Individualistic CEOs and Financial Misstatements

Ran An*

anran_sm@xmu.edu.cn

Xiamen University

Feng Tian

falextian@polyu.edu.hk

Hong Kong Polytechnic University

Yinglei Zhang

yinglei@cuhk.edu.hk

The Chinese University of Hong Kong

October 2024

*Corresponding author; Xiamen University, Xiamen, China; E-mail: anran_sm@xmu.edu.cn

Individualistic CEOs and Financial Misstatements

Abstract

Using the uncommonness of first names as a proxy for individualism at the personal level, we find that individualistic chief executive officers (CEOs) are 50–60% more likely to make financial misstatements and are approximately twice as likely as other CEOs to have irregularities (i.e., material and fraudulent misstatements). We further document that this positive relationship is mitigated by the presence of an independent board and is amplified when individualistic CEOs are socially active or when the management team's ability is low and thus the likelihood of poor underlying financial performance is high. We address potential selection issues with difference-in-differences tests using CEO turnovers and tests based on various matching methods. Specifically, we find that when a non-individualistic CEO (individualistic CEO) is succeeded by an individualistic CEO (non-individualistic CEO), the likelihood of misstating earnings increases (decreases). Moreover, our results are robust to the inclusion of a battery of controls for CEO personal traits, including CEO overconfidence, CEO narcissism and CEO myopia. Overall, our findings suggest that the cultural background of managers significantly influences their corporate behavior.

Keywords: CEO; individualism; culture; uncommon name; financial misstatement; financial irregularity

JEL: G30 G41 M12 M14 M41

1. Introduction

Individualism is the cultural tradition, ideology, and social outlook that emphasizes the intrinsic worth of an individual. Characterized as an emphasis on self-reliance, desire to stand out, primacy of self-interest, and regulation of behavior by personal attitudes rather than social norms (e.g., Hofstede 1991; Triandis 1995), individualism has long shaped American culture and its institutions. Individualistic cultural influence has been increasing over recent decades (Varnum and Kitayama 2011) and it has been found to contribute to the economic growth of the U.S. (Gorodnichenko and Roland 2017). The upper-echelon theory has long argued that leaders, especially CEOs, can dramatically affect corporate decisions (e.g., Hambrick 2007; Kashmiri and Mahajan 2017; Liao et al. 2024). Only recently, the accounting and finance literature has begun to understand the impact of CEOs' cultural backgrounds on corporate behaviour and capital market outcomes (Zingales 2015; Brochet et al. 2019; Agcayazi et al. 2024; Chen et al. 2024). Following recent studies in psychology and economics that motivate a first-name-based measure of personal-level individualism in the U.S. (e.g., Twenge et al. 2010; Bazzi et al. 2020),[1] we measure CEO individualism using the uncommonness of first names and examine the relation between individualistic CEOs and a high-impact accounting event: financial misstatements.

With an implicit assumption that all firms within the same country face the same level of cultural individualism, previous international studies have investigated the relationship between individualism and accounting discretions at the country level and have reached mixed evidence (e.g., Han et al. 2010; Zhang et al. 2013). One reason for this is that country-level

[1] See Lieberson and Bell (1992), Bertrand and Mullainathan (2004), Bloothooft and Onland (2011), and Abramitzky, Boustan, and Eriksson (2020).

individualism proxies are correlated with differences in countries' legal systems, demographics, infrastructure, economic development, or social norms, and teasing out the effects of these confounding factors is a great challenge. In addition, a country-level study, which cannot isolate the role of CEOs' cultural backgrounds from the impact of national culture and corporate culture, may lead to an overgeneralization of local cultural values.

We address these limitations by focusing on CEO-level variation in individualism in the U.S. We hypothesize that firms with individualistic CEOs are more likely to misstate financial reports.[2] This prediction is based on social psychology and economic research on how individualism affects people's decisions. Individualistic people have a strong desire to stand out and value personal achievement (e.g., Triandis and Gelfand 2012). Therefore, individualistic CEOs have incentives to manage earnings if the underlying performance is poor. Engaging in accounting discretion is a risky behavior as it can potentially cause various harmful consequences for the company, including loss of reputation, higher litigation risk, and higher cost of capital if caught (Hribar and Jenkins 2004; Palmrose and Scholz 2004; Desai et al. 2006; Hennes et al. 2008). Prior literature stresses that the characteristics of individualism, such as independence, personal freedom, and self-reliance, can be translated into behaviors including risk-taking (Li, Griffin, Yue and Zhao 2013; Mihet 2013). Moreover, individualistic CEOs tend to pursue selfish ends at the expense of stakeholders and the community. Gray (1988) suggests that individualistic CEOs are more likely to flout social norms and pursue their own interests when there is a conflict between their own interests and those of the firm and society. Therefore, we expect that individualistic CEOs who are eager to be perceived as successful leaders may

[2] We focus on CEOs because they hold positions of such authority and power that they can directly or at least indirectly manipulate financial reports. Indeed, CEOs are involved in most financial misreporting cases (Beasley et al. 2010).

engage in financial reporting practices that deviate from Generally Accepted Accounting Principles (GAAP) in order to paint a more favorable picture when the underlying financial performance of their firms is unsatisfactory.

Empirically, we use CEOs with uncommon first names to proxy for individualistic CEOs in the U.S.[3] Recent studies provide a solid theoretical foundation for using the uncommonness of first names as a compelling proxy for personal-level individualism. In the U.S., naming practices represent the first transmission of culture from one generation to the next. Individuals with uncommon names have a strong desire to stand out because they internalize the perceptions of their parents and others who associate uncommon names with distinctiveness (e.g., Markus and Cross 1990; Twenge and Manis 1998; Mehrabian 2001; Twenge et al. 2010; Harter 2015). A person with an uncommon name is more likely to deviate from social norms and even to engage in misbehavior such as crime (e.g., Schonberg and Murphy 1974; Twenge and Manis 1998; Kalist and Lee 2009). Recent studies empirically validate the uncommonness of first names as a proxy by associating it with distinctive features of individualism in the U.S. (e.g., Twenge et al. 2010; Bazzi et al. 2020).

Using name data from the Social Security Administration (SSA) from 1880 to 2019 and CEO data from ExecuComp from 2000 to 2019, we construct an individualistic CEO proxy, an indicator of name uncommonness for CEOs in the U.S., by determining whether the relative frequency of their first name, compared with the frequency of the most popular name, is within the lowest decile. We document a significantly positive relation between CEO name

[3] Prior studies have used executives' surnames to infer their cultural origins, but such a method is susceptible to measurement errors such as marriages and may not pinpoint the effects of inherited individualistic culture because a country's origin may represent multiple cultural dimensions (Hanlon et al. 2022). Nevertheless, we control for the country of origin of CEOs in order to tease out the cultural dimensions that are not related to individualism in our regression model in Section 4.1.

uncommonness and the occurrence of financial misstatements after controlling for a battery of firm characteristics and CEO characteristics. In terms of economic significance, individualistic CEOs are 50–60% more likely than other CEOs to misstate financial reports. This relation is even stronger for irregularities (i.e., material or fraudulent misstatements). Firms with individualistic CEOs are 100% more likely than firms with non-individualistic CEOs to have irregularities in their financial reporting.

We further investigate three situations where the effect of individualistic CEOs on financial misstatements is expected to be stronger. First, CEOs with lower-ability management teams are more likely to have disappointing pre-managed financial performance and thus possess stronger incentives to misstate earnings. We use the managerial ability score developed by Demerjian et al. (2012)[4] and the CEO ability measure in Baik et al. (2011) to demonstrate that our baseline finding, the positive relation between individualistic CEOs and financial misstatements, is much more pronounced for firms that lack capable management teams. Second, according to psychology studies, socially active individuals are more likely to exhibit stronger individualism because they are more independent of any specific social institution (e.g., Triandis 1995) and because they hear their names more often, which reinforces their sense of individualism (Roberts and Mroczek 2008). We assess CEOs' participation in social settings (i.e., nonprofit organizations such as sports clubs) and find supporting evidence that our baseline result is much more pronounced for socially active CEOs. Third, we find that the lack of an independent board enhances the effect of individualistic CEOs on financial misstatements.

[4] We thank Dr. Peter Demerjian for sharing his research team's data, which can be accessed at https://peterdemerjian.weebly.com/managerialability.html.

This finding is consistent with upper echelons theory, which suggests that a lack of constraints amplifies the effects of CEOs' personal traits on corporate behavior (Hambrick 2007).

One concern with our main finding is that firms that tend to misstate financial statements may also tend to choose individualistic CEOs. To mitigate such endogeneity concerns, we employ two approaches. First, we use various matching methods to alleviate concerns regarding the selection of observable variables (Rosenbaum and Rubin 1983; Roberts and Whited 2013). Our results are robust to using matching based on industry-year-size decile, propensity score matching (PSM) based on observable firm characteristics and entropy balancing (Hainmueller 2012; McMullin and Schonberger 2020). Second, we utilize CEO turnover events to account for unobserved factors that may affect both financial misstatements and the selection of individualistic CEOs. Specifically, we conduct a two-way directional change analysis and find that when a firm with a non-individualistic (individualistic) CEO switch to an individualistic (non-individualistic) CEO, the likelihood of financial misstatements increases (decreases), both economically and statistically.

Another potential concern about our baseline finding is that name uncommonness may proxy for other CEO characteristics that prior literature has documented to affect financial misstatements. We have controlled for CEO country-origin effects that could be associated with multiple personal characteristics such as risk avoidance, masculinity, short-term orientation, and power distance in our main analysis. We further control for CEO ethnicity effects (Liu 2016) because ethnicity may affect how people are named.

Conceptually, while overconfidence and narcissism are robust cognitive biases, individualism is a cultural trait of CEOs. Overconfidence and narcissism can exist in both

individualistic and collectivistic cultures (Raskin and Terry 1988). Prior psychology studies find no positive association between individualism and overconfidence (Yates et al. 1997; Yates et al. 1998; Moore et al. 2018). To empirically distinguish our measure from those CEO psychological traits, we control for CEO overconfidence (Sunder et al. 2017; Saesen et al. 2024) and CEO narcissism (Chatterjee and Hambrick 2007; Capalbo et al. 2018) as well as other CEO attributes (e.g., ownership, tenure, incentive pay, CEO myopia) individually or collectively in the robustness tests. Our baseline results remain qualitatively and quantitatively similar.

Finally, we conduct a battery of robustness tests, including redefining the financial misstatement measures, constructing alternative name-based individualistic CEO measures, and controlling for the ex-ante likelihood of misstatements (Dechow et al. 2011), strategic distinctiveness (Kang et al. 2021), and internal governance to measure the ability of CEOs' subordinates to steer firms to report honestly (Cheng et al. 2016). Again, our results remain robust.

Our research contributes to the emerging literature on how the cultural traits of CEOs influence corporate behaviors and economic outcomes (e.g., Nguyen et al. 2018; Brochet et al. 2019; Antoniou et al. 2024; Chen et al. 2024). Utilizing a CEO-level individualism proxy, we show that the individualistic cultural values CEOs inherit from their parents have a negative effect on their corporate financial reporting decisions. As discussed previously, prior studies on how individualism affects accounting discretion at the country level have produced mixed evidence (Han et al. 2010; Zhang et al. 2013). Our single-country CEO-level study effectively controls for the institutional differences across countries. Our results highlight the ways in which the cultural traits of CEOs influence a high-impact accounting event (i.e., financial

misstatements), which in turn affects market participants, auditors, regulators, and researchers (Bartov et al. 2021).

Our results extend the understanding of how individualism influences corporate behavior. Prior studies document certain positive effects. For example, Shannon (1977) argues that individualists' non-conformism makes them more resourceful. By rewarding personal accomplishments, individualism incentivizes innovation (Gao et al. 2023; Zhang 2024; Bian et al. 2022). We, however, document the dark side of the impact of CEO individualism on corporate behaviors. Our study complements the economics literature on how individualism can result in weaker preferences for regulations, such as by hindering collective actions during the COVID-19 pandemic (Bian et al. 2022).

Our study also makes important contributions to research into how key individual decision makers such as CEOs affect financial reporting (Hanlon et al. 2022). We extend this line of study by examining the effect of executive cultural background (i.e., individualism) on earnings management. The results of our cross-sectional tests also indicate that high-ability management teams and effective monitoring can mitigate the dark side of individualism.

The remainder of the paper is organized as follows. Section 2 discusses our hypothesis development and our executive-level proxy for individualism. Section 3 describes the data sources we used and the sample selection process before presenting descriptive statistics. Section 4 presents the results of the empirical tests. Finally, Section 5 concludes.

2. Hypothesis Development and Proxy for Individualism at the Executive Level

2.1 Research Background

The U.S. is the most individualistic country in the world (Hofstede 2001), and individualism penetrates every aspect of American society. Individualism (versus collectivism) has important implications for social and economic behaviors (e.g., Triandis 1995). Individualism is defined as the desire to be distinctive and stand out. It is associated with self-reliance, loose ties to other individuals, the pursuit of personal goals (potentially at the expense of the goals of others), and regulation of behavior according to one's personal tendencies rather than based on social norms (Triandis 1995; Hofstede 2001; Hofstede et al. 2005; Bian et al. 2022). Economic studies have documented that individualism has long shaped American culture and its institutions (e.g., Kundsen 2019; Olsson and Paik 2016; Bian et al. 2022) and that it has been contributing to the economic growth of the U.S. (Gorodnichenko and Roland 2017). However, researchers have yet to empirically examine the impact of CEOs' individualistic backgrounds on financial misstatements at the executive level.

Previous international studies have documented the effects of country-level individualism on financial reporting. Using the country-level individualism index devised by Hofstede (2001), Han et al. (2010) find that individualism is positively related to accounting discretion, which is proxied by the magnitude of discretionary accruals. Kanagaretnam et al. (2011) extend this analysis to the banking industry and find a positive relation. In contrast, Zhang et al. (2013) argue that agency problems between corporate insiders and investors are less severe in an individualistic culture and find that accounting discretion is less severe in individualistic than in collectivist cultures. One reason for this mixed evidence is that the country-level individualism index is correlated with differences in countries' legal systems, economic development, demographics, infrastructure, and social norms (e.g., Triandis 1995).

Controlling for these differences is a great challenge. Moreover, the earnings management measures (e.g., discretionary accruals, earnings smoothing, and loss avoidance) used in the above international studies are indirect and noisy (e.g., Dechow et al. 2010).

In this study, we investigate the relationship between CEO-level individualism and financial misstatements and address the two challenges that prior international studies have faced. First, instead of assuming that all firms within the same country have the same level of individualism preference, we use a unique CEO-level individualism proxy in the U.S. Although American culture is generally regarded as highly individualistic, the individualism of each person is expected to vary according to their ethnicity, culture, heritage, regional history, etc. (e.g., Triandis 1995; Bazzi et al. 2020; Cao et al. 2024). An executive-level study enables us to explore this variation in the individualistic cultural preferences of CEOs, as well as study changes in CEOs with different individualistic preferences within the same firms, thereby enhancing our confidence in the directional interpretation of the main findings. Second, we focus on financial misstatements and financial irregularities. Financial misstatements and irregularities that are derived from restatements have lower Type I errors (Dechow et al. 2010) than other proxies, such as discretionary accruals and earnings smoothness, and they can help us perceive a clearer relationship between individualism and earnings management.

