

Financial Misconduct and Family Firms

Ronald Anderson, Temple University
Gerald S. Martin, American University
David Reeb, National University of Singapore

June 16, 2017

Abstract

We investigate financial misconduct in family and nonfamily firms. Our analysis indicates that family firms are nearly 3-times more likely to be involved in federal enforcement actions than nonfamily firms, dominating nonfamily peers across firm size and age deciles. Strikingly, founder firms account for nearly 71% of enforcement actions with heir- and nonfamily- firms accounting for 2.5% and 26.5%. Further tests reveal that the likelihood of financial fraud significantly decreases after the unexpected deaths of founders. Although cross-disciplinary literature highlights the benefits of founders, our analysis suggests they also impose costs through financial misrepresentation and illicit behavior.

JEL classification: M40; G32; K42;

Keywords: Founders; Descendants and Heirs; Financial Misrepresentation; Fraud; Penalties; Financial reporting; Securities and Exchange Commission

Corporate fraud occurs across an extensive range of activities. Prominent examples include the emissions cheating software by Volkswagen, the GlaxoSmithKline drug-safety deception case, the second admission of Medicaid fraud by Kindred Healthcare, and the lottery fixing scandal at Powerball.¹ Politicians highlight the societal importance of this issue, suggesting that a \$5 billion fine on Goldman Sachs embodies the culture of fraud on Wall Street (Lane, 2016). Concerns with financial misconduct include questions regarding the roles of outside directors, the SEC, and internal auditors in limiting such activity (Beasley, 1996; Kedia and Rajgopa, 2011; Ege, 2015). Kumar and Langber (2009) describe how financial misrepresentation induces capital market distortions, causing an inefficient allocation of investments. Financial misconduct potentially harms investors and employees, deterring market participation as investors distrust corporate accounts (Fang, Huang, and Wang, 2017). Financial misrepresentation encompasses a rich cross section of misconduct ranging from relatively innocuous issues such as minor GAAP violations to substantively more egregious financial manipulations. Investors and regulators alike, seek to identify and understand organizational factors associated with financial misrepresentation so as to protect their wealth and instill confidence in public markets.

An important and arguably defining organizational characteristic, founding-family control, distinguishes a sizable component of the U.S. stock market, constituting upwards of 35% of publicly traded, industrial firms (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Wang, 2006). These wealthy and influential family members enjoy greater numbers of alternative opportunities relative to less well-off individuals and thus have strong incentives to refrain from illicit behavior (Orsagh and Witte, 1981). Others observe reductions in dishonest activities with improvements in social capital, family structure, human capital, and monitoring activities (Tella and Weinschelbaum, 2008).

¹ See for example *The Economist* (<http://www.economist.com/news/business/21685458-cost-cheating>) *BBC News* (<http://www.bbc.com/news/world-us-canada-18673220>), *Reuters* (<http://www.reuters.com/article/kindredhealthcare-settlement-idUSL2N14W1KM20160112>), and the *Washington Post* (<https://www.washingtonpost.com/news/post-nation/wp/2016/01/09/the-company-that-runs-powerball-had-a-16-5-million-jackpot-rigged-by-a-former-employee/>).

Arguably, controlling families face high opportunity costs arising from financial misconduct and also hold the power to limit illicit corporate activity (Adams, Almeida, and Ferreira, 2009). Yet, family owners' large equity stakes provide wealth incentives to manipulate stock prices, indicating the potential to facilitate financial misconduct. Overconfidence or hubris can also lead individuals to engage in risky behavior (Camerer and Lovallo, 1999). Family owners arguably exhibit great confidence in their capabilities to manage the business, their entitlement to control the business, and their influence to shape the business; suggesting that these powerful owners hold fewer reservations to engage in illicit behavior relative to professional managers or well-diversified shareholders (Anderson, Reeb, and Zhao, 2012; Levine and Rubenstein, 2014). Overall, convincing arguments suggest that controlling family owners maintain strong incentives to facilitate financial misconduct or alternatively, to limit financial misconduct within their firms.

We compare financial misconduct in family and nonfamily firms among publicly registered U.S. companies. Our primary analysis relies on 1,166 federal enforcement actions from 1976 through 2013 from the Federal Securities Regulation (FSR) Database that contains the universe of Securities and Exchange Commission (SEC) and Department of Justice (DOJ) actions for financial misrepresentation. These violations include administrative actions (aggressive accounting), civil injunctive actions (including financial misrepresentation fraud), and criminal proceedings (flagrant and deliberate deception and self-dealing).

Based on the 1,166 federal enforcement actions, we find that 73.2% (853 actions) of financial misrepresentation cases involve family firms, indicating that illicit behavior or misconduct appears far more likely to occur in family firms than nonfamily firms. As a reference frame, family firms constitute 20.6% of the firms in MSCI-GMI Ratings (formerly, Corporate Library Database) of Russell 3000 firms. Comparing firms with a common minimum size and common time frame from the MSCI-GMI Database and the FSR Database, our tests suggest that family firms are about

6.6 times more likely to be involved in an SEC-DOJ enforcement actions than nonfamily firms.² Using successful class action lawsuits as a measure of fraud rather than federal enforcement actions (Dyck et al., 2010), we provide corroborating evidence of greater financial misconduct in family firms relative to their nonfamily peers.

Of course, family firms are not uniformly distributed across large samples or populations of firms (Villalonga and Amit, 2010). Specifically, prior research indicates that family firms tend to be younger and smaller than nonfamily firms (Anderson and Reeb, 2003; Villalonga and Amit, 2010). Our analysis indicates that family firm enforcement actions dominate nonfamily firm enforcement actions across firm size and firm age measures. To further benchmark the likelihood of family firms engaging in financial misconduct, we construct a matched sample of similar firms not engaging in financial misrepresentation and then ascertain the matching firms' equity ownership structure, i.e., family versus nonfamily. Using contingency analysis between the enforcement action firms and the matched sample firms, we find that family firms are 2.87 times more likely to engage in financial misrepresentation than nonfamily firms.

We examine three potential explanations for finding the vast majority of enforcement actions in family firms. First, the large number of actions may arise because family owners lack the same level of financial sophistication and aptitude as managers in nonfamily firms. Directors and managers of family firms often receive their positions based on birthright rather than merit and talent. A less talented executive suite potentially leads to less financial aptitude, resulting in greater financial misrepresentation and more enforcement actions.

Second, the large number of actions may arise because family firms are less able to limit detection of financial misconduct relative to other firms. Of particular concerns is that family firms

² Of the 1,166 enforcement actions for financial misrepresentation, 96.6% involve firms with common equity (ordinary shares and ADRs) listed under Section 12 of the Exchange Act as their primary security. The remaining 3.4% of actions include securities relating to limited partnerships, public debt, REITs, preferred stock, cooperatives, annuities, mutual funds, and the pre-registration process in IPOs.

could self-organize internally in ways that expose fraud on a more frequent basis, suggesting family and nonfamily firms exhibit different detection patterns. Similarly, regulators may place a special emphasis on large equity claimants when choosing targets to prosecute for financial misconduct (Becker, 1957). Family firms with large, concentrated shareholders thus may be attractive targets for regulators to pursue.

A third explanation for the observing fraud in family firms centers on managerial hubris or risk-taking. As large and influential shareholders, family owners possess strong economic incentives and maintain the power to obfuscate corporate performance from outside stakeholders, suggesting managers in family firms are willing to pursue riskier behavior to protect their interests relative to managers in nonfamily firms. Similarly, as individuals who have built firms from the ground-up or who have birthright claims to large equity stakes and top management positions, family owners potentially possess greater confidence than professional managers in their abilities to run and shape the business. Highly confident family owners arguably hold fewer reservations to engage in financial misconduct relative to outside executives, suggesting that managerial hubris or risk-taking explains the disproportionately large fraction of enforcement actions in family firms (Camerer and Lovo, 1999; Anderson et al., 2012; Levine and Rubenstein, 2014).

To explore the financial sophistication and risk-taking/hubris arguments in explaining the large fraction of enforcement actions in family firms, we exploit within family-firm variation and its effect on financial misrepresentation. Specifically, we delineate family firms based on those with founders holding power and control relative to those with descendants holding power and control. Financial sophistication arguments suggest that family firm misconduct should primarily occur in heir firms. The business press indicates that founders create value because they are honest, competent, and enthusiastically seek to build the enterprise (e.g. Fink, 2013). Similarly, academic studies often advocate that the benefits to family ownership, if any, stem primarily from founder

control (LaFond and Roychowdhury 2008; Fahlenbrach, 2009). Villalonga and Amit (2006) argue that descendant control often leads to poor corporate execution and financial performance because of weak ability and work ethic. Thus, the literature on founder and descendant firms suggests that financial misconduct stems from unsophisticated, untalented descendants controlling the firm versus their gifted parent.

Yet, from an alternative perspective, risk tolerance and hubris arguments suggest that financial misconduct should primarily arise in founder firms. Levine and Rubenstein (2014) report that successful entrepreneurs exhibit high ability and illicit behavior. The business press also typifies founders as exhibiting extreme overconfidence (Presley, 2011). Roll (1986) and Camerer and Lovallo (1999) observe many business-entry mistakes made by entrepreneurs stem from overconfidence in their skills and abilities relative to other individuals. Thus, founders' beliefs in their strong business skills potentially lead to riskier behavior and greater managerial hubris relative to heirs; resulting in greater financial misconduct and enforcement actions in founder versus heir firms.

Notably, when segregating the family firm cases of financial misrepresentation between founder firms and heir firms, we document that founder firms account for 70.7% of all actions (826 of the total 1,166 enforcement actions) while heir firms account for only 2.5% (29 of the total 1,166 enforcement actions). As reference points, in the MSCI-GMI database and in our matched counterfactual sample, founder firms account for 12% and 32.4% of firms. Logistic analysis using the enforcement action sample and the matched sample indicates that founder firms are nearly 4.4 times *more* likely to be named in enforcement actions than nonfamily firms. Heir firms are just 0.27 times as likely to be named in enforcement actions relative to nonfamily firms. The analysis strikingly indicates founder firms experience the bulk of enforcement actions across family firms and across the full universe of prosecutions – over 70% of all actions.

Using the Dyck et al. (2010) classification of corporate fraud based on class action lawsuits rather than enforcement actions, we provide an independent confirmation of our analysis by finding that founder firms are 4.0 times more likely to be caught and prosecuted for fraud versus other firms. The dearth of actions surrounding heir firms and the strong preponderance of actions in founder firms provide evidence consistent with explanation two (greater detection rates) and/or explanation three (founder risk-taking/managerial hubris).

We further investigate the argument of founder risk-taking/managerial hubris explaining the vast majority of financial misrepresentation cases by examining firms' propensity to engage in material accounting manipulations while the founder maintains control of the firm and after she/he exits the firm. Because founder exits may be preplanned and thereby affect their incentives to engage in financial misconduct, a potential endogeneity issue arises between founder behavior and fraud (Lennox, Francis, and Wang, 2011; Gow, Larcker, and Reiss, 2016). Specifically, founders may be more (or less) willing to engage in fraud with the knowledge of a preplanned exit. To account for this possibility, we use founder-CEOs' sudden deaths as an exogenous shock in firm control to examine the relation between founder influence and propensity to commit fraud. We develop a sample of 133 sudden founder deaths from 1974 through 2013 by searching SEC filings, Dow Jones Factiva, Lexis-Nexis, and firm press releases. For our analysis, we compare the founder-CEOs' sudden-death firms to 150 sudden CEO-deaths in nonfamily firms based on the Quigley, Crossland, and Campbell (2016) sample. Our analysis focuses on the likelihood of engaging in material accounting manipulations for the 10-years prior to CEO deaths and 10-years after CEO deaths, thus allowing for a difference-in-difference analysis of the probability of fraud surrounding an exogenous shock in managerial influence. The diff-in-diff analysis indicates a 15% decrease in firms' propensity to engage in accounting manipulations after the sudden death of a founder; suggesting founder

characteristics such as risk-taking or managerial hubris play an important role in explaining financial misconduct.

