

New Captain, New Crew?
Top Management Team Composition and Firm Performance after CEO Succession

Svetlana Kalinnikova
Florida Atlantic University

May, 2026

1. Introduction

According to executive officer disclosures in 10-K filings and proxy statements, in a typical U.S. publicly traded firm, the CEO is surrounded by six to eleven senior managers. The inclusion of their names in corporate filings indicates that these managers collectively oversee the firm's operations, finances, legal affairs, and strategic direction, and that their profiles and interactions are important for corporate outcomes. The Upper Echelons Theory (Hambrick and Mason, 1984) provides a theoretical framework for this assertion. The UET is grounded on the premise that managing a complex modern organization requires shared leadership, and the outcomes reflect the top management team's joint effort. A key implication is that focusing on the executive team rather than the CEO alone provides greater explanatory power for organizational outcomes (Hambrick, 2007).

If top executives surrounding the CEO matter, then which leadership team is more likely to steer the firm to better performance outcomes — the one consisting of veterans, who stayed with the firm for decades, climbed the ranks, and know the business inside-out, or a team interspersed with more recent hires, who might need more time for adjustment but bring external experiences, valuable connections, and fresh viewpoints? The answer likely depends on the context, including the firm's life stage, industry, and other factors, but identifying common patterns matters for board decisions and firm valuation.

In this study, I focus on CEO turnover events, which often lead to changes in the top management team (TMT) composition, as some executives leave with the departing CEO, while others join at the successor's bidding (Boumosleh & Cline, 2023). Accounting for the nature and extent of the TMT changes around the time of CEO turnover should provide a more comprehensive ground for analyzing post-succession firm performance (Shen & Cannella, 2002) and can potentially reconcile conflicting results reported in CEO turnover studies (Schepker et al., 2017).

As Zhang and Rajagopalan (2004) note, TMT support is necessary for the incoming CEO attempting to turn around firm performance in a post-succession period, while internal confrontation may undermine the success of new policies. Additionally, an extensive senior executive turnover can lead to detrimental loss of firm-specific knowledge during the transition period (Shen & Cannella, 2002). In this light, focusing on the CEO alone, as it is often done in prior studies, inadvertently attributes these effects to the successor's individual characteristics.

The context of CEO succession also matters for both the changes in the leadership team and post-succession performance. Earlier studies often distinguish between voluntary and forced CEO departures, where the latter generally refers to dismissals due to poor performance, misconduct, or conflicts (Parrino, 1997). However, in practice, the correct identification of forced departures is hindered by missing or vague corporate announcements, which often mask the true state of affairs (Fee & Hadlock, 2004; Gentry et al., 2021). Given these limitations, the classification into routine and performance-induced turnovers proposed by Jenter and Lewellen (2021) appears to be a more practical and conceptually superior alternative for examining post-turnover changes in TMT composition and performance outcomes. Jenter and Lewellen (2021) view performance-induced departures as those that would not have occurred had the firm's performance been satisfactory and estimate that up to 55% of all CEO turnovers are likely to be performance-induced. I adopt this classification when developing and testing the main hypotheses.

Theoretical predictions regarding post-succession performance are divided between two conflicting perspectives. The organizational disruption view predicts lower performance due to significant organizational disturbances, while the organizational adaptation view brings forth beneficial effects associated with change and strategic renewal (Georgakakis & Ruigrok, 2017; Kim et al., 2021). Following these views, the performance consequences of CEO turnovers have received much attention in the empirical literature, but the reported results remain inconsistent (Shen & Cannella, 2002; Kim et al., 2021).

Still, empirical findings generally confirm the disruptive nature of CEO successions and related TMT changes (e.g., Rivolta, 2018; Kim et al., 2021) and suggest that the degree of disruption matters (Karaevli, 2007; Impink et al., 2025). Based on these facts, I hypothesize that extensive TMT turnover following CEO succession is negatively associated with post-succession performance gains, particularly when new team members are outside hires.

On the other hand, a notable number of studies report improvements in firms' post-succession performance, achieved through eliminating inefficiencies and resource reallocation (e.g., Virany et al., 1992; Denis and Denis, 1995; Bai and Mkrtchyan, 2023). These are the type of changes where TMT newcomers, particularly external hires, with their lack of commitment to old projects and established routines, have an advantage over long-tenured TMT members.

In a broader sense, Hambrick and Mason (1984) theorized that more diverse executive teams are better equipped to handle novel and vaguely defined issues. In turn, threshold models of collective behavior (Granovetter, 1978) imply that TMTs with a larger share of newcomers are more likely to overcome incumbent inertia and implement the changes needed for a turnaround. These arguments lead to a second testable hypothesis: in performance-induced CEO successions, the disruptive effects of more extensive TMT turnover and outside hiring are offset by the team's greater capacity to implement change, producing net performance gains.

To test these hypotheses, I collect the data on firms' top executive teams from structured databases (ExecuComp and BoardEx) and from corporate 10-K and proxy (DEF 14A) filings, assembling a TMT sample consisting of over 47 thousand firm-year observations across 2,980 non-financial and non-utilities publicly traded U.S. firms, experiencing 5,176 CEO turnovers between 1993 and 2024. Based on the available data sources, I use and compare throughout the study two operational definitions of TMT, one guided by the list of managers in the executive section of the annual corporate filings and the other based on the executive records appearing in compensation data in either ExecuComp or BoardEx¹.

I measure TMT turnover based on the annual departures and additions, scaled by the executive team size. Following prior studies (Shen and Cannella, 2002; Georgakakis and Ruigrok, 2017), I also calculate cumulative measures of departures and additions over a 2-year window and the overall TMT turnover ratio as the average of the arrival and departure ratios. I separately identify the origin of TMT additions (i.e., internal promotions or outside hires) to calculate the TMT outsider ratios. As binary measures of turnover intensity, I use indicators of high TMT turnover during the first two years following CEO succession, constructed based on the industry-year medians of the corresponding turnover ratios.

I use BoardEx as the main source of data on board characteristics and Compustat and CRSP for the data on firm-level financial and accounting variables. Based on the latter, I construct performance measures for CEO turnover classification into routine and performance-induced, following the descriptions in Jenter & Lewellen (2021). I also incorporate data from the Gentry et

¹ The former is a data source suggested by Hambrick & Mason (1984) and the latter is more readily available in practice.

al. (2021) open-source dataset, with codified reasons for CEO departures based on official corporate communications.

I use the full sample, regardless of CEO turnover timing, to verify general predictions regarding CEO and TMT turnover and explore in more detail patterns related to performance-induced departures. Consistent with findings reported in prior studies, I observe that all measures of TMT turnover are positively associated with the CEO successions, which are in turn more likely to occur in underperforming firms. Focusing on CEO turnover events alone, I find that, in addition to underperformance, the extent of post-succession TMT changes is positively related to board independence and outside successions, while larger firms tend to promote managers from within rather than hire externally. Taken together, these findings help validate the data and justify turnover classification.

In the main analysis, I follow an empirical approach adopted in Bai and Mkrtchyan (2023), using a seven-year panel constructed around the year of the CEO turnover. This final sample, which requires full data availability and does not include interim successions and events where CEOs served fewer than three years, consists of 3,097 CEO successions in 1,617 unique firms between 1993 and 2024.

My baseline empirical model is a modification of the Bai and Mkrtchyan (2023) CEO-outsider specification, adapted for the TMT context. This approach allows me to compare within-firm performance gains between the pre- and post-CEO-succession periods for firms with high and low TMT turnover. Following prior studies, I use standard accounting- and market-based metrics (industry-adjusted ROA, Tobin's Q, and stock returns) to quantify firm performance.

The baseline results indicate that firms with above-median external TMT additions experience significantly lower performance growth than those with fewer outsiders joining the executive team. A similar, though less pronounced, pattern emerges for overall TMT turnover, with high-turnover firms achieving smaller performance gains relative to the pre-turnover baseline than their low-turnover counterparts. At the same time, the estimation results indicate that firms with performance-induced CEO successions, on average, experience significantly larger performance improvements than baseline routine-succession firms. This finding warrants further investigation, which I carry out by adding a triple interaction term to the baseline equation, which also allows me to incorporate continuous turnover measures.

I find that the negative association between post-succession performance changes and TMT turnover, particularly in terms of more extensive external hiring, holds more uniformly for routine CEO successions, where TMT changes may signal unnecessary disruption. By contrast, in the cases when CEO succession occurs under performance pressure, the disruptive effect of outside TMT additions may be offset by the necessity of change, resulting in comparable or marginally better performance outcomes.

[My further plans include examining changes in specific corporate policies (investment, leverage, cash holdings, and others), which may help explain the baseline results. I also plan to add robustness checks and address concerns related to selection bias and endogeneity. Although the baseline model focuses on performance changes rather than levels, it partially mitigates the concern that pre-succession performance jointly determines TMT changes and post-succession outcomes, but it does not account for omitted-variable bias, measurement error, or systematic differences across sample firms.]

So far, the baseline results suggest that the TMT dimension should not be overlooked in assessing the performance consequences of CEO successions. They also point out a meaningful difference between the consequences of TMT restructuring during routine and performance-induced CEO successions, potentially reconciling the disruption and adaptation views developed in prior literature. As such, they also bring forth the advantages of the Jenter and Lewellen (2021) classification approach itself, supporting and expanding on the authors' point that distinguishing between routine and performance-induced successions is conceptually the right choice when the focus is on the CEO (or the entire executive team) match with the firm, whereas identifying forced turnovers is more important for assessing boards' firing decisions. The results also show that further distinguishing between public and quiet dismissals may provide additional insights into post-succession changes.

As an auxiliary contribution, the study compares two operational TMT definitions, one based on disclosures in 10-K filings and proxy statements, and the other guided by the availability of executive records in structured databases (ExecuComp and BoardEx). The cross-sample comparison of TMT size, composition, and turnover measures, along with the corresponding regression results, shows to what extent one definition can substitute for the other.

The rest of the paper is organized as follows. Section 2 reviews the upper echelons literature on TMT composition and the finance literature on CEO turnover, deriving the hypotheses that guide the empirical analysis. Section 3 describes the data sources, variable definitions, sample construction, and empirical design. Section 4 presents the baseline results and channel analysis, while Section 5 focuses on robustness checks and addressing endogeneity concerns. Section 6 concludes.

2. Literature Review² and Hypothesis Development

2.1 Top Management Team

According to executive officer disclosures in 10-K filings and proxy statements, in a typical U.S. publicly traded firm, the CEO is surrounded by six to eleven senior managers, such as the chief financial officer, chief operating officer, general counsel, and heads of technology, human resources, and other key functions. Regardless of the specific titles, which vary by company, the inclusion of their names in corporate filings indicates that these executives collectively oversee the firm's operations, finances, legal affairs, and strategic direction, and that their profiles and interactions are important for corporate outcomes.

The Upper Echelons Theory (UET), formulated by Hambrick and Mason in 1984 and further revised by Hambrick in 2007, offers a theoretical frame. UET is grounded on the premise that managing a complex modern organization requires shared leadership, and the outcomes reflect the top management team's (TMT's) joint effort. Corporate decisions are shaped in part by senior managers' backgrounds, experiences, and values, and UET views executives' observable sociodemographic characteristics as imprecise but valid proxies for their beliefs and ways of thinking. A key implication is that focusing on the executive team rather than the CEO alone provides greater explanatory power for organizational outcomes (Hambrick, 2007; Karaevli, 2007).

UET has been widely adopted in strategic management literature (Hambrick, 2007; Georgakakis et al., 2022), inspiring many follow-up studies that tested its predictions empirically

² An extended literature review will be added during summer 2026, and some of the subsections in the current Hypothesis Development section will be regrouped.

and further developed the theoretical framework (Certo et al., 2006; Weis, 2025). While the original focus was mainly on senior managers' demographic characteristics (age, educational backgrounds, career experiences, etc.) as well as group characteristics, such as team heterogeneity and complementarity, subsequent research also paid attention to the processes that affect decision making, such as conflict, consensus, and faultlines (e.g., Certo et al., 2006; Georgakakis et al., 2017).

The view of TMT also developed to allow unequal power distribution among the team members and the possibility of one-to-one relations between the CEO and other TMT members, rather than a traditional team approach (Hambrick, 2007). Nevertheless, straightforward characteristics, such as executives' organizational tenure and tenure overlap, have been consistently acknowledged as influential for team dynamics (Carpenter, 2002; Georgakakis et al., 2017; Zhang et al., 2021).

2.2 TMT in Finance Literature

The UET ideas initially influenced the finance literature as well, and studies in the 1990s and early 2000s examined the effects of top management teams on firms' policies and performance (e.g., Denis & Denis, 1995; Bertrand & Schoar, 2003; Adams et al., 2005). For instance, Bertrand and Schoar (2003) tracked top executives' between-firm movements across time, finding significant variation in management "styles" and concluding that top managers' individual characteristics matter for key corporate decisions. Adams et al. (2005) further showed that approaches to the decision-making process vary across top management teams, and extreme outcomes are less likely when major decisions are reached by team consensus rather than by a single individual.

However, in recent decades, the focus has largely shifted to the CEO figure and the board of directors (e.g., Adams et al., 2010; Kaplan et al., 2012; Custodio et al., 2013; Edmans & Gabaix, 2016), with some studies even finding that only the CEO matters for the firm's performance and financial outcomes (e.g., Bennedsen et al., 2020). Other top executives enter the picture mainly as potential CEO replacements in the tournament and succession literature (e.g., Kale et al., 2009; Mobbs & Raheja, 2012). Likewise, controlling for the CEO's and board characteristics, such as CEO duality and board size and independence, has become standard practice in corporate finance, whereas TMT characteristics are hardly ever considered.

2.3 Executive Turnover

The analysis of the effects of TMT characteristics and processes on corporate strategy and performance is complicated by many confounding factors that affect the same outcomes. From that perspective, focusing on the changes in the team composition may provide a more direct avenue for isolating TMT effects.

TMT departures and additions change the level of team heterogeneity, reset overlapping tenures, and many other properties, which in turn, change team dynamics. Even if executives with similar characteristics leave and enter the team, leading to relatively homosocial reproduction (Georgakakis et al., 2021), newcomers still bring additional experiences and disrupt established communication patterns and routines. Thus, if the basic UET principles hold, TMT turnover is likely to affect a wide range of corporate decisions.

Numerous management studies find that this is indeed the case³. Moreover, Fee and Hadlock (2004) note that boards continuously assess TMT performance and remove suboptimal team members, while Wiersema and Bantel (1993) conclude that changes within the top executive team appear to be necessary for efficient firm performance.

At the same time, the only TMT members whose resignations and appointments have been studied extensively, particularly in relation to the subsequent financial performance, are CEOs, whereas the related changes in the TMT composition have been largely overlooked (Barron et al., 2011). Although distinct attention to CEO turnovers as critical events in a firm's life-cycle is justified, they should not be viewed in isolation from broader TMT turnover (Shen & Cannella, 2002).

Incidentally, CEO successions provide an appropriate setting for examining performance outcomes of top management turnover, given the general consensus in the literature that TMT changes are expected and often occur during and after CEO successions (Schepker et al., 2017; Weis, 2025). Some executives leave the team with the departing CEO, while others join at the successor's bidding (Boumosleh and Cline, 2023), and non-CEO departure rates may be higher when the new CEO is an outsider (Fee & Hadlock, 2004).

³ For example, Weis (2025) provides a detailed overview of this literature.

Accounting for the extent of the TMT changes around the time of CEO turnover should provide a more comprehensive ground for analyzing post-succession firm performance (Shen & Cannella, 2002) and can potentially reconcile conflicting results reported by CEO turnover studies (Schepker et al., 2017).

As Zhang and Rajagopalan (2004) note, TMT support is necessary for the incoming CEO attempting to turn around firm performance in a post-succession period, while internal confrontation might undermine the success of new policies. Additionally, an extensive senior executive turnover can lead to detrimental loss of firm-specific knowledge during the transition period (Shen & Cannella, 2002). In this light, focusing on the CEO alone inadvertently attributes these effects to the successor's individual characteristics.

