# Remotely Productive:
# The Efficacy of Remote Work for Executives*

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**Abstract**

We study the efficacy of remote arrangements between CEOs and firms. Such arrangements attract executive talent and overcome labor market segmentation but introduce frictions. Remote arrangements are associated with lower operating performance, firm valuation, and insider reviews. Using the private costs from uprooting the CEO's spouse as an instrument for the CEO's decision to seek remote work, we find similar negative effects. The performance decline increases for CEOs who live further away and cross multiple time zones. The mechanisms include the CEO's loss of information, short-termism, and consumption of leisure, such as recreational boats and beach homes. (*JEL* D22, G30, G32, G34, G40, J22, J24, M50, M54)

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A recent trend in corporate management has been a dramatic rise in remote work. While this shift was catalyzed by the global pandemic of 2020–2023, it raises the question of whether remote management can be adopted as an efficient long-term strategy after the economy returns to business as usual. Using a large survey, Barrero, Bloom, and Davis (2023) find that the global pandemic fueled a broad adoption of remote work into professional schedules, particularly for corporate managers and personnel with graduate degrees.

We provide evidence on remote arrangements of CEOs and study their association with corporate outcomes during normal business times. We seek to distinguish between two diverging views on remote management, which offer compelling arguments but relatively little empirical evidence.

On the one hand, the flexibility of remote management can allow boards to attain high-profile CEOs who would otherwise be unwilling to relocate for the job. Supporters of this view argue that remote technology accommodates many of the CEOs' daily tasks and offers efficiency gains. For example, Porter and Nohria (2018) find that CEOs spend 72% of their time in meetings and conduct 39% of their communication via remote means, such as email or phone. These tasks can be done remotely, and doing so can raise efficiency. Consistent with this view, Dingel and Neiman (2020) rank management jobs among the top five categories on the feasibility of remote work, with 87% of the tasks suitable for remote work.

On the other hand, the opponents of remote management argue that managing from a distance serves the CEO's interests at the shareholders' expense. For example, in early 2020, Elliott Asset Management launched an activist campaign against Jack Dorsey, the CEO of Twitter and Square, voicing concerns about his remote management. In an open letter to the Twitter board, another large shareholder explicitly attributed the firm's underperformance to "Mr. Dorsey's move to Africa."[1] Within a week after the campaign start, Dorsey cancelled his plans to work from overseas and called his announcement a mistake.

Other high-profile CEOs went through a similar change of views on remote management after experimenting with it during the pandemic. One surprising example is Zoom Inc., the architect of the leading technology platform for remote management. An early supporter of remote work, Zoom CEO Eric Yuan requested his personnel to return to the office in 2023, concluding that remote management hinders collaboration: "We cannot have a great conversation. We cannot debate..." (Asher 2023). These examples

[1] Open letter to the Board of Twitter, Inc., by Prof. Omid Kordestani, owner of 334,000 shares, Dec. 6, 2019. Available at: https://www.profgalloway.com/twtr-enough-already

show that the effects of remote arrangements are hard to predict ex ante even for well-informed insiders at technologically advanced firms that appear unconstrained by geographic distance.

To study remote management, we build a comprehensive database of 929 long-distance CEOs. We identify such CEOs by hand-collecting data on their remote arrangements from proxy statements and employment contracts and cross-checking it with their primary residences from voter registrations. The average (median) long-distance CEO lives 979 (776) miles from the headquarters, flies in for a few days a week, and works remotely from home or another location at other times. This schedule resembles remote arrangements in broader samples. Barrero, Bloom, and Davis (2023) find that the most common remote arrangement in the U.S. workforce entails working from the office for three days a week and working remotely on the other days.

We find that long-distance CEOs are economically important. From 2000 to 2019, 17.6% of public firms in our sample employed a long-distance CEO at least once. Such arrangements have become more common, and they appear across all major industries, with a higher concentration in technology and retail.

Our first analysis studies why firms hire long-distance CEOs. We find that firms use these contracts to extend the scope of their talent search and accommodate local segmentation in the CEO labor market. Long-distance arrangements are more common for firms located in areas with a thinner executive pool and in industries that require more specialized executive talent. Such arrangements are also more common for firms headquartered in peripheral locations, such as land-locked states in colder climates. These results align with prior evidence on geographic segmentation in the CEO labor market (Yonker 2017a) and the importance of the limited pool of qualified CEO candidates (Cziraki and Jenter 2021).

Our evidence suggests that long-distance arrangements help firms recruit CEO candidates with stronger credentials who might be unwilling to relocate to the firm's headquarters. Compared with locally based CEOs of the same firms, their long-distance peers are more likely to have prior CEO experience, hold degrees from Ivy League schools, and possess larger professional networks.

At the time of appointing long-distance CEOs, their firms look similar to other firms that complete a CEO search, according to (1) firm fundamentals, such as size and investment, (2) trailing performance, such as past ROA and stock returns, and (3) forward-looking metrics, such as Tobin's Q and earnings forecasts. Thus, we find no evidence that firms appoint long-distance CEOs at times of economic distress.

Our main finding is that remote CEO arrangements are associated with a decline in firm performance and valuation. When a firm is run by a long-distance CEO, it experiences a 90 bps decline in annual ROA and a 0.07 decline in Tobin's Q, as compared to the same firm run by a locally-based CEO and after controlling

for other CEO attributes, such as an external hire status and out-of-state origin. This performance differential, equivalent to 12.1% of the standard deviation in ROA and 4.4% of the standard deviation in Tobin's Q, starts to manifest within a year since the beginning of a remote arrangement. These estimates are robust to a variety of specifications, including those with firm × CEO spell fixed effects, which exploit a switch in a CEO's long-distance status during a continuous employment spell at the same firm. The decline in firm performance is greater for CEOs who live further away from the headquarters but also holds for CEOs who work remotely from a firm's field office near their primary residence.

The changes in firm outcomes during long-distance CEO arrangements are largely symmetric after the beginning and after the end of such arrangements. When the same CEO ends a remote arrangement and moves to the headquarters during a continuous employment spell, their firm's operating performance and valuation increase. Conversely, after a CEO relocates away from the headquarters, these indicators decline for the duration of the remote arrangement. By holding constant a firm-CEO spell pair, this analysis accounts for the matching between CEOs and firms and absorbs time-invariant CEO characteristics, such as skill, innate ability, or risk aversion, that could be correlated with a CEO's self-selection into a long-distance arrangement.

While the analyses of the switches in the CEO's remote status and specifications with high-dimensional fixed effects raise the bar for an omitted variable, they do not rule out potential latent factors. Remote arrangements reflect a joint endogenous decision of the firm (demand side) and the CEO (supply side) to enter into a bilateral agreement, and this decision internalizes a variety of unobservable factors.

On the demand side, firms facing bleak economic prospects might be more willing to offer a long-distance arrangement to fill a CEO search or to allow an incumbent CEO to work remotely. In this case, the subsequent decline in firm performance could be attributed to the realization of such pre-existing expectations rather than the CEO's actions. To elicit such forward-looking expectations, we extract informed signals from the discretionary insider trades of directors and executives. We find that, if anything, the insider trade imbalance around the start of long-distance arrangements suggests directionally more favorable (but insignificant) insider expectations. Thus, we find no evidence that boards adopt remote CEO arrangements in anticipation of an impending performance decline. We reach a similar conclusion when we study information signals from equity analysts. We find no significant changes in analyst recommendations and earnings forecasts before the start of a remote CEO arrangement or a switch in a CEO's remote status.

On the labor supply side, across CEOs, it could be that lower-type executives self-select into remote arrangements. For the same CEO, it could also be that their request for a remote arrangement in an employment

contract signals lower commitment to the employer or a preference for a quiet life away from the headquarters. In this case, the subsequent decline in firm performance would be partially attributed to these latent factors rather than the effects of remote management.

To address the supply-side endogeneity, we develop an instrument for the CEO's decision to seek a remote arrangement based on their spouse. We argue that the private relocation costs for the CEO's spouse are significantly higher if moving to the firm's headquarters would force the spouse to leave their home state, thus disrupting the spouse's network and access to extended family. Thus, the same CEO is more likely to seek a remote arrangement for firm A than for an identical firm B if relocating to the headquarters of firm A would uproot the CEO's spouse. Likewise, for any given firm, CEOs have varying propensities to seek a remote arrangement, depending on their spouse, a factor plausibly exogenous to firm fundamentals. After identifying the CEO's then-current spouse or partner from deed and co-habitation records, we infer the spouse's home state from the first digits of their social security number. We find that a CEO is significantly more likely to have a remote arrangement (F-statistics > 20) if relocating their family to the headquarters would uproot the spouse from their home state. Using this instrument for the CEO's decision to seek a remote arrangement, we confirm that firm performance and valuation decline during such arrangements.

Next, we study the mechanisms underlying the link between remote management and firm outcomes by analyzing 1.5 million CEO reviews from employees, managers, and executives. We find that a CEO's approval rate at the same firm drops by 6.2 percentage points after the CEO switches from an onsite to a remote arrangement. This effect is stronger in the reviews from better-informed insiders—those who hold management jobs and work at the headquarters. Using a large language model to analyze the content of employee reviews, we identify several common concerns about remote CEOs: (1) loss of information and disconnect from daily operations, (2) short-termism, and (3) consumption of perquisites and leisure.

We find support for the three channels motivated by insider reviews. First, consistent with information loss, the decline in performance during long-distance arrangements is stronger for geographically localized firms, where information is concentrated at the headquarters, as well as for CEOs working from a different time zone. Second, consistent with short-termism, remote management is associated with a decline in R&D spending and a shift in investment towards assets with a shorter useful life. Third, consistent with the consumption of leisure and perquisites, the decline in performance during remote arrangements is twice as strong for CEOs who reside in a beach home or own a recreational yacht.

Finally, we study whether the board and investors learn from the performance of long-distance CEOs. As a CEO's performance in a remote arrangement is observed over time, the board appears to update its priors and take actions. This gradual learning is consistent with anecdotal evidence on firms' experimentation with remote arrangements and subsequent policy revisions, as well as insights about on-the-job CEO evaluation from structural estimation. For example, in the first structural model of CEO turnover, Taylor (2010) models the board's gradual learning about the CEO's skill and quantifies the costs of CEO replacement. We find that long-distance CEOs are more likely to resign under pressure and finish their tenure 1.8 years earlier than their peers at the same firm. The departures of long-distance CEOs yield positive announcement returns of 2.4–2.6%, in contrast to the muted market reactions to most CEO departures (Weisbach 1988), suggesting an increase in firm value from ending a remote arrangement. Firms that employed a long-distance CEO are less likely to have another such arrangement in the future.

Overall, remote arrangements help firms expand the pool of executive talent and overcome labor market segmentation. However, these immediate benefits in filling a CEO search come with future frictions.

**1. Contribution to the Literature**

Our paper is part of the literature on alternative work arrangements. In contrast to the focus on rank-and-file staff and white-collar professionals in prior research, we provide evidence on long-distance CEOs—the agents endowed with control rights over the firm. Bloom, Han, and Liang (2023) suggest that remote work has a different effect on the productivity of executives and staff. Using an experiment at a technology firm, the authors find higher productivity and lower quit rates for rank-and-file workers, consistent with the evidence from call centers (Bloom et al. 2015; Mas and Pallais 2017). However, in the same experiment, Bloom, Han, and Liang (2023) find the opposite effects of remote work on managers, such as lower perceived productivity, pessimism about the policy, and attrition. The authors suggest that the effects of remote work differ for jobs that require managerial decisions. Consistent with this view, several studies find negative effects of remote work on white-collar professionals, such as procrastination of patent examiners (Frakes and Wasserman 2016), increased coordination costs of IT developers (Gibbs, Mengel, and Siemroth 2023), lower informativeness of equity analysts (Naderi 2023), underperformance of fund managers (Cao, Simin, and Xiao 2024), and lower productivity of academics (Barber et al. 2021). In contrast, Kwan, Matthies and Yuskavage (2024) find positive effects of remote work on the productivity of knowledge workers at the start of the pandemic.

Our paper departs from most research on white-collar agents by studying remote arrangements outside of the pandemic and offering micro evidence from insiders on their efficacy and mechanisms. Our focus on normal business times mutes the effects of transient shocks affecting remote work during the pandemic, such as school shutdowns, pandemic-induced stress, and disrupted commuting. These temporary factors constrained the productivity of remote work during the pandemic (Barber et al. 2021; Du 2023) but have been mostly eliminated thereafter. At the same time, because our findings describe usual business times, these relationships may evolve in the future as firms re-optimize remote work after the global pandemic.

We also extend the literature on the CEO labor market. Cziraki and Jenter (2021) show that the pool of CEO candidates is surprisingly small, suggesting that boards recruit from their networks and heed private effort during a CEO search. Taylor (2010) develops a structural model of CEO turnover and finds that CEO replacement entails large private utility costs to the board. Cremers and Grinstein (2014) and Yonker (2017a) show that the CEO labor market is segmented by industry and location, respectively. Deng and Gao (2013) find that the desirability of a firm's location matters for CEO recruitment. Collectively, this evidence suggests that the pool of CEO candidates is limited, particularly in peripheral locations, and boards incur significant private costs to fill a CEO search. Our results suggest that firms endowed with less attractive lifestyle factors and a thinner local talent pool respond to these constraints by adopting long-distance CEO arrangements. This strategy expands the candidate pool and attracts competitive talent but comes with long-distance frictions.

We add to the research on CEOs' private residences. In the first paper on this topic, Liu and Yermack (2012) study CEOs' real estate transactions and find that CEOs' purchases of luxury homes are followed by a decline in firm performance, consistent with entrenchment. Recent work shows the importance of CEOs' geographic preferences in acquisitions (Chung, Green, and Schmidt 2018; Jiang, Qian, and Yonker 2019) and labor policies (Yonker 2017b; Guenzel, Hamilton, and Malmendier 2023). We extend this work by identifying the drivers of CEOs' location choices, such as favorable tax jurisdictions, good schools, and mild climates.

We also contribute to the literature on the effects of geographic distance inside the firm. Giroud (2013) finds that production plants located further away from the headquarters obtain less investment and have lower productivity. In complement to prior work's focus on the location of physical assets, we provide evidence on the location choices of the firm's top executives and demonstrate their importance for firm outcomes.

Finally, we add to an emerging literature on the role of CEOs' families in their financial decisions. Yonker (2017a) shows that CEOs are more likely to run firms in the state of their childhood home, consistent with a preference for proximity to family. Duchin, Simutin, and Sosyura (2021) show that familial factors

affect CEOs' hiring and capital allocation decisions. Decaire and Sosyura (2023) find that CEOs divert corporate resources to increase the value of their family assets. We find that CEOs' family factors affect their choice of primary residence and the decision to work remotely, and such decisions matter for firm outcomes.

## 2. Data and Sample

### 2.1 Disclosure of CEOs' long-distance arrangements

We begin constructing the sample of long-distance CEOs by conducting a comprehensive search of corporate disclosures, which discuss CEOs' commuting arrangements in 2000–2019. We limit our sample to publicly traded companies that are headquartered in the U.S. and have available data on CEOs from Execucomp or BoardEx. We start our sample in 2000 because data coverage in BoardEx is sparse in prior years. Our primary sources of disclosure comprise definitive proxy statements and CEO employment and separation agreements.

Definitive proxy statements (form DEF 14A) are mandatory disclosures filed with the Securities and Exchange Commission (SEC) when a publicly traded firm requests a shareholder vote, most commonly in conjunction with an annual meeting proxy. Our primary interest is in the additional disclosures related to CEOs' personal benefits and working arrangements in the proxy statement.

In the section dedicated to executive compensation, proxy statements disclose the dollar value of annual compensation classified as other than as salary or bonus, such as the reimbursement of the CEO's commute to the primary residence, home office expenditures, or relocation expenses. Item 402 of SEC Regulation S-K (Executive Compensation) explicitly requires such disclosures: "Examples of items requiring disclosure as perquisites or personal benefits under Item 402 include, but are not limited to: … personal travel using vehicles owned or leased by the company, personal travel otherwise financed by the company, personal use of other property owned or leased by the company, housing and other living expenses (including but not limited to relocation assistance and payments for the executive or director to stay at his or her personal residence), commuting expenses (whether or not for the company's convenience or benefit)." [2]

If the combined value of the executives' personal benefits exceeds $10,000 per year, firms must report these expenses and identify each item by type, regardless of the amount. Firms must also provide "a narrative disclosure of specific information regarding tabular items where necessary to an understanding of the tabular disclosure." [3] These narrative disclosures often discuss the location of the CEO's primary residence in

[2] As per disclosure requirements for executive compensation under 17 CFR § 229.402, Item 402 (page 78): https://www.sec.gov/rules/final/2006/33-8732a.pdf

[3] According to the disclosure guidance for executive compensation under 17 CFR § 229.402, Item 402 (page 18): https://www.sec.gov/rules/final/2006/33-8732a.pdf

conjunction with their commuting expenditures. If a firm only discloses that the CEO's primary residence is "out of state", we establish its address from voter registration and deed records, following the algorithm in Section 2.2. Internet Appendix A.1 shows disclosures of long-distance arrangements in the proxy statements.

We augment and cross-check the information in proxy statements with disclosures from CEOs' employment and separation agreements, as well as their amendments. SEC Regulation S-K requires that firms disclose the terms of their employment agreements with top executives. These agreements are usually filed as exhibits accompanying the annual report or the proxy statement, and we obtain them from the SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system. CEOs' employment agreements usually include a section on expense reimbursement and relocation expenditures, which we use to identify and confirm a CEO's remote status. For example, employment agreements of long-distance CEOs often acknowledge that the CEO will maintain their primary residence away from the headquarters, will be given an allowance for the setup of a remote home office, and will be reimbursed for travel expenses to the headquarters. Internet Appendix A.2 shows examples of such disclosures in CEOs' employment agreements.

**2.2 CEOs' residences and marital partners**

To establish the address of a CEO's primary residence, we rely on the executive's voter registration records, deed transfer records, and tax assessment records. We cross-check them with the CEO's self-identified primary residence in employment and separation agreements, political contribution forms, and, if available, disclosures of the names and addresses of the beneficial stock owners, using the algorithm discussed below.

We hand-match CEOs with long-distance arrangements to the Lexis Nexis Public Records (LNPR) database, using each executive's full name and year of birth. LNPR aggregates information on over 500 million U.S. individuals (live and deceased), who are traced throughout the database via a unique ID linked to one's social security number (SSN), observable with the exception of the last four digits. Examples of records in LNPR include deed and tax assessment records, utility and telephone connections, and criminal filings. Prior studies have used LNPR to acquire personal information on CEOs (Cronqvist, Makhija, and Yonker 2012; Yermack 2014; Duchin, Simutin, and Sosyura 2021), fund managers (Pool, Stoffman, and Yonker 2012; Chuprinin and Sosyura 2018), securitization agents (Cheng, Raina, and Xiong 2014), financial journalists (Ahern and Sosyura 2015), and hospital administrators (Hankins, Liu, and Sosyura 2025).

We manually validate the accuracy of each LNPR match by ensuring that the CEO's employer, work email address, and title in the LNPR employment records match the executive's career history. Using LNPR,

we obtain the CEO's date of birth, address history, deed records, and tax assessment records. For each CEO, we also obtain their partial SSN and infer the state of its issuance. For SSNs issued before June 2011, the first three digits indicate the state or territory granting the number. We refer to this state as the person's home state and follow the same approach for the CEO's spouse. For the small fraction of CEOs and their spouses born abroad, the state granting the SSN is usually the state where the person immigrated in the United States.

We identify the CEO's spouse or partner during the CEO's tenure from deed records (co-owned home titles) and address history (co-habitation). We verify these data with the list of the CEO's relatives in LNPR, which identifies the spouse. We record the spouse's name, date of birth, address history, and home state.

We define a CEO's primary residence in a given year as the address where this executive is registered to vote or resides together with their spouse (based on utility and phone billing records in LNPR). As an additional check, we verify that the location of the CEO's primary residence matches the city of the CEO's residence mentioned in the firm's discussion of the commuting expenses in the proxy statement.

Voter registration records typically provide the CEO's residential address, date of birth, date of registration, and date of last activity or moving out. We obtain voter registration records by filing disclosure requests for statewide voter registration data with each state's Department of State and combine these records with the voter registration records available from LNPR. Using the combination of these sources, we obtain voter registration data for 36 states and the District of Columbia, comprising about 85% of the U.S. population.[4] We match executives to voter registration records using their full name and the month and year of birth (from LNPR) and verify these matches by confirming that the CEO's spouse is registered to vote at the same address.

