Best of Both Worlds: The Advantages of Hybrid CEOs in Multi-Unit Firms

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Abstract

This paper focuses on CEOs promoted from the subsidiaries of multi-unit firms rather than from the parent organization. I use the term "hybrid" to describe this specific type of CEO. I propose that hybrid CEOs are especially beneficial under certain conditions, e.g., when the firm needs significant change but not radical restructuring. This is because hybrid CEOs possess firm-specific knowledge (like insiders) but are less socially embedded in the company (like outsiders). Using data from 1,450 multi-unit US firms between 1993 and 2017, I find that hybrid CEOs are very common, accounting for a third of CEO transitions in multi-unit firms. Moreover, firms are more likely to appoint hybrid CEOs in turbulent industry environments. When firms operating in turbulent environments appoint hybrid CEOs, they implement aggressive changes in their strategies, such as layoffs and capital expenditure cuts, and achieve higher post-succession performance. In addition, firms led by hybrid CEOs demonstrate greater resilience to external shocks, such as financial crises. The findings suggest an advantage to having a robust pool of internal candidates who have developed with an

outsider's perspective, preferably from the company's subsidiaries.

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I. INTRODUCTION

A central challenge facing most companies today is selecting their next CEO. Firms face trade-offs in appointing CEOs from within the ranks of the firm (insiders) versus from another firm (outsiders) (Cummings & Knott, 2018; Howard, 2001; Quigley et al., 2019). On the one hand, insiders are often chosen to maintain continuity and stability with their firm-specific knowledge and established social networks (Harris & Helfat, 1997; Zajac, 1990; Zhang & Rajagopalan, 2004). They may, however, lack external perspectives, and their existing networks can prevent them from making necessary changes (Fondas & Wiersema, 1997; Shen & Cannella, 2002; Shleifer & Summers, 1988). On the other hand, outsiders are selected to transform the company because they are more innovative and have fewer social constraints (Grossman, 2007; Karaevli & Zajac, 2012; Virany et al., 1992). However, they possess less insider knowledge of the firm and may face resistance to change due to a lack of internal networks (Karaevli, 2007; Zhang & Rajagopalan, 2010).

Previous research typically classifies CEO types as insiders or outsiders based on firm boundaries. However, this binary distinction overlooks considerable heterogeneity in the backgrounds and experiences of chief executives (Finkelstein et

al., 2009). Different experiences can lead executives to perceive and interpret objectively similar situations differently, resulting in substantially varied decisions (Crossland et al., 2014). In fact, there are degrees of "outsiderness", and CEOs are likely to fall along a continuum of outsiderness varying by their degrees of firm- specific knowledge and social embeddedness within the focal firm (Finkelstein & Hambrick, 1996; Finkelstein et al., 2009; Karaevli, 2007). CEOs across this continuum can meld the advantages and disadvantages typically associated with insiders and outsiders (Cheng, 2019). Conceptualizing CEO origin as a continuum facilitates a more nuanced understanding of the benefits, costs, and outcomes of appointing different types of CEO (Karaevli, 2007; Shen & Cannella, 2003).

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This study focuses on CEOs promoted from the subsidiaries of multi-unit firms rather than from the parent organization. I use the term "hybrid" to describe this specific type of CEO on the outsiderness continuum. Past research has introduced the concept of "inside-outsiders" to describe a specific type of internal candidate possessing an insider's knowledge of the firm but maintaining enough detachment from the firm (Bower, 2007). Nonetheless, empirical evidence on the prevalence and the effects of this type of CEO appointment remains relatively sparse (Finkelstein & Hambrick, 1996; Karaevli, 2007; Zajac & Westphal, 1996). In light of this, I empirically investigate the conditions, the mechanism, and the outcomes of appointing these CEOs, extending previous research to examine how, when, why, and where firms find and appoint them.

I argue that hybrid CEOs are more likely to be appointed under high environmental turbulence, characterized by uncertainty and volatility in the external business environment. Past literature has shown that when firms want continuity and minor changes, they typically choose insider candidates, whereas when firms seek transformation and significant shifts, an outsider is a better choice (Finkelstein & Hambrick, 1996; Finkelstein et al., 2009). In turbulent environments, where firms need significant change but not radical restructuring, hybrid CEOs might implement strategies to adapt and more effectively navigate these challenges. This is because hybrid CEOs possess firm-specific knowledge (like insiders) but are less socially embedded in the company (like outsiders). Their limited social constraints foster a greater willingness to initiate strategic changes, and their firm-specific knowledge equips them to identify problems and implement solutions promptly.

Using data from 1,450 multi-unit US public firms spanning 1993 to 2017, I find that a significant one-third of CEO transitions are hybrid CEOs. Firms are more likely to appoint hybrid CEOs in turbulent industry environments. When firms operating in turbulent environments appoint

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hybrid CEOs, they implement aggressive changes in their strategies, such as layoffs and capital expenditure cuts, and achieve higher post-succession performance. In addition, firms led by hybrid CEOs demonstrate greater resilience to external shocks, such as financial crises. Specifically, hybrid CEOs tend to lay off more employees than insiders and cut more capital expenditures than insiders and outsiders. However, hybrid CEOs

do not significantly reduce investments in research and development (R&D). These findings imply that hybrid CEOs have a dual focus on immediate financial health (e.g., short-term cost-cutting) and future growth (e.g., long-term investments in innovation). The distinct actions of hybrid CEOs might stem from their unique position of understanding the organization from an insider's perspective (hence the hesitancy to cut R&D) while also having enough detachment to make hard decisions (like layoffs and capital expenditure cuts) that a pure insider might be more reluctant to make.

This study builds upon and extends previous research that explored the outsiderness continuum conceptually and comes up a way to empirically define an intermediate point in the continuum. It also examines the conditions and mechanisms through which firms identify and appoint hybrid CEOs and investigates their strategic decisions compared to insiders and outsiders. In addition, this study emphasizes the significance of contextual factors in assessing the implications of CEO succession (e.g., Chen & Hambrick, 2012; Finkelstein et al., 2009; Karaevli, 2007). The findings suggest that, in general, the appointment of a hybrid CEO does not lead to significant differences in post-succession strategies and performance. Distinct effects emerge when the unique attributes of hybrid CEOs match the firm's needs in specific strategic situations. Lastly, this paper highlights the benefits of having a robust pool of internal candidates, particularly those cultivated with an outsider's perspective from the company's subsidiaries. With a robust pool of qualified internal candidates, companies can get the leadership they need - when needed.

II. THEORY AND HYPOTHESES

Previous research predominantly categorizes CEOs into two distinct types - insiders or outsiders, based on a firm's boundary. Insiders are those who have been promoted from within the firm's existing ranks, while outsiders are those who have been externally recruited from another organization. However, recent studies suggest this strict dichotomy is overly simplistic and does not reflect the reality of degrees of "outsiderness" (Finkelstein & Hambrick, 1996; Zajac & Westphal, 1996). Many CEOs may not be easily classified into the two distinct categories of insiders and outsiders. Prior studies suggest that the insider/outsider dichotomy should be broken down into finer categories, as they can fall along a continuum of outsiderness based on their knowledge, background, prior experiences, tenure with the firm, and other factors (Finkelstein & Hambrick, 1996; Finkelstein et al., 2009; Karaevli, 2007). Based on their diverse backgrounds and experiences, executives are likely to have different perceptions and interpretations when faced with objectively similar situations, leading to substantially different decisions (Crossland et al., 2014). Therefore, the focus should not solely be on whether someone is an outsider or insider but on their level of knowledge, networks, and commitment to the organization.

The conventional way of operationalizing the outsiderness continuum is based on the firm tenure of the new CEO (Finkelstein et al., 2009; Karaevli, 2007). Research suggests that long- tenured executives are more likely to have narrow perspectives, psychological commitment to the status quo, and

entrenched social relationships within firms (Hambrick et al., 1993; March & March, 1977; Katz, 1982). However, the outsiderness continuum appears to be a multi- dimensional continuum that encompasses various aspects of an executive's background and experience. Using tenure as a measure of a CEO's outsiderness is rather unidimensional because it may not reflect the CEO's total experience as a member of top management within a focal firm (Weng & Lin, 2014). It typically assesses a single aspect of their experience: the length of time

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they have spent within the firm or industry. This approach assumes that the primary, or even sole, factor that influences a CEO's perspective, cognitive openness, and commitment to the status quo is the duration of their tenure. It simplifies the complex nature of executive experience and influence into a linear scale based on time, without accounting for the nuances of different types of experiences or roles they may have had. For example, two executives with the same tenure at a company might have had very different experiences. One might have spent a significant portion of their tenure at a subsidiary or in roles that kept them detached from the main political dynamics of the parent company, while another might have been deeply involved in core decision-making processes from early on. Given that job demands and responsibilities vary across different levels of top management positions (Hambrick et al., 2005), the knowledge and experiences associated with top management positions may deserve further theoretical exploration.

In this study, I create a way to empirically define an intermediate point in the continuum by considering the unique trajectory of executives who have been promoted from a subsidiary to the parent company. This approach recognizes that such individuals may possess a blend of *insider* knowledge and *outsider* objectivity. While they have firm-specific experience, their time within a subsidiary—which may have its own distinct culture and strategic priorities—could equip them with a different set of perspectives and social ties compared to those who have climbed the ranks within the parent company alone. By incorporating this additional layer into the analysis of CEO outsiderness, the study aims to provide a more nuanced understanding of how different career paths within the corporate structure can influence leadership effectiveness and firm outcomes.

Furthermore, one primary reason for inconsistent findings concerning the performance consequences of CEO origin is the lack of agreement regarding what has been captured by the insider vs. outsider dichotomy (Karaevli, 2007). There has been an ongoing debate of whether an

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insider or outsider is the best CEO choice (e.g., Cummings & Knott, 2018; Finkelstein et al., 2009; Howard, 2001; Quigley et al., 2019). Recognizing a continuum of outsiderness rather than adhering to a rigid binary classification may help us further our understanding of the benefits and costs of different types of CEO selection decisions and shed light on the nuances of their strategic choices. This broader perspective can potentially resolve some of the inconsistencies in the existing literature and

provide a clearer insight into how different CEOs navigate their strategic roles based on their unique backgrounds (Guthrie & Datta, 1997; Karaevli, 2007; Shen & Cannella, 2003; Zhang & Rajagopalan, 2004).