2.4 Types of CEO Turnover

As the focus narrows down to TMT changes accompanying CEO turnovers, it is important to consider the context of these events. For instance, Hoitash and Mkrtchyan (2018) distinguish between planned and unplanned CEO turnovers. In the case of the former, the board has sufficient time to select and groom a successor and consider the necessary changes in the top management team. Conversely, an unplanned CEO replacement can be due to unanticipated health-related issues or corporate scandals, including lawsuits and criminal charges, and it can be viewed as an emergency situation with ad-hoc solutions, such as appointing a board member as an interim CEO. The subsequent TMT changes and their performance outcomes are hardly generalizable, but as shown by Rivolta (2018), delays in appointing a successor tend to reduce the likelihood of suboptimal choices.

The classification most commonly used in CEO turnover studies is forced versus voluntary departures, where the latter usually means retirements of generally successful and appropriately aged leaders as opposed to involuntary dismissals due to poor performance, misconduct, or conflicts. Ordinary retirements tend to be planned, while forced turnovers can happen on short notice.

In practice, classifying turnovers as forced or voluntary is not straightforward, as firms are not required to disclose the full context of their CEOs' departures (Fee & Hadlock, 2004; Jenter & Lewellen, 2021; Ferris et al., forthcoming). As a result, some studies rely on a plausible retirement

age (e.g., age 64 in Shen & Cannella, 2002), acknowledging the limitations of this approach, while many others follow Parrino (1997) methodology, which involves an extensive search in press reports in conjunction with considering the departing CEO age and other relevant factors (e.g., Eisfeldt & Kuhnen, 2013; Jenter & Kanaan, 2015; Boumosleh & Cline, 2023).

Although more precise than classification by age alone, the Parrino approach does not account for missing or euphemistic corporate statements regarding CEO departures, and misclassifications are still plausible (Fee & Hadlock, 2004). At the same time, the outcomes of forced and voluntary turnovers may differ, as the successors of retiring CEOs are often expected to maintain the directions set by their predecessors and make fewer changes to the executive team (Shen & Cannella, 2002).

2.5 Performance-Induced CEO Successions and Related TMT Changes

Given the limitations in identifying forced CEO departures, a performance-based classification proposed by Jenter and Lewellen (2021) appears to be a viable and conceptually superior alternative in certain settings. According to this approach, CEO departures are viewed as routine or performance-induced, with the latter not occurring had the firm's performance been satisfactory. The strong relation between pre-turnover performance and CEO departures has long been noted in turnover research (e.g., Fee & Hadlock, 2004), and Zhang and Rajagopalan (2004) argued that poor pre-turnover performance could serve as a key antecedent of forced turnover. Jenter and Kanaan (2015) further show that CEOs may be dismissed even when poor performance is caused by external factors, such as industry shocks and recessions, while Gao et al. (2017) report greater turnover–performance sensitivity for publicly traded firms.

Remarkably, Jenter and Lewellen (2021) estimated that up to 55% of all CEO turnovers are likely to be performance-induced, while about half of those would be classified as voluntary using the Parrino (1997) approach. Since many of these “voluntary” turnovers occur more frequently at lower levels of performance, it likely plays a role in the replacement decisions. At the same time, if a CEO decides to retire early due to poor performance, this resignation can hardly be viewed as forced in a traditional sense.

When comparing the two classification approaches, Jenter and Lewellen (2021) suggest that identifying forced dismissals is more useful for studying board decisions and governance

quality, while performance-induced classification is more appropriate when the focus is on the CEO-firm match. From that perspective, performance-induced CEO turnovers also provide a well-suited setting for studying the effects of TMT changes. For one, the likelihood of TMT turnover increases if the performance deteriorated under former leadership (Fee & Hadlock, 2004; Georgakakis et al., 2021; Weis, 2025), and at the same time, the refreshed top management team is more likely to have a mandate for adopting measures aimed at improving the firm's performance.

2.6 Public versus Quiet Dismissals

As noted earlier, firms are not required to disclose the full context of top managers' departures, and official reasons, if provided at all, may sound vague or euphemistic (Larcker et al., 2022; Ferris et al., *forthcoming*). For instance, while examining executive turnover in their sample, Denis and Denis (1995) note that the most commonly stated departure reason is retirement, while very few cases are explicitly attributed to poor performance. Yet, the largest share of departures in their Descriptives table (34%) is marked as "No reason given." The average share of departures with missing reason appears to remain relatively stable over the subsequent three decades (Ferris et al., *forthcoming*).

Even when the reasons are provided, they often mask the true state of affairs by vague formulations, allowing departing executives to "save face" (Jenter & Lewellen, 2021; Gentry et al., 2021). An openly disclosed dismissal can damage an executive's future career prospects (Fee & Hadlock, 2004; Ferris et al., *forthcoming*), but even if the stated reasons do not imply forced departure, the managerial labor market may view an executive's decision to leave as a negative sign due to a strong belief that boards tend to replace lower-quality managers. Consequently, a position at the new place of employment may represent a step down in a departing executive's career (Fee and Hadlock, 2004).

From that perspective, members of a CEO team have a strong incentive to keep their position in the company unless a better offer is available or the departure is non-negotiable. Fee and Hadlock (2004) further note that non-CEO executives are often evaluated as a team, and the sensitivity of TMT turnover to firm performance is lower than that of the CEO.

Given these factors, it may be expected that the extent of TMT turnover surrounding a performance-induced CEO turnover will depend on the format of official communication. If the

stated reason for a CEO's departure openly refers to poor performance, more TMT members are expected to leave compared to the cases of quiet performance-induced turnovers, where the stated reason implies retirement, personal affairs, or new opportunities.

2.7 TMT Changes Depending on the Successor Type

The extent of TMT turnover is also likely to depend on the type of incoming CEO, as boards can choose between promoting a firm insider and hiring an outsider. Drawing upon Ocasio's (1994) "circulation of power" theory, Shen and Cannella (2002) identify three types of CEO succession: follower, contender, and outsider. An outsider CEO assumes the leadership role without current experience at the firm, while both a follower and a contender are promoted from within. The follower CEO (or "heir apparent") is usually selected and groomed by the outgoing chief executive, with the board's approval, and is often first promoted to the position of Chief Operating Officer or President (Adams et al., 2005). A contender CEO is a firm insider appointed after the predecessor's involuntary departure.

According to Shen and Cannella (2002), each of these three types of CEO successors is likely to be associated with varying degrees of TMT turnover, with followers making the least changes to the inherited executive team. At the same time, in the context of a performance-induced CEO departure, the distinction between followers and contenders becomes less relevant, since, in this context, most inside successors are effectively contenders with mandates for change. Consequently, the extent of TMT turnover is likely to be greater compared to routine CEO retirements.

Prior research on CEO turnover also shows that large public firms tend to appoint insider CEOs. For instance, Ferris et al. (2015) find that about 78% of new CEOs in S&P 500 firms during the six decades between 1951 and 2010 were insiders, while Cziraki and Jenter (2022) show that this share may be even greater for the 1993–2012 period. The fact that boards of larger firms usually can select a successor from a broader pool of internal candidates (Georgakakis et al., 2021) further supports these findings.

Nevertheless, there is sufficient evidence that, in the case of performance-induced turnovers, the likelihood of outsider CEO appointments increases (e.g., Cannella and Lubatkin, 1993; Parrino, 1997; Ferris et al., 2015). In that context, outsiders are valued for their external

expertise and ability to initiate change, often shifting away from the previous CEO's policies (Cannella and Lubatkin, 1993; Bai and Mkrtchyan, 2023). Further, Hoitash and Mkrtchyan (2018) investigate the cases when CEOs were chosen from current independent board members, which can be viewed as a viable alternative to hiring an outsider, and find that the majority of such appointments followed good performance.

With respect to the TMT turnover, Boumosleh and Cline (2022) argue that new CEOs either secure the loyalty of incumbent TMT members or replace them. In turn, Shen and Cannella (2002) and Georgakakis and Ruigrok (2017) note that external successors are less likely than insiders to find support among the executives promoted by their predecessors, which might prompt more extensive changes in the TMT composition. Ma and Seidl (2017) further add that outsiders tend to make more radical changes because they have fewer personal ties within the firm and may want to bring loyal supporters from their past places of employment. Given these points, performance-induced CEO turnovers are likely to be associated with more extensive changes in the TMT composition, particularly when the CEO successor is an outsider.

2.8 The Choice Between Promoting Insiders versus Hiring Outsiders

The choice between insiders and outsiders entering the TMT merits further discussion as it may have consequences for the post-turnover changes and performance outcomes. Strong arguments exist for and against both choices, and many points made in the turnover literature about the CEO origin can be extended to other top executives.

Similar to the selection of a new CEO, publicly traded firms tend to promote insiders to the TMT (e.g., Denis & Denis, 1995), and there are several reasons supporting this choice. Besides the previously noted fact that larger and older firms tend to have a larger pool of candidates, both Chan (1996) and Mobbs and Raheja (2012) reason that promotion is a powerful incentive for the firm's employees. The prospect of moving up within the internal hierarchy motivates managers to develop firm-specific skills and invest their time and effort to demonstrate success in their current areas of responsibility. Regular career advancements also help increase commitment and maintain long-term relationships between the firm and its employees, ensuring stability and the preservation of firm-specific human capital (DeOrtentiis et al., 2018).

The latter point brings forth another reason why firms prefer to promote executives from within. Compared to outside candidates, insiders have a deeper understanding of the firm's culture, values, and core competencies, as well as knowledge about internal processes, routines, and stakeholder relationships. They also have established internal networks that ensure quick and efficient communication and help with faster adaptation to the new role (DeOrtentiis et al., 2018). Parrino (1997) adds that insiders' prior experience at the firm sometimes leads to investment in specific assets that create more value under their management than in the hands of a newcomer⁴.

All of the above applies to the outside candidates with "a negative sign," meaning that they usually need more time to get up to speed in their new role and may face integration challenges (Georgakakis & Ruigrok, 2017). Moreover, they may ignore or alter firm resources before learning their value (Zhang and Rajagopalan, 2004), while their external skills and experience may not be readily applicable in the new context (Hoitash and Mkrtchyan, 2018). In that light, it is not surprising that complex firms may have a particular preference for promoting executives from within (Naveen, 2006).

Internal promotions are also associated with reduced risk of adverse selection, given that firms have significantly more information about current employees to form judgments about their abilities and potential fit within the executive team (DeOrtentiis et al., 2018; Georgakakis et al., 2021; Karaevli, 2007). The lack of similar knowledge about external candidates can be partially mitigated through the boards' external networks, and Cziraki and Jenter (2022) and Cai et al. (2022) provide evidence that the majority of newly appointed directors and top executives are first or second-degree connections of the existing board members. Nevertheless, network screening limits the selection of suitable candidates and cannot fully substitute for shared work experience, making internal promotion a safer option.

The other side of the coin is the lack of experience of the promoted executives in their new capacity. While an outsider may already have a proven track record of operating in a similar role at another company, an executive promoted from within is more likely to rise through the ranks, and success in prior positions does not guarantee the ability to handle new responsibilities

⁴ Although the latter may eventually lead to entrenchment, it does not negate the initial preference for the insider candidate.

(Hambrick and Mason, 1984). While CEO grooming aims to provide the necessary training, it cannot replace experience that accumulates with tenure (Zhang & Rajagopalan, 2004).

In addition to having experience in a particular role, outsider CEO and TMT candidates are often valued for their external knowledge and resources (Georgakakis and Ruigrok, 2017; Zhang and Rajagopalan, 2010). They are more likely to bring fresh perspectives, new skills, and valuable connections at the time when the firm needs them most. What is more, outsiders do not have an emotional commitment to old projects and established routines and are more likely to question existing practices and initiate changes (Zhang and Rajagopalan, 2004).

As Karaevli (2007) notes, both the resource dependence view (Pfeffer and Salancik, 1978) and UET provide theoretical support for the appointment of outsiders to top management positions during challenging times, such as declining performance. The latter also implies that the lack of external experience and commitment to the status quo are among the main weaknesses of top executives promoted from within. While they may be better equipped to ensure continuity and preserve firm-specific knowledge, they are also more likely to have vested interests and entrenched social relationships, reducing their ability to overcome strategic inertia and implement changes (Karaevli, 2007; Bai and Mkrtchyan, 2023).

An important caveat is that abandoning old ways and pursuing radical changes do not necessarily lead to improvement. Likewise, external experience may not be readily adaptable to the firm's specific circumstances (Hoitash and Mkrtchyan, 2018), while the loss of firm-specific knowledge could disrupt post-succession adaptation (Weis, 2025). Considering these trade-offs between inside and outside candidates, the balance between continuity and new perspectives is likely to influence the efficacy of the new leadership team.

Cannella and Lubatkin (1993) and Parrino (1997) argue that boards more often consider outside CEOs when firms underperform, and the successor is expected to implement changes. It appears that the same considerations drive the reshuffling of the entire top management team, particularly when hiring committees select outsiders. At the same time, the extent of changes in the TMT composition may vary not only between inside and outside CEO successions but also within each group, producing differing team dynamics and potentially dissimilar performance outcomes.

2.9 TMT Changes and Post-Turnover Performance

Theoretical predictions regarding post-succession performance are divided between two conflicting perspectives. The organizational disruption view predicts lower performance due to significant organizational disturbances, while the organizational adaptation view brings forth beneficial effects associated with change and strategic renewal (Georgakakis & Ruigrok, 2017; Kim et al., 2021).

Following these views, the performance consequences of CEO turnovers have received much attention in the empirical literature, but the reported results remain inconsistent (Shen & Cannella, 2002; Kim et al., 2021). Karaevli (2007) observes that, over five decades of empirical research (1954–2005), scholars did not reach a consensus on whether succession events (in general and insider versus outsider successions) have a positive or negative effect on subsequent firm performance, and if any effect is present at all.

Based on a meta-analysis of sixty turnover studies, Schepker et al. (2017) conclude that, on average, firm performance tends to decline after CEO turnover, but multiple moderating factors and endogeneity concerns complicate generalization. The authors also note the lack of attention to TMT changes coinciding with CEO turnover as a critical omission. Likewise, Shen and Cannella (2002) warn that analyzing post-succession performance requires attention to the context of the turnover, including related TMT changes.

As noted earlier, finance studies focus almost exclusively on CEO origin and characteristics. By contrast, strategic management research has paid more attention to executive teams as a whole, but the choices of performance metrics, empirical strategies, and, importantly, definitions of the TMT vary significantly across studies (Carpenter et al., 2004; Certo et al., 2006), including the decision to include or exclude the new CEO when analyzing team attributes (Weis, 2025). Likewise, the diversity of data collection methods, which, in addition to structured databases and corporate disclosures, included field studies, surveys, and direct interviews with CEOs, added valuable insights, but due to limitations related to sample sizes, industry coverage, and time horizons, it also contributed to the lack of consistency in the reported findings.

What can be inferred from prior studies with more certainty is that the extent to which TMT composition changes after a CEO turnover, and whether that coincides with internal or external succession, determines whether the firm retains enough institutional knowledge to function

effectively while gaining enough new perspective to break from the patterns that led to underperformance.

2.10 Disruptive Effects of CEO Turnovers

By far, the most consistent theme in many turnover studies is the disruptive nature of CEO successions and related TMT changes (e.g., Shen and Cannella, 2002; Rivolta, 2018; Kim et al., 2021, among others), but the degree of disruption matters (Karaevli, 2007). For instance, Kim et al. (2021) note that frequent turnover events appear particularly detrimental for performance recovery, while Zhang and Rajagopalan (2004) cite evidence that outsider successions are less likely to lead to improved performance due to disruption to internal processes caused by their lack of firm-specific knowledge. In the same vein, Bai and Mkrtchyan (2023) find that positive outcomes of outside successions are less likely for firms with poor pre-turnover performance.

Accessing the issue from a different angle, Impink et al. (2025) analyze firms' internal email communication and meeting activity in the post-turnover period and document a sharp decline relative to the pre-turnover levels in the first few months, followed by a gradual increase in communication activity between 5 and 12 months after the CEO succession. Importantly, firms with insider CEO appointments and lower TMT turnover, which the authors view as proxies of lower uncertainty in the succession event, demonstrate faster recovery. By contrast, firms experiencing more drastic changes in the TMT and board composition take longer to establish regular communication, which is likely to affect business processes. Notably, even low-uncertainty cases in the authors' sample appeared to require the entire year to stabilize, which provides additional support for the theoretical view of the disruptive nature of CEO turnover events.

