Financial Reporting Consequences of

CEOs' Early-life Exposure to Disasters and Violent Crime

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ABSTRACT

Understanding the behavior of chief executive officers (CEOs) enables investors, regulators, and others to better appreciate the corporate decisions a CEO makes. Among the many aspects that determine CEO behavior are early-life experiences, we examine whether a CEO's exposure to two important events—fatal natural disasters and violent crime—during the individual's formative years is associated with the firm's financial reporting quality. We provide evidence of a non-monotonic association between early-life exposures to such events and financial reporting outcomes. When a CEO has moderate levels of early-life exposure to deaths associated with natural disasters or to violent crimes, financial reporting quality is lower, consistent with the CEO being over-confident in dealing with risk. However, as exposure increases to extreme levels, the CEO becomes more aware of the risk effect and, as a result, more careful about decisions that could elevate the firm's risk; thus, we find evidence of higher financial reporting quality.

Key Words: CEO Early-life exposure; natural disasters; violent crime; financial reporting quality.

JEL Classification: D81, G32, M41, M54, Q54.

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INTRODUCTION

Natural or anthropogenic disasters such as the Coronavirus pandemic of 2020 significantly affects individuals both physically and mentally, particularly those who reside in the hardest-hit regions and are exposed to high numbers of fatalities, and these impacts are likely to be long-lasting. We examine this type of phenomenon by investigating whether a chief executive officer's (CEO's) early-life exposure to fatal natural disasters and/or violent crime affects the firm's financial reporting quality. Prior research shows that CEO managerial styles significantly influence firm capital structure, investment, compensation, and disclosure policies (e.g., Bamber, Jiang, and Wang 2010; Graham, Harvey, and Puri 2013). CEO managerial styles also vary based on the CEO's professional experience, early-life experiences, early-life environment, and managerial background, as well as social norms (e.g., Malmendir and Tate 2005; Malmendier, Tate, and Yan 2011; Dittmar and Duchin 2016). An important consequence of CEO managerial style is financial reporting quality. In our study, we focus on two potential determinants of managerial behavior and financial reporting quality that are not within the CEO's control.

Individuals experience higher levels of stress long after traumatic events, especially when exposed to natural disasters (Homan and Wilver 1998; Elder 1999). Recent research finds that exposure to a natural disaster influences an individual's short-run financial decisions, as well as having long-lasting effects on investor portfolio decisions (e.g., Cassar, Healy, and Kessler 2017; Dessaint and Matray 2017). Additionally, a history of living in a dangerous or unpleasant environment explains a variety of illegal/deviant behavior, such as white-collar crime (Langton

and Piquero 2007). Adverse experiences subsequently affect behavior by causing permanent changes in the brain (Lyoo et al. 2011; Labont´e et al. 2012). Consequently, brain functions affected by non-economic risk may be co-opted to deal with economic risk (Futuyma 1998). Early-life experiences associated with fatal natural disasters and/or violent crime environments could thus potentially influence an individual's psyche and neurobiology, and therefore, economic decisions-making. We argue that such early-life exposures affect a CEO's risk-taking behavior (Bernile, Bhagwat, and Rau 2017a), introducing uncertainty about the firm's future operations and financial policies and as a result, impacting financial reporting quality.

Looking first at the case of early life exposure to fatal natural disasters, on the one hand, it may increase a CEOs' awareness of the risk effect, resulting in more careful decision-making to avoid elevating firm risk. On the other hand, such exposure may enhance the CEOs' confidence in their ability to deal with risky situations. Such overconfidence may lead to lower financial reporting quality, which is risky for both companies and their senior managers (DuCharme, Malatesta, and Sefcik 2004). A CEO's increased (lower) risk-taking is therefore expected to be realized through lower (greater) financial reporting quality.

Early-life exposure to violent crimes is also expected to influence CEOs' financial reporting quality decisions. Social learning theory states that individuals learn from their social environments. For example, a CEO who grows up in a violent crime environment observes the behaviors and consequences of the criminal activities. On the one hand, these observations may lead to riskier decision-making and opportunistic financial reporting. However, CEOs may also witness the negative consequences of violent crime. As a result, they may be less likely to engage in antisocial behavior, such as opportunistic financial reporting.

Prior research also suggests that exposure to a particular life experience has a unidirectional effect on a CEO's risk-taking behavior and resulting corporate policies. Investigating the relationship between CEO early-life disasters and corporate risk-taking, Bernile et al. (2017a) find the relationship to be non-linear, which demonstrates that the intensity of the disaster has an effect. Compared to firms with CEOs who did not experience early-life disasters involving fatalities, Bernile et al. (2017a) show that those experiencing a moderate (extreme) level of fatalities are associated with more risky (cautious) behavior.

We argue that the intensity of early-life exposures to fatal natural disasters and/or violent crimes influence CEOs' attitudes toward risk, and thus financial reporting quality, non-monotonically. CEOs who experienced less severe natural disasters or moderate levels of violent crimes during their childhoods have a higher level of confidence when making decisions and may overlook or underweight firm risk. These CEOs may exhibit less-conservative corporate policies and may increase their risk tolerance when making decisions on financial reporting quality. However, CEOs who have been exposed to extreme levels of fatalities from natural disasters or of violent crimes are more sensitive to the consequences of risk, and in turn, more cautious about increasing firm risk (Bernile et al. 2017a). They are more likely to adopt financially conservative policies, lower their risk tolerance, and behave more conservatively in the financial reporting process.[1] Consistent with this differential influence on the a CEO's

[1] CEOs Tim Cook and Steve Jobs from Apple Inc. represent these two scenarios. Tim Cook was born in Mobile, Alabama in 1960. In his early childhood, he experienced 1.15 deaths across different natural disaster events. Steve Jobs, who was born in San Francisco, California in 1955, witnessed 31.6 deaths across 39 natural disasters between the ages of 5 and 15 (Bernile et al. 2017a). Another example is the potential effect of Coronavirus outbreak

decision-making and risk-taking behaviors, we expect financial reporting quality to be positively (negatively) associated with a CEO's exposure to extreme (moderate) levels of early-life exposure to fatal natural disasters and/or violent crimes, compared to those with lower levels of exposure.

Following Bernile et al. (2017a), we collect CEO names from the ExecuComp database, and retrieve CEO biographical data (birthdates and place of birth) from Marquis Who's Who. For each CEO, we determine the level of fatal natural disasters and violent crimes occurring during his or her formative years, which we define as between the ages of 5 and 15 (Nelson 1993; Bernille et al. 2017a). Natural disaster data is from the Spatial Hazard Events and Losses Database in the United States (SHELDUS), and the crime data is from the Uniform Crime Reports (UCR) released annually by the Federal Bureau of Investigation (FBI). We use the number of disaster-related fatalities and violent crimes during the formative years of a CEO's childhood to provide measures of moderate and extreme fatality/disaster/crime intensity (Bernile et al. 2017a).

A thorough consideration of financial reporting quality requires an analysis of both the inputs and the outputs of the financial reporting quality process. We follow Garrett, Hoitash, and Prawitt (2014) and measure financial reporting quality as noisiness of accruals, accruals quality, and the likelihood of misstatements. We provide evidence of a non-monotonic association between financial reporting quality and CEOs' early-life exposures to deaths associated with natural disasters and violent crimes. When the CEO had moderate levels of exposure, financial reporting quality is lower, consistent with CEO over-confidence in dealing with risky situations.

on future decision-making. The fatality rate of the Coronavirus varies by region and would have a more significant impact if an individual lived in New York, compared to Wyoming.