If we are missing a CEO's voter registration record, we establish the executive's primary residence as the address of the real estate property (based on deed records in LNPR) that matches the city of the CEO's primary residence in the firm's description of commuting expenses. If a firm does not disclose the city of the CEO's primary residence, we use the address where the CEO lives together with their spouse and verify that this address matches the CEO's primary address listed in the employment agreement. Using a combination of these methods, we identify the primary residence for 100% of the long-distance CEOs in our sample.

Finally, we construct a historical panel of corporate headquarters from proxy statements and calculate the distance between the address of the firm's headquarters and the CEO's primary residence at the time of

[4] The fourteen states for which we do not have voter registration data include Arizona, Indiana, Iowa, Kentucky, Maine, Montana, New Hampshire, New Mexico, North Dakota, Tennessee, South Carolina, South Dakota, Virginia, and West Virginia. As of 2019, the estimated combined population of these states is 51.4 million people or 15.5% of the U.S. population (331.8 million).

the CEO's tenure, using Google maps. We also calculate the time difference (in hours) between these locations, using the Time Zone Database. We augment these data with executives' education, career histories, and governance data from BoardEx, firm financials from Compustat, and equity analyst forecasts from IBES.

### 2.3 Dates of remote arrangements

To establish the starting and ending year of a CEO's long-distance arrangement with a firm, we follow the firm's history of annual disclosures in the proxy statements pertaining to the CEO's commuting and relocation expenses. For example, if a firm discloses the reimbursement of its CEO's commuting expenses in 2012–2015, followed by the reimbursement of relocation expenses in 2015, we infer that the CEO had a long-distance working arrangement in 2012–2015, which ended with their relocation to the headquarters in 2015.

We verify CEO relocation events by tracing the revisions in CEOs' employment agreements, as well as purchases and sales of the primary residences. During the relocation year, we establish the approximate month of the CEO's relocation to or away from the headquarters by using the earliest of the following dates: (1) sale of the prior primary residence, (2) purchase of a new home near the headquarters, or (3) voter registration in a new state. We obtain the dates of home transactions from deed transfer records in LNPR and augment this information with property-level history from Zillow.com.

To exploit the variation in a CEO's long-distance status within a continuous employment spell, we collect the starting and ending dates of the CEO's tenure with the firm and the announcement dates for the CEO's appointment and departure. These data come from corporate press releases about management changes.

### 2.4 Sample and summary statistics

We start with a sample of publicly traded U.S. firms with available data on CEOs from Execucomp or BoardEx and impose three sample filters. First, we exclude executives acting as temporary CEO replacements during a search for a permanent CEO, such as interim or acting CEOs, because they have a short time horizon and likely a different set of incentives. Second, to ensure a sufficient period for evaluating CEO performance, we exclude CEOs who held their position for less than 12 months. Finally, we exclude firms with missing data on income or assets. After imposing these filters, we arrive at our main sample of 6,655 CEOs and 3,136 firms.

We impose two conservative criteria to define CEOs with long-distance arrangements. First, we require that the roundtrip commute between the CEO's primary residence and the firm's headquarters exceed 100 miles. Second, we require that the long-distance arrangement between the CEO and the firm last for at least one year. This criterion eliminates short-term transitions around a CEO's relocation to the headquarters

over the first months of tenure. The combination of these filters suggests that our estimates likely reflect the lower bound of the number of CEOs with long-distance arrangements. Internet Appendix B shows variable definitions, and Table 1 in Internet Appendix C (hence Table IA.1) shows the sample selection criteria.

In the sample of 6,655 CEOs, we identify 929 CEOs who have had a long-distance working arrangement at some point in their CEO career. We find that 427 CEOs have had both regular and long-distance arrangements, allowing us to study how the same CEO performs under different working regimes.

Table 1 reports sample summary statistics, and the top pane focuses on the characteristics of CEOs. The average CEO is 56 years old, holds two external board seats, and stays in their CEO position for 6.4 years. The dominant majority (97%) of CEOs are male, 64% have graduate degrees, and 42% hold MBAs. Most CEOs reside within a short drive from the headquarters. The median distance between the CEO's primary residence and the headquarters is 8.8 miles, and the 75$^{th}$ percentile of this distance is 15.9 miles. These distances align well with those reported for the homes of CEOs at S&P 500 firms in Liu and Yermack (2012).

The middle pane of Table 1 describes CEOs' remote working arrangements. About 8% of firms in a given year have an ongoing long-distance arrangement with their CEO, and 17.6% of firms have had such an arrangement at some point in our sample period. The average (median) long-distance CEO lives 979 (776) miles from the headquarters and maintains a long-distance arrangement for 3.2 years or about 74% of their CEO tenure. Just under half (45%) of long-distance CEOs live in a different time zone than their firm's headquarters. The average (median) explicit costs of a long-distance CEO arrangement, inferred from expense reimbursements reported as "other pay" in CEO compensation, are about $207,000 ($95,000) per year.

The bottom pane of Table 1 shows that our sample covers economically important firms. The average firm has a market capitalization of $22 billion and a Tobin's Q of 1.95, earns an annual revenue of $6.2 billion, and spends $366 million per year on capital investment.

In summary, approximately one in six public firms in our sample has had a long-distance CEO over the past two decades, and these firms account for a significant fraction of the market capitalization.

## 3. Remote Management: Descriptive Evidence

This section describes remote CEO arrangements. Section 3.1 focuses on the time-series and cross-sectional patterns in remote management. Section 3.2 studies the attributes of firms that hire long-distance CEOs. Sections 3.3 and 3.4 examine the characteristics of long-distance CEOs and their primary residences.

### 3.1 Time-series and cross-sectional patterns in remote management

Figure 1 plots the proportion of publicly traded firms in our sample managed by a long-distance CEO in a given year from 2000 to 2019. The frequency of remote CEO arrangements has been steadily increasing during most of our sample period, peaking at about 10% after 2015. This pattern is consistent with rapid technological development during the first decade of the new millennium that facilitated remote work.

In untabulated results, we find that 62% of long-distance arrangements cover the CEO's entire employment spell at the firm, and the remaining 38% last for a fraction of the spell. Thus, over one third of CEOs switch between onsite and long-distance contracts during one employment spell. Specifically, 21% of the CEOs switch from an onsite arrangement to a long-distance one, and 17% switch in the opposite direction.

Figure 2 plots the distribution of long-distance CEOs across industries. Firms with a remote CEO arrangement during our sample period cover all of the industries in the Fama-French 12-industry classification. As expected, long-distance arrangements are more common for technology firms, where remote work is likely more feasible. Such arrangements are also more frequent in geographically-dispersed sectors, such as retail.

Figure 3 shows a heat map of the fraction of firms run by long-distance CEOs in each state, where a firm's location is identified by its headquarters. Long-distance CEOs manage firms across 47 states, and such arrangements are more prevalent for firms located in colder climates and inland areas. The top five states with the highest fraction of remote CEOs (shown in darker colors) include Wyoming, Iowa, Vermont, Kansas, and North Dakota. In these states, over 25% of firms have had a long-distance CEO during our sample period.

In summary, long-distance CEOs manage firms in all major industries and across all regions in the U.S., with a greater concentration in inland states with a colder climate. The frequency of long-distance CEOs has increased over the past two decades, suggesting an important trend in corporate governance.

### 3.2 Which firms hire long-distance CEOs?

Table 2 studies firm characteristics associated with remote CEO arrangements. Panel A focuses on the remote arrangements that start at the time of the CEO appointment and last for the entire employment spell. Panels B and C examine remote arrangements initiated or terminated within the same employment spell.

Panel A compares the characteristics of firms that hire a long-distance CEO with those of other firms that also experience CEO turnover but appoint a local (onsite) CEO. The top pane shows that the comparison groups have similar fundamentals, such as size, leverage, investment rate, R&D intensity, and cash holdings, which are measured as the trailing time-series averages over the three years immediately preceding the CEO's appointment. The differences between the two groups are small, and none of them is statistically significant.

The second pane in Panel A shows that the trailing performance of firms that appoint long-distance CEOs and those that appoint local CEOs is statistically indistinguishable at the time of the CEO's appointment. This conclusion holds across all examined performance metrics, including the trailing return on assets (ROA), realized stock returns, and the average Tobin's Q over the three years preceding the CEO's appointment.

The third pane in Panel A focuses on the expectations about the firm's future performance at the time of the CEO appointment. Firms appointing long-distance CEOs have similar expected earnings growth and expected one-year stock returns, according to the consensus (mean) one-year analyst earnings forecast and price target, respectively. We reach a similar conclusion about forward-looking expectations if we infer them from opportunistic insider trades of the firm's executives and directors. We define opportunistic insider trades as those that do not follow a recurring pattern in the same calendar month over the trailing three years, following Cohen, Malloy, and Pomorski (2012). We find no significant differences in insiders' expectations, as inferred from the sell-buy imbalance of their opportunistic trades. This measure captures the difference between the number of shares sold and bought, scaled by the shares traded. The insider trade imbalance suggests slightly more optimistic (but insignificant) expectations around the appointments of remote CEOs.

The bottom panes of Panel A examine governance and the local pool of executive talent. To construct a proxy for the CEO candidate pool, we follow the intuition in Knyazeva, Knyazeva, and Masulis (2013) and measure the local executive talent in the vicinity of the firm's headquarters. Since CEOs nearly always have prior executive experience, we define the local candidate pool as the number of C-suite executives employed at other publicly-traded companies in the firm's state or within a 100-mile radius of the firm's headquarters. This definition follows the evidence in Yonker (2017a) that the CEO labor market is local and geographically segmented. Since some firms also require industry-specific knowledge for their leadership positions, we also define analogous measures of the local executive pool within the firm's industry group (one-digit SIC code).

We find that long-distance CEO arrangements are more common at firms with a thinner local executive pool. This conclusion holds across all measures of the local pool, whether we focus on the general or industry-specific talent and whether we define the local pool according to distance or state boundaries. The differences in the local executive pool are statistically significant at 1% across all measures and reflect large magnitudes. For example, firms that enter into long-distance CEO contracts have 19% less general executive talent within a 100-mile radius of their headquarters than firms that hire local CEOs (*t*-statistic = 5.76).

Panels B and C report the characteristics of firms whose CEOs switch from a remote to an onsite arrangement or vice versa, respectively. We compare these firm characteristics (measured as in Panel A) with

those of other firms that also retain their CEO but experience no change in the CEO's status. The results are similar to those in Panel A. Firms whose CEOs work in a long-distance arrangement for a fraction of their tenure have a significantly smaller executive pool. This difference is significant at 1% and holds for all measures of the executive pool, including those based on the firm's location, industry, or their combination. Other firm characteristics do not reveal a reliable pattern before a switch in the CEO's remote status in either direction. One interpretation is that such switches reflect the CEO's personal circumstances rather than firm fundamentals, such as sending kids to college or securing a new position for their spouse.

In summary, firms with remote CEO arrangements face a thinner pool of executive talent. Otherwise, these firms have similar fundamentals, accounting performance, trailing stock returns, and expectations of analysts and insiders before the CEO's appointment and before the switches in the CEO's remote status.

### 3.3 Do long-distance arrangements attract talent?

This subsection studies the association between long-distance arrangements and the characteristics of recruited candidates. This analysis provides evidence on the outcomes of the CEO search.

Table 3 compares the attributes of long-distance CEOs and local CEOs at the time of their appointment. To compare the CEOs' education credentials, we obtain information on the academic quality of the CEO's undergraduate institution (average SAT score of the entering class), its competitiveness (undergraduate acceptance rate), and elite status (Ivy League indicator). We hand-collect these data from the College Handbook of the College Entrance Examination Board and construct comparative statistics based on the 2004 edition due to superior data availability. In the subsample of colleges covered in both the 2004 and 1979 editions, the cross-sectional correlations between the corresponding variables exceed 85%, indicating that measurements in 2004 remain valid in the cross-section of colleges.

The top pane in Table 3 shows that long-distance CEOs come from colleges with higher average test scores, lower acceptance rates, and more prestigious status. These differences are economically important and statistically significant. For example, long-distance CEOs hold undergraduate degrees from colleges with average SAT scores in the 84$^{th}$ percentile, nearly 13 percentile points higher than their local counterparts. Remote CEOs are also significantly more likely to hold a degree from an Ivy League institution (24%) than their local peers (19%). Directionally, long-distance CEOs are more likely to earn a graduate degree and hold an MBA, but these differences are smaller and fall short of statistical significance at conventional levels.

The second pane in Table 3 indicates that long-distance CEOs come with stronger professional credentials, as measured by prior CEO experience, multi-industry experience, the number of external board seats, and network centrality. In the subsample of executives with prior CEO experience, long-distance CEOs have insignificantly higher approval ratings in their prior position (69%) than their local counterparts (66%).

The two bottom panes in Table 3 show that long-distance arrangements allow firms to expand their executive search beyond the local CEO market and beyond the pool of internal candidates. Long-distance CEOs are more likely to be born out-of-state (77%) than their local peers (68%), as proxied by the state of their SSN. Long-distance CEOs are also more likely to be external hires (50%) than their local peers (36%). We consider a CEO to be an external hire if he or she has not been previously employed by the firm in any capacity.

Our statistics on the sources of CEO hires align with prior work. Yonker (2017a) shows that 30% of CEOs were born in the state of the firm's headquarters, and this statistic in our sample is 28%. Larcker, Tayan, and Watts (2023) find that two thirds of the CEOs are internal hires, and this statistic in our sample is 61%.

At the same time, long-distance contracts represent distinct working arrangements that differ from other dimensions of the CEO labor market studied in prior work, such as the CEO's state of origin, internal hire status, or ties to the firm. For example, remote arrangements are split about evenly between internal and external hires, and many long-distance CEOs come from the internal pool, such as the firm's directors located away from the headquarters. Similarly, the majority of CEOs were born out-of-state, whether we focus on the subset of CEOs with long-distance arrangements or those with traditional onsite arrangements.

In untabulated results, we find that the unconditional correlation between the indicator *Long-distance CEO* and the indicator *External hire* is 0.132, and the unconditional correlation between the indicator *Long-distance CEO* and the indicator *Born-out-of-state* is 0.116. While these values suggest a modest degree of overlap, our main results include specifications with additional controls for these covariates.

In summary, firms facing a constrained supply of local CEO talent appear to rely on long-distance arrangements to overcome labor market segmentation. The characteristics of new hires suggest that long-distance arrangements expand the talent search beyond the local market and beyond the pool of internal candidates. Such arrangements attract CEOs with stronger education, more experience, and wider networks.

### 3.4 Primary residences of long-distance CEOs

Figure 4 maps the primary residences of long-distance CEOs. As discussed, a primary residence is the home where the CEO is registered to vote and resides with their spouse or domestic partner. Figure 4 reveals three

patterns. First, the residences of long-distance CEOs gravitate towards warmer climates. Second, there is a lower density of CEO residences in landlocked states. Third, many CEO residences cluster narrowly along the coastal shoreline, particularly in Florida and California, and 15% of the long-distance CEOs live within a 5-minute walk (0.25 miles) to the ocean beach.

Table IA.2 in Internet Appendix C compares the counties of remote CEOs' primary residences and those of their firms' headquarters. The top pane focuses on the climate, using data from the Integrated Surface Database of the National Oceanic and Atmospheric Administration. Relative to the area near the firm's headquarters, long-distance CEOs reside in milder climates, as shown by the significantly lower within-year temperature variability (*t*-statistic = 5.24). The average annual temperature is slightly higher near remote CEOs' residences than at the firm's headquarters, but this small difference in annual averages, when decomposed further, reflects a preference for warmer winters and milder summers (e.g., San Diego rather than St. Louis).

The middle pane of Table IA.2 examines the landscape and access to leisure. Relative to the county of the firm's headquarters, the counties of the CEOs' residences have a 30% lower population density, and they are about 50 miles closer to the ocean shore. The average long-distance CEO also lives within about 10 miles from the nearest globally ranked golf course (according to the Rolex World's Top 1,000 Golf Courses).

The bottom pane of Table IA.2 examines socioeconomic factors. Long-distance CEOs reside in favorable tax jurisdictions where top marginal state income tax rates are 71–79 bps lower than in the county of the firm's headquarters, reflecting a 12–13% reduction in state income taxes. This is consistent with anecdotal evidence that some long-distance CEOs manage the number of days spent at the headquarters to maintain an out-of-state residence status. One example is Robert Benmosche, the CEO of AIG, who allegedly designed his travel schedule from a primary residence in Florida to the firm's headquarters in New York in a way that would allow him to maintain his status as a resident of Florida, a state with no income tax. Fitzpatrick and Ng (2010) offer additional details on this case and provide other anecdotal evidence.

Finally, long-distance CEOs choose to live in counties with better high schools. Using the national rankings of high schools by the U.S. News and World Report, we find that the average national rank of the schools in the counties of remote CEOs is about 244 positions higher than in the county of their firm's headquarters, a significant result with a *t*-statistic of 5.03. Other socioeconomic characteristics of the county, such as the average income and the fraction of adults with a college degree, show no significant differences.

In summary, long-distance CEOs appear to choose their home locations according to a combination of lifestyle, economic, and family considerations. Relative to the county of their firm's headquarters, long-distance CEOs reside in counties with a milder climate, lower tax rates, and better schools.

## 4. Performance Outcomes during Long-Distance Arrangements

### 4.1 Evidence from firm insiders

We begin by studying personal assessments of the CEO's performance by corporate insiders, such as mid-level managers, plant supervisors, and rank-and-file employees at the same firm. This setting offers three useful features. First, it provides us with a large number of direct, quantifiable evaluations of the CEO rather than the firm. Second, these evaluations contain comments in free form, which help us gain insights into the stated reasons for the CEO's approval or disapproval without limiting the scope of mechanisms by ex-ante priors. Third, prior research shows that employee reviews of the CEO contain novel, value-relevant information that predicts future firm performance and stock returns (Huang et al. 2015; Green et al. 2019).

Our dataset comprises nearly 1.5 million insider reviews for the sample firms compiled by Glassdoor, Inc., from 2008 to 2019. The data provider offers multiple services to employees, such as salary benchmarking, and, in return, requires an employee to provide an anonymous company review, salary disclosure, or interview discussion. This business model, which requires a submission of a review and personal authentication, produces a large volume of evaluations while limiting the impact of outliers and the scope for manipulation.

Table 4 studies the assessment of the CEO's professional performance by firm insiders, according to the question "Do you approve of the way your CEO is leading your company?" The answer to this question is recorded on a three-point scale (approve, no opinion, or disapprove), and the dependent variable in Table 4 is an indicator that equals 1, 0, or -1, respectively. The main independent variable, *Long-distance CEO* is a binary indicator that equals 1 during CEO-years when the CEO has a remote working arrangement with the firm, and 0 otherwise. This indicator is switched to one during the CEO's first full fiscal year in a long-distance status. This criterion avoids comparisons in the transitional year and the heterogeneity in the fractions of this year. Employee reviews are aggregated to a firm-year to ensure that firms with more reviews do not receive greater weights. Standard errors are heteroscedasticity-adjusted and clustered by firm to accommodate time-series dependence in residuals. Here and henceforth, *t*-statistics are reported as absolute values.

The results show that CEOs earn lower approval ratings during remote arrangements. This conclusion holds when we compare the CEO to their peers within the same firm (column 1), or when we compare the

approval rates for the same CEO between onsite and remote arrangements (columns 2 and 3), while controlling for CEO fixed effects. This result also persists when we augment the specifications with industry × year fixed effects, which add dynamic controls for industry performance, while also controlling for persistent unobservable heterogeneity across firms and CEOs.

Column 5 includes firm × CEO spell fixed effects and industry × year fixed effects. This specification exploits CEOs' switches between long-distance and onsite arrangements during a continuous employment spell with the same firm, while also controlling for temporal variation in employee approvals across industry cycles. The results in column 5 show that a CEO's switch from an onsite to a long-distance arrangement within the same employment spell is associated with a 6.2 percentage point decline in the employee approval rate.

Columns 6–8 show robustness tests and examine the reviews from different groups of insiders. Column 6 finds that the lower approval rate of long-distance CEOs is robust to controlling for the CEO's out-of-state origin and external hire status. Column 7 shows that the lower approval rate of long-distance CEOs is more prevalent in the evaluations from senior insiders who hold management positions and are likely to be informed. This effect is captured by the interaction term *Long-distance CEO × Review by manager*, which suggests that the gap in the approval rate between long-distance CEOs and other CEOs at the same firm widens by another 1.5 percentage points in the reviews from managerial personnel. This resulting approval gap of 7.1 percentage points is stark because, all else equal, managers are more lenient in their CEO reviews, as shown by the positive coefficient on the term *Review by manager*. Finally, column 8 shows that the gap in the approval rate between long-distance CEOs and other CEOs at the same firm expands in the reviews from another group of plausibly informed insiders—those who work at the firm's headquarters or in the same state.