Kim et al. (2021) also list managers' concerns about the loss of status and power among the disruptive factors during the post-transition period, while Bai and Mkrtchyan (2023) note that changes initiated by a new CEO (particularly an outsider) impose substantial demands on the firm's managerial resources. Under heavy pressure, executives may rely on mental shortcuts and draw on past experiences, leading to suboptimal decisions in new contexts (Hambrick, 2007).

Departures of TMT members also lead to the loss of valuable human capital (Fee and Hadlock, 2004), while newcomers face a relatively steep learning curve, with promoted insiders having insufficient experience in their new roles and outside hires lacking firm-specific

knowledge. Taken together, these arguments suggest that more extensive changes in the TMT composition are likely to contribute to post-succession disruption, hindering processes that may lead to performance gains. The negative association between post-succession performance improvement and TMT turnover can be even more pronounced in the case of a more extensive outside hiring.

Hypothesis 1 (Disruption): *Extensive TMT turnover following CEO succession is negatively associated with post-succession performance gains, particularly when new team members are outside hires.*

2.11 Outcomes of Performance-Induced Successions

Despite the acknowledged disruptive nature of CEO succession events, a notable number of studies report improvements in firms' post-turnover performance. For instance, Virany et al. (1992) document a positive change in ROA for a sample of technology companies, while Denis and Denis (1995) find evidence on improved operating performance following forced executive resignations for a much larger and more diverse sample of U.S. publicly traded firms. In turn, Bai and Mkrtchyan (2023) show that outside CEO successors, on average, achieved larger productivity gains than internally promoted executives in U.S. manufacturing firms during the 2000–2015 period.

Notably, Bai and Mkrtchyan (2023) find that productivity improvements under outside CEOs are largely attained by eliminating pre-turnover inefficiencies, while Denis and Denis (1995) attribute positive operating results to firms' downsizing operations relative to industry peers. Both studies note a negative change in post-turnover total assets, capital expenditures, and employee count, accompanied by growing sales. At the same time, Ferris et al. (2015) document that internally promoted CEOs tend to spend more on capital expenditures than their externally appointed counterparts, while cutting R&D spending. In turn, Barron et al. (2011) clarify that reporting of discontinued operations in the post-turnover period is contingent on departures of other top executives alongside the old CEO.

These findings suggest that post-succession performance gains may arise from more efficient resource allocation when new CEOs, supported by their refreshed executive teams, reevaluate and restructure existing operations, letting go of unproductive units and projects. These

are exactly the type of changes where outsiders, with their lack of vested interest and entrenched social relationships, have an advantage over long-tenured TMT members.

In a broader sense, Hambrick and Mason (1984) theorized that homogeneous executive teams achieve better results in routine problem-solving, while more diverse teams are better equipped to handle novel and vaguely defined issues, where the exchange of opinions and executives' diverse backgrounds and experiences help formulate and assess alternative solutions. Georgakakis et al. (2021) further note that although TMT homogeneity tends to facilitate informal communication, newcomers with backgrounds and experiences different from those of incumbent top managers help reduce inertia and adapt to a changing environment.

Threshold models of collective behavior (Granovetter, 1978) also suggest that a larger share of newcomers may be more effective at overcoming incumbent inertia and executing change. Moreover, Virany et al. (1992) state that long-tenured team members, with their stronger attachment to the existing order, may sabotage the new CEO's attempts to implement new policies, while Karaevli (2007) also points out that executives appointed before the succession may naturally feel greater loyalty to the departing CEO.

Taken together, these arguments suggest that post-succession TMT turnover, leading to a greater team heterogeneity and potentially more outside hires, with new experiences and viewpoints, may lead to more positive outcomes in performance-induced successions, where change is needed, rather than in the planned successions targeting continuity⁵.

Hypothesis 2 (Fresh Perspective): *For performance-induced CEO successions, a higher TMT turnover and a larger share of outside TMT hires are associated with post-succession performance gains.*

⁵ Considering the degree of disruption, associated with the executive team changes, a non-linear relationship is also possible. Zhang and Rajagopalan (2010) document an inverted U-shaped relationship between the extent of strategic change and firm performance. Changes in the TMT composition, which are often linked to the ability and willingness to initiate strategic changes, may follow the same pattern, where moderate levels of turnover are more likely to lead to performance gains than both stagnation and drastic restructuring.

2.12 CEO Power

The analysis of post-turnover outcomes also requires considering the power of both outgoing and incoming CEOs. For instance, if the outgoing CEO retains decision-making authority, staying in the firm as a chairman or director, the successor has limited ability to make changes to both the executive team and existing business practices (Boumosleh and Cline, 2023). Conversely, Shen and Cannella (2002) argue that inside succession after a CEO's dismissal indicates that the incoming CEO prevailed in a power contest and secured the board's support.

Adams et al. (2005) further view founder status and title concentration as signs of CEO power, along with cases where the CEO is the sole insider on the board, while Boumosleh and Cline (2022) also consider CEO compensation relative to industry benchmarks. The latter study also documents that more powerful internally promoted CEOs tend to act more like their externally hired peers, with the added bonus of having more intimate organizational knowledge. In turn, Adams et al. (2005) argue that greater CEO power is associated with increased variability in firm performance.

Holding more power may also help a CEO retain the position during periods of the firm's underperformance. Boeker (1992) shows that powerful CEOs may redirect blame to other TMT members, who would be dismissed in the act of scapegoating. Denis and Denis (1995) and Parrino (1997) also provide evidence that boards of poorly performing firms may take years to decide on CEO dismissal, while Shen and Cannella (2002) add that, given the disruptive nature of succession events, boards are generally cautious about such decisions.

Denis and Denis (1995) use a sample of poorly performing firms to demonstrate that performance gains following executive turnover are not merely the result of reversion to the mean. Using similar logic, a comparison of the performance outcomes of poorly performing firms that replace or retain their CEOs while replacing other TMT members may render interesting results, as the changes in the no-turnover cases may reflect scapegoating.

Hypothesis 3: *Among underperforming firms with similar characteristics, firms that experience CEO succession and subsequent TMT turnover exhibit greater performance improvements than those in which TMT turnover occurs without CEO succession.*

3. Data and Methodology

3.1 TMT Operational Definition

The original UET framework does not provide an explicit TMT definition, and Hambrick & Mason (1984) refer to a top management team as “the dominant coalition of the organization,” consisting of “top managers” or “executives.” At the same time, when discussing practical aspects of the future research agenda, Hambrick & Mason (1984) point to annual directories of biographical data, such as Dun & Bradstreet, as well as corporate filings, particularly 10-Ks and proxy statements, as suitable data sources.

The operational definitions of TMT vary quite substantially across subsequent studies, potentially contributing to the inconsistency in the main findings (Certo et al. 2006; Cuypers et al., 2022). For instance, Wiersema and Bantel (1992), in accordance with Hambrick & Mason (1984) recommendations, use the Dun & Bradstreet Reference Book of Corporate Managements to identify the two highest levels of management, while Shen & Cannella (2002) refer to firms’ 10-K reports as their primary data source for TMT turnover. Bills et al. (2024) define the TMT as top executives “that report directly to the CEO or one level below, excluding the CFO” in the Official Board dataset.

At the same time, Denis and Denis (1995) limit their sample to firms’ CEOs, board chairs, and presidents, while Boumosleh & Cline (2022) retain only the four highest-paid executives at each firm, based on the ExecuComp data. Notably, some of these studies count the CEO and the board chair as TMT members, while others consider them separately.

Some researchers also refer to particular titles, for example, including or excluding the VP-level officers (Certo et al., 2006). However, even a brief glance at the range of executive titles in the corporate filings suggests that listed roles may vary considerably across different firms, and attempts to include or exclude specific titles may distort the actual TMT composition, reducing cross-firm comparability.

Among the readily available alternatives, defining the TMT as the top managers listed in the corporate 10-Ks and proxy statements appears to be one of the most straightforward approaches, as at least one of these filings usually contains a section dedicated exclusively to the firm’s executive officers. However, even with the ability to locate the needed sections and extract

executives' data using LLMs, the procedure requires significant time and resources, potentially introducing hard-to-detect errors during processing and merging.

From that perspective, reliance on structured databases, such as ExecuComp and BoardEx, offers a more practical solution, but not without important caveats, given that these sources were not designed to capture firms' TMTs directly. For example, according to the WRDS overview of Compustat's ExecuComp⁶, its coverage is generally limited to the S&P 1500 companies, and it aims to provide data on executive compensation collected from companies' proxy statements⁷. As such, ExecuComp contains data on up to nine executive offices for a given year.

By contrast, a similar WRDS overview of BoardEx⁸ indicates that this source is not limited to the largest publicly traded firms and contains more comprehensive data on corporate directors and senior managers, gathered from company reports, websites, and news releases. However, a more extensive coverage leads back to the problem of a reliable TMT definition, which imposes the need for exclusion rules. For some firm-years, BoardEx provides data on dozens and even hundreds of senior managers, whose titles cannot be classified with certainty as belonging or not to the TMT. Reliance on the C-suite alone reduces the coverage to a CEO or President in some companies, while still leaving over a hundred officers in others⁹. Although BoardEx also has a dedicated *leadershipteam* indicator, for some firms, it appears to omit many officers mentioned in corporate 10-Ks and covered by ExecuComp in the same year. Based on this indicator, the average TMT size ranges from 0 to 92, with a mean of 2.69 team members per firm-year and a median of zero.

Given the trade-offs across available data sources, I rely on both the extractions from corporate 10-Ks and proxy statements and the records available in the ExecuComp and BoardEx

⁶ <https://wrds-www.wharton.upenn.edu/pages/support/manuals-and-overviews/compustat/execucomp/overview-executive-compensation/>

⁷ Compensation data is most often presented in a different section of the proxy statement than the one dedicated to management biographies.

⁸ <https://wrds-www.wharton.upenn.edu/pages/support/manuals-and-overviews/boardex/wrds-overview-boardex-data/>

⁹ The range becomes even greater with inclusion of VP titles.

databases. As a secondary goal, I aim to assess whether it is possible to substitute corporate disclosure processing with the more readily available data from structured databases.

I face an additional limitation in terms of data availability on the stated reasons for CEO departures. For this information, I rely on the open-source dataset described in Gentry et al. (2021)¹⁰. While the original dataset covered the 2000-2018 period, the extended version now spans 1992-2024. The coverage of the dataset matches that of ExecuComp, which determined both the sample period and the universe of firms.

3.2 TMT Data Sources

My starting point is all records included in the ExecuComp database for the 1992–2024 period, which covers 4,169 unique firms and 60,408 unique executives (370,191 executive-years in total). I merge these data with the Gentry et al. (2021) dataset, which covers 7,266 CEO departures in non-financial and non-utilities U.S. firms between 1992 and 2024¹¹.

I identify CEOs and CEO turnovers, following an ExecuComp manual and methods described in prior literature (e.g., Jenter and Kanaan, 2015) and supplementing that with the years and codes from the Gentry et al. (2021). This process results in identifying 10,005 unique CEOs and 65,781 CEO-years.

I also gather senior manager data from several BoardEx tables, including the Composition of Officers and Senior Managers (supplemented by the Individual Profile Employment). After excluding records related to independent directors, the dataset, compatible with the ExecuComp sample in terms of years and firm coverage, contains over 2.77 million annual records on 287,092 unique officers. However, I do not merge the ExecuComp and BoardEx data directly for the

¹⁰ I also attempted to supplement the data on CEO departures with the reasons listed in the Audit Analytics Director and Officer Changes database, but they add very little additional information.

¹¹ Later, I also exclude departures with the codes 1-2 (deaths and health-related issues) as well as many of those related to M&As, corporate takeovers, and company exits (coded 7). In addition, code 9 denotes ExecuComp errors.

reasons described earlier: adding all officers from BoardEx would inflate the TMT count for some companies, reducing comparability¹².

3.2.1 10-K and Proxy Statements Data

I also download 10-K filings and proxy statements (DEF 14A filings) from the SEC EDGAR database for all ExecuComp firms with non-missing CIK codes¹³, excluding financial firms and utilities. The sample begins in 1995, which is the earliest year with available data, although coverage becomes more consistent starting in 1997. I then clean the raw files following the parsing approach described by Professor Bill McDonald at the University of Notre Dame.¹⁴

In the preprocessed TXT files, I locate and extract the signature sections (to quickly identify CEO names and titles) and the main sections on executive officers, which usually contain names, titles, ages, and brief biographies of TMT members. I use a rule-based extraction pipeline that combines regular expression pattern matching and spaCy-based named-entity recognition to identify and validate relevant sections. With that approach, I am able to locate over 90% of the signature sections and about 68% of the Executive Officer sections across 10-Ks and proxy statements.

I then employ the GPT-4o mini language model (OpenAI, 2024) to extract the required information from the located sections¹⁵. This data extraction process produces a sample that covers 2,659 unique firms from the ExecuComp sample and 54,489 unique executive names (255,358 executive-year observations)¹⁶.

¹² As a partial remedy for the latter issue, I later incorporate BoardEx data on executive compensation, which has limited coverage of actual remuneration but can be useful for identifying more likely TMT members, as the maximum number of officers listed per company per year is 15 (for the sample compatible with the ExecuComp data).

¹³ 81 firms in my sample do not have the CIK code.

¹⁴ <https://sraf.nd.edu/sec-edgar-data/cleaned-10x-files/10x-stage-one-parsing-documentation/>

¹⁵ I evaluated several OpenAI and Ollama models, and GPT-4o mini delivered the optimal combination of extraction quality and cost-effectiveness. Cross-model agreement was approximately 90%, suggesting that the results are not sensitive to the choice of model.

¹⁶ Details on the prompts and extraction procedure are provided in the Internet Appendix.

I use the CEO data from 10-K signatures mainly to cross-validate names and turnover years with my ExecuComp sample. I then merge thoroughly cleaned names of executive officers extracted from the 10-K and proxy statements with all available ExecuComp and BoardEx records for the same firms and years, aiming to obtain respective identifiers (*execid* and *directorid*). I am able to match 154,060 records with ExecuComp data and obtain BoardEx's *directorid* identifier for 76% of the remaining executives. The Appendix contains a description of the matching process. I drop 3,353 unidentified executive records that appear only once for a given company, since those are likely to contain misspelled names, which would lead to inflated turnover records.

A relatively high rate of matches between the extracted names and database records is somewhat reassuring (I match on company, year, cleaned executive names, and age to minimize the probability of false matches). However, the only usable portion of the matched sample for my purposes consists of records with data for consecutive years needed to reliably estimate TMT changes. This requirement reduces my extraction sample to 2,233 unique non-financial and non-utilities firms and 136,803 unique non-CEO records, surrounding 2,873 CEO turnovers. Requiring a minimum CEO tenure of three years in the baseline test further reduces the coverage to 2,854 turnover events.

3.3 TMT Turnover Measures and Other TMT Characteristics

I determine a TMT departure in year t if an executive's identifier was listed in year $t-1$ but not in year t . Likewise, a TMT addition (newcomer) is recorded if the identifier appears in year t , but not in year $t-1$. For each year, I calculate the total number of TMT departures¹⁷ and additions, excluding the first and the last years of the company's overall coverage in the sample.

Further, a newcomer can be a promoted insider or an external hire. Since this distinction is of particular interest in this study, I carefully analyze the origins of all executives. As ExecuComp's coverage of starting dates in a company is limited, particularly for non-CEOs, I supplement the missing dates with those from BoardEx and with extractions from corporate disclosures (if the brief executive bios are provided), assigning the earliest determined date. I also trace executives'

¹⁷ Since age is known for 89.8% of executives in the sample, I also calculate the number of departures of executives younger than 67 as non-retirement age departures.

movements between companies, which adds confidence in assigning an outsider status when the starting year in the focal company is determined from the pool of sources rather than stated explicitly in ExecuComp.

Overall, an executive is considered an outsider if the first appearance in the TMT matches the year the manager starts working for the focal company. In all subsequent years, the executive is counted as a TMT insider. Similarly, in CEO turnover years, incoming CEOs with less than one year of tenure in their companies are classified as outsiders, while CEOs with longer tenure are considered promoted insiders¹⁸. While the CEO's outsider status is retained as a separate variable, the number of non-CEO outsiders entering the TMT is aggregated at an annual level.