As the exposure increases to extreme levels, the influence changes. Our results suggest these CEOs are more aware the effect of risk and, as a result, are more careful about decisions that could elevate firm risk. Thus, we find evidence of higher financial reporting quality. Combined, our evidence is consistent with the non-monotonic relationship of CEO risk-taking behavior presented in Bernile et al. (2017a).

Our study makes a number of contributions. Our results complement prior studies that examine how managerial styles are affected by a CEO's marital status (Roussanov and Savor 2013), political affiliation (Hutton, Jiang, and Kumar 2014), and military experience (Malmendier et al. 2011). Although CEOs' early-life experiences have been studied in financial, psychological, and medical settings (e.g., Bernile et al. 2017a), their role in accounting is largely unexplored. CEOs' early-life exposure to crime environments has not been previously investigated in any setting.

Early-life exposure to natural disasters and/or crime environments is not within a CEO's control. Differing from other research focusing on CEOs' life experiences that are endogenous (i.e., flying a plane), we focus on an exogenous source of variation in an individual's life. For example, Cain and McKeon (2016) show that possessing a private pilot's license is associated with a CEO's higher risk-taking behavior. Although it is important to understand the effect of such endogenous actions, it is also critical to ascertain the impact of exogenous attributes on corporate risk-taking in general, and on accounting specifically.

Finally, we contribute to the prior literature on financial reporting. Quality in accounting is associated with a variety of factors, such as trust, CEO networking, and managerial compensation (e.g., Garrett et al. 2014). However, no prior studies examines the influence of CEOs' early-life experiences on financial reporting. Our findings suggest that a CEO's early-life

exposure to disaster and/or violent crimes is correlated with financial reporting quality, which could be useful information for stakeholders, such as boards and audit committees.

We organize the remainder of our paper as follows. The next section reviews the prior literature, which is followed by the development of our hypotheses. The variable construction and empirical specifications are presented in the following section. Discussion of the sample and our results are reported in the next two sections. The final section offers concluding comments on our study.

REVIEW OF PRIOR LITERATURE

Prior research shows that a CEO's managerial style explains a large part of his or her corporate policy decisions and that at least part of the heterogeneity in CEO managerial styles comes from variation in individual life and career experiences. In the following paragraphs, we review managerial style literature that considers variations in professional experiences, early-life experiences, managerial background, and early-life environments.

Psychology literature examining the importance of experience in decision-making suggests that experiences may lead individuals to behave differently from each other (Nisbett and Ross 1980). Dittmar and Duchin (2016) investigate how managers' professional experiences affect corporate policy. They find that a CEO experiencing distress at another firm behaves more conservatively, has less debt, saves more cash, and spends less on capital expenditures. Malmendier and Nagel (2011) investigate whether an individual's experiences with the Great Depression affect financial risk-taking behavior. They find that these individuals prefer lower financial risk and are less likely to participate in the stock market. If they do, these individuals invest a lower fraction of their liquid assets in stocks and are more pessimistic about future stock returns. Bernile, Bhagwat, Rau, Kecskes, and Nguyen (2017b) find that the behavior of

professional investors is also affected by experiencing a natural disaster. Specifically, the researchers show that the portfolio return volatility for these investors is lower in the years immediately following the experience of a severe natural disaster.

Current experiences are also found to affect managerial behaviors. Antoniou, Kumar, and Maligkris (2017) study whether managers are affected by close proximity to terrorist attacks and mass shootings. They find that these managers are more pessimistic, reduce R&D and leverage, and increase cash holdings when terrorist attacks and mass shootings occur. Bourveau and Law (2016) find similar evidence for financial analysts working in New Orleans and affected by Hurricane Katrina. In the eighteen months following Hurricane Katrina, these analysts provided more pessimistic recommendations and forecasts compared to analysts outside of Louisiana.

Prior studies suggest that organizational outcomes are also partially predicted by managerial background characteristics. For example, King, Srivastav, and Williams (2016) find that CEOs with higher levels of education better manage the challenges related to banking firms and achieve more successful performance outcomes. Cain and Mckeon (2016) show that CEO personal risk-taking is associated with corporate policies. They find that CEOs who possess private pilot licenses are associated with firms that have higher equity return volatility. Similarly, Sunder, Snuder, and Zhang (2017) provide evidence of increased innovation for companies whose CEOs have a hobby of flying airplanes. They attribute their findings to sensation-seeking, which is partially based on risk-taking.

Elnahas and Kim (2017) find that CEO political ideology affects the firm's investment decisions. Specifically, Republican CEOs are less likely to engage in merger and acquisition activities that involve high information asymmetry. If they do undertake acquisitions, they tend to use cash to acquire targets, and the target is more likely to be public firms and from the same

industry. Francis, Hasan, Sun, and Wu (2016) show that politically partisan CEOs are associated with a higher level of corporate tax sheltering than firms led by nonpartisan CEOs.

Combined, these studies relate managerial attributes, cognitive ability, level of educational attainment, and personal psychology to decision-making. In addition, other research studies the effect of CEOs' early-life experiences on corporate policies. Benmelech and Frydman (2015) show that CEOs with military service tend to have more conservative corporate policies and exhibit more ethical behavior. They pursue lower corporate investment, are less likely to be involved in corporate fraudulent activity, and perform better during industry downturns. However, Malmendier et al. (2011) find that CEOs with military experience are more aggressive in terms of corporate policies.

More pertinent to our study is the prior literature that considers the long-term effects of early-life exposure to certain environments, such as fatal natural disasters and/or violent crime. Malmendier et al. (2011) show that CEOs who grew up during the Great Depression avoid financing through debt, preferring internal financing. Consistent with these findings, Zhang (2017) finds risk averse behavior among CEOs that experienced the China's Great Famine during childhood. As the intensity of the famine experiences increases, these CEOs exhibit a tendency to hold more cash, use less debt, and perform fewer acquisitions. Similarly, Feng and Johansson (2018) indicate firms with managers who have experienced China's Great Famine show higher performance during economic slowdowns. Additionally, when corporate policies are more conservative, there is a lower likelihood of unethical behavior.

Bernile et al. (2017a) document that there is a non-monotonic relation between the intensity of CEO early-life exposure to fatal disasters and corporate risk-taking. They find that a firm behaves more aggressively if the CEO experienced fatal disasters without extremely

negative consequences, whereas a firm behaves more conservatively when led by a CEO who has witnessed the extreme downside of disasters. Lai, Zi, and Yang (2020) investigate early-life experiences of CEOs and whether they attach to their birthplace by developing a mutual caretaking relationship. They show that if a CEO who has a workplace near his/her childhood home, the CEO is less likely than a non-local CEO to make myopic decisions. This is consistent with the view that leaders act and justify their actions on the basis of a meaning system provided by their personal life-stories (Shamir and Eilam 2005).

Other studies consider the impact of social norms and culture on corporate behavior. Social psychology literature shows that social norms affect human behavior through expectations about how others will behave in a given situation and how others will judge one's conduct (e.g., Cialdini, Kallgren, and Reno 1991). Rogers, Goldstein, and Fox (2017) show that personal influence, or a person's perceptions of others, weighs heavily in decision-making, and this influence is far more powerful than previously recognized. In addition, Sunder (2005) suggests that social norms affect financial standards and regulations. Consistently, McGuire, Omer, and Sharp (2012) and Dyreng, Mayew, and Williams (2012) investigate the effect of religion as well as social norms on corporate financial reporting. They find that firms headquartered in strongly religious areas are associated with higher financial reporting quality.