Next, we examine the qualitative content of employee reviews by using a large language model (LLM) embedded in OpenAI's GPT-4. This architecture employs machine learning techniques to analyze the context of textual responses and evaluate the author's emphasis within each review. We ask GPT-4 to process the text of employee reviews of long-distance CEOs and identify common sources of employee concerns. Internet Appendix D.1 offers details on the sequence of prompts, and Internet Appendix D.2 shows the output from GPT-4. Since some reviews raise multiple issues, the sum of the rubrics' percentages exceeds 100.

The CEO-specific rubrics are highlighted in bold. In the analysis of economic channels, we aggregate these rubrics into three common areas of employee concern about remote CEOs: (1) consumption of perquisites, leisure, and other self-interest activities, (2) loss of information and detachment from the firm, and (3) short-term focus. To give context, Internet Appendix D.3 offers employee quotes for each of these themes.

For example, employees concerned about the CEO's consumption of perquisites and self-interest often express dissatisfaction with the CEO's luxury commute. In the words of one employee, "it's disheartening to know layoffs are pending … and see the executives taking their helicopters back and forth to their homes." Other reviews associate the CEO's travel perquisites with absenteeism and leisure, describing the CEO as "not around most of the time," "invisible," or "generally absent."

Related to the lack of the CEO's on-the-job presence, employees express concern that remote management engenders information losses and detaches the CEO from the firm. Some insiders describe remote CEOs as "confused", "disconnected," or "clueless as to day to day operations."

Finally, some employees suggest that long-distance CEOs are not committed to the firm in the long run. A common concern in this category is that long-distance CEOs "prioritize short term goals over long term ones" and "lack long term vision." In addition to these CEO-specific critiques, the reviews also reveal other broad-based areas of employee dissatisfaction, such as work-life balance and general discontent. These themes appear in plain font in the LLM's output tabulated in Internet Appendix D.2.

In summary, the same CEO receives lower performance ratings from insiders during a long-distance arrangement than during an onsite arrangement within the same employment spell. Employees attribute this performance gap to information losses, short-termism, and consumption of perquisites and leisure.

**4.2 Operating performance**

Table 5 investigates the association between a CEO's long-distance arrangement and their firm's operating performance. The dependent variable is a firm's ROA, and the main independent variable is a binary indicator *Long distance CEO*. Here and henceforth, *t*-statistics (shown as absolute values) are based on heteroscedasticity-adjusted standard errors clustered by firm to account for time-series correlation in a firm's policies and outcomes.

Panel A in Table 5 shows that remote CEO arrangements are associated with a significant decline in a firm's ROA. This effect is significant at 1% across a variety of specifications. Column 1 establishes this result by comparing the performance of the same firm during remote and onsite CEO arrangements, while netting out cross-firm heterogeneity and time trends. Columns 2 and 3 add CEO fixed effects, which account for time-invariant differences across CEOs, such as innate ability, ethics, and execution skills. The evidence in these columns suggests that the same CEO achieves a lower ROA during long-distance rather than onsite arrangements. The addition of CEO fixed effects increases the adjusted $R^2$ from 45.1% to 57.9% (columns 1 and 3, respectively), suggesting that unobservable differences across CEOs explain an extra 12.8% of the variation in firm performance, consistent with prior evidence on the importance of CEOs for firm policies and

outcomes (e.g., Bertrand and Schoar 2003; Kaplan, Klebanov, and Sorensen 2012; Bennedsen, Peréz-Gonzáles, and Wolfenzon 2020). Column 4 shows that the ROA decline during remote CEO arrangements persists when we add industry × year fixed effects, thus controlling for the fluctuations in industry performance, while also absorbing persistent heterogeneity across firms and CEOs.

Column 5 shows the most restrictive specification, which includes two groups of high-dimensional fixed effects: (1) firm × CEO spell fixed effects and (2) industry × year fixed effects. This specification derives identification from a CEO's switch between a long-distance and an onsite arrangement during a continuous employment spell with the same firm, while netting out the fluctuations in operating performance common to the industry. The results show that a CEO's switch from an onsite to a long-distance arrangement within the same employment spell is associated with a 90 basis point decline in a firm's ROA. This effect, statistically significant at 1% (*t*-statistic = 3.02), is equivalent to 12.1% of the standard deviation in ROA.

Panel B in Table 5 estimates the association between a firm's ROA and remote management for different types of remote arrangements, using the full sample of observations. We distinguish among three types of remote CEOs: (1) CEOs in a remote status for their entire employment spell, (2) CEOs who start in a remote arrangement and switch to an onsite status, and (3) CEOs who start their employment spell onsite and switch to a remote status. The firm-years when a CEO operates in a remote arrangement are indicated by the respective binary indicators that mark the three types of arrangements. If one CEO has multiple employment spells (e.g., a remote arrangement with one firm and an onsite arrangement with another), this CEO is assigned the respective indicators for the corresponding firm-years.

The results in Panel B show two patterns. First, the negative association between remote management and ROA persists for all three types of remote arrangements. Second, the changes in ROA are largely symmetric around the switches from a remote to an onsite arrangement and in the opposite direction. A firm's ROA declines after its CEO switches from an onsite to a remote status and increases after the CEO ends a remote arrangement and moves to the headquarters. According to the tightest specification in column 5, a firm's ROA improves by 70 basis points (9.4% of the standard deviation) after its CEO ends a long-distance arrangement and moves to the headquarters. This effect is shown by the negative coefficient on the indicator *Long-distance CEO at the start of spell,* which indicates a lower ROA during the remote portion of a CEO's continuous employment spell before their switch to the headquarters.

In summary, long-distance CEO arrangements are associated with weaker operating performance after controlling for unobservable CEO and firm characteristics and CEO-firm matches. A firm's ROA declines

after its CEO switches from an onsite to a remote arrangement within the same employment spell. Conversely, the ROA improves after the firm's CEO ends a long-distance arrangement and moves to the headquarters.

**4.3 Firm valuation**

Panel A in Table 6 studies the association between a CEO's long-distance arrangement and their firm's market valuation. The dependent variable is a firm's Tobin's Q, a common valuation metric in corporate governance (e.g., Kaplan and Zingales 1997; Gompers, Ishii, and Metrick 2003; Cremers and Ferrell 2014). As before, the indicator *Long-distance CEO* denotes CEO-years with a long-distance working arrangement.

The results in Panel A show that a firm's valuation experiences a significant decline during periods of long-distance CEO arrangements. This conclusion persists whether we exploit the variation in long-distance arrangements within a firm (column 1), within a CEO (columns 2 and 3), or within a CEO's continuous employment spell at the same firm (column 5). These estimates also net out the time-series variation in Tobin's Q at the national level (columns 1–3) and at the industry level (columns 4 and 5).

According to the most restrictive specification in column 5, a firm experiences a 0.070 decline in Tobin's Q after its CEO switches to a remote status. This drop is equivalent to 4.4% of the standard deviation in Tobin's Q. Since this specification includes firm × CEO spell fixed effects and industry × year fixed effects, it captures the effect associated with the CEO's shift from an onsite to a remote status, or vice versa, within the same employment spell and after netting out the temporal changes in valuation within a firm's industry.

Panel B studies the valuation changes for different types of long-distance arrangements. As before, we distinguish among CEOs who operate in a remote status for the entire tenure, those who switch from a remote to an onsite status, and those who switch in the opposite direction. The firm-years that correspond to remote management under each arrangement type are marked by the respective binary indicators.

We find that Tobin's Q declines under remote management for all types of arrangements. As expected, the estimates suggest a greater valuation decline for remote arrangements covering the CEO's entire employment spell rather than its part. Consistent with the evidence on ROA, a firm's valuation goes down in relative terms after its CEO switches from an onsite to a remote status and goes up after the CEO switches in the opposite direction during one employment spell.

In summary, long-distance CEO arrangements are associated with a significant decline in firm valuation, consistent with weaker operating performance. These effects are largely symmetric for CEOs who switch from an onsite to a remote arrangement and vice versa within one employment spell.

**4.4 Robustness to CEO characteristics**

While studying the implications of remote management, it is important to distinguish the effects of CEOs' personal attributes that could correlate with their adoption of remote arrangements, such as risk tolerance or negotiation skills. While CEOs' intangibles are difficult to measure, prior work shows that CEOs' traits are persistent at the individual level (Bertrand and Schoar 2003; Malmendier and Tate 2005; Cronqvist, Makhija, and Yonker 2012; Gow et al. 2016; Hankins, Liu, and Sosyura 2025). To the extent that CEOs' personal traits are persistent, our baseline analyses account for them by including CEO fixed effects, which also absorb a variety of other CEO attributes, such as gender, education, and innate ability.

However, some persistent attributes, such as the CEO's home origin or employment history, could have interaction effects that arise only within particular firm pairs. For example, Yonker (2017b) finds that CEOs exhibit favoritism towards employees in their home state, and Parrino (1997) and Cziraki and Jenter (2021) show that a decision to hire an external CEO is correlated with firm performance.

Table IA.3 shows robustness tests that augment our baseline specifications with controls for a CEO's home state and external hire status, as well as their interaction terms with long-distance CEO arrangements. The dependent variables alternate between the ROA and Tobin's Q in odd and even columns, respectively.

The negative association between long-distance CEO arrangements persists after adding additional CEO controls and their interaction terms to our baseline specifications. The coefficients on *Long-distance CEO* are consistently negative and statistically significant. According to columns 3 and 4, long-distance CEO arrangements are associated with a 90 bps decline in ROA and a 0.107 decline in Tobin's Q.

In summary, the negative association between long-distance arrangements and firm outcomes is robust to controlling for the CEO's home state and external hire status, as well as their interaction effects.

## 5. Endogeneity and Alternative Explanations

Remote arrangements reflect a joint decision of the firm (demand side) and the CEO (supply side) to enter into a bilateral agreement. This section reviews endogeneity issues underlying the demand- and supply-side determinants of these agreements. We highlight several omitted variables and test alternative explanations. We also propose an instrumental variable for the CEO's decision to seek a remote arrangement.

### 5.1 Demand-side factors and the board's decision

The board of directors chooses to hire a long-distance CEO or to allow an incumbent CEO to switch to a remote status. In these decisions, the board internalizes a variety of unobservable signals about the firm's past and future performance, forward-looking forecasts, and attainable CEO candidates. Taylor (2010) develops a

structural model of CEO turnover and quantifies the importance of the board's unobservable signals in its contracts with the CEO, including the CEO's perceived and actual skill, the quality of the executive talent pool, and the board's personal costs of CEO replacement.

The identification challenge is that the board's decision to grant a remote arrangement can be correlated with the firm's past performance and expectations of future performance. For example, firms facing a leadership crisis and bleak prospects might be more willing to offer a long-distance arrangement to fill a CEO search or to allow an incumbent CEO to work remotely. In this case, the subsequent decline in the firm's performance during the CEO's remote arrangement could be attributed to the realization of such pre-existing trends rather than the CEO's actions, creating omitted variable bias. The next subsections analyze pre-existing performance trends and information signals from directors tasked with the CEO search and contract negotiations.

### 5.1.1 Pre-trends in firm outcomes

This subsection examines the temporal dynamics of firm outcomes before and after the adoption of long-distance CEO arrangements. As discussed earlier, we find no discernable differences in the trailing ROA and Tobin's Q around the hiring of long-distance CEOs and in the years preceding a CEO's switch from an onsite to a remote arrangement or vice versa (Table 2). However, it is possible that these comparisons mask a more complex dynamic trend in performance outcomes. If so, the decline in firm outcomes during remote arrangements could be a continuation of a pre-existing downward trend. Also, if firms are more likely to allow their CEOs to work remotely after a period of strong performance or after a major investment, a subsequent decline in firm outcomes could reflect mean reversion in firm outcomes unrelated to the CEO's arrangement.

Figure 5 depicts pre-trends in ROA and Tobin's Q before the adoption of long-distance CEO arrangements that cover the CEO's entire employment spell (Panels A and B) or represent a switch in the CEO's remote status (Panels C and D). The figure presents estimates from regressions studying event-time dynamics in ROA and Tobin's Q. The regressions are estimated with firm fixed effects and year fixed effects to capture within-firm variation in outcomes. The regressions in panels A and B omit the year of the CEO turnover. The regressions in panels C and D omit the year when the CEO switches their remote status. In Panels C and D, we negate the coefficients for the switches from a remote location to the headquarters for directional consistency. As discussed, the long-distance status of the CEO is switched on during the first full year in a remote status, and the x-axis labels correspond to the event years preceding or following this year.

Figure 5 reveals two patterns. First, before the adoption of a remote arrangement, there is no discernible pre-trend in a firm's ROA or Tobin's Q. This conclusion holds both for the adoption of remote arrangements at the time of CEO hiring and for the switches between remote and onsite arrangements during a CEO's continuous employment spell. The coefficients on event-year dummies preceding the adoption of remote arrangements have near-zero estimates, flip signs, and are not statistically significant. Second, a switch to a remote CEO arrangement is followed by a decline in firm performance and valuation, which is comparable in magnitude to that reported in the baseline tests (Tables 5 and 6).

In summary, we find no discernable pre-trend in firm outcomes before long-distance arrangements, whether they start at the beginning of a CEO's tenure or constitute a switch during the same employment spell. The start of a CEO's remote arrangement is followed by a decline in operating performance and firm valuation, and these effects begin to materialize in the following year.

### 5.1.2 Future expectations of the board

While we do not detect signs of incipient deterioration in firm outcomes before remote CEO arrangements, the board of directors has private information about the firm's economic prospects. If the board is more likely to permit such an arrangement in the face of a bleak outlook, a subsequent decline in firm performance would be attributed to these unobservable pre-existing conditions rather than the remote arrangement. This scenario illustrates an omitted variable in the board's decision—that is, its private information about the firm's future.

While the content of the board's information set is unobservable, its aggregate signal about the firm's prospects can be extracted from directors' stock trades. Prior work shows that directors embed their private forward-looking signals into insider trades. For example, Ravina and Sapienza (2010) find that directors' trades predict firm performance, news releases, and corporate events. Cohen, Malloy, and Pomorski (2012) and Kelly (2018) validate these patterns and design methodological improvements to extract insiders' private signals.

Panel A of Table IA.4 studies opportunistic insider trades of independent directors. These trades represent irregular, unscheduled open-market transactions that contain the strongest private signals of informed agents. We obtain insider trading data from Thomson Reuters and identify opportunistic transactions by following Cohen, Malloy, and Pomorski (2012).

If directors have private information about an upcoming decline in their firm's valuation before the start of a remote CEO arrangement, we would expect them to start reducing their discretionary stock holdings to minimize personal losses. To test this hypothesis, we construct two measures of insider selling during the

twelve months preceding the start of a remote CEO arrangement. In columns 1–3, the dependent variable is an indicator *Net Seller*, which takes on the value of one when an insider sells more shares than they buy during said period. In columns 4–6, the dependent variable is *Sell-Buy Imbalance*, defined as the difference between the number of shares sold and bought, scaled by the total number of shares traded.

Panel A of Table IA.4 shows no evidence of discretionary stock sales before the start of a remote arrangement. The coefficients on *Long-Distance CEO* are small, statistically insignificant, and have the opposite sign. This result persists whether we focus on remote arrangements that cover the CEO's entire tenure or on the switches in the remote status of an incumbent CEO.

In summary, we find no evidence that corporate boards adopt remote CEO arrangements in anticipation of a decline in firm performance, as signaled by directors' discretionary trades.

### 5.2 Supply-side factors and the CEO's decision

The CEO makes an endogenous choice to seek a long-distance arrangement with the firm. This outcome reflects the CEO's private decision inputs that could be relevant for performance outcomes but are difficult to observe for the econometrician. Our analyses account for persistent CEO inputs, such as innate ability, risk tolerance, or work ethic, by studying the variation in performance outcomes for the same CEO during a continuous employment spell. However, it is possible that a CEO's decision to accept a remote arrangement reflects a major change in these personal inputs. For example, a CEO who becomes more risk averse could seek a quiet life in a remote, low-stress location. Similarly, a CEO who decides to reduce their commitment to the firm, faces distractions, or sees less upside from exerting effort could move away from the headquarters. In these cases, a subsequent decline in firm performance would be partially attributed to the CEO's increase in risk aversion or a decline in intrinsic motivation rather than a change in their remote status.

#### 5.2.1 Evidence from the CEO and other executives

If a CEO experiences an increase in risk aversion, decides to reduce effort, or foresees a negative shock on the horizon before switching to a remote status, we would expect the CEO to reduce their discretionary stock holdings. Panel B of Table IA.4 tests this hypothesis by examining insider trades. The dependent variables are the previously-defined measures of an insider's propensity to sell their company's stock in discretionary trades: *Net Seller* and *Sell-Buy Imbalance*. As before, we examine remote arrangements that span the CEO's entire employment spell (Columns 1 and 4) and those that induce a switch in an incumbent CEO's remote

status (Columns 2, 3, 5, and 6). To identify the CEO's trades before their appointment, we focus on a subset of CEOs who serve as their firm's directors, officers, or other executives before their appointment.

The results in Panel B of Table IA.4 show no evidence of the CEO's discretionary stock sales before the start of their remote arrangement. The coefficients on the term *Long-distance CEO* are negative, suggesting that, if anything, CEOs are less likely to sell their company's stock before a switch in their remote status.

It is possible that some CEOs strategically avoid selling their shares to conceal a negative signal about their motivation and commitment to the firm. If so, we would expect other agents privy to this information to adjust their personal trades to avoid impending losses. Panel C tests this hypothesis by studying the discretionary trades of other C-suite executives who work closely with the CEO. We find a similar pattern, and the data show no discernible increase in insider sales by other top executives.

In summary, we find no evidence that CEOs reduce their exposure to the firm's stock before going remote, as would be expected if this decision reflected a sudden decline in their intrinsic motivation, an increase in risk aversion, or a decision to reduce commitment to the firm.

**5.2.2 Evidence from equity analysts**

Table IA.5 studies forward-looking signals from equity analysts. Analysts have frequent access to the CEO via one-on-one calls (Soltes 2014), private meetings at conferences (Green et al. 2014), and interactions during analyst days (Kirk and Markov 2016). Brown et al. (2015) find that most analysts have private contacts with the management of the typical firm they cover at least five times a year. The authors show that analysts view these interactions as the most valuable source of soft information from the management. In the words of one analyst, "The CEO and CFO, you can read their body language—even on the phone—and get a feel for how optimistic they are…" (Brown et al. 2015). Given analysts' incentives for information discovery, we would expect at least some analysts to detect a decline in the CEO's future expectations or commitment to the firm ahead of time, if these factors explained the CEO's subsequent decision to work remotely.

Table IA.5 examines information signals from equity analysts. The dependent variable is a change in the consensus EPS forecast or consensus stock recommendation (scaled 0 to 4) during the year preceding a firm's adoption of a remote arrangement for a new CEO or a switch in the remote status for an incumbent CEO. The results show no major changes in the consensus recommendations and forecasts during the year preceding the remote arrangement. This conclusion holds both for the arrangements that cover the entire CEO tenure and those that represent a switch in the CEO's status during a continuous employment spell.

In summary, we do not find evidence that CEOs choose long-distance contracts in anticipation of a performance decline, according to the forward-looking projections in analyst forecasts.

### 5.2.3 Instrumental variable for the CEO's decision to seek a remote arrangement

Since we do not find significant differences in forward-looking signals from executives and analysts before the adoption of remote arrangements, a natural question is why do some CEOs seek a remote arrangement, while others do not under similar market expectations? Also, why does the same CEO run one company from its headquarters but then leads a comparable firm from afar?

It is important to understand how the CEO's self-selection affects our results. Across CEOs, it could be that lower-type, less hardworking CEOs are more likely to seek positions that allow them to live away from the headquarters. For example, Ben-Rephael et al. (2025) find significant cross-CEO variation in effort. As a result, the weaker firm performance under long-distance CEOs could reflect self-selection of low-type CEOs into such contracts. Similar self-selection could also affect the same CEO's decisions across different firms. For example, for the same CEO, the decision to run one firm from afar could be a sign of a weaker commitment relative to another firm for which this CEO relocates to the headquarters. In this case, the differences in performance across firms run by the same CEO would be explained by the variation in the CEO's commitment.

Addressing these endogeneity sources requires an instrumental variable that explains the CEO's decision to seek a remote arrangement, while being plausibly unrelated to firm performance. To understand the drivers of CEOs' decisions, we review their interview transcripts, responses to analysts' questions, and personal disclosures explaining their rationale for a remote arrangement. Among the most common factors, CEOs state that their decision to work long-distance aims to circumvent uprooting their family in general and their spouse in particular. CEOs often cite their desire to avoid disrupting the spouse's involvement with the community, family connections, or career. Internet Appendix A.3 provides examples of such disclosures.

