Early-Life Experience and CEOs' Reactions to COVID-19[1]

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This study investigates how CEOs' experience of natural disasters and severe disease outbreaks in their formative years influences their firms' responses to the COVID-19 pandemic in the United States. We observe that firms whose CEOs experienced disease outbreaks akin to COVID-19 early in their lives demonstrated more conservative responses to the emergence of the COVID-19 in late February 2020, notably through a substantial slowdown in capital expenditure growth. Moreover, firms led by CEOs with early-life disease experience exhibit a more negative tone in their corporate disclosures and heightened pessimism in their earnings forecasts following the COVID-19 outbreak. These effects are more pronounced for firms in industries that were hit hard by the pandemic. Our findings suggest that severe events early in life leave indelible imprints on memory, thereby impacting CEOs' decision-making when managing similar crises in their professional careers.

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JEL Classification: G30, G31, G32, D83, M41, I1

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1. Introduction

A central topic in accounting and finance is the role of CEOs in corporate decision making (Jensen and Meckling, 1976). In the accounting literature, the field has advanced with positive accounting theory, especially through a focus on managerial incentives (Watts and Zimmerman, 1986; Frankel et al., 2024). More recent research broadens the scope to the individual characteristics of CEOs (Hanlon et al., 2022). Following the seminal work by Bertrand and Schoar (2003), a number of studies highlight that "tone at the top" matters for corporate policies and disclosures (e.g., Bamber et al., 2010; Dyreng et al., 2010). Particularly noteworthy is the exploration of factors influencing a CEO's style, which has gained prominence in recent years (Ahmed and Duellman, 2013; Schoar and Zuo 2017; Abdel-Meguid et al., 2021). Building upon this rich body of research, this paper seeks to contribute a novel perspective by investigating how CEOs' early-life experiences with severe adversities, especially past epidemics, shape their responses to the unprecedented and unforeseen challenges posed by the COVID-19 outbreak, particularly in the realms of corporate investment and disclosure decisions.

Specifically, we source the list of CEOs of public firms from the S&P Compustat Executive Compensation database (Execucomp) from 2010 to 2021 and manually gather their birthplace information using various sources. We then employ a standard approach to designate CEOs as imprinted by early-life adversities if major natural disasters occurred during their formative years (ages 5–15) (Nelson, 1993; Yonker, 2017).[1] For this, we use the Spatial Hazard Events and Losses Database for the United States (SHELDUS), maintained by the University of South Carolina, which recorded disaster events in the country from 1960 to 2019. We use the initial COVID-19

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[1] Individuals are susceptible to imprinting during transition periods, including the early-life stage (Higgins, 2005). Psychological research also indicates that adolescence is the most crucial phase in the formation of individual thinking and values (Elder et al., 1991; Becker, 1992).

outbreak and subsequent lockdowns in the United States as exogenous shocks and employ difference-in-differences (DID) analyses to estimate how CEOs with early-life adversities react differently in their firms' investment and corporate disclosure decisions compared with CEOs without such experience. Following the lockdown due to the initial COVID-19 outbreak, amid strict social distancing mandates, firms managed by CEOs experiencing early-life disasters reduce their capital expenditure growth rate by 18.2 percentage points more on average compared with firms whose CEOs have no such experience. Moreover, the pre-COVID-19 capital expenditure growth in 2019 is not statistically different for CEOs with and without early-life disaster experience, which supports the parallel trend assumptions for the DID regressions.

While previous studies have typically assessed the average impact of early-life experience during normal periods (e.g., Bernile et al., 2017; Schoar and Zuo, 2017), our DID approach enables us to estimate the incremental effect of imprints during special periods, as exemplified by crises such as COVID-19. Precisely, we capture the relative shifts in firms' activities between those led by CEOs with early-life experience of disasters and CEOs without such experience in the wake of the COVID-19 shock, marking a progressive step in this research field.

One might argue that CEOs with early-life experience of natural disasters such as earthquakes and tornadoes have the learned ability to navigate unexpected future adverse events. Hence, firms might strategically appoint such CEOs to benefit from their resilience. To mitigate this concern, we focus on CEOs with early-life exposure to infectious disease outbreaks (i.e., measles, tuberculosis, polio, and scarlet fever) that parallel COVID-19 not only in their symptomatology and transmission methods but also in their severity. Measles, tuberculosis, polio, and scarlet fever accounted for 328,000 reported deaths, or 80% of all reported deaths in the United States caused by notifiable airborne infectious diseases between 1951 and 1998. The DID regressions show that

CEOs with such early-life experience of severe diseases react more strongly to COVID-19, as evidenced by the substantially larger decrease in capital expenditure growth for firms managed by such CEOs than those managed by their counterparts without such experience. These patterns are more pronounced for firms in industries hit hard by the COVID-19 pandemic. Our findings alleviate a prevalent concern in the literature about firms or boards that purposefully select CEOs with specific management styles to deliver certain outcomes. Given the unpredictability of the COVID-19 outbreak, it is unlikely that firms in the pre-COVID-19 era would have strategically selected CEOs with experience of such infectious disease outbreaks to handle a pandemic.

Next, we explore how CEOs' early-life experience of similar diseases affect their attitudes toward COVID-19 regarding corporate disclosure and earnings guidance. Following the initial COVID-19 outbreak, CEOs with early-life experience of severe diseases use 6.8% fewer positive words in their firms' financial reports than those managed by CEOs without similar experience. Their firms' communication, reflected in financial reports, is notably more pessimistic. Following the lockdowns, CEOs with early-life experience of similar severe diseases exhibit significantly lower optimism in their earnings guidance. Firms led by these CEOs are 29.8 percentage points less likely to release positive news during the lockdown period compared with firms managed by CEOs without such experience. Consistent with our earlier findings, these patterns are more pronounced for firms in industries hit hard by COVID-19.

Our findings reveal that CEOs with early-life experience of similar disease outbreaks responded more strongly following the initial COVID-19 outbreak in the United States, taking actions such as slowing capital expenditure growth, using more negative tones in corporate disclosures, and increasing conservatism in earnings forecasts. These findings are consistent with the imprinting theory, which states that past events, particularly those from the pivotal early stages,

leave a long-lasting imprint on individuals' memories that continues to influence their decision-making throughout their careers (Marquis and Tilcsik, 2013; Hanlon et al., 2022). Emotional tagging and belief formation (e.g., Laudenbach et al., 2019) explain the formation and biological foundation of imprints, providing a natural interpretation of our findings.[2]

This study contributes to the literature in three ways. First, it expands research on corporate disclosure. Our findings of more negative tones in financial reports and conservative earnings guidance for firms managed by CEOs with early-life disease experience following COVID-19 enrich our understanding of how executives affect corporate disclosure and firms' earnings guidance (e.g., Davis et al., 2015; Ham et al., 2017; Baginski et al., 2018; Bochkay et al., 2019; Brochet et al., 2021; Kubick and Li, 2023). Furthermore, while there is a growing body of research on the economic impacts of COVID-19, empirical evidence is notably scarce regarding how companies adapt their earnings guidance and disclosures in response to the pandemic.[3] We fill this gap by showing that CEOs with early-life experience of similar epidemics have been more conservative in their corporate disclosures following the COVID-19 outbreak.

Second, we contribute to the longstanding debate on the causal effects of CEOs and other top management team members on firms' activities and performance. Many prior studies have shown significant associations between CEOs' personal characteristics and firms' activities (e.g., Bertrand and Schoar, 2003; Adams et al., 2005; Malmendier and Tate, 2005; Bamber et al., 2010; Schrand and Zechman, 2012; Demerjian et al., 2013; Graham et al., 2013; Jenter and Lewellen, 2015; Cronqvist and Yu, 2017). Many studies have also acknowledged that firms often select CEOs with certain preset agendas, which could lead to biased estimations of the extent to which

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[2] See Section 2.2 for more detailed discussions.
[3] Several concurrent accounting studies have estimated the impact of COVID-19 on earnings guidance withdrawals (Hope et al., 2022) and earnings expectations (Landier and Thesmar, 2020) as well as examined whether managers forewarn shareholders about pandemic risks in their annual reports or disclosures (Loughran and McDonald, 2023).

CEOs' personal characteristics affect their management decisions.[4] Our DID regressions capture the *incremental* impact of CEOs' early-life experience during similar crises and extend the scope of prior studies that focus primarily on the average effects of CEOs' characteristics in normal times. Furthermore, given that it is unlikely for boards to foresee the COVID-19 pandemic and thus preselect CEOs with prior experience of similar disease outbreaks, our approach of using the COVID-19 outbreak as a sudden event bolsters the establishment of the causal relationships between CEOs' personal traits and firms' activities, which is a central debate in the literature.[5]

Third, we contribute to the literature on early-life experience. This research area, initiated by Elder (1986, 1998), has inspired numerous studies exploring the impact of initial labor market conditions on economists' and investment bankers' long-term success (Oyer, 2006, 2008) and the influence of early-life experience on managerial styles (e.g., Malmendier et al., 2011; Kaplan et al., 2012; Benmelech and Frydman, 2015; Schoar and Zuo, 2017; Yonker, 2017; He et al., 2018), career advancements (e.g., Gibbons and Waldman, 2006; Law and Zuo, 2021), and risk aversion (e.g., Malmendier and Nagel, 2011; Guiso et al., 2015).[6] Our finding that CEOs who experienced similar severe diseases as COVID-19 in their formative years tended to react more conservatively and cautiously in their corporate disclosure and investment decisions when COVID-19 hit suggests that imprints from past experiences are long-lasting and deeply embedded in memories, which can be triggered when a similar crisis occurs.

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[4] For example, Schoar and Zuo (2017) point out that CEOs' impact on corporate policies reflects a mix of their skills and the firm's specific requirements. Importantly, even if a board selects a CEO based on management style, it is the CEO's actual presence that is crucial for implementing change, emphasizing CEOs' unique role in driving corporate transformations.

[5] Using CEO sudden death or hospitalization events, several studies have tried to identify the role of CEOs in firms' activities (Johnson et al., 1985; Hayes and Schaefer, 1999; Nguyen and Nielsen, 2014; Quigley et al., 2017; Bennedsen et al., 2020; Brochet et al., 2021). However, the empirical evidence is mixed, and the literature on the CEO's role remains inconclusive.

[6] Another strand of the literature in management science has studied how early-life experience can imprint individuals. See, for example, Marquis and Tilcsik (2013) and Higgins (2005). See also Oyer (2006, 2008), McEvily et al. (2012), and Oreopoulos et al. (2012) on the early-life experience of ordinary workers.

The remainder of this paper is organized as follows. Section 2 describes the background of the COVID-19 pandemic and develops the hypothesis. Section 3 presents the data and summary statistics. Section 4 provides the empirical results. Section 5 concludes.

2. Background and Hypothesis Development

2.1. Background on COVID-19

The COVID-19 pandemic was caused by the coronavirus SARS-CoV-2. COVID-19 was first discovered in December 2019 in Wuhan, China, and the coronavirus epidemic developed rapidly. By March 11, 2020, confirmed coronavirus cases had been reported in 110 countries, prompting the World Health Organization (WHO) to declare a pandemic. As of September 21, 2023, more than 770 million confirmed cases had been reported globally, causing nearly seven million reported deaths, according to WHO.

The first known COVID-19 case in the United States was reported on January 20, 2020, and the first known death was reported on February 6, 2020. As shown in Figure 1, from early March 2020, the number of confirmed cases in the United States soared, with a growth rate of over 30% per day. Several state, city, and county governments imposed "stay at home" or "shelter in place" orders on their populations throughout March and early April to halt the spread of the virus. Despite government containment, on April 11, the reported death toll in the United States surpassed that of Italy, reaching 20,000. In late May and early June, several states began reopening their economies. However, the economic reopening and a lack of widespread mask orders sharply increased the number of cases across most of the continental United States. By October 12, 2022, approximately 96.5 million cases had been reported and more than 1.06 million deaths had been confirmed. This pandemic has had profound economic and social impacts on the United States.

[Place Figure 1 about here]

2.2. Hypothesis Development

In this subsection, we develop our hypothesis by drawing on prior research in behavioral economics of accounting, psychology, and neuroscience. Building on these lines of research, we argue that the CEOs with imprints formed by experiencing early-life traumatic events responded differently compared with CEOs without such imprints during the COVID-19 pandemic, thereby leading to distinct corporate policies for firms managed by the two groups of CEOs.