In addition to counts of TMT departures and additions, the set of annual TMT characteristics includes the team size, mean and median TMT tenure, and counts of inside directors, industry insiders, prior places of employment, executives of retirement age (above 66 years old), and female members. To ensure comparability across firms, all these characteristics are also calculated as ratios relative to the TMT size.

Following Shen and Cannella (2002) and Georgakakis and Ruigrok (2017), I also add cumulative measures of departures and additions over a 2-year window and calculate the overall TMT turnover ratio (the average of the arrival and departure ratios), which summarizes how much the team composition changed, regardless of whether the change came more from exits or entries. Table A1 in the Appendix contains more detailed variable descriptions.

3.4 CEO Turnover Classification

Jenter & Lewellen (2021) estimate that up to 55% of all CEO turnovers are likely to be performance-induced. At the same time, only one-fifth of all departures are coded as “The CEO stepped down for reasons related to job performance” in the Gentry et al. (2021) dataset. Although after excluding departures where a company ceases to exist and those with missing TMT data, the

¹⁸ I am able to classify most executive records with confidence, except for cases where a company coverage just starts in ExecuComp (255 records, mainly in 1992), and the employment dates in BoardEx are the same or even later. If no starting date is available and the company coverage starts before 1998, the CEO is conservatively considered an insider. The remaining 35 cases are classified as external hires.

share increases to 26% in my sample, it is still less than half of departures coded as voluntary retirements “based on how the turnover was reported in the media” (57%).

Given that Jenter & Lewellen (2021) find that many turnovers typically classified as voluntary based on stated reasons are also likely to be performance-induced, I investigate this possibility for my sample. I reconstruct the performance measures used in Jenter & Lewellen’s study (average industry-adjusted monthly stock returns scaled by their standard deviation and industry-adjusted ROA) and add their respective industry benchmarks¹⁹, accounting for Eisfeldt and Kuhnen (2013) finding that the overall industry performance also matters for dismissal decisions.

I first compare the ages of CEOs and their firms’ accounting and market performance during the three years preceding the departure for those classified as retirements (coded 5 in the Gentry et al., 2021, dataset) and those due to performance-related reasons (coded 3). Panel A of Table A3 in the Appendix presents the results. The average age of CEOs dismissed for poor performance is 55 years old, which is significantly younger than the average age of their retired counterparts (61 years old). As for performance, the averages for the retired group are significantly higher for all measures considered, including industry benchmarks. However, when I create performance quartiles based on the scaled returns and ROA, both types of departures are present in each quartile.

Next, I construct a subsample consisting of the explicitly coded performance-related dismissals that rank below the top quartile on both two-year average industry-adjusted returns and industry-adjusted ROA (*performance_induced* = 1), and departures coded as retirements, exhibiting above-average performance on the same metrics (i.e., unlikely candidates for quiet performance-induced departures; *performance_induced* = 0). I then estimate a logit model on this subsample, regressing the *performance_induced* indicator on departing CEO age and lagged performance measures capturing the two years prior to departure (industry-adjusted average stock returns, by their standard deviation, average industry-adjusted ROA, and their respective industry benchmarks).

¹⁹ Following Jenter & Lewellen (2021), I use Fama-French 49 industries.

Panel B of Table A3 in the Appendix presents the results, indicating negative, statistically significant coefficients on all regressors except the average industry ROA. Lower values of all considered performance measures, as well as younger CEO age, are associated with a higher estimated probability of performance-induced departure. I use the fitted probability to classify the remaining ambiguous cases, assigning the “likely performance-induced” status to observations with a predicted probability exceeding 0.5. I exclude from classification emergency cases, such as deaths and health-related issues (codes 1 and 2 in Gentry et al., 2021).

I also replicate the classification using XGBoost, a gradient-boosted tree algorithm that accommodates non-linear interactions among performance measures. The two methods agree on 91.5% of classified observations, and I use the consensus score for the final classification of turnovers into likely performance-induced departures and those in which performance did not appear to be a dominant factor.

Given the initial coding used for the logit regression and XGBoost, this classification approach is conservative, and I mainly capture cases with even weaker performance than those with publicly acknowledged performance-related reasons. The mean comparison across performance metrics over three years preceding CEO successions (Table A3, Panel C) suggests that firms where CEOs were dismissed with explicit references to poor performance, on average, perform on par and even better than those classified as likely performance-induced. At the same time, in the remaining cases (i.e., classified as routine successions), firms’ pre-succession industry-adjusted performance (both market and accounting-based) is significantly higher.

3.5 TMT Changes During CEO Transition

Before turning to the main analysis, it is useful to assess the scope of and patterns in TMT changes at the time of CEO successions. Although the general expectation of increased TMT turnover appears well established in the literature (e.g., Shen & Cannella, 2002; Boumosleh & Cline, 2023), patterns related to performance-induced departures, whether public or quiet, remain unclear.

At this stage, I consider the full dataset regardless of CEO turnover timing. I also compare results across the augmented ExecuComp and disclosure-based samples to assess whether one can substitute for the other in subsequent tests. The samples’ descriptive statistics are reported in Table

IA1 in the Internet Appendix (Panels A and B, respectively). In turn, Table IA2 presents probit regression results for the likelihood of CEO turnover (Columns 1 and 4) and outside CEO succession (Columns 2-3 and 5-6, respectively²⁰). As expected, the likelihood of CEO turnover increases significantly with CEO age and declining firm performance (both market- and accounting-based). At the same time, turnover is less likely for longer-tenured and more powerful CEOs, consistent with prior findings (e.g., Boumosleh & Cline, 2023). The probability of turnover is also lower in more complex firms and in firms with smaller boards of directors.

Columns (2)–(3) and (5)–(6) show that the likelihood of outside CEO succession is significantly higher for performance-induced turnovers and for firms with more independent boards and greater institutional ownership. Conversely, larger, older, and more complex firms are more likely to promote successors from within. These observations are also consistent with the findings reported in prior studies (e.g., Georgakakis et al., 2021; Bai & Mkrtchyan, 2023).

Shifting focus to TMTs, Table A4 in the Appendix reports OLS estimates from regressions of 2-year TMT turnover measures on CEO-, board-, and firm-level characteristics for the full panel, with firm- and year-fixed effects. The four columns show the results for overall non-CEO executive turnover, departures of non-retirement-age team members, TMT additions, and outside hires. Importantly, all four are positively associated with the CEO turnover. At the same time, TMT turnover tends to decrease with CEO tenure and power. Also, fewer departures and more internal promotions occur in more complex firms, while larger and more independent boards are associated with more frequent TMT reshufflings. Likewise, underperformance, especially poor market results, is associated with more executive replacements, including outside hires.

Table A5 reports the results of univariate tests (Panel A) and cross-sectional regressions (Panels B and C) focused specifically on CEO turnover events. In a univariate setting, the share of external hires, both CEO and subordinate positions, is significantly higher for performance-induced successions. Moreover, outsiders are more likely to join the TMT when the reasons for the CEO's departure are stated explicitly and when the successor is an outsider. Overall, greater TMT changes, in terms of both departures and additions, are associated with performance-induced CEO turnovers, particularly those with unambiguous public announcements.

²⁰ The estimation results in Columns 3 and 6 include the inverse Mills ratio (IMR) correction for selection into CEO turnover.

The OLS regression estimates reported in Panel B indicate that a larger share of external TMT hires is associated with outside CEO successions, greater power of an incoming CEO, and greater board independence. At the same time, outsiders are less likely to join TMTs in larger firms and during follower successions. In turn, poor performance appears to be associated with both greater changes in the TMT compositions and more outside hires.

Panel C zooms in on performance-induced turnovers, and the OLS estimates confirm the observations from the univariate analysis that explicit public references to performance in relation to CEO departures are associated with more significant changes in TMT composition, including more outside hires. Likewise, more outsiders tend to join TMTs when the incoming CEO is also an external hire, even though this type of succession does not necessarily mean more executive departures.

Taken together, the results of this preliminary analysis²¹ suggest that, while CEO successions generally appear to lead to TMT restructuring, more significant changes tend to coincide with turnovers associated with underperformance. The extent of changes also depends on how the departure is publicly disclosed, the type of incoming CEO, board composition, and other factors. These differences likely contribute to diverging post-succession performance trajectories, which I examine in subsequent sections.

3.6 Empirical Design

Prior studies commonly consider performance during the first three years following a CEO succession (e.g., Shen & Cannella, 2002; Karaevli, 2007) and focus on changes in performance relative to the years before the turnover event rather than on levels (e.g., Denis & Denis, 1995; Hoitash & Mkrtchyan, 2018; Bai and Mkrtchyan, 2023).

For baseline tests, I use fairly standard accounting- and market-based metrics to assess post-turnover performance. Following prior literature (e.g., Hoitash & Mkrtchyan, 2018; Ferris et al., 2015), I rely on industry-adjusted ROA to capture operating performance and on Tobin's Q as a market-based valuation proxy. I also use average industry-adjusted monthly stock returns scaled

²¹ Tables IA3 and IA4 in the Internet Appendix replicate the results based on the corporate disclosures sample. Importantly, all reported relationships hold, with only minimal corrections.

by their standard deviation, following the construction in Jenter and Lewellen (2021)²². The details on each measure construction are provided in the Appendix.

Following an empirical approach adopted in Bai and Mkrtchyan (2023), I use a seven-year panel constructed around the year of the CEO turnover, i.e., including the turnover year, three years of pre-turnover history ($t-3$, $t-2$, $t-1$), and three post-turnover years ($t+1$, $t+2$, $t+3$). Firms are not required to have data for all seven years to be included in the sample, but I exclude 289 interim successions²³ and 919 turnover events where the incoming CEOs served fewer than three years, since these have insufficient data to judge about post-succession outcomes.

To compare pre- and post-succession performance for firms with high versus low TMT turnover, I estimate the following panel regression:

$$y_{i,t} = \beta_1 Post_t + \beta_2 HighTMT_i + \beta_3 HighTMT_i \times Post_t + Z_{i,t}\delta + X_{i,t-1}\theta + \eta_i + \gamma_t + \varepsilon_{i,t}, \quad (1)$$

where $y_{i,t}$ is one of three measures of firm performance (ROA, Tobin's Q, or scaled returns). $Post_t$ is an indicator equal to one for the post-succession period (i.e., years t , $t+1$, $t+2$, and $t+3$) and zero otherwise. In turn, $HighTMT_i$ stands for one of the three high-TMT-turnover indicators constructed based on the overall TMT turnover, outsider, and departure ratios. I partition turnover events based on the industry-year medians for each of these ratios²⁴. In this setup, the coefficient of interest is β_3 , which captures the differential change in performance from the pre- to post-succession period for firms with high and low TMT turnover and outsider hiring. For instance, a positive β_3 on the overall TMT turnover indicator would suggest that greater TMT change is associated with greater post-succession performance gains.

The vector $Z_{i,t}$ contains event characteristics that also vary through their interaction with $Post_t$: a performance-induced indicator and its interaction with $Post$, capturing the differences associated with the two types of CEO successions (Jenter & Lewellen, 2021); an outsider-CEO

²² For robustness, I also use cumulative market-adjusted returns and excess stock returns adjusted for firm size and market-to-book (e.g., Aktas et al., 2015). The results are also robust for using Peters and Taylor (2017) Total Q measure.

²³ I determine interim successions by the indicator in Gentry et al. (2021) database and by the CEO title. The majority of these successions last fewer than two years.

²⁴ I use an overall industry median for 289 cases with fewer than 4 industry-year turnovers. Also, the results are robust to splits made by year or industry medians instead of industry-year.

indicator and its interaction with Post, which controls for the successor origin; and the interaction of board independence with Post, which captures differential monitoring intensity around the succession (Bai and Mkrtchyan, 2023).

Finally, the vector $X_{i,t-1}$ contains lagged firm-level controls. Following prior literature (e.g., Adams et al., 2005; Ferris et al., 2015; Hoitash & Mkrtchyan, 2018), I control for the firm age and size (measured by the natural logarithm of total assets), book leverage, capital expenditures, and the number of business segments (log transformed), as well as governance characteristics, measured by board size, board independence, and institutional ownership. The Tobin's Q specifications also include lagged ROA to control for cross-sectional variation in firm fundamentals.

η_i stands for firm fixed effects, which absorb time-invariant firm-specific factors, and γ_t are year fixed effects, which absorb macroeconomic and market-wide shocks. Standard errors are clustered at the firm level, and all continuous variables are winsorized at the 1st and 99th percentiles to mitigate the influence of outliers.

3.7 Summary Statistics

Table 1 reports descriptive statistics for the main variables in the sample constructed around 3,097 CEO successions that took place in 1,617 unique firms between 1993 and 2024. All continuous variables are winsorized at the 1st and 99th percentiles.

The average firm in the sample is around 29 years old, and its total assets exceed \$7.5 billion. At the same time, the distribution is skewed, as indicated by a much lower median of \$1.89 billion and the maximum of \$108.8 billion, well-justifying the log-transformation of the size measure. Firms' leverage and capital expenditures average 24.5% and 4.9% of book assets, respectively, and firms operate in 6 reported business segments on average (median 3), consistent with samples of large, multidivisional U.S. corporations described in earlier studies (e.g., Ferris et al., 2015; Boumosleh & Cline, 2023). These firms are governed, on average, by 10 directors, most of whom (83.5%) are independent, while their institutional ownership averages 72.9%.

The average industry-adjusted ROA across the sample is 7% (median 4.6%), indicating outperformance of the industry benchmarks. At the same time, more than a quarter of observations

indicate poor performance. The mean of Tobin's Q is 2.14, in line with previously reported metrics for large U.S. firms (e.g., Adams et al., 2018; Bai and Mkrtchyan, 2023), while the volatility-scaled returns average near zero.

Among the TMT turnover measures, the two-year overall turnover ratio averages 0.337, indicating that roughly one-third of the executive team is being replaced around the time of an average CEO succession. TMT departures occur at a roughly the same rate (mean 0.342), while outsider hires, on average, are less common than inside promotions (0.169). Similarly, outside CEO successions occur in only 16% of all turnover events, which is consistent with the findings reported for the publicly traded U.S. firms (e.g., Ferris et al., 2015; Cziraki & Jenter, 2022).

Almost a fifth of all CEO successions are officially attributed to performance-related issues, while nearly half (48.8%) is classified as performance-induced based on the actual pre-succession performance, which is consistent with Jenter and Lewellen (2021) estimations.

Overall, the sample appears to consist of large, well-established firms experiencing meaningful TMT turnover around CEO successions, which provides sufficient cross-sectional variation for the high-low *HighTMT* splits and in succession circumstances (performance-induced vs. routine, outsider CEO vs. insider CEO, and public vs. quiet) to identify the parameters of equation (1).

[Insert Table 1 Here]

Figure 1 plots the distribution of CEO turnover events by calendar year, with the share of performance-induced successions shown in dark. This share fluctuates around 50%, with no apparent trend over the sample period.

[Insert Figure 1 Here]

Figure 2 displays the pairwise Pearson correlation matrix among the main variables. The three performance measures are positively correlated, but the degree of relation suggests that they capture distinct aspects of firm performance. At the same time, these measures are negatively correlated with all metrics of executive turnover, both CEO and TMT. For instance, the indicator of performance-induced CEO succession negatively correlates with ROA and Tobin's Q (-0.33 and -0.22, respectively).

The pairwise correlations among some of the TMT turnover metrics are expectedly high due to their construction. For example, the departure and outsider ratios, as components of the overall turnover ratio, are correlated with it at 0.87 and 0.62. At the same time, the correlation between TMT departures and outside hires is 0.40, indicating that these measures capture distinct aspects of TMT turnover. All turnover metrics also display positive correlation with the indicators of performance-induced and outsider CEO successions, supporting earlier findings about increased TMT turnover during such events.

Among the control variables, the strongest correlations are between the firm size (measured by log assets) and its age (0.42) and board size (0.60). Overall, all pairwise correlations are well below conventional multicollinearity thresholds.

[Insert Figure 2 Here]

4. Empirical Results

4.1 Baseline Results

Before moving to the empirical results for the baseline model described by equation (1), Table 2 and Figure 3 display the results of the mean comparisons across firms grouped depending on the CEO succession type and the intensity of TMT turnover.