Despite the importance of social norms to corporate culture (Guiso, Sapienza, and Zingales 2004), empirical research on this topic has been limited in the accounting literature due to difficulty of properly capturing social norms. Prior studies provide evidence that social norms influence managers' propensity to seek private rents, thus affecting reporting behavior. Hope (2003) and Han, Kang, Salter, and Yoo (2010) document that national-level cultural variables,

such as uncertainty avoidance and individualism, account for the cross-section of managerial discretion over financial reporting and disclosure practices.

Liu (2016) document that firms in highly corrupt environments are more likely to engage in misconduct, such as earnings management, accounting fraud, option backdating, and opportunistic insider trading. Similarly, Parsons, Sulaeman, and Titman (2018) find a positive link between city-level financial misconduct and misbehavior of residing firms. Cho, Choi, Lee, and Yang (2017) examine borough-level crime rates in London and find that firms with headquarters in a borough with higher crime rates are associated with greater levels of earnings management and tax avoidance.[2]

Overall, prior research shows that managerial traits and social norms explain a large part of the variation in firm capital structure, investment, stock volatility, and risk-taking. Managerial decision-making develops throughout one's individual life and career experiences. Childhood, personality, background, and characteristics influence a CEO's psychological attributes and development. Exposure to a particular macroeconomic, personal, or career-specific event has a unidirectional effect on CEO risk-taking and consequently, on corporate policies. We extend this research to consider whether exposures to fatal natural disasters and/or violent crimes in the early-life of a CEO are associated with financial reporting quality.

[2] Crime rates are positively associated with local unemployment rates and negatively associated with education and neighborhood earnings (Gould, Weinberg, and Mustard 2002; Narayan and Smyth 2007). In addition, Hipp (2007) suggests that class, specifically the distribution of economic resources within neighborhoods, affects crime rates. Therefore, crime rates are also important indicators of social norms and culture.

HYPOTHESIS DEVELOPMENT

Prior research indicates that CEOs who experience early-life natural disasters or grew up in areas with higher levels of violent crime are more risk averse. This risk averse behavior results in more conservative corporate behavior. It is a natural extension that the corporation's financial reporting quality is impacted. We therefore build upon prior earnings management literature, which underscores the importance of the "tone at the top" (e.g., Cohen, Krishnamoorthy, and Wright 2002; Judd, Olsen, and Stekelberg 2017).

According to the upper echelon theory, executive background and other characteristics affect the tone at the top, which in turn influences a firm's organizational outcomes (Hambrick 2007). Furthermore, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) emphasizes the importance of the management team on the effectiveness of a firm's control environment, which indirectly affects the reliability of financial reporting (COSO 2013). Therefore, a CEO plays a significant role in establishing a firm's culture and environment, thus influencing the process of financial reporting.

According to behavior consistency theory, an individual's personal traits, attitudes, and preferences translate consistently across various fields and situations (Hutton et al. 2014). As such, CEO risk-taking behavior translates coherently from corporate policies to the financial reporting process. For example, Cronqvist, Makhija, and Yonker (2012) find a positive association between CEO personal leverage and corporate leverage, suggesting that when faced with similar economic choices in different domains, a CEO makes consistent decisions. In addition, prior research shows that CEO personal risk-taking behavior is associated with corporate risk-taking (Graham, Harvey, and Puri 2013; Cain and McKeon 2016). Frank, Rego, and Zhao (2018) find that firms with more risk-taking practices are associated with aggressive

financial and tax reporting purposes. For example, Enron encouraged its managers to be more risk prone, which resulted in earnings manipulation and information concealment (Frank et al. 2018). We build on this literature by examining how two types of CEO early-life experiences, which affect risk-taking behavior, are associated with financial reporting quality.

First, we consider how a CEO's early-life exposure to fatal natural disasters is associated with financial reporting quality. Early-life exposure to natural disasters affects a CEO's risk-taking behavior and influences the tone at the top, and therefore introducing uncertainty about the firm's future operations and financial policies (Bernile et al. 2017a). However, the direction is unclear.

On the one hand, childhood exposure to fatal natural disasters may increase a CEO's awareness of the risk effect. As a result, a CEO may become more careful about decisions that could elevate firm risk. More conservative CEO behavior is expected to be associated with higher financial reporting quality. On the other hand, exposure to fatalities from natural disasters may enhance a CEO's confidence in their ability to deal with risky situations. Lower financial reporting quality is considered a risky situation (DuCharme et al. 2004). As a result, a CEO's increased risk-taking is expected to be realized through lower financial reporting quality.

Bernile et al. (2017a) document that both situations exist by showing there is a non-monotonic relation between the intensity of CEO early-life exposure to natural disasters and corporate risk-taking. Using the number of fatalities to measure the intensity of the natural disaster, the researchers classify CEOs into one of three categories: 1) no fatality group (if no deaths are attributed to the natural disaster), 2) extreme fatality group (the top decile of CEO observations in terms of the number of fatalities associated with natural disasters), and 3) the medium fatality group (for all others). Bernile et al. (2017a) find that CEOs act more

aggressively if the natural fatal disaster involves fewer fatalities. However, it is also true that CEOs behave more conservatively when CEOs witness natural disasters with extreme number of fatalities (top decile). Therefore, early-life disasters affect the likelihood of risk-taking in non-monotonic relationships, consistent with the dosage hypothesis in psychiatry literature (Bernile et al. 2017a).[3] This behavior is consistent with the view that managers act and justify their actions on the basis of a system provided by their personal life-stories (Shamir and Eilam 2005).

We expect a similar non-monotonic relationship between CEO's exposure to early-life disasters and financial reporting quality, consistent with the dosage hypothesis that the strength of the treatment matters (Bernile, et al. 2017a). If a CEO experiences natural disasters involving a moderate level of fatalities, he or she is more like to be a risk-taker. One outcome of this behavior will be lower financial reporting quality. As the level of fatalities experienced increases to extreme levels, a CEO is likelier to act more conservatively. As such, we expect higher financial reporting quality. Our natural disaster financial reporting hypotheses are expressed as follows.

H1a: Exposure to early-life disasters involving moderate levels of fatalities is negatively associated with financial reporting quality compared with early-life disasters that do not involve fatalities.

H1b: Exposure to early-life disasters involving extreme levels of fatalities is positively associated with financial reporting quality compared with early-life disasters that do not involve fatalities.

[3] Bernile et al. (2017a) find their findings are robust to alternate measures of early-life disaster experience, including economic damage, continuous measure of fatalities, and the use of the top 5% and 15% as measures for "extreme".

Second, we consider whether a CEO's early-life exposure to violent crime is associated with financial reporting quality. Social learning and social control theories provide a basis for understanding the influence of growing up in areas with higher violent crime rates. Based on social learning theory, individuals learn from their social environment. This is both direct and indirect, and cognition is a major determinant of behavior (Petraitis, Flay, and Miller 1995). According to social control theory, delinquents who fail to maintain strong social bonds are more likely to engage in delinquent behavior (Hirschi 1969).

In the context of our study, CEOs born in higher crime environments likely observe the behaviors and consequences of the criminal activities. As a result, they learn from others' behaviors. Similar to the arguments on exposure to natural disasters, exposure to crime could result in either risk-taking or risk avoidance. We expect that both situations exist, and there is a non-monotonic relationship between early-life exposure to violent crime and financial reporting quality, consistent with Bernile et al. (2017a). Thus, we predict that when a CEO has moderate (high) early-life exposure to violent crime, he or she is more (less) likely to engage in earnings management, and therefore, is associated with lower (higher) financial reporting quality. Our violent crime financial reporting hypotheses is expressed as follows.

H2a: Exposure to moderate levels of early-life violent crime is negatively associated with financial reporting quality compared with low levels of early-life violent crime.