In particular, the imprinting theory states that events that occur in the distant past can be imprinted into a person's memory, especially if these events occur during formative periods such as early childhood, and such imprints persist despite subsequent environmental changes (Marquis and Tilcsik, 2013).[7] Neuroscientific findings offer a natural and convincing explanation for the imprinting effects (Dekeyser et al., 2023).[8] Personal experiences can alter biological features and, thus, the functioning of the human brain through a process known as "synaptic tagging" (Frey and Morris, 1997).[9] Emotional arousal can enhance this tagging because it signals to the brain whether an experience is important and should be memorized (LaBar and Cabeza, 2006). In other words, emotional arousal can enhance memory consolidation and modulate the formation of long-term memories, a process termed "emotional tagging" (Richter-Levin and Akirav, 2003).[10] To the

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[7] Psychological research has also demonstrated that individual decision-making is rooted in the memory of past experiences and conditioned reflexive learning, which form a sort of knowledge guide for current actions (Schlag, 1998).

[8] Note that none of these neuroscientific predictions are directly tested in the current paper.

[9] According to the Synaptic Tagging and Capture hypothesis, local tagging of synapses at the moment an experience is made leads to a more stable connection between synapses and eventually memory of the experience. See the book by Sajikumar (2016) for an overview and more technical details.

[10] Emotional tagging refers to the transfer of an experience into memory as a function of its emotional significance. It states that when an emotional event occurs, the amygdala is activated and "tags" the experience as important, presumably by strengthening synapses located on neurons that have just been activated in other brain regions, mainly the hippocampus (Richter-Levin et al., 2015).

extent that emotional arousal is more intense, the anchoring of this experience in memory is stronger, leading to easier availability in the future (Talarico et al., 2004).

The finance and accounting literature also suggests that individuals carry the imprints of their early-life experiences throughout their careers (see the review in Hanlon et al., 2022). For example, Schoar and Zuo (2017) document that managers who started their careers during U.S. recessions adopt more conservative management styles even decades later. Law and Zuo (2021) also show that financial advisors with recession experience early in their careers are less likely to commit financial misconduct. Kubick and Li (2023) find that firms, led by senior financial executives with experience of accounting-related adverse events during their careers, exhibit greater accounting conservatism and lower likelihood of future accounting issues.

Related to our context of COVID-19, a large number of studies provide evidence that exposure to early-life traumatic events, such as natural disasters, increases risk aversion, even in the long run (Malmendier and Nigel, 2011; Callen et al., 2014; Cassar et al., 2017). Exposure to such events causes an individual to "perceive the world to be a riskier place" (Lerner and Keltner, 2001; Cameron and Shah, 2015), to likely be more sensitized to the consequences of risk-taking, and to thus become more conservative.

Drawing on this line of studies, the intense emotional arousal brought by the outbreaks of similar severe diseases in CEOs' early lives could form a long-lasting memory and thus leave a strong imprint for those CEOs due to the emotional tagging effect. The sudden outbreak of COVID-19 in 2020 triggered the memory of CEOs with severe early-life experience of natural disasters or similar epidemics/pandemics, who, then, are likely to behave more conservatively, causing different corporate outcomes compared with CEOs without similar early-life experience. In making capital expenditure decisions and issuing forecasts, a CEO adopts a forward-looking

approach, predicting future investment outcomes and earnings by anticipating shifts in the broader economic landscape. By examining these outcomes, we can gain deeper insights into how CEOs' early-life experiences might influence their leadership styles and decision-making processes in periods of crisis. Therefore, we form the following hypothesis:

Hypothesis: Firms managed by CEOs with severe adverse early-life experiences have more conservative responses to COVID-19, such as lower capital expenditure growth, a more negative tone in corporate disclosures, and heightened pessimism in earnings forecasts, compared with firms managed by CEOs without similar experience.

3. Data, Sample, and Variables

3.1. Data on CEOs

We obtain the full list of 4,672 CEOs in Execucomp from 2010 to 2021. For firms with two executives flagged as CEO in the same quarter, we manually check their positions and exclude those who held roles such as vice president or president of a subsidiary company. We hand-collect these CEOs' birthplace information by searching for their full names in various sources, including LexisNexis, Marquis Who's Who, the Notable Names Database (NNDB), and Wikipedia.[11] To avoid linking Execucomp CEOs with the wrong biography or CV, we ensure that the company name for the CEOs in the Execucomp data appears on their CV. In cases where the CEO's full name can be matched but the company name in the Execucomp data does not appear on the CV, we use Bloomberg and Google to check whether the company name mentioned on the CV is an alternative name or the predecessor of the company listed in Execucomp.

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[11] We also collected similar data on CFOs from those sources. Our analysis indicates that firms whose CFOs have severe disease experiences use fewer positive words in their financial reports and issue more conservative earnings guidance. However, the results do not achieve statistical significance. This finding is consistent with our main results on CEOs' adverse early-life experiences.

Moreover, a CEO's first name in Execucomp may differ from that provided by Marquis Who's Who or other data sources. We verify the alternative CEO names in Marquis Who's Who by searching for CEOs' names in Bloomberg and Google. Regarding CEOs for whom birthplace information is available, fewer than 10 percent were born and raised in foreign countries. We exclude CEOs born in foreign countries and obtain the birth states of the remaining CEOs from the information collected above. We then supplement the missing CEO birth state data using the states inferred from their social security numbers, following Yonker (2017).

3.2. Data on natural disasters and infectious diseases

To quantify the early-life disaster experience of each CEO, we obtain information on disaster events from 1960 to 2019 from SHELDUS. These data cover natural hazards such as earthquakes, thunderstorms, hurricanes, floods, wildfires, and landslides and perils such as flash floods and heavy rainfall. For each county-year observation, SHELDUS calculates the number of fatalities and injuries, the dollar amount of property loss (adjusted to 2019 U.S. dollars), and the dollar amount of direct damage to crops (adjusted to 2019 U.S. dollars).

To obtain the data on historical infectious diseases, we rely on the annual supplement of the Morbidity and Mortality Weekly Report (MMWR) published by the Centers for Disease Control and Prevention (CDC). The MMWR annual supplement records reported cases of notifiable infectious diseases (e.g., chickenpox, measles, mumps, pertussis, polio, plague, scarlet fever, and tuberculosis) by state. We manually collect the annual number of reported cases of each disease in each state. For example, the earliest available MMWR report documents 37 diseases in 1952, while the most recent report includes over 100 diseases. We then collect the total number of reported deaths from each disease in each year across the United States from the MMWR. Because the

MMWR provides only the annual number of reported deaths caused by each disease at the national level, we assume a uniform case mortality rate across states in a given year to estimate the state-level number of reported deaths. We then calculate the state-level number of reported deaths for each disease by multiplying the diseases' total reported death figures in the United States by the state's proportion of cases. For example, in 1960, there were 55,270 reported cases of tuberculosis and 10,866 related deaths in the United States. This results in a case mortality rate of 19.66% for that year. Specifically in Alabama, the MMWR report documented 1,302 tuberculosis cases during the same period. Based on the calculated national case mortality rate, we estimate approximately 256 (=1,302×19.66%) tuberculosis-related deaths in Alabama in 1960. We also gather information on each disease's transmission mode, symptoms, and severity.

To measure CEOs' adverse experiences in their early lives, we follow Nelson (1993) in defining formative years as those between the 5th and 15th birthdays, when individuals are most susceptible to imprinting (Higgins, 2005). We use the CEOs' birth states to define their adverse early-life experience to maximize our coverage of CEOs and firms, as there is much more missing information on CEOs' birth counties.[12] In addition, this alleviates the concern that CEOs may have grown up in a different place than their birthplaces because it is more likely that CEOs lived in the same state rather than the same county as their birthplaces during their teenage years.[13]

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[12] Nevertheless, if we use CEOs' birth counties to define adverse early-life experiences, as in Bernile et al. (2017), our main results continue to hold, although with a much smaller sample size.

[13] We acknowledge that it is still possible for CEOs to have grown up in states other than their birth states. Following the methodologies employed by Yonker (2017) and Bernile et al. (2017), we cross-verify CEOs' hometowns using their social security numbers and hand-collected birth counties. In particular, as Yonker (2017) argued, social security numbers were primarily used for employment purposes and driver registrations, and they provide information on where CEOs "grew up." In the U.S., it is typical for individuals to first begin driving or working at the age of 15 or 16, especially during the 1950s to 1970s, when most of the CEOs in our sample would have been imprinted with disease experience. Therefore, the state inferred from the social security number is likely to be the state where the CEO grew up. Moreover, Bernile et al. (2017) independently collected data on CEOs' birth counties and matched it to the CEOs' states of origin based on social security issuance, finding that 75% of the birth counties of CEOs match their social security–issuance state. While we have striven to address this concern, we acknowledge it as a caveat and limitation of our study.

To proxy for CEOs' early-life disaster experience, we calculate the total dollar amount of property losses caused by natural disasters over 10 years in the CEOs' birth states. Following Bernile et al. (2017), we rank the severity of CEOs' early-life disaster experience into 10 deciles and classify CEOs in the top decile as those imprinted with severe disaster experience. We construct an indicator variable, *DisasterExp*, which equals one if the CEO is in the top decile in terms of property losses.

To capture CEOs' early-life disease experience, we focus on four infectious diseases: measles, tuberculosis, polio, and scarlet fever. These diseases are similar to COVID-19 in terms of their symptoms and transmission methods (e.g., they can spread among people via airborne transmission). More importantly, these four diseases have been notably severe and have had far-reaching consequences on public health, where their severity is comparable to that of COVID-19 and caused many infections and deaths (over 15 million cases from 1952 to 1999) across various states. In terms of the reported death toll, these four diseases account for nearly 70% of all reported deaths caused by the 35 notifiable diseases covered by the CDC from 1951 to 1998. For each of these four diseases, we compute the total number of reported deaths over 10 years in the CEOs' birth states during their formative years. We then rank the severity of CEOs' early-life disease experience into 10 deciles. We construct an indicator variable, *DiseaseExp*, that equals one if the CEO is in the top decile of severity among all CEOs for any of the four significant diseases.

Note that our measures of CEOs' adverse early-life experience are not manifestations of a pure geography or industry effect. Our analysis reveals that the CEOs, both with and without early-life disease experience, are similarly dispersed across various states and industries. The four severe diseases are widespread nationwide, and nine of the top 10 states where the highest numbers of CEOs were born have CEOs with early-life disease experience. We also find significant overlaps

and similarities in the industry distribution between firms led by CEOs with early-life disaster experience and firms managed by CEOs without similar experience. For example, "machinery manufacturing" and "transportation equipment manufacturing" are predominant industries across firms led by both types of CEOs, as shown in Table A.1 in the online appendix.

3.3. Data on U.S. firms

We obtain the company's quarterly financial information from Compustat. We include only firms jointly covered by Compustat and the Center for Research in Security Prices (CRSP). Since we are interested in how CEOs reacted during the COVID-19 pandemic, we classify firms' financial information into calendar quarters based on the data date. For example, we treat a firm's financial information as first-calendar-quarter information if the data date is the end of February, March, or April.[14]

From the SEC Analytics database, we obtain information on the number of positive, negative, and uncertain words in firms' 10-K and 10-Q reports, using the word classifications from Loughran and McDonald (2011). We construct a variable, *Tone*, to measure a firm's financial reporting tone using the ratio of positive words to negative and uncertain words in these reports. We match the financial reporting tone data with the COVID-19 containment policies using the filing dates of the 10-K and 10-Q reports.

In addition, we obtain data on management earnings forecasts from the I/B/E/S Guidance database. Following Hilary and Hsu (2011) and Arikan et al. (2023), we include both annual and quarterly earnings guidance and exclude pre-announcements (i.e., forecasts made after the end of the fiscal quarter). We merge the management guidance data with financial information using the

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[14] Similarly, we treat a firm's financial information as second (third, fourth) calendar quarter information if the data date is the end of May, June, or July (August, September, or October; November, December, or the following January).

I/B/E/S–CRSP linking table. For management guidance with range estimates, we use the lower bound of the range forecasts. We construct an indicator variable, *GoodNews,* if the issued guidance is higher than analysts' consensus estimates on the date of issuance to classify the earnings guidance as releasing good news (Hribar and Yang, 2016). We match the earnings guidance data with COVID-19 containment policies using the date on which the company announced the guidance.