Detecting financial misconduct requires a virtual village of market participants and often, securities backing misrepresented assets do not sell at discounts (Dyck et al., 2010; Piskorski, Seru, and Witkin, 2015). Yet, our study relies on caught and successfully prosecuted fraud to capture financial misconduct. Consequently, these founder misconduct results could also stem from greater detection of fraud in founder firms relative to other firms because of greater internal monitoring or because of greater regulatory oversight of firms with founders or large shareholders. Our results on the substantively differing rates of enforcement actions in founder firms (70.7%) and heir firms (2.5%) however, do not support the notion that regulators uniformly focus on firms with large shareholders. Founder firms and heir firms both maintain large equity stakes in U.S. public firms. In the Russell 3000 industrial firms from 2001 through 2015, founders and heirs on average, hold stakes of 20.6% and 26.0%, respectively (Anderson, Ottolenghi, and Reeb, 2016). The analysis does not provide evidence that regulators focus on equity ownership levels when choosing firms to prosecute.

Still, greater detection rates in founder firms versus other types of firms arguably explains the disproportionate fraction of enforcement actions in founder firms. We conduct an additional test for regulator emphasis on founder firms (versus nonfamily firms) by examining returns to regulators from prosecution. Assuming regulators emphasize founder firms in choosing targets, we expect them to systematically over investigate founder firms relative to other firm types (Becker, 1957; Knowles et al., 2001). By doing so, regulators will capture a large number of founder firms that engage in relatively minor infractions with these firms receiving light or minimal penalties. A regulatory emphasis or targeting explanation thus suggests that many founder firms will be caught for fraud (both major and minor), rendering a lower average penalty for founder firms versus other

firms. In stark contrast to the emphasis explanation (lower penalties), we find the founder firms suffer higher monetary fines, longer incarceration periods, and more severe civil actions than nonfounder firms. This analysis provides evidence inconsistent with an explanation that regulators focus on founder firms when choosing prosecution targets. Rather, the results suggest that regulators potentially *under-target* founder controlled firms.

Detection may also arise from processes internal to the firm. Specifically, founder firms, but not heir firms, may organize themselves in such a way to encourage greater internal monitoring by employees, resulting in greater detection rates relative to other firms. We test this implication by examining the proportion of fraud cases in founder firms (relative to nonfounder firms) brought to the public's attention by internal (external) whistleblowing. Using the Dyck et al. (2010) database of fraud as measured by successful class action lawsuits, we find that founder firms are no more or less likely to experience detection from internal detection (or external detection) than other firms.

Founder risk-taking and/or managerial hubris appear to be potential explanations for observing the disproportionately large number of enforcement actions in founder firms. Further bolstering this argument, we find that founders aggressively sell-off their equity stakes when engaging in financial misconduct but prior to detection. During the period that firms engage in financial misconduct and prior to revelation by regulators or investors, we observe that founders, on average, sell-off nearly 14.1% of the firm's outstanding equity from their portfolios for a value of over \$128 million. Descendant firms in contrast, over the violation period and before detection, sell-down (on average) about 4.9% of the firm's outstanding equity. The difference in the equity sales between founder firms and heir firms is significant at the 1% level. Further extending the risk-taking and managerial hubris argument, the equity sales analysis suggests that founders may be willing to assume greater "gambles" (relative to descendants or managers in other firm types) by misrepresenting the firms' financial picture so as to monetize their equity stakes.

This study contributes to two different literatures. An extensive literature on family controlled firms suggests that many of the benefits accruing from family control and monitoring stem from founder firms. The cross-disciplinary literature on founders and entrepreneurs often focuses on the potential leadership benefits of these iconic individuals. Empirical studies provide compelling arguments for greater founder talent, greater risk-taking, and better “luck” relative to other types of managers (May, 1995). These benefits attributed to founders however, tell only one side of the story. Our analysis shows that over 70% of SEC and DOJ enforcement actions for financial misrepresentation occur in founder firms. Although heirs or descendants often receive the bulk of the business press’ derision for irregular or poor decision-making, our results suggest that founder firms exhibit the greatest issues with illicit activity and financial misrepresentation. Founder studies often focus on the superior performance of these highly visible firms, capturing the benefits of these entrepreneurs. Our analysis in contrast, indicates that firms also bear a cost in the form of financial misrepresentation and irregularities arising from founder ownership and control.

The emerging literature on financial misconduct focuses on both the monetary outcomes to executives and the potential determinants of misconduct. Our results arguably indicate founder control as a first order concern in evaluating the prevalence of financial misconduct. Founders comprise roughly 12% of the firms in the MSCI-GMI database but make up over 70% of SEC and DOJ enforcement actions. The analysis further indicates that founder presence potentially affects the fraud prediction literature (e.g., *F*-score) by providing additional explanatory power. Importantly, our results imply that labor market remedies seem unlikely to work, as founders typically do not participate in the CEO labor market for atomistic shareholder firms. Moreover, the notion of a board monitoring and CEO compensation differ dramatically in family and nonfamily firms (Erickson, Hanlon, and Maydew, 2006), suggesting a reinterpretation of the role of these important corporate governance devices in limiting financial misconduct.

I. Data and Descriptive Statistics

A. Financial Misrepresentation Enforcement Data

Our empirical analysis uses the Federal Securities Regulation (FSR) Database that contains the 1,166 enforcement actions from 1978 through 2013 brought by the SEC and DOJ against publicly-registered firms for financial misrepresentation (www.fesreg.com).³ Three important points need to be addressed with respect to the FSR Database. First, the database contains all enforcement matters related to firms that engaged in, and were subsequently caught and prosecuted for financial misrepresentation. Second, firms that engage in financial misrepresentation but are not caught fall outside the FSR Database as companies must be prosecuted to be included in the dataset and as such, raises a partial observability concern (Li, 2013). Specifically, firms may engage (not engage) in fraud and subsequently not be prosecuted (prosecuted) for misconduct. Thus, we cannot draw inferences about violators who were not caught by regulators. Third, because all caught and prosecuted firms are included in the FSR Database, the data was solely collected based on whether firms committed financial misrepresentation and not based on firm characteristics (e.g., equity ownership structure, firm age, riskiness, etc.).

In using the FSR database, we potentially capture firms committing more egregious and/or obvious acts of financial misrepresentation as these firms are subsequently caught and prosecuted by the SEC and/or the DOJ. With limited resources, regulators arguably pursue cases that they deem likely to lead to successful prosecutions, e.g., guilty verdicts, admissions of guilt, no contest, less politically connected firms (Files, 2012; Correia, 2014). To further corroborate our results, we also use the Dyck et al. (2010) data that measures corporate fraud as successful class action lawsuits from

³ The data in this database is used in Karpoff et al (2008a, 2008b). See Internet Appendix 1 for a detailed explanation of the enforcement action process. Of the 1,166 enforcement actions for financial misrepresentation, 96.6% involve firms with common equity (ordinary shares and ADRs) listed under Section 12 of the Exchange Act as their primary security. The remaining 3.4% of actions include securities relating to limited partnerships, public debt, REITs, preferred stock, cooperatives, annuities, mutual funds, and the pre-registration process in IPOs.

1996 through 2004, rather than enforcement actions, thus providing an analysis from an independent data source.

B. Family, Founder and Heir Data and Control Variables

For each of the 1,166 enforcement actions, we examine corporate filings (proxy and 10k statements) and company histories to tabulate data on family ownership, the founder, the founder's subsequent lineage, and their involvement with the firm. Family firms are those where the founder or descendants are present and active in the firm through a senior management position, directorship, or an equity stake. We define senior management positions as COB/CEO, COB, CEO, or president. Heir firms are those where the founder is no longer present but at least one of the founder's descendants or relatives remains active in the firm as a senior manager, director, or equity claimant. We do not place a minimum ownership threshold on family ownership when defining these firms but note that our results do not substantively differ when using a 5% minimum ownership rule (Shleifer and Vishny, 1986). Firms through their public filings frequently do not provide information on whether founding-family members retain equity stakes or hold managerial posts and director seats. Although regulations stipulate that firms disclose any shareholder with a 5% stake or larger equity stake, firms typically do not disclose if the shareholder is part of the original founding family. To ascertain founders and their subsequent lineage and involvement in the firm, we examine corporate histories for each of the 1,166 FSR firms. Corporate histories come from ReferenceforBusiness.com (51%), FundingUniverse.com (28%), Gale Business Resources (7%), and from individual companies (14%). Data definitions for the variables used in our analysis are supplied in Table 1. The family ownership data, to be best of our knowledge, is new to family firm and fraud literature.

As an alternative metric for financial misconduct (other than caught and prosecuted), we use Dechow, Ge, Larson, and Sloan's (2011) *F*-score that predicts the likelihood of firms engaging in

material accounting manipulations. *F*-score assesses firms along accrual quality, financial performance, off-balance sheet activities, market-based incentives, and non-financial measures and then assigns a value to each firm on the likelihood of future accounting restatements. The higher the value of the *F*-score, the greater likelihood of firms manipulating their account statements and thus, subject to regulatory action. Internet appendix 2 provides details on the construction of *F*-score which we use as a measure of firms' propensity to engage in accounting manipulation (Beatty, Liao, and Yu, 2013; Chan, Chen, and Chen, 2013; Chi, Pincus, and Toeh, 2013; Jia, Van Lent, and Zeng, 2014; Defond, Lim, and Zang, 2015; Purda and Skillicorn, 2015).

C. Reference Samples for the FSR Database

To gauge whether the fraction of family firms (founder and descendant) in the FSR Database differs from the fraction of family firms in the publicly traded universe of firms, we need a reference frame or benchmark to compare against the FSR firms. Extant literature (Villalonga and Amit, 2006; and Anderson, Duru and Reeb, 2009) indicates that family firms constitute no more than 45% of listed, industrial firms. The samples within these studies however, focus on larger firms (Fortune 500 and largest 2,000 firms, respectively). Family firms may thus constitute a larger or smaller fraction of total firms across the universe of publicly traded companies. The ideal reference frame would be to benchmark the FSR Database (with our delineation of family and nonfamily firms) against all publicly traded firms categorized into family (founder, descendant) firms and nonfamily firms. To our knowledge, no database exists that provides family ownership for all publicly traded firms. In addition, given the time span of the FSR Database (1978 - 2013) and the number of publicly traded firms in CompuStat (> 26,000) over this period, we have no economically conceivable method to collect this volume of data. We thus proceed along two routes; (1) referencing to the MSCI-GMI Ratings (formerly, Corporate Library Database), and (2) developing a matched sample.

The MSCI-GMI Ratings provide a corporate governance dataset covering 3,000 U.S. companies from 2001 to 2013. The dataset further denotes that founder firms and descendant firms comprise 11.9% and 8.6% of all firms in the database (the sum of founder and descendant equals family firms = 20.6%).⁴ Although we reference the FSR Database to the full MSCI-GMI Database, these datasets differ in covered time-periods and potentially differ in firm characteristics. To account for time differences and potential firm differences, we conduct an additional test by using only those firms in the FSR Database from 2001 through 2013 (same as MSCI-GMI) and those firms meeting the minimum size threshold (total assets) for each year of the MSCI-GMI Database. Thus, we exclude fraud observations prior to 2001 and fraud observations where firm size is less than \$249,000, indicating an arguably better comparison between the MSCI-GMI Database and the FSR Database. When we limit the FSR Database to the same common time and common size as the MSCI-GMI Database, our sample size falls to 479 firms from the original 1,166 firms.

To create a matched sample, we find the overlap between the FSR Database and CompuStat firms from 1978 to 2013. CompuStat covers 823 of the firms in the FSR Database. The entire FSR Database contains 1,166 observations, indicating that 343 firms are not covered by CompuStat. The excluded 343 firms are closely-held firms or employee owned firms subject to Section 12(g) of the Securities Act and are required to report under Section 13 of the Exchange Act. Of the 823 firms that overlap between the FSR Database and CompuStat, family firms comprise 68.5% of the total. The remaining 31.5% are nonfamily firms. These percentages of family firms and nonfamily firms in the intersection of FSR and CompuStat database (823 firms) are similar to family-firm percentages in

⁴ Our definition of family, founder, and heir firms adheres closely to the definitions used by MSCI-GMI, indicating that differences in our variable measures and those used by MSCI-GMI do not materially influence our analysis. MSCI-GMI's definitions are: **Family Firm** - A company where family ties, most often going back a generation or two to the founder, play a key role in both ownership and board membership. Family members may not have full control of the shareholder vote (greater than 50%), but will generally hold at least 20%; **Founder Firm** - A company where the CEO or Chairman is a founder of the company.

the full FSR Database. In the full FSR Database, family firms, founder firms, and heir firms comprise 73.1%, 70.7%, and 2.5% of all firms, respectively.