H2b: Exposure to high levels of early-life violent crime is positively associated with financial reporting quality compared with low levels of early-life violent crime.

RESEARCH DESIGN

Tests of our hypotheses rely on appropriate constructs for exposure to early-life natural disasters and violent crime rates. We first discuss these two key constructs. Then, our measures of financial reporting quality are presented. Finally, the empirical specification for the financial reporting quality model that provides evidence on our hypotheses is discussed.

Measuring Early-Life Exposure to Natural Disasters

We collect CEO names from the ExecuComp database for the period of 1992 to 2016. We obtain CEO biographical data (birthplace and date of birth information for 1,698 CEOs) from Marquis Who's Who. If we are unable to obtain CEO biographical data, we use internet search engines as a last resort. We follow Bernile et al. (2017a) and exclude foreign-born CEOs and those for whom we are not be able to determine the county of birth.

We obtain county-level natural disaster events data from the Spatial Hazard Events and Losses Database in the United States (SHELDUS^{TM}) of the University of South Carolina for the period of 1960 to 2016. This database contains fatalities associated with various natural hazard events, such as earthquakes, volcanic eruptions, tsunamis, hurricanes, tornadoes, severe storms, floods, landslides, and fires.

We match the CEO biographical data with the county-level natural disaster events data. We follow Bernile et al. (2017a) and measure the disaster-related experiences by summing the number of deaths from natural disasters between 5 and 15 years after the CEO's birth, including both the years 5 and 15.[4] We then create two indicator variables based on the annual decile

[4] CEO data starts in 1992 and disaster data starts in 1960. In addition, we follow Bernile et al. (2017a) and consider natural disasters between 5 and 15 years after the CEO's birth, inclusive. Therefore, CEOs in our sample are limited to being born after 1955.

ranking of the number of deaths. HIGH_DISASTER is an indicator variable equal to one for CEOs who are in the top decile for the number of disaster-related fatalities per capita experienced in their birth county, and zero otherwise.[5] MOD_DISASTER is an indicator variable equal to one for CEOs who experienced some disaster-related fatalities in their birth county but are not in the high fatality experience group, and zero otherwise.

Measuring Early-Life Exposure to Violent Crime

Violent crime rates data is obtained from the Uniform Crime Reports (UCR), which are released by FBI. This database provides annual estimates of various crimes, including aggravated assault, forcible rape, murder, and robbery. We generate county-level crime rates per 100,000 residents for violent crimes between the years 1960 to 2016. We then match the CEO biographical data with the county-level crime data.

Consistent with our natural disaster metrics, we measure the early-life violent crime experiences by summing the number of crimes between 5 and 15 years after the CEO's birth, inclusive. We create two indicator variables based on the annual decile ranking of the number of crimes. HIGH_CRIME is an indicator variable equal to one for CEOs who are in the top decile for violent crime rates in their birth county, and zero otherwise. MOD_CRIME is an indicator variable equal to one for CEOs who are above the median for the crime rates in their birth county but not in the high crime experience group, and zero otherwise.

Financial Reporting Quality

We employ a number of financial reporting quality metrics. We use the modified Jones model (Dechow, Ge, and Schrand 1995; Jones 1991) to compute abnormal accruals for our first financial reporting quality metric. Abnormal accruals provide a measure of the managerial

[5] We consider an alternative cut-off to determine extreme fatalities in later sensitivity tests.

discretion in accounting measurement decisions, where greater abnormal accruals are consistent with lower financial reporting quality.

We follow the approach in Dechow et al. (1995). We first estimate Equation (1) annually for each Fama-French 48 industry classification. We then use the estimated coefficients from Equation (1) to compute discretionary accruals (DA) using Equation (2).[6]

$$ACCRUALS = \alpha_1 \, 1/AT_{t-1} + \alpha_2 \, \Delta SALES + \alpha_3 \, PPE + \varepsilon \quad (1)$$

$$DA = ACCRUALS - \hat{\alpha}_1 \, 1/AT_{t-1} - \hat{\alpha}_2 \, (\Delta SALES - \Delta AR) - \hat{\alpha}_3 \, PPE \quad (2)$$

where variables are defined in Appendix.[7] Higher measures of DA represent lower financial reporting quality.

Dechow and Dichev (2002) and McNichols (2002) provide a measure of financial reporting quality that focuses on how well accruals map into cash flow. The change in short-term working accruals is viewed as a function of prior, current, and next year cash flows, sales growth, and fixed assets. We estimate Equation (3) annually for each Fama-French 48 industry classification.

$$\Delta WC = \gamma_0 + \gamma_1 \, CFO_{t-1} + \gamma_2 \, CFO + \gamma_3 \, CFO_{t+1} + \gamma_4 \, \Delta SALES + \gamma_5 \, PPE + \varepsilon \quad (3)$$

where variables are defined in Appendix. The residuals from estimating Equation (3) represent accrual estimation errors. The standard deviation of these residuals over the previous four years is our measure of accrual quality (DD), where higher values are associated with lower accruals quality.

[6] We omit firm and year subscripts in all equations for brevity, unless their inclusion is necessary to understand the model.

[7] In sensitivity tests, we use the absolute value of the discretionary accruals to focus on the magnitude (but not direction) of abnormal accruals.

Our final measure is earnings restatements. A restatement provides direct evidence of problematic financial reporting quality. After it is determined that a misstatement occurred in the past, firms are required to restate prior year's earnings. The restatement indicates poor financial reporting quality in the past. We construct an indicator variable (RESTATEMENT) equal to one if the earnings are subsequently restated, and zero otherwise.

Empirical Specification for Financial Reporting Quality Model

Our hypotheses consider the association of a CEO's early-life exposure to fatalities associated with natural disasters and/or violent crimes on financial reporting quality. We draw on prior research for the explanatory variables included in our model. Our financial reporting quality model is as follows.

$$\begin{aligned} FRQ = {} & \beta_0 + \beta_1 \text{ MOD\_DISASTER} + \beta_2 \text{ HIGH\_DISASTER} + \beta_3 \text{ MOD\_CRIME} + \\ & \beta_4 \text{ HIGH\_CRIME} + \beta_5 \text{ SIZE} + \beta_6 \text{ ROA} + \beta_7 \text{ MB} + \beta_8 \text{ SGROWTH} + \\ & \beta_9 \text{ LEV} + \beta_{10} \text{ STDCFO} + \beta_{11} \text{ STDSALES} + \beta_{12} \text{ RETURN} + \\ & \beta_{13} \text{ BIG4} + \beta_{14} \text{ INDBOARD} + \beta_{15} \text{ ANALYSTS} + \beta_{16} \text{ CEOTENURE} + \\ & \beta_{17} \text{ CEOOWNER} + \text{Year FE} + \text{Industry FE} + \text{CEO Birth Year FE} + \\ & \text{CEO Birth State FE} + \varepsilon \end{aligned} \quad (4)$$

where variables are defined in Appendix. FRQ takes the value of one of our three financial reporting quality constructs—DA, DD, or RESTATEMENTS. Higher values of each of our financial reporting quality constructs indicate lower financial reporting quality. Fixed effects are based on Bernile et al. (2017a).

Our test variables for H1 are the two indicator variables, MOD_DISASTER and HIGH_DISASTER. Consistent with H1a, we expect that early-life exposure to moderate levels of fatalities from natural disasters are positively associated with financial reporting quality

constructs ($\beta_1 > 0$).[8] H1b is supported by a negative association for early-life exposure to high levels of fatalities from natural disasters with each financial reporting quality construct ($\beta_2 < 0$). MOD_CRIME and HIGH_CRIME are the test variables for H2. Consistent with H2a (H2b), we expect a positive (negative) association for early-life exposure to moderate (high) levels of violent crime with each financial reporting quality constructs ($\beta_3 > 0$ and $\beta_4 < 0$).