Following the CEOs' reasoning, we propose an instrument that exploits the private costs of uprooting the CEO's spouse or partner from their home state. We argue that the private relocation costs for the CEO's spouse are significantly higher if the relocation to the firm's headquarters would force the spouse to leave their home state, thus disrupting their network, community involvement, and access to relatives and friends. We expect that the same CEO would be more likely to seek a remote arrangement for firm A than for an identical firm B if relocating to the headquarters of firm A would result in uprooting their spouse. Yonker (2017a) argues that the CEO's family likely play a key role in the geographic segmentation in the CEO labor market.

We identify the CEO's spouse or partner at the time of the CEO's appointment, collect their address history, and infer their home state from the SSN, as detailed in Section 2.2. To provide an easy-to-interpret definition, we introduce the variable *Uprooting the spouse*, defined as an indicator that equals 1 if moving the CEO's household to the firm's headquarters would require the CEO's spouse to leave their home state, and 0 otherwise. Thus, the instrument takes on the value of 1 if the spouse resides in their home state immediately before the CEO's appointment and if the relocation would require the spouse to move out of state. We turn off the instrument (set it to zero) if the CEO's SSN state is the same as their spouse's. This step ensures that our instrument captures the relocation costs of spouse rather than the CEO's own home state preferences.

The instrument exploits variation both across CEOs and within CEOs across time. Across CEOs, our identification comes from the combination of their spouse's home state and state of residence immediately before the appointment. Within CEOs, our identification comes from CEOs who run multiple firms during their career (in more than one state) and from temporal variation in their spouse's residence before each appointment. Since CEOs' spouses and firms' headquarters change rarely, the instrument does not generate sufficient variation within a CEO's tenure at the same firm. As a result, the instrument explains the CEO's decision to seek a remote arrangement at the start of their employment spell (62% of cases) rather than their decision to switch status mid-tenure. As discussed, the instrument focuses on the supply side and does not treat the decision of the board. Another limitation is that a CEO's decision to take the job after considering the spousal situation may still contain an element of selection. When a relocation requires uprooting one's spouse, the candidates who underestimate the importance of onsite presence may be more likely to take the position, leading to the selection of candidates underestimating their job requirements.

Panel A in Table 7 reports first-stage regressions. A CEO is significantly more likely to have a remote working arrangement if relocating their spouse to the headquarters would take the spouse out of the home state. This result is significant at 1% across all specifications, which alternate with respect to CEO, firm, and industry × year fixed effects. Focusing on within-CEO variation (column 4), the same CEO is 10.8% more likely to have a remote arrangement if the move to the headquarters would uproot their spouse from the home state. The first-stage F-statistics range from 20.2 to 31.4. The adjusted $R^2$ shows that the first-stage regression explains a significant part of the variation in CEOs' long-distance decisions.

Panels B and C show the results of the second-stage regressions for operating performance and Tobin's Q, respectively. The results confirm the negative relation between a CEO's long-distance status and firm outcomes. The coefficient on the instrumented indicator *Long-distance CEO* is negative and significant

across all specifications, whether we exploit within-firm or within-CEO variation. The point estimates for ROA are broadly comparable with OLS specifications, and the point estimates for Tobin's Q are greater. For example, column 4 in Panel C indicates a 0.139 decline in Tobin's Q, compared to a decline of 0.087 in a similar OLS specification (column 4 in Panel A of Table 6). A downward bias in OLS estimates would be observed, for example, if the CEOs who self-select into remote arrangements are better able to work remotely, including skills in using remote technology, working efficiently on airplanes, and running a firm from a distance.

In summary, CEOs are more likely to pursue a long-distance arrangement if it allows them to avoid uprooting their spouse. Using this variation as an instrument for the CEO's decision to seek a remote arrangement, we confirm a negative relationship between remote arrangements and firm outcomes. Yet, a perfect treatment of endogeneity in executive contracting would require a random assignment of executives to employment contracts. Since this is difficult to achieve in the field, our evidence should be viewed with caution. Our results suggest that remote arrangements are followed by a deterioration in firm outcomes.

## 6. Mechanisms

This section studies the drivers of changes in operating performance during long-distance CEO arrangements. We then examine the non-mutually exclusive mechanisms proposed by insiders as contributors to performance outcomes, such as the CEO's short-termism, information loss, and consumption of perquisites and leisure.

### 6.1 Decomposition of operating performance

Table 8 studies the association between long-distance CEO arrangements and the main components of a firm's operating performance. Panel A focuses on the components of income (the numerator of ROA), and Panel B examines the main categories of assets (the denominator of ROA). The dependent variables are the natural logarithms of the respective asset and income components.

Table 8 reveals three patterns. First, the changes in operating performance during remote arrangements are driven by the changes in income rather than assets. Second, the relative decline in income is attributed to higher costs rather than lower sales. Panel A shows that long-distance CEO arrangements are associated with a 2.4% increase in the cost of goods sold and a 2.2% increase in selling, general, and administrative expenses (SG&A), despite no significant changes in sales. Third, the changes in assets are muted and offset each other across different categories of assets. The results in Panel B show an increase in cash holdings accompanied by a decline in long-term assets, but these changes fall short of being statistically significant.

In summary, the increase in SG&A and production costs during remote CEO arrangements matches the symptoms of a CEO's "quiet life" with looser cost controls (Bertrand and Mullainathan 2003). The directional increase in cash and a decline in long-term assets are consistent with a shorter duration of assets.

### 6.2 Economic channels

Table 9 examines the three economic channels commonly cited in CEO reviews by firm insiders. Panel A tests the hypothesis of short-termism. If long-distance CEOs gradually learn that their remote arrangements are unlikely to last (e.g., due to burdensome travel or less family time), they may adopt a shorter horizon in financial policies. Under this hypothesis, long-distance CEOs would reduce investment in assets that impose an immediate charge on income but yield benefits in the future, such as R&D. The same incentives also predict a reduction in long-term investment and a tilt towards assets with a shorter useful life.

Panel A in Table 9 shows evidence consistent with CEO short-termism. Columns 1 and 2 indicate that remote CEO arrangements are associated with a decline in R&D and capital investment (measured as a percent of book assets) by 15 and 19 bps, respectively, or 3.3% and 4.4% of their means. Column 3 shows that investment becomes less responsive to long-term investment opportunities, as proxied by the changes in Tobin's Q, following Shin and Stulz (1998) and Ozbas and Scharfstein (2010). Column 4 finds that capital investment shifts towards assets with a shorter useful life. This effect is captured by a decline in the average useful life of investment assets, calculated as the annual change in net PP&E divided by the annual change in depreciation.

Panel B examines the information channel. Research finds that management's onsite presence is important for acquiring information and making value-improving decisions (Giroud 2013; Kalnins and Lafontaine 2013). Conversely, a less frequent presence of long-distance CEOs could hinder their information acquisition, making them "detached" or "uninformed" in the words of insiders' reviews.

The evidence in Panel B supports the information hypothesis. The decline in a firm's operating performance during a long-distance CEO arrangement is stronger when the CEO's access to information at the headquarters is more important for firm outcomes. Column 1 shows that the decline in ROA during periods of long-distance arrangements is attenuated at geographically dispersed firms where information is less concentrated at the headquarters, such as restaurant chains and retail stores. We measure a firm's geographic dispersion by the number of states where it operates, using the data from Garcia and Norli (2012). Column 2

shows that the decline in operating performance during remote CEO arrangements is more than twice as strong for externally-hired CEOs, for whom onsite presence is likely more important for information acquisition.

The remaining columns focus on the cross-sectional characteristics of remote arrangements. Columns 3 and 4 show that the decline in ROA expands for remote arrangements that entail greater travel distance and cross multiple time zones. This is consistent with prior evidence that time zone separation hinders synchronous communication, resulting in information losses and lower productivity (Mell, Jang, and Chai 2021).

Column 5 shows that the performance gap is smaller for remote CEOs whose contracts permit remote work from a regional office, a feature that likely mitigates information asymmetry. We collect these data from long-distance employment agreements and introduce binary indicators that distinguish between remote CEOs with and without regional office arrangements. We add similar indicators for the attributes in Panel C.

Panel C in Table 9 studies the consumption of perquisites and leisure. Ben-Rephael et al. (2025) show that the amount of time a CEO dedicates to work-related tasks (versus leisure and other activities) is a strong predictor of firm performance. Since long-distance CEOs spend more time away from the headquarters, they could dedicate some of this away time to leisure and self-interest, consistent with insiders' reviews.

Panel C develops proxies for leisure and self-interest activities of long-distance CEOs and shows evidence consistent with this channel. Column 1 indicates that the decline in a firm's ROA expands for long-distance arrangements accompanied by the CEOs' ownership of recreational boats. We obtain these data from state vessel registrations in LNPR and identify recreational boats as those whose primary use is recorded as "pleasure" or "leisure." To make the data collection manageable, we obtain these records only for remote CEOs.

Column 2 shows that the decline in the firm's operating performance expands for long-distance CEOs with a primary residence in a beach home during their remote arrangement. A beach home is a CEO's residence located within 0.25 miles of the ocean shore in one of the following warm-climate states: California, Florida, Georgia, Hawaii, Alabama, North Carolina, South Carolina, and Texas.

Column 3 shows that the decline in firm performance during long-distance CEO arrangements is stronger for CEOs who live within 10 miles of a premium golf course, according to the 2019 list of the 200 best golf courses by *Golf Digest*. This result is consistent with prior work. Yermack (2006) shows that CEOs' trips to golf destinations are associated with weaker firm performance, and Biggerstaff, Cicero, and Puckett (2017) find that firm valuation and operating performance decline if the CEO plays more rounds of golf.

In summary, the decline in firm performance during long-distance CEO arrangements likely reflects a combination of several non-mutually exclusive channels. We find evidence consistent with CEO short-termism, information frictions, and the pursuit of perquisites and leisure.

**7. Learning**

In our final analysis, we study whether the board and investors update their priors about the performance of long-distance CEOs and take corrective actions if these CEOs underperform. This analysis makes a step towards understanding whether the initiation of long-distance agreements between the firm and the CEO reflects diffused priors about such arrangements or agency frictions.

Panel A in Table 10 examines the relationship between remote CEO arrangements and the likelihood of CEO turnover, using logistic regressions. In columns 1–4, the dependent variable is a binary indicator that equals 1 for firm-years that experience any CEO turnover (columns 1 and 2) or forced CEO turnover (columns 3 and 4), and 0 otherwise. We classify a CEO departure as forced if the firm's press release, media article, or CEO interview indicate that the CEO was ousted or resigned under pressure. We include controls for common predictors of CEO turnover, such as trailing stock returns, accounting performance, retirement age, and market cycles captured by year fixed effects (Weisbach 1998; Kaplan and Minton 2012; Jenter and Kanaan 2015).

The results show that long-distance CEOs are more likely to experience turnover (columns 1 and 2) and more likely to be terminated (columns 3 and 4). These conclusions are significant at 1%, and the point estimates are higher for the likelihood of forced turnover. As expected, CEOs are more likely to separate from the firm when they reach the retirement age, but no more likely to be terminated. Poor stock returns and weak operating performance predict forced CEO turnover.

Columns 5 and 6 study the likelihood of a firm that has had a long-distance CEO to appoint another long-distance CEO in the future. The dependent variable is an indicator that equals 1 if the firm appoints another long-distance CEO, and 0 otherwise. *Past long-distance CEO* is a binary indicator that equals 1 if a firm has previously had a long-distance CEO. The results show that firms adjust their recruiting policies after a first-hand experience with long-distance CEOs. After working with a long-distance CEO, a firm becomes significantly less likely to enter into a long-distance CEO arrangement in the future. This evidence is consistent with board learning from its first-hand experience. Consistent with this interpretation, we have come across cases when boards make qualitative revisions in their future contractual agreements with CEOs by introducing clauses in employment contracts that require future CEOs to relocate to the area near the firm's headquarters.

Panel B in Table 10 shows the announcement returns to the appointments and departures of long-distance CEOs. The outcome variable is the announcement return on the company's stock around a three-day window centered on the announcement day. The table shows cumulative abnormal returns (CARs) and buy-and-hold returns (BHARs) calculated according to the Capital Asset Pricing Model (CAPM).

Panel B reveals no significant differences in the announcement returns around the appointments of onsite and long-distance CEOs. This is consistent with the evidence that long-distance contracts attract CEOs with stronger credentials, which could outweigh the effect of frictions in remote arrangements.

The departures of long-distance CEOs are associated with a 2.5–2.6% increase in the firm's market value, and this result is statistically significant at 1%. The sizable increase in firm value at departures of remote CEOs aligns with the evidence that such arrangements, on average, are associated with lower firm performance and valuation. In contrast, departures of regular CEOs are met with muted market reactions, consistent with prior research (Borstadt 1985; Reinganum 1985; Weisbach 1988; Jenter, Matveyev, and Roth 2016).

In summary, at the time of a CEO's appointment, the board faces a tradeoff between expanding the pool of CEO candidates and the frictions in remote management. The net effects of this tradeoff are unclear ex ante. After a first-hand experience with a remote CEO, the board is more likely to replace the CEO and less likely to offer another such arrangement in the future. Departures of remote CEOs trigger positive returns.

## 8. Conclusion

This paper has studied CEOs' long-distance arrangements. We find that such arrangements are associated with weaker operating performance, lower firm valuation, and a lower approval rate of the CEO's policies by firm insiders. These effects are related to CEO short-termism, loss of information, and consumption of perquisites and leisure. Consistent with these frictions, remote CEO arrangements do not last in the long-term.

As remote work is becoming increasingly prevalent across the corporate hierarchy, our paper makes a step towards a better understanding of long-distance arrangements of top executives. These agents are particularly important because they define remote work policies for all other employees and establish a new equilibrium in remote work after the pandemic. We hope that the growing interest in alternative work arrangements will continue to expand our understanding of the drivers and consequences of these decisions.

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**Figure 1**
**Frequency of Long-distance CEOs over Time**

This figure plots the proportion of long-distance CEOs among all sample CEOs in 2000-2019. *Long-distance CEO* is an indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles. The sample consists of 6,655 CEOs at 3,136 publicly-traded U.S. firms covered by Execucomp or BoardEx with non-missing data on CEO tenure. Sample selection criteria and variable definitions appear in appendixes B and C, respectively.

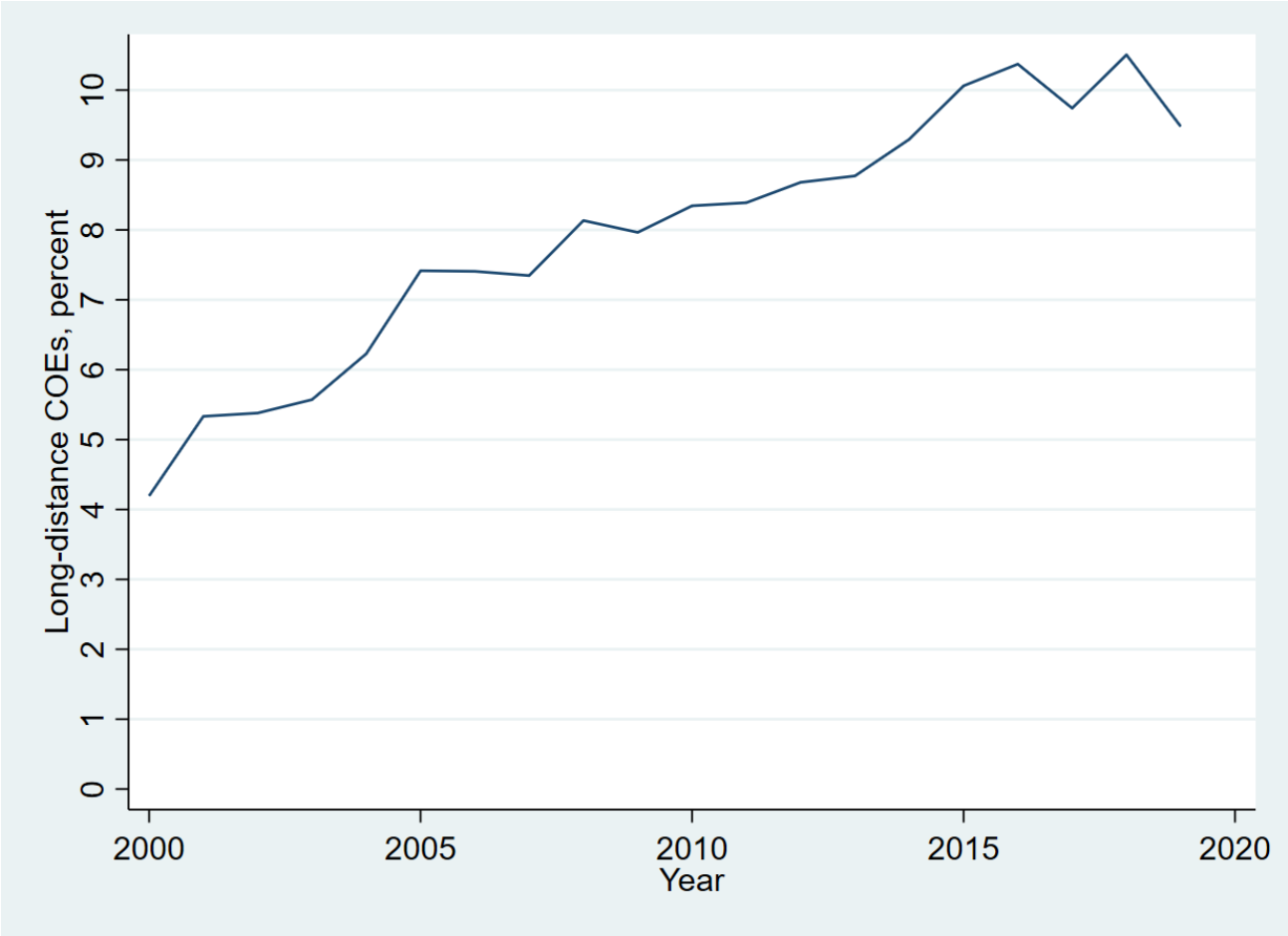


**Figure 2**
**Proportion of Long-distance CEOs by Industry**

This figure shows the proportion of long-distance CEOs across the twelve Fama-French industries. The bars indicate the fraction of CEOs with a long-distance working arrangement in a given industry, averaged over the sample period from 2000 to 2019. A long-distance arrangement is one where the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles. Sample selection criteria and variable definitions appear in appendixes B and C, respectively.

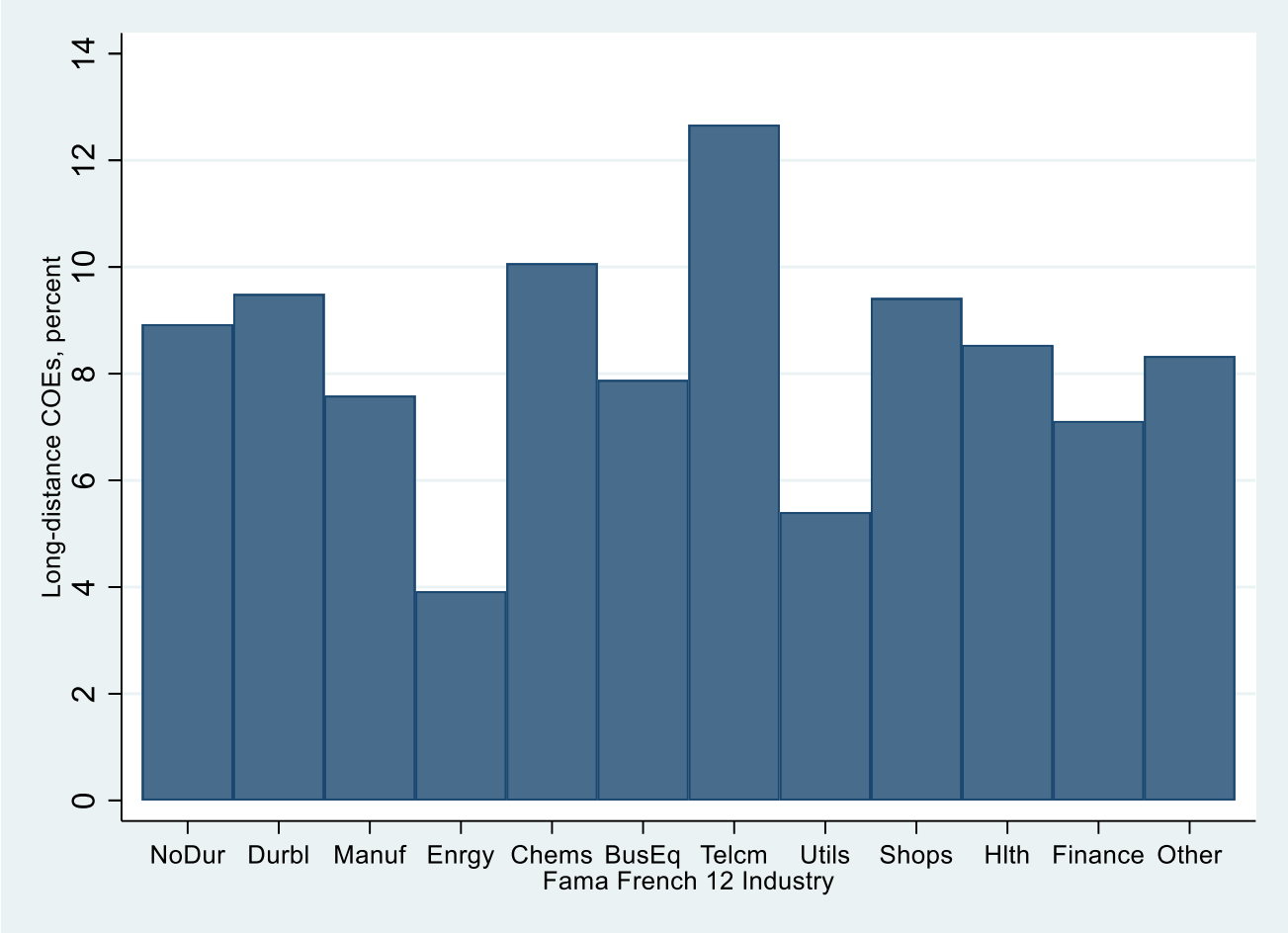


**Figure 3**
**Proportion of Long-Distance CEOs by the State of the Firm's Headquarters**

This figure shows the proportion of long-distance CEOs by the state of the firm's headquarters. Darker colors indicate states with a higher proportion of firms (headquartered in a given state) that have had a long-distance working arrangement with a CEO in 2000-2019. A long-distance arrangement is one where the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles. Sample selection criteria and variable definitions appear in appendixes B and C, respectively.