3.4. Sample construction and summary statistics

Panel A of Table 1 details the steps involved in constructing our sample. We start with firms listed in both Compustat and the CRSP from 2018 to 2021, covering 5,284 firms and 60,883 firm-year-quarter observations. After merging these data with the CEO data from Execucomp, our sample contains 1,400 firms managed by 1,851 CEOs. Since SHELDUS started covering disaster events in 1960, which was five years after the birth of CEOs born in 1955, we exclude CEOs born before 1955 and those for whom no information was available on their birthplaces.[15] Following these steps, we compiled a primary sample containing 4,885 firm-year-quarter observations from 2018 to 2021, including 398 firms and 419 CEOs.

Our study aligns well with prior research in terms of CEO and firm data. We expand the methodology of Bernile et al. (2017), using the same sources to gather the birth counties of 2,053 U.S.-born CEOs from S&P 1500 firms (1992–2021), compared to their sample of 1,508 CEOs (1992–2012). Our data on CEOs' birth states also mirrors that of Yonker (2017) in terms of availability. Besides, we compare our sample with the Execucomp-Compustat population, as detailed in Table A.2 in the online appendix. Compared with firms jointly covered by Execucomp

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[15] We are interested in CEOs' early-life experience, particularly during their formative years (i.e., ages 5–15). Only 12% of the CEOs in our sample were born before 1955.

and Compustat in the same period, firms in our regression sample have slightly larger sizes and sales and are more profitable. This is mainly because firms with available hometown information for CEOs tend to be larger. Moreover, CEOs are similar in terms of age and gender distribution in firms between the Execucomp-Compustat and the regression samples.[16]

Panel B shows the summary statistics of the firms' characteristics and CEOs' early-life experience. Firms' financial information is shown in quarters. Merging the financial information with the CEOs' early-life disaster and disease experience (i.e., for those with their birth state information available) produces approximately 300 firms covered in each quarter. All the continuous financial variables are winsorized at 0.5% and 99.5%. The mean of *CapExG* is 11.3%, and the mean of *CashFlow/Asset* is 2.228 percentage points. The mean of *DisasterExp* is 10.8%, indicating that 10.8% of firm-year quarters are managed by CEOs with early-life disaster experience. In addition to the financial data and CEOs' early-life experience, Panel B also reports the summary statistics of the firms' financial reporting tone and management guidance characteristics. Firms' financial reporting tone data are also at the quarterly frequency, including firms' reporting tones in their 10-K and 10-Q filings. The mean of *Tone* is 31.213, suggesting that the ratio of positive words to negative and uncertain words in a firm's 10-K or 10-Q report is approximately 30%, similar to the ratio reported by Arikan et al. (2023). The mean of *GoodNews* is 0.3, indicating that approximately 30% of management earnings guidance exceeds the most recent analysts' consensus estimate.

[Place Table 1 about here]

4. Empirical Analyses and Results

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[16] We also compare the summary statistics of several variables (i.e., *Size*, *Leverage*, *BM ratio*, and *Tone*) against those in the existing papers (Arikan et al., 2023; Zhang, 2023). Our sample is comparable to these other studies.

4.1. CEOs' early-life experience of natural disasters

Before exploring the effects of CEOs' early-life disaster experience on firms' responses during the COVID-19 pandemic, we analyze the unconditional patterns of U.S. firms' responses. Figure A.1 in the online appendix plots the coefficient estimates of regressing firms' capital expenditure growth on the year-quarter indicators from the first quarter of 2018 to the last quarter of 2020 for firms in hard-hit industries and non-hard-hit industries, respectively (see the detailed definitions later in this subsection). Firms generally exhibit significantly lower capital expenditure growth in the first and second quarters of 2020 owing to the initial outbreak of COVID-19. This pattern is more pronounced for firms in hard-hit industries, as evidenced by the larger drop in capital expenditure growth. Investment rebounded in the fourth quarter of 2020 when most states in the United States started to reopen. These observations are consistent with those of previous studies (Baker et al., 2020; Gormsen and Koijen, 2020; Ding et al., 2021; Levine et al., 2021; Ru et al., 2021; Hassan et al., 2023).

We explore the heterogeneous responses to the COVID-19 pandemic for firms managed by CEOs with and without early-life disaster experience during the 16 quarters between 2018 and 2021. Although most states were under lockdown orders in the second and third quarters of 2020, there are significant variations in announcement dates and stringency across states. We deal with this problem by coding each state's lockdown and reopening periods according to their respective policies. We obtain state-wide containment policies from the Oxford COVID-19 Government Response Tracker (OxCGRT) and code each state as starting its lockdown when the state government required partial or complete school closures (*c1_schoolclosing*>=2, in OxCGRT term) and selective or comprehensive workplace closures or work-from-home arrangements (*c2_workplaceclosing*>=2). When the pandemic containment measures were substantially relaxed

(i.e., when containment policies were lifted for more than two consecutive months), we code the state as reopened. Table A.3 in the online appendix provides an overview of the *LockDown* and *ReOpen* timelines of each state during the COVID-19 pandemic.

To mitigate the concern that our results are driven by the pre-treatment periods among firms with different CEOs, we include two pre-trend dummies, $DisasterExp_i \times LockDown_{t-1}$ and $DisasterExp_i \times LockDown_{t-2}$, which denote the differences in the one quarter and two quarters before the lockdown starts, respectively. Moreover, because we emphasize the incremental effects by focusing on the interaction terms between CEOs' adverse early-life experience and the policy indicators, it is important to control for interactions between firms' (and CEOs' characteristics) and policy indicators to ensure that our findings are not driven by certain firm types or inherent differences in CEOs who have experienced early-life disasters. Therefore, we control for several interaction terms of CEOs' characteristics and the policy indicators, including *Age*, *Gender*, and *Tenure*, to alleviate the concern that other plausible factors could influence CEOs' responses to COVID-19. This approach helps to reduce concerns about age influencing CEOs' likelihood of having disease experience and their responses during the pandemic. To mitigate the concern that firm-level characteristics affect CEOs' reactions to the pandemic, we also control for several interaction terms of firms' characteristics and the policy indicators, including *CashFlow/Asset*, lagged *Tobin's Q*, and *SalesGrowth*. This approach helps to neutralize the potential influence of other factors that could impact CEOs' reactions to the COVID-19 pandemic. As a result, our analysis is finely tuned to tease out the effects of early-life experience on CEO behavior during the crisis.

We empirically examine the effect of a CEO's early-life disaster experience on a firm's capital expenditure growth during the pandemic by estimating the following regression model:

$$CapExG_{i,t} = \alpha + \beta \times DisasterExp_i + \gamma_1 \times DisasterExp_i \times LockDown_t$$

$$+ \gamma_2 \times DisasterExp_i \times LockDown_{t-2} + \gamma_3 \times DisasterExp_i \times LockDown_{t-1}$$

$$+ \gamma_4 \times DisasterExp_i \times ReOpen_t + Controls_{i,t} + Firm\ FE + Year$$

$$- Quarter\ FE + \varepsilon_{i,t}, \qquad (1)$$

where $CapExG_{i,t}$ is the capital expenditure growth of firm i in quarter t; here t ranges from 1 to 16, denoting the first quarter of 2018 to the last quarter of 2021. $DisasterExp_i$ is an indicator that equals one if the firm is managed by a CEO with early-life disaster experience. $LockDown_t$ is an indicator that equals one if the firm's headquarters state is under lockdown during this calendar quarter. $LockDown_{t-1}$ and $LockDown_{t-2}$ are indicators denoting one quarter and two quarters, respectively, before the lockdown starts. $ReOpen_t$ is an indicator that equals one if the containment policies in the firm's headquarters state are lifted. $Controls$ denote a vector of firms' and CEOs' characteristics, including $CashFlow/Asset$, lagged $Tobin's\ Q$, $SalesGrowth$, CEOs' $Gender$, $Tenure$, and Age as well as the interaction terms between policy indicators and firms' characteristics and between policy indicators and CEOs' characteristics. Year-quarter fixed effects are also included to account for the time trends. γ_1 captures the impacts of the CEO's early-life disaster experience on the firm's capital expenditure growth during the lockdown periods.

Table 2 presents the results. In Column (1), the coefficient of $DisasterExp \times LockDown$ is -0.182 and statistically significant, where firm fixed effects are included to account for time-invariant unobservable firm characteristics. This suggests that firms whose CEOs have early-life disaster experience slow their capital expenditure growth after the lockdown more significantly than those with no early-life disaster experience. Given that the average capital expenditure growth is 0.113, a 0.182 decrease is economically significant. Similarly, a one standard deviation increase in *Tenure* is associated with a 0.062 (=0.009 × 6.885) decrease in capital expenditure growth. In

addition, we control for both CEO fixed effects and firm fixed effects in Column (2) and find consistent results. The inclusion of CEO fixed effects allows us to capture the variations in the behavior, before and after the pandemic, of the same CEO with early-life experience of natural disasters or diseases, using changes in other CEOs' behavior as the benchmark.

Yet, concerns may arise that CEO fixed effects are the result of endogenous decisions. A classic issue in the CEO literature is the endogenous matching problem, where CEOs are not randomly assigned to firms but endogenously selected according to their types by firms with certain needs. Following Bennedsen et al. (2020), we employ the firm–CEO fixed effects in all our main analyses, which allows us to more robustly account for the potential endogeneity stemming from the unique matching process between firms and their CEOs. In Column (3) of Table 2, the coefficient of $DisasterExp \times LockDown$ is negative and significant after controlling for firm–CEO fixed effects. In other words, holding a firm–CEO pair constant, CEOs with early-life disaster experience slow firms' capital expenditure growth to a larger extent than CEOs without such experience, where the results are unlikely to be driven by endogenous matching.

[Place Table 2 about here]

Next, we examine the different responses of CEOs with and without early-life disaster experience during the COVID-19 pandemic for firms in hard-hit and non-hard-hit industries. To identify industries hit hard by COVID-19, we focus on industries' pre-existing characteristics that would make them particularly susceptible to the impacts of such a global health crisis. Pandemic containment measures such as social distancing are particularly detrimental to businesses that rely heavily on face-to-face communication or close physical proximity when producing a product or providing a service. Hence, based on these ex-ante industry characteristics, we classify firms in industries that rely heavily on face-to-face communication or close physical proximity as in the

hard-hit group and the remaining firms as in the non-hard-hit group. Specifically, we follow Koren and Peto (2020) by classifying industries using the share of workers in teamwork-intensive, customer-facing, and physical-proximity occupations within that industry.

Table 3 presents the results of analyzing the hard-hit and non-hard-hit subsamples. The coefficients of $DisasterExp \times LockDown$ in Columns (1), (3), and (5) are negative and statistically significant, while the coefficients of this interaction term are not significant in the other columns. Following Cleary (1999), we test the difference in coefficients between the two samples and find that the coefficient of $DisasterExp \times LockDown$ in Column (1) is indeed significantly ($p = 0.074$) smaller than that in Column (2). The differences in coefficients in other specifications (e.g., firm–CEO fixed effects) are also significant. The decrease in capital expenditure growth for firms managed by CEOs with early-life disaster experience in the hard-hit group is also greater than that for firms in the non-hard-hit group. This suggests that CEOs with early-life disaster experience respond more significantly in these pre-identified hard-hit industries. These results emphasize the profound impact of CEOs' personal history on shaping firms' reactions during crises, especially in industries more vulnerable to such events.[17]

[Place Table 3 about here]

Taken together, our results highlight the significant role CEOs play in helping their firms cope with the COVID-19 pandemic. CEOs with early-life disaster experience react more strongly and are more resilient than CEOs who lack such experience. These results highlight the importance of the imprints formed during CEOs' early lives in affecting firms' policies, even decades later, consistent with the behavioral narrative in accounting (Hanlon et al., 2022).

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[17] To further mitigate the concern that our results might be driven by firms in certain industries (such as high-tech), we include the industry-specific time trends in the regressions and report the results in Tables A.4 and A.5 in the online appendix.

4.2. CEOs' early-life experience of severe diseases

Although firms are unlikely to purposefully choose CEOs with experience of natural disasters, CEOs with early-life disaster experience may have certain personalities that boards of directors value. This subsection focuses on CEOs with early-life experience of infectious disease outbreaks. Given that firms cannot have possibly foreseen the COVID-19 pandemic and thus preselected CEOs with experience of similar disease outbreaks, this set of analyses takes a step forward in the literature on identifying the causal effect of CEO traits on firms' activities.