Following Dechow et al. (2010), we include proxies for firm size, performance, debt, growth, and investment in explaining financial reporting quality. We include the natural log of total assets to control firm size; however, we do not make a prediction on its direction. Return on assets and firm leverage are included to control for firm performance and debt holdings (Dechow et al. 1995; Francis, Huang, Rajgopal, and Zang 2008). Financial reporting quality is expected to decrease as leverage increases. We also include market-to-book ratio, sales growth, cash flow volatility, and sales volatility as controls for firm growth and investment. We expect that financial reporting quality decreases with sales growth, cash flow volatility, and sales volatility.

We use annual stock returns to control incentives provided by capital market. We expect higher financial reporting quality for firms with less capital market pressure, that is, higher returns. DeAngelo (1981) as well as Healy and Palepu (2001) suggest that external monitoring promotes higher financial reporting quality. We therefore use auditor size and analyst coverage as two external monitoring measures. Both monitors help detect or deter financial misreporting. We expect a positive relationship between financial reporting quality and both Big 4 auditors, and number of analysts following the firm.[9]

[8] Remember, higher values of each of our constructs indicate lower financial reporting quality.

[9] Leverage, discussed above, also captures the role of monitoring by debtholders.

SAMPLE AND DESCRIPTIVE STATISTICS

Sample Determination

We acquire CEO information from ExecuComp (2000 to 2016) and then hand collect CEO biographical data. We use CEO birth places and birth years to match with disaster data from the Spatial Hazard Events and Losses Database in the United Stated (SHELDUS) and crime data from the Uniform Crime Reports (UCR) released annually by the Federal Bureau of Investigation (FBI). The initial sample of CEO disaster data with the CEO disaster/crime data consists of 7,305 firm-year observations for the period of 2000 to 2016.[10] We then eliminate 1,310 firm-years that are missing financial statement and return data. We also remove 423 firm-years that are missing restatement data from Audit Analytics. Our final sample consists of 5,572 firm year observations.

< Insert Table 1 around here >

Table 2 presents the sample distribution by year (Panel A) and industry (Panel B). Annual observations are relatively constant across time, with a slight decrease, consistent with the overall decreasing Compustat population. When the annual distribution is separately reported for moderate disaster, high disaster, moderate crime, and high crime categories, the annual observations are generally constant across time, except for some slight variations. For example, the observations are relatively higher for high disaster from 2006 to 2009 and for high crime between 2001 and 2002. Panel B suggests that most observations come from the manufacturing industry, followed by transportation, service, and retail trade industries. The individual trends are similar to the total observations when considering the industry distribution for high and moderate disaster/crime categories.

[10] Our sample is limited by our ability to find the CEO's birthplace.

< Insert Table 2 around here >

Descriptive Statistics

Table 3 provides summary statistics for the variables used in our empirical analyses.[11] Approximately 33.2% of observations have CEOs who were exposed to early-life disasters involving moderate levels of fatalities, while 11.6% were exposed to early-life disasters involving extreme levels of fatalities. For early-life exposure to violent crimes, 39.1% and 10.8% of CEOs were exposed to moderate high levels of crimes, respectively. The mean value of DA is 0.0279 and the average DD is 0.0819. Approximately 12% of our sample firms have a restatement.

The mean (median) log of total assets is 8.6165 (8.5497), suggesting that our sample firms are generally large, which supports the notion that ExecuComp covers larger firms. The sample firms report an average debt leverage ratio of 20.89 of their total assets. Sixteen percent of our sample firms have a loss and the ROA average is 4.27%. The mean market-to-book ratio is 1.94, implying that our sample firms trade at a premium above book value. The mean of Big4 is 95.5%, suggesting that Big 4 firms audit almost all of our sample firms.

< Insert Table 3 around here >

Table 4 presents the Pearson correlation matrices for the Equation (4) variables. The pairwise correlations between our three financial reporting quality measures and early life exposure are generally consistent with hypotheses. The correlations between DA and both HIGH_DISASTER and HIGH_CRIME are negative and significant (-0.089 and -0.088, both p-value < 0.05). Similarly, DD and HIGH_DISASTER, as well as DD and HIGH_CRIME, are positively correlated (Pearson correlation coefficients = -0.150 and -0.029, both p-values < 0.05).

[11] All continuous variables are winsorized at the 1 and 99th percent level to minimize the effect of outliers.

The correlations for moderate levels show the opposite pattern. Using DA, the correlations with MOD_DISASTER is positive, but not significant, and the correlation with MOD_CRIME is 0.014 (p-value < 0.05). Similarly, DD is positively correlated with both MOD_DISASTER and MOD_CRIME (0.090 and 0.030), both p-values < 0.05). All significant correlations between the other variables are less than 0.5, indicating that multicollinearity should not compromise our inferences.[12]

< Insert Table 4 around here >

ANALYSIS AND RESULTS

Table 5 presents the regression results from estimating Equation (4) for the impact of CEO early-life experiences on abnormal accruals (Dechow et al. 1995). The test variables are varied across the results, where column 1 only includes the natural disaster indicator variables, column 2 only includes the violent crime indicator variables, and column 3 includes all of them. The explanatory power of all three models is approximately 35%.

The significant coefficients on the control variables are consistent across the three columns and prior research (e.g., Garrett et al. 2014; He 2015). Abnormal accruals decrease, and therefore, financial reporting quality increases with firm size, leverage, shareholder returns, Big 4 auditor, board independence, and number of analysts. Return on assets, ratio of market to book value of equity, sales growth, cash flow volatility, sales volatility, and CEO ownership are associated with lower financial reporting quality.

In column 1, MOD_DISASTER has a positive and statistically significant coefficient (0.014, p-value < 0.01), indicating that CEOs who experience moderate early-life disaster are

[12] We also review the VIFs for each explanatory variable. There is no indication of any multicollinearity concerns that would affect our inferences.

associated with lower accruals quality, supporting H1a. HIGH_DISASTER has a negative and statistically significant coefficient (-0.016, p-value < 0.01), indicating that CEOs who experience extreme early-life disaster are associated with greater accruals quality, supporting H1b.

In column 2, the coefficient estimate on MOD_CRIME is positive and significant (0.031, p-value < 0.01). The coefficient estimate on HIGH_CRIME is negative and significant (-0.046, p-value < 0.01). These results support H2a and H2b. At moderate levels of crime environment, CEOs are more likely to be risk-takers, and the outcome of this behavior is lower financial reporting quality. As the levels of crime environment increase to extreme levels, CEOs act more conservatively, consistent with greater accrual quality.

In column 3, we include all four testing variables. Our results are consistent with our predictions and the estimations in columns 1 and 2. Each of our hypotheses are supported when using the abnormal accruals (DA) measure as our dependent variable.

< Insert Table 5 around here >

Table 6 presents regression results from estimating Equation (4), with the dependent variable defined as accruals quality (DD), following Dechow and Dichev (2002). The results, including that of the control variables, are generally consistent with those reported in Table 5. The estimated coefficients in column 1 on MOD_DISASTER (HIGH_DISASTER) are positive (negative) and significantly associated with financial reporting quality. Furthermore, the estimated coefficients on MOD_CRIME and HIGH_CRIME in column 2 are 0.012 (p-value < 0.01) and -0.025 (p-value < 0.01), respectively. Similar results are obtained when all four variables in included in column 3.