While the shift from a binary distinction to recognizing a continuum of outsiderness has been highlighted as vital for a nuanced understanding of CEO selection, only a few studies have explored this continuum. In his book *The CEO Within* (2007), Joseph Bower introduced the concept of "inside-outsiders" to describe a specific type of internal candidate. These CEOs embody different managerial skills from traditional insiders and outsiders, combining firm-specific knowledge of insiders with a political detachment of outsiders. Drawing on years of formal and informal research into how corporations work, Bower believes that "the best leaders are people from inside the company who somehow have maintained enough detachment from the local traditions, ideology, and shibboleths that they have retained the objectivity of an outsider" (Bower, 2007, p. 8). Bower's book provides practical examples and offers advice on building inside- outsiders and succession planning. For instance, he considers a leader who left the company ten years ago and returned as an inside-outsider. In a related vein, a recent study by Cheng (2019) examined "leapfrog" CEOs or quick-rise internal CEOs who bypass more senior executives to be appointed CEO. However, this study was limited to high-performing firms. While these studies

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offer intriguing perspectives beyond the dichotomy of insider versus outsider, empirical evidence on the prevalence and effects of this type of CEO appointment remains relatively sparse.

In this study, I focus on CEOs promoted from their firms' subsidiaries rather than the parent organization, a category I term "hybrid" CEOs. These CEOs are insiders with more outsiderness, embodying the characteristics of both an insider and an outsider - that is, they possess an insider's knowledge of the firm, coupled with an outsider's relative detachment from internal social ties. Building on the idea of "inside-outsiders" (Bower, 2007) and the "outsiderness" continuum (Finkelstein et al., 2009), I empirically investigate the conditions and the outcomes of appointing these CEOs, extending previous research to examine how, when, why, and where firms find and appoint them. This study suggests an advantage of having a pipeline of hybrid candidates within the subsidiaries and that a plausible context for appointing these hybrid CEOs is during periods of turbulence when the firm needs significant change, but not radical restructuring.

Figure 1 illustrates parent firm A, with three subsidiaries, each with separate profit and loss (P&L) statements, and an external firm E. CEOs promoted from parent firm A are defined as "insiders"; Those promoted from the subsidiaries are "hybrid" CEOs; "Outsider" CEOs are individuals hired away from the external firm E. Conventional frameworks classify all candidates within the firm boundary, whether from the parent firm or subsidiaries, as insiders. This includes hybrid leaders, who often have diverse experiences inside and outside the organization. By lumping these hybrid leaders in with traditional insiders, we

might overlook key differences in expertise, network, or strategic perspective. This can result in companies failing to recognize valuable internal talent possessing unique skills well-suited for specific challenges or contexts. In fact, a significant one-third of CEO transitions in my sample are hybrid CEOs, a substantial portion that past research might have overlooked and classified as binary insiders.

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Hypotheses Development

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In this study, I propose that hybrid CEOs meld the characteristics of both insiders and outsiders. Similar to insiders, hybrid CEOs draw from firm-specific knowledge and internal networks, equipping them to make well-informed decisions and tackle potential resistance to change among stakeholders. Similar to outsiders, these individuals often possess a degree of autonomy and unique networks and are less entangled in the parent firm's internal politics due to their operational distance.

This resonates with the "inside-outsider" concept, as Bower (2007) described. He defines such a person as being "both inside and outside the company"; that is, "the successful CEO from inside must be able to look at his or her corporate inheritance as if he or she had just bought the company" (Bower, 2007, p. 16). A great inside-outsider must possess "a deep understanding of how the business actually works" (Bower, 2007, p. 60), including industry and product knowledge and administrative

inheritance encompassing both interpersonal and organizational relationships. He terms this the "plugged-in" insider, who knows how to work with and through the organization - skills that are vital when the organization needs to change (such as knowing which functional specialists to engage, how to seek assistance, and how to coordinate among key organizational members).

Another attribute of the inside-outsider, arguably the most important, is the ability to "see the need for change" (Bower, 2007, p. 74), an advantage typically associated with outsiders. Although many insiders possess deep knowledge of the company and social networks, they often fail to recognize the extent of necessary change. Even those who identify promising opportunities

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may find their visions often overwhelmed by the status quo and social constraints. An inside- outsider can and should leverage their knowledge of the company and its people, gained over years of experience within the organization while drawing substantially on their understanding of the new world to which the company must respond. They must do this without the cognitive and emotional baggage often tied to a long organizational tenure.

The value of an inside-outsider's attributes (or any specific skills or traits) must also be considered in the context of the specific challenges and opportunities that exist at that moment (Chen & Hambrick, 2012; Carpenter et al., 2001; Gupta & Govindarajan, 1984; Henderson et al., 2006; Miller & Shamsie, 2001). Prior literature suggests that an insider candidate is often appointed to

ensure organizational continuity and stability (Lauterbach et al., 1999). In contrast, outsiders are often selected when firms seek transformation or reorientation (e.g., Bailey & Helfat, 2003; Karaevli & Zajac, 2013; Zhang & Rajagopalan, 2010). "By definition, inside-outsiders are not run of the mill ... whether a particular skill set is important at the time of succession will have a lot to do with technology, markets, and the world at that time." (Bower, 2007: 85). This aligns with my argument that the benefits of hybrid CEO depends on the environment - although hybrid CEOs may offer potential benefits, their effectiveness may be enhanced or reduced depending on the circumstances.

In this study, I posit that hybrid CEOs are appointed more often during periods of turbulence, i.e., when a company needs to change but does not need a radical restructuring that an outsider might implement. Turbulence refers to instability or hard-to-predict environmental changes heightening uncertainty for key organizational members (Aldrich, 1979; Dess & Beard, 1984; Wholey & Brittain, 1989). It is typically associated with shifting external demands such as high industry growth rates, changing demand for products and services, financial crises, and other

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unpredictable exogenous developments that create uncertainty and volatility (Haleblian & Finkelstein, 1993; Kraatz, 1998; Wiersema & Bantel, 1993). In turbulent environments, firms commonly need incremental or gradual change but not radical restructuring (Grant, 2003). It is usually temporary and therefore would not require long-term reprogramming of the company (Garcia-Sanchez et al., 2014; Smart & Vertinsky, 1984).

Flexibility to adjust to the changing environment and the ability to assess a situation quickly and implement the right decisions under conditions of uncertainty are crucial success factors (Ulrich & Wiersema, 1989). The critical challenge for managers is "the constant need to adapt one's perception of the environment to fit its current reality" (Wiersema & Bantel, 1993, p.488).

Unprecedented changes in the external environment often require organizational adaptation to better fit the external environment (Cyert & March, 1963; Levinthal, 1991). In such contexts, managers must change their routine problem-solving habits and be vigilant in environmental scanning (Ancona, 1990; Eisenhardt, 1989). They need "an extensive, multidimensional collection of capabilities" (Volberda, 1996, p.361) and abilities to envision and implement new courses of action (Carpenter & Westphal, 2001; March, 1991; McGrath, 2001). The new CEO should be able to leverage as well as continue to use existing assets and resources (Kogut & Zander, 1992; Song et al., 2005). They must also possess firm-specific knowledge and a good understanding of organizational history and competencies to respond promptly and appropriately (Schepker et al., 2017). Moreover, higher task and environmental uncertainty levels require more extensive coordination and cooperation (Argote, 1982; Galbraith, 1977; Thompson, 1967). It is essential to have a certain degree of social networks within the organization that facilitate coordination, communication, and implementation of strategic changes, especially when the external environment is unstable. That is, the new CEO needs to have a vision which

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encompasses the current assets and situations and be willing to initiate and implement the appropriate actions.

Hybrids possess skills that are vital in turbulence when firms need to adapt quickly. As Bower (2007) suggested, an inside-outsider, or a hybrid candidate in my setting, is uniquely positioned within an organization. They possess a deep understanding of the company and connections with key internal stakeholders, characteristics typical of a "plugged-in" insider, enabling them to make informed decisions and smoothly implement changes. Simultaneously, with fewer social constraints and experience gained outside their parent company, they are equipped to "see the need for change" and are not afraid to implement it. They will likely explore various strategic options, introduce new management perspectives, and initiate necessary changes. Therefore, in situations demanding insight into the organization and a swift adaptation, these hybrid CEOs can respond without panic, improvise without undermining the existing structure, and maintain the strategic vision essential for guiding the organization forward. Their unique blend of insider's expertise and outsider's perspective equips them to recognize the need for change and execute those changes efficiently. Consequently, companies operating in turbulent environments, where adaptability and resilience are essential, will be more likely to appoint hybrid CEOs over purely insider or outsider CEOs.

Hence, I propose the following:
Hypothesis (H1): Companies operating in turbulent environments will be more likely to appoint hybrid CEOs over insider or outsider CEOs.

In this study, I posit that the benefits of a hybrid CEO depend on the environmental contexts. Hybrid CEOs do not systematically lead to higher organizational performance. I expect their effectiveness only when a hybrid CEO's unique characteristics align with the firm's strategic needs

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in the specific environmental context, that is, when the firm needs significant change to meet the shifts in the environment, but not a radical restructuring. These findings are consistent with prior studies that highlight the importance of contingencies when analyzing the differential effects of CEO types (Chen & Hambrick, 2012; Finkelstein et al., 2009; Karaevli & Zajac, 2013; Khurana & Nohria, 2000).

I argue that hybrid CEOs are particularly valuable in turbulent environments, where organizations must swiftly respond and adapt to changes. Their firm-specific knowledge enables them to allocate existing resources more efficiently during changes; Their strategies may be better aligned with the firm's existing capabilities; Their experience gained outside the parent company equips them with the ability to identify new strategic alternatives. Moreover, their social capital facilitates internal coordination without hindering the initiation and implementation of necessary changes.

Hypothesis (H2): Companies with hybrid CEOs achieve greater performance than those with insider or outsider CEOs in turbulent environments.

III. DATA AND METHODOLOGY Sample

To test these hypotheses, I compiled a list of CEO transitions within multi-unit U.S. firms between 1993 and 2017. I then developed a panel dataset linking each of these transitions to data on the characteristics of the incoming CEO and financial data for the focal firm and its external industry environment for three years preceding the transition and the three years following the succession.

I began building the estimation sample by the Directory of Corporate Affiliations (DCA) offered by LexisNexis, which provides company profiles and hierarchies for over 228,000 global

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(U.S. and international) parent companies and their units (e.g., affiliates, subsidiaries, and divisions) down to the seventh level of corporate linkage. The database reports detailed company structure annually from 1993 to 2017 for firms with more than 300 employees, exceeding $10 million in revenue, and indicating four-digit SICs for each unit. The source of the data is a combination of public filings and independent research undertaken by LexisNexis.

Each parent company and its respective units are assigned unique, permanent firm identifiers, enabling consistent tracking over time. For each of these units, the database records up to the top 50 managers and their corresponding positions, enabling me to compile the work history for each person. I identified a CEO transition as an instance where the CEO recorded for the ultimate parent firm at time 't' differed from the CEO recorded at

time 't-1'. This approach allowed me to systematically track and analyze changes in CEO appointments across the dataset.

To measure the pre- and post-transition performance and a set of corporate strategies, I obtain financial information on the ultimate parent firm from Compustat. The data sets were matched to the DCA by parent company names first using a matching algorithm and then by extensive manual checks. The performance estimation data is limited to public firms due to data availability.