As mentioned in Section 3.2, we focus on four infectious diseases to define CEO disease imprints: measles, tuberculosis, polio, and scarlet fever. Historically, these diseases have been severe, causing over 15 million infection cases, and have had far-reaching consequences on public health, similar to the impact of COVID-19. Moreover, these four diseases are also severe in terms of the reported death toll, accounting for nearly 70% of all reported deaths caused by the 35 notifiable diseases covered by the CDC from 1951 to 1998.[18]

Experiencing severe infectious diseases that cause many deaths in early life can cause intense emotional arousal. This is likely to form strong and long-term memory due to synaptic and emotional tagging, which then creates imprints. The more severe the disease that a CEO experiences in the formative years, the more intense the emotional arousal, the deeper the imprint formed in memory, and the more readily these memories are accessed in the future. When a similar disease such as COVID-19 suddenly hits, these imprints can be easily triggered for CEOs with early-life disease experience, leading these CEOs to react more conservatively and decisively.

4.2.1. Capital expenditure

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[18] If we exclude infectious diseases transmitted mainly through mosquitoes or blood (e.g., encephalitis and hepatitis), these four diseases represent about 80% of all reported deaths caused by notifiable diseases.

We first examine the effects of CEOs' early-life disease experience on firms' capital expenditure growth during the lockdown period by repeating the analyses presented in Table 2. As shown in Table 4, the coefficients of $DiseaseExp \times LockDown$ are negative and statistically significant in all the columns, with various specifications. These results suggest that firms managed by CEOs with experience of severe diseases in their early lives reduce capital expenditure growth to a larger extent than firms managed by CEOs without such experience, consistent with our main findings.

[Place Table 4 about here]

As before, we also rerun the analyses for the subsamples of hard-hit and non-hard-hit industries. The coefficients of $DiseaseExp \times LockDown$ in Columns (1), (3), and (5) of Table 5 are negative and statistically significant in the hard-hit industries subsample, whereas the coefficients of this interaction term are not significant in the non-hard-hit industries subsample. Moreover, the differences in coefficients are also significant ($p < 0.01$) across all specifications. The decrease in capital expenditure growth for firms managed by CEOs with early-life disease experience in the hard-hit group is also larger than that for firms in the non-hard-hit group. This suggests that CEOs imprinted by early-life disease experience react more strongly in hard-hit industries.

[Place Table 5 about here]

4.2.2. Financial reporting tone

To test whether CEOs' early-life disease experience affects their firms' financial reporting tone, we examine whether firms whose CEOs have early-life disease experience are less likely to use positive words in their 10-K or 10-Q filings during the lockdown period, as early-life adversity would make these CEOs more conservative. We measure firms' financial reporting tone by using the number of positive words over the number of negative and uncertain words in their 10-K or

10-Q filings. The tone of each word is determined by the Loughran and McDonald (2011) word classification system. Specifically, we perform the following regression model to test our conjecture:

$$Tone_{i,t} = \alpha + \beta \times DiseaseExp_i + \gamma_1 \times DiseaseExp_i \times LockDown_t$$

$$+ \gamma_2 \times DiseaseExp_i \times LockDown_{t-2} + \gamma_3 \times DiseaseExp_i \times LockDown_{t-1}$$

$$+ \gamma_4 \times DiseaseExp_i \times ReOpen + Controls + Firm\ FE + Year$$

$$- Quarter\ FE + \varepsilon_{i.t}, \quad (2)$$

where $Tone_{i,t}$ is the proportion of positive words to negative and uncertain words in firm i's 10-K or 10-Q reports in quarter t; here t ranges from 1 to 16, denoting the first quarter of 2018 to the last quarter of 2021. $DiseaseExp_i$ is an indicator that equals one if the firm is managed by a CEO with early-life disease experience. $Controls$ denote a vector of firms' and CEOs' characteristics, including $Size$, $Tobin's\ Q$, $LnSale$, $CashFlow/Asset$ and $Leverage$, CEOs' $Gender$, $Tenure$, and Age as well as the interaction terms between policy indicators and firms' characteristics and between policy indicators and CEOs' characteristics. Year-quarter fixed effects are also included. A negative γ_1 suggests that the tone of a firm's financial reports is more negative during the lockdown period for firms managed by CEOs with early-life disease experience.

Table 6 presents the results. In Column (1), the coefficients of *DiseaseExp × LockDown* are -2.126 and significant at the 5% level, indicating that firms whose CEOs experienced severe disease outbreaks in their early lives use fewer positive words in their firms' financial reports during the COVID-19 lockdown periods than firms whose CEOs had no such experience. In terms of economic magnitude, firms managed by CEOs with early-life disease experience use 6.8% (=2.126/31.213) fewer positive words in their 10-K and 10-Q reports during the lockdown periods

than the average firm. In Table 7, we further split our sample into hard-hit and non-hard-hit industries and continue to find that the results are significantly stronger for firms relying heavily on face-to-face communications or close physical proximity. Statistical tests show that the differences in coefficients between hard-hit and non-hard-hit industries subsamples are significant ($p < 0.05$) across all specifications, suggesting that firms managed by CEOs with early-life disease experience in the hard-hit group exhibit greater pessimism than firms in the non-hard-hit group.

[Place Tables 6 & 7 about here]

4.2.3. Management forecasts

In addition to mandatory disclosure measures, we examine voluntary disclosure (i.e., the earnings forecasts issued by a firm's management) to determine whether CEOs who experienced similar severe diseases in their early lives behave differently from other CEOs, as voluntary disclosure is more likely to reflect the CEOs' attitudes. Specifically, we classify management earnings guidance as releasing good news when earnings guidance is above the most recent analysts' consensus estimate, following Hribar and Yang (2016). Table 8 reports results on the earnings forecasts, showing negative and significant coefficients of *DiseaseExp* × *LockDown* in all three columns. In Column (1), the coefficient of *DiseaseExp* × *LockDown* is -0.298, suggesting that during lockdown periods, the probability of firms releasing good news is 29.8 percentage points lower if they are managed by CEOs with early-life disease experience compared to firms managed by CEOs without such experience. In other words, such CEOs are significantly more conservative when issuing earnings guidance. The subsample analyses in Table 9 further confirm that the effects of disease imprints are stronger for firms in hard-hit industries, as shown by the significantly negative coefficients in Columns (1), (3), and (5). Again, the coefficient differences between hard-hit and non-hard-hit industry subsamples are significant ($p < 0.05$) across all

specifications. This suggests that CEOs imprinted by early-life disease experience react more conservatively when their firms are in hard-hit industries.

[Place Tables 8 & 9 about here]

Taken together, our findings reveal that CEOs with early-life experience of similar disease outbreaks reacted more conservatively and cautiously following the initial COVID-19 outbreak. These CEOs lower their firms' capital expenditure growth, adopt a more negative tone in their firms' financial reports, and exhibit greater conservatism in their earnings forecasts during the pandemic. This pattern is particularly pronounced for firms in industries severely affected by the pandemic based on pre-existing characteristics. This novel evidence on management guidance and corporate disclosure provides a compelling narrative in line with behavioral economic theories and suggests that CEOs' decisions during crises such as COVID-19 could be affected by imprints from past experiences deeply embedded in their memories.

5. Conclusion

Our study delves into the nuanced impact of CEOs' early-life experience, particularly with natural disasters and severe disease outbreaks, on their decision-making during the unprecedented COVID-19 crisis. CEOs affected by early-life adversity, especially severe diseases, demonstrate a notably conservative approach during the pandemic, characterized by significant reductions in capital expenditure growth and a pessimistic stance in their firms' communication. These findings highlight the profound influence of formative experiences on CEOs' actions during future crises, emphasizing the pivotal role of their personal histories in shaping firms' responses. Future investigations could explore the long-term ramifications and broader implications of this behavior among CEOs.

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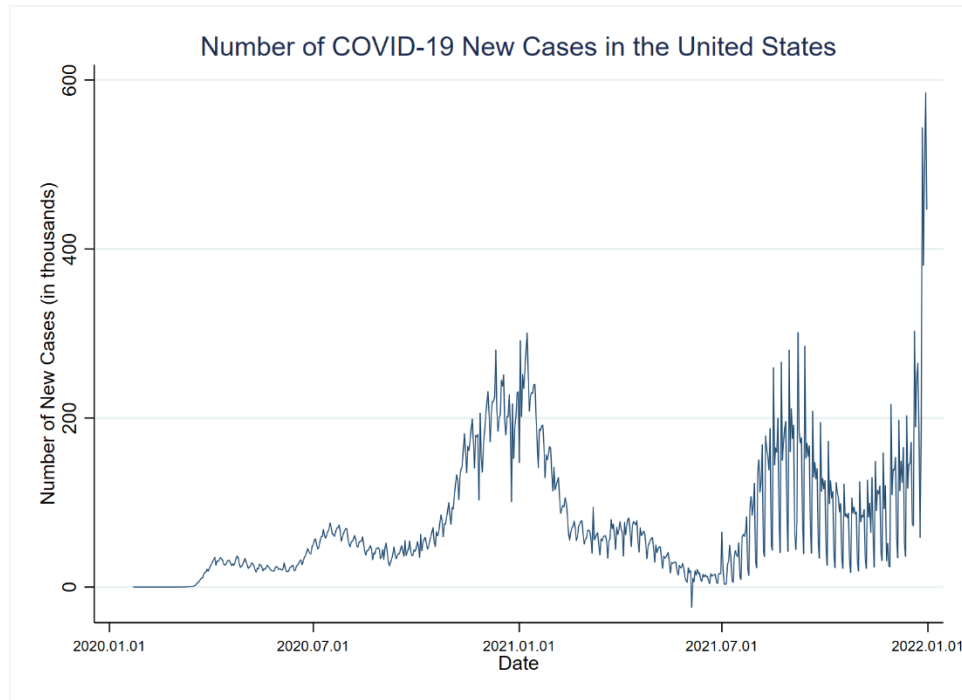
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Figure 1 Development of the COVID-19 Pandemic in the United States

This figure shows the development of the COVID-19 pandemic in the United States from late January 2020 to December 2021. The vertical axis represents the number of confirmed COVID-19 cases.

Table 1 Sample Construction and Descriptive Statistics

This table reports the sample construction procedure, the variable construction, and summary statistics of the quarterly data on public U.S. firms' activities and their CEOs' characteristics. The sample period covers the 16 calendar quarters between 2018 and 2021. *CapExG* is quarterly capital expenditure growth. *CashFlow/Asset* is the sum of income before extraordinary items plus depreciation and amortization over total assets multiplied by 100. *Tobin's Q* represents the market value over the book value of total assets. *SalesGrowth* is the quarterly sales increase over quarterly sales in the last quarter. *Size* is the natural logarithm of total assets. *LnSale* is the natural logarithm of quarterly sales. *Leverage* is the sum of current liability and long-term debt over total assets. *DisasterExp* is an indicator that equals one if a CEO's early-life disaster experience, measured by property damage, is in the top decile of severity among all CEOs. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *Tone* is the number of positive words divided by the number of negative and uncertain words multiplied by 100 in a firm's 10-K or 10-Q report. *GoodNews* is an indicator that equals one if earnings guidance is above analysts' consensus estimates on the date of issuance.