2.2 Hypothesis Development

We hypothesize that individualistic CEOs are more likely to engage in financial misstatements. First, according to Gray's (1988) theoretical framework, prior studies suggest that managers in an individualistic society tend to have more latitude in accounting discretion and measurement flexibility (e.g., Han et al. 2010; Kanagaretnam et al. 2011). From the

perspective of social psychology, individualism emphasizes personal achievement and the desire to stand out rather than blend in (Hofstede 2001; Hofstede et al. 2005; Cao et al. 2024). Previous experimental studies show that individualists are more likely to misreport performance due to stronger incentives (Sánchez-Expósito and Naranjo-Gil 2017). Therefore, we expect that individualistic CEOs have lower psychological tolerance for being perceived as failures and, thus, have stronger incentives to manage earnings when the underlying financial performance is not satisfactory.

Second, prior literature stresses that characteristics of individualism, such as independence, personal freedom, and self-reliance, can be translated into behaviors including risk-taking (Li et al. 2013; Mihet 2013). Engaging in accounting discretion is a risky behavior for both firms and CEOs as it can potentially cause various harmful consequences for the company, including loss of reputation and higher cost of capital, for the firm employees, including loss of wages, and for the CEO, including litigation risk and termination of career (e.g., Hribar and Jenkins 2004; Palmrose and Scholz 2004; Desai et al. 2006; Hennes et al. 2008; Choi and Gipper 2024). Individualists tend to rationalize misbehaviors to reduce the associated negative emotions (Murphy 2012). Therefore, individualistic CEOs are more likely to engage in risky misreporting behaviors than non-individualistic CEOs.

Third, individualistic managers have weaker preferences for regulations and rules and are more likely to view their personal gains as their top priority with less consideration for the shareholders (Realo et al. 2008; Power et al. 2010; Bian et al. 2022). At the extreme level, individualists may increase the use of deception to stand out (e.g., Triandis 2004). In other words, individualists tend to behave opportunistically to meet their own interests (Triandis et

al. 2001). Therefore, the deterrence effect of regulations and rules on earnings manipulation might be weaker for individualistic CEOs.

To summarize, we hypothesize that with stronger incentives to manipulate earnings when underlying performance is poor, a higher tendency to rationalize risky misreporting, and lower reverence for regulations and norms, individualistic CEOs tend to misstate earnings more often than their non-individualistic peers.

2.3 Proxy for Individualistic CEOs

Recent studies establish that, in the U.S., uncommon first names can be used as a compelling proxy for individualism at the personal level (Bazzi et al. 2020). Naming practices are deeply embedded with core cultural values (Lieberson and Bell 1992) and represent the first transmission of culture from one generation to the next (e.g., Twenge et al. 2010). Individualistic people are likely to come from families with individualistic cultures, and parents with individualistic preferences are more likely to name their children with uncommon names (Twenge et al. 2010; 2016). Thus, an individualistic person's sense of being distinctive begins in their childhood (Fryer and Levitt 2004; Twenge and Manis 1998). The development of this self-conception of uniqueness is further reinforced each time the individual's name is called by others, both in childhood and adulthood (e.g., Chen et al. 2006). In addition, prior studies document that a person with an uncommon name is more likely to deviate from social norms, which is an important characteristic of individualism. In extreme cases, people with uncommon names may even engage in misbehavior such as crime (e.g., Kalist and Lee 2009; Twenge and Manis 1998; Schonberg and Murphy 1974).

Varnum and Kitayama (2011) observe a positive cross-country correlation between uncommon names and Hofstede's country-level index of individualism. In Japan, Ogihara et al. (2015) demonstrate a strong time-series correlation between the share of uncommon names and an index of individualism. Moreover, in a recent study, Bazzi et al. (2020) directly use uncommon names as a proxy for individualism and further validate this measure by associating it with distinctive features of individualistic societies in the U.S. For example, they find that individualistic names (i.e., uncommon names) were more prevalent on the frontier,[5] which had distinctive demographics and greater individualism.

In sum, there is a rich literature on both U.S. and international data establishing that uncommonness of first name is a compelling proxy for individualism at the personal level.

3. Sample Construction and Descriptive Statistics

This section describes the sample, defines our independent variables, dependent variables, and control variables, and provides summary statistics.

3.1 Sample Construction

We start with the ExecuComp database, which primarily covers S&P 1500 firms, and then match the CEO profile information—including gender, age, educational background, and nationality—from the BoardEx database. For profile data not available in Boardex, we use various internet sources, including Wikipedia, the Notable Names Database, referenceforbusiness.com, prabook.com, LinkedIn, and newswire articles. Our sample period

[5] Bazzi et al. (2020) write that according to the influential historian Frederick Jackson Turner, the presence of "a continually advancing frontier line" profoundly shaped American culture. The frontier cultivated individualism and antipathy to government intervention. Even long after the closing of the frontier, counties with greater total frontier experience still exhibit more pervasive individualism.

begins in 2000, when Boardex's coverage for S&P 1500 firms started. To accurately determine the effect of CEO name uncommonness (our proxy for individualistic CEOs), we exclude firm-year observations with more than one CEO (e.g., co-CEOs).

We obtain accounting variables from Compustat, stock return variables from the Center for Research in Security Prices (CRSP), corporate governance variables from RiskMetrics, and financial misstatement data from Audit Analytics. We exclude firms from regulated financial (SIC codes 6000-6999) and utility (SIC codes 4900-4999) industries.

We obtain the frequencies of first names for all Americans from the Social Security Administration (SSA) national dataset between 1880 and 2019. As CEOs born in other countries are likely to have names that are uncommon in the U.S., we restrict our sample to U.S.-born CEOs. We identify CEOs as U.S.-born if we can confirm their birthplace using the previously mentioned internet sources or if their nationality is listed as American and they obtained a bachelor's degree from a U.S. school. Using this approach, we produce a final sample with 13,059 firm-year observations, representing 1,539 unique firms and 2,398 unique CEOs from 2000 to 2019.

3.2 Variable Measurement

3.2.1 Uncommonness of CEO first names

As discussed in Section 2, we use CEOs with an uncommon first name as a proxy for individualistic CEOs. We obtain all given names in each year from the SSA dataset between 1880 and 2019.[6] We measure the uncommonness of CEO names in two ways. Following prior studies (e.g., Kalist and Lee 2009), we calculate the ratio of the frequency of a CEO's first

[6] All names with at least five occurrences in the SSA dataset are included in the data. For names that do not appear in the dataset, we assign them a frequency value of one. Our results also hold if we alternatively assign them a value of four.

name appearing in the SSA dataset to the frequency of the most common first name from 1914 (i.e., the birth year of the oldest CEO in the final sample) to 2019 (i.e., the ending year of the sample period), by gender, and then multiply it by 100 so that the ratio is normalized from 0 to 100 as a percentage. We then match this frequency ratio with the ExecuComp dataset and define a dummy variable, *UNCOMMON_RF*, which equals one for observations with ratios falling in the lowest decile for all ExecuComp observations over 2000–2019, and zero otherwise. We focus on the lowest decile because studies on people's names suggest that uncommon names are expected to be rare and infrequent (e.g., Lawson 1984).

The above measure implicitly assumes that Americans share a similar cultural understanding of a name's commonness in terms of how it affects social-psychological traits over a lifetime (e.g., Roberts and Mroczek 2008).[7] However, some psychologists argue that childhood and adolescence are crucial developmental periods (e.g., Soto and Tackett 2015). Thus, we alternatively construct an uncommon-name measure, *UNCOMMON_BRF*, which equals one when the frequency of a CEO's first name relative to that of the most common first name within 18 years of the CEO's birth year by gender falls in the lowest decile of all ExecuComp observations, and zero otherwise. The four most common first names in our final sample are James, Mary, John, and Robert, and the four most uncommon first names are Aylwin, Crandall, Bradbury, and Owsley, which have *UNCOMMON_RF* values of 0.000020%, 0.000028%, 0.00010%, and 0.00024%, respectively. To ensure the robustness of our results, we also use alternative measures of name uncommonness, which helps us to obtain consistently robust results (see Section 4.4).

[7] From the perspective of social psychology, individualism at the individual level is referred to as idiocentrism (Triandis et al. 1985), which may be changed when an individual is exposed to a different environment (Triandis 1995).

3.2.2 Other variables

Our two main dependent variables are financial misstatement (*MISSTATE*) and irregularities (*IRREGULARITY*). *MISSTATE* equals one for the misstating periods, which are the actual periods being restated and not the period when restatements are announced, and zero otherwise. We classify misstatements as irregularities (*IRREGULARITY*) using two sources. First, following Bartov et al. (2021), *IRREGULARITY* equals one for firm-years involved in a misstating period during which firms disclose filing Form 8-K Item 4.02, and zero otherwise. These misstatements refer to material (unintentional) or fraudulent (intentional) errors in financial statements. Second, as the SEC implemented this filing requirement in August 2004, for restatements before 2005, we start with data provided by Hennes et al. (2008), which determines whether restatements are irregularities. We then manually collect the related misstating periods.

Following previous literature (e.g., Lee et al. 2006; Lennox and Pittman 2010; Chiu et al. 2013), we control for a battery of time-varying firm characteristics that are important determinants of earnings misstatements. The firm-level controls include firm size (*LnAT*, the natural logarithm of total assets), financial performance (*ROA*, return on total assets, and *LOSS*, an indicator of negative earnings before extraordinary items), leverage (*LEV*), book-to-market ratio (*BTM*), stock performance (*BHRET*, buy-and-hold returns over the fiscal year), return volatility over the fiscal year (*RETVOL*), and firm age (*AGE*). We use abnormal employment (*AB_EMP*) to control for the divergence between financial and non-financial performance.

We also control for off-balance sheet activities that can be used to misstate earnings. More specifically, we include operating lease obligations (*LEASE)*, an indicator that equals one if a

firm's future operating lease obligations exceed zero. In addition, firms might have strong incentives to misstate earnings in certain circumstances, so we include indicators for merger and acquisition (*M&A*) and issuance of new equity and debt (*ISSUE*). CEO-level controls include an indicator for a female CEO (*CEO_GENDER*), for a CEO with an accounting education background (*CEO_EDU*), and CEO age (*CEO_AGE*). We also obtain CEO country origins and include them as fixed effects in the regression analysis to ensure that the effect of people's ancestry is controlled. Moreover, we include some board characteristic variables, including CEO/chairperson duality (*DUALITY*) and board size (*BOARD_SIZE*). Finally, we include the proportion of dedicated institutional ownership (*DEDINST*) as a proxy for the influence of external investors on financial misstatements. Appendix A provides detailed variable definitions.

3.3 Descriptive Statistics

Table 1 provides descriptive statistics for our main variables. The frequencies of *MISSTATE* and *IRREGULARITY* are 14.6% and 7.2%, respectively, which are comparable to those produced by previous studies using Audit Analytics was used (e.g., Pittman and Zhao 2021). Meanwhile, the mean values of our individualistic CEO proxies, *UNCOMMON_RF (raw ratio)* and *UNCOMMON_BRF (raw ratio)*, are 37.7% and 36.2%, respectively.

The average firm characteristics—including profitability (*ROA*), frequency of losses (*LOSS*), firm size (*LnAT*), leverage ratio (*LEV*), book value-to-market value ratio (*BTM*), annual return volatility (*RETVOL*), annual buy-and-hold raw returns (*BHRET*), operating lease (*LEASE*), and firm age (*AGE*)—all fall within the scope of previous research (Jia 2014). In

addition, approximately 12.6% of our observations involve merger and acquisition activities, while 59.4% involve the issuance of new stock or debt.

For CEO-specific characteristics, the average age of CEOs (*CEO_AGE*) is 56.6. Only 4% of CEOs in our sample are women, which is consistent with findings of previous studies on female CEOs (Cook and Glass 2014; Cai et al. 2019). Around 40.8% of CEOs have accounting-related education backgrounds. In terms of board characteristics, we find that the CEO also serves as chairperson for roughly 56% of firm-years in our sample. The average board comprises 9.3 directors, and, on average, 72.3% of board members are independent, which is comparable to statistics reported in the literature. The average dedicated institutional ownership is only around 3%, which is consistent with previous studies that have indicated that the percentage of ownership of dedicated institutional investors is much smaller than that of transient institutional investors and declines over time (e.g., Borochin and Yang 2017; Bushee et al. 2019).

[Insert Table 1 Here]

In Appendix B, we present the Spearman ranking (upper triangle) correlations and the Pearson (lower triangle) correlations for the main variables. Individualistic CEOs are slightly less likely to have accounting-related educational backgrounds. In general, the correlations between CEO individualism and other CEO characteristics are weak, suggesting that our CEO individualism proxies capture a different effect on financial misstatements from other personal traits and psychological dimensions that have been documented in the prior literature.

Table 2 presents the univariate comparisons of misstatement frequency, irregularity frequency, firm-level fundamentals, and board/investor characteristic variables between firms

with uncommon-name CEOs (i.e., individualistic CEOs) and those with common-name CEOs. Using the uncommonness variable *UNCOMMON_RF* as an example (Panel A), the univariate tests reveal that the frequency of misstatement (irregularities) is approximately 20.1% (12.8%) in the subsample with uncommon-name CEOs (i.e., individualistic CEOs), compared to 14.1% (6.7%) in the subsample with common-name CEOs (i.e., the control sample). The differences are economically large and statistically significant at the 1% level, providing initial support for our main hypothesis.

However, we also observe that the two groups of firms differ significantly in many aspects. Firms led by uncommon-name CEOs (i.e., individualistic CEOs) tend to be younger and smaller, while also having poorer financial performance as reflected by lower ROA and higher loss frequency. Such firms have higher book-to-market ratios, lower operating lease levels, and higher return volatility than firms with common-name CEOs. They are also are less likely to have independent boards and are less likely to have a CEO with an accounting-related background. In addition, uncommon-name CEOs are more likely to be female.

[Insert Table 2 Here]

4. Empirical Results

4.1 Baseline Results

To estimate the relationship between CEO individualism and the incidence of financial misstatements (irregularities), we first estimate the following baseline logistic model:

$$MISSTATE\ /\ IRREGULARITY_{i,t} = \beta_0 + \beta_1 \times UNCOMMON\_X_j + \beta_2 \times ROA_{i,t} + \beta_3 \times LOSS_{i,t} +$$
$$\beta_4 \times LnAT_{i,t} + \beta_5 \times LEV_{i,t} + \beta_6 \times BTM_{i,t} + \beta_7 \times RETVOL_{i,t} + \beta_8 \times BHRET_{i,t} +$$
$$\beta_9 \times LEASE_{i,t} + \beta_{10} \times AGE_{i,t} + \beta_{11} \times AB\_EMP_{i,t} + \beta_{12} \times M\&A_{i,t} + \beta_{13} \times ISSUE_{i,t}$$

$$+ \beta_{14} \times DEDINST_{i,t-1} + \beta_{15} \times DUALITY_{i,t} + \beta_{16} \times BOARD\_SIZE_{i,t} +$$

$$\beta_{17} \times CEO\_AGE_{j,t} + \beta_{18} \times CEO\_GENDER_j + \beta_{19} \times CEO\_EDU_j$$

$$+ \beta_{20} \times CEO\_EDU\_MISS_j + \sum \gamma_k \times Fixed\ effects_k + \varepsilon_{i,t} \quad (1)$$

We regress the indicator variables *MISSTATE* and *IRREGULARITY* of firm *i* in year *t* on the indicator variables of CEO name uncommonness (our proxies for individualistic CEOs), a battery of firm-level control variables, and CEO/board/investor characteristics variables. We also include industry and year-fixed effects to control for unobservable industry-wide and time-specific invariant characteristics that may influence both CEO selection and the likelihood of misstatements or irregularities.[8] To control for the possibility that the country origins of the CEOs' ancestors may reflect values and norms from that country (e.g., Liu 2016), which in turn could affect CEO behaviors, we also include CEO country origin fixed effects.[9] The details of these variable definitions are discussed in Section 3.2 and in Appendix A. All standard errors are estimated by clustering at the firm level. β_1 captures the impact that having an uncommon-name CEO has on the likelihood of financial misstatements—and we expect this to be positive.