Following prior research, I have excluded financial firms (SIC 6000-6999) and utilities firms (SIC 4900-4999) from the data set. The rationale for this exclusion is that these sectors are subject to heavy regulation and specific accounting rules, limiting their comparability to firms in other industries (Fama & French, 2001; Hadlock & Pierce, 2010; Malmendier et al., 2011). The final sample includes 2,071 CEO transitions that occurred within 1,450 multi-unit companies.

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Construction of main variables

Dependent Variables

New CEO origin. I divided all CEO transitions into three categories: insider CEOs, hybrid CEOs, and outsider CEOs. All CEOs referred to here are the CEOs of the ultimate parent company. Using employment history compiled from DCA data, I distinguished *hybrid* CEOs as those who, in the year prior to their appointment, worked within a subsidiary of the parent company rather than at the parent company itself. DCA defines

subsidiaries as a business owned by the company 50% or more, having separate profit and loss statements. *Insider* CEOs are those employed at the ultimate parent company before they were appointed CEO. *Outsider* CEOs are hired from outside the company.

Financial performance. I measured firm performance using each firm's return on assets (ROA), averaged over three years preceding and following the CEO transition, excluding the CEO transition year. A firm's ROA is computed by dividing its net income by its total assets and taking the log value.

Independent Variables

External environmental uncertainty. There are several environmental dimensions considered in the business literature (Aldrich, 1979). In this study, I focus on the degree of turbulence or stability of the external environment, identified as among the most critical in affecting the firm's strategic decision-making and ensuring the firm's survival (Dess & Beard, 1984; Sharfman & Dean, 1991; Wiersema & Bantel, 1993).

I measured external environmental turbulence or instability in two ways. First, I constructed environmental turbulence at the industry level by assessing changes in the industry

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concentration ratio, a standard approach employed in previous research (e.g., Carpenter & Westphal, 2001; Karaevli, 2007). Environmental turbulence or instability is "the rate of change in factors relevant to strategic decision-making" (Duncan, 1972; Wiersema & Bantel, 1993). It is mainly influenced by changes

in the industry's economic structure; such competitive dynamics represent a critical element of the environment (Sharfman & Dean, 1991). One key aspect of an industry's structure is the number and size distribution of the firms, which, according to economic theory, directly influences the intensity of competition (Bain, 1968). The change in the industry's concentration ratio is the primary way of quantifying this aspect, as it depicts "the shift in market share due to factors such as new entrants, consolidations, exits, or erosion of market share, thereby capturing the dynamic nature of a firm's industrial environment" (Wiersema & Bantel, 1993, p.493).

The industry concentration ratio is the percentage of an industry's sales, categorized by the four-digit SIC level, attributed to the four largest companies. I computed the annual absolute changes in the concentration ratio for each focal firm's industry. Subsequently, I created an indicator variable to represent high environmental instability, which is assigned the value of one if there are significant absolute changes (exceeding the sample median) in the year before the CEO transition and zero otherwise.

There may be concerns that firms anticipating a shift in the external environment might choose a hybrid CEO while concurrently preparing for the industry shift in other ways. This potentially confounding factor might mean that any observed effect on performance cannot be directly attributed to the hybrid CEO appointment. Also, past literature suggests that turbulence in the external environment is difficult to predict (Aldrich, 1979; Dess & Beard, 1984; Wholey & Brittain, 1989). To overcome

this identification challenge, I conducted a natural experiment using

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an external shock - the sharp increase in borrowing costs following the credit crunch of August 2007. By leveraging this unanticipated event, it is possible to isolate the impact of the hybrid CEO appointment on a company's performance more clearly (Flammer & Ioannou, 2021).

The credit crunch was sparked by the abrupt collapse of the mortgage-backed securities (MBS) market, leading to a sharp reassessment of credit risk. This resulted in a substantial surge in the cost of credit and allowed me to obtain (quasi-)random variation in the extent to which companies were hit by higher borrowing costs (Flammer & Ioannou, 2021). I categorize companies into treatment and control categories. The control group includes companies whose long-term debt was due to mature six months before August 2007, and as a result, they experienced a minimal impact from the financial crisis. The treatment group encompasses companies whose long-term debt matured six months after August 2007 and were thus heavily impacted by the crisis.

It can be argued that the timing of a firm's debt agreement—whether it was made before or after August 2007—was essentially random. Companies with debt maturing just before August 2007 had the advantage of rolling over their debt under pre-crisis conditions. In contrast, companies with debt maturing shortly after August 2007 faced significantly higher refinancing costs. Loan information was collected from

the Thomson Reuters Loan Pricing Corporation's (LPC) Dealscan. This database contains details about loans provided by financial institutions to U.S. corporations.

Controls

I control for a set of firm- and manager-level characteristics that could affect the propensity of appointing different types of CEO and subsequent firm performance.

Firm-level controls. Firm fixed effects are included to account for time-invariant, unobservable firm-specific characteristics. Year fixed effects are included in all specifications to

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account for economy-wide year-to-year changes. As robustness checks, I ran separate regressions with firm-level controls (in place of firm fixed effects), including parent firm sales (natural log of total annual sales of the parent firm), firm size (natural log of the total number of employees of the parent firm), pre-succession firm performance (ROA), subsidiary count (number of divisions and majority-owned subsidiaries that have no subordinate divisions or subsidiaries, i.e., number of base subsidiaries of the ultimate parent firm) (Zhou, 2013), and industry-fixed effects (a full set of two- digit SIC indicators of the parent firm). Note that firm size and all financial controls are average values for three years prior to CEO succession. I further controlled for regional factors (a complete set of indicators of the state where the parent company's headquarters is located) that may be correlated with the propensity of different types of CEO to be appointed and firm performance.

Manager-level controls. When performing regressions on the firms' tendency to appoint various types of CEOs, I incorporated a control for the manager's gender, which was identified by their first name and indicated whether the individual is female. I included an indicator variable of whether or not the individual was on the board of directors in the year before the CEO succession. In the regression testing the propensity of appointing different CEO types, I accounted for the number of years that the individual had spent at the parent firm before CEO succession.

Methodology

Propensity of appointing a hybrid CEO

To examine the likelihood of appointing hybrid CEOs in turbulent environments, I constructed a dataset in which each observation represents one CEO transition. I used the following empirical specification to estimate a logistic regression at the transition level.

$$\Pr(Hybrid) = F(\beta\, HighTurbulence + \delta + \tau + \epsilon)\ it\ 1\ it-1\ i$$
$$t\ i$$

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for firm i in year t. δ is a vector of firm-level controls, τ_t are year fixed effects. $Hybrid_{it}$ is

an indicator for the type of transition of firm i in year t, which equals one if the new CEO is a

hybrid candidate (i.e., promoted from one of its subsidiaries) and equals zero if the new CEO is an

insider or outsider candidate. $High Turbulence_{it-1}$ indicates industry-level environmental

instability, assessed by changes in the industry concentration ratio in the year preceding CEO

succession. I expect $\beta > 0$ if external environmental uncertainty has a positive relationship with 1

the probability that a hybrid CEO will be appointed.

Performance implications of appointing a hybrid CEO

Industry-level turbulence. To examine the performance implications of appointing a

hybrid CEO, I constructed a panel dataset encompassing the three years before and the three years

following each transition, excluding the year in which the transition took place (illustrated in

Figure 2). This time window aligns with previous studies examining the outcomes of CEO

transitions (e.g., Bennedsen et al., 2007; Chen & Hambrick, 2012; Karaevli, 2007; Shen &

Cannella, 2002). I used an ordinary least squares model and a difference-in-difference approach to

conduct my main analysis.

$$ROA_{it} = \beta_1 Post_{it} + \beta_2 Post{\times}Hybrid_{it} + \beta_3 Post{\times}Outsider_{it} + \beta_4 Post{\times}Turbulence_{it-1}$$

$$+\beta_5 Post \times Hybrid \times Turbulence + \beta_6 Post \times Outsider \times$$

$Turbulence + \delta_i + \tau_t + \epsilon_i$ for firm i in year t. The dataset is a panel data that includes a set of firms experiencing different numbers of CEO succession events over time, allowing me to capture both cross-sectional and time-series variations within the data. Each parent firm (identified by a unique firm ID) in the dataset has experienced one or more CEO transitions (identified by a unique succession ID). For each CEO succession event in the dataset, two distinct observations are recorded: one from the pre-succession phase (*Post* = 0) and another from the post-succession phase (*Post* = 1). In other

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words, every CEO succession event yields two separate data points, each depicting the firm's performance in its respective time frame. Firm performance is a three-year averaged return on assets. The binary variable, *Post,* is incorporated to specify whether a given data point belongs to the post-succession period (Post = 1) or the pre-succession period (Post = 0). Additional variables in each data point include the type of CEO succession, a measure of environmental turbulence, control variables, industry, and year fixed effects are also incorporated into the dataset.

Each CEO appointment is classified into one of three types: *hybrid, insider,* or *outsider*. These classifications are represented as binary variables, with a value of one indicating that the CEO is of that type and zero otherwise. In the empirical specification presented above, I excluded the indicator variable for insider CEOs, making insider CEO transitions the reference category by default. I also conducted my analysis with outsider CEO transitions set as the reference group for comparison.

The level of environmental turbulence at the industry level is also accounted for, represented as a binary variable (*High Turbulence*). A value of one indicates a high level of turbulence, while a zero indicates a low level of turbulence. This data structure allows us to analyze the impacts of different types of CEO succession on firm performance, and how these impacts vary under different environmental conditions.

I used the interaction terms to compare the pre- versus post-succession performance of hybrid CEOs relative to pre- versus post-succession performance of insider CEOs (and separately relative to outsider CEOs if the baseline category is an outsider). Specifically, β_2 captures the additional change in ROA between the pre-succession and post-succession periods for firms with hybrid CEOs, compared to those with insider CEOs, in *non-turbulent environments*. I expect $\beta_2 + \beta_5 > 0$, because their sum captures the changes in financial performance following CEO

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transitions for firms that appoint hybrid CEOs relative to firms that appoint an insider CEO *under turbulent environments.*

-- Insert Figure 2 about here --

Firm-level credit crunch (external shocks to uncertainty). In order to address concerns of endogeneity, whereby firms may anticipate a shift in the external environment and choose a hybrid CEO while concurrently making other strategic adjustments, I utilize a natural experiment framework. Past literature suggests that turbulence in the external environment is difficult to predict (Aldrich, 1979; Dess & Beard, 1984; Wholey & Brittain, 1989), and by using an exogenous shock, we can isolate the impact of the hybrid CEO appointment on a company's performance.

The exogenous shock I leverage is the sharp increase in borrowing costs following the credit crunch of August 2007 (Flammer & Ioannou, 2021). I focus on a subset of firms where a CEO transition occurred between 2001 and 2006, five years before the credit crunch. This exogenous shock is an unpredictable change in the firm's external environment. Firms are then categorized into treatment and control groups based on their exposure to the credit crunch.