Panel A: Sample Construction

Sample Construction	Number of Observations
Firms that are jointly covered by Compustat and CSRP	60,833 firm-year-quarter observations, 5,284 firms
Merge Execucomp CEOs	20,436 firm-year-quarter observations, 1,400 firms, 1,851 CEOs
Drop CEOs born before 1955 or without birth states information	5,397 firm-year-quarter observations, 440 firms, 460 CEOs
Drop firms with missing headquarters states or in states that have never issued lockdown	4,885 firm-year-quarter observations, 398 firms, 419 CEOs

Panel B: Summary Statistics

Variable	N	Mean	SD	P25	P50	P75
CapExG	4,860	0.113	0.620	-0.207	0.015	0.270
CashFlow/Asset	4,816	2.228	2.916	1.247	2.194	3.408
Tobin's Q	4,873	1.681	1.861	0.550	1.071	1.993
Sales Growth	4,872	0.034	0.204	-0.044	0.019	0.090
Size	4,884	8.589	1.590	7.475	8.489	9.621
LnSale	4,882	6.928	1.645	5.800	6.803	7.946
Leverage	4,737	0.354	0.209	0.217	0.346	0.470
DisasterExp	4,885	0.108	0.311	0.000	0.000	0.000
DiseaseExp	4,885	0.211	0.408	0.000	0.000	0.000
Gender	4,885	0.927	0.261	1.000	1.000	1.000
Tenure	4,885	7.753	6.885	3.000	6.000	10.000
Age	4,885	57.384	4.908	54.000	58.000	61.000
LockDown	4,885	0.147	0.354	0.000	0.000	0.000
ReOpen	4,885	0.259	0.438	0.000	0.000	1.000
Tone	4,791	31.213	9.262	24.413	29.652	36.563
GoodNews	3,319	0.300	0.458	0.000	0.000	1.000

Table 2 CEO's Early-Life Disaster Experience and Capital Expenditure During COVID-19

This table reports the ordinary least squares regression results on capital expenditure growth between firms managed by CEOs with and without early-life disaster experience during the 16 quarters between 2018 and 2021. *CapExG* is quarterly capital expenditure growth. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. *LockDown$_{t-1}$* and *LockDown$_{t-2}$* denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DisasterExp* is an indicator that equals one if a CEO's early-life disaster experience, measured by property damage, is in the top decile of severity among all CEOs. Firms' characteristics (i.e., *CashFlow/Asset*, lagged *Tobin's Q,* and *SalesGrowth*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, LockDown$_{t-1}$*, *LockDown$_{t-2}$*, and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DisasterExp*, and coefficients for interactions with *LockDown* are reported. For brevity, the coefficients of other variables are not displayed. The main effects of *LockDown$_{t-2}$*, *LockDown$_{t-1}$*, and *ReOpen* are absorbed by the year-quarter fixed effects. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table 2 CEO's Early-Life Disaster Experience and Capital Expenditure During COVID-19
-continued

Variables	(1) CapExG	(2) CapExG	(3) CapExG
$DisasterExp \times LockDown$	-0.182**	-0.184**	-0.184**
	(-2.50)	(-2.38)	(-2.49)
$DisasterExp \times LockDown_{t-2}$	-0.017	-0.015	-0.015
	(-0.09)	(-0.08)	(-0.08)
$DisasterExp \times LockDown_{t-1}$	-0.040	-0.045	-0.045
	(-0.40)	(-0.42)	(-0.44)
$DisasterExp \times ReOpen$	-0.015	-0.039	-0.039
	(-0.22)	(-0.56)	(-0.59)
$Gender \times LockDown$	0.035	0.043	0.043
	(0.21)	(0.24)	(0.25)
$Tenure \times LockDown$	-0.009**	-0.009**	-0.009**
	(-2.36)	(-2.32)	(-2.43)
$Age \times LockDown$	0.001	0.000	0.000
	(0.24)	(0.03)	(0.03)
$CashFlow/Asset \times LockDown$	0.012	0.013	0.013
	(1.16)	(1.16)	(1.22)
$Tobin's\ Q \times LockDown$	-0.018	-0.021	-0.021
	(-1.51)	(-1.48)	(-1.55)
$SalesGrowth \times LockDown$	0.146	0.149	0.149
	(1.11)	(1.07)	(1.12)
$LockDown$	-0.274	-0.270	-0.270
	(-0.81)	(-0.76)	(-0.79)
Controls	YES	YES	YES
Firm FE	YES	YES	NO
CEO FE	NO	YES	NO
Firm-CEO FE	NO	NO	YES
Year-Quarter FE	YES	YES	YES
Observations	4,780	4,780	4,780
R-squared	0.123	0.126	0.126

Table 3 CEOs' Early-Life Disaster Experience and Capital Expenditure During COVID-19 in the Different Industry Groups

This table reports the ordinary least squares regression results of CEOs' early-life disaster experience on firms' capital expenditure growth in hard-hit and non-hard-hit industries during the 16 quarters between 2018 and 2021. Firms in industries that rely heavily on face-to-face communication or close physical proximity are classified as the hard-hit group. *CapExG* is quarterly capital expenditure growth. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. $LockDown_{t-1}$ and $LockDown_{t-2}$ denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DisasterExp* is an indicator that equals one if a CEO's early-life disaster experience, measured by property damage, is in the top decile of severity among all CEOs. Firms' characteristics (i.e., *CashFlow/Asset*, lagged *Tobin's Q,* and *SalesGrowth*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, $LockDown_{t-1}$, $LockDown_{t-2}$,* and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DisasterExp*, and coefficients for interactions with *LockDown* are reported. For brevity, coefficients of other variables are not displayed. The permutation test is performed to determine the significance of observed differences in coefficient estimates on *DisasterExp × LockDown* between the hard-hit and non-hard-hit groups. The main effects of $LockDown_{t-2}$, $LockDown_{t-1}$, and *ReOpen* are absorbed by the year-quarter fixed effects. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table 3 CEOs' Early-Life Disaster Experience and Capital Expenditure During COVID-19 in the Different Industry Groups *-continued*

Variables	(1) Hard-Hit CapExG	(2) Non-Hard-Hit CapExG	(3) Hard-Hit CapExG	(4) Non-Hard-Hit CapExG	(5) Hard-Hit CapExG	(6) Non-Hard-Hit CapExG
$DisasterExp \times LockDown$	-0.222**	-0.066	-0.233**	-0.067	-0.233**	-0.067
	(-2.24)	(-0.75)	(-2.21)	(-0.72)	(-2.32)	(-0.75)
$DisasterExp \times LockDown_{t-2}$	0.045	-0.157	0.048	-0.157	0.048	-0.157
	(0.18)	(-1.04)	(0.18)	(-1.00)	(0.19)	(-1.04)
$DisasterExp \times LockDown_{t-1}$	-0.106	0.112	-0.116	0.111	-0.116	0.111
	(-0.85)	(1.02)	(-0.88)	(0.98)	(-0.92)	(1.02)
$DisasterExp \times ReOpen$	0.046	-0.094	0.003	-0.095	0.003	-0.095
	(0.49)	(-1.28)	(0.03)	(-1.24)	(0.03)	(-1.30)
$Gender \times LockDown$	-0.088	0.259	-0.076	0.258	-0.076	0.258
	(-0.41)	(1.05)	(-0.33)	(0.99)	(-0.35)	(1.04)
$Tenure \times LockDown$	-0.001	-0.014***	-0.001	-0.014***	-0.001	-0.014***
	(-0.13)	(-2.83)	(-0.27)	(-2.71)	(-0.28)	(-2.83)
$Age \times LockDown$	-0.005	0.001	-0.006	0.001	-0.006	0.001
	(-0.78)	(0.19)	(-0.89)	(0.13)	(-0.94)	(0.13)
$CashFlow/Asset \times LockDown$	0.011	0.008	0.016	0.008	0.016	0.008
	(0.74)	(0.58)	(0.98)	(0.52)	(1.02)	(0.55)
$Tobin's\ Q \times LockDown$	0.021	-0.032**	0.011	-0.031*	0.011	-0.031**
	(0.76)	(-2.29)	(0.36)	(-1.92)	(0.37)	(-2.01)
$SalesGrowth \times LockDown$	-0.042	0.320	-0.043	0.321	-0.043	0.321
	(-0.25)	(1.62)	(-0.25)	(1.55)	(-0.26)	(1.62)
$LockDown$	0.253	-0.434	0.253	-0.427	0.253	-0.427
	(0.52)	(-0.85)	(0.49)	(-0.80)	(0.52)	(-0.84)
Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	NO	NO
CEO FE	NO	NO	YES	YES	NO	NO
Firm-CEO FE	NO	NO	NO	NO	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES
Observations	2,477	2,303	2,477	2,303	2,477	2,303
R-squared	0.125	0.141	0.130	0.141	0.130	0.141
Coefficient Test	*diff* = -0.155		*diff* = -0.166		*diff* = -0.166	
$DisasterExp \times LockDown$	*p* = 0.074		*p* = 0.070		*p* = 0.062	

Table 4 CEOs' Early-Life Disease Experience and Capital Expenditure During COVID-19

This table reports the ordinary least squares regression results for capital expenditure growth between firms managed by CEOs with and without early-life experience of severe diseases during the 16 quarters between 2018 and 2021. *CapExG* is quarterly capital expenditure growth. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. $LockDown_{t-1}$ and $LockDown_{t-2}$ denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). Firms' characteristics (i.e., *CashFlow/Asset*, lagged *Tobin's Q,* and *SalesGrowth*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, $LockDown_{t-1}$, $LockDown_{t-2}$,* and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DiseaseExp*, and coefficients for interactions with *LockDown* are reported. For brevity, the coefficients of other variables are not displayed. The main effects of $LockDown_{t-2}$, $LockDown_{t-1}$, and *ReOpen* are absorbed by the year-quarter fixed effects. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table 4 CEOs' Early-Life Disease Experience and Capital Expenditure During COVID-19
-continued

Variables	(1) CapExG	(2) CapExG	(3) CapExG
DiseaseExp × LockDown	-0.147**	-0.150**	-0.150**
	(-2.28)	(-2.19)	(-2.29)
DiseaseExp × LockDown$_{t-2}$	0.061	0.062	0.062
	(0.49)	(0.48)	(0.50)
DiseaseExp × LockDown$_{t-1}$	-0.003	-0.002	-0.002
	(-0.04)	(-0.03)	(-0.03)
DiseaseExp × ReOpen	0.033	0.033	0.033
	(0.67)	(0.66)	(0.69)
Gender × LockDown	0.021	0.033	0.033
	(0.13)	(0.18)	(0.19)
Tenure × LockDown	-0.008**	-0.008**	-0.008**
	(-2.14)	(-2.13)	(-2.23)
Age × LockDown	0.005	0.006	0.006
	(1.31)	(1.33)	(1.39)
CashFlow/Asset × LockDown	0.014	0.016	0.016
	(1.42)	(1.43)	(1.50)
Tobin's Q × LockDown	-0.026**	-0.026*	-0.026*
	(-2.06)	(-1.80)	(-1.88)
SalesGrowth × LockDown	0.145	0.146	0.146
	(1.10)	(1.06)	(1.11)
LockDown	-0.619*	-0.633*	-0.633*
	(-1.77)	(-1.70)	(-1.78)
Controls	YES	YES	YES
Firm FE	YES	YES	NO
CEO FE	NO	YES	NO
Firm-CEO FE	NO	NO	YES
Year-Quarter FE	YES	YES	YES
Observations	4,780	4,780	4,780
R-squared	0.122	0.126	0.126

Table 5 CEOs' Early-Life Disease Experience and Capital Expenditure During COVID-19 in the Different Industry Groups

This table reports the ordinary least squares regression results of CEOs' early-life disease experience on firms' capital expenditure growth in hard-hit and non-hard-hit industries during the 16 quarters between 2018 and 2021. Firms in industries that rely heavily on face-to-face communication or close physical proximity are classified as the hard-hit group. *CapExG* is quarterly capital expenditure growth. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. *LockDown$_{t-1}$* and *LockDown$_{t-2}$* denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). Firms' characteristics (i.e., *CashFlow/Asset*, lagged *Tobin's Q,* and *SalesGrowth*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, LockDown$_{t-1}$*, *LockDown$_{t-2}$*, and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DiseaseExp*, and coefficients for interactions with *LockDown* are reported. For brevity, coefficients of other variables are not displayed. The permutation test is performed to determine the significance of observed differences in coefficient estimates on *DiseaseExp × LockDown* between the hard-hit and non-hard-hit groups. The main effects of *LockDown$_{t-2}$*, *LockDown$_{t-1}$*, and *ReOpen* are absorbed by the year-quarter fixed effects. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table 5 CEOs' Early-Life Disease Experience and Capital Expenditure During COVID-19 in the Different Industry Groups *-continued*