Table 3 presents the estimated results of model (1). Columns (1) to (4) report the results when the dependent variable is *MISSTATE*. Columns (1) and (2) include only the two measures of CEO name uncommonness and the year, industry, and country-of-origin fixed effects. The coefficients on the two proxies for the uncommonness of CEO names are positively related to the occurrence of financial misstatement at a significance level of 1%.

[8] We define industry based on the Fama-French 12 industry classification. To ensure that we adequately control for industry-wide effects, we further use the Fama-French 48 industry classification. The results remain unchanged.

[9] We obtain the national origins of executives by using the algorithm created by Ye et al. (2017) and Ye and Skiena (2019). We thank Steven Skiena for his team's generous data support. Among 39 nationality classifications associated with 118 countries from their algorithm, we identify 29 and include these origins as indicators in the regressions.

Columns (3) and (4) include a battery of controls. Consistent with previous literature (e.g., Chiu et al., 2013), firms with a higher BTM ratio, higher return volatility, or stock and debt issuance are more likely to have financial misstatements in the concurrent period. Most importantly, both CEO individualism measures are positively associated with a higher likelihood of misstatement, and the coefficients are significant at the 1% level. The effect of individualistic CEOs on misstatement is also economically significant. The coefficients on the two CEO name uncommonness measures translate into odds ratios of 1.551 and 1.638, indicating that firms with individualistic CEOs are 55.1% or 63.8% more likely than firms with non-individualistic CEOs to misstate earnings, respectively.

Columns (5) to (8) present the estimation results when the dependent variable is *IRREGULARITY*. We observe that the coefficients across all specifications on the uncommon-name proxies are positive and significant at the 1% level. In terms of the economic significance, using Column (7) as an example, the coefficient of 0.771 translates into an odds ratio of 2.161, indicating that firms with individualistic CEOs are more than twice as likely as firms with non-individualistic CEOs to have financial irregularities.

[Insert Table 3 Here]

4.2 Cross-Sectional Analysis

To provide further support for the effect of individualistic CEOs on financial misstatements, we explore conditions for which psychology theory and upper echelons theory predict a more pronounced effect. Specifically, we examine cross-sectional variations in our baseline relation along dimensions of managerial ability, the size of CEO social connections, and the strength of board monitoring.

4.2.1 Management Team Ability

When the management team's ability is low, the probability of a mismatch between individualistic CEOs' expectations and the underlying operational performance of their firm is high.[10] In other words, if the pre-managed performance is poor, it is likely that the CEO will have a stronger incentive to manage earnings opportunistically. Accordingly, we predict that individualistic CEOs are more likely to manage earnings when their management teams have low ability levels.

To test the hypothesized difference between the two groups of CEOs, we use two proxies for managerial ability. First, we obtain managerial ability scores from Demerjian et al. (2013). Second, we follow Baik et al. (2011) and use a measure derived from the company's industry-adjusted profitability for the prior three years under the leadership of a particular CEO. We partition our sample into the high- versus low-ability management subsamples according to the median value of each proxy of managerial ability for each year.

The findings in Panels A1 and A2 of Table 4 indicate that the positive relation between individualistic CEOs and financial misstatements is much more pronounced, and the coefficients on the proxies for individualistic CEOs are significant mostly in the low-ability management subsamples.[11] We also observe striking contrasts in the coefficients on measures of CEOs' individualism between the high-ability and the low-ability management subsamples

[10] We use the management team's ability to identify the situations where a mismatch between individualistic CEOs' expectations and the underlying operational performance of the firm may occur. Therefore, we do not intend to differentiate between the ability of CEOs and that of their management team, but use low managerial ability as a proxy for a higher likelihood that the underlying performance of the firm might not be satisfactory. In addition, since CEOs are the leaders of the management teams and are responsible for major decision-making and operations (Hambrick 1995; Fee and Hadlock 2004), it is challenging to differentiate the ability of CEOs from that of their subordinates.

[11] The p-values of Fisher's permutation test for the difference in the coefficients on the uncommon-name variables between the high- and low- management ability subsamples are 0.215 (0.082) for *UNCOMMON_RF* and 0.059 (0.048) for *UNCOMMON_BRF* in Panel A1 (Panel A2).

when the dependent variable is *IRREGULARITY*.[12] Collectively, these findings align with our prediction that the desire to be viewed as outstanding drives misbehavior among individualistic CEOs, particularly when the management team's ability is low and thus the underlying financial performance is likely to be unsatisfactory.

4.2.2 CEO Social Interactions

As discussed in Section 2, CEOs with uncommon names may further strengthen their sense of individualism when others repeatedly use their names (Chen et al. 2006). This repeated activation process is likely to continue even into their executive careers (Robert and Mroczek 2008). Accordingly, we predict that uncommon-name CEOs who are more socially active tend to exhibit stronger individualistic behavior and, thus, are more likely to engage in financial misstatements. Furthermore, social psychology studies suggest that having multiple social memberships encourages a person's individualistic behavior because participation of diverse social groups allows this person not to rely on any single organization (e.g., Daab 1991; Triandis 1995).

To test this prediction, we measure CEOs' social interactions according to the number of nonprofit organizations (e.g., sports clubs) in which they have active roles.[13] We then partition our sample into a low versus a high social interaction subgroups according to the median value. The findings in Panel B of Table 4 indicate that the positive relation between individualistic CEOs and financial misstatements is much more pronounced and that the coefficients on the

[12] The p-values of Fisher's permutation test for the difference in the coefficients on the uncommon-name variable between the high- and low-ability subsamples are 0.006 (0.052) for *UNCOMMON_RF* and 0.003 (0.013) for *UNCOMMON_BRF* in Panel A1 (Panel A2). We drop all fixed effects when conducting the coefficient difference tests because the logit model cannot converge in the presence of too many fixed effects.

[13] An active role means that the CEO is not just a "member" but serves as a "trustee," "advisor," "president," or some other meaningful role. We collect these role data from BoardEx.

proxies for uncommon names are significant only in the subsample of socially active CEOs. We observe even more striking contrasts between coefficients on individualistic CEOs across the two subsamples when the dependent variable is *IRREGULARITY*.[14] Collectively, the findings support our prediction that, compared to their less socially active peers, individualistic CEOs who participate in a larger number of social activities are more likely to engage in financial misstatements due to the self-reinforcement of a sense of individualism (or idiocentrism).

4.2.3 Board Monitoring Strength

Upper echelons theory predicts that the effect of CEOs' personal traits on corporate behavior is more pronounced when CEOs exercise more discretion (e.g., Hambrick 2007). In regard to financial reporting, previous studies suggest that independent board directors constrain the financial misstatement tendency of CEOs (e.g., Klein 2002). Therefore, we expect the baseline relation to be more pronounced in the subsample of firms with weak corporate governance. To test this theoretical prediction, we partition our sample into two groups based on the median value of board independence, measured as the percentage of independent directors on the board each year. Panel C of Table 4 reports our main regression results for the two subsamples. We find that for both dependent variables, *MISSTATE* and *IRREGULARITY*, the positive baseline association is more pronounced in the subsample with low board independence. This is consistent with the theoretical explanation that the effect of

[14] For the models using *MISSTATE* as the dependent variable in Columns (1) and (2), the p-values of Fisher's permutation test of the difference in the coefficients on the uncommon-name variable between the high and low social interaction subsamples are 0.005 for *UNCOMMON_RF* and 0.002 for *UNCOMMON_BRF*. For the models using *IRREGULARITY* as the dependent variable in Columns (3) and (4), the p-values of Fisher's permutation test of the difference in the coefficients on the uncommon-name variable between the high and low board independence subsamples are 0.000 for *UNCOMMON_RF* and *UNCOMMON_BRF*. We drop all fixed effects when conducting the difference tests because the logit model does not converge in the presence of too many fixed effects.

individualistic CEOs on corporate behavior is contingent on their level of discretion.[15] Indeed, when monitored by an independent board, the tendency of individualistic CEOs to defy common practice is constrained.

[Insert Table 4 Here]

4.3 Matching and Change Analyses

Our baseline results indicate a positive relationship between CEOs' individualism and the likelihood of financial misstatements or irregularities. Though we control for various confounding factors, our findings might still be subject to omitted variable concerns in both the selection of individualistic CEOs and the incidence of financial misstatements. To mitigate this concern, first, we adopt three matching methods to ensure that the treatment group (i.e., firms with uncommon-name CEOs) and the control group (i.e., firms with common-name CEOs) are comparable based on observable firm-level characteristics. Second, to interpret our results more confidently as a directional relation, we conduct two-way directional change analyses. We utilize CEO turnover events that change the uncommonness of CEO names and explore whether the likelihood of financial misstatements and irregularities increases (decreases) after a firm switches from a CEO with a(n) common (uncommon) name to one with a(n) uncommon(common) name.

[15] For the models using *MISSTATE* as the dependent variable in Columns (1) and (2), the p-values of Fisher's permutation test of the difference in the coefficients on the uncommon-name variables between the high and low board independence subsamples are 0.353 for *UNCOMMON_RF* and 0.205 for *UNCOMMON_BRF*. For the models using *IRREGULARITY* as the dependent variable in Columns (3) and (4), the p-values of Fisher's permutation test for the difference in the coefficients on the uncommon-name variables between the high and low board independence subsamples are 0.349 for *UNCOMMON_RF* and 0.147 for *UNCOMMON_BRF*. We drop all fixed effects when conducting the difference tests because the logit model did not converge in the presence of too many fixed effects.

4.3.1 Matching Results

Table 5 presents logistic regressions of the occurrence of misstatements on CEO individualism, based on three different ways to match our treatment sample with a control sample. We first match each firm-year observation with uncommon-name CEOs (i.e., individualistic CEOs) to those with common-name CEOs in the same year, industry, and size decile. Size deciles are ranked by sorting all sample firms based on the magnitude of total assets at the beginning of the year. The number of observations after matching is reduced by approximately half to about 6,000. Panel A of Table 5 reports the results.

[Insert Table 5 Here]

We observe that firms headed by individualistic CEOs have a significantly higher likelihood of conducting misstatements or irregularities than firms headed by non-individualistic CEOs for both uncommon-name measures. The coefficients are 0.490 (*z*-statistics: 2.73 for *UNCOMMON_RF*) and 0.612 (*z*-statistic: 3.33 for *UNCOMMON_BRF*) for the dependent variable *MISSTATE,* respectively. The coefficients are 0.766 (*z*-statistics: 3.20 for *UNCOMMON_RF*) and 0.818 (*z*-statistic: 3.49 for *UNCOMMON_BRF*) for the dependent variable *IRREGULARITY,* respectively. Compared to the results in Table 3, the magnitude of coefficients and the economic significance in the matched samples are slightly larger.

Next, we perform propensity score matching by first regressing the two CEO uncommon-name variables, *UNCOMMON_RF* and *UNCOMMON_BRF,* on the following firm-level characteristics: *ROA*, *LOSS*, *LnAT*, *LEV*, *BTM*, *RETVOL*, *LEASE*, *AGE*, and *ISSUE.*[16] We

[16] Panel A of Appendix C reports the first-stage logit model results used to estimate the propensity score. Firms with loss, lower leverage ratios, larger return volatilities, higher book-to-market ratios, and lower operating leases are more likely to appoint uncommon-name CEOs. Panels B1 and B2 in Appendix C show that, after propensity score matching, the mean (median) differences in all firm characteristics between the uncommon-name CEO group and the common-name CEO group are statistically insignificant.

choose these firm characteristics because they are significantly different between firms with uncommon-name CEOs and those with common-name CEOs, as shown in Table 2. After that, we match each firm-year observation with an uncommon-name CEO to that with a common-name CEO within the same industry, year, and the closest propensity score. All matched peers are drawn without replacement. The number of observations for this analysis is reduced by 85% to around 1,900. Panel B of Table 5 reports the logistic regression results based on the PSM sample. Both CEO uncommon-name variables (i.e., individualistic CEOs) are positively and significantly associated with the occurrence of misstatements or irregularities. The coefficients are slightly higher than those in the baseline regressions shown in Table 3, even with this much reduced sample size.

Finally, we follow a recently developed entropy balancing matching approach based on the work of Hainmueller (2012) and McMullin and Schonberger (2020). This approach identifies weights for the control sample to equalize the distribution of determinants across treatment (i.e., firms with individualistic CEOs) and control samples (i.e., firms with non-individualistic CEOs). Our results remain robust, as shown in Panel C of Table 5.[17]

4.3.2 Changes in Financial Misstatements around CEO Turnover Events

The above matching methods may not rule out the possibility that unobservable time-varying characteristics explain both the hiring of individualistic CEOs and the likelihood of financial misstatements. To further address this concern, we use CEO turnover events that may cause a change in the uncommonness of CEO names (individualism). Specifically, we perform a two-way directional change analysis to examine the effect of switching from a CEO with an

[17] We report the covariates before and after weighting using the entropy balancing method in Appendix D.

uncommon name to one with a common name, and vice versa, on the likelihood of misstatements and irregularities. Conducting this analysis enhances our confidence in the directional inference of the relation between CEO individualism and the likelihood of financial misstatements.