The dataset structure mirrors the prior triple difference-in-differences design (illustrated in Figure 3). Each firm is recorded with a pre-crisis observation and a post-crisis observation, noting changes in firm performance measured by a three-year average return on assets. The binary variable *Treatment* is introduced to indicate the extent to which a firm

was affected by the credit crunch, with one indicating intense exposure and zero indicating weak exposure. CEO succession type is also captured for each firm, categorized as hybrid, insider, or outsider. The empirical specification is the following:

$$ROA = \beta\ Post + \beta\ Post \times Hybrid + \beta\ Post \times Outsider + \beta\ Post \times Treatment\ it\ 1\ it\ 2\ it\ 3\ it\ 4\ it$$

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$$+\beta_5 Post \times Hybrid \times Treatment + \beta_6 Post \times Outsider \times$$

$Treatment + \delta_i + \tau_t + \epsilon_i$ for firm i in year t. I expect that the firms most severely affected by the credit crunch but had appointed a hybrid CEO prior to the crisis would exhibit greater performance levels compared to firms led by other types of CEO. This reinforces the argument that hybrid CEOs have an inherent capability to deal with environmental uncertainties, irrespective of the original premise behind their appointment.

-- Insert Figure 3 about here ---

IV. RESULTS

Propensity of appointing a hybrid CEO

Table 1 presents the summary statistics of the main variables. 33% of the CEO transitions in my sample are categorized as hybrid successions, 54% as insider successions, and 13% as outsider successions. The mean workforce size across these companies is 8,125 employees, with an average of 16 subsidiaries and an average revenue of $5.6 billion. These are

large and established multi-unit firms. The mean tenure spent within the parent organization preceding the appointment to the ultimate CEO is five years. 73% of these managers served on the parent company's board of directors in the year preceding their transition to the CEO position. Women represent a small percentage of these CEOs, accounting for just 4%.

--- Insert Table 1 about here ---

Table 2 presents the correlation between the key variables in my sample. Note that the correlation between hybrid CEO appointment and industry-level turbulence is positive and

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significant at the 5% level, which is consistent with my prediction that hybrid CEO appointments are more likely when firms are experiencing turbulence or instability in the external environment.

--- Insert Table 2 about here ---

Table 3 compares the frequency of different types of CEO appointments (hybrid, insider, and outsider) after periods of high and low industry-level turbulence. It provides the number of appointments and their corresponding percentages for each type and turbulence level. Hybrid CEO appointments are more common in high turbulence environments (34.9%) compared to low turbulence environments (30.9%). Insider CEO appointments are more common overall but show a decrease in high turbulence environments compared to low turbulence

environments. Outsider CEO appointments are the least common and their frequency slightly decreases in high turbulence environments. This table suggests that when the external environmental turbulence is high, organizations appoint relatively fewer insider and outsider CEOs and more hybrid CEOs compared to periods of low turbulence. Conversely, when the industry is more stable (low turbulence), there is a slight preference towards appointing CEOs from inside the company.

-- Insert Table 3 about here --

Table 4 reports the estimation results for the propensity of appointing different CEO types. I conducted a logistic regression with the dependent variable as the appointment of hybrid CEO, and the independent variable of interest is industry-level turbulence, while incorporating firm- and manager-level controls as well as year and industry fixed effects (column 2). The estimated coefficient on *turbulence* is positive and statistically significant, suggesting a higher likelihood of appointing a hybrid CEO when a firm faces a turbulent external environment in the year before

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the CEO transition. The likelihood of appointing a hybrid CEO rises by 3.5 percentage points in a turbulent environment, holding all other factors constant. This is consistent with Hypothesis 1, that external environmental turbulence is associated with a greater chance of appointing a hybrid CEO.

Columns 1 and 3 show the likelihood of appointing insider and outsider CEOs. The estimated coefficients on turbulence are negative and statistically insignificant. The likelihood of appointing an insider CEO or an outsider does not differ significantly with respect to external industry uncertainty.

In column 2, the estimated coefficient on *base unit count* is positive and significant. Firms with more base subsidiaries may have a wider array of qualified internal candidates, thus, are more likely to appoint hybrid CEOs than firms with fewer subsidiaries. Firms also prefer managers with more extensive company experience for hybrid CEO roles, as indicated by the positive and significant coefficient on *tenure*. The estimated coefficient on *prior board position* is negative and statistically significant, suggesting that having served on the board of directors at the parent company reduces the likelihood of a manager being appointed as a hybrid CEO. This is consistent with the notion that individuals who have previously served on the board may be more committed to the organization's status quo or existing strategies. Additionally, these individuals are seen as more entrenched in existing networks and power structures within the organization, which could conflict with the more flexible, adaptive role a hybrid CEO might need to fulfill.

-- Insert Table 4 about here --

Performance implications of appointing a hybrid CEO

In Table 5, I examine post-succession changes in ROA by comparing the average ROA for the three years before the

transition relative to the three years following the transition (excluding

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the year of the transition). The dependent variable in each of these regressions is three-year averaged ROA. I examine the effect of hybrid CEOs relative to the effect of outsider CEOs (columns 1 and 3), and, separately examine the effect of hybrid CEOs relative to the effect of insider CEOs (columns 2 and 4), with year fixed effects and firm fixed effects to account for time-invariant, unobservable firm-specific characteristics.

The coefficient for the interaction term between *Post* and *Hybrid* captures the additional change in ROA from pre- to post-succession for companies with hybrid CEO appointments compared to those with outsider CEO appointments (column 1) or insider CEO appointments (column 2). This essentially compares the pre- versus post-succession performance of hybrid CEOs relative to the pre- versus post-succession performance of outsider CEOs (column 1) and, separately, to insider CEOs (column 2).

In columns 1 and 2, the estimated coefficients for the interaction variable between *Post* and *Hybrid* are not statistically significant (p-values of 0.610 and 0.231, respectively), which implies that in general, appointing a hybrid CEO does not make a significant difference in ROA. That is, I do not find that post-succession performance following the appointment of a hybrid CEO systematically differs from post-succession performance.

To test Hypothesis 2, I focus on a subset of firms that experienced turbulence in the external industry environment in the year before the CEO transition by adding an indicator for industry- level turbulence and interactions between this indicator and CEO type (columns 3 and 4). In column 3, the coefficient for the interaction between *Post*, *Hybrid*, and *High turbulence* is positive and significant (p-value = 0.015). The estimated coefficients imply that it is only among firms that experienced environmental turbulence, the appointment of a hybrid CEO is associated with a 3.5% increase in post-succession ROA relative to firms that appoint an outsider CEO (The effect is

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calculated by adding up the coefficients on *Post x Hybrid*, and *Post x Hybrid x High turbulence,* i.e., -0.053+0.088=0.035). Similarly, among firms that experienced environmental turbulence, the appointment of hybrid CEO is associated with a 4% increase in post-succession ROA relative to firms that appoint an *insider* CEO (see column 4: 0.006+0.034=0.04).

-- Insert Table 5 about here --

I ran a similar set of regressions with firm-level credit crunch as an exogenous shock to the external environment, where firms cannot anticipate a change in the external environment. I focus on the subset of firms in which the appointment of CEO took place before the credit crunch (between 2001 to 2006). Table 6 shows that among firms strongly affected by the financial crisis, those that had appointed a hybrid CEO prior to the credit crunch outperformed those that had appointed an insider or outsider

CEO (columns 3 and 4). Among firms that experienced greater external shock, firms with hybrid CEOs are associated with a 7 to 11% increase in post-succession ROA relative to firms with an outsider or insider CEO, which provides additional support for Hypothesis 2.

-- Insert Table 6 about here --

Figure 4 represents an event study on the subset of firms that were *strongly* affected by the credit crunch. The X-axis represents the time relative to the credit crunch, and the Y-axis shows the average return on assets (ROA). Before the credit crunch, the three types of firms appear to have somewhat parallel ROA trends. After the credit crunch, the *hybrid* group shows a rapid recovery and improvement in ROA. The *insider* and *outsider* groups suffered a decrease. Figure 5 plots the average ROA surrounding the credit crunch for the subset of firms that were *weakly*

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affected by the credit crunch. There is no significant gap in performance differences between hybrid versus. other types of CEOs. The adaptive advantages of hybrid CEOs seem to come into play more effectively when faced with stronger adversity.

-- Insert Figure 4 about here --

-- Insert Figure 5 about here --

Drivers of change in financial performance

Results in the previous section suggest that firms with hybrid CEOs performed better in the post-crisis years, especially for those most affected by the crisis. To examine the potential mechanisms underlying the increase in financial performance post-succession among firms with hybrid CEOs, I investigated how companies adjusted their investments in key strategic resources in response to the financial crisis. Following Flammer and Ioannou (2021), I ran the main regression with the dependent variable as the change in the firm's investment strategies, including their workforce, capital expenditures, and R&D. Workforce is computed by taking the natural logarithm of the number of employees. To measure investments in physical capital, I measured capital expenditure as the ratio of capital expenditures to property, plant, and equipment. To measure R&D investments, I calculated the ratio of R&D expenses to total assets. All measures are computed in the years 2007 and 2009 (Flammer and Ioannou, 2021).

Results show that among firms strongly affected by the financial crisis, hybrid CEOs responded by laying off more employees than insider CEOs, closer to what outsider CEOs are doing. From Table 7, the negative and significant coefficient for the interaction between *Post*, *Hybrid*, and *Firm-level credit crunch* in column 2 (p-value = 0.041) suggests that in response to

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the increase in borrowing costs during the credit crunch (i.e., for the treatment group), firms with hybrid CEOs in the period after the CEO appointment reduced their workforce by 6.8% more

than firms with insider CEOs. However, there is no statistically significant difference in workforce reduction between firms with hybrid CEOs and those with outsider CEOs during this period.

Columns 3 and 4 suggest virtually no significant difference in R&D spending between hybrid and other types of CEOs. Both coefficients on the triple interaction term are small in economic terms and statistically insignificant (p-values of 0.674 and 0.953, respectively).

In columns 5 and 6, I find that hybrid CEOs are cutting capital expenditures more aggressively than insider CEOs and outsider CEOs when faced with crises. Specifically, the coefficient of the triple interaction term implies that hybrid CEOs, in response to the financial crisis, reduced their capital expenditure ratio by 0.05 more than outsider CEOs. This corresponds to a decrease of 26% over the sample average. They also reduced their capital expenditure ratio by 0.06 more than insider CEOs, representing a 30% decrease over the sample average.

