75	0.005
	(-1,1)	**1381**	**0.14**	**0.059**	**2.4**	**0.018**
	(-2,2)	1381	0.067	0.061	1.1	0.278
	(-5,5)	1381	0.017	0.06	0.3	0.782

Table A4. Succession planning and the market reaction to CEO turnovers

This table reports estimates of OLS regressions of short-term cumulative abnormal returns (CARs) on succession planning. CARs are cumulated from one day before to one day after the turnover event and estimated with respect to the market model (MM) with the CRSP value-weighted index as the benchmark (column 1), and with respect to the Fama and French (1993) three-factor model (column 2). Firm controls are as of the latest fiscal year-end prior to the CEO succession and are defined in Table A1. All models include industry (FF49) by fiscal year fixed effects and report (in parentheses) *t*-statistics, calculated with standard errors clustered at the firm level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
	CAR (-1d,+1d) – MM	CAR (-1d,+1d) – FF3
SP	0.001	0.003
	(0.243)	(1.054)
SP_Relay	0.000	-0.004
	(0.001)	(-1.407)
Market beta	-0.001	-0.000
	(-0.290)	(-0.122)
SMB beta	-0.001	-0.003
	(-0.304)	(-1.250)
HML beta	-0.002	-0.001
	(-0.884)	(-0.288)
Ln Assets	0.001	-0.000
	(0.459)	(-0.382)
ROA	-0.008	0.020
	(-0.207)	(0.879)
MTB	-0.001	-0.001
	(-0.812)	(-0.788)
Leverage	0.009	0.007
	(0.796)	(0.857)
Cashflow	-0.023	-0.035
	(-0.610)	(-1.365)
Sales growth	0.008	0.005
	(1.219)	(0.758)
Ln CEO age	-0.011	-0.012
	(-0.757)	(-1.061)
Ln CEO tenure	-0.002	-0.002
	(-0.433)	(-0.823)
Discussion of current turnover	-0.000	0.003
	(-0.064)	(0.502)
CEO stays during transition	0.003	0.001
	(0.761)	(0.468)
Constant	0.046	0.059
	(0.803)	(1.342)
Observations	2,071	2,071
R-squared	0.338	0.303
Fixed effects	Ind*Year	Ind*Year