We use a multistep process to match the 823 family and nonfamily firms in the FSR Database (caught and prosecuted) to CompuStat firms (not caught and prosecuted). In step one, we run a logit model to calculate a propensity score for all firms in the FSR Database and Compustat firms over a common time period, corresponding to the FSR Database (1978 through 2013). The logit model for the propensity score is:

$$\begin{aligned} \text{Enforcement Action Firm} = a + \beta_1(\text{Firm Size}) + \beta_2(\text{Firm Age}) + \\ \beta_3(\text{Propensity to Engage Accounting Manipulations}) + \varepsilon \quad (1) \end{aligned}$$

Where;

Enforcement Action Firm = 1 for each year that the firm misrepresents their financial statements (FSR Database) and zero otherwise (Compustat firms less FSR firm).

Firm Size = natural log of total assets; larger firms may be less likely to engage in financial misconduct due to greater public visibility and thus a greater probability of being caught than smaller firms.

Firm Age = Years listed in Compustat; younger firms may be willing to assume greater operational and reporting risk than older firms.

Propensity to Engage in Material Accounting Manipulations = *F*-score (Dechow et al., 2011); firms with higher *F*-scores exhibit greater accounting-reporting aggressiveness than firms with lower *F*-scores. Thus, *F*-score may indicate a firm's willingness to push the boundaries of financial misconduct.

From the model, we use the predicted value of *enforcement action firm* as the propensity score for each firm-year observation. With the propensity scores, using the monotonic imbalance bounding (MIB) matching method, we match each enforcement action firm to a control firm with the closest propensity score while exactly matching on year (last year of violation) and the same 2-digit SIC code. Our method eliminates imbalance for two variables (time and industry) without changing the maximum imbalance for the variables in the propensity score matching process (size, firm age, and risk of financial misrepresentation) (Iacus, King, and Porro, 2011).

Notably, we do not match on equity-ownership structure (i.e., family or founder ownership) as we are attempting to determine whether this characteristic affects the likelihood of firms engaging, in financial misrepresentation (Roberts and Whited, 2013; Gow, Larcker, and Reiss, 2016).

The matching process yields 823 control sample firms. With these 823 matched-controls spanning from 1978 to 2010, we search proxy statements, 10-k statements, and company histories to ascertain which are family firms and nonfamily firms. The summary statistics with respect to family ownership between the enforcement action sample and the control sample are shown in Table 2, Panel C and discussed in Section I.D, below.

D. Descriptive Statistics

Table 2, Panel A provides descriptive statistics on enforcement action firms. Column 1 shows the statistics for the full sample while columns 2 and 3 present the statistics for nonfamily firms and family firms, respectively. Column 4 shows the p -values for a parametric t -test (non-parametric Wilcoxon rank-sum distribution test) of the difference in means (medians) between family firms and nonfamily firms. For the empirical analysis, we winsorize the data at the 1% and 99% level.

Firms entangled in enforcement actions exhibit a mean (median) market capitalization of equity of about \$6.5 billion (\$139.7 million) with average (median) total leverage of 141.7% (58.5%). For reference, at the end of fiscal 2005, the CompuStat universe of firms have a mean (median) market value and leverage ratio of \$2.20 billion (\$192.3 million) and 201.0% (55.1%); indicating that the universe of firms caught for financial misconduct and the universe of firms covered by CompuStat appear similar in size and debt usage.

Panel B of Table 2 presents descriptive statistics on the violation characteristics and shows that the violation period – the length of time the firm engages in financial misconduct – averages 36.1 months, suggesting misrepresentation occurs for some time before detection by regulators

and/or investors. The typical infraction involves violations of more than 11 U.S. Codes and Codes of Federal Regulations. The DOJ brings criminal or civil actions in slightly less than one-third of the cases. Financial misconduct can be costly to investors with average stock losses of 15.6% over the 36.1-month violation period.

Figure 1 depicts the number of family firms and nonfamily firms caught in enforcement actions on a year-by-year basis from 1978 through 2013. The mean (median) of family firms named as a percentage of all enforcement actions by year is 73.3% (77.3%) and ranges from a low of 39.5% in 2010 to a high of 100% in 1979 and 1980. On a yearly basis, we observe that family firms generally experience more enforcement actions than nonfamily firms over the entire period. In addition, we observe that the number of violations increases each year since the inception of laws in 1978 governing financial misrepresentation, but do not find that the fraction of family-firm enforcement actions relative to total actions markedly changes on a year-by-year basis.

As noted earlier, we develop a counterfactual sample to compare enforcement action firms to non-enforcement action firms. Table 2, Panel C presents summary statistics for the counterfactual sample and the enforcement action subsample. The matching process provides 823 enforcement action firms and 823 non-enforcement action firms for a total of 1,646 observations, spanning the period from 1978 through 2010 (corresponding to the last violation year in the enforcement sample). Differences of mean (median) tests indicate a relatively homogeneous match between the enforcement action firms and the non-enforcement action firms. All violating firms match to non-violating firms on 2-digit SIC code and year of infraction. We find no statistical difference in means or medians for firm size and firm age. However, enforcement action firms exhibit a slightly higher propensity to engage in material accounting manipulations (*F*-score) relative to non-enforcement action firms (1.712 versus 1.554).

II. Empirical Analysis

We begin the presentation of our empirical results with simple univariate statistics detailing the fraction of enforcement actions for financial misrepresentation in family firms and nonfamily firms. The analysis then moves on to assess whether the fraction of family firms experiencing enforcement actions significantly differs from the fraction of family firms in the general population of publicly-traded firms. We conduct this assessment by comparing family (nonfamily) firms' enforcement actions against a database with large number of firms – MSCI-GMI. Because the general population of publicly traded firms may not be representative of the type of firms engaging in financial misconduct, we then contrast the enforcement action firms against a matched sample of non-enforcement action firms classified into family and nonfamily firms. The empirical analysis concludes by investigating three potential reasons for observing a large fraction of enforcement actions in family firms. These reasons include financial sophistication, detection rates, and managerial hubris/risk-taking.

A. Family-Firm Financial Misconduct

Of the 1,166 enforcement actions occurring from 1978 through 2013, we find that 73.3% of these actions occur in family firms and 26.7% occur in nonfamily firms. Table 2, Panel A shows that family firms involved in these actions – on average – tend to be smaller, more valuable, and more levered than nonfamily firms involved in actions. In particular, family firms exhibit a mean (median) market capitalization of \$2.46 billion (\$71.2 million) while nonfamily firms have a market capitalization of \$17.4 billion (\$1.29 billion). Insider ownership (founders, founders' families, plus other insiders) is notably higher in family firms versus nonfamily firms; 37.7% versus 13.4%. Family-firms' boards of directors tend to be smaller and less independent than boards of nonfamily firms (6.6 directors versus 10.1 directors; 40.4% independent directors versus 63.2% independent directors).

Our summary statistics indicate that family presence/ownership bears a strong relation to regulatory actions arising from financial misrepresentation. To benchmark our results, we compare the fraction of family and nonfamily firms in the enforcement action database (FSR Database) to the fraction of family and nonfamily firms in the MSCI-GMI Database. Table 3, Panel A provides a contingency analysis comparing family presence in the enforcement action database relative to family firms in the MSCI-GMI database. As noted earlier, family firms comprise 855 of the 1,166 (73.3%) observations in the enforcement action universe. MSCI-GMI notes that 20.56% of their sample firms are family firms (742 of 3,609 observations) with the remaining 79.44% classified as nonfamily firms. Based on the relative proportion of family firms in the enforcement action sample and the MSCI-GMI database, our analysis indicates that family firms are 10.6 times more likely to engage in financial misconduct than nonfamily firms.⁵ Using a χ^2 -test to examine the hypothesis that family and nonfamily firms are equally likely to be named in enforcement actions, we reject the null ($\chi^2 = 1,102.4$, p -value=0.00) and infer that family firms are substantially more likely to become entangled in enforcement actions arising from financial misrepresentation than nonfamily firms.

Because the FSR Database and the MSCI-GMI Database cover different periods (1978 through 2013 and 2001 through 2013, respectively) and potentially differ in firm characteristics, we conduct an additional test by comparing the datasets along common time frames and common minimum firm size. Specifically, we exclude those firms from the FSR Database prior to 2001 and those firms from the FSR Database with minimum total assets less than the minimum firm size in the MSCI-GMI Database (\$249,000). Table 3, Panel B presents the analysis covering a common time and common minimum firm size. Family firms continue to constitute the majority of firms caught and prosecuted for financial misrepresentation, accounting for slightly over 63% of all

⁵ We provide odds ratio for this analysis. Odds ratios can also be calculated via a logit regression where the dependent variable equals 1 for enforcement action firms (0 for non-enforcement action firms) and the independent variable equals 1 for a family firm and zero otherwise.

SEC/DOJ enforcement actions. Within the MSCI-GMI data, family firms constitute 20.56% of all firms. Based on the common time-size analysis, we infer that family firms are 6.59 times more likely to engage in financial misconduct than nonfamily firms.⁶

The contingency analyses of the enforcement action (FSR) database relative to the MSCI-GMI Database indicate that family firms are far more likely to be caught and prosecuted for financial misrepresentation than nonfamily firms. Prior literature however, indicates an uneven distribution of family firms across large populations (or samples) of firms. In particular, family firms tend to be younger and smaller than nonfamily firms (Villalonga and Amit, 2010). Younger and/or smaller firms may maintain stronger incentives to engage in financial misrepresentation relative to well-established, larger firms. Thus, size and age may be covariates to family ownership and potentially account for the disproportionately large fraction of family firms involved in enforcement actions rather than firm ownership structure.

We document that the fraction of family firm enforcement actions exceeds the fraction of nonfamily firm enforcement actions across all size deciles with the exception of decile 10 (largest firms). In decile 10, family firms constitute 34.6% of all enforcement actions. In the remaining size deciles, we find that family firm enforcement actions range from a low of 68.4% in decile 8 to a high of 91.7% in decile 3. The analysis based on firm age provides similar conclusions. With the exception of age decile 10 (oldest firms), family firms dominate nonfamily firms across the remaining age deciles, constituting a low of 67.9% of firms in decile 9 to a high of 92.3% in decile 1. Internet appendix 3 provides a heat map that compares enforcement actions between family and

⁶ Prior research examining the prevalence of founder and/or family firms often use samples based on the S&P 500, S&P 1500, or Fortune 500 firms (Wang, 2006, Chen et al., 2008, Anderson et al., 2009). Excluding financial firms and utilities, these researchers find that family firms constitute about 30% to about 35% of their samples, with founders comprising 10-15% of their samples. However, founders and families tend not to hold stakes in financial firms and utilities, suggesting that these samples provide an upper limit to the prevalence of founder ownership in the total population..

nonfamily firms across firm size and firm age deciles. Our analysis suggests that neither firm size nor firm age explains the large fraction of family firms engaging in financial misrepresentation.

To further control for the possibility that other important covariates explain the propensity for family firms to engage in financial misconduct, we contrast the enforcement-action database against our counterfactual, non-enforcement action firms. We run the following conditional logistic regression.⁷

$$\text{Enforcement Action Firm}_{i,t} = a + \beta_1(\text{Family Firm}_{i,t}) + (\text{Control Variables})_{i,t}\beta + \varepsilon_{i,t} \quad (2)$$

Where:

Enforcement Action Firm = 1 for firms caught and prosecuted for financial misrepresentation (FSR database) and zero otherwise (matched sample). See Section I, Part C for a complete description of the matching process.

Family Firm = 1 for firms where the founding family maintains an ownership and zero otherwise.

Control Variables = firm size (natural log of total assets), firm age (natural log years since firm inception), propensity to engage in material accounting manipulations (Dechow et al., 2011), growth opportunities (market-to-book value of equity), and family ownership (fractional equity ownership of the family).

Table 4, column 1 shows the results of the regression which presents the coefficient estimates as odds ratios. With odds ratios, we measure the association between an exposure (family presence/ownership) and an outcome (enforcement action). The coefficient estimate thus represents the odds that an enforcement action occurs given family ownership compared to the odds of enforcement without family ownership. An odds ratio of one indicates that family ownership does not affect enforcement action outcomes. An odds ratio greater (less) than one indicates family presence exhibits a greater (lower) likelihood of enforcement actions.