Overall, the findings indicate that companies led by hybrid CEOs responded to the financial crisis by laying off more employees and significantly reducing capital expenditures but sustaining their investments in R&D. This suggests that hybrid CEOs tend to focus on immediate rather than long-term strategies in the face of a crisis. This approach could play a key role in preserving their firms' competitiveness, which may, in part, account for the superior performance observed in the years following the crisis. This is consistent with the mechanism I propose – hybrid CEOs are taking bold actions like the outsiders but also seem to be retaining long-term strategies like the insiders. This is also consistent with the findings of Flammer

and Ioannou (2021), which suggest that firms that were adversely affected by the credit crunch followed a "two-pronged" approach of

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curtailing their workforce and capital expenditures while maintaining their R&D investments. They further document that firms following this approach achieved greater performance post-crisis.

-- Insert Table 7 about here --

Additional Analyses

Inverted U-shape relationship and continuous measures of outsiderness

I investigate the potential of an inverted U-shaped relationship between outsiderness and expected performance in turbulent environments. This suggests that both pure insiders and complete outsiders might yield lower expected performance in turbulent environments, whereas a balanced mix of the two can lead to enhanced outcomes. I construct a continuous "outsiderness" variable that equals zero for insiders, one for outsiders, and ranges between zero to one for hybrids, based on the relatedness index between the parent firm and the subsidiary. I use the Fan-Lang (2000) indices based on US input-output commodity flow data from the Bureau of Economic Analysis to create two distinct relatedness indices: one reflecting vertical relatedness (degree to which one industry can employ the other′s products and services as inputs for its own production or supply

output as the other′s input) and the other indicating complementarity (whether two industries can procure inputs jointly or share marketing and distribution networks).

To test the inverted-U shape relationship, I perform the following quadratic equation conditional on firms that had experienced external environmental turbulence in the year prior to CEO transition. The dependent variable is the difference in the three-year averaged ROA post- and pre-succession. The independent variable is the continuous outsiderness variable. Table 8 presents the estimation result. The first column presents the results when using vertical integration to

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measure outsiderness, while the second column displays the results when using complementarity to measure outsiderness. I followed Lind & Mehlum (2010)'s three-step procedure to test the inverted U-shape relationship. It is highly recommended by past literature to follow this three-step testing procedure before concluding that there truly exists a U-shaped curve over the data range (Haans et al., 2016). First, $\beta 2$ needs to be significant and negative, which is supported by the coefficients on the quadratic term in both columns of Table 8. Second, the slope must be sufficiently steep at both ends of the data range. Both slope tests are significant in my specification. Third, the turning point needs to be located well within the data range. Taking the first derivative of the quadratic equation and setting it to zero yields the turning point at 0.51 and 0.48 (for specifications 1 and 2 respectively). I also plot my results from specification 1 to visualize the U- shape relationship in Figure 6, with the X-axis as the degree of outsiderness and the Y-axis as the expected

performance (i.e., change in average ROA three years before and after the CEO transition). The shaded area represents the 95 percent confidence interval of the inverted U-shape curve. The three-step testing procedure implies an inverted U-shape relationship between outsiderness and expected performance in turbulent environments.

$$\Delta ROA\ pre-post, it$$

$$= \beta\ Outsiderness + \beta\ Outsiderness^2 + \delta + \tau + \epsilon\ 1\ it\ 2\ it\ i$$
$$t\ i$$

-- Insert Table 8 about here --

-- Insert Figure 6 about here --

Robustness Checks

Coarsened exact matching (CEM)

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A potential concern about our sample is that firms appointing hybrid CEOs are fundamentally different from firms appointing either insider or outsider CEOs, which could lead to biased estimates when comparing their performance. That is, firms that select hybrid CEOs might differ from firms that select other CEO types in ways that could influence post-succession financial performance. To address this concern, I employ coarsened exact matching (CEM) to balance the observed

covariates between these groups, ensuring a more robust comparison and minimizing confounding effects.

I create "treatment" and "control" groups that share similar pre-transition features, including pre-succession firm performance, number of subsidiaries, number of employees, firm revenue, firm age, industry, and transition year. Firms with hybrid and non-hybrid CEO transitions are now generally comparable in firm-level characteristics. Using the matched sample, I estimate the hypothesized hybrid CEO appointment effect on the post-succession performance and the moderating effects of industry-level turbulence. Results are in Table 9, which is consistent with the results of my main analyses.

-- Insert Table 9 about here --

Alternative measures of turbulence – Chinese import penetration

In addition to the industry-level turbulence and firm-level financial crisis measure, I use changes in the industry level of imports from China to the US as an exogenous trigger of turbulence and examine the effect of hybrid CEO appointment on subsequent firm performance when the Chinese import increases for the focal parent company in the year prior to CEO appointment. I calculate the level of Chinese import penetration as the share of the value of imports originating from China of total imports in an industry from 1999 to 2006 and computed

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the year-over-year change in the share of Chinese imports for each industry (Belenzon & Tsolmon, 2016; Bloom et al., 2016). When this growth exceeds the industry's median value, I categorize it as an indication of rise in Chinese imports or turbulence for that specific industry.

Table 10 presents the estimation results. Consistent with the main predictions, in general, there are no significant differences in post-transition performance between firms that appoint a hybrid vs. a non-hybrid CEO. It is among firms that experienced Chinese import increase in the year prior to the CEO transition, the appointment of hybrid CEOs is associated with 4-5 percent increase in post-succession ROA compared to insider or outsider CEO appointments.

-- Insert Table 10 about here --

Two-stage least squares

One potential concern is that the selection of a hybrid CEO is an endogenous decision as CEOs are not randomly assigned to firms. There may be unobserved factors that influence both the selection of a hybrid CEO and the firm performance. Therefore, to address endogeneity concerns regarding potential selection issues or omitted variable bias, I use a two-stage least square model with an instrument variable as the state-by-state non-compete law (NCA) enforceability, which is correlated with the likelihood of appointing a hybrid CEO but is not directly related to firm performance. I follow Marx (2022) and Ewens & Marx (2018) to construct state-level non-compete enforceability, given the state experienced a change in non- compete law -

whether strengthening or weakening - or had no change in labor laws.

The underlying rationale for this instrument stems from the observation that heightened enforceability of NCAs often limits outsiders from joining competing firms due to contractual constraints. When such enforceable NCAs restrain the onboarding of qualified external

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candidates, and a firm lacks a suitable internal candidate for promotion, there is a resultant propensity for the firm to consider internal redeployment from within its subsidiaries, thereby increasing the likelihood of hybrid CEO appointments.

The first-stage model in Table 11 column 1 shows that hybrid CEO appointments are more likely with an increase in NCA enforceability. The second-stage models in columns 2 and 3 show consistent results with my previous findings – among firms that had experienced turbulence in the year prior to CEO appointment, hybrid CEO appointments are associated with more than 2 percent increase in post-succession ROA compared to insider or outsider CEO appointments.

--- Insert Table 11 about here ---

Dominant subsidiaries

There are scenarios where the parent company essentially functions as a holding entity, and the subsidiaries dominate in terms of size and operations. For instance, Alphabet acts as the

holding company for Google, which is responsible for most of Alphabet's operational activities and revenue. In such instances, a CEO who is promoted from a dominant subsidiary could be perceived as an insider due to their significant influence and familiarity with the corporate structure. To address this, I identify subsidiaries that represent the majority of the firm—specifically, those that employ 50% or more of the total workforce—and I treat these dominant subsidiaries as equivalent to the parent company. The results remain consistent with the main analysis after excluding these companies. Additionally, I reclassify CEOs who are promoted from dominant subsidiaries as insiders instead of hybrid CEOs. The results are presented in Table 12: the first two columns exclude dominant subsidiaries, while the last two columns

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consider CEO promotions from these subsidiaries as pure insider promotions. The findings are consistent with my prior results.

-- Insert Table 12 about here --

Stacked Difference-in-Difference

The staggered nature of the CEO successions raises the concern that firms that appoint hybrid CEOs in period t might act as controls for firms that appoint them in period $t + x$. To address this problem, I set up a "stacked DID" in which there are essentially separate datasets/panels for each possible adoption year and the only control firms in that year are firms that have not yet hired a new CEO (e.g., Cengiz et al., 2019; Wing, 2021).

Specifically, I define the treatment event as the appointment of a hybrid CEO and construct lead and lag variables to capture the effects before and after the treatment, spanning a window of six years around the event. Control firms in my analysis are those that have not yet appointed a hybrid CEO.

Table 13 presents the findings from the stacked DID analysis. In the initial one to two years following the appointment of hybrid CEOs, firms with hybrid CEOs did not experience a significant increase in ROA relative to control firms. However, in the period spanning three- and four-years post-transition, firms that opted for a hybrid CEO—compared to those appointing an insider or outsider—experienced an average increase of one to two percent in return on assets. Figure 7 visualizes the estimated average effect of appointing a hybrid CEO over time, with the shaded area around the estimate line representing the confidence intervals. Prior to the appointment of the CEO (to the left of the dashed line), the average effect is generally stable and close to zero, suggesting that there are no major pre-existing trends. Hybrid CEOs saw a positive impact two to four years after the transition and persisted for several periods after the transition.

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--- Insert Table 13 about here ---

--- Insert Figure 7 about here ---

V. DISCUSSION AND CONCLUSION

The choice between appointing an insider or an outsider CEO is a complex decision that firms continuously navigate. Previous studies simplifying CEOs into these two categories overlook the complexity of CEO career trajectories and experiences. Recognizing CEOs as existing along an "outsiderness" continuum allows a more nuanced understanding of the advantages and drawbacks of different CEO appointments (Bower, 2007; Finkelstein et al., 2009).

Responding to the call for more theory and empirical research on the continuum of outsiderness, I introduce an additional category of CEOs along the continuum - the "hybrid" CEOs - who are essentially insiders with more outsiderness. These CEOs originate from the subsidiaries of multi-unit firms, possessing an insider's knowledge of the firm coupled with an outsider's relative detachment from internal social ties. These traits are especially valuable in turbulent environments or crisis situations that require a firm to respond and adapt to the changing environment appropriately and quickly.

Previous studies suggest that insider CEOs, equipped with firm-specific knowledge and established internal networks, are beneficial for ensuring continuity and stability, making them preferable when minimal change is required. Outsider CEOs, characterized by their innovative approach and relative immunity to internal politics, are more suitable when a company seeks transformation or significant changes. I argue that hybrid CEOs, a category that combines elements from both ends of the spectrum, provide a balanced blend of firm-specific knowledge and

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willingness for change without being overly entrenched in internal politics. These leaders can be precious in turbulent environments that call for adaptability, offering the right mix of continuity and change. Therefore, when moderate changes are needed, particularly in turbulent scenarios, companies are more likely to opt for a hybrid CEO, enhancing firm performance.