Table 2 reports mean comparisons of the three performance measures in the post-succession period, separately for routine and performance-induced successions. Panel A shows the split by the overall TMT turnover, while Panels B and C report the results for high versus low outside hires and TMT departures, respectively. Among the routine turnover events, the average post-turnover performance is significantly lower for firms with a higher TMT turnover, particularly when measured by ROA and Tobin's Q. The results for performance-induced successions generally follow the same pattern for ROA and market performance but reverse for Tobin's Q, most notable in the case of external TMT hires.

[Insert Table 2 Here]

Figure 3 plots the mean performance, measured by industry-adjusted ROA, Tobin's Q, and scaled average returns, in the pre-and post-succession periods. Solid lines depict the averages for the firms with low TMT turnover, while dashed lines indicate above-median levels of TMT

changes. In addition, square red and orange markers are used for performance-induced CEO successions, and circle navy and blue markers indicate routine successions. Similar to Table 2, Panel A displays the differences for the overall TMT turnover, while Panels B and C show the results for outside hires and departures, respectively.

Across all three panels, average ROA and Tobin's Q differ noticeably for routine and performance-induced successions, regardless of the period and TMT turnover, indicating only mild recovery for the latter group. The average ROA also differs consistently between firms with high and low TMT turnover, particularly for routine turnovers. For instance, while ROA averages for TMTs with high and low outside hires are close in the pre-succession years, they diverge perceptibly in the post-CEO-turnover period, with low-outsider firms outperforming the ones with above-median levels of external TMT additions. The averages for Tobin's Q follow a similar trend in the case of routine successions but reverse for performance-induced turnovers. At the same time, the average market performance (measured by the volatility-scaled returns) recovers in the post-succession period if a CEO turnover occurs due to poor performance.

Overall, the pre-turnover trends appear to hold more closely for the split on low and high outside TMT hires and exhibit more divergence in the case of executive departures, which are more uniformly expected at the time surrounding CEO turnover events.

[Insert Figure 3 Here]

Although generally informative, the univariate mean comparisons do not account for differences in firm and industry characteristics, external environment, and other conditions surrounding CEO successions and related TMT changes. They also cannot quantify the differential post-period change between high- and low-TMT-turnover firms, holding pre-period levels constant. These limitations are addressed in the regression analysis.

Table 3 reports the estimates of equation (1) across the three performance measures and three dimensions of TMT turnover. As noted earlier, the model, adapted from Bai and Mkrtchyan (2023) design, helps identify within-firm changes from the pre- to the post-CEO-succession period. The baseline (omitted) case is the average pre-to-post change in the outcome for firms with low TMT changes, routine succession, and an insider CEO. The insignificant coefficient estimates on *Post* across all model specifications suggest that this group, on average, experiences very little change in post-succession performance.

By contrast, the estimation results for performance-induced turnovers indicate meaningful improvement. While the coefficient on $Perf_induced_i$ is consistently negative across the board, the one on $Post_t \times Perf_induced_i$ is positive for all three performance measures and statistically significant at the 1% level for ROA and returns, suggesting that such firms experience a significantly larger improvement in performance compared to baseline routine-succession firms. This result is consistent with the findings documented for forced CEO turnovers (e.g., Denis & Denis, 1995) but not formally stated for performance-induced classification defined in Jenter and Lewellen (2021).

Shifting focus to the main variables of interest, i.e., the interactions between the post-CEO-turnover indicator and each of the three *HighTMT* indicators, the results for the more extensive outside TMT hiring are the first to draw attention due to consistently negative and significant coefficient estimates for all three performance measures. This result indicates that firms with the above industry-year median level of outside TMT additions experience a lower performance growth (or post-succession performance recovery) than those with fewer outsiders joining the executive team. Moreover, in conjunction with an insignificantly different from zero coefficient on $Post_t$, it appears that high-outsider firms underperform relative to their pre-period baseline more than their low-outsider counterparts.

The results for more extensive executive departures and overall TMT turnover are less definitive. For one, the coefficient on $Post_t$ interacted with the indicator of the above industry-year median level of executive departures is positive and statistically significant for the scaled stock returns, suggesting that the market may interpret executive exits as a positive signal. At the same time, these departures do not appear to translate into measurable operating performance or valuation gains, as indicated by negative and statistically insignificant coefficient estimates for the two other performance measures. Likewise, relative to low-TMT-turnover firms, a more extensive overall executive turnover contributes negatively to changes in post-succession valuation but the differential changes for ROA and stock returns are insignificant.

Overall, the results are consistent with the disruption hypothesis, particularly in terms of post-succession changes in firm valuation and with regard to the outside TMT hiring.

[Insert Table 3 Here]

4.2 Performance-Induced Successions

The estimations, presented in Table 3, mix the outcomes for routine and performance-induced successions, showing the average negative association. At the same time, the differences in post-succession performance changes, captured by the positive coefficients on $Post_t \times Perf_induced_i$, as well as noticeable divergence in the average performance captured by Figure 3 warrant further investigation of whether the relationship between TMT changes and post-succession performance outcomes vary between performance-induced and routine CEO successions.

To this end, I estimate a modified version of equation (1) with performance-induced indicator interacted with continuous TMT turnover measures (outside hires and departures), where the main variable of interest is the triple interaction between performance-induced indicator (PI_i), a TMT turnover measure (TMT_ratio_i), and the indicator of the post-succession period ($Post_t$):

$$y_{i,t} = \beta_1 Post_t + \beta_2 PI_i + \beta_3 TMT_ratio_i + \beta_4 PI_i \times Post_t + \beta_5 TMT_ratio_i \times Post_t + \beta_6 PI_i \times TMT_ratio_i + \beta_7 PI_i \times TMT_ratio_i \times Post_t + X_{i,t-1}\theta + \eta_i + \gamma_t + \varepsilon_{i,t}, \quad (2)$$

With the exception of the interaction terms, the model specification includes the same variables as described in Section 3.6 (i.e., the same firm-level controls, firm and year fixed effects, and standard errors clustered at the firm level).

Table 4 reports the estimation results for equation (2). Consistent with the baseline findings, the evidence of greater post-turnover performance gains, particularly for ROA and stock returns, continues to hold for the performance-induced successions. Further, negative (and statistically significant in the case of Tobin's Q) coefficient estimates on the interaction between Post and outsider ratio indicate that, among routine successions, pre-to-post change in performance is lower for more extensive outside hiring. At the same time, the positive coefficient estimates on the triple interaction term suggest that the negative relationship, documented in Table 3, holds mainly for routine successions. Put differently, the disruption associated with outside hires appears less of a concern for performance-induced CEO turnovers.

Although the results vary in strength among the three performance measures, all three triple-interaction estimates are positive, suggesting that, for successions triggered by poor

performance, outside hires are associated with the same, if not greater, performance gains than TMT changes stemming mainly from internal promotions.

Turning to executive departures, the results indicate that the difference in pre-to-post performance changes is not significant between performance-induced and routine successions, but in the case of the latter, higher departure rates are associated with a greater ROA change post-succession.

Taken together, these results indicate that the negative association between post-succession performance changes and TMT turnover, particularly in terms of more extensive external hiring, holds more uniformly for routine CEO successions, where TMT turnover may signal unnecessary disruption. By contrast, in the cases when CEO succession occurs under performance pressure, the disruptive effect of outside TMT additions may be offset by the necessity of change, resulting in comparable or marginally higher performance gains.

[Insert Table 4 Here]

4.3 Channel Analysis

Prior studies document that outsider and insider CEO successors differ in their approach to capital expenditures, R&D, employment, and discontinued operations. Motivated by these findings, this section will examine post-succession changes in investment, leverage, cash holdings, and other corporate policies, with a focus on how accompanying TMT changes contribute to these shifts.

5. Robustness and Endogeneity

This section will address endogeneity concerns, which are plenty. As frequently noted in prior literature (e.g., Georgakakis & Ruigrok, 2017; Cuypers et al., 2022), TMT composition changes do not occur randomly. When triggered by CEO succession, TMT turnover depends on pre-succession performance, and the choice between outside TMT hires and inside promotions, as well as between outsider and insider CEO appointments, largely reflects the firm's need to recover performance or ensure continuity. Similarly, the extent of executive departures depends on the circumstances of CEO succession, as confirmed by the preliminary analysis.

Although the baseline model focuses on performance changes rather than levels, partially mitigating the concern that pre-succession performance jointly determines TMT changes and post-succession outcomes, it does not account for omitted variable bias, measurement error, or systematic differences among sample firms.

To address these concerns, I plan to employ propensity score matching, alternative model specifications, and instrumental variables. I will be grateful for any suggestions.

6. Conclusion

This study examines how changes in top management team composition at the time of CEO succession contribute to changes in subsequent firm performance. I use a variety of data sources, including structured databases and mandatory corporate disclosures, to gather information on executive teams and compare post-succession performance across firms with varying degrees of TMT change. I also account for the context of CEO succession, distinguishing between routine and performance-induced turnovers (as defined by Jenter & Lewellen, 2021) and the origin of the incoming CEO.

The results generally point to a detrimental effect of outside TMT additions at the time of CEO succession. For routine CEO turnovers, a greater share of external TMT hires is associated with lower performance gains. At the same time, outsiders' input appears to be more welcome when CEO successions are driven by performance-related issues. In such cases, TMTs with more external hires are, on average, associated with greater performance recovery than executive teams restructured mainly through internal promotions.

These findings suggest that accounting for TMT changes may help resolve the persistently inconclusive evidence on the performance consequences of CEO successions. More broadly, incorporating basic TMT characteristics alongside those of the CEO and board may provide additional insights into firm outcomes. In that respect, although corporate disclosures offer a more reliable source of TMT information, a combination of traditional databases such as ExecuComp and BoardEx can serve as a workable alternative. Moreover, a higher demand for TMT data should prompt more extensive and reliable coverage.

References

- Adams, R. B. (2017). Boards, and the directors who sit on them. In *The handbook of the economics of corporate governance* (Vol. 1, pp. 291-382). North-Holland.
- Adams, R. B., Almeida, H., & Ferreira, D. (2005). Powerful CEOs and Their Impact on Corporate Performance. *Review of Financial Studies*, 18(4), 1403–1432. <https://doi.org/10.1093/rfs/hhi030>
- Adams, R. B., Hermalin, B. E., & Weisbach, M. S. (2010). The Role of Boards of Directors in Corporate Governance: A Conceptual Framework and Survey. *Journal of Economic Literature*, 48(1), 58–107. <https://doi.org/10.1257/jel.48.1.58>
- Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance*, 30, 98-113.
- Bai, J., & Mkrtchyan, A. (2023). What do outside CEOs really do? Evidence from plant-level data. *Journal of Financial Economics*, 147(1), 27–48. <https://doi.org/10.1016/j.jfineco.2022.10.001>
- Barron, J. M., Chulkov, D. V., & Waddell, G. R. (2011). Top management team turnover, CEO succession type, and strategic change. *Journal of Business Research*, 64(8), 904–910. <https://doi.org/10.1016/j.jbusres.2010.09.004>
- Bennedsen, M., Pérez-González, F., & Wolfenzon, D. (2020). Do CEOs Matter? Evidence from Hospitalization Events. *The Journal of Finance*, 75(4), 1877–1911. <https://doi.org/10.1111/jofi.12897>
- Bertrand, M., & Schoar, A. (2003). Managing with style: The effect of managers on firm policies. *The Quarterly Journal of Economics*, 118(4), 1169-1208.
- Bills, K. L., Harding, M. K., Seidel, T. A., & Truelson, J. M. (2024). The Influence of Turnover among Other Top Executives on Financial Reporting Risk. *Auditing: A Journal of Practice & Theory*, 43(2), 43–72. <https://doi.org/10.2308/AJPT-2022-125>
- Boeker, W. (1992). Power and Managerial Dismissal: Scapegoating at the Top. *Administrative Science Quarterly*, 37(3), 400. <https://doi.org/10.2307/2393450>
- Boumosleh, A., & Cline, B. N. (2023). The influence of incoming CEOs. *European Financial Management*, 29(4), 1263–1303. <https://doi.org/10.1111/eufm.12393>
- Cai, J., Nguyen, T., & Walkling, R. (2022). Director Appointments: It Is Who You Know. *The Review of Financial Studies*, 35(4), 1933–1982. <https://doi.org/10.1093/rfs/hhab064>
- Cannella, A. A., & Lubatkin, M. (1993). Succession as a Sociopolitical Process: Internal Impediments to Outsider Selection. *Academy of Management Journal*, 36(4), 763-793.

- Carpenter, M. A. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. *Strategic Management Journal*, 23(3), 275–284. <https://doi.org/10.1002/smj.226>
- Carpenter, M. A., Geletkanycz, M. A., & Sanders, Wm. G. (2004). Upper Echelons Research Revisited: Antecedents, Elements, and Consequences of Top Management Team Composition. *Journal of Management*, 30(6), 749–778. <https://doi.org/10.1016/j.jm.2004.06.001>
- Certo, S. T., Lester, R. H., Dalton, C. M., & Dalton, D. R. (2006). Top Management Teams, Strategy and Financial Performance: A Meta-Analytic Examination. *Journal of Management Studies*, 43(4), 813–839. <https://doi.org/10.1111/j.1467-6486.2006.00612.x>
- Chan, W. (1996). External recruitment versus internal promotion. *Journal of Labor Economics*, 14(4), 555–570.
- Custódio, C., Ferreira, M. A., & Matos, P. (2013). Generalists versus specialists: Lifetime work experience and chief executive officer pay. *Journal of Financial Economics*, 108(2), 471–492. <https://doi.org/10.1016/j.jfineco.2013.01.001>
- Cuypers, I. R. P., Patel, C., Ertug, G., Li, J., & Cuypers, Y. (2022). Top management teams in international business research: A review and suggestions for future research. *Journal of International Business Studies*, 53(3), 481–515. <https://doi.org/10.1057/s41267-021-00456-9>
- Cziraki, P., & Jenter, D. (2022). The market for CEOs. *European Corporate Governance Institute–Finance Working Paper*, (831).
- Denis, D. J., & Denis, D. K. (1995). Performance changes following top management dismissals. *The Journal of Finance*, 50(4), 1029–1057.
- DeOrtentiis, P. S., Van Iddekinge, C. H., Ployhart, R. E., & Heetderks, T. D. (2018). Build or buy? The individual and unit-level performance of internally versus externally selected managers over time. *Journal of Applied Psychology*, 103(8), 916–928. <https://doi.org/10.1037/apl0000312>
- Edmans, A., & Gabaix, X. (2016). Executive Compensation: A Modern Primer. *Journal of Economic Literature*, 54(4), 1232–1287. <https://doi.org/10.1257/jel.20161153>
- Eisfeldt, A. L., & Kuhnen, C. M. (2013). CEO turnover in a competitive assignment framework. *Journal of Financial Economics*, 109(2), 351–372. <https://doi.org/10.1016/j.jfineco.2013.02.020>
- Fee, C. E., & Hadlock, C. J. (2004). Management turnover across the corporate hierarchy. *Journal of Accounting and Economics*, 37(1), 3–38. <https://doi.org/10.1016/j.jacceco.2003.11.003>