Variables	(1) Hard-Hit *CapExG*	(2) Non-Hard-Hit *CapExG*	(3) Hard-Hit *CapExG*	(4) Non-Hard-Hit *CapExG*	(5) Hard-Hit *CapExG*	(6) Non-Hard-Hit *CapExG*
$DiseaseExp \times LockDown$	-0.235**	0.011	-0.246**	0.010	-0.246**	0.010
	(-2.53)	(0.15)	(-2.47)	(0.13)	(-2.58)	(0.13)
$DiseaseExp \times LockDown_{t-2}$	0.058	0.130	0.057	0.130	0.057	0.130
	(0.33)	(0.69)	(0.31)	(0.66)	(0.32)	(0.69)
$DiseaseExp \times LockDown_{t-1}$	0.045	0.026	0.042	0.024	0.042	0.024
	(0.45)	(0.30)	(0.39)	(0.27)	(0.41)	(0.28)
$DiseaseExp \times ReOpen$	0.015	0.028	0.019	0.026	0.019	0.026
	(0.20)	(0.41)	(0.25)	(0.36)	(0.27)	(0.38)
$Gender \times LockDown$	-0.109	0.267	-0.098	0.267	-0.098	0.267
	(-0.51)	(1.10)	(-0.44)	(1.05)	(-0.46)	(1.10)
$Tenure \times LockDown$	-0.002	-0.014***	-0.002	-0.014***	-0.002	-0.014***
	(-0.35)	(-2.85)	(-0.51)	(-2.73)	(-0.53)	(-2.86)
$Age \times LockDown$	0.005	0.000	0.006	0.000	0.006	0.000
	(0.65)	(0.07)	(0.70)	(0.04)	(0.73)	(0.04)
$CashFlow/Asset \times LockDown$	0.015	0.009	0.019	0.009	0.019	0.009
	(0.96)	(0.63)	(1.18)	(0.59)	(1.23)	(0.62)
$Tobin's\ Q \times LockDown$	0.004	-0.032**	-0.001	-0.032*	-0.001	-0.032*
	(0.13)	(-2.17)	(-0.03)	(-1.86)	(-0.03)	(-1.95)
$SalesGrowth \times LockDown$	-0.045	0.319	-0.043	0.318	-0.043	0.318
	(-0.28)	(1.62)	(-0.25)	(1.54)	(-0.26)	(1.61)
$LockDown$	-0.365	-0.463	-0.450	-0.454	-0.450	-0.454
	(-0.71)	(-0.90)	(-0.83)	(-0.84)	(-0.87)	(-0.88)
Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	NO	NO
CEO FE	NO	NO	YES	YES	NO	NO
Firm-CEO FE	NO	NO	NO	NO	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES
Observations	2,477	2,303	2,477	2,303	2,477	2,303
R-squared	0.125	0.141	0.131	0.141	0.131	0.141
Coefficient Test	*diff* = -0.246		*diff* = -0.256		*diff* = -0.256	
$DiseaseExp \times LockDown$	$p < 0.01$		$p < 0.01$		$p < 0.01$	

Table 6 CEOs' Early-Life Disease Experience and Financial Reporting Tone During COVID-19

This table reports the ordinary least squares regression results of the financial reporting tone between firms managed by CEOs with and without early-life experience of severe diseases during the 16 quarters between 2018 and 2021. *Tone* is the number of positive words divided by the number of negative and uncertain words multiplied by 100 in a firm's 10-K or 10-Q reports. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. $LockDown_{t-1}$ and $LockDown_{t-2}$ denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). Firms' characteristics (i.e., *Size*, *Tobin's Q*, *LnSale*, *CashFlow/Asset*, and *Leverage*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown,* $LockDown_{t-1}$, $LockDown_{t-2}$, and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DiseaseExp*, and coefficients for interactions with *LockDown* are reported. For brevity, the coefficients of other variables are not displayed. The main effects of $LockDown_{t-2}$, $LockDown_{t-1}$, and *ReOpen* are absorbed by the year-quarter fixed effects. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table 6 CEOs' Early-Life Disease Experience and Financial Reporting Tone During COVID-19 *-continued*

Variables	(1) Tone	(2) Tone	(3) Tone
DiseaseExp × LockDown	-2.126**	-2.111**	-2.111**
	(-2.51)	(-2.36)	(-2.47)
DiseaseExp × LockDown$_{t-2}$	0.257	0.318	0.318
	(0.32)	(0.38)	(0.40)
DiseaseExp × LockDown$_{t-1}$	0.496	0.576	0.576
	(0.54)	(0.60)	(0.62)
DiseaseExp × ReOpen	-0.202	-0.165	-0.165
	(-0.24)	(-0.19)	(-0.20)
Gender × LockDown	1.008	0.956	0.956
	(0.91)	(0.84)	(0.88)
Tenure × LockDown	0.075**	0.081**	0.081**
	(2.26)	(2.32)	(2.43)
Age × LockDown	-0.101*	-0.113*	-0.113*
	(-1.66)	(-1.72)	(-1.80)
Size × LockDown	-0.182	-0.135	-0.135
	(-0.33)	(-0.23)	(-0.24)
Tobin's Q × LockDown	-0.100	-0.306*	-0.306*
	(-0.58)	(-1.71)	(-1.79)
LnSale × LockDown	0.027	0.022	0.022
	(0.05)	(0.04)	(0.04)
CashFlow/Asset × LockDown	-0.024	0.009	0.009
	(-0.29)	(0.11)	(0.12)
Leverage × LockDown	2.230	1.861	1.861
	(1.44)	(1.12)	(1.18)
LockDown	-1.732	-1.727	-1.727
	(-0.59)	(-0.57)	(-0.60)
Controls	YES	YES	YES
Firm FE	YES	YES	NO
CEO FE	NO	YES	NO
Firm-CEO FE	NO	NO	YES
Year-Quarter FE	YES	YES	YES
Observations	4,586	4,585	4,585
R-Squared	0.754	0.757	0.757

Table 7 CEOs' Early-Life Disease Experience and Financial Reporting Tone During COVID-19 in the Different Industry Groups

This table reports the ordinary least squares regression results of CEOs' early-life disease experience on firms' financial reporting tone in hard-hit and non-hard-hit industries during the 16 quarters between 2018 and 2021. Firms in industries that rely heavily on face-to-face communication or close physical proximity are classified as the hard-hit group. *Tone* is the number of positive words divided by the number of negative and uncertain words multiplied by 100 in a firm's 10-K or 10-Q reports. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. $LockDown_{t-1}$ and $LockDown_{t-2}$ denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). Firms' characteristics (i.e., *Size*, *Tobin's Q*, *LnSale*, *CashFlow/Asset*, and *Leverage*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, $LockDown_{t-1}$*, *$LockDown_{t-2}$*, and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DiseaseExp*, and coefficients for interactions with *LockDown* are reported. For brevity, the coefficients of other variables are not displayed. The permutation test is performed to determine the significance of observed differences in coefficient estimates on *DiseaseExp × LockDown* between the hard-hit and non-hard-hit groups. The main effects of *$LockDown_{t-2}$, $LockDown_{t-1}$*, and *ReOpen* are absorbed by the year-quarter fixed effects. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7 CEOs' Early-Life Disease Experience and Financial Reporting Tone During COVID-19 in the Different Industry Groups *-continued*

Variables	(1) Hard-Hit Tone	(2) Non-Hard-Hit Tone	(3) Hard-Hit Tone	(4) Non-Hard-Hit Tone	(5) Hard-Hit Tone	(6) Non-Hard-Hit Tone
$DiseaseExp \times LockDown$	-2.542**	-0.991	-2.445**	-1.163	-2.445**	-1.163
	(-2.39)	(-0.77)	(-2.15)	(-0.86)	(-2.25)	(-0.90)
$DiseaseExp \times LockDown_{t-2}$	0.442	0.011	0.497	0.002	0.497	0.002
	(0.44)	(0.01)	(0.47)	(0.00)	(0.50)	(0.00)
$DiseaseExp \times LockDown_{t-1}$	-0.030	1.541	0.118	1.414	0.118	1.414
	(-0.03)	(1.04)	(0.10)	(0.90)	(0.10)	(0.95)
$DiseaseExp \times ReOpen$	-0.283	0.708	-0.228	0.579	-0.228	0.579
	(-0.27)	(0.52)	(-0.20)	(0.40)	(-0.21)	(0.42)
$Gender \times LockDown$	0.294	0.289	0.478	0.311	0.478	0.311
	(0.24)	(0.16)	(0.37)	(0.17)	(0.38)	(0.17)
$Tenure \times LockDown$	0.178***	0.005	0.175***	0.019	0.175***	0.019
	(4.21)	(0.10)	(3.92)	(0.33)	(4.11)	(0.34)
$Age \times LockDown$	-0.321***	-0.024	-0.330***	-0.026	-0.330***	-0.026
	(-3.53)	(-0.30)	(-3.32)	(-0.30)	(-3.48)	(-0.32)
$Size \times LockDown$	0.192	-0.990	0.144	-0.866	0.144	-0.866
	(0.27)	(-1.09)	(0.19)	(-0.90)	(0.20)	(-0.95)
$Tobin's\ Q \times LockDown$	-0.050	-0.102	-0.147	-0.270	-0.147	-0.270
	(-0.20)	(-0.45)	(-0.49)	(-1.14)	(-0.51)	(-1.19)
$LnSale \times LockDown$	-0.495	1.090	-0.407	0.991	-0.407	0.991
	(-0.68)	(1.15)	(-0.53)	(0.99)	(-0.56)	(1.03)
$CashFlow/Asset \times LockDown$	-0.037	-0.029	-0.032	-0.000	-0.032	-0.000
	(-0.31)	(-0.26)	(-0.25)	(-0.00)	(-0.27)	(-0.00)
$Leverage \times LockDown$	2.272	0.233	2.374	-0.105	2.374	-0.105
	(1.12)	(0.11)	(1.08)	(-0.05)	(1.13)	(-0.05)
$LockDown$	0.017	1.811	0.155	2.009	0.155	2.009
	(0.00)	(0.39)	(0.04)	(0.42)	(0.04)	(0.44)
Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	NO	NO
CEO FE	NO	NO	YES	YES	NO	NO
Firm-CEO FE	NO	NO	NO	NO	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES
Observations	2,368	2,218	2,367	2,218	2,367	2,218
R-Squared	0.769	0.747	0.771	0.748	0.771	0.748
Coefficient Test	*diff* = -1.552		*diff* = -1.282		*diff* = -1.282	
$DiseaseExp \times LockDown$	$p < 0.05$		$p < 0.05$		$p < 0.05$	

Table 8 CEOs' Early-Life Disease Experience and Management Earnings Guidance During COVID-19

This table reports the ordinary least squares regression results for management earnings guidance for firms managed by CEOs with and without early-life experience of severe diseases during the 16 quarters between 2018 and 2021. *GoodNews* is an indicator that equals one if earnings guidance is above analysts' consensus estimates on the date of issuance. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. *LockDown$_{t-1}$* and *LockDown$_{t-2}$* denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). Firms' characteristics (i.e., *Size*, *Tobin's Q*, *LnSale*, *CashFlow/Asset*, and *Leverage*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, LockDown$_{t-1}$, LockDown$_{t-2}$*, and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DiseaseExp*, and coefficients for interactions with *LockDown* are reported. For brevity, the coefficients of other variables are not displayed. The main effects of *LockDown$_{t-2}$, LockDown$_{t-1}$*, and *ReOpen* are absorbed by the year-quarter fixed effects. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table 8 CEOs' Early-Life Disease Experience and Management Earnings Guidance During COVID-19 *-continued*

Variables	(1) GoodNews	(2) GoodNews	(3) GoodNews
DiseaseExp × LockDown	-0.298***	-0.302***	-0.302***
	(-3.21)	(-3.07)	(-3.19)
DiseaseExp × LockDown$_{t-2}$	0.060	0.058	0.058
	(0.68)	(0.63)	(0.66)
DiseaseExp × LockDown$_{t-1}$	-0.136	-0.137	-0.137
	(-1.57)	(-1.53)	(-1.59)
DiseaseExp × ReOpen	-0.035	-0.053	-0.053
	(-0.39)	(-0.58)	(-0.60)
Gender × LockDown	0.152	0.144	0.144
	(0.46)	(0.42)	(0.43)
Tenure × LockDown	-0.004	-0.004	-0.004
	(-0.79)	(-0.81)	(-0.84)
Age × LockDown	0.015*	0.014	0.014
	(1.71)	(1.51)	(1.57)
Size × LockDown	0.006	0.006	0.006
	(0.11)	(0.09)	(0.10)
Tobin's Q × LockDown	-0.036*	-0.042**	-0.042**
	(-1.79)	(-2.04)	(-2.12)
LnSale × LockDown	-0.039	-0.041	-0.041
	(-0.65)	(-0.66)	(-0.68)
CashFlow/Asset × LockDown	0.015	0.017	0.017
	(1.09)	(1.26)	(1.31)
Leverage × LockDown	0.098	0.101	0.101
	(0.39)	(0.38)	(0.40)
LockDown	-0.123	-0.008	-0.008
	(-0.17)	(-0.01)	(-0.01)
Controls	YES	YES	YES
Firm FE	YES	YES	NO
CEO FE	NO	YES	NO
Firm-CEO FE	NO	NO	YES
Year-Quarter FE	YES	YES	YES
Observations	3,179	3,178	3,178
R-Squared	0.246	0.251	0.251