Utilizing data from over 1,400 multi-unit US public firms over 24 years, I discovered that one-third of CEO transitions involved hybrid CEOs. Consistent with my hypotheses, firms are more likely to appoint a hybrid CEO when the external environment is turbulent, and such appointments often lead to superior post-succession performance. Hybrid CEOs also exhibit greater resilience to external crises by taking appropriate, aggressive actions, such as layoffs or cutting capital expenditures. These findings support the theory that hybrid CEOs are willing to initiate changes and make appropriate adaptations under high environmental uncertainty due to their unique blend of firm-specific knowledge and less social embeddedness.

This study contributes to the strategic human capital and CEO succession literature by identifying a unique category of CEO on the outsiderness continuum. I have defined and operationalized hybrid CEOs utilizing the distinct organizational structure of multi-unit firms. This method goes beyond the traditional unidimensional focus on firm and industry tenure and allows for a more granular analysis of executive backgrounds. This research extends beyond existing studies that focus on conceptualizing the characteristics of "inside-outsiders" (Bower, 2007) and practical examples of successful hybrid CEOs in prominent corporations (e.g., General Electric, Volkswagen,

Yum Brands, etc.), by empirically examining the preferable conditions and performance implications of appointing hybrid CEOs.

The findings contribute to previous research underscoring the role of contingencies when analyzing the effects of different CEO types (Chen & Hambrick, 2012; Finkelstein et al., 2009;

Karaevli & Zajac, 2013; Khurana & Nohria, 2000). Specifically, this study suggests that hybrid CEOs do not universally contribute to superior organizational performance. Their effectiveness significantly depends on the congruence between their distinct characteristics and the firm's strategic requirements within the specific environmental context. This study also advances our understanding of how CEO transitions serve as a vehicle for organizational change and a mechanism through which organizations adapt to shifts in the external environment (Romanelli & Tushman, 1994; Virany et al., 1992).

Finally, this study emphasizes the importance of maintaining a robust internal managerial labor market. The development of hybrid leaders, embodying insider knowledge and outsider perspectives, becomes viable with a robust internal labor market. Firms should think broadly at their internal managerial labor market and have a pipeline of hybrid candidates groomed within the organization, because they could be especially useful under turbulent environments and adaptation. This suggests a need for firms to invest substantially in internal talent cultivation, developing potential leaders who can navigate the complexities of environmental turbulence and disruptive events.

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Figure 1. An illustrative example of multi-unit firm
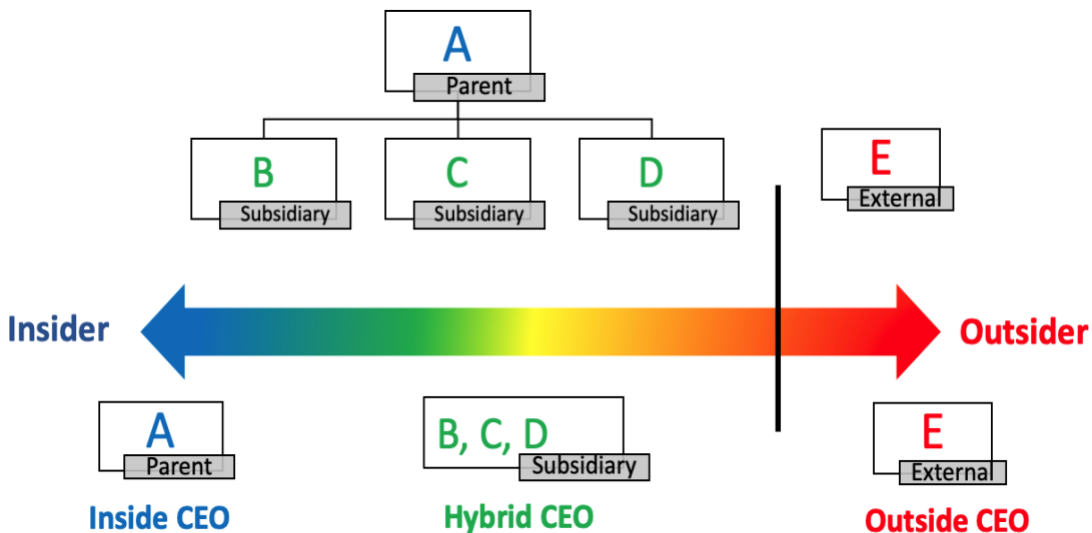
Figure 2. Illustration of data construction for industry-level turbulence

Figure 3. Illustration of data construction for firm-level turbulence
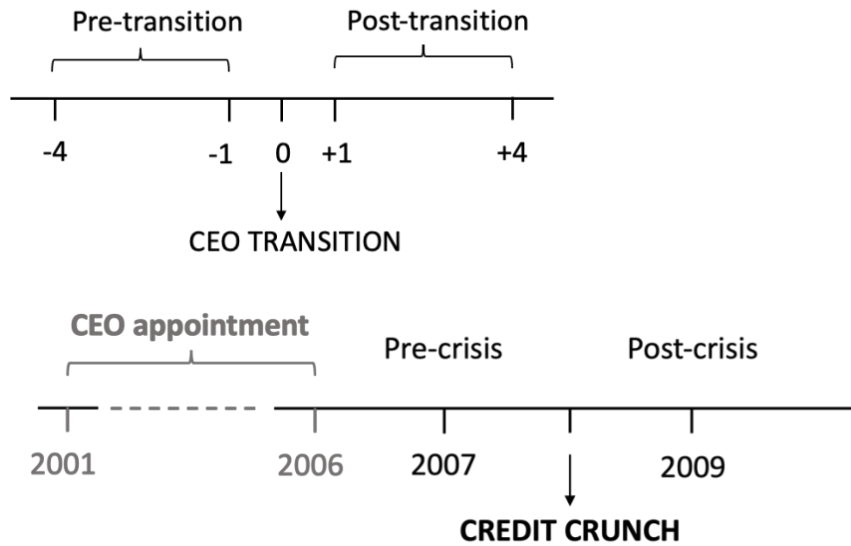
43

Figure 4. Average ROA surrounding the credit crunch (Strongly affected)
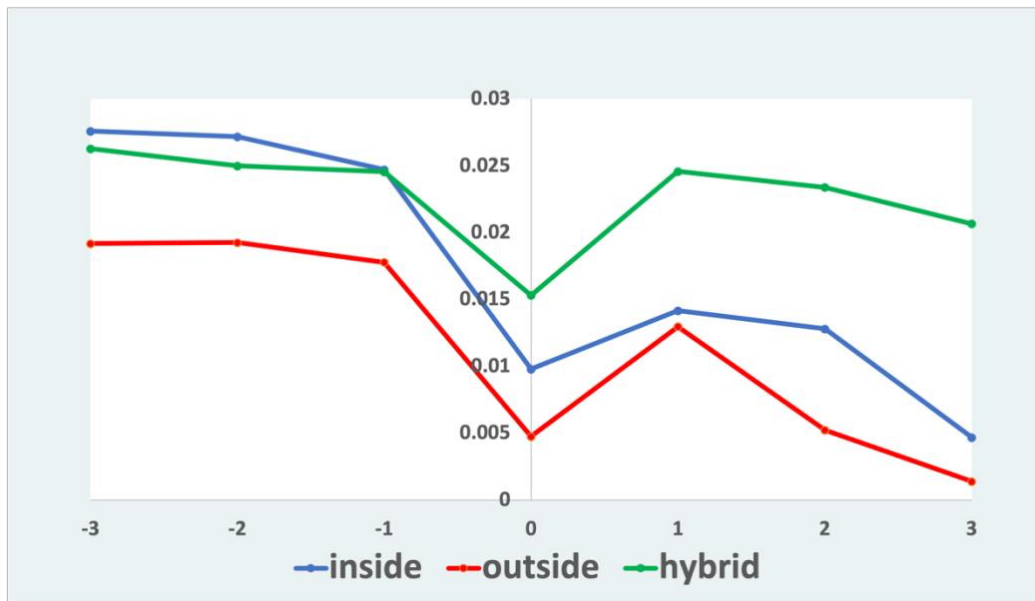
Figure 5. Average ROA surrounding the credit crunch (Weakly affected)
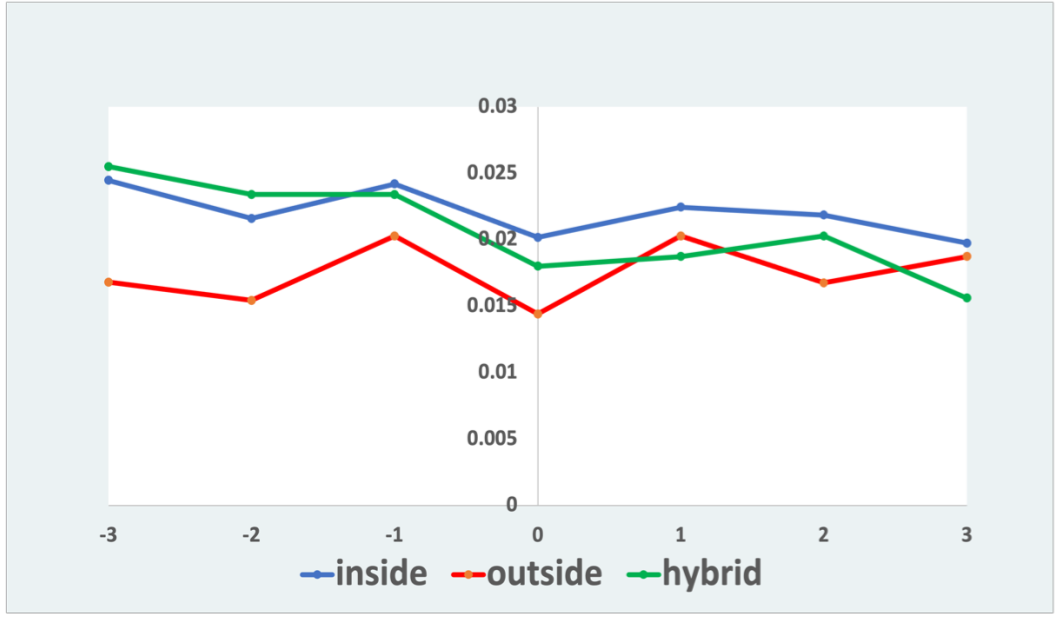
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Figure 6. Inverted U-shape relationship
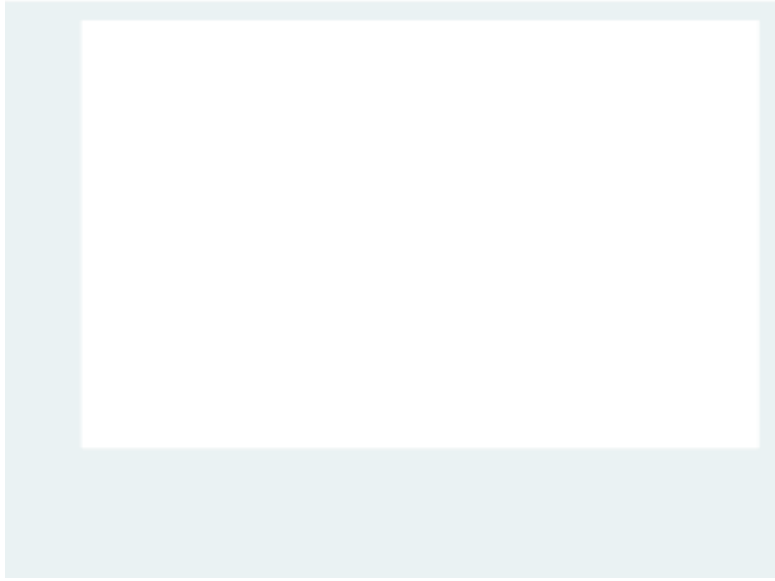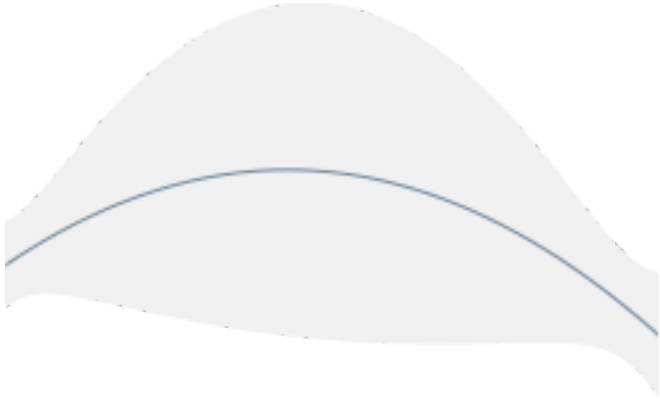
Figure 7. Stacked DID