- Ferris, S. P., Jayaraman, N., & Lim, J. (2015). Six Decades of CEO Successions: The Importance of Being an Insider. *Journal of Accounting & Finance*, 15(4).
- Gao, H., Harford, J., & Li, K. (2017). CEO Turnover–Performance Sensitivity in Private Firms. *Journal of Financial and Quantitative Analysis*, 52(2), 583–611.
<https://doi.org/10.1017/S0022109017000126>
- Gentry, R. J., Harrison, J. S., Quigley, T. J., & Boivie, S. (2021). A database of CEO turnover and dismissal in S&P 1500 firms, 2000–2018. *Strategic Management Journal*, 42(5), 968–991.
<https://doi.org/10.1002/smj.3278>
- Georgakakis, D., Greve, P., & Ruigrok, W. (2017). Top management team faultlines and firm performance: Examining the CEO-TMT interface. *The Leadership Quarterly*, 28(6), 741–758. <https://doi.org/10.1016/j.leaqua.2017.03.004>
- Georgakakis, D., & Ruigrok, W. (2017). CEO Succession Origin and Firm Performance: A Multilevel Study. *Journal of Management Studies*, 54(1), 58–87.
<https://doi.org/10.1111/joms.12194>
- Georgakakis, D., Greve, P., & Ruigrok, W. (2021). Differences that matter: Hiring modes and demographic (dis)similarity in executive selection. *The International Journal of Human Resource Management*, 32(3), 650–679. <https://doi.org/10.1080/09585192.2018.1496126>
- Georgakakis, D., Heyden, M. L. M., Oehmichen, J. D. R., & Ekanayake, U. I. K. (2022). Four decades of CEO–TMT interface research: A review inspired by role theory. *The Leadership Quarterly*, 33(3), 101354. <https://doi.org/10.1016/j.leaqua.2019.101354>
- Granovetter, M. (1978). Threshold Models of Collective Behavior. *American Journal of Sociology*, 83(6), 1420–1443. <https://doi.org/10.1086/226707>
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206.
- Hambrick, D. C. (2007). Upper Echelons Theory: An Update. *Academy of Management Review*, 32(2), 334–343. <https://doi.org/10.5465/amr.2007.24345254>
- Hoitash, U., & Mkrtchyan, A. (2018). Recruiting the CEO from the Board: Determinants and Consequences. *Journal of Financial and Quantitative Analysis*, 53(3), 1261–1295.
<https://doi.org/10.1017/S002210901800011X>
- Impink, S. M., Prat, A., & Sadun, R. (2025). Communication Within Firms: Evidence from CEO Turnovers. *Management Science*, 71(1). <https://doi.org/10.1287/mnsc.2022.02719>
- Jenter, D., & Kanaan, F. (2015). CEO Turnover and Relative Performance Evaluation. *The Journal of Finance*, 70(5), 2155–2184. <https://doi.org/10.1111/jofi.12282>

- Jenter, D., & Lewellen, K. (2021). Performance-Induced CEO Turnover. *The Review of Financial Studies*, 34(2), 569–617. <https://doi.org/10.1093/rfs/hhaa069>
- Kale, J. R., Reis, E., & Venkateswaran, A. (2009). Rank-Order Tournaments and Incentive Alignment: The Effect on Firm Performance. *The Journal of Finance*, 64(3), 1479–1512. <https://doi.org/10.1111/j.1540-6261.2009.01470.x>
- Kaplan, S. N., Klebanov, M. M., & Sorensen, M. (2012). Which CEO characteristics and abilities matter? *The Journal of Finance*, 67(3), 973-1007.
- Karaevli, A. (2007). Performance consequences of new CEO ‘Outsiderness’: Moderating effects of pre- and post-succession contexts. *Strategic Management Journal*, 28(7), 681–706. <https://doi.org/10.1002/smj.589>
- Kim, Y., Jeong, S. S., Yiu, D. W., & Moon, J. (2021). Frequent CEO Turnover and Firm Performance: The Resilience Effect of Workforce Diversity. *Journal of Business Ethics*, 173(1), 185–203. <https://doi.org/10.1007/s10551-020-04534-0>
- Larcker, D. F., Tayan, B., & Watts, E. M. (2022). Firing and Hiring the CEO: What Does CEO Turnover Data Tell Us About Succession Planning? *Rock Center for Corporate Governance at Stanford University Working Paper Forthcoming, Stanford University Graduate School of Business Research Paper*.
- Ma, S., & Seidl, D. (2017). New CEOs and their collaborators: Divergence and convergence between the strategic leadership constellation and the top management team. *Strategic Management Journal*, 39(3), 606–638. <https://doi.org/10.1002/smj.2721>
- Mobbs, S. (2013). CEOs Under Fire: The Effects of Competition from Inside Directors on Forced CEO Turnover and CEO Compensation. *Journal of Financial and Quantitative Analysis*, 48(3), 669–698. <https://doi.org/10.1017/S0022109013000318>
- Mobbs, S., & Raheja, C. G. (2012). Internal managerial promotions: Insider incentives and CEO succession. *Journal of Corporate Finance*, 18(5), 1337–1353. <https://doi.org/10.1016/j.jcorpfin.2012.09.001>
- Naveen, L. (2006). Organizational Complexity and Succession Planning. *Journal of Financial and Quantitative Analysis*, 41(3), 661–683. <https://doi.org/10.1017/S002210900000257X>
- OpenAI. (2024). *GPT-4o mini: advancing cost-efficient intelligence*. OpenAI. <https://openai.com/index/gpt-4o-mini-advancing-cost-efficientintelligence/>
- Parrino, R. (1997). CEO turnover and outside succession: A cross-sectional analysis. *Journal of Financial Economics*, 46(2), 165–197. [https://doi.org/10.1016/S0304-405X\(97\)00028-7](https://doi.org/10.1016/S0304-405X(97)00028-7)
- Peters, R. H., & Taylor, L. A. (2017). Intangible capital and the investment-q relation. *Journal of Financial Economics*, 123(2), 251–272. <https://doi.org/10.1016/j.jfineco.2016.03.011>

- Rivolta, M. L. (2018). Worth the wait? Delay in CEO succession after unplanned CEO departures. *Journal of Corporate Finance*, 49, 225–251. <https://doi.org/10.1016/j.jcorpfin.2017.12.021>
- Schepker, D. J., Kim, Y., Patel, P. C., Thatcher, S. M. B., & Campion, M. C. (2017). CEO succession, strategic change, and post-succession performance: A meta-analysis. *The Leadership Quarterly*, 28(6), 701–720. <https://doi.org/10.1016/j.leaqua.2017.03.001>
- Shen, W., & Cannella Jr, A. A. (2002). Revisiting the performance consequences of CEO succession: The impacts of successor type, postsuccession senior executive turnover, and departing CEO tenure. *Academy of Management Journal*, 45(4), 717–733.
- Virany, B., Tushman, M. L., & Romanelli, E. (1992). Executive Succession and Organization Outcomes in Turbulent Environments: An Organization Learning Approach. *Organization Science*, 3(1), 72–91. <https://doi.org/10.1287/orsc.3.1.72>
- Weis, M. (2025). Changes in top management teams: A review and future research. *The Leadership Quarterly*, 36(6), 101923. <https://doi.org/10.1016/j.leaqua.2025.101923>
- Wiersema, M. F., & Bantel, K. A. (1992). Top management team demography and corporate strategic change. *Academy of Management Journal*, 35(1), 91–121.
- Wiersema, M. F., & Bantel, K. A. (1993). Top management team turnover as an adaptation mechanism: The role of the environment. *Strategic Management Journal*, 14(7), 485–504. <https://doi.org/10.1002/smj.4250140702>
- Zhang, Y., Ayoko, O. B., & Liang, Q. (2021). The joint influence of CEO succession types and CEO-TMT faultline on firm's strategic change. *Journal of Business Research*, 126, 137–152. <https://doi.org/10.1016/j.jbusres.2020.12.055>
- Zhang, Y., & Rajagopalan, N. (2004). When the known devil is better than an unknown god: An empirical study of the antecedents and consequences of relay CEO successions. *Academy of Management Journal*, 47(4), 483–500.
- Zhang, Y., & Rajagopalan, N. (2010). Once an outsider, always an outsider? CEO origin, strategic change, and firm performance. *Strategic Management Journal*, 31(3), 334–346. <https://doi.org/10.1002/smj.812>

Tables

Table 1. Summary Statistics

This table reports descriptive statistics for the $[t-3, t+3]$ sample constructed around the year of the CEO succession. The sample covers 3,097 CEO successions across 1,617 unique firms from 1993 to 2024. All continuous variables are winsorized at the 1st and 99th percentiles. Variable definitions are provided in Appendix A1.

	N	Mean	Median	SD	Q1	Q3	Min	Max
Panel A. Firm-level Controls								
<i>Firm_size_bln</i>	18,671	7.504	1.886	16.689	0.643	5.995	0.049	108.768
<i>Firm_age</i>	18,671	29.075	24.000	21.052	13.000	39.000	2.000	91.000
<i>Leverage_at</i>	18,671	0.245	0.227	0.198	0.084	0.355	0.000	0.935
<i>Capex_at</i>	18,671	0.049	0.034	0.047	0.019	0.061	0.001	0.280
<i>Bus_seg</i>	18,671	6.481	3.000	5.173	3.000	10.000	1.000	21.000
<i>Board_size</i>	18,671	9.936	10.000	2.618	8.000	12.000	3.000	16.000
<i>Board_independence</i>	18,671	0.835	0.857	0.096	0.800	0.900	0.462	1.000
<i>Instown_perc</i>	18,671	72.942	77.923	22.569	61.974	89.944	0.785	100.000
Panel B. Performance Measures								
<i>Roa_adj</i>	18,671	0.070	0.046	0.130	0.000	0.114	-0.273	0.577
<i>Tobinsq</i>	18,671	2.136	1.654	1.504	1.250	2.403	0.736	9.902
<i>Ret_scaled</i>	17,523	0.009	0.005	0.296	-0.180	0.195	-1.221	1.205
Panel C. TMT Turnover								
<i>Turnover_ratio_2y</i>	18,671	0.337	0.311	0.217	0.182	0.473	0.000	1.000
<i>High_turnover</i>	18,671	0.466	0.000	0.499	0.000	1.000	0.000	1.000
<i>Outsider_ratio</i>	18,671	0.082	0.000	0.127	0.000	0.167	0.000	0.500
<i>Outsider_ratio_2y</i>	18,671	0.169	0.143	0.197	0.000	0.286	0.000	0.800
<i>High_outsider</i>	18,671	0.427	0.000	0.495	0.000	1.000	0.000	1.000
<i>Depart_ratio</i>	18,671	0.159	0.167	0.164	0.000	0.250	0.000	0.600
<i>Depart_ratio_2y</i>	18,671	0.342	0.333	0.251	0.182	0.500	0.000	1.000
<i>High_depart</i>	18,671	0.457	0.000	0.498	0.000	1.000	0.000	1.000
<i>Perf_induced</i>	18,671	0.488	0.000	0.500	0.000	1.000	0.000	1.000
<i>Public_dismissal</i>	18,671	0.196	0.000	0.397	0.000	0.000	0.000	1.000
<i>Ceo_outsider</i>	18,671	0.162	0.000	0.368	0.000	0.000	0.000	1.000

Table 2. Average Post-Succession Performance

This table presents a comparison of average performance over the post-CEO-succession years ($Post = 1$), by succession type (routine and performance-induced) and intensity of TMT changes. Panel A shows the difference in average post-succession performance for firms split by the overall TMT turnover (*High_turnover*). Panel B compares average performance for firms partitioned by the industry-year median outside TMT hiring (*High_outsider*), and Panel C presents the results for the split by executive departures (*High_depart*). Performance measures are industry-adjusted ROA (*Roa_adj*), Tobin's Q (*Tobinsq*), and volatility-scaled industry-adjusted returns (*Ret_scaled*). *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively. Variable definitions are provided in Appendix A1.

	Routine CEO Succession			Performance-Induced Succession		
	High	Low	Diff.	High	Low	Diff.
A. Overall TMT Turnover						
<i>Roa_adj</i>	0.103	0.114	-0.011***	0.028	0.033	-0.006*
<i>Tobinsq</i>	2.359	2.431	-0.072*	1.813	1.820	-0.008
<i>Ret_scaled</i>	0.021	0.021	0.000	0.010	0.025	-0.015*
B. TMT Outsiders						
<i>Roa_adj</i>	0.101	0.115	-0.014***	0.028	0.032	-0.004
<i>Tobinsq</i>	2.288	2.470	-0.181***	1.853	1.781	0.072**
<i>Ret_scaled</i>	0.012	0.026	-0.014*	0.004	0.031	-0.027***
C. TMT Departures						
<i>Roa_adj</i>	0.103	0.114	-0.011***	0.026	0.035	-0.009***
<i>Tobinsq</i>	2.348	2.434	-0.086**	1.802	1.833	-0.032
<i>Ret_scaled</i>	0.023	0.020	0.003	0.015	0.020	-0.005

Table 3. TMT Turnover and Post-Succession Firm Performance

The table reports OLS estimates for the baseline model, focusing on differential within-firm performance changes between the pre- and post-CEO-succession periods, depending on the intensity of TMT changes. The dependent variable in Columns 1–3 is industry-adjusted ROA (*Roa_adj*), while Columns 4–6 and 7–9 report the results for Tobin's Q (*Tobinsq*) and volatility-scaled industry-adjusted returns (*Ret_scaled*), respectively. *Post* = 1 for the years starting with the CEO succession. The main independent variables are the indicators of the above-median TMT turnover (*High_turnover*), outside hires (*High_outsider*), and departures (*High_depart*), each interacted with *Post*. All model specifications include firm and year fixed effects. Robust standard errors are clustered at the firm level. Variable definitions are provided in Appendix A1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>High_turnover</i> × <i>Post</i>	-0.005*			-0.078**			0.000		
	(-1.707)			(-2.207)			(-0.002)		
<i>High_turnover</i>	0.005			0.058			-0.015*		
	(1.387)			(1.232)			(-1.828)		
<i>High_outsider</i> × <i>Post</i>		-0.007**			-0.096***			-0.023***	
		(-2.228)			(-2.664)			(-2.615)	
<i>High_outsider</i>		0.001			-0.009			-0.001	
		(0.298)			(-0.163)			(-0.141)	
<i>High_depart</i> × <i>Post</i>			-0.003			-0.068*			0.015*
			(-0.940)			(-1.888)			(1.902)
<i>High_depart</i>			0.000			-0.005			-0.029***
			(0.076)			(-0.101)			(-3.470)
<i>Perf_induced</i> × <i>Post</i>	0.014***	0.014***	0.014***	0.062*	0.064*	0.065*	0.125***	0.127***	0.123***
	(4.378)	(4.426)	(4.308)	(1.756)	(1.791)	(1.829)	(14.285)	(14.477)	(14.018)
<i>Perf_induced</i>	-0.041***	-0.041***	-0.041***	-0.268***	-0.266***	-0.263***	-0.129***	-0.130***	-0.126***
	(-11.031)	(-11.066)	(-10.723)	(-6.470)	(-6.433)	(-6.246)	(-15.119)	(-15.215)	(-14.669)
<i>Post</i>	-0.009	-0.008	-0.009	-0.047	-0.040	-0.046	0.046	0.048	0.043
	(-0.782)	(-0.723)	(-0.791)	(-0.308)	(-0.262)	(-0.300)	(1.267)	(1.330)	(1.206)
<i>Ceo_outsider</i> × <i>Post</i>	-0.006	-0.004	-0.006	-0.100**	-0.082	-0.106**	0.013	0.018	0.013
	(-1.327)	(-1.013)	(-1.404)	(-1.976)	(-1.597)	(-2.106)	(1.057)	(1.479)	(1.109)
<i>Ceo_outsider</i>	0.000	0.000	0.000	-0.089	-0.085	-0.087	-0.028**	-0.028**	-0.029**
	(-0.024)	(-0.037)	(0.016)	(-1.172)	(-1.104)	(-1.160)	(-2.321)	(-2.325)	(-2.487)
<i>L.board_independence</i>	-0.050***	-0.049***	-0.049***	-0.519***	-0.505***	-0.507***	0.063	0.060	0.068*
	(-3.382)	(-3.331)	(-3.333)	(-2.660)	(-2.597)	(-2.603)	(1.631)	(1.556)	(1.762)
<i>Post</i> × <i>L.board_indep.</i>	0.008	0.007	0.007	0.026	0.020	0.017	-0.094**	-0.088**	-0.099**
	(0.582)	(0.546)	(0.507)	(0.146)	(0.109)	(0.095)	(-2.189)	(-2.026)	(-2.312)
<i>L.board_size</i>	-0.001**	-0.001**	-0.001**	0.003	0.003	0.003	0.003*	0.003*	0.003**
	(-2.239)	(-2.230)	(-2.239)	(0.373)	(0.378)	(0.394)	(1.925)	(1.955)	(2.017)
<i>L.instown_perc</i>	0.000***	0.000***	0.000***	0.001	0.001	0.001	-0.001***	-0.001***	-0.001***
	(3.099)	(3.114)	(3.087)	(1.081)	(1.124)	(1.051)	(-6.606)	(-6.486)	(-6.643)
<i>L.log_assets</i>	-0.007**	-0.006**	-0.007**	-0.518***	-0.513***	-0.517***	-0.074***	-0.074***	-0.074***
	(-2.232)	(-2.151)	(-2.208)	(-12.609)	(-12.460)	(-12.610)	(-12.301)	(-12.229)	(-12.264)
<i>L.log_firm_age</i>	-0.004	-0.004	-0.004	-0.189*	-0.191*	-0.191*	-0.024*	-0.024*	-0.025*
	(-0.583)	(-0.606)	(-0.614)	(-1.802)	(-1.835)	(-1.831)	(-1.730)	(-1.681)	(-1.789)