We predict that, after switching from an individualistic CEO (i.e., uncommon-name CEO) to a non-individualistic CEO (i.e., common-name CEO), incidences of misstatement or irregularities will decrease. By contrast, these incidences will increase when switching from a non-individualistic CEO (i.e., common-name CEO) to an individualistic CEO (i.e., uncommon-name CEO). We have 842 CEO turnover events in our sample period. For *UNCOMMON_RF*, we identify 46 (57) turnover events wherein CEO names switch from common (uncommon) to uncommon (common), respectively; for *UNCOMMON_BRF*, we identify 49 (56) such events. The sample includes firm-year observations from three years before to three years after the appointment of a new CEO, and we estimate the following regressions:

$$MISSTATE\ /\ IRREGULARITY_{i,t} = \alpha_0 + \beta_1 \times BE\_UNCOMMON + \beta_2 \times POST + \beta_3 \times BE\_UNCOMMON \times POST + other\ controls + \sum \gamma_k \times Fixed\ effects_k + \varepsilon_{i,t} \quad (2)$$

$$MISSTATE/IRREGULARITY_{i,t} = a_0 + \beta_1 \times BE\_COMMON + \beta_2 \times POST + \beta_3 \times BE\_COMMON \times POST + other\ controls + \sum \gamma_k \times Fixed\ effects_k + \varepsilon_{i,t} \quad (3)$$

BE_UNCOMMON equals one for a turnover event in which a common-name CEO is replaced by an uncommon-name one, whereas *BE_COMMON* equals one for a turnover event in which an uncommon-name CEO is succeeded by a common-name one. Both variables are set to zero for a turnover event in which the status of CEO name uncommonness remains the same. In other words, the control sample for both equations includes firm-year turnover

observations for which the uncommonness of the pre-turnover CEO name and the succeeding CEO name are the same. *POST* is coded as one for a three-year period after the new CEO takes office. It is possible that misstatements initiated by the previous CEO could continue into the post-turnover years and distort the estimated effect of change in name uncommonness. We therefore revise the dependent variable, *MISSTATE* (*IRREGULARITY*), by assigning a value of zero to misstating years in a post-turnover window if the misstatement (or irregularity) dates back to a pre-turnover window. Note that the definitions here are different from those that we used previously; we now assign a value of one to *MISSTATE* (*IRREGUARLITY*) for misstating years, regardless of initiation year, in Equation (1). This is consistent with the spirit of attributing the misbehavior to the right persons. We expect β_3 to be positive in Equation (2) and to be negative in Equation (3).

Table 6 presents the estimated relation between the change in CEO name uncommonness (CEO individualism) and the occurrence of financial misstatements or irregularities around CEO turnovers. When the dependent variable is *MISSTATE*, the likelihood of misstatement significantly increases after switching from a non-individualistic CEO to an individualistic CEO. The coefficients on *BE_UNCOMMON*×*POST* in Columns (1) and (3) are significantly positive at 1.218 (z-statistic=2.44 for *UNCOMMON_RF*) and at 1.131 (z-statistic=2.27 for *UNCOMMON_BRF*), respectively. In stark contrast, when a firm switches from an individualistic CEO to a non-individualistic one, the coefficients on the interaction terms become significantly negative (-1.297 with z-statistic=-2.36 (Column (2)) and -1.423 with z-statistic=-2.61 (Column (4))), indicating that this change leads to a significant decrease in the likelihood of misstatements.

When the dependent variable is *IRREGULARITY*, we also find that the coefficients on the interaction term *BE_UNCOMMON×POST* are significantly positive. In the opposite situation, the coefficients on the interaction term *BE_UNCOMMON×POST* are negative, as predicted, and are marginally significant at the one-tailed test level because we have a directional prediction.

Overall, the results in Table 6 show that the change in CEO individualism drives the changes in the likelihood of financial misstatements in the expected directions. This finding mitigates the concern that unobserved omitted variables may explain the baseline relation. However, it must be acknowledged that the small sample size used in this change analysis means that the power of the tests is low.

[Insert Table 6 Here]

4.4. Additional Tests

We conduct a battery of additional robustness tests and report them in Table 7. For brevity, we tabulate only the coefficients and their associated z-stats on our CEO individualism measures.

4.4.1 Control for personal attributes of CEOs

One potential concern is that our measures of CEO individualism may capture other personal attributes, such as CEO overconfidence and CEO narcissism (Schrand and Zechman 2012). By including country-origin fixed effects in our baseline regression models, we have effectively controlled for various cultural dimensions related to CEOs' country origins, including uncertainty avoidance, masculinity, and power distance (Hofstede 2001). We also

control for CEO ethnicity because ethnicity may affect the names that people are given. Our results remain robust.[18]

Conceptually, while overconfidence is a robust cognitive bias and its level is affected by sudden and exogenous changes in capital market frictions (Jang and Lee 2024), individualism is the cultural tradition, ideology, and social outlook that emphasizes the intrinsic worth of an individual. An individualistic individual may or may not exhibit behavioral bias. Previous psychology studies have found no positive association between individualism and overconfidence (Moore et al. 2018). For example, psychology researchers find that Chinese participants exhibit greater overconfidence in the accuracy of their knowledge than American participants, even though Chinese culture is regarded as less individualistic (Yates et al. 1997; Yates et al. 1998).

To further ensure that our results are not driven by overconfidence, we follow prior literature (e.g., Campbell et al. 2011; Ge et al. 2024; Saesen et al. 2024) to use option-holding data to measure CEO overconfidence. We find that the overconfidence measure is not significantly correlated with our two CEO individualism measures (correlations are -0.002 and 0.001, respectively). Also, when we include overconfidence as a further control, the effect of CEO individualism on financial misstatements remains similar.

Narcissism is a personality trait characterized by a grandiose sense of self, arrogance, exploitativeness, vanity, and lack of empathy (Raskin and Terry 1988). Narcissistic CEOs are defined as CEOs who have very inflated self-views and are preoccupied with having those self-

[18] We obtain executives' ethnic information by using the algorithm employed by Ye et al. (2017) and Ye and Skiena (2019). The six ethnicities include White, Black, Asian and Pacific Islander, American Indian and Alaska Native, Hispanic, and descendants of more than two races.

views continuously reinforced (Chatterjee and Hambrick 2007). Compared to overconfidence, narcissism has its own set of characteristics. Campbell et al. (2004) suggest that narcissists' strong need for attention and recognition does not necessarily apply to overconfident individuals, while overconfidence relates to a general attitude regarding events or occurrences.

Prior studies also note that narcissism is an extreme form of overconfidence and both narcissism and overconfidence should conceptually be categorized under behavioral bias (Campbell et al. 2004; Schrand and Zechman 2012). In great contrast, individualism is a cultural belief that does not suggest a behavioral bias and emphasizes the importance of personal achievement, individual autonomy, and self-reliance (e.g., Hofstede 1991).

Prior studies document an ambiguous relationship between CEO narcissism and earnings management. On one hand, since narcissistic personalities tend to resort to all means, including unethical behavior, to reinforce their self-image and ideal ego, narcissistic CEOs are likely to manage earnings to meet investors' expectations (Campbell et al. 2011). On the other hand, narcissists tend to take highly visible operations to gain applause and engage in various forms of "sensation-seeking" tasks to satisfy their own self-admiration. As a result, narcissistic CEOs may affect operational activities to reach earnings targets (Olsen et al. 2014; Ham et al. 2017). Therefore, prior literature provides mixed evidence regarding the effect of CEO narcissism on earnings management (Campbell et al. 2011; Olsen et al. 2014; Ham et al. 2017).

To empirically address this issue, we follow prior studies (e.g., Chatterjee and Hambrick 2007) and construct a composite narcissism index based on the principal factor analysis of the following three variables: 1) *relative cash payment*, calculated as the CEO's cash compensation relative to that of the second-highest-paid executive; 2) *relative non-cash*

payment, calculated as the CEO's non-cash compensation relative to that of the second-highest-paid executive; 3) *CEO prominence in press releases*, calculated as the number of times the CEO is mentioned by name in the company's press releases divided by the total number of words in all the company's press releases. We find that the Pearson correlations between the CEO narcissism index and our two CEO individualism measures are low at -0.020 and -0.028, respectively. Most importantly, Table 7 shows that our baseline results are robust to the inclusion of the proxy for CEO narcissism.[19]

In addition, we control for more variables that may correlate with both financial misreporting and CEO individualism (Dechow and Sloan 1991; Warfield et al. 1995; Cheng and Warfield 2005; Ali and Zhang 2015; Cheng et al. 2016), including CEO ownership, tenure, incentive pay, two proxies for CEO myopia, and internal governance that measures the ability of CEO subordinates to steer the firm to report honestly. All variables are defined in Appendix A. Our baseline results are robust to these additional controls.

4.4.2 Additional robustness tests

We further conduct the following robustness checks. First, following previous studies (Czerney et al., 2019), we redefine *MISSTATE* (*IRREGULARITY*), which equals one for the initial year of misstatement or irregularity period, and zero otherwise, so that we can relate the origination of financial misstatements to individualistic CEOs. Our results are robust to this alternative definition of financial misstatements or irregularities.

Second, we calculate alternative name uncommonness variables based on whether the frequency of a CEO's first name, scaled by the total population in SSA from 1914 to 2019 (or

[19] Our results are robust when controlling for the three components in the narcissism index separately.

within 18 years of the birth of the CEO), falls in the lowest decile of measures in the ExecuComp sample. Our results are robust to this alternative definition. We further limit the calculation of the name frequency (in the construction of *UNCOMM_BRF*) to within a six-year window around (three years before and three years after) the birth year of a CEO to estimate the name uncommonness measures, which gives us similar results.

Third, Dechow et al. (2011) develop an ex-ante misstatement measure (i.e., *F-score*) from publicly available information. This ex-ante likelihood measure may be correlated with CEO characteristics and therefore sparks concerns regarding our interpretation of the main results. Thus, we include *F-score* as an additional control variable, which gives us robust results. As the calculation of *F-score* requires non-missing observations on many variables and would significantly reduce our sample size, we do not include *F-score* in the main tables.[20]

Fourth, individualistic CEOs might be related to operational strategies that deviate from those of industry peers. Such strategic distinctiveness may, in turn, affect the likelihood of financial misstatement, thereby explaining our main findings. To address this concern, we follow Kang et al. (2021) in constructing strategic distinctiveness and control for it. The results show that the estimated coefficients on our name uncommonness variables remain similar, suggesting that distinct strategic choices do not explain the relation between individualistic CEOs and the likelihood of financial misstatements.

Finally, we include CEO overconfidence, CEO narcissism, incentive pay, tenure, ownership, CEO myopia, firm internal governance, *F-score*, and strategic distinctiveness in

[20] We use the same sample that requires the availability of *F-score* and find that the estimated coefficients on our name uncommonness variables do not change, suggesting that excluding *F-score* does not cause a correlated omitted variable problem.

one comprehensive regression and examine the robustness of our main results. The untabulated results show that our main findings are robust to the inclusion of all these additional controls, with similar magnitudes of coefficients and significance levels on our CEO individualism proxies.

[Insert Table 7 Here]

5. Conclusion

We examine the effect of an important dimension of CEOs' cultural background—individualism—on their corporate behaviors in the context of a high-impact accounting event: financial misstatements. Archival research has long been limited to country-level studies, primarily due to the difficulty of empirically measuring individualism at the executive level, while social psychologists indicate large variations in individualism within the same country (e.g., Triandis 1995). Recent developments in the psychology and economics literature, however, now make the measurement at the individual level feasible.

Using a unique proxy of executive-level individualism—the first-name uncommonness of CEOs—we posit and find that individualistic CEOs are more likely to misstate financial reports in the U.S. This relation is even stronger when we focus on more severe types of misstatements: (unintentional) material and fraudulent misstatements. Moreover, based on the predictions from psychology theory and upper echelons theory, we also find that this positive relation is mitigated by the presence of an independent board and that it is amplified when individualistic CEOs are socially active or when the management team's ability is low.

Furthermore, our results are robust to industry-year-size matching, propensity score matching, and entropy balancing matching methods. We also utilize CEO turnovers to address

potential endogeneity. We find that when non-individualistic CEOs (individualistic CEOs) are succeeded by individualistic CEOs (non-individualistic CEOs), the likelihood of misstating earnings increases (decreases), both statistically and economically.

Focusing on executive-level individualism of U.S. firms, we are able to tease out country-level confounding factors that may lead to mixed results in cross-country settings. Our results speak to the important role the cultural background of CEOs plays in shaping corporate behaviors. We extend this line of investigation to examine the effect of arguably the most important executive cultural background (i.e., individualism) (Triandis 2001) on earnings management.

Our findings will be of interest to academic researchers and have important implications for auditors and capital market participants, including investors and financial analysts, who wish to better understand corporate financial misreporting behavior.

References

Abramitzky, R., Boustan, L., and Eriksson, K. 2020. Do immigrants assimilate more slowly today than in the past? *American Economic Review: Insights* 2(1): 125-41.

Agcayazi, B., Hibbert, A. M., & Morillon, T. G. 2024. CEO international background and cross-border M&As. *Journal of Banking & Finance*, 164, 107129.

Ahern, K. R., Daminelli, D., & Fracassi, C. 2015. Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics*, 117(1), 165-189

Ali, A., and W. Zhang. 2015. CEO tenure and earnings management. *Journal of Accounting and Economics* 59 (1):60-79.

Antoniou, C., Cuculiza, C., Kumar, A., & Yang, L. 2024. It takes two to tango: Spousal risk preferences and CEO risk-taking behavior. *Journal of Corporate Finance*, 86, 102584.

Baik, B. O., Farber, D. B., & Lee, S. A. M. 2011. CEO ability and management earnings forecasts. *Contemporary Accounting Research*, 28(5): 1645-1668.

Bartov, E., A. Marra, and F. Momenté. 2021. Corporate Social Responsibility and the Market Reaction to Negative Events: Evidence from Inadvertent and Fraudulent Restatement Announcements. *The Accounting Review* 96 (2):81-106.

Bazzi, S., M. Fiszbein, and M. Gebresilasse. 2020. Frontier Culture: The Roots and Persistence of "Rugged Individualism" in the United States. *Econometrica* 88 (6):2329-2368.

Beasley, M., Carcello, J., Hermanson, D., & Neal, T. 2010. Fraudulent financial reporting: 1998–2007. An analysis of U.S. public companies. Committee of Sponsoring Organizations of the Treadway Commission (COSO) Report.

Bertrand, M., and Mullainathan, S. 2004. Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review* 94(4): 991-1013.

Bian, B., Li, J., Xu, T., and Foutz, N. Z. 2022. Individualism during crises. *Review of Economics and Statistics* 104 (2): 368-385.

Bloothooft, G., and Onland, D. 2011. Socioeconomic determinants of first names. *Names* 59 (1): 25-41.

Borochin P, Yang J. 2017. The effects of institutional investor objectives on firm valuation and governance. *Journal of Financial Economics* 126 (1): 171-199.

Brochet, F., Miller, G. S., Naranjo, P., and Yu, G. 2019. Managers' cultural background and disclosure attributes. *The Accounting Review* 94(3): 57-86.

Bushee, B. J., Goodman, T. H., & Sunder, S. V. 2019. Financial reporting quality, investment horizon, and institutional investor trading strategies. *The Accounting Review* 94(3): 87-112.

Cai, Y., Y. Kim, S. Li, and C. Pan. 2019. Tone at the top: CEOs' religious beliefs and earnings management. *Journal of Banking and Finance* 106:195-213.

Campbell, T. C., Gallmeyer, M., Johnson, S. A., Rutherford, J., & Stanley, B. W. 2011. CEO optimism and forced turnover. *Journal of Financial Economics*, 101(3): 695-712.

Campbell, W. K., A. S. Goodie, and J. D. Foster. 2004. Narcissism, confidence, and risk attitude. *Journal of Behavioral Decision Making* 17 (4):297-311.

Capalbo, F., A. Frino, M. Y. Lim, V. Mollica, and R. Palumbo. 2018. The Impact of CEO Narcissism on Earnings Management. *Abacus* 54 (2):210-226.