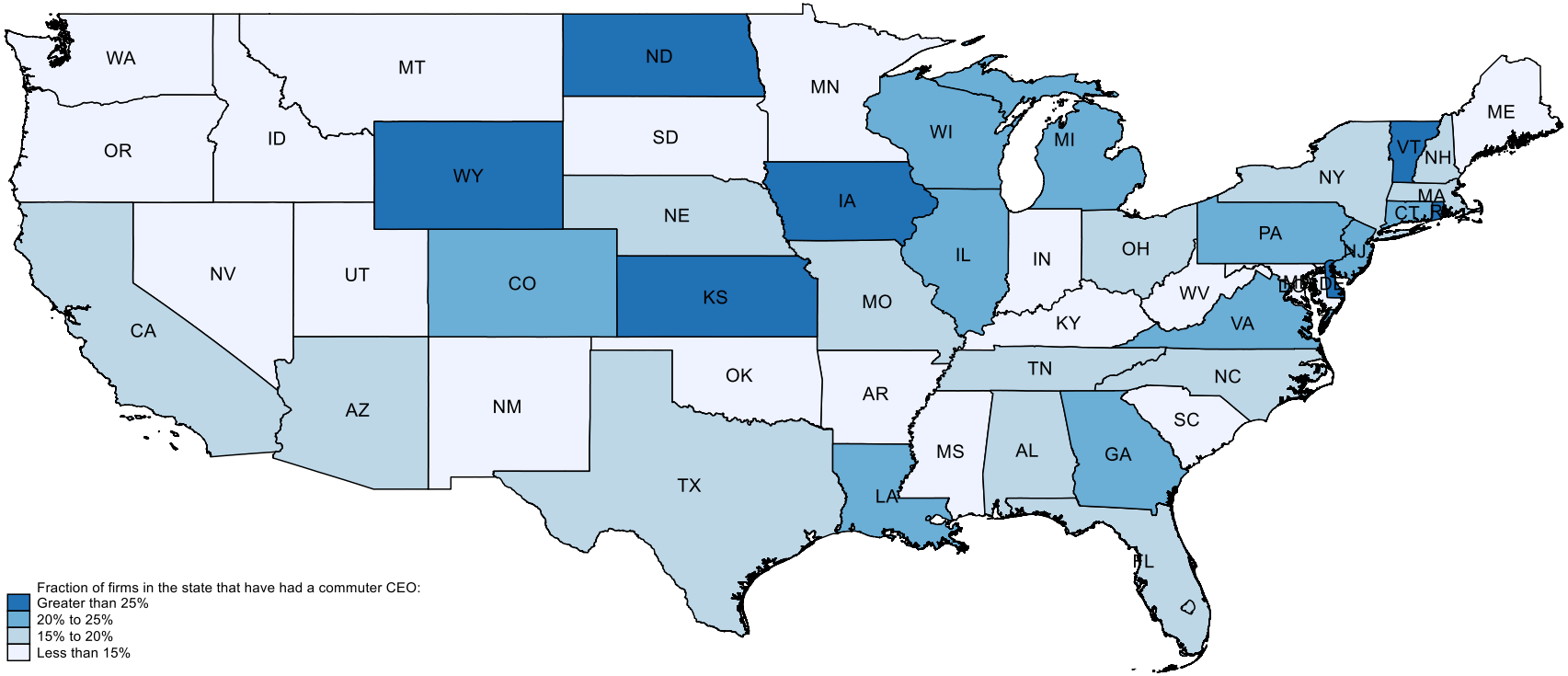
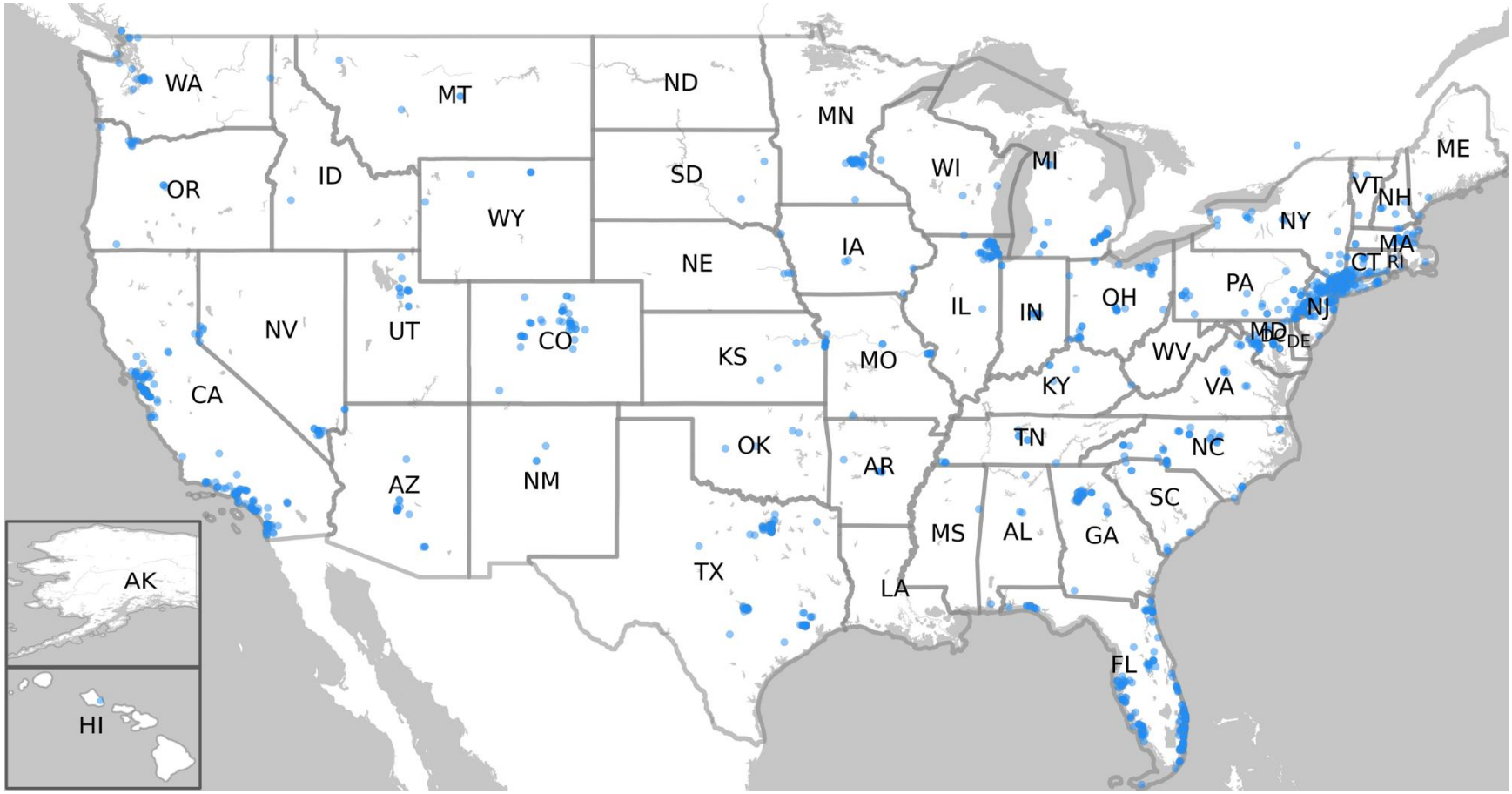


**Figure 4**
**Primary Residences of Long-distance CEOs**

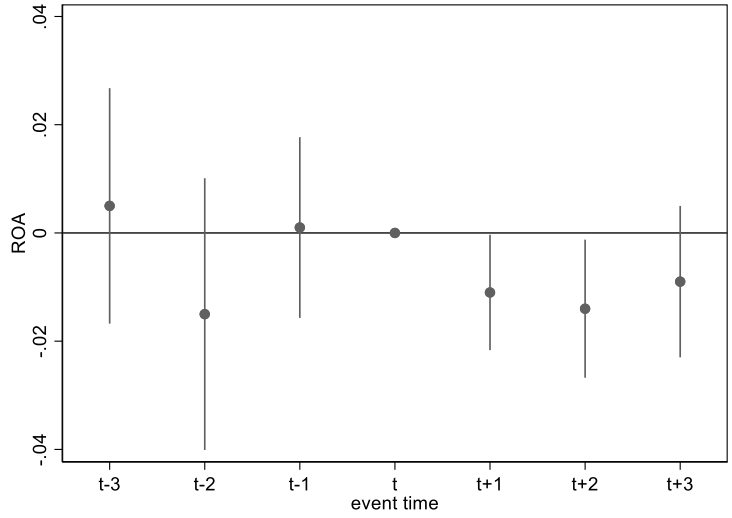
The figure plots the locations of the primary residences of long-distance CEOs. Long-distance CEOs are defined as CEOs whose roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles. A CEO's primary residence is the home where the CEO is registered to vote and resides with their spouse or domestic partner. Darker-shaded circles correspond to locations with multiple long-distance CEOs. Sample selection criteria and variable definitions appear in appendixes B and C, respectively.



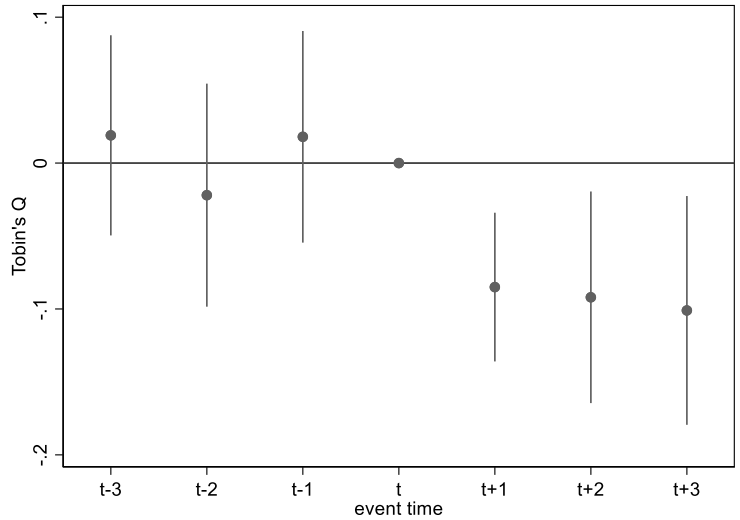
## Figure 5
## The Dynamics of Long-distance CEOs and Operating Performance/Firm Valuation

This figure presents dynamic estimates from regressions studying how a CEO's remote working arrangement is associated with the firm's operating performance (ROA) and firm valuation (Tobin's Q). The dependent variable panels A and C is the firm's annual return on assets (ROA), defined as the ratio of annual operating income to book assets. The dependent variable in panels B and D is *Tobin's Q*, which measures the ratio of the firm's market value to its book value. The main independent variable, *Long-distance CEO*, is a binary indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. This indicator is switched on in the year following the year of transition to long-distance. The regressions in panels A and B omit the year when the CEO turns over. The regressions in panels C and D omit the year when the CEO switches from a long-distance to a local working arrangement and vice versa. In panels C and D, we negate the coefficients for the switches from long-distance to local arrangements for directional consistency. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. All the regressions include firm fixed effects and year fixed effects.

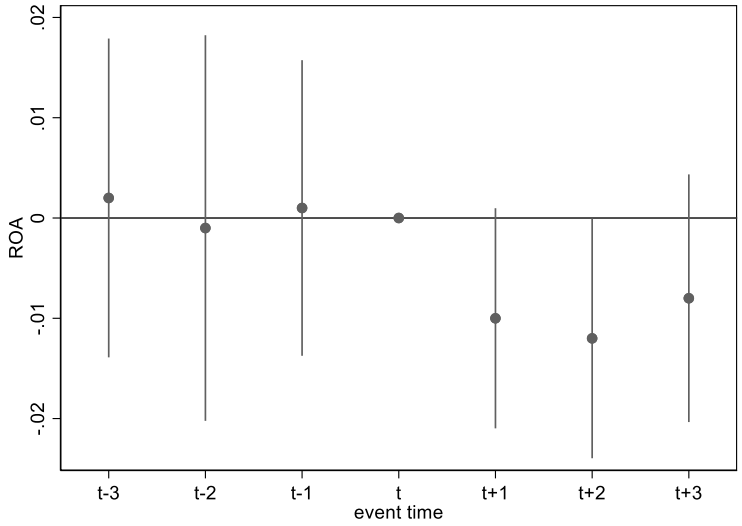
Panel A: The ROA of Long-distance CEOs During Their Entire Tenure



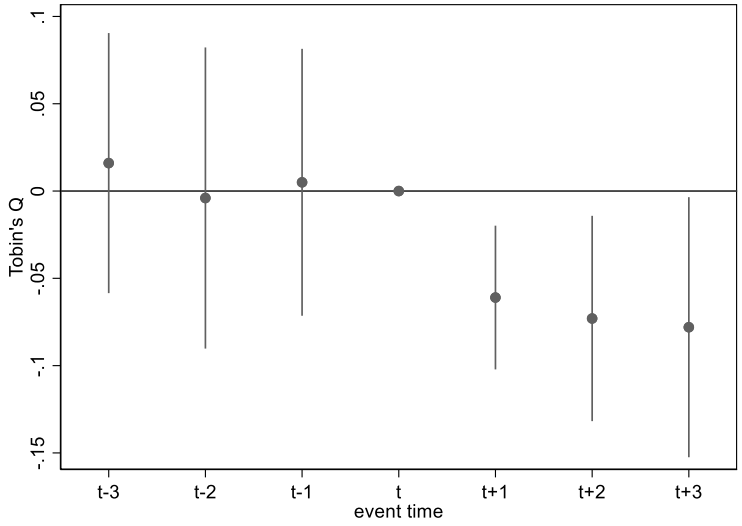

Panel B: Tobin's Q of Long-distance CEOs During Their Entire Tenure



Panel C: The ROA of Switchers




Panel D: Tobin's Q of Switchers



## Table 1
## Summary Statistics

This table reports summary statistics for CEOs and their firms. The reported values are time-series averages over the sample period. The sample consists of 6,655 CEOs at 3,136 publicly-traded U.S. firms covered by Execucomp or BoardEx in 2000–2019 with non-missing data on CEO tenure. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. *Long-distance CEO* is an indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles.

### Panel A: CEOs

| Variable | Mean | 25th percentile | Median | 75th percentile | Standard deviation |
|---|---|---|---|---|---|
| **CEO characteristics** | | | | | |
| Age, years | 55.96 | 51.00 | 56.00 | 61.00 | 7.42 |
| Male indicator | 0.97 | 1.00 | 1.00 | 1.00 | 0.18 |
| Tenure with the firm, years | 6.38 | 2.00 | 6.00 | 10.00 | 5.23 |
| Graduate degree indicator | 0.64 | 0.00 | 1.00 | 1.00 | 0.58 |
| MBA indicator | 0.42 | 0.00 | 0.00 | 1.00 | 0.52 |
| Employee approval rate | 0.67 | 0.50 | 0.71 | 0.88 | 0.26 |
| External hire indicator | 0.39 | 0.00 | 0.00 | 1.00 | 0.47 |
| Born out-of-state indicator | 0.72 | 0.00 | 1.00 | 1.00 | 0.45 |
| Ivy league indicator | 0.20 | 0.00 | 0.00 | 0.00 | 0.41 |
| College ave. SAT percentile rank, 0-100 | 82.36 | 52.90 | 77.47 | 89.02 | 11.65 |
| College admission rate | 0.57 | 0.38 | 0.64 | 0.75 | 0.21 |
| Professional network centrality | 126.84 | 92.75 | 122.81 | 150.63 | 38.79 |
| Multi-industry experience indicator | 0.23 | 0.00 | 0.00 | 0.00 | 0.43 |
| Prior CEO experience indicator | 0.36 | 0.00 | 0.00 | 1.00 | 0.48 |
| Distance from home to HQ, miles | 90.40 | 4.32 | 8.77 | 15.93 | 70.09 |
| **Long-distance CEO arrangements** | | | | | |
| Long-distance CEO indicator | 0.08 | 0.00 | 0.00 | 0.00 | 0.27 |
| Different time zone indicator | 0.45 | 0.00 | 0.00 | 1.00 | 0.50 |
| Distance from remote home to HQ, miles | 979.06 | 262.14 | 775.86 | 1,324.75 | 859.02 |
| Duration of remote arrangement, years | 3.22 | 1.00 | 2.00 | 4.00 | 3.22 |
| Remote arrangement from a satellite office, indicator | 0.10 | 0.00 | 0.00 | 0.00 | 0.30 |
| Fraction of tenure in remote arrangement | 0.74 | 0.38 | 1.00 | 1.00 | 0.36 |
| Annual cost of remote arrangement based on "other compensation", $000 | 206.59 | 24.54 | 94.78 | 288.54 | 252.07 |
| Beach home owner indicator | 0.16 | 0.00 | 0.00 | 1.00 | 0.36 |
| Leisure boat owner indicator | 0.54 | 0.00 | 1.00 | 1.00 | 0.43 |
| Distance from home to major golf course, miles | 24.42 | 5.44 | 10.84 | 27.63 | 35.06 |

## Panel B: Firms

| Variable | Mean | 25th percentile | Median | 75th percentile | Standard deviation |
|---|---|---|---|---|---|
| **Fundamentals** | | | | | |
| Book value of total assets, $ bil. | 18.26 | 0.68 | 2.16 | 7.65 | 114.05 |
| Market capitalization, $ bil. | 21.98 | 1.14 | 3.46 | 11.49 | 107.52 |
| Sales, $ mil | 6,156 | 476 | 1,360 | 4,331 | 19,651 |
| Net income, $ mil | 400.54 | 10.71 | 67.95 | 261.99 | 2,235.56 |
| Capital expenditures, $ mil | 366.01 | 11.44 | 46.44 | 187.00 | 1,410.04 |
| CapEx, in percent of book assets | 4.33 | 1.25 | 2.91 | 5.66 | 4.79 |
| R&D expenditures, $ mil | 116.96 | 0.25 | 23.60 | 91.52 | 228.73 |
| R&D, in percent of book assets | 4.48 | 0.04 | 2.13 | 7.08 | 5.44 |
| Leverage | 0.24 | 0.06 | 0.21 | 0.36 | 0.21 |
| Cash, in percent of book assets | 13.83 | 2.26 | 7.44 | 20.99 | 17.60 |
| Average useful life of fixed assets, years | 4.72 | -0.49 | 2.16 | 8.28 | 32.37 |
| Return on Assets (ROA), percent | 3.61 | 0.87 | 3.93 | 7.94 | 7.45 |
| Tobin's Q | 1.95 | 1.13 | 1.49 | 2.17 | 1.60 |
| Geographic dispersion, number of states | 11.32 | 4.00 | 8.00 | 14.00 | 10.94 |
| Annual realized stock return | 0.05 | -0.11 | 0.03 | 0.17 | 0.30 |
| Ave. analyst recommendation, (0-4) | 2.54 | 2.14 | 2.56 | 3.00 | 0.59 |
| Expected one-year EPS growth | 0.05 | -0.12 | 0.09 | 0.26 | 1.22 |
| Expected one-year stock return | 0.03 | -0.10 | 0.02 | 0.15 | 0.27 |
| **Governance** | | | | | |
| Chairman-CEO indicator | 0.47 | 0.00 | 0.00 | 1.00 | 0.48 |
| External board seats per CEO | 1.39 | 0.00 | 1.00 | 2.00 | 0.81 |
| External board seats per director | 0.69 | 0.00 | 1.00 | 1.00 | 0.36 |
| Fraction of independent directors | 0.74 | 0.69 | 0.78 | 0.85 | 0.14 |
| State CEO pool | 842.26 | 511.00 | 649.00 | 826.00 | 595.46 |
| 100-mile radius CEO pool | 661.19 | 342.00 | 462.00 | 613.00 | 525.83 |
| Insider sell-buy imbalance | 0.42 | -0.46 | 1.00 | 1.00 | 0.84 |
| Insider net seller | 0.72 | 0.00 | 1.00 | 1.00 | 0.45 |
| Review by manager indicator | 0.15 | 0.00 | 0.00 | 1.00 | 0.36 |
| Review from HQ state indicator | 0.37 | 0.00 | 0.00 | 1.00 | 0.48 |

**Table 2**
**A Comparison of Firms Appointing Long-Distance CEOs and Local CEOs**

This table compares the characteristics of firms that appoint long-distance CEOs and local CEOs in our sample. In Panel A, which focuses on the appointment of long-distance CEOs for the entire tenure, we compare between firms that appoint long-distance CEOs and other firms that experience turnover. In Panels B and C, which focus on CEOs who switch from long-distance working arrangements to local working arrangements and vice versa, respectively, we compare between firms whose CEOs switch and all other firms (except those that experience CEO turnover). The dependent variables are measured as trailing time-series averages in the three years prior to the appointment or switch of the CEO. Long-distance CEOs are those whose roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles. Local CEOs are all other CEOs. The sample period is 2000–2019. Sample selection criteria appear in Appendix Table B.1. The right-hand side column shows the absolute values of *t*-statistics for the tests of the differences of means, and the levels of statistical significance are indicated as follows: *=10%, **=5%, ***=1%.