Consistent with the contingency analysis using the MSCI-GMI Database, our results using the matched sample indicate that family firms are more likely to be caught and prosecuted for financial misrepresentation than nonfamily firms. The coefficient estimate on the family variable in

⁷ Conditional logit regressions compare matched pairs in case-control studies to investigate the relation between an outcome being an event (enforcement action) or a non-event (no enforcement action) relative to a prognostic factor (family ownership). The model fit using a conditional logit is the same as a fixed-effects logit model for panel data with the fixed effects on experimental/control cases (Hosner, Lerneshow, and Sturdivant, 2013).

column 1 of Table 4 suggests that family firms are 2.88 times more likely to be involved in an enforcement action relative to nonfamily firms. The estimate is significant at the 1% level. Notably, because we use the likelihood to engage in material accounting manipulation (*F*-score) in developing our matched sample, an alternative interpretation of our results suggests that family firms are more likely to be caught for fraud than nonfamily firms. That is, after controlling for the propensity to commit fraud (*F*-score), we continue to find that family firms experience higher rates of enforcement actions than nonfamily firms; suggesting that family firms are simply more likely to be caught or detected for engaging in financial misconduct than other firms. We explore this explanation in section B.3.

Others document that financial misconduct is related to different firm choices or characteristics that prior work suggests differ between family and non-family firms (Anderson and Reeb, 2003). Khanna, Kim and Lu (2015) find that connections that CEOs develop with top executives and directors through their appointment decisions increase the risk of corporate fraud. In Internet appendix 4, we repeat our analysis with the inclusion of board connectedness. We do not find a significant relation between financial misrepresentation and board connectedness. Notably, with the inclusion of connectedness, our results continue to hold between family firms and financial misconduct. In a similar fashion, Burns and Kedia (2006) suggest that CEO compensation is related to financial misreporting. To investigate the relation between fraud and executive pay, we examine CEO pay for family firms, founder firms, and heir firms during violation years versus non-violation years. Total CEO compensation is defined as the sum of salary, bonus, other annual pay, restricted stock grants, LTIP payouts, value of options exercised and all other. Although we find that violation year compensation tends to be greater than non-violation year compensation, the differences are not significant at conventional levels, consistent with Erickson, Hanlon, and Maydew (2006).

Our results relative to MSCI-GMI Database and the matched counterfactual sample indicate that family firms are far more likely to engage in financial misconduct than nonfamily firms. Relative to MSCI-GMI Database, family firms are about 6 times more likely to misrepresent their financial condition. Relative to the propensity-score matched sample, family firms are about 2.87 times more likely to misrepresent their financial condition. In summary, the analyses indicate that family firms appear far more likely to be caught and prosecuted for financial misrepresentation than nonfamily firms.

B. Explanations for Financial Misconduct in Family Firms

Family firms account for over 73% of all enforcement actions. What explains this preponderance of actions in family firms? We explore three potential reasons. First, the large number of actions may arise because family firms lack the same level of financial sophistication and aptitude as managers in nonfamily firms. Directors and managers of family firms often receive their positions based on birthright rather than merit and talent. A less talented executive suite potentially leads to less financial aptitude, resulting in greater financial misrepresentation and more enforcement actions. Second, the large number of actions may arise because family firms are less able to limit detection of financial misconduct relative to other firms. Third, family owners may simply be willing to engage in more illicit activity due to greater managerial hubris or risk-taking relative to nonfamily firms.

B.1 Family Firm Financial Sophistication and Risk-taking

To explore the financial sophistication and risk-taking arguments for explaining the disproportionately large fraction of enforcement actions in family firms, we exploit within family-firm variation and its effect on financial misconduct. In particular, we segregate family firms into founder firms and heir firms. Prior literature indicates that heir ownership and control often lead to poor financial performance, inept strategic decisions, and poorly managed organizations (Villalonga

and Amit, 2006). Financial sophistication arguments thus suggest that family firm misconduct primarily occurs in heir firms versus founder firms.

Yet, extant research indicates that founders often exhibit greater overconfidence and managerial hubris than their descendants (LaFond and Roychowdhury 2008; Fahlenbrach, 2009; Fink, 2013). Founders' beliefs in their business acumen potentially lead to riskier behavior and greater illicit activity relative to firms lead by founders' heirs (Levine and Rubinstein, 2014). Thus, arguments of managerial hubris and risk-taking suggest greater financial misconduct and subsequent enforcement actions in founder firms versus heir firms.

To investigate the financial sophistication and managerial hubris/risk-taking arguments, we compare the fraction of enforcement actions in founder firms and heir firms in our database (FSR) to the fraction of founder and heir firms in the MSCI-GMI Database and to our matched sample. Founder firms are those where the founder maintains an equity stake and a position as COB/CEO, COB, CEO, or president. Similarly, heir firms are those where the founder is no longer present (e.g., deceased) and ownership and involvement has passed to subsequent generations with descendants holding a position as COB/CEO, COB, CEO or president.

Family firms comprise 855 of the 1,166 enforcement actions with the remaining 311 firms falling into the nonfamily category. Of the 855 family firms caught for fraud, 826 are founder firms and 29 are heir firms. The founder is one of the top executives (COB/CEO, COB, CEO, or President) in 801 (97%) of these firms and thus, sits in or very near the firm's seat of power. In the remaining 25 founder firms (3%), the founder serves only on the board of directors. For the 29 heir firms caught for fraud, descendants serve as top executives in 25 of the firms and only as directors in four of these firms.⁸ In aggregate, founder firms, heir firms, and nonfamily firms represent 70.84%, 2.49%, and 26.67%, respectively of all enforcement actions.

⁸ In additional testing, we repeat our analyses by excluding those firms where the founder only serves as a firm director rather than in one of the top executive positions to delineate between founder managerial control and founder passive

Table 3, Panel C provides a contingency analysis comparing the fraction of founder firms in the MSCI-GMI Database against the fraction of founder firms in our database. Within the MSCI-GMI Database, founder firms account for 11.9% of all observations. Relative to the MSCI-GMI database, our contingency analysis indicates that founder firms are 17.96 times more likely to commit and be prosecuted for financial misrepresentation than nonfounder firms.

Panel D of Table 2 shows the contingency analysis contrasting the fraction of heir firms in the MSCI-GMI Database against the fraction of heir firms in our database. MSCI-GMI denotes 8.65% of their observations as heir firms. When comparing the MSCI-GMI firms to our database, we find that heir firms are only 0.27 times as likely to engage in financial misconduct as other firms.

The MSCI-GMI database tends to cover large firms (Russell 3000) and thus may not be fully representative of the types of firms that would engage in financial misrepresentation. To further benchmark our results, we compare the enforcement action database against the matched sample when segregating family firms into founder firms and heir firms. We use the same specification as in equation 2 but replace the family firm variable with founder firm and heir firm variables. In particular, we estimate the following conditional logit model.

$$Enforcement\ Action\ Firm_{i,t} = a + \beta_1(Founder/Heir\ Firm_{i,t}) + (Control\ Variables)_{i,t}\beta + \varepsilon_{i,t} \quad (3)$$

Where:

Enforcement Action Firm = 1 for firms caught and prosecuted for financial misrepresentation (FSR database) and zero otherwise (matched sample).

Founder/Heir Firm = 1 for firms where the founder (heir) maintains a position as COB/CEO, COB, CEO, or president and zero otherwise

Control Variables = firm size (natural log of total assets), firm age (natural log years since firm inception), propensity to engage in material accounting manipulations (Dechow et al., 2011), growth opportunities (market-to-book value of equity), and family ownership (fractional equity ownership of the family).

Table 4, column 3 shows the regression results with the coefficient estimates presented as odds ratios. Consistent with the contingency analysis using the MSCI-GMI Database, our results using the

control. Given the small number of enforcement actions with founders holding board positions, our results remain unchanged with the exclusion of founder directors.

matched sample indicate that founder firms are more likely to be caught and prosecuted for financial misrepresentation than other firms. The coefficient estimate on the founder variable suggests that founder firms are nearly 4.4 times more likely to be involved in an enforcement action versus nonfounder firms. The results in column 4 indicate heir firms are far less likely to engage in financial misconduct relative to other firms. Specifically, the odds ratio on the heir firm variable indicates heirs are just 0.27 times as likely to be caught and prosecuted for financial misrepresentation as their non-heir counterparts.

The comparison against the MSCI-GMI database or against the matched sample strikingly indicates that founder firms experience the bulk of enforcement actions across family firms and across the full universe of firms caught and prosecuted for financial misrepresentation. Further, this preponderance of founder firm actions and the dearth of actions in heir firms provides evidence consistent with founder firm characteristics – risk-taking/managerial hubris or greater detection rates – as explanations for the high fraction of founder firms ensnarled in financial misconduct.

B.2 Founder's Sudden Deaths and Managerial Hubris/Risk-Taking

Our analysis shows that 70.3% of enforcement actions for financial misrepresentation occur in founder firms; suggesting founder-specific traits or greater detection rates in founder firms potentially lead to greater number of enforcement actions relative to other firm types. To further investigate founder-specific traits as an explanation, we investigate firms' propensity to engage in misconduct while founders maintain an equity stake/presence in the firm and after founders exit the firm. If founder-specific traits influence financial misrepresentation, then we expect to observe a decrease in the likelihood of misconduct after founders exit the firm. Founders who preplan their exits however, potentially have different incentives to engage in fraud relative to founders remaining in the firm. For instance, founders with preplanned exits may be less willing to engage in fraud to

ensure the sale of their shares. Conversely, with a preplanned exit, founders may be more willing to engage in fraud to pump-up stock price or to obfuscate performance. Using founder exits in general, thus introduces endogeneity issues on the direction of causality as well as omitted variable problems. Consequently, we use founder-CEO sudden deaths as an exogenous shock in firm control to examine the relation between founder influence and financial misconduct.

Within the FSR Database, we have a small number of observations (4) in which the founder suddenly dies before the public learns about the misconduct and thus lack statistical power to examine financial misconduct pre- and post- founders' sudden-deaths.⁹ To develop a sufficiently large sample of founder-CEO sudden deaths, we use the CompuStat universe of firms from 1974 to 2013. Using SEC filings, Dow Jones Factiva, Lexis-Nexis, and firm press releases, we develop a sample of 133 founder-CEO sudden deaths. In our search, we look for the terms “founder” and variations of death (e.g. died, passed, killed, murdered, suicide, etc.) in the same release and further investigate these releases to determine whether the death was unexpected (i.e., not due to preexisting illness or expected by investors, etc.).

Because CEO transitions (founder deaths) provide an opportunity for new management to resolve lingering issues through write-offs or accounting charges, our analysis examining financial misconduct pre- and post- sudden founder deaths potentially captures executive change-outs rather than changes in founders' propensity to engage in fraud. To address this issue, we compare founder-CEO sudden deaths to nonfounder-CEO sudden deaths. Quigley, Crossland, and Campbell (2016) kindly provided their data of sudden-CEO deaths that span from 1950 through 2009. We restrict Quigley et al.'s death sample and our founder death sample to the same period (1974 through 2009)

⁹ These four cases include Charles G. Bluhdorn of Gulf + Western and Michael Chowdry of Atlas Worldwide Holdings who both died in plane crashes; Roger M. Wheeler of Telex who was murdered; and Rejjane Huai of FalconStor who committed suicide. Interestingly, four times as many executives unexpectedly died during the regulatory proceedings (after disclosure to the public) such as Ken Lay of Enron, an architect of one of the most egregious founder frauds in history, who died from a heart attack after the company ceased to exist and after conviction but prior to final sentencing.

and further restrict the Quigley sample to only nonfounder CEO-deaths. Thus, the final comparison consists of 133 founder-CEO sudden deaths and 150 nonfounder-CEO sudden deaths, allowing for a difference-in-difference analysis of the propensity to engage in fraud surrounding an exogenous shock in managerial (founder) control.