Our results are consistent that exposures to moderate levels of death associated with natural disasters and crime in a CEO's early-life are associated with lower financial reporting

quality. However, when a CEO's early-life exposures increase to extreme levels, financial reporting quality is greater. Each of our hypotheses are supported when using the accruals quality (DD) measure as our dependent variable.

< Insert Table 6 around here >

Table 7 presents the regression results for the impact of CEO early-life experience on the incidence of misstating earnings. The explanatory power is approximately 11% for each estimation. The estimated coefficients on the control variables are generally consistent with prior studies (e.g., Garrett et al. 2014). We find that the likelihood of restatements increases (decreases) in return on assets (size, market to book ratio, shareholder returns, and board independence).

The coefficient on HIGH_DISASTER in column 1 is significantly negative (-0.207, p-value < 0.05), and the coefficient on HIGH_CRIME in column 2 is negative and statistically significant (-0.156, p-value < 0.01). Similar results for HIGH_DISASTER and HIGH_CRIME are obtained in column 3, where both disaster and crime variables are included. These results indicate that firms with a CEO exposed to early-life events involving extreme levels of fatalities or violent crimes are less likely to be associated with financial statement restatements, consistent with higher financial reporting quality. However, the estimated coefficients for both moderate levels are not statistically significant in any of the three estimations. Only H1b and H2b are supported with respect to restatements.

< Insert Table 7 around here >

We perform a number of sensitivity tests to evaluate the robustness of our results. First, we consider alternative financial reporting quality metrics, including the absolute value of the discretionary accruals (DA) and an indicator variable representing the presence of material

internal control weaknesses. The untabulated results using |DA| are similar to those reported in Table 5, and material weaknesses are similar to those reported in Table 7 for restatements.

Second, prior research indicates that older CEOs are associated with higher financial reporting quality (Huang, Rose-Green, and Lee 2012). Other research suggests that CEO gender (males are found to be riskier than females) and managerial ability are associated with financial reporting quality (e.g., Demerjian, Lev, Lewis, and McVay 2013; Zhang 2019). We therefore include these potential correlated variables, and in each case, our results (untabulated) continue to hold.

Third, an alternative estimation technique uses clustered standard errors rather than OLS standard errors. Clustered standard errors consider the potential correlation across error terms. We therefore re-estimate our model using clustered standard errors based on industry and year and based on firm and year. We find similar support for our hypotheses.

Fourth, we use the top decile to measure both extreme fatalities from natural disasters and extreme number of violent crimes during the CEO's early life. As an alternative, we expand our definition of extreme to be based on the top quintile. Our results (untabulated) are similar to those reported, with the exception that the restatement results only hold for the extreme disasters.

Fifth, it might be the case that an uncontrolled factor affects both the choice to employ a CEO with these early life experience and financial reporting quality, which results in correlated omitted variable bias. To minimize this concern, we examine whether a change in CEO early life experiences is associated with a change in financial reporting quality. There are challenges related to such analysis because firms may prefer risk averse CEOs, and even when an executive is replaced, there may not be a change in risk preference at the firm level. Nevertheless, we perform this analysis, and our untabulated results show that firms that switch to a CEO who has

experienced a moderate level of disaster experience is associated with a higher likelihood of financial restatements. We also show that firms that switch to a CEO who has experienced a moderate violent crime environment is associated with an increase in discretionary accruals and a higher likelihood of financial restatement. In addition, firms that switch to a CEO who has experienced a high crime environment is associated with a decrease in discretionary accruals and a lower likelihood of financial restatement. The results (untabulated) are consistent with our expectations.

Finally, Audia and Greve (2006) demonstrate that a firm's resource endowment, proxied by firm size, affects managers' risk tolerance. Small firm managers are less likely to take risks as they perceive low performance to be a step closer to failure, whereas large firm managers are subject to greater risk-taking, as their firms are more buffered from the threat of failure. Therefore, we partition our sample by firm size. We find that managers' risk-taking behaviors are more volatile (and our results are more pronounced) when firms are larger (untabulated).

CONCLUDING THOUGHTS

It is important to understand CEO behavior, as it enables investors, regulators, and others to better appreciate the corporate decisions that the CEO makes. One of the many aspects determining CEO behavior is early-life experiences. We consider exposure to early-life experiences and the influence these experiences may have on two important financial reporting outcomes. Specifically, we investigate early-life exposure to fatal natural disasters and violent crimes and the effect on financial reporting quality.

We provide evidence of a non-monotonic association between early-life exposures and both financial reporting outcomes. When the CEO has early-life exposure to moderate levels of deaths associated with natural disasters and violent crimes, financial reporting quality is lower,

consistent with greater CEO confidence in dealing with risky situations. However, as the exposure increases to extreme levels, the influence changes. The CEO is more aware of the risk effect, and as a result, CEOs are more careful about decisions that could elevate firm risk; thus, we find evidence of higher financial reporting quality. Combined, our evidence is consistent with the non-monotonic relationship of CEO risk-taking behavior in Bernile et al. (2017a).

The measurement of early life exposure is based on the period of 5 to 15 years after birth in the state of birth. We follow prior research for our definition, but our findings are limited. The CEO may be affected by disasters and high crime rates outside of this time period. Further, the CEO may not remain in the same area where the CEO was born. As such, our study may misclassify CEOs.

Our study contributes to the literature on CEO early-life exposure by providing evidence on unexplored implications for financial reporting quality. This research is important because exposure to early-life natural disasters is not something a CEO controls, but does influence the CEO actions. Our findings will therefore be useful for stakeholders, such as investors, boards, and audit committees.

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APPENDIX – VARIABLE DEFINITIONS

DA	Discretionary accruals using the modified Jones Model (Jones 1991; Dechow et al. 1995)
DD	Accrual quality using the model developed by Dechow and Dichev (2002) and modified by McNichols (2002)
ACCRUALS	Net income minus cash flow from operations
AT	Total assets
ΔSALES	Year-to-year change in sales
PPE	Total property, plant and equipment
ΔAR	Year-to-year change in accounts receivable
ΔWC	Year-to-year change in working capital
CFO	Cash flow from operations
RESTATEMENT	An indicator variable equal to one if the firm subsequently announced a restatement related to the year, and zero otherwise
HIGH_DISASTER	An indicator variable equal to one for CEOs who are in the top decile for the number of disaster-related fatalities per capita experienced in their birth county, and zero otherwise. We follow Bernile et al. (2107) and measure the disaster-related experiences between 5 and 15 years after the CEO's birth, inclusive
MOD_DISASTER	An indicator variable equal to one for CEOs who experienced some disaster-related fatalities in their birth county but are not in the high fatality experience group, and zero otherwise. We follow Bernile et al. (2107) and measure the disaster-related experiences between 5 and 15 years after the CEO's birth, inclusive
HIGH_CRIME	An indicator variable equal to one for CEOs who are in the top decile for violent crime rates in their birth county, and zero otherwise. We measure the crime-related experiences between 5 and 15 years after the CEO's birth, inclusive, consistent with our disaster measures
MOD_CRIME	An indicator variable equal to one for CEOs who above the median for violent crime rates in their birth county but not in the high crime experience group, and zero otherwise. We measure the crime-related experiences between 5 and 15 years after the CEO's birth, inclusive, consistent with our disaster measures