<i>L.leverage_at</i>	0.004 (0.363)	0.004 (0.384)	0.004 (0.374)	0.326** (2.210)	0.329** (2.224)	0.330** (2.233)	0.115*** (5.702)	0.117*** (5.785)	0.114*** (5.661)
<i>L.capex_at</i>	0.118*** (3.695)	0.119*** (3.744)	0.118*** (3.718)	0.177 (0.407)	0.201 (0.460)	0.179 (0.412)	-0.457*** (-5.725)	-0.458*** (-5.757)	-0.461*** (-5.781)
<i>L.log_segm</i>	-0.004** (-2.310)	-0.004** (-2.298)	-0.004** (-2.298)	-0.026 (-1.020)	-0.025 (-1.010)	-0.026 (-1.025)	0.006 (1.349)	0.006 (1.326)	0.006 (1.341)
<i>L.roa_adj</i>				2.705*** (9.973)	2.700*** (10.007)	2.705*** (9.974)			
Intercept	0.185*** (6.892)	0.184*** (6.901)	0.186*** (6.960)	6.873*** (15.471)	6.860*** (15.533)	6.891*** (15.572)	0.686*** (11.252)	0.676*** (11.057)	0.686*** (11.307)
Number of obs.	18,671	18,671	18,671	18,671	18,671	18,671	17,519	17,519	17,519
Adjusted R-squared	0.728	0.728	0.728	0.654	0.654	0.654	0.093	0.094	0.094

Table 4. Performance-Induced vs. Routine Successions

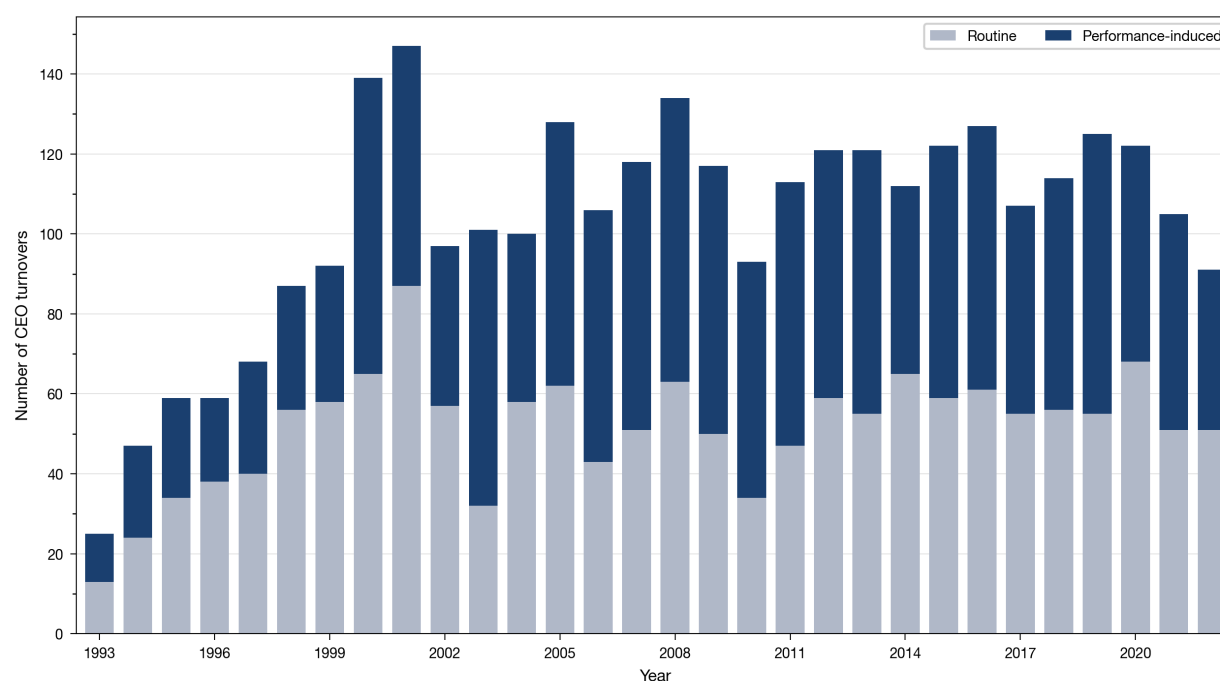
This table reports OLS estimates examining whether the relationship between changes in pre- and post-CEO-succession performance and TMT turnover intensity varies depending on the succession type (routine vs. performance-induced). The dependent variables are *Roa_adj* (1–2), *Tobinsq* (3–4), and *Ret_scaled* (5–6). *Post* = 1 for the years starting with the CEO succession. The main independent variables are the ratios measuring the share of annual executive departures and outside hires relative to the TMT size (*Depart_ratio* and *Outsider_ratio*, respectively), interacted with *Post* and the indicator of a performance-induced succession (*Perf_induced*). All model specifications include firm and year fixed effects. Robust standard errors are clustered at the firm level. Variable definitions are provided in Appendix A1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Perf_induced</i> × <i>Post</i> × <i>Outsider_rat.</i>	0.020 (0.840)		0.757*** (2.710)		0.100 (1.229)	
<i>Perf_induced</i> × <i>Post</i> × <i>Depart_rat.</i>		-0.024* (-1.678)		0.090 (0.453)		0.115* (1.882)
<i>Perf_induced</i> × <i>Post</i>	0.012*** (3.496)	0.018*** (4.692)	0.000 (0.001)	0.038 (0.807)	0.116*** (11.086)	0.108*** (9.168)
<i>Post</i> × <i>Outsider_ratio</i>	-0.023 (-1.430)		-0.799*** (-3.424)		-0.047 (-0.814)	
<i>Post</i> × <i>Depart_ratio</i>		0.021** (2.069)		-0.082 (-0.539)		-0.029 (-0.636)
<i>Outsider_ratio</i>	0.002 (0.112)		0.201 (1.040)		-0.005 (-0.101)	
<i>Depart_ratio</i>		-0.015* (-1.754)		-0.194 (-1.493)		0.036 (0.940)
<i>Post_turnover</i>	-0.007 (-0.630)	-0.010 (-0.860)	-0.007 (-0.045)	-0.007 (-0.044)	0.051 (1.412)	0.046 (1.283)
<i>Ceo_outsider</i> × <i>Post</i>	-0.005 (-1.144)	-0.006 (-1.502)	-0.091* (-1.802)	-0.107** (-2.111)	0.015 (1.251)	0.012 (0.978)
<i>Ceo_outsider</i>	0.000 (0.075)	0.001 (0.154)	-0.086 (-1.139)	-0.081 (-1.076)	-0.028** (-2.347)	-0.028** (-2.343)
<i>L.board_independence</i>	-0.049*** (-3.349)	-0.049*** (-3.325)	-0.515*** (-2.645)	-0.515*** (-2.650)	0.063 (1.636)	0.063 (1.639)
<i>Post</i> × <i>L.board_indep.</i>	0.005 (0.400)	0.003 (0.258)	0.006 (0.033)	-0.027 (-0.151)	-0.097** (-2.245)	-0.093** (-2.149)
<i>L.board_size</i>	-0.001** (-2.186)	-0.001** (-1.982)	0.003 (0.356)	0.004 (0.536)	0.003** (2.062)	0.003* (1.858)
<i>L.instown_perc</i>	0.000*** (3.062)	0.000*** (3.004)	0.001 (1.117)	0.001 (1.016)	-0.001*** (-6.529)	-0.001*** (-6.489)
<i>L.log_assets</i>	-0.007** (-2.265)	-0.007** (-2.301)	-0.518*** (-12.632)	-0.518*** (-12.655)	-0.074*** (-12.325)	-0.074*** (-12.201)
<i>L.log_firm_age</i>	-0.005 (-0.773)	-0.004 (-0.671)	-0.195* (-1.871)	-0.195* (-1.860)	-0.025* (-1.762)	-0.022 (-1.571)
<i>L.leverage_at</i>	0.004	0.004	0.321**	0.330**	0.118***	0.115***

	(0.386)	(0.437)	(2.183)	(2.231)	(5.825)	(5.709)
<i>L.capex_at</i>	0.119***	0.120***	0.198	0.187	-0.468***	-0.465***
	(3.735)	(3.765)	(0.455)	(0.429)	(-5.902)	(-5.856)
<i>L.roa_adj</i>			2.703***	2.689***		
			(9.987)	(9.902)		
Intercept	0.185***	0.184***	6.863***	6.892***	0.686***	0.677***
	(6.937)	(6.887)	(15.578)	(15.578)	(11.231)	(11.076)
Number of obs.	18,671	18,671	18,671	18,671	17,519	17,519
Adjusted R-squared	0.728	0.728	0.654	0.654	0.094	0.093

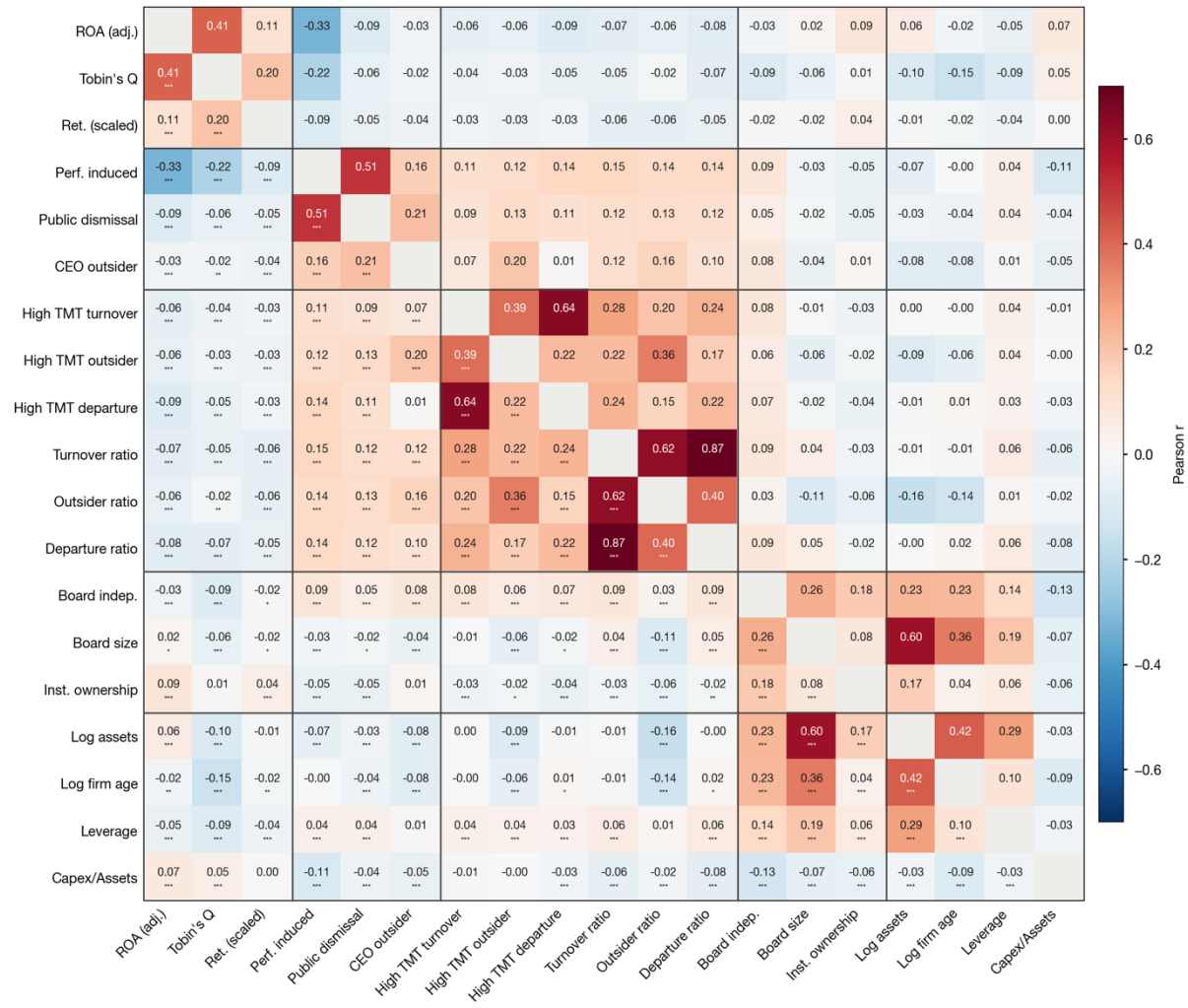
Figures

Figure 1. CEO Turnover Events by Year



Note: This figure displays the distribution of CEO turnover events by calendar year and by succession type.

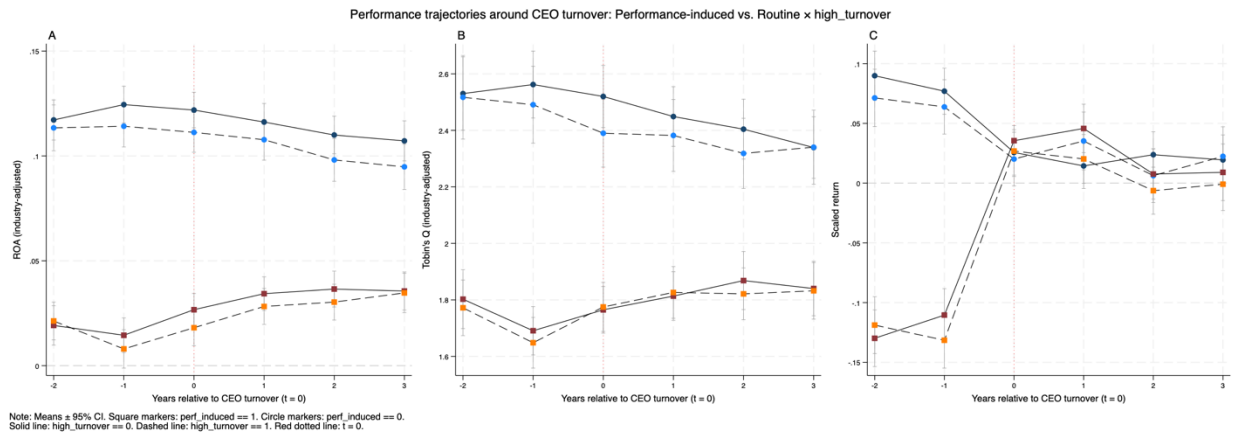
Figure 2. Correlations Matrix



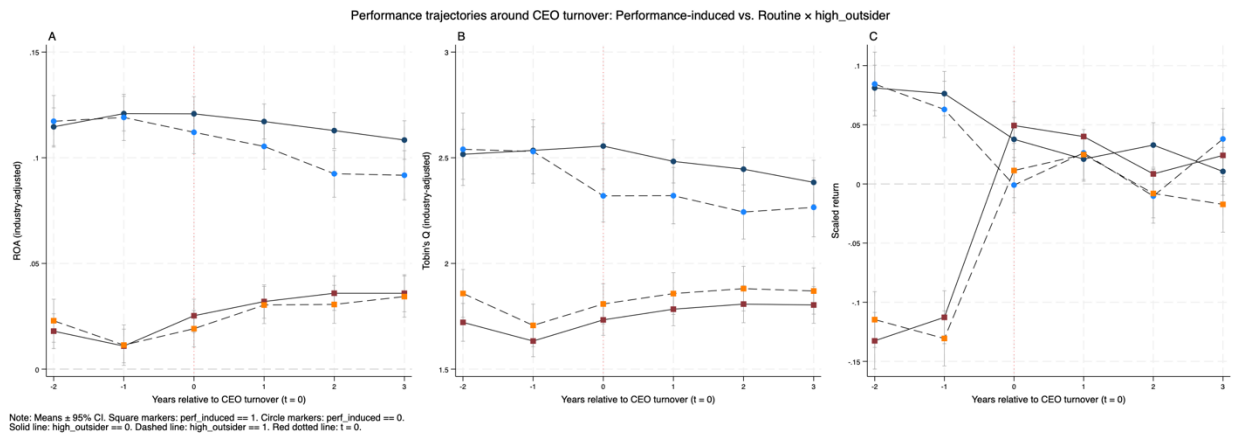
Note: This figure displays pairwise Pearson correlations among the main variables. Shading intensity reflects the magnitude of the correlation, and *** denotes statistical significance at the 1% level. Variable definitions are provided in Appendix A1.