Our sample of founder and nonfounder sudden-death firms fall outside of the FSR Database, indicating that these firms have not been caught-and-prosecuted for financial misconduct (no enforcement actions). Consequently, we use *F*-score (Dechow et al., 2011) as an alternative metric to enforcement actions for gauging the likelihood of misconduct for the 10-years prior to CEO deaths and the 10-years after CEO deaths. Internet appendix 2 provides the details on the computation of *F*-score. Importantly, in using *F*-score, we proxy for the likelihood to engage in material accounting misconduct rather than being caught and prosecuted for financial misconduct. Thus, our analysis cannot unambiguously delineate actual fraud from the propensity to commit fraud.

Table 5, Panel A displays a univariate difference-in-difference analysis for the propensity to engage in material accounting manipulation for firms experiencing sudden deaths of founder CEOs relative to sudden deaths of nonfounder CEOs. Prior to death, our analysis indicates that firms with founder CEOs exhibit a significantly greater likelihood of engaging in accounting manipulation relative to firms with nonfounder CEOs. The average *F*-score, pre-death, for founder CEO firms is 1.0723 versus 0.7236 for nonfounder firms. The difference of 0.349 ($= 1.0723 - 0.7236$) is significant at the 1% level; suggesting that prior to death, founder CEO firms are more likely to engage in financial misconduct relative to nonfounder firms.

From pre- to post- death, we observe that founder firms experience a significant decrease in the propensity to engage in fraud while the likelihood of engaging in fraud remains unchanged for nonfounder firms. Specifically, from pre- to post- death, *F*-score decreases from 1.0723 to 0.9573 (*p*-

value < 1%) for founder firms and increases from 0.7236 to 0.7370 (p -value = 0.62) for nonfounder firms.

The overall difference-in-difference analysis indicates that founder firms experience a significant and incrementally larger decrease in the likelihood of engaging in fraud, relative to nonfounder firms, from pre- to post- death. We observe that firms with sudden deaths of founder CEOs experience a greater decrease in F -score of 0.1284 versus firms with sudden deaths of nonfounder CEOs. This difference-in-difference of -0.1284 has an associated p -value of 2%. Intuitively, our analysis indicates that the likelihood of engaging in material accounting manipulation decreases by 15.0% from pre- to post- founder death relative to the matched sample.¹⁰ The sudden death analysis indicates that once founders cease to exert control/influence on the firm, the likelihood of financial misconduct significantly decreases, providing evidence consistent with the notion that founder hubris/risk-taking leads to the disproportionately large fraction of enforcement actions occurring in founder firms. We present the multivariate results of this analysis in Panel B of Table 5, drawing similar inferences.

Our analysis appears to point towards hubris/risk-taking in explaining fraud in founder firms. However, an alternative explanation centers on greater detection rates rather than greater levels of financial misconduct. Specifically, founder firms may just be more likely to be caught for fraud than other firms and thus, experience more enforcement actions versus nonfounder firms. We investigate this explanation in the next section.

B.3 Detection Rates

¹⁰ We calculate this percentage as the difference between the founder-CEO death sample (pre to post death) less the difference in the nonfounder-CEO death sample (pre to post death) divided by average F -score for the sample. That is, the diff-in-diff estimate divided by the sample F -score = $-0.1284/0.8552 = 15.01\%$.

Our measure of corporate financial misconduct relies on firms engaging in fraud and subsequently, being caught and successfully prosecuted for this misbehavior. Thus, the finding of more illicit conduct in founder firms may arise because these powerful, influential individuals engage in more fraud (hubris/risk-taking) or alternatively, because monitoring agents provide greater oversight of founder firms versus nonfounder firms, suggesting that these firms suffer from greater detection rates and thus more enforcement actions (Miller, 2006). We investigate the detection explanation via two avenues. First, we analyze whether founder firms experience more whistleblowing activity from internal and/or external agents versus nonfounder firms. Second, we examine whether regulators particularly emphasize, or target, founder firms that results in greater detection rates relative to other firms.

B.3.1 Detection through Whistleblowing

Firms with powerful, influential managers may establish internal control systems that incentivizes employees to report dubious or illicit activity relative to firms with more decentralized power bases. Similarly, founders often garner greater attention from the business media, academics, and the public, suggesting a greater likelihood of external agents uncovering fraud relative to nonfounder firms (e.g., Lyon and Maher, 2005). If founder firms self-organize in ways that permit greater employee monitoring or receive heightened public attention, then whistleblowing may explain the large fraction of enforcement actions in founder firms (e.g., Miller, 2006). To investigate whether founder firms experience different detection rates versus nonfounder firms, we use an alternative database of fraud that relies on successful litigation of class action lawsuits as a measure of corporate misconduct. Specifically, Dyck et al. (2010) examine 216 incidences of firm fraud, from 1996 through 2004, and classify the detecting group (whistleblowers) along 11 categories. We group the

Dyck et al. (2010) classifications into internal and external detecting agents.¹¹ Internal agents constitute firm employees and the firm itself, representing 41.7% of the 216 cases of corporate fraud. The external detecting agents consist of analysts, auditors, clients or competitors, equity holders, industry regulators, law firms, newspapers, the SEC, and short sellers and represent the remaining 58.3% of the fraud cases. For each of the 216 firms, we search corporate proxy statements to determine founder firms, heir firms, family firms (sum of founder and heir), and nonfamily firms. Founder firms and heir firms account for 33.3% and 7.4%, respectively, of the firms in this database.

Importantly, the Dyck et al. (2010) data relies on successful class action lawsuits as a measure of fraud while the FSR Database relies on successful prosecutions by the SEC/DOJ. Plaintiffs (lawsuits) and regulators (enforcement actions) arguably maintain different incentives in pursuing fraud cases. Although this analysis provides the advantage of an independent data source to confirm our earlier results, a potential caveat arises because we are not making a strict one-to-one comparison when contrasting class action lawsuits against enforcement actions.

First, to examine the viability of using class action lawsuits rather than enforcement actions as a measure of corporate financial misconduct, we repeat our earlier analysis using the 216 fraud cases from the Dyck et al. (2010) data. Because all firms in the Dyck et al. (2010) sample commit fraud, we require a reference sample of family and nonfamily firm to benchmark the likelihood of founder and heirs engaging in illicit behavior. We use Anderson, Duru, and Reeb's (2009) database of family and nonfamily firms covering the largest 2,000 firms based on total assets from 2001 through 2010. Similar to the Dyck et al. (2010) firm selection criteria, we exclude firms from the

¹¹ In additional logistic analysis, we examine each of the 11-categories to determine whether founder firms are more likely to be detected by one group versus another. The results indicate that founder-firm fraud is no more (or less) likely to be detected by any single group versus nonfounder firms. The 11-categories along with the percent of fraud detected by each group are: equity analyst (9.72%), auditor (7.41%), client or competitor (3.24%), employee (12.04%), equity holder (2.31%), the firm (29.63%), industry regulator-government agency-SRO (9.26%), law firm (2.31%), newspaper (9.26%), SEC (4.63%), and short-seller (10.19%).

Anderson et al. data with total assets less than \$750 million and restrict the sample period to years 2004 and earlier. The total sample consists of 4,071 firm-years observations, comprising the 216 firm-year observations from the Dyck et al. data and the remaining from the Anderson et al. data.

To ensure our results are not driven by sample size differences (216 observations for class actions lawsuits and 3,855 observations for the reference firms) or firm characteristic differences, we also construct a matched sample for our analysis. We employ coarsened exact matching (CEM) (Iacus, King, and Porro, 2011) and match fraud firms to non-fraud firms using an exact industry match (2-digit SIC code), and also match on total assets, firm age, debt ratio, and return on assets.¹² Of the 216 firms in the class action lawsuit, we were able to match 164 observations, resulting in 164 firms experiencing successful class action lawsuits and 164 firms without class action lawsuits, resulting in 328 observations. Internet appendix 5 provides the summary statistics for the full sample as well as the matched sample.

We contrast the class action lawsuit fraud data against the reference sample with the following logit regression.

$$\text{Corporate Fraud}_{i,t} = a + \beta_1(\text{Founder or Heir Firm}_{i,t}) + (\text{Control Variables})_{i,t}\beta + \varepsilon_{i,t} \quad (5)$$

Where:

Corporate Fraud = 1 for firms successfully prosecuted in class action lawsuits for corporate fraud (Dyck et al. data) and zero otherwise (Anderson et al. data).

Founder or Heir Firm = 1 when the founder or heir continues to hold a 5% or larger ownership stake in the firm and zero otherwise. (Shleifer and Vishny, 1986; Villalonga and Amit, 2006). We use the same definition of founder and heir firms for both the Dyck et al. and Anderson et al. data.

Control Variables = firm size (natural log of total assets), firm age (natural log years since firm inception), leverage (long-term debt divided by total assets), growth opportunities (market-to-book value of equity), and firm performance (EBITDA divided by total assets).

Table 6, Panel A shows the regression results for the full sample with the coefficient estimates presented as odds ratios. Panel B presents the results for the matched sample. The

¹² The difference in means for the matching variables between the fraud sample and non-fraud sample as a percent of the variable average for the full matched sample are: SIC code – exact match; natural log of total assets - 1.46%, natural log of firm age – 0.60%, debt ratio – 0.00%, and return on assets – 9.33%.

regressions results using class action lawsuits rather than enforcement actions provide evidence consistent with our earlier analysis that founder firms are more likely to experience fraud than other firms (e.g., nonfamily firms or nonfounder firms). Our results for the full sample (matched sample) indicate that founder firms are 2.45 (4.04) times more likely to be caught and prosecuted for corporate fraud relative to firms without founders. Our earlier results with enforcement actions indicate that founder firms are 3.97 times more likely to be caught and prosecuted for corporate fraud. Overall, the analyses from class action lawsuits and from SEC/DOJ enforcement actions suggest that founder firms experience substantively more fraud than other firm types.

The analysis indicates no difference in corporate fraud for heir firms versus other firm types when using class action lawsuits as a measure for financial misconduct. The coefficient estimates on heir firms in Panel A (full sample) and Panel B (matched sample) of Table 6 are not significant at conventional levels, suggesting that firms headed by descendants do not differ in financial misconduct from other firms. The last column of Panels A and B combine founder firms and heir firms into the same regression and provides similar results. In our earlier analysis using enforcement actions, our results indicated that heir firms are less likely to be caught-and-prosecuted for financial misrepresentation than other firms. The analysis with class action lawsuits indicates no difference in descendant firms.

We now turn to whether founder firms experience greater detection rates than nonfounder firms. Of the 216 cases of fraud in the Dyck et al. (2010) whistleblower dataset, 90 incidences are disclosed by internal sources (employees or firm) and 126 occurrences are disclosed by external agents. We use the following logit specification to examine internal versus external detection rates in founder firms relative to nonfounder firms.

$$Founder\ Firm\ Corporate\ Fraud_{i,t} = a + \beta_1(Internal\ Detection_{i,t}) + (Control\ Variables)_{i,t}\beta + \varepsilon_{i,t} \quad (6)$$

Where:

Firm Corporate Fraud = 1 if corporate fraud is detected in a founder firm and zero when corporate fraud is detected in a nonfounder firm (heir and nonfamily firms).

Internal Detection = 1 for firms where the fraud is reported by internal sources (employee or the firm) and zero for fraud detected by external sources (newspaper, regulators, investors, etc.)

Control Variables = firm size (natural log of total assets), firm age (natural log years since firm inception), leverage (long-term debt divided by total assets), growth opportunities (market-to-book value of equity), and firm performance (EBITDA divided by total assets).

For the detection analysis, we only use firms experiencing successful class action lawsuits because the firms in the Anderson et al. (2009) sample have neither been prosecuted for fraud nor have detection activity. Panel B of Table 6 (right-hand side of table) displays the results of our regression analysis. Notably, in either specification (with- and without- control variables), we find no evidence that founder firms are likely to experience greater detection from internal sources versus other firms. The odds-coefficient estimate on internal detection is not significant at conventional levels, suggesting that the high rates of fraud in founder firms do not arise from differences in internal whistleblowing.¹³ Because the benchmark variable for internal detection is the alternative, external detection, the analysis also indicates that founder firms are no more (or less) likely to be caught by agents outside the firm. Although all of the firms in the analysis experience whistleblowing activity, our results indicate that this activity does not differ between founder and nonfounder firms.