SIZE	The natural logarithm of market value of a firm's common shareholders' equity at the beginning of the fiscal year
ROA	Income before extraordinary items divided by total assets for a fiscal year
MB	Market value of common shareholders' equity divided by book value of common shareholders' equity at the beginning of the fiscal year
SGROWTH	Sales in the current fiscal year divided by sales in the previous fiscal year
LEV	The ratio of long-term debt to total assets at the beginning of the fiscal year
STDCFO	The standard deviation of cash flows scaled by total assets over the previous five years
STDSALES	The standard deviation of sales scaled by total assets over the previous five years
RETURN	Annual stock return
BIG4	An indicator variable equal to one if a firm is audited by Big-4 auditors for a fiscal year and zero otherwise
INDBOARD	The number of independent directors divided by the total number of the board of directors
ANALYSTS	The natural logarithm of the number of analysts following a firm in a fiscal year
CEOTENURE	Nature log of the number of years that a CEO has been at the CEO position
CEOOWNER	The sum of CEOs' stock and stock option ownership as a percentage of total shares outstanding as of the end of the fiscal year

Table 1 – Sample Determination

	Number of Firm-year Observations
Cross-section of CEO disaster/crime and ExecuComp databases from 2000 to 2016	7,305
Less firm-year observations:	
Missing financial statement and return data	(1,310)
Missing audit data from Audit Analytics	(423)
Final Sample	**5,572**

Table 2 – Sample by Year and Industry

Panel A – Frequency Distribution by Year

Year	Total	Moderate Disaster	High Disaster	Moderate Crime	High Crime
2000	314	111	25	116	23
2001	366	140	31	106	49
2002	410	131	42	135	55
2003	395	130	52	146	27
2004	371	129	37	134	38
2005	386	125	35	154	38
2006	391	123	46	162	37
2007	371	130	43	136	32
2008	334	110	45	133	45
2009	363	103	47	150	33
2010	342	109	40	144	32
2011	326	108	38	128	37
2012	280	90	37	123	28
2013	294	102	32	122	36
2014	245	78	37	114	31
2015	207	72	32	95	30
2016	177	58	25	83	31
Total	5,572	1,849	645	2,181	602

Panel B: Frequency Distribution by Industry

Industry	Total	Percent	Moderate Disaster	High Disaster	Moderate Crime	High Crime
Mining	199	3.57	56	77	42	15
Construction	23	0.41	20	0	16	2
Manufacturing	2,568	46.09	760	222	1159	266
Transportation	937	16.82	326	141	352	28
Wholesale Trade	96	1.72	35	6	22	14
Retail Trade	660	11.84	185	106	161	84
Finance	293	5.26	97	28	120	68
Services	780	14.00	370	65	309	125
Public Administration	16	0.29	0	0	0	0
Total	5,572	100%	1,849	645	2,181	602

Table 3 – Descriptive Statistics

Variable[1] (N=5,572)	Mean	Std. Dev.	25th Percentile	Median	75th Percentile
DA	0.0279	0.1314	-0.0238	0.0122	0.0669
DD	0.0819	0.1089	0.0338	0.0590	0.0967
RESTATEMENT	0.1158	0.3200	0.0000	0.0000	0.0000
MOD_DISASTER	0.3318	0.4709	0.0000	0.0000	1.0000
HIGH_DISASTER	0.1157	0.3529	0.0000	0.0000	0.0000
MOD_CRIME	0.3914	0.4881	0.0000	0.0000	1.0000
HIGH_CRIME	0.1080	0.3105	0.0000	0.0000	0.0000
Fatalities per capita	0.1063	0.4085	0.0000	0.0000	0.1000
Crime rate per 100,000 people	3457.6100	1491.6000	2219.6100	3378.9000	4424.5900
SIZE	8.6165	1.9458	7.1447	8.5497	10.1263
ROA	0.0427	0.0917	0.0192	0.0458	0.0873
MB	1.9405	1.2518	1.1992	1.5137	2.2085
SGROWTH	0.0937	0.4650	-0.0148	0.0557	0.1398
LEV	0.2089	0.1643	0.0677	0.1931	0.3152
STDCFO	0.0329	0.0405	0.0079	0.0205	0.0432
STDSALES	0.1442	0.6433	0.0357	0.0766	0.1546
RETURN	0.0166	0.3192	-0.0478	0.0422	0.1179
BIG4	0.9550	0.2074	1.0000	1.0000	1.0000
INDBOARD	5.8306	3.9798	2.0000	7.0000	9.0000
ANALYSTS	2.0149	1.1363	1.3863	2.3026	2.8904
CEOTENURE	2.3050	0.6390	1.9459	2.3979	2.7726
CEOOWNER	2.3613	4.4351	0.2530	0.9155	2.4956

[1] See Appendix for variable definitions.

Table – Person Correlations

Panel A – Variables 1 to 10

Variables[1]	2	3	4	5	6	7	8	9	10
1.DA	-0.003	-0.033	0.015	**-0.089**	**0.014**	**-0.088**	**-0.049**	**0.153**	-0.011
2.DD	1.000	-0.002	**0.090**	**-0.150**	**0.030**	**-0.029**	**-0.334**	**-0.023**	**0.131**
3.RESTATEMENT		1.000	-0.006	**-0.022**	-0.032	**-0.037**	**-0.066**	**-0.040**	**-0.073**
4.MOD_DISASTER			1.000	**-0.291**	**0.053**	**-0.048**	**-0.025**	**0.047**	**0.081**
5.HIGH_DISASTER				1.000	**-0.053**	**0.027**	**0.087**	0.005	0.000
6.MOD_CRIME					1.000	**-0.279**	**0.071**	**0.050**	**0.075**
7.HIGH_CRIME						1.000	**-0.039**	**-0.090**	-0.006
8.SIZE							1.000	0.012	**-0.111**
9.ROA								1.000	**0.642**
10. MB									1.000

Panel B – Variables 11 to 20

Variables[1]	11	12	13	14	15	16	17	18	19	20
1.DA	**0.035**	**-0.055**	**0.098**	**0.084**	-0.003	-0.018	**-0.097**	-0.008	**0.045**	**0.099**
2.DD	**0.053**	**-0.179**	**0.280**	**0.242**	0.021	**-0.125**	**-0.274**	**-0.165**	**-0.038**	**0.198**
3.RESTATEMENT	-0.002	-0.002	**0.028**	**0.036**	**-0.076**	0.001	-0.016	**-0.056**	**-0.036**	**0.049**
4.MOD_DISASTER	-0.015	**-0.054**	0.012	0.021	0.014	0.012	**-0.064**	0.009	**0.123**	**0.054**
5.HIGH_DISASTER	**0.052**	0.012	-0.014	0.024	0.013	0.023	**0.050**	**0.103**	**-0.083**	**-0.116**
6.MOD_CRIME	0.006	**-0.065**	**0.042**	**-0.060**	0.016	0.023	**0.055**	**0.078**	**0.109**	-0.018
7.HIGH_CRIME	-0.006	**-0.037**	**0.074**	**0.059**	-0.005	-0.016	**-0.087**	**-0.026**	**-0.067**	**0.063**
8.SIZE	-0.008	**0.209**	**-0.285**	**-0.336**	-0.005	**0.274**	**0.479**	**0.504**	**0.196**	**-0.519**
9.ROA	**0.306**	**-0.304**	**0.086**	**0.120**	**0.183**	**0.025**	**0.057**	**0.242**	**0.030**	**-0.052**
10.MB	**0.276**	**-0.336**	**0.262**	**0.236**	**0.304**	**0.026**	**-0.026**	**0.253**	**-0.070**	**0.039**
11.SGROWTH	1.000	**-0.155**	**0.073**	**0.280**	**0.159**	**0.029**	**-0.135**	**0.104**	-0.005	**0.047**
12.LEV		1.000	**-0.345**	**-0.286**	**-0.080**	**0.146**	**0.162**	**-0.050**	**0.061**	**-0.070**
13.STDCFO			1.000	**0.262**	**0.058**	**-0.093**	**-0.235**	**-0.073**	**-0.068**	**0.167**
14.STDSALES				1.000	**0.044**	**-0.051**	**-0.266**	**-0.136**	**-0.141**	**0.192**
15.RETURN					1.000	0.011	**-0.025**	**0.049**	0.008	**0.026**
16.BIG4						1.000	**0.170**	**0.189**	-0.015	**-0.128**
17.INDBOARD							1.000	**0.503**	**0.072**	**-0.285**
18.ANALYSTS								1.000	**0.036**	**-0.230**
19.CEOTENURE									1.000	**0.047**
20.CEOOWNER										1.000

Note: Pearson correlation coefficients significant at the 0.05 level are bolded.