Cao, Y., Hao, R., & Yang, Y. G. 2024. National culture and analysts' forecasting. *Review of Accounting Studies*, 29(2), 1147-1191.

Chatterjee, A., and D. C. Hambrick. 2007. It's All about Me: Narcissistic Chief Executive Officers and Their Effects on Company Strategy and Performance. *Administrative Science Quarterly* 52 (3):351-386.

Chen, S., H. C. Boucher, and M. P. Tapias. 2006. The relational self revealed: Integrative conceptualization and implications for interpersonal life. *Psychological bulletin* 132 (2):151-179.

Chen, Y., Fu, R., Tang, Y., & Zhao, X. 2024. CEOs' Pre-Career Exposure to Religion and Corporate Tax Avoidance. *Journal of Management Studies*.

Cheng, Q., and T. A. Warfield. 2005. Equity incentives and earnings management. *The Accounting Review* 80 (2):441-476.

Cheng, Q., Lee, J., & Shevlin, T. 2016. Internal governance and real earnings management. *The Accounting Review* 91(4): 1051-1085.

Cheng, S. 2004. R&D expenditures and CEO compensation. *The Accounting Review* 79 (2): 305-328.

Chiu, P.-C., S. H. Teoh, and F. Tian. 2013. Board Interlocks and Earnings Management Contagion. *The Accounting Review* 88 (3):915-944.

Choi, J. H., & Gipper, B. 2024. Fraudulent financial reporting and the consequences for employees. *Journal of Accounting and Economics*, 101673.

Cook, A., and C. Glass. 2014. Above the glass ceiling: When are women and racial/ethnic minorities promoted to

CEO? *Strategic Management Journal* 35 (7):1080-1089.
Czerney, K., J. J. Schmidt, A. M. Thompson, and W. Zhu. 2019. Do Type II Subsequent Events Impair Financial Reporting Quality? *The Accounting Review* 95 (6):97-123.
Daab, W. Z. 1991. Changing perspectives on individualism. *International Society for Political Psychology*
DeBacker, J., Heim, B. T., & Tran, A. 2015. Importing corruption culture from overseas: Evidence from corporate tax evasion in the United States. *Journal of Financial Economics*, 117(1), 122-138.
Dechow, P. M., & Sloan, R. G. 1991. Executive incentives and the horizon problem: An empirical investigation. *Journal of Accounting and Economics*, 14(1): 51-89.
Dechow, P. M., W. L. Ge, C. R. Larson, and R. G. Sloan. 2011. Predicting Material Accounting Misstatements. *Contemporary Accounting Research* 28 (1):17-82.
Dechow, P., Ge, W., and Schrand, C. 2010. Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics* 50(2-3): 344-401.
Demerjian, P. R., B. Lev, M. F. Lewis, and S. E. McVay. 2013. Managerial Ability and Earnings Quality. *The Accounting Review* 88 (2):463-498.
Demerjian, P., B. Lev, and S. McVay. 2012. Quantifying Managerial Ability: A New Measure and Validity Tests. *Management Science* 58 (7):1229-1248.
Desai, H., Hogan, C., Wilkins, M., 2006. The reputational penalty for aggressive accounting: earnings restatements and management turnover. *The Accounting Review* 81, 83–112.
Fee, C. E., and C. J. Hadlock. 2004. Management turnover across the corporate hierarchy. *Journal of Accounting and Economics* 37 (1):3-38.
Fryer Jr, R. G., and S. D. Levitt. 2004. The causes and consequences of distinctively black names. *The Quarterly Journal of Economics* 119 (3):767-805.
Gao, L., Han, J., Pan, Z., & Zhang, H. 2023. Individualistic CEO and corporate innovation: Evidence from US frontier culture. *Research Policy*, 52(9), 104852.
Ge, L., Jamil, T., & Yu, J. 2024. CEO overconfidence and the choice of debt issuance. *Journal of Banking & Finance*, 161, 107099
Gorodnichenko, Y., and Roland, G. 2017. Culture, institutions, and the wealth of nations. *Review of Economics and Statistics* 99(3): 402-416.
Gray, S. J. 1988. Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus*, 24(1): 1-15.
Hainmueller, J. 2012. Entropy Balancing for Causal Effects: A Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies. *Political Analysis* 20 (1):25-46.
Ham, C., M. Lang, N. Seybert, and S. Wang. 2017. CFO Narcissism and Financial Reporting Quality. *Journal of Accounting Research* 55 (5): 1089-1135.
Hambrick, D. C. 1995. Fragmentation and the other Problems CEOs Have with Their Top Management Teams. *California Management Review* 37 (3):110-127.
Hambrick, D. C. 2007. Upper Echelons Theory: An Update. *The Academy of Management Review* 32 (2):334-343.
Han, S., Kang, T., Salter, S., and Yoo, Y. K. 2010. A cross-country study on the effects of national culture on earnings management. *Journal of International Business Studies* 41(1): 123-141.
Hanlon, M., K. Yeung, and L. Zuo. 2022. Behavioral Economics of Accounting: A Review of Archival Research on Individual Decision Makers. *Contemporary Accounting Research* 39 (2):1150-1214.
Harter, S. 2015. *The construction of the self: Developmental and sociocultural foundations*: Guilford Publications.
Hennes, K. M., A. J. Leone, and B. P. Miller. 2008. The Importance of Distinguishing Errors from Irregularities in Restatement Research: The Case of Restatements and CEO/CFO Turnover. *The Accounting Review* 83 (6):1487-1519.
Hilary, G., & Hui, K. W. 2009. Does religion matter in corporate decision making in America? *Journal of Financial Economics*, 93(3), 455-473.
Hofstede, G. 1991. *Culture and organizations intercultural cooperation and its importance for survival*. Software of the Mind. London Melraw-Hill.
Hofstede, G. 2001. *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Sage publications.
Hofstede, G., Hofstede, G. J., and Minkov, M. 2005. *Cultures and organizations: Software of the mind* (Vol. 2). New York: Mcgraw-hill.
Hribar, P., Jenkins, N., 2004. The effect of accounting restatements on earnings revisions and the estimated cost of capital. *Review of Accounting Studies* 9,337–356.
Jang, J., & Lee, E. 2024. CEO confidence matters: the real effects of short sale constraints revisited. *Review of Quantitative Finance and Accounting*, 62(2), 603-636.

Jia, Y., L. V. Lent, and Y. Zeng. 2014. Masculinity, Testosterone, and Financial Misreporting. *Journal of Accounting Research* 52 (5):1195-1246.

Kalist, D. E., and D. Y. Lee. 2009. First Names and Crime: Does Unpopularity Spell Trouble?. *Social Science Quarterly* 90 (1):39-49.

Kanagaretnam, K., Lim, C. Y., and Lobo, G. J. 2011. Effects of national culture on earnings quality of banks. *Journal of International Business Studies* 42(6): 853-874.

Kang, Y., D. H. Zhu, and Y. A. Zhang. 2021. Being extraordinary: How CEOs' uncommon names explain strategic distinctiveness. *Strategic Management Journal* 42 (2):462-488.

Kashmiri, S., & Mahajan, V. 2017. Values that shape marketing decisions: Influence of chief executive officers' political ideologies on innovation propensity, shareholder value, and risk. *Journal of Marketing Research*, 54(2), 260-278.

Klein, A. 2002. Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics* 33 (3):375-400.

Knudsen, A. S. B. 2019. Those who stayed: Individualism, self-selection and cultural change during the age of mass migration. Lund University

Lawson, E. D. 1984. Personal names: 100 years of social science contributions. *Names-a Journal of Onomastics* 32 (1):45-73.

Lee, C. W. J., L. Y. Li, and H. Yue. 2006. Performance, growth and earnings management. *Review of Accounting Studies* 11 (2-3):305-334.

Lennox, C., and J. A. Pittman. 2010. Big Five Audits and Accounting Fraud. *Contemporary Accounting Research* 27 (1):209-247.

Li, K., Griffin, D., Yue, H., Zhao, L. 2013. How does culture influence corporate risk-taking? *Journal of Corporate Finance*. 23, 1–22.

Liao, S., Nguyen, N. H., & Truong, C. 2024. Does CEO extraversion pay off when in need? Evidence from the global financial crisis. *The British Accounting Review*, 56(4), 101234.

Lieberson, S., and Bell, E. O. 1992. Children's first names: An empirical study of social taste. *American Journal of Sociology* 98(3): 511-554.

Liu, X. 2016. Corruption culture and corporate misconduct. *Journal of Financial Economics* 122 (2):307-327.

Markus, H., and S. Cross. 1990. The interpersonal self. In *Handbook of personality: Theory and research.* New York, NY, U.S.: The Guilford Press, 576-608.

McMullin, J. L., and B. Schonberger. 2020. Entropy-balanced accruals. *Review of Accounting Studies* 25 (1):84-119.

Mehrabian, A. 2001. Characteristics attributed to individuals on the basis of their first names. *Genetic, Social, and General Psychology Monographs* 127 (1):59.

Mihet, R., 2013. Effects of culture on firm risk-taking: A cross-country and cross-industry analysis. *Journal of Cultural Economics*. 37 (1), 109–151.

Moore, D. A., A. S. Dev, and E. Y. Goncharova. 2018. Overconfidence Across Cultures. Collabra: Psychology 4 (1).

Murphy, P. R. 2012. Attitude, Machiavellianism and the rationalization of misreporting. *Accounting, Organizations and Society* 37 (4):242-259.

Nguyen, D. D., Hagendorff, J., & Eshraghi, A. 2018. Does a CEO's cultural heritage affect performance under competitive pressure?. *The Review of Financial Studies*, 31(1), 97-141.

Ogihara, Y., Fujita, H., Tominaga, H., Ishigaki, S., Kashimoto, T., Takahashi, A., ... & Uchida, Y. 2015. Are common names becoming less common? The rise in uniqueness and individualism in Japan. *Frontiers in Psychology* 6: 1490.

Olsen, K. J., K. K. Dworkis, and S. M. Young. 2014. CEO Narcissism and Accounting: A Picture of Profits. *Journal of Management Accounting Research* 26 (2): 243-267.

Olsson, O., and Paik, C. 2016. Long-run cultural divergence: Evidence from the neolithic revolution. *Journal of Development Economics* 122: 197-213.

Palmrose, Z., Scholz, S., 2004. The circumstances and legal consequences of non-GAAP reporting: evidence from restatements. *Contemporary Accounting Research* 21, 139–180

Pittman, J. A., and Y. Zhao. 2021. Auditor Responses to and Prevention of Non-Income-Increasing Misreporting: Evidence from Audit Fees and Restatements. *Auditing: A Journal of Practice & Theory* 40 (3):127-153.

Power, D., Schoenherr, T., and Samson, D. 2010. The cultural characteristic of individualism/collectivism: A comparative study of implications for investment in operations between emerging Asian and industrialized Western countries. *Journal of Operations Management* 28(3): 206-222.

Raskin, R., and Terry H. 1988. A principal-components analysis of the narcissistic personality inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology* 54 (5): 890– 902.

Realo, A., Allik, J., and Greenfield, B. 2008. Radius of trust: Social capital in relation to familism and institutional collectivism. *Journal of Cross-Cultural Psychology* 39(4): 447-462.
Roberts, B. W., and D. Mroczek. 2008. Personality Trait Change in Adulthood. *Current Directions in Psychological Science* 17 (1):31-35.
Roberts, M.R., Whited, T.M., 2013. Endogeneity in empirical corporate finance. In: Constantinides G, Harris M & Stulz R (eds.) *Handbook of the Economics of Finance* 2. Elsevier, B.V., pp. 493-572.
Rosenbaum, P.R., Rubin, D.B., 1983. The central role of the propensity score in observational studies for causal effects. *Biometrika*, 41-55.
Sánchez-Expósito, M. J., and D. Naranjo-Gil. 2017. Effects of management control systems and cognitive orientation on misreporting: an experiment. *Management Decision* 55 (3):579-594.
Saesen, J., Schmidt, C. V. H., & Strese, S. 2024. The more, the better: The influence of overconfident CEOs on their firms' digital orientation. *Journal of Business Research*, 183, 114809.
Schonberg, W. B., and D. M. Murphy. 1974. The Relationship Between the Uniqueness of a Given Name and Personality. *The Journal of Social Psychology* 93 (1):147-148.
Schrand, C. M., and S. L. C. Zechman. 2012. Executive overconfidence and the slippery slope to financial misreporting. *Journal of Accounting and Economics* 53 (1–2):311-329.
Shannon, F. A. 1977. The Farmer's Last Frontier: Agriculture, 1860–1897, Vol. 5. ME Sharpe.
Soto, C. J., and J. L. Tackett. 2015. Personality Traits in Childhood and Adolescence: Structure, Development, and Outcomes. *Current Directions in Psychological Science* 24 (5):358-362.
Sunder, J., Sunder, S. V., & Zhang, J. 2017. Pilot CEOs and corporate innovation. *Journal of Financial Economics* 123(1): 209-224.
Triandis, H. C. 1995. Individualism & Collectivism. New Directions in Social Psychology. Boulder, Colorado: Westview Press.
Triandis, H. C. 2004. The many dimensions of culture. *Academy of Management Perspectives* 18(1): 88-93.
Triandis, H. C., and Gelfand, M. J. 2012. A theory of individualism and collectivism. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), Handbook of theories of social psychology (498–520). Sage Publications Ltd.
Triandis, H. C., Leung, K., Villareal, M. J., and Clack, F. I. 1985. Allocentric versus idiocentric tendencies: Convergent and discriminant validation. *Journal of Research in Personality* 19(4): 395-415.
Triandis, H.C., Carnevale, P., Gelfand, M., Robert, C., Wasti, S.A., Probst, T., Kashima, E.S., Dragonas, T., Chan, D., Chen, X.P. and Kim, U., 2001. Culture and deception in business negotiations: A multilevel analysis. *International Journal of Cross Cultural Management* 1(1):73-90.
Twenge, J. M., Abebe, E. M., and Campbell, W. K. 2010. Fitting in or standing Out: Trends in American parents' choices for children's names, 1880–2007. *Social Psychological and Personality Science* 1(1): 19-25.
Twenge, J. M., and M. Manis. 1998. First-Name Desirability and Adjustment: Self-Satisfaction, Others' Ratings, and Family Background. *Journal of Applied Social Psychology* 28 (1):41-51.
Twenge, J. M., Dawson, L., and Campbell, W. K. 2016. Still standing out: Children's names in the United States during the Great Recession and correlations with economic indicators. *Journal of Applied Social Psychology* 46(11): 663-670.
Varnum, M. E., and Kitayama, S. 2011. What's in a name? Popular names are less common on frontiers. *Psychological Science* 22(2): 176-183.
Warfield, T. D., J. J. Wild, and K. L. Wild. 1995. Managerial Ownership, Accounting Choices, and Informativeness of Earnings. *Journal of Accounting and Economics* 20 (1):61-91.
Yates, J. F., Lee, J.-W., & Bush, J. G. 1997. General Knowledge Overconfidence: Cross-National Variations, Response Style, and "Reality." *Organizational Behavior and Human Decision Processes*, 70(2), 87–94.
Yates, J. F., Lee, J.-W., Shinotsuka, H., Patalano, A. L., & Sieck, W. R. 1998. Cross-Cultural Variations in Probability Judgment Accuracy: Beyond General Knowledge Overconfidence? *Organizational Behavior and Human Decision Processes*, 74(2), 89–117.
Ye, J. and S. Skiena. The Secret Lives of Names? Name Embeddings from Social Media. in Proceedings of the 25th SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), Anchorage, Alaska, Aug. 2019.
Ye, J., S. Han, Y. Hu, B. Coskun, M. Liu, H. Qin and S. Skiena. Nationality Classification using Name Embeddings. in Proceedings of the 2017 ACM on Conference on Information and Knowledge Management (CIKM), Singapore, Nov. 2017, pp. 1897-1906.
Zhang, F. 2024. CEO individualism and corporate innovation. *China Accounting and Finance Review*, 26(3), 385-412.
Zhang, X., Liang, X., and Sun, H. 2013. Individualism–collectivism, private benefits of control, and earnings management: A cross-culture comparison. *Journal of Business Ethics* 114(4): 655-664.