Table 9 CEOs' Early-Life Disease Experience and Management Earnings Guidance During COVID-19 in the Different Industry Groups

This table reports the ordinary least squares regression results of CEOs' early-life disease experience on management guidance in hard-hit and non-hard-hit industries during the 16 quarters between 2018 and 2021. Firms in industries that rely heavily on face-to-face communication or close physical proximity are classified as the hard-hit group. *GoodNews* is an indicator that equals one if earnings guidance is above analysts' consensus estimates on the date of issuance. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. *LockDown$_{t-1}$* and *LockDown$_{t-2}$* denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). Firms' characteristics (i.e., *Size*, *Tobin's Q*, *LnSale*, *CashFlow/Asset*, and *Leverage*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, LockDown$_{t-1}$*, *LockDown$_{t-2}$*, and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DiseaseExp*, and coefficients for interactions with *LockDown* are reported. For brevity, the coefficients of other variables are not displayed. The permutation test is performed to determine the significance of observed differences in coefficient estimates on *DiseaseExp × LockDown* between the hard-hit and non-hard-hit groups. The main effects of *LockDown$_{t-2}$*, *LockDown$_{t-1}$*, and *ReOpen* are absorbed by the year-quarter fixed effects. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table 9 CEOs' Early-Life Disease Experience and Management Earnings Guidance During COVID-19 in the Different Industry Groups *-continued*

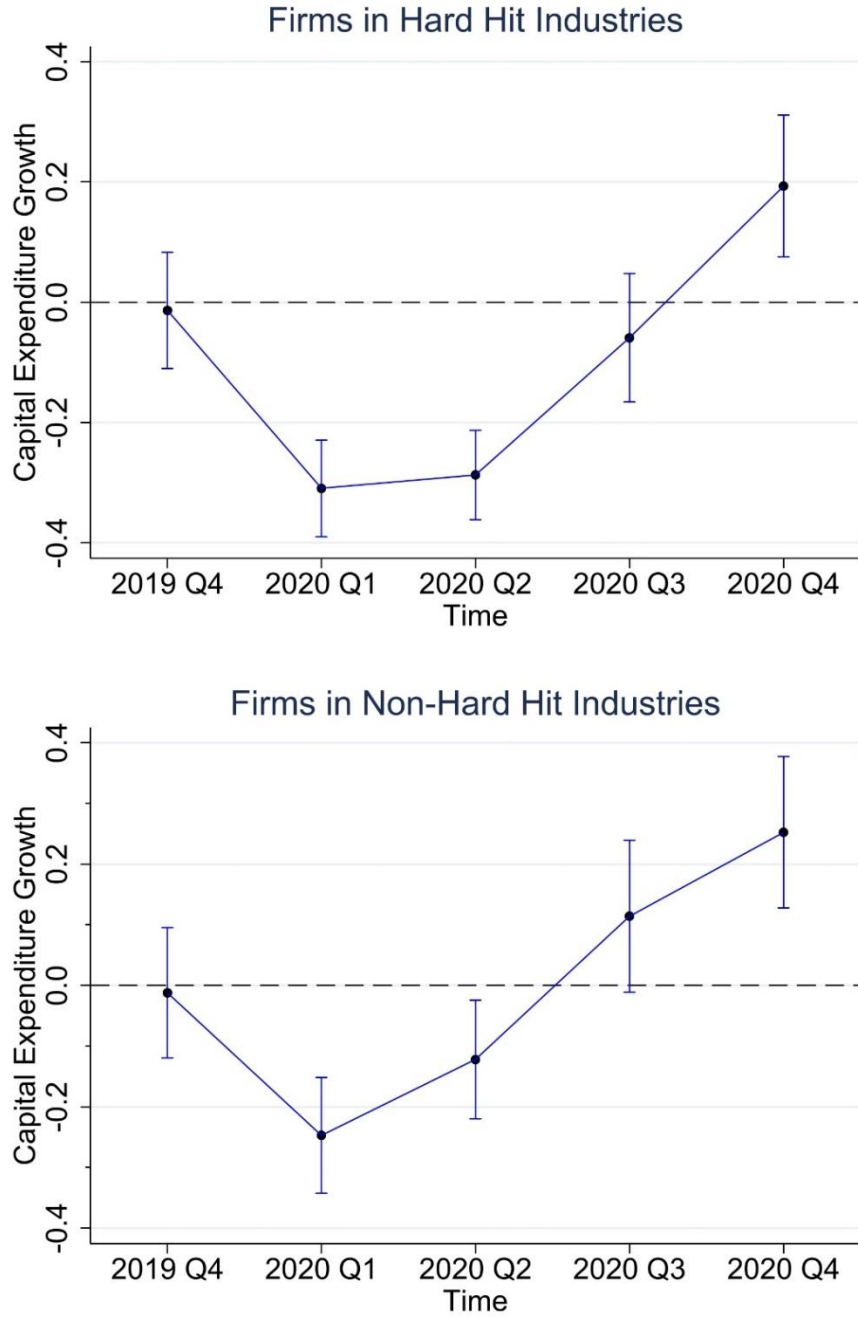| Variables	(1) GoodNews	(2) GoodNews	(3) GoodNews	(4) GoodNews	(5) GoodNews	(6) GoodNews
$DiseaseExp \times LockDown$	-0.387***	-0.179	-0.371**	-0.179	-0.371***	-0.179
	(-2.97)	(-1.41)	(-2.61)	(-1.36)	(-2.73)	(-1.41)
$DiseaseExp \times LockDown_{t-2}$	0.038	0.119	0.039	0.119	0.039	0.119
	(0.32)	(1.03)	(0.32)	(0.99)	(0.33)	(1.03)
$DiseaseExp \times LockDown_{t-1}$	-0.304*	-0.076	-0.289*	-0.076	-0.289*	-0.076
	(-1.94)	(-0.80)	(-1.74)	(-0.77)	(-1.82)	(-0.80)
$DiseaseExp \times ReOpen$	-0.081	-0.074	-0.080	-0.074	-0.080	-0.074
	(-0.49)	(-0.71)	(-0.47)	(-0.69)	(-0.49)	(-0.71)
$Gender \times LockDown$	-0.054		-0.067		-0.067	
	(-0.17)		(-0.21)		(-0.22)	
$Tenure \times LockDown$	0.003	-0.002	0.001	-0.002	0.001	-0.002
	(0.23)	(-0.42)	(0.08)	(-0.40)	(0.08)	(-0.42)
$Age \times LockDown$	0.005	0.013	0.003	0.013	0.003	0.013
	(0.34)	(1.24)	(0.16)	(1.20)	(0.17)	(1.24)
$Size \times LockDown$	0.062	-0.149*	0.009	-0.149*	0.009	-0.149*
	(0.51)	(-1.74)	(0.07)	(-1.68)	(0.07)	(-1.74)
$Tobin's\ Q \times LockDown$	0.013	-0.047***	0.005	-0.047***	0.005	-0.047***
	(0.40)	(-2.73)	(0.15)	(-2.64)	(0.16)	(-2.73)
$LnSale \times LockDown$	-0.106	0.134	-0.077	0.134	-0.077	0.134
	(-1.07)	(1.59)	(-0.73)	(1.54)	(-0.77)	(1.59)
$CashFlow/Asset \times LockDown$	-0.014	0.016	-0.015	0.016	-0.015	0.016
	(-0.72)	(0.87)	(-0.76)	(0.84)	(-0.80)	(0.87)
$Leverage \times LockDown$	-0.015	0.144	0.039	0.144	0.039	0.144
	(-0.03)	(0.53)	(0.09)	(0.51)	(0.09)	(0.53)
$LockDown$	0.079	1.017	0.232	1.017	0.232	1.017
	(0.06)	(1.32)	(0.17)	(1.27)	(0.17)	(1.32)
Controls	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	NO	NO
CEO FE	NO	NO	YES	YES	NO	NO
Firm-CEO FE	NO	NO	NO	NO	YES	YES
Year-Quarter FE	YES	YES	YES	YES	YES	YES
Observations	1,316	1,863	1,315	1,863	1,315	1,863
R-Squared	0.274	0.265	0.282	0.265	0.282	0.265
Coefficient Test	*diff* = -0.207		*diff* = -0.191		*diff* = -0.191	
$DiseaseExp \times LockDown$	$p < 0.01$		$p < 0.05$		$p < 0.05$	

Online Appendix for

Early-Life Experience and CEOs' Reactions to the COVID-19

Contents

Figure A.1 Capital Expenditure Growth During COVID-19

This figure plots the coefficients of the year-quarter indicators and their 95% confidence intervals from the regressions: $CapExG_{i,t} = \alpha + \sum_{2018Q1}^{2020Q4} \beta_t \times YearQuarter_t + \gamma_1 \times OROA_{i,t} + \gamma_2 \times Tobin's\ Q_{i,t-1} + SalesGrowth_{i,t} + Industry\ FE + \varepsilon_{i,t}$. The sample spans 12 quarters, and 2018 Q1 to 2019 Q3 serve as the benchmark group. Firms in industries that rely heavily on face-to-face communication or close physical proximity are classified as the hard-hit group. Standard errors are clustered at the firm level.

Table A.1 Top Ten Industry Distribution

This table shows the top 10 industries for firms managed by CEOs with and without early-life experience. Panel A (B) presents the top 10 industries for firms managed by CEOs with and without early-life disaster (disease) experience.

Panel A: Early-life disaster experience

DisasterExp = 1	*DisasterExp* = 0
Industry	**Industry**
Machinery Manufacturing	Computer and Electronic Product Manufacturing
Telecommunications	Chemical Manufacturing
Accommodation	Transportation Equipment Manufacturing
Air Transportation	Machinery Manufacturing
Oil and Gas Extraction	Publishing Industries (except Internet)
Support Activities for Mining	Data Processing, Hosting, and Related Services
Transportation Equipment Manufacturing	Food Manufacturing
Ambulatory Health Care Services	Fabricated Metal Product Manufacturing
Animal Production and Aquaculture	Food Services and Drinking Places
Educational Services	Broadcasting (except Internet)

Panel B: Early-life disease experience

DiseaseExp = 1	*DiseaseExp* = 0
Industry	**Industry**
Chemical Manufacturing	Computer and Electronic Product Manufacturing
Computer and Electronic Product Manufacturing	Chemical Manufacturing
Air Transportation	Transportation Equipment Manufacturing
Fabricated Metal Product Manufacturing	Machinery Manufacturing
Professional, Scientific, and Technic	Publishing Industries (except Internet)
Ambulatory Health Care Services	Food Services and Drinking Places
Support Activities for Mining	Food Manufacturing
Machinery Manufacturing	Data Processing, Hosting, and Related Services
Broadcasting (except Internet)	Primary Metal Manufacturing
Furniture and Related Product Manufac..	Oil and Gas Extraction

Table A.2 Sample Comparison

This table presents the comparison of firm characteristics between firms jointly covered by Execucomp-Compustat from 2018 to 2021 and firms in our regression sample. *Size* is the natural logarithm of total assets. *LnSale* is the natural logarithm of quarterly sales. *OROA* is the sum of income before extraordinary items plus depreciation and amortization over total assets multiplied by 100. *Leverage* is the sum of current liability and long-term debt over total assets. *Tobin's Q* represents the market value over the book value of total assets. *Age* is a CEO's contemporaneous age. *Gender* is an indicator variable that takes a value of one for male CEOs and zero for female CEOs.

Variables	Execucomp-Compustat Sample			Working Sample		
	N	Mean	S.D.	N	Mean	S.D.
Size	20,048	8.050	1.614	5,396	8.573	1.588
LnSale	19,988	6.368	1.635	5,394	6.876	1.583
OROA	19,874	1.912	3.932	5,328	2.160	3.247
Leverage	19,370	0.328	0.218	5,223	0.350	0.208
Tobin's Q	20,025	1.808	2.012	5,385	1.650	1.847
Age	20,058	57.571	7.123	5,397	57.300	4.901
Gender	20,062	0.943	0.233	5,397	0.927	0.261

Table A.3 Lockdown and Re-Open Periods for Each State

This table provides an overview of the lockdown and re-opening timelines of each state during the COVID-19 pandemic, detailing the specific quarters in which each state initiated its lockdown and began to reopen.