B.3.2 Detection through Regulatory Emphasis

The analysis thus far, suggests that founder firms experience similar detection rates from internal and external agents relative to nonfounder firms. We conduct one additional test that focuses on regulators emphasizing monitoring of founder firms versus other firm types. Specifically, regulatory agencies may impartially monitor these controlling owners due to regulators' preconceived notions

¹³ We also examine whistleblower activities in heir-led firms. Using the same specification as noted in the last column of Panel B in Table 6 (specification with control variables), we find an odds ratio coefficient estimate on the whistleblower variable of 2.379 with a *p*-value of 0.23. The analysis indicates that whistleblowing in heir-led firms does not significantly differ from whistleblowing in other firms.

of founder risk-taking or due to the founders' large equity stakes. If so, we expect regulators to over investigate founder firms relative to other firm types (Becker, 1957; Knowles et al., 2001). By doing so, regulators will capture founder firms that engage in major fraud as well as minor fraud. Founder firms engaging in minor acts of financial misrepresentation will receive small penalties. A regulatory emphasis or targeting explanation thus suggests that many founder firms will be caught for minor fraud, rendering a lower average penalty for founder firms versus other firms.

Table 6, Panel C displays the returns to regulators, or outcomes of enforcement actions, against founder and nonfounder respondents. We examine three types of penalties that individual respondents receive for engaging in financial misconduct; monetary fines, incarceration, and probation. Our analysis does not provide evidence consistent with a regulatory targeting explanation. Rather, we find that founder firms experience, on average, larger monetary fines, longer incarceration periods, and longer probation periods than nonfounder firms. Founder respondents suffer an average monetary penalty of \$15.66 million while the average penalty for nonfounder respondents is \$6.89 million. The average incarceration for founder respondents is 55.6 months while that for nonfounder respondents is 29.6 months. Similarly, for founder and nonfounder respondents, we observe probation periods of 38.7 and 33.0 months, respectively. Founder respondents, on average, suffer significantly more severe penalties than respondents in other firms.¹⁴

Our results do not provide evidence consistent with a regulatory targeting explanation for the high fraction of enforcement actions in founder firms. Notably, the analysis suggests that regulators may be under targeting founder firms relative to other firm types.¹⁵ We find that founder

¹⁴ This analysis shows founder firms experience higher penalties than nonfounder firms on a per respondent basis. Intuitively, decision-makers commit financial misconduct after weighing the potential benefits and costs to themselves. Thus, founders deciding on the potential costs and benefits of financial misrepresentation likely focuses on their expected penalties (fines and prison sentences) while the government officials and shareholders conceivably focus on the total package.

¹⁵ Our analysis centers on the average outcome but regulatory targeting potentially occurs on the margin where regulators have greater discretion (infra-marginality). Based on the average outcome, we can reject the notion that regulators target founder firms however, the under-targeting interpretation may be more fragile (Anwar and Fang, 2006).

firms exhibit larger, average penalties than nonfounder firms. Simple math suggests that to decrease average penalty size to the same level as nonfounder firms, regulators need to ensnare more founder firms in their oversight efforts. Overall, a regulatory emphasis or targeting explanation does not appear to account for the disproportionately large fraction of enforcement actions against founder firms.

To provide insight into the large number of enforcement actions in founder firms, we examined three potential explanations; (i) financial sophistication, (ii) risk-taking/hubris, and (iii) detection rates. Our analyses point neither towards financial sophistication nor detection rates to explain enforcement actions in founder firms. Rather, the sudden-death results indicate that founder risk-taking and/or managerial hubris appears to be the reason for observing the high fraction of founder firms being caught and prosecuted for financial misrepresentation. Further bolstering this argument, we find that founders aggressively sell-off their equity stakes when engaging in financial misconduct. During the period that founders engage in financial misrepresentation and prior to detection, their average (median) equity stake decreases by 14.1% (5.4%) of the firm's outstanding shares. In dollar terms, founders sell, on average, over \$128 million of their equity while misrepresenting the firm's books and records. As a reference point, heir firms (as another type of large, undiversified shareholder) over the violation period and before detection, sell-down about 4.9% of the firm's outstanding equity. The difference in the equity sell-down between founder firms and descendant firms of 9.2% (14.1% - 4.9%) is statistically significant with a p -value less than 0.001. Notably, founder firms much more quickly sell-down their equity stakes than descendant firms (31.8 months versus 49.5 months, p -value < 0.001). When segregating founder firms and heir firms into those in which the founder or heir are named as culpable or guilty individuals, we find, on average, equity sell-downs of 18.5% and 6.5% for founder and descendant firms, respectively. Internet

Yet, because we find a wide range of penalty types in founder firms for both moderate and severe infractions, our analysis suggests that average and marginal regulatory oversight under targets founder firms.

appendix 6 provides details on equity sales by founder and heir firms. The analysis suggests founder risk-taking and/or hubris, partially motivated by private economic benefits, explains the disproportionately large fraction of enforcement actions occurring in founder firms.

III. Conclusions

Financial misconduct often comprises relatively egregious acts by managers and directors, resulting in large losses for firm stakeholders and undermining overall investor confidence. Literature on the economics of crime indicates that those with “much to lose” may possess the strongest incentives to refrain from illicit or illegal behavior (Orsagh and Witte, 1981). Family owners – shareholders with a strong, influential voice in firm matters and with substantive professional, economic, and social ties to the organization – represent a group of iconic investors that would face particularly large opportunity costs from engaging in or being associated with financial misconduct; suggesting few acts of financial misrepresentation. Yet, an alternative argument suggests that family owners’ large equity stakes may provide ample economic and behavioral incentives to issue misleading financial reports so as to protect their personal wealth and welfare. We investigate the relation between family owner presence/control and financial misrepresentation for U.S. publicly-registered firms.

Using the universe of SEC and DOJ enforcement actions from 1978 through 2013 for financial misrepresentation (FSR Database), we find that over 73% of all actions involve family firms. Extant estimates of the fraction of family firms in the publicly traded universe of firms range from a low of slightly over 20% to a high of about 45%. Contingency analysis relative to the MSCI-GMI Database indicates that family firms are about 6.6 times more likely to engage in financial misrepresentation than nonfamily firms. To further buttress our argument, we also develop a well-defined matched sample of non-enforcement action firms and find that family firms are about 2.9 times more likely to be involved in enforcement actions relative to nonfamily firms.

What accounts for the disproportionately large fraction of enforcement actions in family firms? We explore three explanations that encompass financial sophistication, managerial hubris/risk-taking, and detection rates. Our first argument suggests that family firms differ in aptitude and business acumen versus nonfamily firms. The second explanation, managerial hubris/risk-taking, suggests that family owners fundamentally differ from other owners or managers and may be more willing to assume high risk reporting tactics that results in greater financial misrepresentation relative to other firms. Third, the large number of actions may arise because family firms are simply more likely to be caught for engaging in fraud relative to other firms.

To investigate the first explanation (financial sophistication), we exploit within family-firm variation by segregating family firms into founder firms and heir firms. Existing literature indicates that heirs obtain their positions due to birthright rather than from talent and merit, leading to poor corporate decision-making and inferior financial performance (Anderson et al., 2003; Villalonga and Amit, 2006), and thus greater financial misconduct. Risk tolerance and managerial hubris arguments however, indicate that financial misconduct primarily arises in founder firms. Levine and Rubenstein (2014) document that successful entrepreneurs exhibit greater levels of illicit behavior than other managers but also tend to possess greater ability. Consequently, founders' beliefs in their business acumen potentially leads to riskier behavior and greater managerial hubris resulting in greater financial misconduct than in heir firms.

When delineating between founder and heir firms, we find that the vast majority of enforcement actions occur in founder firms. Over 70% of all enforcement actions arise in founder firms while only 2.5% occur in heir firms (the remaining 26.7% occur in nonfamily firms). Relative to our propensity score matched sample, we find that founder (heir) firms are 3.97 (0.56) times more (less) likely to be caught and prosecuted for misconduct. Our analysis on founder and heir firms

points towards founder hubris/risk-taking or founder-firm detection rates as principal explanations for the high fraction of enforcement actions in family firms.

To further test founder risk-taking/hubris as a possible explanation, we examine 133 sudden deaths of founder CEOs occurring from 1952 through 2010 and compare these to 150 sudden deaths of nonfounder CEOs. Using sudden CEO-deaths as an exogenous shock to changes in corporate control, we can examine the effect of founder deaths on firms' propensity to engage in material accounting manipulations. Our analysis indicates that from pre- to post- founder death, firms' reporting aggressiveness decreases by over 15% relative to sudden deaths of nonfounder CEOs. The results from the sudden founder death analysis suggest that founder hubris/risk-taking arguably explains the disproportionate number of enforcement actions in family firms.

An alternative explanation for the large fraction of enforcement actions in founder firms focuses on the notion that these firms are just more likely to caught for fraud than other firm types. That is, founder firms do not commit more fraud than other firms but are simply caught or detected at higher rates than nonfounder firms. To investigate this proposition, we examine detecting agents for 216 incidences of corporate fraud for founder and nonfounder firms (Dyck et al., 2010). When segregating whistleblowing agents into sources internal and external to the firm, we find no evidence that founder firms experience differing detection rates from these agents than nonfounder firms. In an additional test of the detection rate explanation, we examine whether regulatory agencies impartially monitor or target founder firms. Our analysis does not provide support regulatory targeting but rather, indicates that regulators may be under targeting founder firms relative to nonfounder firms. We find little evidence to suggest that higher detection rates in founder firms explain the large fraction of enforcement actions.

Founder risk-taking and/or managerial hubris appear to be likely explanations for observing the disproportionately large number of enforcement actions in founder firms. In additional evidence

supporting this argument, we note that founders sell-off large portions of their equity stakes while engaging in financial misconduct. During the period of financial misrepresentation but before detection, founders, on average, sell 14.1% of the firm's outstanding shares from their personal portfolio. The results from the founder sudden-death analysis and founder equity-sales point towards founder hubris/risk-taking as the principle explanation for observing such a large fraction of enforcement actions in family firms.

In total, our results appear *inconsistent* with the idea that large, influential owners limit financial misconduct. Rather, founder firms appear several times more likely to engage in financial misconduct than other firms. What makes founders engage in this behavior? Our analysis points to managerial hubris or risk-taking as an important factor. Consistent with the notion that founders are more risk tolerant than professional managers or their own descendants, the results suggest that founders appear willing to assume gambles on financial misconduct to extract private benefits from the firm.

References

- Adams, R., H. Almeida and D. Ferreira. 2009. Understanding the relationship between founder-CEOs and firm performance. *Journal of Empirical Finance* 16(1): 136-150.
- Anderson, R., S. Mansi, and D. Reeb. 2003. Founding family ownership and the agency cost of debt. *Journal of Financial Economics* 68(2): 263-285.
- Anderson, R., and D. Reeb. 2003. Founding family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance* 58: 1301-29.
- Anderson, R., A. Duru, and D. Reeb. 2009. Founders, heirs, and corporate opacity in the United States. *Journal of Financial Economics* 92: 205-222.
- Anderson, R., D. Reeb and W. Zhao. 2012. Family-controlled firms and informed trading: Evidence from short sales. *Journal of Finance* 67: 351-385.
- Anwar, S. and H. Fang. 2006. An alternative test of racial prejudice in motor vehicle searches: Theory and evidence, *American Economic Review* 96:127-151
- Beasley, M. 1996. An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review* 71(4):443-465.
- Beatty, A., S. Liao, and J. Yu. 2013. The spillover effect of fraudulent financial reporting on peer firms' investments. *Journal of Accounting and Economics* 55(2): 183-205.
- Becker, G. 1957. *The Economics of Discrimination*. University of Chicago Press, Chicago.
- Burns, N. and S. Kedia, 2006. The impact of performance-based compensation on misreporting, *Journal of Financial Economics* 79:35-67
- Camerer, C., and D. Lovo. 1999. Overconfidence and excess entry: An experimental approach. *The American Economic Review* 89(1): 306-318.
- Chan, L., K. Chen, and T. Chen. 2013. The effects of firm-initiated clawback provisions on bank loan contracting. *Journal of Financial Economics* 110(3): 659-679.
- Chen, S., X. Chen, and Q. Cheng. 2008. Do family firms provide more or less voluntary disclosure?. *Journal of Accounting Research* 46(3): 499-536.
- Chi, S., M. Pincus, and S. Teoh. 2013. Mispricing of book-tax differences and the trading behavior of short sellers and insiders. *The Accounting Review* 89 (2): 511-543.
- Correia, M., 2014. Political connections and SEC enforcement. *Journal of Accounting and Economics* 57(2): 241-262.
- Dechow, P., W. Ge, C. Larson, and R. Sloan. 2011. Predicting material accounting misstatements. *Contemporary Accounting Research* 28(1): 17-82.
- DeFond, M., C. Lim, and Y. Zang. 2015. Client conservatism and auditor-client contracting. *The Accounting Review* 91(1): 69-98.
- Dyck, A., A. Morse, and L. Zingales. 2010. Who blows the whistle on corporate fraud?. *The Journal of Finance* 65(6): 2213-2253.
- Dyck, A., A. Morse, and L. Zingales. 2014. How pervasive is corporate fraud? Working Paper University of Chicago.
- Ege, M. 2015. Does internal audit function quality deter management misconduct? *The Accounting Review* 90(2): 495-527.
- Erickson, M., M. Hanlon, and E. Maydew. 2006. Is there a link between executive equity incentives and accounting fraud?. *Journal of Accounting Research* 44 (1): 113-143.
- Fahlenbrach, R. 2009. Founder-CEOs, investment decisions, and stock market performance. *Journal of Financial and Quantitative Analysis* 44(2): 439-466.
- Fang, V., A. Huang, and W. Wang. 2017. Imperfect Accounting and Reporting Bias. *Journal of Accounting Research*, forthcoming.