Zingales, L. 2015. The “cultural revolution” in finance. *Journal of Financial Economics* 117 (1):1-4.

Appendix A: Variable definitions

Variables	Description
Dependent variables	
MISSTATE	Indicator variable equal to 1 for firm-years involved in restating periods according to Audit Analytics, and 0 otherwise. We exclude misstatements due to clerical errors.
IRREGULARITY	Indicator variable equal to 1 for firm-years with a Form 8-K Item 4.02 filing, and 0 otherwise. For restatements filed before 2005, we rely on hand-collected GAO restatement data to define restatement periods.
Independent variables	
UNCOMMON_RF (raw ratio)	A relative frequency measure of the first name, calculated as the frequency of a given name divided by the frequency of the most common given name from 1914–2019 by gender, multiplied by 100.
UNCOMMON_RF	Indicator variable equal to 1 for the lowest decile of UNCOMMON_RF (raw ratio) for all CEOs in ExecuComp from 2000–2019, and 0 otherwise.
UNCOMMON_BRF (raw ratio)	A relative frequency measure of the first name, calculated as the frequency of a given name divided by the frequency of the most common given name within 18 years of a CEO's birth by gender, multiplied by 100.
UNCOMMON_BRF	Indicator variable equal to 1 for the lowest decile of UNCOMMON_BRF (raw ratio) for all CEOs in ExecuComp from 2000–2019, and 0 otherwise.
Control variables	
ROA	Return on total assets, equal to net income (Compustat: NI) divided by average total assets (Compustat: AT).
LOSS	Indicator variable equal to 1 if the firm has negative income before extraordinary items (IB), and 0 otherwise.
LnAT	Natural logarithm of total firm assets (Compustat: AT).
LEV	Total liabilities (Compustat: LT) divided by total assets (Compustat: AT).
BTM	Book-to-market ratio (Compustat: (CSHO*PRCC_F)/CEQ).
RETVOL	Stock return volatility, estimated as the standard deviation of daily stock returns in the fiscal year where a minimum number of 200 days of available returns data is required.
BHRET	Buy-and-hold annual returns estimated based on monthly stock returns in the fiscal year.
LEASE	Indicator variable equal to 1 if future operating lease obligations (Compustat: MRC1-5) are greater than 0, and 0 otherwise at year end.
AGE	Number of years reported in Compustat for the firm.
AB_EMP	Percentage change in the number of employees (Compustat: EMP) minus percentage change in total assets (Compustat: AT).
M&A	Indicator variable equal to 1 if the firm has an M&A event (Compustat: AQS > 0) in the year, and 0 otherwise.
ISSUE	Equals 1 if the sum of new long-term debt (Compustat: DLTIS) and new equity (Compustat: SSTK) is greater than 2% of the total assets (Compustat: AT).
CEO_AGE	Age (in years) of CEO.

CEO_GENDER	Indicator variable equal to 1 for female CEO, and 0 otherwise.
CEO_EDU	Indicator variable equal to 1 if a CEO holds an MBA degree or is a CPA, and 0 otherwise.
CEO_EDU_MISS	Indicator variable equal to 1 if education information of a CEO is unknown, and 0 otherwise.
DEDINST	Percentage of institutional holdings by dedicated institutional shareholders at the beginning of the year.
DUALITY	Indicator variable equal to 1 if a CEO is also the board chair of the firm, and 0 otherwise.
BOARD_SIZE	The number of board directors of the firm.

Additional variables used in the cross-sectional analysis

Managerial ability score	Managerial ability score developed in Demerjian et al. (2016).
Industry-adjusted ROA	The average value of annual industry-adjusted ROA for the prior three years for a particular CEO for each firm year. Annual industry-adjusted ROA is calculated as ROA for each firm minus the average ROA for all other firms with the same two-digit SIC code for each firm-year. The CEO is required to be the same for the current and prior three years. The firm-year observations are deleted if there are fewer than 10 firms within a two-digit SIC code for a given year.
CEO's social network	Number of nonprofit organizations (e.g., clubs and charities) in which the CEO has active roles.

Additional variables used in the robustness check

CEO ethnicity	CEO's ethnicity categories which include White, Black, Asian and Pacific Islander, American Indian and Alaska Native, Hispanic, and the descendants of more than 2 races.
CEO overconfidence	Indicator variable equal 1 if a CEO holds stock options that are more than 67% in the money (i.e., the stock price exceeds the average exercise price by more than 67%), and 0 otherwise (Campbell et al. 2011).
CEO narcissism	A composite index based on the principal factor analysis of the following three variables: (a) relative cash payment, which is calculated as the CEO's cash compensation relative to that of the second-highest-paid executive; (b) relative non-cash payment, calculated as the CEO's non-cash compensation relative to that of the second-highest-paid executive; (c) CEO prominence in press releases, calculated as the number of times the CEO is mentioned by name in the company's press releases divided by the total number of words in all the company's press releases.
CEO ownership	The percentage of shares (excluding options) held by the CEO.
CEO tenure	The number of service years of the firm's CEO since he or she takes office.
CEO incentive pay	The sum of cash bonus and stock-based compensation divided by total pay.
Above63	An indicator variable equal to 1 if the CEO's age exceeds 63, and 0 otherwise
STO	A ranked variable based on a short-term orientation culture index (Hofstede 1991, 2001). The index is constructed according to the CEO's ethnic origin. A lower value indicates a culture with more short-termism orientation. The index is ranked into deciles and transformed into a variable within the range of 0 to 1.

Internal governance	The sum of the standardized value of *Exec_Horizon* and *Exec_PayRatio* following Cheng, Lee and Shevlin (2016). *Exec_Horizon* is subordinate executives' decision horizon, defined as retirement age of 65 minus the average age of other executives. *Exec_PayRatio* is subordinate executives' pay ratio, calculated as the average total compensation of subordinate executives scaled by the CEO's total compensation for prior year.
Alternative MISSTATE (or IRREGULARITY)	Indicator variable equal 1 for the initial year of the misstatement (or irregularity) period, and 0 otherwise.
Alternative UNCOMMON_RF (different deflator)	Indicator variable equal 1 for the lowest decile of the absolute frequency of a CEO's first name scaled by the total population in SSA from 1914 to 2019 (by gender), and 0 otherwise.
Alternative UNCOMMON_BRF (different deflator)	Indicator variable equal 1 for the lowest decile of the absolute frequency of a CEO's first name scaled by the total population in SSA within 18 years since the birth year of the CEO (by gender), and 0 otherwise.
Alternative UNCOMMON_BRF (different frequency calculation period)	Indicator variable equal 1 for the lowest decile of the frequency of a CEO's first name scaled by the frequency of the most common first name within 3 years before and 3 years after a CEO's birth (by gender), and 0 otherwise.
F-score	The average fraud score in the past three years, estimated from model 3 of Dechow et al. (2011).
Strategic distinctiveness	A composite measure calculated as the sum of standardized values of strategic distinctiveness indicators of dimensions (Kang et al. 2020): (a) advertising intensity (advertising expense divided by sales), (b) inventory level (inventories divided by sales), (c) plant and equipment newness (net plant and equipment divided by gross plant and equipment), (d) research and development (R&D) intensity (R&D expense divided by sales), (e) nonproduction overhead (selling, general, and administrative expense divided by sales), and (f) financial leverage (total debt divided by equity). The strategic distinctiveness indicator is calculated as the absolute difference between a firm and the average of all other firms in the same industry in each year along each dimension. Each indicator is then standardized by industry and year.

Appendix B: Pearson and Spearman correlations

The table reports Pearson (lower) and Spearman (upper) correlation coefficients among variables used in the baseline analysis. ***, ** and * indicate 1%, 5%, and 10% significant levels, respectively.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1)	MISSTATE		0.644***	0.044***	0.050***	-0.090***	0.067***	-0.059***	-0.023***	0.077***	0.082***	-0.037***
(2)	IRREGULARITY	0.644***		0.062***	0.064***	-0.074***	0.063***	-0.089***	-0.046***	0.046***	0.109***	-0.035***
(3)	UNCOMMON_RF	0.044***	0.062***		0.852***	-0.023***	0.037***	-0.040***	-0.078***	0.032***	0.053***	-0.005
(4)	UNCOMMON_BRF	0.050***	0.064***	0.852***		-0.032***	0.049***	-0.040***	-0.063***	0.029***	0.056***	-0.004
(5)	ROA	-0.073***	-0.068***	-0.014	-0.024***		-0.599***	0.027***	-0.236***	-0.496***	-0.312***	0.195***
(6)	LOSS	0.067***	0.063***	0.037***	0.049***	-0.648***		-0.113***	0.068***	0.218***	0.349***	-0.215***
(7)	LnAT	-0.063***	-0.087***	-0.049***	-0.045***	0.071***	-0.119***		0.437***	-0.102***	-0.400***	0.019**
(8)	LEV	-0.027***	-0.047***	-0.080***	-0.065***	-0.165***	0.070***	0.404***		-0.161***	-0.130***	-0.029***
(9)	BTM	0.077***	0.050***	0.043***	0.044***	-0.352***	0.289***	-0.082***	-0.123***		0.287***	-0.292***
(10)	RETVOL	0.079***	0.108***	0.047***	0.051***	-0.414***	0.405***	-0.346***	-0.082***	0.311***		-0.229***
(11)	BHRET	-0.022**	-0.018**	0.003	0.004	0.202***	-0.180***	-0.011	-0.035***	-0.311***	-0.152***	
(12)	LEASE	0.007	-0.007	-0.021**	-0.028***	-0.043***	0.021**	0.066***	0.044***	-0.003	-0.003	-0.007
(13)	AGE	-0.054***	-0.086***	-0.027***	-0.011	0.056***	-0.092***	0.427***	0.262***	-0.011	-0.295***	-0.012
(14)	AB_EMP	0.000	-0.013	0.009	0.002	-0.149***	0.098***	-0.054***	-0.013	0.053***	-0.006	-0.135***
(15)	M&A	0.019**	0.017*	-0.013	-0.011	-0.034***	-0.006	0.009	-0.009	0.009	-0.013	-0.011
(16)	ISSUE	0.025***	0.031***	-0.013	-0.019**	-0.019**	0.005	0.129***	0.201***	-0.045***	-0.019**	0.036***
(17)	DEDINST	0.018**	0.021**	0.013	0.013	-0.057***	0.035***	0.004	0.105***	0.054***	0.002	-0.029***
(18)	DUALITY	0.003	0.018**	-0.013	-0.005	0.013	-0.045***	0.099***	0.058***	-0.007	-0.022**	-0.004
(19)	BOARD_SIZE	-0.055***	-0.076***	-0.051***	-0.039***	0.052***	-0.088***	0.570***	0.339***	-0.070***	-0.253***	-0.015*
(20)	CEO_AGE	-0.043***	-0.083***	0.007	0.012	0.048***	-0.063***	0.076***	0.026***	0.037***	-0.147***	0.004
(21)	CEO_GENDER	0.015*	0.013	0.091***	0.068***	0.004	0.001	0.004	0.018**	0.008	-0.012	-0.016*
(22)	CEO_EDU	-0.011	-0.009	-0.020**	-0.031***	0.021**	-0.027***	0.055***	0.081***	-0.026***	-0.054***	0.01

		(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1)	MISSTATE	0.007	-0.056***	0.012	0.019**	0.025***	0.035***	0.003	-0.060***	-0.043***	0.015*	-0.011
(2)	IRREGULARITY	-0.007	-0.091***	-0.002	0.017*	0.031***	0.047***	0.018**	-0.081***	-0.081***	0.013	-0.009
(3)	UNCOMMON_RF	-0.021**	-0.026***	0.009	-0.013	-0.013	0.015*	-0.013	-0.053***	0.012	0.091***	-0.020**
(4)	UNCOMMON_BRF	-0.028***	-0.012	0.006	-0.011	-0.019**	0.020**	-0.005	-0.043***	0.016*	0.068***	-0.031***
(5)	ROA	-0.040***	0.020**	-0.142***	-0.051***	-0.036***	-0.052***	0.01	0.025***	0.023***	0.004	0.016*
(6)	LOSS	0.021**	-0.090***	0.138***	-0.006	0.005	0.013	-0.045***	-0.093***	-0.060***	0.001	-0.027***
(7)	LnAT	0.066***	0.408***	-0.050***	0.01	0.136***	0.116***	0.096***	0.570***	0.086***	-0.007	0.058***
(8)	LEV	0.043***	0.259***	-0.013	-0.002	0.204***	0.110***	0.071***	0.349***	0.040***	0.018**	0.083***
(9)	BTM	0.002	0.020**	0.040***	0.036***	-0.077***	0.011	0.008	-0.064***	0.039***	-0.002	-0.037***
(10)	RETVOL	-0.018**	-0.329***	0.015*	-0.004	-0.044***	-0.011	-0.038***	-0.285***	-0.133***	-0.017*	-0.055***
(11)	BHRET	-0.008	0.020**	-0.146***	-0.009	0.034***	-0.043***	0.009	0.011	0.020**	-0.016*	0.01
(12)	LEASE		-0.016*	0.016*	0.023***	0.029***	-0.038***	-0.007	0.017**	-0.021**	0.016*	0.042***
(13)	AGE	-0.01		-0.019**	-0.067***	-0.025***	0.102***	0.091***	0.412***	0.160***	0.01	0.092***
(14)	AB_EMP	0.008	0.002		-0.106***	-0.110***	-0.019**	-0.015*	-0.022**	-0.006	-0.004	-0.005
(15)	M&A	0.023***	-0.064***	-0.159***		0.130***	-0.034***	-0.028***	-0.057***	-0.025***	-0.01	-0.007
(16)	ISSUE	0.029***	-0.026***	-0.115***	0.130***		0.027***	-0.009	0.065***	-0.026***	-0.035***	-0.004
(17)	DEDINST	-0.013	0.064***	0.01	-0.029***	0.033***		0.082***	0.118***	-0.023***	-0.002	-0.015*
(18)	DUALITY	-0.007	0.108***	-0.004	-0.028***	-0.009	0.028***		0.027***	0.227***	-0.046***	-0.048***
(19)	BOARD_SIZE	0.014	0.403***	-0.016*	-0.056***	0.066***	0.032***	0.019**		0.068***	-0.008	0.081***
(20)	CEO_AGE	-0.045***	0.148***	0.005	-0.020**	-0.039***	-0.01	0.231***	0.049***		-0.060***	-0.045***
(21)	CEO_GENDER	0.016*	0.026***	-0.009	-0.01	-0.035***	0.028***	-0.046***	-0.01	-0.053***		-0.033***
(22)	CEO_EDU	0.042***	0.098***	-0.006	-0.007	-0.004	-0.015*	-0.048***	0.076***	-0.058***	-0.033***	