**Panel A: Long-distance CEOs for the entire tenure**

| Variable | Local CEOs | Long-distance CEOs | Difference | t-statistic |
|---|---|---|---|---|
| **Trailing firm attributes** | | | | |
| CapEx/Assets | 0.052 | 0.055 | 0.002 | 0.341 |
| Leverage | 0.238 | 0.217 | -0.021 | 1.179 |
| Cash/Assets | 0.138 | 0.140 | 0.002 | 0.270 |
| R&D/Assets | 0.050 | 0.045 | -0.005 | 1.136 |
| Size (Natural logarithm of book assets) | 7.630 | 7.679 | 0.049 | 0.570 |
| **Trailing performance** | | | | |
| Annual ROA | 0.021 | 0.019 | -0.002 | 0.568 |
| Annual realized stock return | 0.051 | 0.050 | -0.001 | 0.485 |
| Tobin's Q | 1.918 | 1.900 | -0.018 | 0.932 |
| **Forward-looking performance** | | | | |
| Expected one-year stock return | 0.026 | 0.020 | -0.006 | 0.764 |
| Expected EPS growth | -0.006 | -0.015 | -0.009 | 0.309 |
| Average analyst recommendation (0-4) | 2.576 | 2.601 | 0.025 | 0.652 |
| Insiders' sell-buy imbalance | 0.427 | 0.360 | -0.067 | 1.180 |
| **Corporate governance** | | | | |
| Fraction of independent directors | 0.734 | 0.762 | 0.028 | 2.770*** |
| Chairman-CEO duality | 0.525 | 0.470 | -0.054 | 1.395 |
| **Local CEO pool** | | | | |
| State CEO pool | 901.784 | 826.109 | -75.675 | 5.448*** |
| 100-mile radius CEO pool | 726.062 | 612.947 | -113.115 | 5.763*** |
| State & industry (1-digit SIC) CEO pool | 342.407 | 225.886 | -116.521 | 8.026*** |
| 100-mile radius & industry (1-digit SIC) CEO pool | 317.990 | 196.109 | -121.881 | 8.443*** |

**Panel B: CEOs who switch from long-distance to local working arrangements**

| Variable | Local CEOs | Long-distance CEOs | Difference | t-statistic |
|---|---|---|---|---|
| **Trailing firm attributes** | | | | |
| CapEx/Assets | 0.034 | 0.037 | 0.003 | 1.018 |
| Leverage | 0.290 | 0.283 | -0.006 | 0.411 |
| Cash/Assets | 0.134 | 0.145 | 0.011 | 1.277 |
| R&D/Assets | 0.040 | 0.046 | 0.007 | 1.201 |
| Size (Natural logarithm of book assets) | 8.228 | 8.201 | -0.027 | 0.792 |
| **Trailing performance** | | | | |
| Annual ROA | 0.027 | 0.026 | -0.001 | 0.192 |
| Annual realized stock return | 0.149 | 0.127 | -0.022 | 0.596 |
| Tobin's Q | 1.836 | 1.757 | -0.079 | 1.262 |
| **Forward-looking performance** | | | | |
| Expected one-year stock return | 0.111 | 0.080 | -0.031 | 1.191 |
| Expected EPS growth | 0.044 | -0.013 | -0.057 | 0.454 |
| Average analyst recommendation (0-4) | 2.609 | 2.518 | -0.091 | 1.387 |
| Insiders' sell-buy imbalance | 0.415 | 0.434 | 0.019 | 0.574 |
| **Corporate governance** | | | | |
| Fraction of independent directors | 0.831 | 0.814 | -0.018 | 1.175 |
| Chairman-CEO duality | 0.490 | 0.410 | -0.080 | 1.301 |
| **Local CEO pool** | | | | |
| State CEO pool | 849.634 | 794.752 | -54.882 | 3.066*** |
| 100-mile radius CEO pool | 685.462 | 601.150 | -84.312 | 4.473*** |
| State & industry (1-digit SIC) CEO pool | 311.806 | 239.330 | -72.476 | 6.409*** |
| 100-mile radius & industry (1-digit SIC) CEO pool | 285.274 | 203.480 | -81.794 | 7.118*** |

**Panel C: CEOs who switch from local to long-distance working arrangements**

| Variable | Local CEOs | Long-distance CEOs | Difference | t-statistic |
|---|---|---|---|---|
| **Trailing firm attributes** | | | | |
| CapEx/Assets | 0.039 | 0.042 | 0.003 | 1.018 |
| Leverage | 0.278 | 0.275 | -0.003 | 0.200 |
| Cash/Assets | 0.117 | 0.125 | 0.009 | 0.893 |
| R&D/Assets | 0.031 | 0.031 | -0.001 | 0.145 |
| Size (Natural logarithm of book assets) | 7.949 | 7.961 | 0.011 | 0.095 |
| **Trailing performance** | | | | |
| Annual ROA | 0.040 | 0.032 | -0.008 | 1.470 |
| Annual realized stock return | 0.104 | 0.058 | -0.047 | 1.275 |
| Tobin's Q | 1.858 | 1.745 | -0.114 | 1.421 |
| **Forward-looking performance** | | | | |
| Expected one-year stock return | 0.020 | 0.016 | -0.004 | 0.528 |
| Expected EPS growth | -0.018 | 0.006 | 0.024 | 0.676 |
| Average analyst recommendation (0-4) | 2.562 | 2.580 | 0.018 | 0.271 |
| Insiders' sell-buy imbalance | 0.485 | 0.496 | 0.010 | 0.557 |
| **Corporate governance** | | | | |
| Fraction of independent directors | 0.751 | 0.760 | 0.009 | 0.647 |
| Chairman-CEO duality | 0.520 | 0.581 | 0.061 | 1.114 |
| **Local CEO pool** | | | | |
| State CEO pool | 915.408 | 842.794 | -72.614 | 4.972*** |
| 100-mile radius CEO pool | 738.525 | 629.336 | -109.189 | 5.140*** |
| State & industry (1-digit SIC) CEO pool | 360.008 | 246.308 | -113.700 | 7.522*** |
| 100-mile radius & industry (1-digit SIC) CEO pool | 326.664 | 221.512 | -105.152 | 6.867*** |

**Table 3**
**A Comparison of Long-Distance CEOs and Local CEOs**

This table compares the characteristics of long-distance CEOs and local CEOs in our sample. Long-distance CEOs are those whose roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles. Local CEOs are all other CEOs. The sample period is 2000–2019, and the values reported are time-series averages. Sample selection criteria appear in Appendix Table B.1. The right-hand side column shows the absolute values of *t*-statistics for the tests of the differences of means, and the levels of statistical significance are indicated as follows: *=10%, **=5%, ***=1%.

| Variable | Long-distance CEOs | Local CEOs | Difference | t-statistic |
|---|---|---|---|---|
| **Education** | | | | |
| Ivy League indicator | 0.24 | 0.19 | 0.05 | 4.75*** |
| Graduate degree indicator | 0.67 | 0.64 | 0.03 | 1.42 |
| MBA indicator | 0.44 | 0.42 | 0.02 | 1.08 |
| College admission rate | 0.54 | 0.68 | -0.14 | 8.41*** |
| College ave. SAT percentile rank, 0-100 | 84.06 | 71.50 | 12.56 | 9.12*** |
| **Experience and Professional Networks** | | | | |
| Prior CEO experience indicator | 0.45 | 0.33 | 0.12 | 10.66*** |
| Mutli-industry experience indicator | 0.28 | 0.21 | 0.07 | 5.06*** |
| External board seats | 1.87 | 1.36 | 0.51 | 2.29** |
| Professional network centrality | 163.42 | 118.79 | 44.63 | 18.46*** |
| Employee approval rate in prior CEO positions | 0.69 | 0.66 | 0.03 | 1.46 |
| **Demographics** | | | | |
| Age, years | 56.16 | 55.94 | 0.22 | 1.53 |
| Male indicator | 0.96 | 0.97 | -0.01 | 1.30 |
| **Relationship with the Firm at Appointment** | | | | |
| Born out-of-state indicator | 0.77 | 0.68 | 0.09 | 12.75*** |
| External hire indicator | 0.50 | 0.36 | 0.14 | 15.90*** |
| Tenure with the firm, years | 5.73 | 7.58 | -1.85 | 8.28*** |
| Chairman-CEO indicator | 0.46 | 0.48 | -0.02 | 1.27 |

## Table 4
## Motivating Evidence: Employee Approval Rate of Long-Distance CEOs

This table studies how a CEO's remote working arrangement is associated with the CEO's approval rate by the firm's employees. The dependent variable, *Employee approval rate,* is based on an employee's answer to the question "Do you approve of the way your CEO is leading your company?" The indicator *Employee approval rate* equals 1, 0, or -1, if the employee's answer to this question is "approve," "no opinion," or "disapprove," respectively. *Long-distance CEO* is a binary indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. This indicator is switched on in the year following the year of transition to long-distance. *External CEO* is a binary indicator that equals 1 if the CEO has not worked for the firm before becoming CEO, and 0 otherwise. *Home-grown CEO* is a binary indicator that equals 1 if the CEO's social security number was issued in the same state where the firm is headquartered, and 0 otherwise. *Review by manager* is a binary indicator that equals 1 if the reviewer's job title includes the words "manager," "director," or "senior," and 0 otherwise. *Review from HQ state* is a binary indicator that equals 1 if the reviewer is based in the state of the firm's headquarters, and 0 otherwise. Data on employee reviews are from Glassdoor, Inc., and cover the period 2008–2019. The unit of observation is a firm-year, except in columns (7) and (8), where each firm-year observation is split into two to separate between reviews by managers and non-managers or reviews from HQ states and from other states. Variable definitions appear in Appendix C. The regressions alternate with respect to fixed effects. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

| Dependent variable | Employee approval rate | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Long-distance CEO | -0.051**<br>[2.256] | -0.054**<br>[2.105] | -0.065**<br>[2.276] | -0.063**<br>[2.079] | -0.062**<br>[2.072] | -0.059**<br>[2.074] | -0.056**<br>[2.018] | -0.060**<br>[2.108] |
| External CEO | | | | | | -0.028**<br>[2.205] | | |
| Born out-of-state CEO | | | | | | 0.004<br>[0.253] | | |
| Review by manager | | | | | | | 0.010*<br>[1.864] | |
| Long-distance CEO x Review by manager | | | | | | | -0.015*<br>[1.830] | |
| Review from HQ state | | | | | | | | 0.009<br>[1.447] |
| Long-distance CEO x Review from HQ state | | | | | | | | -0.013*<br>[1.756] |
| Year fixed effects | Yes | Yes | Yes | No | No | Yes | Yes | Yes |
| Firm fixed effects | Yes | No | Yes | Yes | No | Yes | Yes | Yes |
| CEO fixed effects | No | Yes | Yes | Yes | No | No | No | No |
| Firm x CEO Spell fixed effects | No | No | No | No | Yes | No | No | No |
| Industry x Year fixed effects | No | No | No | Yes | Yes | No | No | No |
| N_obs | 12,255 | 12,255 | 12,255 | 12,255 | 12,255 | 12,255 | 22,396 | 21,262 |
| $R^2$ | 0.382 | 0.482 | 0.486 | 0.539 | 0.541 | 0.407 | 0.389 | 0.388 |

## Table 5
## Long-distance CEOs and Operating Performance

This table studies the association between a CEO's remote working arrangement and their firm's operating performance. The dependent variable is the firm's annual return on assets (ROA), defined as the ratio of annual operating income to book assets. The main independent variable, Long-distance CEO, is a binary indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. This indicator is switched on in the year following the year of transition to long-distance. Panel A presents baseline results. Panel B distinguishes between long-distance CEOs that remained in a remote status during their entire employment spell (top row) and those that switched their remote status during a continuous employment spell (next two rows). Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of t-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

**Panel A: The ROA of Long-distance CEOs**

| Dependent variable | Return on Assets (ROA) | | | | |
|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) |
| Long-distance CEO | -0.010***<br>[3.362] | -0.012***<br>[3.407] | -0.010***<br>[3.561] | -0.010***<br>[3.373] | -0.009***<br>[3.015] |
| Year fixed effects | Yes | Yes | Yes | No | No |
| Firm fixed effects | Yes | No | Yes | Yes | No |
| CEO fixed effects | No | Yes | Yes | Yes | No |
| Firm x CEO Spell fixed effects | No | No | No | No | Yes |
| Industry x Year fixed effects | No | No | No | Yes | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| $R^2$ | 0.451 | 0.573 | 0.579 | 0.598 | 0.612 |

**Panel B: Different Types of Long-distance Arrangements**

| Dependent variable | Return on Assets (ROA) | | | | |
|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) |
| Long-distance CEO for entire spell | -0.009***<br>[3.714] | -0.013***<br>[3.554] | -0.010***<br>[3.197] | -0.010***<br>[3.355] | |
| Long-distance CEO at the start of spell | -0.010*<br>[1.743] | -0.009*<br>[1.699] | -0.010**<br>[2.224] | -0.007*<br>[1.913] | -0.007*<br>[1.830] |
| Long-distance CEO at the end of spell | -0.012***<br>[4.360] | -0.011***<br>[4.332] | -0.011***<br>[3.370] | -0.011**<br>[2.468] | -0.010**<br>[2.426] |
| Year fixed effects | Yes | Yes | Yes | No | No |
| Firm fixed effects | Yes | No | Yes | Yes | No |
| CEO fixed effects | No | Yes | Yes | Yes | No |
| Firm x CEO Spell fixed effects | No | No | No | No | Yes |
| Industry x Year fixed effects | No | No | No | Yes | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| $R^2$ | 0.459 | 0.580 | 0.588 | 0.611 | 0.621 |

## Table 6
## Long-distance CEOs and Firm Valuation

This table studies the association between a CEO's remote working arrangement and their firm's valuation. The dependent variable is Tobin's Q, which measures the ratio of the firm's market value to its book value. The main independent variable, Long-distance CEO, is a binary indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. This indicator is switched on in the year following the year of transition to long-distance. Panel A presents baseline results. Panel B distinguishes between long-distance CEOs that remained in a remote status during their entire employment spell (top row) and those that switched their remote status during a continuous employment spell (next two rows). Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of t-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

**Panel A: Tobin's Q of Long-distance CEOs**

| Dependent variable | Tobin's Q | | | | |
|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) |
| Long-distance CEO | -0.161***<br>[3.497] | -0.148**<br>[2.464] | -0.118***<br>[3.412] | -0.087**<br>[2.205] | -0.070**<br>[2.108] |
| Year fixed effects | Yes | Yes | Yes | No | No |
| Firm fixed effects | Yes | No | Yes | Yes | No |
| CEO fixed effects | No | Yes | Yes | Yes | No |
| Firm x CEO Spell fixed effects | No | No | No | No | Yes |
| Industry x Year fixed effects | No | No | No | Yes | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| $R^2$ | 0.832 | 0.659 | 0.853 | 0.886 | 0.893 |

**Panel B: Different Types of Long-distance Arrangements**

| Dependent variable | Tobin's Q | | | | |
|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) |
| Long-distance CEO for entire spell | -0.159***<br>[3.815] | -0.146**<br>[2.460] | -0.117***<br>[2.826] | -0.089**<br>[2.556] | |
| Long-distance CEO at the start of spell | -0.142**<br>[2.429] | -0.125*<br>[1.872] | -0.103**<br>[2.279] | -0.076*<br>[1.829] | -0.061*<br>[1.915] |
| Long-distance CEO at the end of spell | -0.163***<br>[3.001] | -0.152***<br>[2.978] | -0.122***<br>[3.365] | -0.086***<br>[3.132] | -0.068***<br>[2.949] |
| Year fixed effects | Yes | Yes | Yes | No | No |
| Firm fixed effects | Yes | No | Yes | Yes | No |
| CEO fixed effects | No | Yes | Yes | Yes | No |
| Firm x CEO Spell fixed effects | No | No | No | No | Yes |
| Industry x Year fixed effects | No | No | No | Yes | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| $R^2$ | 0.838 | 0.667 | 0.861 | 0.895 | 0.898 |

## Table 7
## An Instrumental Variable Analysis of Firm Performance and Valuation

This table studies the effect of CEOs' remote working arrangements on operating performance and firm valuation in an instrumental variable specification estimated via a two-stage least squares regression. Panel A shows the first-stage regressions that estimate the effect of uprooting the CEO's spouse on the CEO's decision to work remotely. In Panel A, the dependent variable, *Long-distance CEO*, is a binary indicator that equals 1 for CEOs whose roundtrip commute from the primary residence to the headquarters exceeds 100 miles, and 0 otherwise. The instrumental variable, *Uprooting the spouse*, is an indicator that equals 1 if moving the CEO's household to the company's headquarters would require the spouse to leave the spouse's home state, and 0 otherwise. The home state of the spouse is the state where the spouse received their social security number. If the home state of the spouse is the same as that of the CEO, the instrument is set to 0. Panel B shows the second-stage regressions where the dependent variable is the firm's return on assets (ROA), defined as the ratio of annual operating income to book assets. Panel C shows the second-stage regressions where the dependent variable is the firm's Tobin's Q, which approximates the ratio of the firm's market value to its book value. The second-stage regressions in Panels B and C use the predicted values of *Long-distance CEO* from the first stage. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

**Panel A: First-stage regressions of *Long-distance CEO***

| Column | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Uprooting the spouse | 0.094***<br>[4.089] | 0.091***<br>[3.862] | 0.106***<br>[2.907] | 0.108***<br>[2.886] |
| Firm fixed effects | Yes | Yes | No | No |
| CEO fixed effects | No | No | Yes | Yes |
| Industry x Year fixed effects | No | Yes | No | Yes |
| N_obs | 29,465 | 29,465 | 29,465 | 29,465 |
| $R^2$ | 0.605 | 0.609 | 0.832 | 0.832 |
| F-Statistic | 31.402 | 28.441 | 20.937 | 20.165 |

**Panel B: Second-stage regressions of *ROA***

| Column | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Instrumented Long-distance CEO | -0.008***<br>[2.805] | -0.009**<br>[2.411] | -0.007**<br>[2.286] | -0.007**<br>[2.227] |
| Firm fixed effects | Yes | Yes | No | No |
| CEO fixed effects | No | No | Yes | Yes |
| Industry x Year fixed effects | No | Yes | No | Yes |
| N_obs | 29,465 | 29,465 | 29,465 | 29,465 |
| $R^2$ | 0.453 | 0.471 | 0.539 | 0.556 |