Figure 3. Performance Trajectories

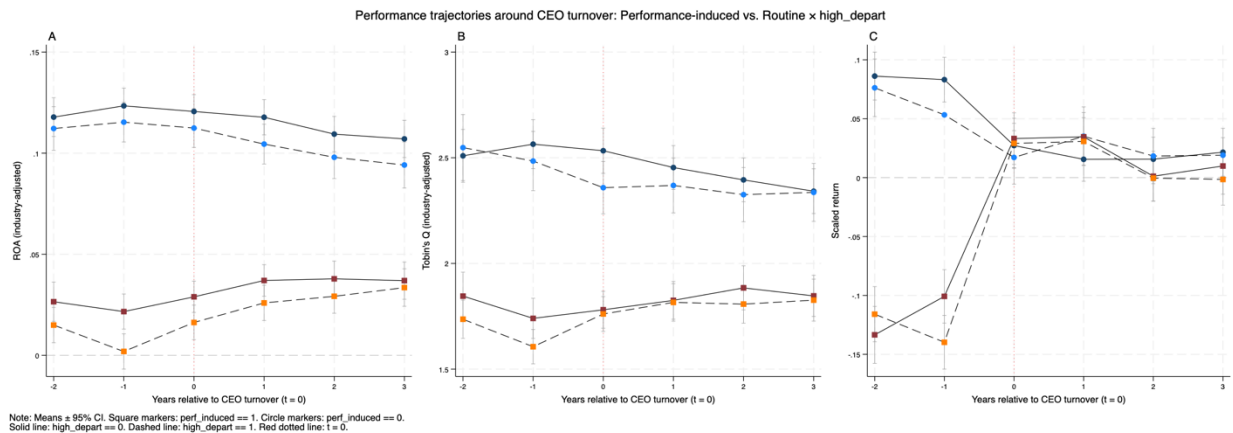
3.1 Average Performance Depending on the Succession Type and Overall TMT Turnover



3.2 Average Performance Depending on the Succession Type and the Level of Outside Hires



3.3 Average Performance Depending on the Succession Type and the Departure Intensity



Note: Figures 3.1–3.3 show trajectories in average firm performance, depending on succession type and intensity of TMT changes measured by *High_turnover* (3.1), *High_outsider* (3.2), and *High_depart* (3.3). Solid lines depict the averages for firms with lower TMT turnover, while dashed lines are used for firms with TMT changes above the industry-year median. Square red and orange markers indicate performance-induced CEO successions, and circle navy and blue markers indicate routine successions. Panel A in each figure (3.1–3.3) plots averages for industry-adjusted ROA (*Roa_adj*), Panel B for Tobin’s Q (*Tobinsq*), and Panel C for volatility-scaled industry-adjusted returns (*Ret_scaled*). Variable definitions are provided in Appendix A1.

Appendix

Table A1. Variable Definitions

Variable	Definition	Source
Dependent Variables		
<i>Roa_adj</i>	Industry-adjusted ROA, calculated as operating income before depreciation (oibdp) divided by total assets (at) minus the industry-year median. Following Jenter & Lewellen (2021), the industry adjustment uses the Fama-French 49 industries.	<i>Compustat</i>
<i>Tobinsq</i>	Tobin's Q, calculated as market value of equity ($prcc_f \times csho$) plus book value of assets (at) minus book value of equity (ceq), divided by book value of total assets (at).	<i>Compustat</i>
<i>Ret_scaled</i>	Average industry-adjusted monthly stock returns scaled by their standard deviation (following Jenter & Lewellen, 2021). The average is calculated over the calendar year; the standard deviation is measured over 48-months, ending with the year over which stock returns are averaged; the industry adjustment is the equal-weighted FF49 average excluding the focal firm.	<i>CRSP</i>
TMT Turnover		
<i>Depart_ratio</i>	Departure ratio: Number of non-CEO TMT members who were present in year $t-1$, but not in year t , divided by TMT size in year $t-1$.	<i>ExecuComp, BoardEx, 10-K, DEF 14A (here and for the remaining TMT variables)</i>
<i>Depart_nr_ratio</i>	Non-retirement-age departure ratio: Number of non-CEO TMT members aged below 67, who were present in year $t-1$, but not in year t , divided by TMT size in year $t-1$.	
<i>Newcom_ratio</i>	Newcomer ratio: Number of non-CEO TMT members, who were not present in year $t-1$, but appeared in the list of TMT members in year t , divided by TMT size in year t .	
<i>Outsider_ratio</i>	Outsider ratio: Number of externally hired TMT members in year t , divided by TMT size in year t (i.e., newcomers who joined TMT in year t and had no previous employment history with the firm).	
<i>Turnover_ratio</i>	Overall turnover ratio: Average of <i>Depart_ratio</i> ratio and <i>Newcom_ratio</i> .	
<i>Depart_ratio_2y</i>	2-year departure ratio: The sum of exits in years t and $t+1$ (i.e., non-CEO executives present in years $t-1$, but not t , or in year t but not in $t-1$, respectively), divided by the average TMT size over years $t-1$ and t .	
<i>Depart_nr_ratio_2y</i>	2-year non-retirement-age departure ratio: same as above, but sums only the exits of executives aged below 67.	
<i>Newcom_ratio_2y</i>	2-year newcomer ratio: The sum of non-CEO TMT additions in years t and $t+1$, divided by average TMT size over t and $t+1$.	
<i>Outsider_ratio_2y</i>	2-year outsider ratio: The sum of non-CEO external TMT additions in years t and $t+1$, divided by average TMT size over t and $t+1$.	
<i>Turnover_ratio_2y</i>	The average of <i>Depart_ratio_2y</i> and <i>Newcom_ratio_2y</i> .	
<i>High_turnover</i>	Indicator of the above-median TMT turnover: Equals 1 if <i>turnover_ratio_2y</i> exceeds the FF49-industry-year median and 0 otherwise. For a small number of cases with fewer than 4 observations per industry in a given year, uses the overall industry median.	

Variable	Definition	Source
<i>High_outsider</i>	Above-median outsider ratio: Equals 1 if <i>Outsider_ratio_2y</i> exceeds the FF49-industry-year median (industry median for the cases with fewer than 4 observations per industry in a given year), and 0 otherwise.	
<i>High_depart</i>	Above-median departure ratio: Equals 1 if <i>Depart_ratio_2y</i> exceeds the FF49-industry-year median (industry median for the cases with fewer than 4 observations per industry in a given year), and 0 otherwise.	
<i>Tmt_size</i>	The number of non-CEO TMT members in a given year.	
<i>Med_tenure</i>	Median tenure (in years) of incumbent non-CEO TMT members in year <i>t</i> .	
CEO Turnover Classification		
<i>Perf_induced</i>	Performance-induced CEO turnover: Equals 1 if the CEO turnover is classified as performance-induced (as defined in Jenter & Lewellen, 2021), and 0 otherwise. The classification approach is described in Section 3.4, and the performance metrics used for the classification are described below.	
<i>Roa_adj_2yr_lag</i>	Prior 2-year average industry-adjusted ROA: Average of industry-adjusted ROA in years <i>t</i> –1 and <i>t</i> –2. For each year, industry-adjusted ROA is calculated as operating income before depreciation (<i>oibdp</i>) divided by total assets (<i>at</i>) minus the industry-year median. The industry adjustment is based on the Fama-French 49 industries. Also calculated for year <i>t</i> –1 alone (<i>Roa_adj_lag</i>) and years <i>t</i> –3, <i>t</i> –2, and <i>t</i> –3 (<i>Roa_adj_3yr_lag</i>)	<i>Compustat</i>
<i>Ind_roa_2yr_lag</i>	Prior 2-year average industry ROA: Average of the Fama-French 49 industry-year median ROA (<i>oibdp</i> / <i>at</i>) for years <i>t</i> –1 and <i>t</i> –2.	<i>Compustat</i>
<i>Ret_scaled_24_lag</i>	Prior 24-month average industry-adjusted monthly stock returns scaled by their standard deviation. The average return is calculated over the years <i>t</i> –2 and <i>t</i> –1, and the standard deviation of returns is measured over 48 months, ending with year <i>t</i> –1. Also calculated for 12 and 36 months that use average for year <i>t</i> –1 alone (<i>Ret_scaled_12_lag</i>) or years <i>t</i> –3, <i>t</i> –2, and <i>t</i> –3, respectively (<i>Ret_scaled_36_lag</i>).	<i>CRSP</i>
<i>Ret_ind_24_lag</i>	Prior 24-month industry return: Compounded 24-month equal-weighted industry return (excluding the focal firm), based on the Fama-French 49 industry classification.	<i>CRSP</i>
<i>Public_dismissal</i>	Public CEO dismissal: Equals 1 if the predecessor's dismissal has an explicit reference to performance (Code 3 in the Gentry et al. (2021) dataset).	<i>Gentry et al. (2021)</i>
Panel and Event-Time Variables		
<i>Post</i>	Post-CEO-turnover indicator: Equals 1 for all firm-years at or after the CEO turnover year (<i>year</i> ≥ <i>turnover_year</i>), and 0 otherwise. Applicable to the final sample, i.e., the 7-year panel centered around the CEO turnover year.	
<i>Window_year</i>	Event-time year: Year relative to the CEO turnover: 0 = turnover year (<i>t</i>); negative integers (–3, –2, –1) = pre-turnover years, positive integers (1, 2, 3) = post-turnover years. The panel spans [–3, +3] around the event (one additional year at <i>t</i> –4 is kept for lagged controls).	
CEO Characteristics		
<i>Ceo_age</i>	CEO age in years.	<i>ExecuComp, BoardEx, 10-K, DEF 14A</i>

Variable	Definition	Source
<i>Ceo_outsider</i>	Outsider CEO: Equals 1 if the incoming CEO is employed by the firm for less than one year.	<i>ExecuComp, BoardEx, 10-K, DEF 14A</i>
<i>Ceo_follower</i>	Follower CEO: Equals 1 if an internally promoted CEO held a title of COO and/or President in the year prior to assuming the CEO role (Shen & Cannella, 2002); 0 otherwise.	<i>ExecuComp, BoardEx, 10-K, DEF 14A</i>
<i>Ceo_tenure</i> (<i>Log_ceo_tenure</i>)	CEO's tenure in years and the natural logarithm of CEO tenure.	<i>ExecuComp, BoardEx, 10-K, DEF 14A</i>
<i>Duality</i>	CEO-chairman duality: Equals 1 if the CEO also serves as chairman of the board.	<i>ExecuComp, BoardEx, 10-K, DEF 14A</i>
<i>Ceo_power</i>	CEO power (follows the construction rules described in Boumosleh & Cline, 2023, but modified to annual frequency). An index constructed annually as the sum of 0/1 indicators that the CEO is the only insider on the board, falls in the top quintile of the FF49 industry-year pay distribution, and assumed a role following a forced or unplanned predecessor departure, defined as either performance-induced turnover (<i>Perf_induced</i> = 1) or the predecessor's dismissal codes 1, 2, and 4 in Gentry et al. (2021). The final component of the index is an indicator that the predecessor did not remain on the board of directors (1 – <i>Stayed</i>). The index takes values between 0 and 4, with larger values indicating greater CEO power.	<i>ExecuComp, BoardEx, Gentry et al. (2021)</i>
Board and Governance Controls		
<i>Board_size</i>	Total number of board members.	<i>BoardEx</i>
<i>Board_independence</i>	Fraction of independent directors on the board.	<i>BoardEx</i>
<i>Instown_perc</i>	Institutional ownership: Percentage of shares held by institutional investors.	<i>LSEG 13F</i>
Firm-Level Control Variables		
<i>Firm_size</i> (<i>Log_assets</i>)	Firm size measured by total assets (at), in \$ millions or log transformed. For conciseness, presented in \$ billions in the Summary Statistics Table.	<i>Compustat</i>
<i>Firm_age</i> (<i>Log_firm_age</i>)	Firm age measured as the number of years since the firm's listing in CRSP. Log transformed in all regressions.	<i>CRSP</i>
<i>Leverage_at</i>	Leverage: Book value of long-term debt plus debt in current liabilities (dltt + dlc), divided by total assets (at).	<i>Compustat</i>
<i>Capex_at</i>	Capital expenditures (capx) divided by total assets (at).	<i>Compustat</i>
<i>Bus_seg</i> (<i>Log_segm</i>)	The total number of business segments. Log transformed in all regressions.	<i>Compustat</i>
<i>Complexity_factor</i>	Complexity factor: The first principal component from a PCA of <i>Log_assets</i> , <i>Leverage_at</i> , and <i>Log_segm</i> , standardized to have zero mean and a standard deviation of 1 (based on Coles et al., 2008 and Bai & Mkrtchyan, 2023).	<i>Compustat</i>
<i>Volatility</i>	The standard deviation of daily excess returns over a rolling 252-trading-day window, where excess returns are computed as the difference between a firm's daily return and the CRSP value-weighted market return. The annual value is taken from the last observation of the fiscal year.	<i>CRSP</i>

Variable	Definition	Source
Alternative Dependent variables		
<i>Tobinsq_adj</i>	Industry-adjusted Tobin's Q, calculated as the difference between the firm's Tobin's Q and the industry-year median. Tobin's Q is market value of equity plus book value of assets minus book value of equity, divided by book value of total assets (at). minus. The industry adjustment uses the Fama-French 49 industries.	<i>Compustat</i>
<i>Total Q</i>	Tobin's Q proxy that includes intangible capital; the ratio of firm market value to total capital, where total capital is the sum of physical and intangible capital stocks.	<i>Peters and Taylor (2017) via WRDS</i>
<i>Annual_ret_madj</i>	Annual market-adjusted buy-and-hold return computed as the compounded annual firm return minus the compounded annual CRSP value-weighted market return over the same calendar year.	<i>CRSP</i>
<i>Ff_excess_ret</i>	Annual buy-and-hold excess return adjusted for firm size and market-to-book. Each firm is assigned annually to one of the Fama-French 25 size/book-to-market portfolios based on NYSE ME and BE/ME breakpoints. The excess return is the firm's compounded annual return less the compounded annual return of the matched value-weighted FF25 portfolio.	<i>CRSP, Kenneth French's Data Library</i>
Preliminary analysis		
<i>Ceo_turnover</i>	An indicator of a CEO turnover event. Equals 1 in the year of CEO change, and 0 otherwise.	<i>ExecuComp, 10-K, Gentry et al. (2021),</i>
<i>Log_predecessor_tenure</i>	The natural logarithm of the predecessor's (of the current CEO) tenure (tenure is measured in years).	
<i>Log_predecessor_age</i>	The natural logarithm of the predecessor's age.	
<i>Predecessor_duality</i>	Equals 1 if the current CEO's predecessor also served as chairman of the board.	
<i>Imr</i>	Inverse Mills ratio: Correction term for the non-random occurrence of CEO turnover, included to address potential selection bias. Estimated from a first-stage probit regression of the turnover event indicator (<i>Ceo_turnover</i>) on 1-year lags of firm and governance characteristics (<i>Log_assets</i> , <i>Log_firm_age</i> , <i>Complexity_factor</i> , <i>Board_size</i> , <i>Board_independence</i> , <i>Instown_perc</i>), outgoing CEO characteristics (<i>Ceo_age</i> , <i>Ceo_power</i> , <i>Duality</i> , <i>Log_ceo_tenure</i>), and firm and industry performance measures averaged over the two years prior to the turnover event (<i>Ret_scaled_24_lag</i> , <i>Ret_ind_24_lag</i> , <i>Roa_adj_2yr_lag</i> , <i>Ind_roa_2yr_lag</i> ; includes industry and year fixed effects.	