Stacked DID
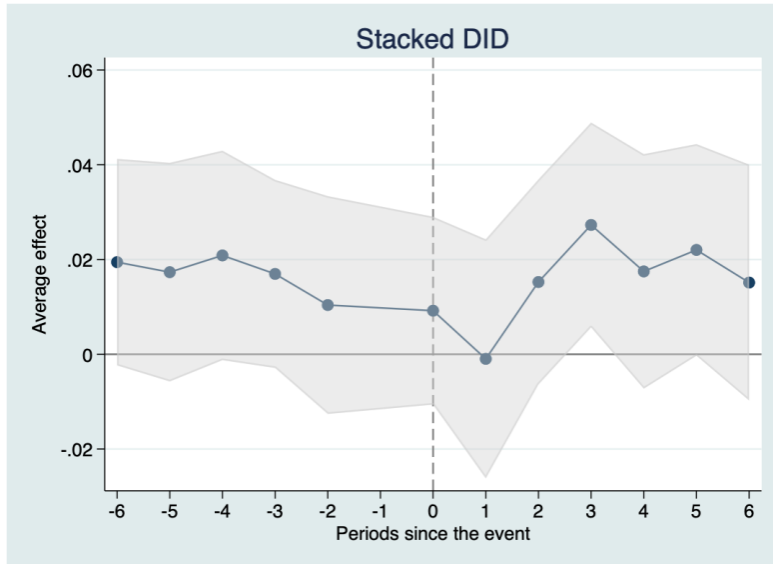
45
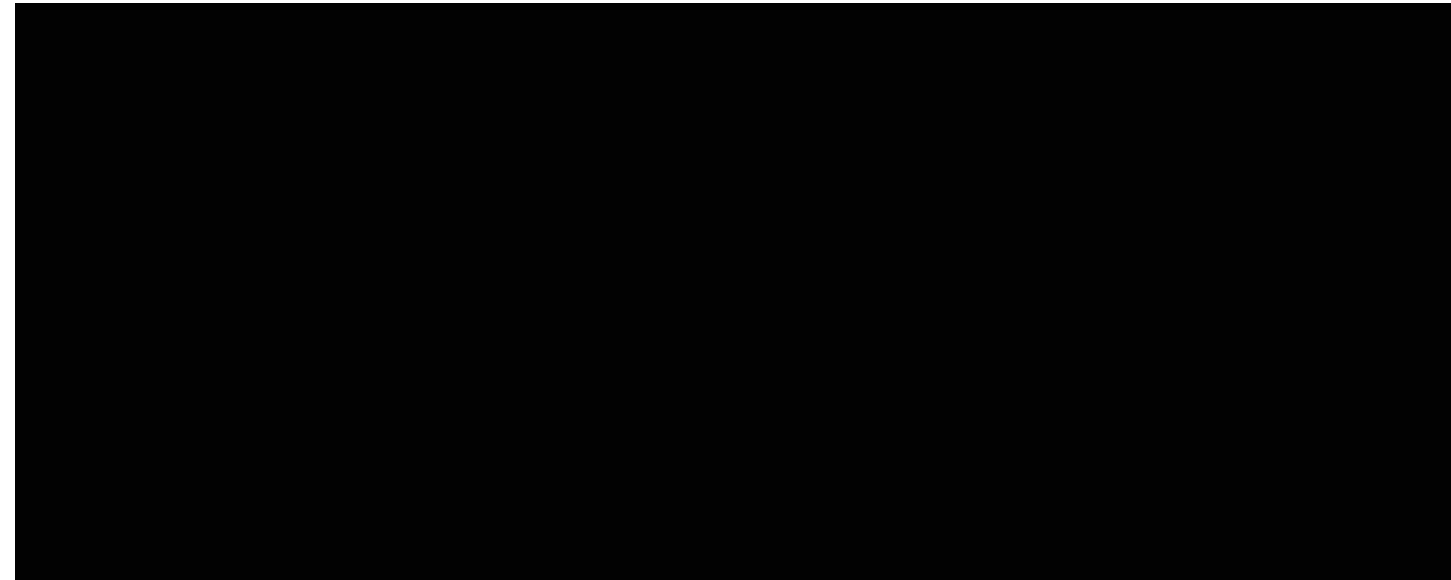
Variables

1. (1) Hybrid
2. (2) Insider
3. (3) Outsider
4. (4) Industry-level turbulence
5. (5) Firm-level credit crunch

6. (6) Increase in Chinese import
7. (7) ln(employees)
8. (8) ln(sales)
9. (9) ROA
10. (10) ROA change, avg 3-year
11. (11) Base unit count
12. (12) Prior board position
13. (13) Female
14. (14) Tenure at the parent firm

Table 1. Summary Statistics

Definition
Indicator of whether or not the appointment of CEO at time t=0 is a hybrid CEO

Indicator of whether or not the appointment of CEO at time t=0 is an insider CEO
Indicator of whether or not the appointment of CEO at time t=0 is an outsider CEO
Indicator of the whether or not the external environment is turbulent
Indicator of the whether or not the firm is strongly affected by the financial crisis (i.e., firms with long-term debt matures six months before the credit crunch of August 2007)

Indicator of whether there is a rise in Chinese import penetration

Natural log of total number of employees of the parent firm, averaged over three years prior to CEO succession (t=-1 to t=-3)
Natural log of total annual sales of the parent firm, averaged over three years prior to CEO succession (t=-1 to t=-3)

Parent firm return on assets, computed by dividing its net income by its total assets Difference between averaged 3 year ROA pre- and post-transition

Number of base subsidiaries of the ultimate parent firm
Indicator of whether or not the individual was on the board of directors in the year prior to CEO succession
Indicator of whether or not the individual is a female
Number of years that the individual has spent in the parent firm prior to CEO succession

Mean Std. Dev. 0.332 0.471 0.543 0.498 0.125 0.331 0.537 0.499 0.428 0.495

0.468 0.499 1.186 1.868

6.534 2.122

0.036 0.118

-0.001 0.164

16.744 32.805 0.728 0.445

0.038 0.191 5.055 3.926

4. (4) High turbulence
5. (5) Increase in Chinese Import
6. (6) ln(employees)

-0.412

-0.028 0.042 **-0.082 -0.098** -0.001 -0.020 **0.060 -0.040**

1

(8) ROA change, avg 3-year

9. (9) Base unit count
10. (10) Prior board position
11. (11) Female

1 -0.023 -0.009

0.016 0.013 -0.015 -0.007 *Notes:* This table reports the correlations between the main variables. Bolded figures are significant at

0.002 -0.002 5% level.

1 -0.016 -0.007 -0.014

1

Table 2. Correlations

Variables (1)

(2)

(3) (4)

1
-0.013 1

-0.052 -0.008

(5)

(6)

(7) (8)

1
-0.072 1

0.465 -0.006

(9)

(10)

(11)

1

   2. (2) Insider **-0.769**
   3. (3) Outsider **-0.267 0.038** -0.008 **0.127**

(7) ln(sales) **0.136** 0.019 **0.079** -0.033 0.031

(1) Hybrid

1

-0.058
-0.047
-0.025 -0.014 **-0.058 -0.053 -0.083** 0.026 **0.073 0.467 -0.043**
-0.019 -0.009 -0.012

0.054 0.059
0.049 0.040 **0.908**

Table 3: Proportion of CEO Types Appointed Following Periods of High vs. Low Industry Turbulence

		CEO Appointment Type			
		Hybrid	Insider	Outsider	
Industry-level Turbulence	Low	296 (30.9%)	538 (56.2%)	124 (12.9%)	958
	High	388 (34.9%)	590 (53%)	135 (12.1%)	1,113
		684	1,120	259	2,071

Notes: This table shows compares the frequency of different types of CEO appointments (Hybrid, Inside, Outside) one year after periods of high and low industry- level turbulence. It provides the number of appointments and their corresponding percentages for each type and turbulence level.