[1] Variables are defined in Appendix.

Table 5 – The Effect of CEO Early-life Experiences on Abnormal Accruals (DA)

		Column 1		Column 2		Column 3	
Variable[1]	**Pred.**	**Estimated Coefficient**	**t-statistic**	**Estimated Coefficient**	**t-statistic**	**Estimated Coefficient**	**t-statistic**
Intercept	?	0.224***	3.29	0.256***	3.82	0.262***	3.91
MOD_DISASTER	H1a: +	0.014***	3.51			0.013***	3.27
HIGH_DISASTER	H1b: -	-0.016***	-2.83			-0.012***	-2.28
MOD_CRIME	H2a: +			0.031***	7.48	0.030***	7.39
HIGH_CRIME	H2b: -			-0.046***	-7.53	-0.045***	-7.37
SIZE	-	-0.004***	-3.43	-0.005***	-4.16	-0.005***	-3.90
ROA	+	0.598***	30.95	0.572***	29.91	0.573***	30.00
MB	?	0.022***	13.26	0.021***	13.22	0.021***	13.23
SGROWTH	+	0.007**	2.22	0.008***	2.48	0.008**	2.54
LEV	-	-0.024**	-1.99	-0.031***	-2.62	-0.028**	-2.39
STDCFO	+	0.113**	2.55	0.071*	1.63	0.080*	1.82
STDSALES	+	0.011***	4.07	0.008***	3.10	0.008***	3.04
RETURN	-	-0.012***	-2.36	-0.012**	-2.38	-0.012**	-2.50
BIG4	-	-0.031***	-3.58	-0.026***	-3.05	-0.026***	-3.02
INDBOARD	-	-0.003***	-6.28	-0.003***	-5.82	-0.003***	-6.01
ANALYSTS	-	-0.006***	-3.02	-0.006***	-3.45	-0.006***	-3.31
CEOTENURE	?	0.001	0.15	0.001	0.44	0.001	0.06
CEOOWNER	+	0.001***	2.87	0.001***	3.02	0.001***	3.25
Firm, Year, Industry, CEO Birth Year and CEO Birth State FEs		Yes		Yes		Yes	
Adjusted R^2		33.30%		35.30%		35.56%	
N				5,572			

* / ** / *** indicates significant levels at the 0.10 / 0.05 / 0.01 level.

[1] See Appendix for variable definitions.

Table 6 – The Effect of CEO Early-life Experiences on Accruals Quality (DD)

		Column 1		Column 2		Column 3	
Variable[1]	**Pred.**	**Estimated Coefficient**	**t-statistic**	**Estimated Coefficient**	**t-statistic**	**Estimated Coefficient**	**t-statistic**
Intercept	?	0.071	1.51	0.067	1.41	0.071	1.50
MOD_DISASTER	H1a: +	0.024***	7.06			0.023***	6.85
HIGH_DISASTER	H1b: -	-0.014***	-3.04			-0.012***	-2.76
MOD_CRIME	H2a: +			0.012***	3.82	0.010***	3.13
HIGH_CRIME	H2b: -			-0.025***	-5.05	-0.025***	-5.12
SIZE	-	-0.006***	-5.39	-0.006***	-5.58	-0.006***	-5.37
ROA	-	-0.173***	-10.46	-0.187***	-11.15	-0.186***	-11.21
MB	?	0.008***	5.94	0.009***	6.37	0.008***	6.19
SGROWTH	+	0.008***	2.62	0.007**	2.52	0.008***	2.71
LEV	-	-0.033***	-3.19	-0.027***	-2.63	-0.029***	-2.84
STDCFO	+	0.270***	7.01	0.248***	6.44	0.258***	6.73
STDSALES	+	0.010***	4.77	0.011***	5.16	0.011***	5.36
RETURN	-	-0.012***	-2.80	-0.012***	-2.88	-0.012***	-2.87
BIG4	-	-0.008	-1.10	-0.007	-1.04	-0.008	-1.10
INDBOARD	-	-0.003***	-6.51	-0.003***	-7.04	-0.003***	-6.89
ANALYSTS	-	-0.001	-0.66	-0.001	-0.78	-0.001	-0.70
CEOTENURE	?	0.007***	3.07	0.008***	3.57	0.007***	2.95
CEOOWNER	+	0.001**	2.13	0.001	1.53	0.001**	2.15
Firm, Year, Industry, CEO Birth Year and CEO Birth State FEs		Yes		Yes		Yes	
Adjusted R^2		24.21%		23.94%		24.94%	
N		5,572					

* / ** / *** indicates significant levels at the 0.10 / 0.05 / 0.01 level.

[1] See Appendix for variable definitions.

Table 7 – The Effect of CEO Early-life Experiences on Restatements

		Column 1		Column 2		Column 3	
Variable[1]	**Pred.**	**Estimated Coefficient**	**Pr > ChiSq**	**Estimated Coefficient**	**Pr > ChiSq**	**Estimated Coefficient**	**Pr > ChiSq**
Intercept	?	-4.486	0.99	-4.531	0.99	-4.503	0.99
MOD_DISASTER	H1a: +	-0.064	0.31			-0.062	0.32
HIGH_DISASTER	H1b: -	-0.207**	0.02			-0.210**	0.02
MOD_CRIME	H2a: +			0.001	0.98	-0.009	0.88
HIGH_CRIME	H2b: -			-0.156*	0.08	-0.153*	0.08
SIZE	-	-0.058***	0.00	-0.061***	0.00	-0.059***	0.00
ROA	?	0.519*	0.10	0.602	0.06	0.598*	0.06
MB	?	-0.088***	0.00	-0.096***	0.00	-0.090***	0.00
SGROWTH	+	0.045	0.29	0.045	0.30	0.043	0.33
LEV	-	-0.105	0.57	-0.117	0.53	-0.130	0.49
STDCFO	+	0.055	0.94	0.048	0.95	0.098	0.89
STDSALES	+	-0.080	0.18	-0.091	0.13	-0.088	0.15
RETURN	-	-0.150***	0.02	-0.153**	0.02	-0.149**	0.02
BIG4	-	0.084	0.53	0.100	0.45	0.100	0.45
INDBOARD	-	-0.017**	0.05	-0.019**	0.03	-0.018**	0.04
ANALYSTS	-	0.018	0.57	0.014	0.66	0.018	0.56
CEOTENURE	?	-0.092**	0.04	-0.088**	0.05	-0.092**	0.04
CEOOWNER	+	0.005	0.41	0.005	0.40	0.006	0.38
Firm, Year, Industry, CEO Birth Year and CEO Birth State FEs		Yes		Yes		Yes	
Pseudo-R^2		11.31%		11.25%		11.22%	
N				5,572			

* / ** / *** indicates significant levels at the 0.10 / 0.05 / 0.01 level.

[1] See Appendix for variable definitions.