States	Lockdown Starts	Re-Open Starts	States	Lockdown Starts	Re-Open Starts
ALABAMA	2020Q2	2020Q3	MONTANA	2020Q2	2020Q3
ALASKA	N.A.	N.A.	NEBRASKA	2020Q2	2020Q3
ARIZONA	N.A.	N.A.	NEVADA	2020Q2	2020Q3
ARKANSAS	2020Q2	2020Q3	NEW HAMPSHIRE	2020Q2	2020Q3
CALIFORNIA	2020Q2	2021Q3	NEW JERSEY	2020Q2	2020Q4
COLORADO	2020Q2	2021Q1	NEW MEXICO	2020Q2	2021Q2
CONNECTICUT	2020Q2	2021Q2	NEW YORK	2020Q2	2021Q2
DELAWARE	2020Q2	2021Q1	NORTH CAROLINA	2020Q2	2021Q1
DISTRICT OF COLUMBIA	2020Q2	2020Q4	NORTH DAKOTA	N.A.	N.A.
FLORIDA	2020Q2	2020Q4	OHIO	2020Q2	2020Q4
GEORGIA	2020Q2	2020Q3	OKLAHOMA	N.A.	N.A.
HAWAII	2020Q2	2021Q3	OREGON	2020Q2	2021Q2
IDAHO	2020Q2	2020Q4	PENNSYLVANIA	2020Q2	2020Q3
ILLINOIS	2020Q2	2020Q3	RHODE ISLAND	2020Q2	2020Q3
INDIANA	2020Q2	2020Q3	SOUTH CAROLINA	2020Q2	2020Q3
IOWA	2020Q2	2020Q3	SOUTH DAKOTA	N.A.	N.A.
KANSAS	2020Q2	2020Q3	TENNESSEE	2020Q2	2020Q3
KENTUCKY	2020Q2	2020Q3	TEXAS	2020Q2	2020Q4
LOUISIANA	2020Q2	2020Q4	UTAH	N.A.	N.A.
MAINE	2020Q2	2020Q4	VERMONT	2020Q2	2020Q3
MARYLAND	2020Q2	2020Q3	VIRGINIA	2020Q2	2020Q3
MASSACHUSETTS	2020Q2	2021Q2	WASHINGTON	2020Q2	2021Q2
MICHIGAN	2020Q2	2020Q4	WEST VIRGINIA	2020Q2	2020Q3
MINNESOTA	2020Q2	2020Q3	WISCONSIN	N.A.	N.A.
MISSISSIPPI	2020Q2	2020Q3	WYOMING	N.A.	N.A.
MISSOURI	2020Q2	2020Q3			

Table A.4 CEOs' Early-Life Disease Experience and Capital Expenditure During COVID-19 (Robustness)

This table reports the ordinary least squares regression results of CEOs' early-life disease experience on firms' capital expenditure growth during the 16 quarters between 2018 and 2021. *CapExG* is quarterly capital expenditure growth. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. $LockDown_{t-1}$ and $LockDown_{t-2}$ denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). Firms' characteristics (i.e., *CashFlow/Asset*, *Tobin's Q,* and *SalesGrowth*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, $LockDown_{t-1}$, $LockDown_{t-2}$*, and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DiseaseExp*, and coefficients for interactions with *LockDown* are reported. For brevity, coefficients of other variables are not displayed. The main effects of $LockDown_{t-2}$, $LockDown_{t-1}$, and *ReOpen* are absorbed by the fixed effects. Columns (1) and (4) display the results in the full sample. Columns (2) and (5) focus on hard-hit industries, while (3) and (6) present results on non-hard-hit industries. Firms in industries that rely heavily on face-to-face communication or close physical proximity are classified as the hard-hit group. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table A.4 CEOs' Early-Life Disease Experience and Capital Expenditure During COVID-19 (Robustness) - *continued*

Variables	(1) Full Sample CapExG	(2) Hard-Hit CapExG	(3) Non-Hard-Hit CapExG	(4) Full Sample CapExG	(5) Hard-Hit CapExG	(6) Non-Hard-Hit CapExG
$DiseaseExp \times LockDown$	-0.184***	-0.229**	-0.104	-0.137**	-0.178*	-0.037
	(-2.94)	(-2.58)	(-1.19)	(-2.06)	(-1.75)	(-0.43)
$DiseaseExp \times LockDown_{t-2}$	-0.060	-0.094	0.001	-0.027	-0.078	0.052
	(-0.44)	(-0.41)	(0.00)	(-0.20)	(-0.34)	(0.29)
$DiseaseExp \times LockDown_{t-1}$	-0.052	0.105	-0.083	-0.004	0.146	-0.013
	(-0.63)	(1.01)	(-0.78)	(-0.05)	(1.27)	(-0.13)
$DiseaseExp \times ReOpen$	-0.044	-0.045	-0.066	-0.001	0.002	0.015
	(-0.76)	(-0.48)	(-0.81)	(-0.02)	(0.02)	(0.20)
$Gender \times LockDown$	-0.080	-0.076	-0.034	-0.010	-0.128	0.219
	(-0.53)	(-0.31)	(-0.22)	(-0.05)	(-0.45)	(0.90)
$Tenure \times LockDown$	-0.011***	-0.011*	-0.013***	-0.012***	-0.008	-0.015***
	(-3.04)	(-1.73)	(-2.81)	(-2.93)	(-1.14)	(-3.23)
$Age \times LockDown$	0.012**	0.018*	0.007	0.008	0.009	0.002
	(2.25)	(1.76)	(1.11)	(1.36)	(0.76)	(0.34)
$CashFlow/Asset \times LockDown$	0.016	-0.012	0.026	0.001	-0.022	0.012
	(1.03)	(-0.54)	(1.34)	(0.07)	(-0.91)	(0.74)
$Tobin's\ Q \times LockDown$	-0.046**	0.013	-0.059***	-0.036**	0.042	-0.056***
	(-2.45)	(0.31)	(-2.90)	(-1.99)	(0.99)	(-2.87)
$SalesGrowth \times LockDown$	0.221	0.275	0.240	0.307*	0.311	0.340
	(1.32)	(1.02)	(1.13)	(1.73)	(1.12)	(1.53)
$LockDown$	-0.702*	-0.683	-0.648	-0.573	-0.333	-0.557
	(-1.68)	(-1.00)	(-1.18)	(-1.31)	(-0.45)	(-0.94)
Industry Year-Quarter FE	YES	YES	YES	YES	YES	YES
Firm FE	NO	NO	NO	YES	YES	YES
Observations	4,469	2,222	2,247	4,468	2,221	2,247
R-Squared	0.220	0.312	0.139	0.270	0.345	0.206

Table A.5 CEOs' Early-Life Disease Experience and Financial Reporting Tone During COVID-19 (Robustness)

This table reports the ordinary least squares regression results of CEOs' early-life disease experience on firms' financial reporting tone during the 16 quarters between 2018 and 2021. Firms in industries that rely heavily on face-to-face communication or close physical proximity are classified as the hard-hit group. *Tone* is the number of positive words divided by the number of negative and uncertain words multiplied by 100 in a firm's 10-K or 10-Q report. *LockDown* is an indicator that equals one if a firm's headquarters state is under lockdown during this calendar quarter. *LockDown$_{t-1}$* and *LockDown$_{t-2}$* denote one quarter and two quarters before the lockdown starts, respectively. *ReOpen* is an indicator that equals one if the lockdown policies in the firm's headquarters state have been removed. *DiseaseExp* is an indicator that equals one if a CEO's early-life disease experience, measured by the number of deaths, is in the top decile of severity among all CEOs for any of the four significant diseases (i.e., measles, tuberculosis, polio, and scarlet fever). Firms' characteristics (i.e., *Size*, lagged *Tobin's Q*, *LnSale*, *CashFlow/Asset*, and *Leverage*) and CEOs' characteristics (i.e., *Gender*, *Tenure*, and *Age*) are controlled for in all the columns. The interactions between firm characteristics and COVID-19 containment policy indicators (i.e., *LockDown, LockDown$_{t-1}$, LockDown$_{t-2}$*, and *ReOpen*) and the interactions between CEOs' characteristics and COVID-19 containment policy indicators are controlled in all the columns. Only the coefficients for *LockDown*, coefficients for interactions with *DiseaseExp*, and coefficients for interactions with *LockDown* are reported. For brevity, coefficients of other variables are not displayed. The main effects of *LockDown$_{t-2}$*, *LockDown$_{t-1}$*, and *ReOpen* are absorbed by the fixed effects. Columns (1) and (4) display the results in the full sample. Columns (2) and (5) focus on hard-hit industries, while (3) and (6) present results on non-hard-hit industries. Firms in industries that rely heavily on face-to-face communication or close physical proximity are classified as the hard-hit group. Standard errors are clustered at the firm level, and *t*-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

(To be continued)

Table A.5 CEOs' Early-Life Disease Experience and Financial Reporting Tone During COVID-19 (Robustness) - *continued*

Variables	(1) Full Sample Tone	(2) Hard-Hit Tone	(3) Non-Hard-Hit Tone	(4) Full Sample Tone	(5) Hard-Hit Tone	(6) Non-Hard-Hit Tone
$DiseaseExp \times LockDown$	-2.390*	-3.872***	-0.824	-2.225**	-3.362***	-1.479
	(-1.89)	(-2.74)	(-0.39)	(-2.38)	(-2.87)	(-0.99)
$DiseaseExp \times LockDown_{t-2}$	-0.820	0.351	-2.486	-0.011	0.090	-0.562
	(-0.72)	(0.21)	(-1.47)	(-0.01)	(0.07)	(-0.37)
$DiseaseExp \times LockDown_{t-1}$	0.696	0.796	0.795	1.135	0.428	2.023
	(0.55)	(0.46)	(0.43)	(1.05)	(0.33)	(1.17)
$DiseaseExp \times ReOpen$	-1.484	-1.658	-0.704	-0.829	-2.401*	0.545
	(-1.24)	(-0.92)	(-0.40)	(-0.79)	(-1.92)	(0.32)
$Gender \times LockDown$	3.965*	4.514*	1.246	0.474	-0.495	-1.122
	(1.67)	(1.85)	(0.27)	(0.34)	(-0.33)	(-0.41)
$Tenure \times LockDown$	0.113*	0.182	0.010	0.020	0.039	0.005
	(1.73)	(1.59)	(0.12)	(0.42)	(0.45)	(0.09)
$Age \times LockDown$	0.037	-0.055	0.000	-0.053	-0.222*	0.064
	(0.32)	(-0.31)	(0.00)	(-0.67)	(-1.97)	(0.57)
$Size \times LockDown$	-0.129	1.143	-1.091	-0.608	0.463	-1.777*
	(-0.13)	(0.85)	(-0.77)	(-0.80)	(0.41)	(-1.76)
$Tobin's\ Q \times LockDown$	-0.237	0.205	-0.072	-0.151	-0.058	-0.288
	(-0.75)	(0.33)	(-0.19)	(-0.63)	(-0.19)	(-1.03)
$LnSale \times LockDown$	0.244	-1.483	1.384	0.456	-1.096	1.918*
	(0.24)	(-1.09)	(0.95)	(0.61)	(-1.01)	(1.82)
$CashFlow/Asset \times LockDown$	-0.173	-0.171	-0.255	-0.046	-0.091	-0.003
	(-1.18)	(-0.68)	(-1.36)	(-0.48)	(-0.63)	(-0.03)
$Leverage \times LockDown$	2.449	6.123	-0.657	2.377	2.112	1.564
	(0.85)	(1.64)	(-0.16)	(1.28)	(0.66)	(0.65)
$LockDown$	-4.835	-4.415	1.768	-1.484	5.731	-0.996
	(-0.68)	(-0.54)	(0.17)	(-0.40)	(1.14)	(-0.19)
Industry Year-Quarter FE	YES	YES	YES	YES	YES	YES
Firm FE	NO	NO	NO	YES	YES	YES
Observations	4,303	2,119	2,184	4,296	2,115	2,181
R-Squared	0.358	0.473	0.287	0.799	0.835	0.771