Appendix C: The procedure to develop propensity-score-matched sample

Panel A: Determining of hiring uncommon name CEOs

Dependent indicator =	(1) UNCOMMON_RF	(2) UNCOMMON_BRF
ROA	0.796	0.702
	(1.63)	(1.47)
LOSS	0.255**	0.335***
	(2.11)	(2.84)
LnAT	-0.039	-0.070**
	(-1.37)	(-2.49)
LEV	-1.179***	-0.890***
	(-5.67)	(-4.33)
BTM	0.307***	0.241**
	(3.17)	(2.54)
RETVOL	0.094**	0.110***
	(2.36)	(2.80)
LEASE	-0.298	-0.419**
	(-1.63)	(-2.38)
AGE	0.001	0.007***
	(0.29)	(2.83)
M&A	-0.218**	-0.147
	(-2.02)	(-1.38)
ISSUE	0.046	-0.035
	(0.65)	(-0.50)
Year & Industry fixed effects	Yes	Yes
N	13059	13059
Log Likelihood	-3472.62	-3375.32

Panel B1: Univariate tests after matching based on *UNCOMMON_RF*

	UNCOMMON_RF = 1		**UNCOMMON_RF = 0**		**Difference**			
	Mean (1)	Median (2)	Mean (3)	Median (4)	Mean (1) - (3)	t-stat	Median (2) - (4)	z-stat
MISSTATE	**0.201**	**0.000**	**0.151**	**0.000**	**0.049**	**2.86**	**0.000**	**2.85**
IRREGULARITY	**0.128**	**0.000**	**0.079**	**0.000**	**0.049**	**3.58**	**0.000**	**3.57**
ROA	0.049	0.053	0.052	0.055	-0.003	-0.69	-0.002	-0.52
LOSS	0.191	0.000	0.191	0.000	0.000	0.00	0.000	0.00
LnAT	7.648	7.636	7.622	7.409	0.026	0.38	0.228	1.64
LEV	0.473	0.481	0.483	0.484	-0.010	-1.00	-0.003	-0.91
BTM	0.525	0.425	0.525	0.430	0.000	0.00	-0.005	-0.19
RETVOL	2.681	2.404	2.634	2.355	0.047	0.82	0.048	0.81
LEASE	0.961	1.000	0.965	1.000	-0.004	-0.48	0.000	-0.48
AGE	29.349	24.000	29.822	25.000	-0.473	-0.61	-1.000	-0.60
M&A	0.111	0.000	0.106	0.000	0.004	0.29	0.000	0.29
ISSUE	0.571	1.000	0.588	1.000	-0.016	-0.73	0.000	-0.73

Panel B2: Univariate tests after matching based on *UNCOMMON_BRF*

	UNCOMMON_BRF = 1		**UNCOMMON_BRF = 0**		**Difference**			
	Mean (1)	Median (2)	Mean (3)	Median (4)	Mean (1) - (3)	t-stat	Median (2) - (4)	z-stat

MISSTATE	**0.208**	**0.000**	**0.144**	**0.000**	**0.064**	**3.75**	**0.000**	**3.74**
IRREGULARITY	**0.130**	**0.000**	**0.080**	**0.000**	**0.050**	**3.63**	**0.000**	**3.62**
ROA	0.046	0.051	0.045	0.054	0.001	0.16	-0.003	-0.44
LOSS	0.206	0.000	0.206	0.000	0.000	0.00	0.000	0.00
LnAT	7.674	7.625	7.648	7.486	0.026	0.37	0.139	1.02
LEV	0.484	0.500	0.499	0.497	-0.016	-1.57	0.003	-1.41
BTM	0.525	0.427	0.532	0.428	-0.007	-0.35	-0.001	-0.85
RETVOL	2.697	2.423	2.670	2.348	0.028	0.47	0.075	0.94
LEASE	0.957	1.000	0.964	1.000	-0.007	-0.81	0.000	-0.81
AGE	30.360	25.000	29.740	25.000	0.620	0.79	0.000	0.47
M&A	0.113	0.000	0.104	0.000	0.009	0.65	0.000	0.65
ISSUE	0.561	1.000	0.586	1.000	-0.026	-1.14	0.000	-1.14

Appendix D: Covariates before and after weighting using entropy balancing method

Panel A: Based on *UNCOMMON_RF*

	UNCOMMON_RF = 1		**UNCOMMON_RF = 0**			
			Before: without weighting		After: with weighting	
	mean	variance	mean	variance	mean	variance
ROA	0.049	0.009	0.054	0.008	0.049	0.009
LOSS	0.191	0.155	0.142	0.122	0.191	0.155
LnAT	7.648	2.137	7.938	2.408	7.648	2.139
LEV	0.473	0.050	0.535	0.041	0.473	0.050
BTM	0.525	0.172	0.465	0.127	0.525	0.172
RETVOL	2.681	1.598	2.466	1.444	2.680	1.598
LEASE	0.961	0.037	0.974	0.025	0.961	0.037
AGE	29.350	294.700	31.200	315.900	29.350	294.800
M&A	0.111	0.098	0.127	0.111	0.111	0.098
ISSUE	0.571	0.245	0.596	0.241	0.571	0.245

Panel B: Based on *UNCOMMON_BRF*

	UNCOMMON_BRF = 1		**UNCOMMON_BRF = 0**			
			Before: without weighting		After: with weighting	
	mean	variance	mean	variance	mean	variance
ROA	0.046	0.011	0.054	0.008	0.046	0.011
LOSS	0.206	0.164	0.141	0.121	0.206	0.164
LnAT	7.674	2.301	7.936	2.395	7.674	2.302
LEV	0.484	0.050	0.534	0.041	0.484	0.050
BTM	0.525	0.181	0.465	0.127	0.525	0.180
RETVOL	2.697	1.650	2.465	1.439	2.697	1.650
LEASE	0.957	0.041	0.974	0.025	0.957	0.041
AGE	30.360	317.200	31.120	314.300	30.360	317.100
M&A	0.113	0.101	0.127	0.111	0.114	0.101
ISSUE	0.561	0.247	0.597	0.241	0.561	0.246

Table 1

Descriptive statistics

The table presents the descriptive statistics of the main variables in the baseline analysis. Variable definitions are provided in Appendix A.

Variables	N	Mean	Std. dev	Q1	Median	Q3
MISSTATE	13,059	0.146	0.353	0.000	0.000	0.000
IRREGULARITY	13,059	0.072	0.258	0.000	0.000	0.000
UNCOMMON_RF (raw ratio)	13,059	37.368	34.791	7.071	24.196	72.643
UNCOMMON_BRF (raw ratio)	13,059	36.180	33.164	6.687	28.075	61.633
ROA	13,059	0.054	0.092	0.024	0.058	0.096
LOSS	13,059	0.146	0.353	0.000	0.000	0.000
LnAT	13,059	7.916	1.547	6.780	7.769	8.930
LEV	13,059	0.530	0.205	0.394	0.533	0.660
BTM	13,059	0.469	0.362	0.241	0.394	0.606
RETVOL	13,059	2.482	1.208	1.650	2.183	2.975
BHRET	13,059	0.133	0.426	-0.122	0.103	0.332
LEASE	13,059	0.973	0.162	1.000	1.000	1.000
AGE	13,059	31.060	17.734	16.000	26.000	46.000
AB_EMP	13,059	-0.049	0.183	-0.106	-0.034	0.032
M&A	13,059	0.126	0.332	0.000	0.000	0.000
ISSUE	13,059	0.594	0.491	0.000	1.000	1.000
DEDINST	13,059	0.027	0.049	0.000	0.004	0.032
DUALITY	13,059	0.560	0.496	0.000	1.000	1.000
BOARD_SIZE	13,059	9.265	2.181	8.000	9.000	11.000
CEO_AGE	13,059	56.600	7.330	52.000	57.000	61.000
CEO_GENDER	13,059	0.039	0.193	0.000	0.000	0.000
CEO_EDU	13,059	0.408	0.492	0.000	0.000	1.000

Table 2

Univariate comparisons between firms with common-name CEOs and those with uncommon-name CEOs

The table compares the mean and median of main variables between firms with uncommon-name CEOs and firms with common-name CEOs. The t-statistics and z-statistics are reported for mean differences and median differences tests. ***, ** and * indicate 1%, 5%, and 10% significance levels, respectively. Variable definitions are provided in Appendix A.

Panel A: Uncommon name variable = *UNCOMMON_RF*

	UNCOMMON_RF=1 (obs. = 977)		**UNCOMMON_RF=0 (obs. = 12,082)**		**Difference**			
	Mean	Median	Mean	Median	Mean	t-stats	Median	z-stats
	(1)	(2)	(3)	(4)	(1) - (3)		(2) - (4)	
MISSTATE	0.201	0.000	0.141	0.000	0.059	5.05	0.000	5.05
IRREGULARITY	0.128	0.000	0.067	0.000	0.061	7.08	0.000	7.06
ROA	0.049	0.053	0.054	0.058	-0.005	-1.56	-0.006	-2.67
LOSS	0.191	0.000	0.142	0.000	0.049	4.18	0.000	4.18
LnAT	7.648	7.636	7.938	7.779	-0.290	-5.64	-0.142	-4.59
LEV	0.473	0.481	0.535	0.537	-0.062	-9.16	-0.056	-8.93
BTM	0.525	0.425	0.465	0.392	0.060	4.97	0.033	3.67
RETVOL	2.681	2.404	2.466	2.166	0.215	5.36	0.238	6.04
BHRET	0.137	0.091	0.133	0.104	0.005	0.32	-0.013	-0.54
LEASE	0.961	1.000	0.974	1.000	-0.013	-2.40	0.000	-2.40
AGE	29.349	24.000	31.198	27.000	-1.849	-3.14	-3.000	-2.96
AB_EMP	-0.043	-0.032	-0.049	-0.034	0.006	0.98	0.002	1.07
M&A	0.111	0.000	0.127	0.000	-0.017	-1.51	0.000	-1.51
ISSUE	0.571	1.000	0.596	1.000	-0.025	-1.53	0.000	-1.53
DEDINST	0.029	0.004	0.027	0.004	0.002	1.51	0.000	1.74
DUALITY	0.537	1.000	0.562	1.000	-0.025	-1.49	0.000	-1.49
BOARD_SIZE	8.873	9.000	9.297	9.000	-0.424	-5.85	0.000	-6.00
CEO_AGE	56.776	57.000	56.586	56.000	0.190	0.78	1.000	1.37
CEO_GENDER	0.100	0.000	0.034	0.000	0.067	10.41	0.000	10.37
CEO_EDU	0.374	0.000	0.411	0.000	-0.038	-2.30	0.000	-2.30

Panel B: Uncommon name variable = *UNCOMMON_BRF*

	UNCOMMON_BRF=1 (obs. = 979)		**UNCOMMON_BRF=0 (obs. = 12,080)**		**Difference**			
	Mean	Median	Mean	Median	Mean	t-stats	Median	z-stats
	(1)	(2)	(3)	(4)	(1) - (3)		(2) - (4)	
MISSTATE	0.208	0.000	0.141	0.000	0.068	5.78	0.000	5.77
IRREGULARITY	0.130	0.000	0.067	0.000	0.063	7.31	0.000	7.29
ROA	0.046	0.051	0.054	0.059	-0.008	-2.76	-0.007	-3.70
LOSS	0.206	0.000	0.141	0.000	0.065	5.56	0.000	5.56
LnAT	7.674	7.625	7.936	7.781	-0.262	-5.10	-0.156	-4.54
LEV	0.484	0.500	0.534	0.536	-0.050	-7.44	-0.036	-7.16
BTM	0.525	0.427	0.465	0.392	0.060	4.98	0.036	3.26
RETVOL	2.697	2.423	2.465	2.163	0.233	5.81	0.260	6.36
BHRET	0.139	0.094	0.133	0.104	0.007	0.49	-0.010	-0.49
LEASE	0.957	1.000	0.974	1.000	-0.017	-3.20	0.000	-3.20
AGE	30.360	25.000	31.116	27.000	-0.757	-1.28	-2.000	-1.38
AB_EMP	-0.047	-0.034	-0.049	-0.034	0.001	0.23	0.000	0.67
M&A	0.113	0.000	0.127	0.000	-0.014	-1.23	0.000	-1.23

ISSUE	0.561	1.000	0.597	1.000	-0.036	-2.22	0.000	-2.22
DEDINST	0.029	0.004	0.027	0.004	0.002	1.54	0.001	2.27
DUALITY	0.551	1.000	0.561	1.000	-0.010	-0.62	0.000	-0.62
BOARD_SIZE	8.967	9.000	9.290	9.000	-0.322	-4.45	0.000	-4.86
CEO_AGE	56.901	57.000	56.576	56.000	0.325	1.34	1.000	1.85
CEO_GENDER	0.085	0.000	0.035	0.000	0.050	7.78	0.000	7.76
CEO_EDU	0.355	0.000	0.413	0.000	-0.057	-3.51	0.000	-3.51

Table 3

The uncommonness of CEO names and financial misstatements: the baseline results

The table presents the logistic estimation results of the effect of uncommon-name CEOs on the occurrence of financial restatements (Column (1) - (4)) and irregularities (Column (5) - (8)) based on Model (1). The z-statistics are estimated by clustering by firm and are reported in parentheses. ***, **, and * indicate 1%, 5%, and 10% significance levels, respectively. Variable definitions are provided in Appendix A.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var =	**MISSTATE**				**IRREGULARITY**			
UNCOMMON_RF	0.480***		0.439***		0.785***		0.771***	
	(2.85)		(2.59)		(3.59)		(3.49)	
UNCOMMON_BRF		0.530***		0.494***		0.752***		0.759***
		(3.08)		(2.85)		(3.49)		(3.51)
ROA			-0.561	-0.560			-0.239	-0.229
			(-1.22)	(-1.22)			(-0.40)	(-0.38)
LOSS			0.137	0.133			0.198	0.186
			(1.22)	(1.18)			(1.24)	(1.16)
LnAT			-0.019	-0.017			-0.001	0.001
			(-0.44)	(-0.40)			(-0.02)	(0.02)
LEV			0.213	0.203			0.174	0.144
			(0.79)	(0.75)			(0.47)	(0.39)
BTM			0.422***	0.423***			0.340**	0.345**
			(3.69)	(3.72)			(2.20)	(2.25)
RETVOL			0.080*	0.080*			0.150**	0.152**
			(1.78)	(1.77)			(2.44)	(2.47)
BHRET			-0.084	-0.087			-0.134	-0.137
			(-1.21)	(-1.26)			(-1.48)	(-1.53)
LEASE			0.074	0.075			-0.113	-0.105
			(0.28)	(0.28)			(-0.33)	(-0.31)
AGE			-0.002	-0.002			-0.002	-0.003
			(-0.50)	(-0.55)			(-0.49)	(-0.53)
AB_EMP			-0.134	-0.131			-0.165	-0.160
			(-0.92)	(-0.89)			(-0.93)	(-0.90)