- Files, R., 2012. SEC enforcement: Does forthright disclosure and cooperation really matter?. *Journal of Accounting and Economics* 53(1): 353-374.
- Fink, J., 2013. Founder CEOs are best leaders of small-cap companies. *Investing Daily*, <http://www.investingdaily.com/17246/founder-ceos-are-the-best-leaders-of-small-cap-companies>
- Gow, Ian D., D. Larcker, and P. Reiss. 2016. Causal inference in accounting research. *Journal of Accounting Research* 54(2): 477-523.
- Hosmer, D., S. Lemeshow, and R. Sturdivant. 2013. *The Multiple Logistic Regression Model, in Applied Logistic Regression, Third Edition*, John Wiley & Sons, Hoboken, NJ.
- Iacus, S., G. King, and G. Porro. 2011. 2011. Multivariate matching methods that are monotonic imbalance bounding. *Journal of the American Statistical Association*, 493, 106: 345-361.
- Jia, Y., L. Van Lent, and Y. Zeng. 2014. Masculinity, testosterone, and financial misreporting. *Journal of Accounting Research* 52(5): 1195-1246.
- Karpoff, J., D. Lee and G. Martin. 2008a. The cost to firms of cooking the books. *Journal of Financial and Quantitative Analysis* 43: 581-612.
- Karpoff, J., D. Lee and G. Martin. 2008b. The consequences to managers for financial misrepresentation. *Journal of Financial Economics* 88: 193-215.
- Kedia, S. and S. Rajgopal. 2011. Do the SEC's enforcement preferences affect corporate misconduct? *Journal of Accounting and Economics* 51(3): 259-278.
- Khanna V., Kim E and Y. Lu. 2015. CEO connectedness and corporate fraud. *The Journal of Finance* 70: 1203–1252.
- Knowles, J., N. Persico, and P. Todd. 2001. Racial bias in motor vehicle searches: Theory and evidence, *Journal of Political Economy* 109(1): 203-229.
- Kumar , P. and N. Langberg. 2009. Corporate Fraud and Investment Distortions in Efficient Capital Markets. *Rand Journal of Economics* 40: 144–72.
- La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 1999. Corporate ownership around the world. *The Journal of Finance* 54(2); 471-517.
- Lafond, R., and S. Roychowdhury. 2008. Managerial ownership and accounting conservatism. *Journal of Accounting Research* 46(1): 101-135.
- Lane, B. 2016. Bernie Sanders targets Goldman Sachs, Wall Street in latest campaign ad, *Housing Wire*, February.
- Lennox, C., J. Francis, and Z. Wang. 2011. Selection models in accounting research. *The Accounting Review* 87(2): 589-616.
- Levine, R., and Y. Rubinstein. 2014. Smart and illicit: Who becomes an entrepreneur and does it pay?. Working Paper UC Berkeley.
- Li, S., 2013. Corporate Financial Fraud: An Application of Detection Controlled Estimation. Working Paper Wilfrid Laurier University.
- Lyon, J., and M. Maher. 2005. The importance of business risk in setting audit fees: Evidence from cases of client misconduct. *Journal of Accounting Research* 43(1): 133-151.
- May, D. 1995. Do managerial motives influence firm risk reduction strategies? *The Journal of Finance* 50(4): 1291-1308.
- Miller, G. 2006. The press as a watchdog for accounting fraud. *Journal of Accounting Research* 44(5): 1001-1033.
- Orsagh, T., and A. Witte. 1981. Economic status and crime: Implications for offender rehabilitation. *The Journal of Criminal Law and Criminology* 72(3): 1055-1071.
- Piskorski, T., A. Seru, and J. Witkin. 2015. Asset quality misrepresentation by financial intermediaries: evidence from the RMBS market. *The Journal of Finance* 70(6): 2635-2678.

- Presley, T., 2011. Chief executive officer overconfidence and the incidence of financial statement restatement, UMI Dissertation Publishing.
- Purda, L., and D. Skillicorn. 2015. Accounting variables, deception, and a bag of words: Assessing the tools of fraud detection. *Contemporary Accounting Research* 32(3): 1193-1223.
- Quigley, T., C. Crossland, and R. Campbell, R.J., 2016. Shareholder perceptions of the changing impact of CEOs: Market reactions to unexpected CEO deaths, 1950–2009. *Strategic Management Journal*.
- Roberts, M., and T. Whited. 2013. Chapter 7 - Endogeneity in empirical corporate finance. *Handbook of the Economics of Finance 2*: 493-572.
- Roll, R. 1986. The hubris hypothesis of corporate takeovers. *Journal of Business*: 197-216.
- Shleifer, A., and R. Vishny. 1986. Large Shareholders and corporate control. *Journal of Political Economy* 94(3): 461-488.
- Tella, R., and F. Weinschelbaum. 2008. Choosing agents and monitoring consumption: A note on wealth as a corruption-controlling device. *The Economic Journal* 118(532): 1552-1571.
- U. S. Securities and Exchange Commission (SEC). 2003. SEC charges China-based company and former chief financial officer in fraudulent scheme involving non-existent computing business. Litigation Release No. 22698, May 8, 2013.
<http://www.sec.gov/litigation/litreleases/2013/lr22698.htm>
- Villalonga, B., and R. Amit. 2006. How do family ownership, control and management affect firm value? *Journal of Financial Economics* 80(2); 385-417.
- Villalonga, B., and R. Amit. 2010. Family control of firms and industries. *Financial Management* 39(3): 863-904.
- Wang, D. 2006. Founding family ownership and earnings quality, *Journal of Accounting Research* 44: 619-656.

Figure 1. Family Firms and Nonfamily Firms engaged in Enforcement Actions

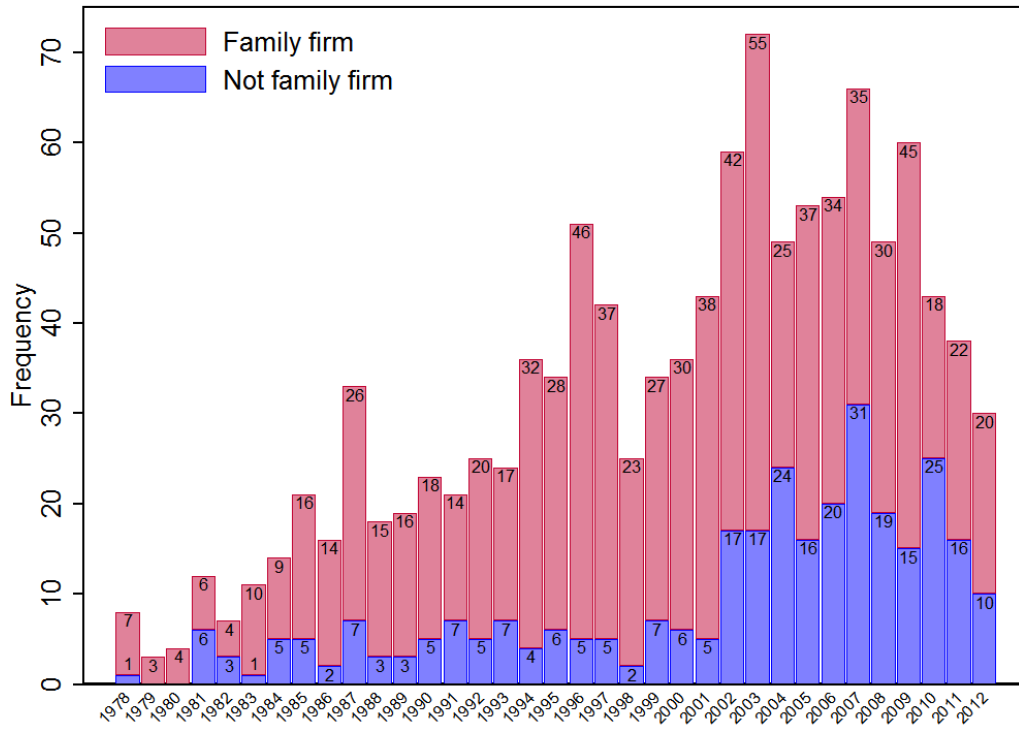


Table 1 - Term and Variable Definitions

Average Loss – the loss experienced by the average investor by holding the stock from the beginning of the violation period to the initial public announcement of the violation.

Board Independence – the percent of independent directors divided by the total number of directors.

Board Size – total number of directors serving on the board of directors.

CEO Named – a binary variable that equals one when the CEO is named in the enforcement action and zero otherwise.

Chm/CEO Duality – a binary variable that equals one when the same individual holds both the titles of chairman of the board and chief executive officer, and zero otherwise.

Class Action – a binary variable that equals one when the firm was subject to private civil class action or derivative lawsuit for the regulatory misbehavior described in the enforcement action, and zero otherwise.

Distance from Regulator – the distance from the closest SEC Regional Office or US Attorney’s Office (if DOJ involved) and the firm’s headquarters.

DOJ Involved – a binary variable that equals one when Department of Justice prosecutes the violation and zero otherwise.

Family Firm – binary variable that equals one when the family maintains an equity ownership stake and zero otherwise.

Family Ownership – total number of shares held by family members (founder, heirs and their relatives) divided by total shares outstanding.

Firm Age – natural logarithm of the number of years since firm founding to the start of the violation period.

Firm Size – natural logarithm of total assets measured in the last fiscal year of the violation period.

Firm Failed – a binary variable that equals one when the firm declared bankruptcy, liquidated, forfeited, or ceased operations before the regulatory action was completed.

Firm Performance - earnings before interest, tax, depreciation and amortization (EBITDA) divided by total assets.

Founder Firm – binary variable that equals one when the founder maintains an ownership stake and presence and zero otherwise.

Heir Firm - binary variable that equals one when the founder’s descendant(s) maintain an ownership stake and presence and zero otherwise.

Initial Abnormal Return – abnormal return associated with the first public announcement of an event leading to an enforcement action. Calculated as the firm’s raw stock return less the CRSP value-weighted index of all stocks.

Insider Ownership – percent of outstanding equity held by all officers and directors of the firm.

Leverage – book value of total liabilities divided by the book value of total assets.

Market Cap – market value of outstanding equity measured as the number of shares outstanding at year-end multiplied by the price per share at year-end.

Market-to-Book – total assets minus stockholders’ equity plus the market value of equity, all divided by total assets.

Prob (Accounting Manipulations) or the Propensity to Engage in Material Accounting Manipulations – F-score is derived per Dechow, Ge, Larson and Sloan (2011) using F-score Model 1.

Reverse Merger – a binary variable that equals one when the firm became public through a reverse merger and zero otherwise.

US Codes Violated – number of unique sections and rules violated under the U.S. Code and Code of Federal Regulations.

Violation Period – number of months that the violation occurred as defined in the enforcement proceedings’ documents.