**Panel C: Second-stage regressions of *Tobin's Q***

| Column | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Instrumented Long-distance CEO | -0.183** [2.019] | -0.135** [2.135] | -0.135** [2.202] | -0.139** [2.028] |
| Firm fixed effects | Yes | No | Yes | Yes |
| CEO fixed effects | No | Yes | Yes | Yes |
| Industry x Year fixed effects | No | No | No | Yes |
| N_obs | 29,465 | 29,465 | 29,465 | 29,465 |
| $R^2$ | 0.671 | 0.692 | 0.729 | 0.748 |

## Table 8
## Decomposition of Operating Performance

This stable studies how a CEO's remote working arrangement is associated with the components of the firm's return on assets (ROA). Panel A examines the income components of the return on assets. In Panel A, the dependent variable is the natural logarithm of the firm's annual sales (columns 1–2), cost of goods sold (columns 3–4), and selling, general, and administrative expenses (columns 5–6). Panel B examines the asset components of the return on assets. In Panel B, the dependent variable is the natural logarithm of the firm's cash holdings (columns 1–2), short-term assets (columns 3–4), and long-term assets (columns 5–6). The main independent variable, *Long-distance CEO*, is a binary indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

**Panel A: Income**

| Dependent variable | Sales | | Cost of goods sold | | SG&A | |
|---|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) | (6) |
| Long-distance CEO | -0.014<br>[0.708] | -0.014<br>[0.450] | 0.024**<br>[2.206] | 0.024**<br>[2.005] | 0.022**<br>[2.011] | 0.022**<br>[1.994] |
| Firm fixed effects | Yes | No | Yes | No | Yes | No |
| CEO fixed effects | Yes | No | Yes | No | Yes | No |
| Industry x Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm x CEO fixed effects | No | Yes | No | Yes | No | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| Adjusted $R^2$ | 0.973 | 0.974 | 0.964 | 0.965 | 0.979 | 0.980 |

**Panel B: Assets**

| Dependent variable | Cash holdings | | Short-term assets | | Long-term assets | |
|---|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) | (6) |
| Long-distance CEO | 0.061<br>[1.490] | 0.061<br>[1.062] | 0.005<br>[0.965] | 0.005<br>[0.768] | -0.011<br>[0.498] | -0.011<br>[0.335] |
| Firm fixed effects | Yes | No | Yes | No | Yes | No |
| CEO fixed effects | Yes | No | Yes | No | Yes | No |
| Industry x Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm x CEO fixed effects | No | Yes | No | Yes | No | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| Adjusted $R^2$ | 0.909 | 0.911 | 0.950 | 0.952 | 0.971 | 0.973 |

## Table 9
## Mechanisms

This table studies three non-mutually exclusive mechanisms behind the decline in operating performance at firms run by long-distance CEOs: short-termism (Panel A), information asymmetry (Panel B), and CEO perquisites and leisure (Panel C). The main independent variable across all panels is *Long-distance CEO*, a binary indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. In Panel A, the dependent variable is one of the measures of firm investment: research and development, capital expenditures, and the average useful life of acquired assets. *R&D (%)* and *CapEx (%)* are the percentage ratios of research and development expenditure and capital expenditure to the book value of total assets, respectively. *Investment useful life* is the annual change in net PP&E divided by the annual change in depreciation. *Asset maturity* is the weighted average of the maturities of current assets (current assts divided by the costs of goods sold) and net property, plant and equipment (PP&E divided by the annual depreciation expense). Panel B studies the information asymmetry channel. In this panel, the dependent variable is the firm's annual return on assets (ROA). In this panel, *Firm geographic dispersion* is the number of states in which the firm operates, according to its annual report. Internally (externally) hired long-distance CEOs denote those whose immediately preceding professional position was with the same firm (different firm). *Below (above) median distance* is a binary indicator that equals 1 if the distance between the CEO's primary residence and the headquarters is less (greater) than the median distance for long-distance CEOs. *Same (different) time zone* is a binary indicator that equals 1 if the CEO's primary residence and the headquarters are in the same (different) time zone. *Satellite office* is an indicator that equals 1 if the CEO's long-distance employment agreement mentions performing professional duties from a firm's regional office within 30 miles of the CEO's residence, and 0 otherwise. Panel C studies the leisure channel. *Long-distance CEO with leisure boat* is an indicator variable that equals one if the CEO owns a private vessel during the long-distance arrangement, and the use of the vessel is classified as "pleasure" in the state vessel registration. *Long-distance CEO in beach home* is a binary indicator that equals 1 if the CEO's primary home is within 0.25 miles of the ocean shore in one of the following warm-climate states: CA, FL, HI, GA, NC, SC, TX, or AL, and 0 otherwise. *Long-distance CEO near golf* is a binary indicator that equals 1 if the long-distance CEO's primary home is within 10 miles of a top-200 golf course, according to the 2019–2020 national ranking of U.S. golf courses by *Golf Digest*. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

**Panel A: Short-termism**

| Dependent variable | R&D (%) | CapEx (%) | CapEx (%) | Investment useful life | Asset maturity |
|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) |
| Long-distance CEO | -0.154** | -0.186** | -0.039** | -0.643*** | -0.212*** |
| | [2.212] | [2.167] | [2.008] | [3.284] | [2.873] |
| Tobin's Q | | | 0.192*** | | |
| | | | [5.983] | | |
| Long-distance CEO x Tobin's Q | | | -0.129*** | | |
| | | | [3.035] | | |
| Firm fixed effects | Yes | Yes | Yes | Yes | Yes |
| CEO fixed effects | Yes | Yes | Yes | Yes | Yes |
| Industry x Year fixed effects | Yes | Yes | Yes | Yes | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| $R^2$ | 0.798 | 0.851 | 0.855 | 0.283 | 0.665 |

**Panel B: Information Asymmetry**

| Dependent variable | Return on Assets (ROA) | | | | |
|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) |
| Long-distance CEO | -0.017** [2.062] | -0.006** [2.118] | | | |
| Firm geographic dispersion | 0.009 [1.511] | | | | |
| Long-distance CEO x Firm geographic dispersion | 0.003* [1.748] | | | | |
| CEO hired externally | | 0.005 [1.147] | | | |
| Long-distance CEO x CEO hired externally | | -0.008** [2.104] | | | |
| Long-distance CEO, below median distance | | | -0.008* [1.955] | | |
| Long-distance CEO, above median distance | | | -0.012** [2.318] | | |
| Long-distance CEO, same time zone | | | | -0.008** [2.047] | |
| Long-distance CEO, different time zone | | | | -0.012*** [3.173] | |
| Long-distance CEO, no satellite office | | | | | -0.011*** [3.862] |
| Long-distance CEO, satellite office | | | | | -0.004* [1.712] |
| Firm fixed effects | Yes | Yes | Yes | Yes | Yes |
| CEO fixed effects | Yes | Yes | Yes | Yes | Yes |
| Industry x Year fixed effects | Yes | Yes | Yes | Yes | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| $R^2$ | 0.600 | 0.609 | 0.598 | 0.598 | 0.598 |

**Panel C: Perquisites and Leisure**

| Dependent variable | Return on Assets (ROA) | | |
|---|---|---|---|
| Column | (1) | (2) | (3) |
| Long-distance CEO without leisure boat | -0.006*<br>[1.732] | | |
| Long-distance CEO with leisure boat | -0.017***<br>[3.555] | | |
| Long-distance CEO not in beach home | | -0.007*<br>[1.873] | |
| Long-distance CEO in beach home | | -0.013***<br>[3.195] | |
| Long-distance CEO far from golf | | | -0.009**<br>[2.217] |
| Long-distance CEO near golf | | | -0.012***<br>[2.795] |
| Firm fixed effects | Yes | Yes | Yes |
| CEO fixed effects | Yes | Yes | Yes |
| Industry x Year fixed effects | Yes | Yes | Yes |
| N_obs | 36,930 | 36,930 | 36,930 |
| $R^2$ | 0.598 | 0.598 | 0.598 |

## Table 10
## Board learning about long-distance performance

This tables studies how the board of directors responds to the performance of long-distance CEOs. Panel A estimates logit regressions explaining the relation between long-distance working arrangements and CEO turnovers (Columns 1-2), CEO terminations (Columns 3-4), and the appointment of another CEO with long-distance working arrangements (Columns 5-6). Panel B studies announcement returns around the appointments and departures of long-distance CEOs. Cumulative abnormal returns (CARs) and buy-and-hold returns (BHARs) are calculated using the CAPM within a three-day window [-1,1] centered on the announcement date. *Long-distance CEO* is defined as a CEO whose roundtrip commute from home to the headquarters exceeds 100 miles. *Past long-distance CEO* is a binary indicator that equals 1 if the company has previously employed a long-distance CEO. *Stock return in year t-1* is the firm's stock return in the previous calendar year. *ROA in year t-1* is the firm's return on assets in the previous calendar year. *CEO of retirement age* is an indicator that equals 1 if the CEO is 65 years or older. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

**Panel A: CEO Turnovers and Appointments**

| Dependent variable | CEO turnover | | Forced CEO turnover | | Appointment of long-distance CEO | |
|---|---|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) | (5) | (6) |
| Long-distance CEO | 2.200***<br>[8.111] | 2.322***<br>[8.895] | 3.340***<br>[11.199] | 3.299***<br>[11.339] | | |
| Past long-distance CEO | | | | | -3.526***<br>[6.891] | -3.567***<br>[6.231] |
| Stock return in year t-1 | -0.507***<br>[2.772] | -0.498**<br>[2.569] | -1.337***<br>[7.285] | -1.439***<br>[8.366] | -0.516<br>[1.385] | -0.542<br>[1.368] |
| ROA in year t-1 | 0.256<br>[0.606] | 0.311<br>[0.723] | -2.460***<br>[3.635] | -2.581***<br>[3.526] | -0.557<br>[1.039] | -0.649<br>[1.175] |
| CEO of retirement age | 0.711***<br>[5.744] | 0.759***<br>[6.068] | 0.247<br>[0.764] | 0.188<br>[0.573] | 0.920***<br>[4.914] | 0.915***<br>[4.909] |
| Year fixed effects | No | Yes | No | Yes | No | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 | 36,930 |
| Pseudo $R^2$ | 0.140 | 0.173 | 0.189 | 0.215 | 0.294 | 0.303 |

**Panel B: Announcement Returns to CEO Appointments and Departures**

| Event | CEO | CAR | t-statistic | BHAR | t-statistic |
|---|---|---|---|---|---|
| Appointments | Long-distance CEO | 0.001 | 0.089 | 0.005 | 0.661 |
| | Non-long-distance CEO | 0.002 | 1.294 | 0.002 | 1.150 |
| | Difference | -0.002 | 0.274 | 0.003 | 0.521 |
| Departures | Long-distance CEO | 0.025 | 2.574 | 0.026 | 2.736 |
| | Non-long-distance CEO | 0.001 | 0.374 | 0.000 | 0.008 |
| | Difference | 0.024 | 3.522 | 0.026 | 3.872 |

# Internet Appendix

# Remotely Productive: the Efficacy of Remote Work for Executives

**Appendix Contents:**

**Internet Appendix A: Sample Disclosures of Long-distance CEO Arrangements**

This appendix includes sample disclosures of CEOs' long-distance working arrangements from proxy statements and employment letters, as well as CEOs' personal disclosures related to the reasons for their long-distance working arrangements.

**Internet Appendix A.1**
**Sample disclosures of long-distance arrangements in proxy statements**

Example 1

Proxy statement for Vista Outdoor Inc., for shareholders' meeting on 06/18/2018, p. 37
CEO: Christopher T. Metz

*The amounts in this column consist of a stipend for expenses in connection with Mr. Metz's commuting between Vista Outdoor's Utah headquarters and his home in Florida.*

Example 2

Proxy statement for Global Eagle Entertainment Inc., for shareholders' meeting on 11/28/2017, p. 30
CEO: David M. Davis

*Amounts disclosed under "All Other Compensation" include (1) for Mr. Davis, approximately $50,000 for commuting benefits for his travel to and from his principal residence in Minnesota and our Company's headquarters in Los Angeles, California, and $4,300 for 401(k) employer matching contributions;*

Example 3

Proxy statement for 3D Systems Corporation for shareholders' meeting on 04/30/2007, p. 35
CEO: Abraham N. Reichental

*Since joining the Company in 2003, Mr. Reichental's primary residence has been in South Carolina, and the living expenses were for a residence maintained by him in California, where our headquarters were located until 2006.*

Example 4

Proxy statement for Mattel Inc., for shareholders' meeting on 04/05/2017, p. 81
CEO: Christopher A. Sinclair

*For Mr. Sinclair, the amount shown is a special allowance of $60,000 per month, in lieu of participation in Mattel's relocation program or any one-time special relocation payment, and was intended to assist Mr. Sinclair with his living and commuting expenses while working in California and maintaining his primary residence in Florida. Mr. Sinclair ceased to be eligible for this allowance effective April 1, 2017 in connection with his new role as Executive Chairman.*

Example 5

Proxy statement for Libbey Inc., for shareholders' meeting on 03/28/2019, p. 28
CEO: William A. Foley

*Direct payment or reimbursement of personal financial planning and tax return preparation fees; annual executive health screening and related services; ground transportation for trips between Toledo, Ohio, and the Detroit/Wayne County Metropolitan airport for the executive when traveling for business purposes and the executive's spouse when traveling together; membership in one airline club of the executive's choice; for executives relocating at Libbey's request, moving and related expenses associated with the move (may also include loss-on-sale protection when necessary to attract talent); and, for Mr. Foley until April 24, 2019, a housing allowance for housing in the Toledo, Ohio, area since his primary residence is in the Cleveland, Ohio, area.*

Example 6

Proxy statement for Verisign Inc., for shareholders' meeting on 04/10/2012, p. 31
CEO: D. James Bidzos

*Additionally, because Mr. Bidzos was located in California and the Company's headquarters are in Virginia, the Company also provided Mr. Bidzos with a corporate-leased apartment and automobile while he was in Virginia. The Compensation Committee approved a value not to exceed $10,000 per month for the apartment, costs associated with the apartment such as cleaning services and utilities, and the automobile.*

Example 7

Proxy statement for FSI International Inc., for shareholders' meeting on 12/07/2011, p. 19
CEO: Donald S. Mitchell

*In addition to Company-paid premiums on term life and long-term disability policies for executive officers, the Company also pays the cost for Mr. Mitchell to travel to our headquarters in Minneapolis from his office in San Diego, and for his lodging expenses while in Minneapolis. These arrangements were agreed to by the Company and Mr. Mitchell in 1999 in connection with his original hiring by the Company.*

Example 8

Proxy statement for Cryo Cell International Inc., for shareholders' meeting on 10/30/2019, p. 19
CEO: David Portnoy

*The agreements also provide for reimbursement for all business expenses, including reasonable commuting expenses for David Portnoy between his home in Miami, Florida to the Company's headquarters in Tampa, Florida, including lodging and rental car expenses for when he is working in the Company's offices in Tampa. David Portnoy's principal place of employment shall be at the Company's offices in Miami, Florida, provided he shall travel to the Company's headquarters as necessary to fulfill his responsibilities under the agreement.*

**Internet Appendix A.2**
**Sample disclosures of long-distance arrangements in employment contracts**

Example 1

Exhibit 10.1 in the annual report (10-K) for NCR Corporation for fiscal year 2005, p. 3
CEO: James M. Ringler

*Because you will need to spend time working at the Company's headquarters in Dayton, Ohio, NCR will provide you with the following during the Engagement: (a) temporary housing at its corporate guest facility in Dayton, Ohio, including meals at such facility (with an approximate cost to the Company of $3,000 per month); and (b) a rental vehicle and car service to and from the airport (with an approximate cost to the Company of $1,500 per month).*

*During the Engagement, NCR will also permit you to use the corporate aircraft for business travel and for travel between your Florida residence or any other residence and the Company's offices in Dayton, Ohio, and elsewhere as needed.*

Example 2

Exhibit 10.1 in the current report (8-K) for ATA Holdings Corporation on 10/21/2005, p. 2
CEO: John G. Denison

*The Companies understand that Executive's permanent residence is in Dallas, Texas, and the Companies acknowledge that Executive may continue to commute weekly or bi-weekly to such permanent residence consistent with Executive's commuting practices during his employment under the Initial Employment Agreement, as long as such commuting does not interfere unreasonably with the execution of Executive's duties for the Companies.*

Example 3

Exhibit 10 in the current report (8-K) for Rite Aid Corporation on 01/18/2000
CEO: Mary F. Sammons

*Other than for necessary travel in connection with the performance of his duties hereunder, the Executive shall be based in Portland, Oregon, and shall not at any time be required to relocate his primary residence from the Portland metropolitan area, regardless of the location from time to time of the Company's principal headquarters. The Company shall provide suitable office space, staff and equipment to enable the Executive to discharge his duties from such location.*

Example 4

Exhibit 10.1 in the current report (8-K) for Convergys Corporation on 02/12/2010, p. 2
CEO: Jeffrey H. Fox

*For so long as you remain employed with the Company, the Company shall provide you with temporary housing or a monthly housing allowance to be paid to you on the last business day of each month commencing February 2010 and otherwise reimburse you in accordance with the Company's general expense policies.*

Example 5

Exhibit 99 in the current report (8-K) for Zilog Inc., on 01/30/2002
CEO: James M. Thorburn

*The Company will reimburse Executive for all reasonable business expenses actually incurred by Executive, including commuting expenses for up to two round trip visits per week to Executive's residence, and expenses incurred for temporary housing.*

Example 6

Exhibit 10.35 in the annual report (10-K) for Spirit Airlines Inc., for fiscal year 2015, page 2
CEO: Robert L. Fornaro

*Executive shall be required to maintain regular hours at Company's headquarters (which are currently located in Miramar, Florida) and to perform his duties and responsibilities hereunder primarily from and at the Company's headquarters, it being understood and agreed that the foregoing shall not preclude Executive from traveling on Company business to the extent reasonably required to perform his duties and responsibilities. Subject to the foregoing, Executive may perform, on a lesser scale, some of his duties and responsibilities from and at his primary residence; provided, however, that Executive shall arrange his schedule so as to be present in person at the Company's headquarters as and when necessary to perform those duties and responsibilities that cannot be effectively or properly performed elsewhere.*

Example 7

Exhibit 10.16 in the annual report (10-K) for Starz LLC for fiscal year 2012, page 2
CEO: Christopher Albrecht

*Executive shall not be required to relocate his principal residence from the Los Angeles, California metropolitan area to the Englewood, Colorado metropolitan area during the Term. The Company and Executive shall agree on a reasonable budget for Executive's travel between Los Angeles and Englewood as necessary for the conduct of the Company's business and the performance of Executive's duties hereunder.*

Example 8

Exhibit 10.1 in the current report (8-K) for Novatel Wireless Inc on 08/06/2014
CEO: Alex Mashinsky

*In connection with the Executive's commute from his New York residence, the Company will also reimburse Executive for the cost of his weekly trips from New York to San Diego, including coach-class travel, reasonable San Diego area lodging reimbursement, and ground transportation. The Executive shall also be entitled to $750 per month non-accountable reimbursement for all other costs incurred in connection with his commute to and stay in the San Diego area, including but not limited to non-business meals.*

**Internet Appendix A.3**
**Sample disclosures of the CEOs' stated reasons for long-distance arrangements**

Example 1

CEO: Jay A. Snowden
Company: Penn National Gaming, Inc.
Article: Penn National's new CEO put all he learned from poker and football into a challenging first year
Author: Gary Rotstein
Source: US Bets
Publication date: 12/16/2020

*Snowden has had Boston connections ever since his Harvard days in the late 1990s — his wife is from there, and they make their home there, with him commuting weekly to Pennsylvania on commercial flights into Philadelphia.*

Example 2

CEO: Spencer Rascoff
Company: Zillow Group, Inc.
Article: Filing shows what Zillow pays for CEO's air commute from L.A. to Seattle
Author: Monica Nickelsburg
Source: GeekWire
Publication date: 04/27/2017

*"Beginning this summer, I will be splitting my time between Seattle and L.A., where my wife grew up and where all four of our parents live," Spencer Rascoff wrote at the time of his move.*

**Internet Appendix B**: **Variable Definitions**

This appendix defines the variables. Parenthetical entries refer to the annual Compustat item name.

### B.1 CEOs

*Age, years*: CEO's age in years

*Appointment of another long-distance CEO*: An indicator that equals 1 if a firm that has previously employed a long-distance CEO appoints another long-distance CEO, and 0 otherwise

*Chairman-CEO indicator*: An indicator that equals 1 during firm-years when the firm's CEO also serves as the chairman of the board of directors, and zero otherwise.

*College admission rate:* The admission rate of the college that the CEO graduated from (based on 2004 data).

*College ave. SAT percentile rank, 0-100:* The percentile ranking of the average SAT score of the students attending the college that the CEO graduated from (based on 2004 data).