Table 4. Propensity of each type of CEO appointment

Hypothesis:

Dependent variable:

Indicator for industry-level turbulence standard error
p-value
Pre-transition parent company ROA

ln(number of employees) ln(sales)
ln(number of base subsidiaries) Indicator for prior board position Indicator for woman manager Tenure at the parent company

Year fixed effects Industry fixed effects

Observations Pseudo R-squared

(1)

Insider

-0.121 (0.094) 0.197 -0.095 (0.284) 0.736 0.058 (0.076) 0.443
-0.140 (0.068) 0.038 -0.039 (0.056) 0.491 0.322 (0.106) 0.002
-0.388 (0.244) 0.112 0.046 (0.013) 0.000

Yes Yes

2,071 0.050

(2) H1

Logit models Hybrid

0.170 (0.103) 0.098 0.024 (0.336) 0.944 -0.034 (0.083) 0.681
0.083 (0.075) 0.266 0.142 (0.060) 0.019 -0.323 (0.115) 0.005
0.381 (0.256) 0.136 0.127 (0.014) 0.000

Yes Yes

2,071 0.099

(3)

Outsider

-0.037 (0.142) 0.792 -0.483 (0.374) 0.197 -0.076 (0.113) 0.498
0.156 (0.099) 0.115 -0.360 (0.088) 0.000 -0.275 (0.155) 0.075
0.254 (0.342) 0.458

Yes Yes

2,071 0.091

Table 5. Hybrid CEO performance - Industry-level turbulence

(1)

(2) (3) H2
OLS models
ROA, 3-year average

(4)

0.006 (0.015) 0.659 0.059 (0.020) 0.004 -0.014 (0.012) 0.257

0.034 (0.020) 0.095 -0.054 (0.029) 0.057 -0.015 (0.009) 0.090 0.006 (0.010) 0.560 0.012 (0.023) 0.613

Yes Yes

4,200 0.728

Hypothesis:

Dependent variable:

Indicator for post, interacted with:
Indicator for insider -0.032 standard error (0.014) p-value 0.025
Indicator for hybrid -0.008 standard error (0.015) p-value 0.610
Indicator for outsider
standard error
p-value
Indicator for industry-level turbulence
standard error
p-value
Indicator for insider, interacted with industry-level turbulence
standard error
p-value
Indicator for hybrid, interacted with industry-level turbulence
standard error
p-value
Indicator for outsider, interacted with industry-level turbulence
standard error
p-value

Indicator for post 0.009 (0.013)

0.469 Indicator for prior board position 0.006

(0.010) 0.558 Indicator for woman manager 0.012

(0.023) 0.605

Year fixed effects Yes Firm fixed effects Yes

Observations 4,200 R-squared 0.727

0.013 (0.011) 0.231 0.017 (0.016) 0.286

-0.059 (0.020) 0.004 -0.053 (0.022) 0.015

-0.069 (0.026) 0.008 0.054 (0.029) 0.057 0.088 (0.030) 0.004

0.044 (0.018) 0.016 0.006 (0.010) 0.560 0.012 (0.023) 0.613

Yes Yes

4,200 0.728

-0.010 (0.007) 0.129 0.007 (0.011) 0.546 0.012 (0.025) 0.640

Yes Yes

4,200 0.727

Table 6. Hybrid CEO performance - Firm-level financial crisis

(1)

(2) (3) H2
OLS models
ROA, 3-year average

(4)

Hypothesis:

Dependent variable:

Indicator for post, interacted with:
Indicator for insider -0.034 standard error (0.040) p-value 0.401
Indicator for hybrid 0.005 standard error (0.042) p-value 0.908
Indicator for outsider
standard error
p-value
Indicator for firm-level credit crunch
standard error
p-value
Indicator for insider, interacted with firm-level credit crunch
standard error
p-value
Indicator for hybrid, interacted with firm-level credit crunch
standard error
p-value
Indicator for outsider, interacted with firm-level credit crunch
standard error
p-value

Indicator for post -0.002 (0.036)

0.950

Year fixed effects Yes Firm fixed effects Yes Individual level controls Yes

Observations 521 R-squared 0.629

0.038 (0.026) 0.140 0.034 (0.040) 0.401

-0.041 (0.053) 0.448 -0.066 (0.057) 0.246

-0.056 (0.072) 0.444 0.002 (0.080) 0.978 0.145 (0.083) 0.081

0.023 (0.049) 0.635

Yes Yes Yes

521 0.640

-0.026 (0.035) 0.461 0.041 (0.053) 0.448 -0.053 (0.034) 0.114

0.143 (0.052) 0.007 -0.002 (0.080) 0.978 -0.017 (0.020) 0.397

Yes Yes Yes

521 0.640

-0.036 (0.016) 0.028

Yes Yes Yes

521 0.629

Table 7. Corporate strategies in response to the credit crunch

(1)

Dependent variable: Ln(employment)

Indicator for post, interacted with:
Indicator for insider -0.055 standard error (0.049) p-value 0.256
Indicator for hybrid -0.025 standard error (0.051) p-value 0.618
Indicator for outsider
standard error
p-value

Indicator for firm-level credit crunch -0.027 standard error (0.068) p-value 0.691 *Indicator for insider, interacted with firm-level credit crunch* 0.043 standard error (0.075) p-value 0.569 *Indicator for hybrid, interacted with firm-level credit crunch* -0.055 standard error (0.076) p-value 0.467 *Indicator for outsider, interacted with firm-level credit crunch*

standard error

p-value

Indicator for post 0.007 (0.045)

0.878

Year fixed effects Yes Firm fixed effects Yes Individual level controls Yes

Observations 454 R-squared 0.997

(2)

0.030 (0.031) 0.342 0.055 (0.049) 0.256 0.016 (0.033) 0.628

-0.098 (0.048) 0.041 -0.043 (0.075) 0.569 -0.048 (0.019) 0.012

Yes Yes Yes

454 0.997

(3)

0.001 (0.013) 0.947 0.004 (0.014) 0.772

0.002 (0.016) 0.877 -0.009 (0.018) 0.637 -0.008 (0.019) 0.674

0.004 (0.012) 0.722

Yes Yes Yes

272 0.933

OLS models R&D

(4)

0.003 (0.009) 0.713 -0.001 (0.013) 0.947 -0.006 (0.008) 0.466

0.001 (0.012) 0.953 0.009 (0.018) 0.637 0.005 (0.005) 0.333

Yes Yes Yes

272 0.933

(5) (6) Capital expenditure

0.072 (0.042) 0.085 0.072 (0.043) 0.098

0.073 (0.051) 0.158 -0.065 (0.056) 0.253 -0.122 (0.057) 0.032

-0.112 (0.039) 0.005

Yes Yes Yes

463 0.811

-0.001 (0.023) 0.982 -0.072 (0.042) 0.085 0.008 (0.024) 0.735

-0.058 (0.034) 0.090 0.065 (0.056) 0.253 -0.040 (0.014) 0.006

Yes Yes Yes

463 0.811

Table 8. Hybrid CEO performance - Inverted U-shape relationship

(1) (2) H2
OLS models

Change in 3-year average ROA

Hypothesis:

Dependent variable:

Outsiderness
standard error
p-value
Outsiderness, interacted with Outsiderness

Year fixed effects
Firm fixed effects Individual level controls

0.193 (0.104) 0.064 -0.189 (0.105) 0.075

Yes Yes Yes

0.146 (0.087) 0.095 -0.151 (0.086) 0.082

Yes Yes Yes

1,241 0.952

Observations 1,265 R-squared 0.952

Table 9. Hybrid CEO performance - Coarsened exact matching

Hypothesis:

Dependent variable:

Indicator for post, interacted with: Indicator for hybrid

standard error
p-value
Indicator for hybrid, interacted with industry-level turbulence
standard error
p-value

Year fixed effects
Firm fixed effects Individual level controls

Observations R-squared

(1)

0.029 (0.024) 0.236

Yes Yes Yes

2,672 0.739

(2) (3) H2
OLS models
ROA, 3-year average

(4)

0.003 (0.020) 0.873 0.062 (0.027) 0.019

Yes Yes Yes

2,672 0.734

0.037 (0.049) 0.433

Yes Yes Yes

2,672 0.739

-0.028 (0.033) 0.396 0.120 (0.048) 0.012

Yes Yes Yes

2,672 0.734

Table 10. Hybrid CEO performance - Chinese import penetration

Hypothesis:

Dependent variable:

Indicator for post, interacted with: Indicator for hybrid

standard error
p-value
Indicator for hybrid, interacted with Chinese import increase
standard error
p-value

Year fixed effects
Firm fixed effects Individual level controls

Observations R-squared

(1)

0.021 (0.017) 0.194

Yes Yes Yes

3,011 0.739

(2) (3) H2
OLS models
ROA, 3-year average

(4)

-0.002 (0.015) 0.879 0.046 (0.022) 0.035

Yes Yes Yes

3,011 0.740

0.020 (0.011) 0.064

Yes Yes Yes

3,011 0.739

-0.006 (0.022) 0.790 0.063 (0.033) 0.062

Yes Yes Yes

3,011 0.740

Table 11. Hybrid CEO performance - Two-stage least squares

Hypothesis:

Dependent variable:

NCA enforceability
standard error
p-value
Indicator for post, interacted with:

Indicator for insider

standard error p-value
Indicator for hybrid standard error p-value

Indicator for outsider

standard error
p-value
Indicator for industry-level turbulence
standard error
p-value
Indicator for insider, interacted with industry-level turbulence
standard error

p-value

Indicator for hybrid, interacted with industry-level turbulence

standard error

p-value

Indicator for outsider, interacted with industry-level turbulence

standard error

p-value

Indicator for post

Year fixed effects

Firm fixed effects Individual level controls

Observations R-squared

(1)

Logit model Hybrid

0.213 (0.119) 0.074

(2) (3) H2

OLS models ROA, 3-year average

Yes Yes Yes

1,978 0.109

-0.023 (0.020) 0.270 -0.249 (0.061) 0.000

-0.086 (0.036) 0.019 0.014 (0.028) 0.624 0.275 (0.082) 0.001

0.087 (0.027) 0.001

Yes Yes Yes

1,978 0.697

-0.239 (0.060) 0.000 -0.018 (0.028) 0.509 -0.076 (0.031) 0.013

0.267 (0.080) 0.001 -0.002 (0.039) 0.956 0.074 (0.023) 0.001

Yes Yes Yes

1,978 0.697

Table 12. Hybrid CEO performance - Account for dominant subsidiaries

Hypothesis:

Dependent variable:

Indicator for post, interacted with: Indicator for hybrid

standard error
p-value
Indicator for hybrid, interacted with industry-level turbulence
standard error
p-value

Year fixed effects
Firm fixed effects Individual level controls

Observations R-squared

(1)

-0.050 (0.022) 0.026 0.086 (0.031)

(2) (3) H2
OLS models
ROA, 3-year average

(4)

0.006 (0.015) 0.659 0.034 (0.020)

0.006 0.093

Yes Yes Yes Yes Yes Yes

3,990 3,990 0.732 0.732

0.003 0.093

Yes Yes Yes Yes Yes Yes

4,200 4,200 0.728 0.728

0.009 (0.016) 0.562 0.036 (0.021)

-0.053 (0.022) 0.015 0.088 (0.030)

Table 13. Hybrid CEO performance - Stacked DID

Hypothesis:

Dependent variable:

Lead_1

standard error p-value *Lead_2*

Lead_3 Lead_4 Lead_5 Lead_6 Lag_1 Lag_2 Lag_3 Lag_4 Lag_5 Lag_6

Year fixed effects
Firm fixed effects Individual level controls

Observations R-squared

(1)

H2 OLS models ROA

0.009 (0.010) 0.363 0.010 (0.012) 0.376 0.017 (0.010) 0.094 0.021 (0.011) 0.064 0.017 (0.012) 0.141 0.019 (0.011) 0.080

-0.001 (0.013) 0.940 0.015 (0.011) 0.167 0.027 (0.011) 0.013 0.017 (0.013) 0.166 0.022 (0.011) 0.053 0.015 (0.013) 0.234

Yes Yes Yes

505,572 0.640