M&A			0.096	0.097			0.090	0.089
			(1.19)	(1.20)			(0.82)	(0.81)
ISSUE			0.169**	0.171**			0.261**	0.264**
			(2.37)	(2.39)			(2.50)	(2.52)
DEDINST			0.614	0.619			0.003	0.037
			(0.74)	(0.75)			(0.00)	(0.03)
DUALITY			0.055	0.053			0.101	0.094
			(0.62)	(0.60)			(0.79)	(0.74)
BOARD_SIZE			-0.028	-0.028			-0.079**	-0.079**
			(-0.95)	(-0.98)			(-1.96)	(-1.98)
CEO_AGE			-0.004	-0.004			-0.010	-0.011
			(-0.56)	(-0.59)			(-1.01)	(-1.05)
CEO_GENDER			0.291	0.298			0.632**	0.645**
			(1.38)	(1.42)			(2.14)	(2.18)
CEO_EDU			-0.005	0.001			0.107	0.116
			(-0.05)	(0.01)			(0.78)	(0.84)
CEO_EDU_MISS			-0.828***	-0.825***			-0.798***	-0.802***
			(-3.16)	(-3.15)			(-2.87)	(-2.86)
Intercept	-4.217***	-4.267***	-4.284***	-4.323***	-6.405***	-6.392***	-6.303***	-6.273***
	(-5.35)	(-5.41)	(-4.40)	(-4.43)	(-5.22)	(-5.18)	(-4.49)	(-4.45)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country origin fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	13,059	13,059	13,059	13,059	13,059	13,059	13,059	13,059
pseudo R-sq	0.043	0.044	0.060	0.060	0.151	0.150	0.175	0.175

Table 4

Cross-sectional analysis of the relation between the uncommonness of CEO names and financial misstatements

The table presents cross-sectional variations in the relation between CEO name uncommonness and the occurrence of financial restatements or irregularities. The partitioning variables are the managerial ability measures in Panel A1-A2, the CEO's social interactions in Panel B, and the proportion of independent board directors in Panel C. High (Low) refers to firm-year observations above (below) the sample median of each measure. The z-statistics are estimated by clustering by firm and reported in parentheses. ***, ** and * indicate 1%, 5%, and 10% significance levels, respectively. Variable definitions are provided in Appendix A.

Panel A1: Managerial ability based on Demerjian et al. (2013)'s score

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var =	**MISSTATE**				**IRREGULARITY**			
Sample partition	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**
UNCOMMON_RF	0.392	0.547***			0.519	1.039***		
	(1.60)	(2.68)			(1.50)	(4.03)		
UNCOMMON_BRF			0.372	0.688***			0.479	1.055***
			(1.59)	(3.35)			(1.46)	(4.13)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country origin fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	6205	6214	6205	6214	6205	6214	6205	6214
pseudo R-sq	0.080	0.058	0.080	0.059	0.233	0.151	0.232	0.152

Panel A2: Managerial ability based on industry-adjusted ROA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var =	**MISSTATE**				**IRREGULARITY**			
Sample partition	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**
UNCOMMON_RF	0.247	0.566**			0.671*	0.878***		
	(0.89)	(2.39)			(1.85)	(2.76)		
UNCOMMON_BRF			0.238	0.621***			0.531	1.009***
			(0.79)	(2.75)			(1.43)	(3.44)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Country origin fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4,769	4,777	4,769	4,777	4,769	4777	4,769	4777
pseudo R-sq	0.081	0.088	0.081	0.089	0.233	0.151	0.232	0.152

Panel B: CEO's social network

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var =	**MISSTATE**				**IRREGULARITY**			
Sample partition	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**
UNCOMMON_RF	0.801***	0.211			1.458***	0.204		
	(3.26)	(0.91)			(4.69)	(0.65)		
UNCOMMON_BRF			0.866***	0.143			1.278***	0.244
			(3.60)	(0.55)			(4.18)	(0.76)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country origin fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5374	7085	5374	7085	5374	7085	5374	7085
pseudo R-sq	0.080	0.062	0.082	0.062	0.193	0.189	0.190	0.189

Panel C: Board independence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var =	**MISSTATE**				**IRREGULARITY**			
Sample partition	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**	**Low**
UNCOMMON_RF	0.418	0.493**			0.668*	0.870***		
	(1.58)	(2.40)			(1.81)	(3.37)		
UNCOMMON_BRF			0.429*	0.599***			0.563	0.950***
			(1.71)	(2.86)			(1.64)	(3.63)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country origin fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5989	7070	5989	7070	5989	7070	5989	7070
pseudo R-sq	0.055	0.078	0.055	0.079	0.175	0.202	0.174	0.203

Table 5

The uncommonness of CEO names and financial misstatements: the matching analysis

This table presents the estimated results of the relation between CEO name uncommonness and the occurrence of financial restatements and irregularities using matched samples. Panel A shows the results for a sample in which each firm headed by an uncommon-name CEO is matched to firms headed by common-name CEOs in the same year, industry classification, and size decile (size deciles are ranked by sorting all sample firms according to total assets each year). Panel B shows the results for a matched sample based on the same year, industry, and nearest propensity score (propensity scores are estimated by regressing CEO uncommon-name variables on the following firm characteristics: *ROA, LOSS, LnAT, LEV, BTM, RETVOL, LEASE, AGE, M&A,* and *ISSUE*). All matched peers are drawn without replacement. Panel C shows the results for the entropy balancing method. The set of covariates to be balanced includes *ROA, LOSS, LnAT, LEV, BTM, RETVOL, LEASE, AGE, M&A*, and *ISSUE*. The z-statistics are estimated by clustering by firm and reported in parentheses. ***, ** and * indicate 1%, 5%, and 10% significance levels, respectively. Variable definitions are provided in Appendix A.

Panel A: Matching on the same year, industry, and size decile

	(1)	(2)	(3)	(4)
Dep. Var. =	**MISSTATE**		**IRREGULARITY**	
UNCOMMON_RF	0.490***		0.766***	
	(2.73)		(3.20)	
UNCOMMON_BRF		0.612***		0.818***
		(3.33)		(3.49)
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Country origin fixed effects	Yes	Yes	Yes	Yes
N	6527	6626	6527	6626
pseudo R-sq	0.080	0.086	0.171	0.178

Panel B: Matching on the same year, industry, and the nearest propensity score

	(1)	(2)	(3)	(4)
	MISSTATE		**IRREGULARITY**	
UNCOMMON_RF	0.536***		0.752***	
	(2.59)		(2.66)	
UNCOMMON_BRF		0.576***		0.739***
		(2.73)		(2.67)
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Country origin fixed effects	Yes	Yes	Yes	Yes
N	1954	1958	1954	1958
Pseudo R-sq	0.146	0.140	0.242	0.267

Panel C: Entropy balancing method

	(1)	(2)	(3)	(4)
	MISSTATE		**IRREGULARITY**	
UNCOMMON_RF	0.483***		0.768***	
	(2.70)		(3.24)	
UNCOMMON_BRF		0.535***		0.774***
		(3.06)		(3.39)
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Country origin fixed effects	Yes	Yes	Yes	Yes
N	13,059	13,059	13,059	13,059
pseudo R-sq	0.126	0.117	0.252	0.257

Table 6

The uncommonness of CEO names and financial misstatements: the two-way change analysis

This table presents the change in an estimated relation between CEO name uncommonness and the occurrence of financial misstatements around CEO turnovers (842 CEO turnover events between 2001 and 2019 in the sample). Columns (1) to (4) report the results for restatements; Columns (5) to (8) report the results for irregularities. *BE_UNCOMMON* equals 1 for a turnover event in which a common-name CEO is replaced by an uncommon-name CEO, whereas *BE_COMMON* equals 1 for a turnover event in which a common-name CEO is replaced by an uncommon-name CEO. Both variables equal 0 for a turnover event in which the status of CEO name does not change. *POST* equals 1 for a three-year window period when the new CEO takes office and 0 for a three-year window period before the turnover year. To mitigate the concern that restatements or irregularities initiated before the turnover persist into the post-turnover years and distort the estimated effect of the name uncommonness change, we adjust *MISSTATE* (*IRREGULARITY*) to 0 in the restating years in the post-turnover window (*POST*=1) if the restatement is dated back to the pre-turnover window (*POST*=0). For brevity, we do not tabulate control variables in the table. The z-statistics are estimated by clustering by firm and reported in parentheses. ***, ** and * indicate 1%, 5%, and 10% significance levels, respectively. Variable definitions are provided in Appendix A.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var. =	**MISSTATE**				**IRREGULARITY**			
Uncommon name variables =	**UNCOMMON_RF**		**UNCOMMON_BRF**		**UNCOMMON_RF**		**UNCOMMON_BRF**	
BE_UNCOMMON	-0.248		-0.291		0.069		0.022	
	(-0.67)		(-0.81)		(0.14)		(0.04)	
BE_UNCOMMON ×POST	1.218**		1.131**		1.781**		1.738**	
	(2.44)		(2.27)		(2.38)		(2.37)	
BE_COMMON		0.562*		0.633**		1.004***		0.915**
		(1.70)		(1.96)		(2.61)		(2.39)
BE_COMMON ×POST		-1.297**		-1.423***		-1.500		-1.491
		(-2.36)		(-2.61)		(-1.40)		(-1.40)
POST	-0.913***	-0.933***	-0.887***	-0.926***	-1.557***	-1.575***	-1.547***	-1.595***
	(-5.25)	(-5.34)	(-5.12)	(-5.32)	(-5.17)	(-5.16)	(-5.11)	(-5.21)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country origin fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4021	4094	4023	4078	4021	4094	4023	4078
Pseudo R-sq	0.076	0.089	0.075	0.090	0.196	0.222	0.196	0.222

Table 7

Other robustness checks

This table reports the estimated results of the relation between the uncommonness of CEO names and financial misstatements across alternative specifications. *F-score* is the average fraud score in the past three years, estimated from model 3 of Dechow et al. (2011). *Strategic distinctiveness* is a composite measure of six dimensions (Kang et al. 2020): (a) advertising intensity (advertising expense divided by sales), (b) inventory level (inventories divided by sales), (c) plant and equipment newness (net plant and equipment divided by gross plant and equipment), (d) research and development (R&D) intensity (R&D expense divided by sales), (e) nonproduction overhead (selling, general, and administrative expense divided by sales), and (f) financial leverage (total debt divided by equity). Along each dimension, we calculate the absolute difference between a firm and the average of all other firms in the same industry in each year to obtain an indicator of strategic distinctiveness in that dimension. We then create the standardized score of each indicator of strategic distinctiveness by industry and year and use the sum of these standardized scores as our composite measure of strategic distinctiveness. *CEO overconfidence* is an indicator variable equal 1 if the CEOs hold stock options that are more than 67% in the money (i.e., the stock price exceeds the average exercise price by more than 67%), and 0 otherwise, following Campbell et al. (2011). *CEO narcissism* is proxied by a composite index based on the principal factor analysis of the following three variables: (a) relative cash payment, calculated as the CEO's cash compensation relative to that of the second-highest-paid executive; (b) relative non-cash payment, calculated as the CEO's non-cash compensation relative to that of the second-highest-paid executive; (c) CEO prominence in press releases, calculated as the number of times the CEO is mentioned by name in the company's press releases divided by the total number of words in all the company's press releases. CEO ownership is calculated as the percentage of shares (excluding options) held by the CEO. *CEO tenure* refers to the number of service years of the firm's CEO since he or she takes office. *CEO incentive pay* is calculated as the sum of cash bonus and stock-based compensation divided by total pay. *CEO myopia* is proxied by two separate variables: (a) *Above63* is an indicator variable equal 1 if the CEO's age exceeds 63, and 0 otherwise (b) *STO* is a ranked variable based on a short-term orientation culture index (Hofstede 1991, 2001). The index is constructed according to the CEO's ethnic origin. A lower value indicates a culture with more short-termism orientation. We rank the index into deciles and transform the rank into a variable within the range of 0 to 1. *Internal governance* is measured as the sum of the standardized values of *Exec_Horizon* and *Exec_PayRatio* following Cheng, Lee and Shevlin (2016). *Exec_Horizon* is subordinate executives' decision horizon, defined as retirement age of 65 minus the average age of other executives. *Exec_PayRatio* is subordinate executives' pay ratio, calculated as the average total compensation of subordinate executives scaled by the CEO's total compensation for prior year. *CEO ethnicity* includes White, Black, Asian and Pacific Islander, American Indian and Alaska Native, Hispanic, and the descendants of more than 2 races. The z-statistics are estimated by clustering by firm and reported in parentheses. ***, ** and * indicate 1%, 5%, and 10% significance levels, respectively. Also see Appendix A for all variable definitions.

Dep. Var =	**MISSTATE**		**IRREGULARITY**	
Uncommon name variables =	**UNCOMMON_RF**	**UNCOMMON_BRF**	**UNCOMMON_RF**	**UNCOMMON_BRF**
Descriptions	**(1)**	**(2)**	**(3)**	**(4)**
Control for CEO ethnicity	0.406**	0.466***	0.748***	0.738***
	(2.41)	(2.70)	(3.38)	(3.41)
Control for CEO overconfidence	0.409**	0.492***	0.676***	0.703***
	(2.35)	(2.75)	(2.98)	(3.15)
Control for CEO narcissism	0.464**	0.534***	0.910***	0.944***
	(2.55)	(2.86)	(3.85)	(4.11)
Control for CEO ownership and tenure	0.413**	0.409**	0.716***	0.747***
	(2.19)	(2.13)	(2.86)	(3.01)
Control for CEO incentive pay	0.439***	0.506***	0.773***	0.778***

	(2.59)	(2.92)	(3.49)	(3.59)
Control for CEO myopia	0.443***	0.498***	0.776***	0.764***
	(2.63)	(2.88)	(3.52)	(3.53)
Control for internal governance	0.373**	0.461**	0.924***	0.968***
	(2.00)	(2.38)	(4.11)	(4.35)
Alternative MISSTATE (IRREGULARITY) by coding misstatement and irregularity as 1 for the initial year of the misstatement and irregularity period, and 0 otherwise	0.380**	0.376**	0.777***	0.706***
	(2.15)	(2.10)	(3.56)	(3.20)
Alternative UNCOMMON_RF (or UNCOMMON_BRF) by replacing the deflator of the corresponding raw ratio with the total population in SSA from 1914 to 2019 (or the total population in SSA within 18 years since the birth year of the CEO)	0.481***	0.452***	0.795***	0.704***
	(2.83)	(2.58)	(3.58)	(3.23)
Alternative UNCOMMON_BRF by recalculating the frequency of the first name within 3 years before and 3 years after the CEO's birth.		0.547***		0.791***
		(3.17)		(3.64)
Control for F-score	0.451***	0.467***	0.787***	0.785***
	(2.58)	(2.66)	(3.55)	(3.61)
Control for strategic distinctiveness	0.433**	0.487***	0.758***	0.746***
	(2.55)	(2.81)	(3.44)	(3.46)