*Different time zone indicator*: An indicator equal to one if the home of a long-distance CEO is in a different time zone than the firm's headquarters, and zero otherwise.

*Distance from remote home to HQ, miles*: The distance between the firm's headquarters and the CEO's home, in miles, calculated for long-distance CEOs.

*Duration of remote arrangement, years*: The number of years that a CEO works remotely in a given firm.

*External board seats*: The number of directorships at other firms.

*Forced departure*: An indicator that equals 1 if the CEO is terminated or forced to resign, and 0 otherwise.

*Fraction of tenure in remote arrangement*: The number of years that a CEO works remotely in a given firm divided by the overall tenure as CEO.

*Graduate degree indicator*: An indicator equal to one if the manager holds a graduate degree and zero otherwise

*Internally (externally) hired long-distance CEO*: A CEO whose immediately preceding professional position was with the same firm (different firm).

*Ivy league:* An indicator that equals 1 if the CEO graduated from an IV league college.

*Long-distance CEO indicator:* An indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. This indicator is switched on in the year following the year of transition to long-distance.

*Long-distance CEO with leisure boat:* An indicator variable that equals one if the CEO owns a private vessel during the long-distance arrangement, and the use of the vessel is classified as "pleasure" in the state vessel registration.

*Long-distance CEO in beach home:* An indicator that equals 1 if the CEO's primary home is within 0.25 miles of the ocean shore in one of the following warm-climate states: CA, FL, GA, NC, SC, AL, or TX, and 0 otherwise.

*Long-distance CEO near golf:* An indicator that equals 1 if the long-distance CEO's primary home is within 10 miles of a top-200 golf course, according to the 2019–2020 national ranking of U.S. golf courses by *Golf Digest*.

*Long-distance CEO, below (above) median distance*: An indicator that equals 1 if the distance between the CEO's primary residence and the headquarters is less (greater) than the median distance for long-distance CEOs (775.86 miles).

*Long-distance CEO, same (different) time zone*: An indicator equal to 1 for long-distance CEOs whose home is in the same (a different) time zone than the headquarters and 0 otherwise.

*Male indicator*: An indicator equal to one if the manager is male and zero if the manager is female.

*MBA indicator*: An indicator equal to one if the manager holds an MBA degree and zero otherwise

*Period 2000-2010*: An indicator equal to 1 for long-distance CEOs in the years 2000-2010, and 0 otherwise.

*Professional network centrality:* The average annual number of executives that the CEO is connected to through educational background, prior employment, and social memberships based on BoardEx.

*Sell-Buy Imbalance*: The difference between the number of shares sold and bought by executives, scaled by the total number of shares they trade in the year before the CEO turns over or switches between a long-distance and a local working arrangement.

*Satellite office*: An indicator that equals 1 if the CEO's long-distance employment agreement mentions performing professional duties from a firm's regional office within 30 miles of the CEO's residence, and 0 otherwise.

*Time in CEO position*: The natural logarithm of the number of years between the effective appointment date and the effective date of departure from the CEO position.

*Tenure with the firm, years*: The number of years the manager has worked at the firm.

*Uprooting the spouse*: An indicator that equals 1 if moving the CEO's household to the company's headquarters would require the spouse to leave the spouse's home state, and 0 otherwise. The home state of the spouse is the state where the spouse received their social security number. If the home state of the spouse is the same as that of the CEO, the instrument is set to 0.

**B.2 Firms**

*100-mile radius CEO pool:* The average number of C-suite executives employed at other publicly-traded companies within a 100-mile radius of the firm's headquarters

*Book value of total assets, $ bil*: Book value of total assets (at) in billions of dollars.

*Capital expenditures, $ millions*: capital expenditure (capx) in millions of dollars.

*CapEx (%)*: The percentage ratio of capital expenditure (capx) to book value of total assets (at).

*EBITDA:* Earnings before interest, taxes, depreciation and amortization (ebitda) in millions of dollars.

*Geographic dispersion of operations*: The number of states in which the firm operates, according to its annual report.

*Investment useful life*: The average useful life of acquired assets, measured as the annual change in net PP&E (ppent) divided by the annual change in depreciation (dp). Note that the reported depreciation follows the half-year convention of the Internal Revenue Service, which deducts half of the annual depreciation in the year the asset is purchased.

*Market capitalization, $ bil*: book assets (at) + market value of common equity (csho*prcc_f) - common equity (ceq).

*Net income, $ millions*: Net income (ni) in millions of dollars.

*R&D expenditure, $ millions*: research and development expenditure (xrd) in millions of dollars.

*R&D (%)*: The percentage ratio of R&D expenditure (xrd) to book value of total assets (at).

*ROA*: Return on assets, calculated as net income (ni) divided by the book value of total assets (at).

*Sales, $ millions*: Net sales (sale) in millions of dollars.

*State CEO pool:* The average number of C-suite executives employed at other publicly-traded companies in the firm's state

*Tobin's Q*: Market value of assets [book assets (at) + market value of common equity (csho*prcc_f) - common equity (ceq)] / book value of total assets (at).

### B.3 Employee Reviews

The following variables are based on employee reviews on www.glassdoor.com.

*Employee approval rate*: An indicator equal to 1, 0, or -1, if the employee's answer to the question "Do you approve of the way your CEO is leading your company?" is "approve," "no opinion," or "disapprove," respectively.

*Review by manager*: An indicator that equals 1 if the reviewer's job title includes the words "manager," "director," or "senior," and 0 otherwise.

*Review from HQ state:* An indicator that equals 1 if the reviewer is based in the state of the firm's headquarters, and 0 otherwise.

## Internet Appendix C: **Robustness and Extensions**

**Table IA.1**
**Sample Construction**

This table shows the sample selection criteria and provides the number of firms, CEOs, and observations screened out by each sample filter. The sample consists of publicly traded U.S. firms covered by Execucomp or BoardEx with available data on CEO tenures. The sample period is 2000–2019.

| **Sample selection criteria** | **# firms** | **# CEOs** | **# observations** |
|---|---|---|---|
| Public firms with available data on CEOs | 3,819 | 8,418 | 49,749 |
| - Interim or Acting CEOs | 104 | 268 | 961 |
| - CEOs with tenure less than one year | 317 | 926 | 3,098 |
| - Firms with missing information on income or assets | 262 | 569 | 8,760 |
| **= Final Sample** | **3,136** | **6,655** | **36,930** |

## Table IA.2
## Home locations of long-distance CEOs: Climate, landscape, and socioeconomics

This table compares the counties of primary residences of long-distance CEOs and those of their firms' headquarters. The right-hand side column shows the absolute values of *t*-statistics for the tests of the differences of means. Values reported are county-level averages, except for distances, which are calculated for the exact addresses. Long-distance CEOs are defined as CEOs whose roundtrip commute to the headquarters exceeds 100 miles. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. Statistical significance levels for the test of the difference in means are indicated as follows: *=10%, **=5%, ***=1%.

| Variable | Headquarters | Primary home | Difference | *t*-statistic |
|---|---|---|---|---|
| **Climate** | | | | |
| Average annual temperature, degrees F | 56.14 | 58.06 | 1.93 | 5.17*** |
| Within-year temperature variability (monthly st. deviation), degrees F | 14.62 | 13.73 | -0.89 | 5.24*** |
| Days of sunshine per year | 215.36 | 216.86 | 1.50 | 1.02 |
| Average annual rainfall, inches | 38.32 | 41.85 | 3.53 | 5.21*** |
| Average annual snowfall, inches | 21.60 | 20.87 | -0.73 | 0.70 |
| **Landscape and leisure** | | | | |
| Distance to the ocean shore, miles | 198.68 | 149.60 | -49.09 | 6.24*** |
| Distance to the nearest water body (ocean, lake, or river), miles | 6.17 | 2.80 | -3.36 | 1.55 |
| Distance to a top 1,000 golf course | 12.60 | 10.54 | -2.07 | 4.68*** |
| Population density, residents per square mile | 4,980.36 | 3,429.27 | -1,551.10 | 3.57*** |
| Elevation span (highest minus lowest point), meters | 1,837.55 | 1,633.09 | -204.46 | 4.59*** |
| Fraction of non-flat land, % | 65.83 | 64.16 | -1.67 | 4.86*** |
| **Socioeconomics** | | | | |
| Top marginal state income tax rate, % | 6.00 | 5.21 | -0.79 | 12.98*** |
| Top marginal state capital gains tax rate, % | 5.66 | 4.95 | -0.71 | 11.29*** |
| Median annual household income, year 2019 dollars | 82,011.49 | 82,033.26 | 21.77 | 0.03 |
| Percent of adults with a bachelor's degree or higher | 41.59 | 41.01 | -0.59 | 1.55 |
| Mean national high school quality rank (low rank = high quality) | 5,063.07 | 4,819.19 | -243.88 | 5.03*** |

## Table IA.3
## External hires and CEOs Born Out of State

This table studies how a CEO's remote working arrangement is associated with the firm's operating performance or Tobin's Q. *Long-distance CEO* is a binary indicator that equals 1 during CEO-years when the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. *External CEO* is a binary indicator that equals 1 if the CEO has not worked for the firm before becoming CEO, and 0 otherwise. *Born-out-of-state CEO* is a binary indicator that equals 1 if the CEO's social security number was issued in a state different from the one where the firm is headquartered, and 0 otherwise. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

| Dependent variable | ROA | Tobin's Q | ROA | Tobin's Q |
|---|---|---|---|---|
| Column | (1) | (2) | (3) | (4) |
| Long-distance CEO | -0.007***<br>[4.460] | -0.129**<br>[2.306] | -0.009**<br>[2.393] | -0.107**<br>[2.031] |
| External CEO | -0.007***<br>[5.697] | -0.036**<br>[2.186] | -0.007***<br>[5.211] | -0.037**<br>[2.080] |
| Born-out-of-state CEO | -0.001<br>[0.040] | 0.031<br>[1.534] | -0.001<br>[0.264] | 0.047**<br>[2.158] |
| Long-distance CEO x External CEO | | | -0.001<br>[0.174] | 0.009<br>[0.211] |
| Long-distance CEO x Born-out-of-state CEO | | | -0.003<br>[0.745] | -0.095*<br>[1.881] |
| Year fixed effects | Yes | Yes | Yes | Yes |
| Firm fixed effects | Yes | Yes | Yes | Yes |
| N_obs | 36,930 | 36,930 | 36,930 | 36,930 |
| $R^2$ | 0.451 | 0.660 | 0.451 | 0.660 |

## Table IA.4
## Trades of Independent Directors

This table studies how a CEO's remote working arrangement is associated with the insider trades of independent directors. Columns 1 and 4 of each panel consider CEO turnovers (for CEOs who remain long-distance or local for their entire tenure). Columns 2, 3, 5, and 6 consider changes in the working arrangements of existing CEOs. The dependent variable in columns 1-3 is an indicator, *Net Seller*, which takes on the value of one if the number of shares sold by the executive exceeds the number of shares bought in the year before the CEO turns over or switches between a long-distance and a local working arrangement. In columns 4-6, the dependent variable is *Sell-Buy Imbalance*, defined as the difference between the number of shares sold and bought by the executive, scaled by the total number of shares he trades in the year before the CEO turns over or switches between a long-distance and a local working arrangement. The main independent variable, *Long-distance CEO*, is a binary indicator that equals 1 if the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

| Dependent variable | Net Seller | | | Sell-buy Imbalance | | |
|---|---|---|---|---|---|---|
| Event | Appointments | Switches from long-distance to local arrangements | Switches from local to long-distance arrangements | Appointments | Switches from long-distance to local arrangements | Switches from local to long-distance arrangements |
| Column | (1) | (2) | (3) | (4) | (5) | (6) |
| Long-distance CEO | -0.028<br>[1.033] | -0.012<br>[0.846] | -0.025<br>[0.989] | -0.056<br>[1.161] | -0.026<br>[1.248] | -0.049<br>[1.338] |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| N_obs | 19,104 | 961 | 1,175 | 19,104 | 961 | 1,175 |
| $R^2$ | 0.586 | 0.457 | 0.460 | 0.586 | 0.479 | 0.482 |

## Table IA.5
## Trades of the CEO and Other Executives

This table studies how a change in a CEO's remote working arrangement is associated with the CEO's insider trades or with the trades of other corporate executives. Columns 1 and 4 of each panel consider CEO turnovers (for CEOs who remain long-distance or local for their entire tenure). Columns 2, 3, 5, and 6 consider changes in the working arrangements of existing CEOs. The dependent variable in columns 1-3 is an indicator, *Net Seller*, which takes on the value of one if the number of shares sold by the executive exceeds the number of shares bought in the year before the CEO turns over or switches between a long-distance and a local working arrangement. In columns 4-6, the dependent variable is *Sell-Buy Imbalance*, defined as the difference between the number of shares sold and bought by the executive, scaled by the total number of shares he trades in the year before the CEO turns over or switches between a long-distance and a local working arrangement. The main independent variable, *Long-distance CEO*, is a binary indicator that equals 1 if the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

**Panel A: CEOs**

| Dependent variable | Net Seller | | | Sell-buy Imbalance | | |
|---|---|---|---|---|---|---|
| Event | Appointments | Switches from long-distance to local arrangements | Switches from local to long-distance arrangements | Appointments | Switches from long-distance to local arrangements | Switches from local to long-distance arrangements |
| Column | (1) | (2) | (3) | (4) | (5) | (6) |
| Long-distance CEO | -0.081*<br>[1.762] | -0.031<br>[1.293] | -0.068<br>[1.577] | -0.162*<br>[1.795] | -0.086<br>[1.359] | -0.194<br>[1.508] |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| N_obs | 3,184 | 160 | 196 | 3,184 | 160 | 196 |
| $R^2$ | 0.618 | 0.476 | 0.482 | 0.622 | 0.492 | 0.499 |

**Panel B: Other Executives**

| Dependent variable | Net Seller | | | Sell-buy Imbalance | | |
|---|---|---|---|---|---|---|
| Event | Appointments | Switches from long-distance to local arrangements | Switches from local to long-distance arrangements | Appointments | Switches from long-distance to local arrangements | Switches from local to long-distance arrangements |
| Column | (1) | (2) | (3) | (4) | (5) | (6) |
| Long-distance CEO | -0.041<br>[1.348] | -0.011<br>[0.722] | -0.033<br>[1.136] | -0.074<br>[1.304] | -0.059<br>[1.285] | -0.036<br>[1.013] |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| N_obs | 22,288 | 1,282 | 1,566 | 22,288 | 1,282 | 1,566 |
| $R^2$ | 0.573 | 0.462 | 0.466 | 0.587 | 0.486 | 0.459 |

## Table IA.6
## Analyst Forecasts

This table studies how a CEO's remote working arrangement is associated with analyst forecasts. The dependent variable in columns 1-3, *Change in Analyst Recommendations*, is the average change in analyst recommendations (standardized to lie between 0 and 4) in the year before the CEO turns over or switches between a long-distance and a local working arrangement. In columns 4-6, the dependent variable is *Change in EPS Forecasts*, defined as the change in the consensus EPS forecast in the year before the CEO turns over or switches between a long-distance and a local working arrangement. The main independent variable, *Long-distance CEO*, is a binary indicator that equals 1 if the CEO's roundtrip commute from the primary residence to the firm's headquarters exceeds 100 miles, and 0 otherwise. Sample selection criteria and variable definitions appear in appendixes B and C, respectively. The absolute values of *t*-statistics (in brackets) are based on standard errors that are heteroskedasticity consistent and clustered by firm. Significance levels are indicated as follows: * = 10%, ** = 5%, *** = 1%.

| Dependent variable | Change in Analyst Recommendations | | | Change in EPS Forecasts | | |
|---|---|---|---|---|---|---|
| Sample | CEO Appointments | Remote to Local Switches | Local to Remote Switches | CEO Appointments | Remote to Local Switches | Local to Remote Switches |
| Column | (1) | (2) | (3) | (4) | (5) | (6) |
| Long-distance CEO | 0.047<br>[0.449] | 0.014<br>[0.202] | -0.009<br>[0.146] | -0.056<br>[0.235] | -0.139<br>[0.807] | -0.195<br>[0.783] |
| Year fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm fixed effects | Yes | Yes | Yes | Yes | Yes | Yes |
| N_obs | 3,184 | 160 | 196 | 3,184 | 160 | 196 |
| $R^2$ | 0.542 | 0.534 | 0.521 | 0.480 | 0.511 | 0.538 |

**Internet Appendix D: Content Analysis of Employee Reviews**

This appendix details the natural language processing of the employee reviews of long-distance CEOs submitted on Glassdoor.com. Appendixes D.1 and D.2 provide details on the large language model (LLM) used for extracting and categorizing common themes in the reviews of long-distance CEOs. Appendix D.3 offers sample employee quotes for the main rubrics related to long-distance CEOs.

**Internet Appendix D.1**
**Processing employee reviews with a large language model**

We analyze the content of employee reviews by using OpenAI's GPT-4 (Generative Pre-trained Transformer 4) architecture built into the interface of Microsoft Copilot. This architecture provides an LLM designed for advanced natural language processing.

We apply the model to the dataset of employee reviews submitted by the employees of firms run by long-distance CEOs during periods of remote arrangements. The employee reviews come from the online feedback portal of Glassdoor, Inc.

We use the following sequence of prompts in the Copilot interface to extract and classify common themes related to employee dissatisfaction during remote CEO arrangements.

1. The attached file contains companies' employee reviews.

2. For each review, please determine if it is related to the CEO or top management.

3. For each review related to the CEO or top management, identify the main issues that the employee raises. Note that each review can raise multiple issues. Note that some reviews might not raise clearly identified issues.

4. Provide a table that summarizes the percentage of reviews containing each issue relative to the total number of reviews containing at least one identifiable issue. Since each review can contain several different issues, they need not sum up to 100.

**Internet Appendix D.2**
**Common issues in employee reviews at firms with long-distance CEOs**

The table below shows the LLM output in categorizing common areas of employee concern in the online reviews of firms with long-distance CEOs. The CEO-related rubrics are highlighted in bold. In the analysis of economic channels, we aggregate these rubrics into three mechanisms: (1) consumption of perquisites, leisure, and self-interest, (2) information loss and detachment from the firm, and (3) short-term focus.

In addition to the CEO-specific concerns, the reviews reveal other broad-based areas of dissatisfaction. These general rubrics are shown in plain font.

| **Areas of Concern** | **% of Reviews with Issues** |
|---|---|
| Vague or Redundant Feedback | 73.48 |
| **Perquisites and Compensation Issues** | 22.51 |
| **Disconnected Leadership** | 16.82 |
| Work-Life Balance | 15.66 |
| **Pursuing Self-interests** | 4.32 |
| General Dissatisfaction | 2.90 |
| **Short-Term Focus** | 1.57 |

**Internet Appendix D.3**
**Sample insider reviews of long-distance CEOs grouped by common themes**

**1. Consumption of perquisites, leisure, and absenteeism**

- *Very hard to swallow travel cuts when the company helicopter continues to fly almost daily*
- *CEO generally absent from the Buffalo office.*
- *It's disheartening to know layoffs are pending (10k in late 2013) and see the executives taking their helicopters back and forth and to their homes.*
- *Management absent most times.*
- *I have worked at the HQ site for several years. I have seen the executives throttling others pay so they can stuff their wallets. 600K spent on the CEO for his furniture, nearly a million dollars spent for a lease so the CEO can travel in his own private jet, hundreds of thousands spent for fuel for the CEO's personal plane (Yes he has his OWN plane).*
- *CEO is not around most of the time and with the senior management changing so rapidly, future of the company is very uncertain.*
- *They expect you as a DM to get your managers ($30,000 a year) and your hourly employees (min. wage) to work miracles while corporate executives take the private company jet back and forth to work from home every week. It's insanity.*
- *Management also preaches price controls but doesn't practice it themselves in any way/shape/form (e.g. - purchase of second corporate jet).*
- *I can't say I have ever seen the people like the CEO or CFO in the NY headquarters office more than a handful of times over numerous years.*

**2. Information loss and disconnect from the firm**

- *CEO is completely out of touch with some selling practices regarding customers.*
- *There is a huge disconnect between upper management and the rest of the workforce.*
- *Upper Management and CEO are clueless as to day-to-day operations.*
- *CEO is out of touch with his employees.*
- *An out of touch CEO and corporate staff.*
- *Upper management not always in tune to what is happening on the research and development level.*
- *Upper Management disconnected.*

**3. CEO short-termism**

- *Current management is putting short term gains ahead of long term vision.*
- *Executive leadership seems to have little direction, poor communication, no accountability. Prioritize short term goals over long term ones.*
- *The company has a very short term focus.*
- *Management needs to have long term vision, minimize frequent reorganization, and appreciate talent within the company.*