Table 2: Descriptive Statistics

This table presents summary statistics and difference of mean and median tests between family and nonfamily firms for 1,166 enforcement actions in the FSR Database. Panel A provides firm characteristics and Panel B provides violation characteristics. Mean values are reported along with median values in parentheses directly below. Data definitions and sources are shown in Table 1.

Panel A: Firm Characteristics				
	Universe of Actions (n=1,166)	Nonfamily Firms (n=311)	Family Firms (n=855)	p-value of test statistic
Market Cap	6,458.01 (139.70)	17,440.01 (1,288.12)	2,463.39 (71.24)	0.000 ¹ (0.000)
Market-to-Book	146.73 (1.54)	2.12 (1.04)	199.33 (1.81)	0.188 ¹ (0.000)
Leverage (%)	141.70 (58.50)	69.86 (66.39)	167.82 (52.87)	0.055 ¹ (0.000)
Firm Age	24.09 (11.00)	54.21 (39.00)	13.14 (8.00)	0.000 ¹ (0.000)
Insider Ownership (%)	31.25 (24.95)	13.42 (4.60)	37.74 (34.17)	0.000 ¹ (0.000)
Board Size	7.53 (7.00)	10.10 (10.00)	6.59 (6.00)	0.000 ¹ (0.000)
Board Independence (%)	46.49 (50.00)	63.15 (69.23)	40.43 (41.67)	0.000 ¹ (0.000)
COB/CEO Duality (%)	80.53	73.31	83.16	0.000
Panel B: Violation Characteristics				
	Universe of Actions (n=1,166)	Nonfamily Firms (n=311)	Family Firms (n=855)	p-value of test statistic
Violation Period	36.14 (26.94)	40.49 (32.95)	34.56 (24.02)	0.000 ¹ (0.001)
US Codes Violated	11.34 (11.00)	9.33 (9.00)	12.06 (11.00)	0.000 (0.000)
DOJ Involved (%)	31.05	35.69	29.36	0.055
Insider Trading (%)	17.67	7.40	21.40	0.000
CEO Named (%)	60.38	32.15	70.64	0.000
Class Action (%)	46.83	41.16	48.89	0.004
Reverse Merger (%)	16.47	6.11	20.23	0.000
Firm Failed (%)	35.51	19.94	41.17	0.000
Distance from Regulator	411.82 (34.86)	638.53 (37.37)	329.36 (33.46)	0.000 ¹ (0.023)
Initial Abnormal Return (%)	-11.88 (-3.84)	-8.01 (-2.53)	-13.29 (-5.65)	0.000 ¹ (0.000)
Average Loss (%)	15.60 (32.03)	11.15 (12.36)	17.22 (40.45)	0.590 ¹ (0.000)

¹ indicates *t*-test with unequal variances.

Panel C: Descriptive Statistics for Enforcement Action Subsample and Matched Sample

This panel presents summary statistics and difference of mean and median tests for the enforcement-action subsample and matched sample. Using the universe of CompuStat firms from 1978 through 2013, we construct a propensity score matched sample of enforcement action firms to non-enforcement action firms. The propensity score is calculated using a logit model with the dependent variable equal to one in the violation year of enforcement action firms and zero for all other firm-years. The independent variables used to calculate the propensity score are size (logarithm of total assets), firm age (years since initial listing in CompuStat), and firms' propensity to engage in material accounting manipulations using the lagged two-year moving average *F*-score (Dechow et al., 2011). The propensity score is used to match control firms in the last fiscal year of the violation period within the same industry (2-digit SIC code). The matching process yields a sample of 823 enforcement actions firms and 823 non-enforcement action firms for a total of 1,646 firm-year observations. Mean values are reported along with median values in parentheses directly below. Data definitions and sources are shown in Table 1.

	Counterfactual Sample (n=823)	Enforcement Sub-sample (n=823)	Total Sample (n=1,646)	Difference Test
Family Firms	377 (45.81%)	564 (68.53%)	941 (57.17%)	0.000 ¹
Founder Firms	308 (37.42%)	539 (65.49%)	847 (51.46%)	0.000 ¹
Descendant Firms	69 (8.38%)	25 (3.04%)	94 (5.71%)	0.000 ¹
Nonfamily Firms	446 (54.19%)	259 (31.47%)	705 (42.83%)	0.000 ¹
Propensity Score	0.0042 (0.0038)	0.0047 (0.0038)	0.0044 (0.0038)	0.206 ² (0.758) ³
Ln (Total Assets)	6.003 (5.984)	5.890 (5.828)	5.947 (5.923)	0.424 ² (0.275) ³
Total Assets	15,109.6 (397.035)	19,693.0 (339.606)	17,356.3 (373.532)	0.381 ⁴ (0.275) ³
Firm Age	15.211 (11.00)	15.778 (10.00)	15.495 (10.00)	0.384 ² (0.612) ³
Prob(Accounting Manipulations)	1.554 (1.192)	1.712 (1.291)	1.633 (1.248)	0.034 ² (0.006) ³

1. Two-sample test of proportions.
2. Two-sample t test with unequal variances.
3. Two-sample Wilcoxon rank-sum (Mann-Whitney) test.
4. Two-sample t test with equal variances.

Table 3: Family, Founder and Heir Involvement in Enforcement Actions relative to the MSCI-GMI Database

This table presents the results of contingency analyses comparing enforcement actions in family, founder and heir firms relative to nonfamily firms from the FSR Database and the MSCI-GMI Database.

Source	Family Firms (A)	Nonfamily Firms (B)	Total Firms (C)	Proportion Family (A) ÷ (C)	Family Odds/Risk & Odds Ratio (A) ÷ (B)	Risk Diff.
--------	------------------	---------------------	-----------------	-----------------------------	---	------------

Panel A: FSR Database versus MSCI-GMI Database

MSCI-GMI	(1)	742	2,867	3,609	0.2056	0.2588	
FSR	(2)	855	311	1,166	0.7333	2.7492	
Total Firms	(3)	1,597	3,178	4,775	0.3345	0.5025	
Enforcement Risk	(2)/(3)	0.5354	0.0979	0.2442		5.4708	0.4375
Enforcement Odds	(*)	1.1523	0.1085	0.3231		10.6226	

Panel B: FSR Database versus MSCI-GMI Database over Common- Time and Minimum Size

MSCI-GMI	(1)	742	2,867	3,609	0.2056	0.2588	
FSR	(2)	302	177	479	0.6305	1.7062	
Total Firms	(3)	1,044	3,044	4,088	0.2554	0.3430	
Enforcement Risk	(2)/(3)	0.2893	0.0581	0.1172		4.9793	0.2321
Enforcement Odds	(*)	0.4070	0.0617	0.1327		6.5926	

Panel C: FSR Database versus MSCI-GMI Database for Founder Firms

MSCI-GMI	(1)	430	3,179	3,609	0.1191	0.1353	
FSR	(2)	826	340	1,166	0.7084	2.4294	
Total Firms	(3)	1,256	3,519	4,775	0.3345	0.3569	
Enforcement Risk	(2)/(3)	0.6576	0.0966	0.2442		6.8066	0.5610
Enforcement Odds	(*)	1.9209	0.1070	0.3231		17.9607	

Panel D: FSR Database versus MSCI-GMI Database for Heir Firms

MSCI-GMI	(1)	312	3,297	3,609	0.0865	0.0946	
FSR	(2)	29	1,137	1,166	0.0249	0.0255	
Total Firms	(3)	34	4,434	4,775	0.0714	0.0769	
Enforcement Risk	(2)/(3)	0.0850	0.2564	0.2442		0.3316	-0.1714
Enforcement Odds	(*)	0.0929	0.3449	0.3231		0.2695	

Table 4: Family, Founder, and Heir Firm Involvement in an Enforcement Action relative to the Matched Sample

This panel presents **odds ratios** from conditional logit regression of comparing enforcement actions in founder and heir firms from the FSR Database to founder and heir firms from a propensity-score matched sample. We match enforcement action firms to non-enforcement actions firms based on firm size (total assets), firm age (years listed in CompuStat), firms' propensity to engage in material accounting manipulations (F-score; Dechow et al., 2011), industry (2-digit SIC codes), and the last year of violation. *p*-values are reported in parentheses. Data definitions and sources are shown in Table 1.

	<i>Dependent Variable = 1 for an Enforcement Action and 0 otherwise</i>			
Firm Size	2.369*** (0.01)	2.575*** (0.01)	2.508*** (0.01)	2.724*** (0.01)
Firm Age	0.994 (0.56)	1.001 (0.94)	1.000 (0.98)	0.989 (0.36)
Prob(Accounting Manipulations)	3.571*** (0.01)	3.714** (0.02)	3.602*** (0.01)	4.408*** (0.01)
Market-to-Book	1.062*** (0.02)	1.060** (0.03)	1.059** (0.03)	1.073*** (0.00)
Family Ownership	1.395 (0.33)	1.409 (0.33)	1.157 (0.66)	6.463*** (0.00)
Family Firm	2.877*** (0.00)	-	-	-
Founder	-	3.974*** (0.00)	4.378*** (0.00)	-
Heir	-	0.561** (0.04)	-	0.267*** (0.00)
Log-likelihood	-504.29	-474.14	-476.51	-520.19
Observations	1,646	1,646	1,646	1,646
χ^2	108.77	145.27	144.89	74.07
<i>p</i> -value	0.00	0.000	0.000	0.000
<i>pseudo</i> - R ²	0.116	0.169	0.165	0.088

Table 5: Analysis of Sudden Death of Founders

Panel A presents univariate results of parametric difference-in-difference tests of firms' propensity to engage in material accounting manipulations (Dechow et al., 2011) based on firm-years for 133 firms experiencing a sudden founder CEO death and 150 firms experiencing a sudden nonfounder CEO death (Quigley, Crossland, and Campbell, 2016). Firm years used in the analysis are limited to +/- 10 years from year of death. The data cells contain firms' propensity to engage in material accounting manipulations with the number of observations directly below in parentheses. The difference row and column contain the respective differences between the samples with the p -value reported directly below from a test of difference in means assuming unequal variances. **Panel B** presents a difference-in-difference OLS multivariate regression of firms' propensity to engage in material accounting manipulations on founder firm, a post-death flag that equals 1 after the founder dies and zero otherwise, and an interaction between founder and the post-death flag along with associated control variables. p -values are in parentheses below each coefficient estimate. Data definitions and sources are shown in Table 1.

Panel A: Difference-in-Difference Test on Firms' Propensity to Engage in Material Accounting Manipulation			
	Pre-Death	Post-Death	Difference
Nonfounder Sample	0.7236 (n=1,098)	0.7370 (n=1,199)	-0.0134 (t = -0.50) (p -value = 0.615)
Founder Sample	1.0723 (n=1,043)	0.9573 (n=587)	0.1150 (t = 2.64) (p -value = 0.008)
Difference	-0.3487 (t = 8.84) (p -value = 0.000)	-0.2203 (t = 6.81) (p -value = 0.000)	-0.1284 (t = -2.52) (p -value = 0.012)
Panel B: Difference-in-Difference Regression of Firm's Propensity to Engage in Material Accounting Manipulation			
	<i>Dependent Variable = Firms' Propensity to Engage in Material Accounting Manipulations</i>		
Ln (Total Assets)	-	-	0.002 (0.81)
Firm Age	-	-	0.003*** (0.03)
Market-to-Book	-	-	0.009 (0.48)
Founder Firm	0.349*** (0.00)	0.340*** (0.00)	0.340*** (0.00)
Post Sudden-Death Flag	0.013 (0.62)	0.001 (0.99)	0.001 (0.99)
Founder Firm x Post Death Flag	-0.128** (0.01)	-0.130** (0.01)	-0.130** (0.01)
Intercept	0.724*** (0.00)	0.650*** (0.00)	0.650*** (0.00)
Observations	3,927	3,927	3,927
F-statistic	41.71	28.46	28.46
p -value	(0.00)	(0.00)	(0.00)
Adjusted-R ²	3.62%	3.83%	3.83%

Table 6: Internal Detection of Firm Fraud

Panel A and **Panel B** present odds ratios from logit regression for the full and matched sample, respectively, comparing fraud in founder and heir firms from the Dyck et al. (2010) database relative to a references sample from Anderson et al. (2009). **Panel C** presents odds ratios from logit regressions of regressing founder-firm corporate fraud on internal whistleblowing. For this analysis, we only use firms from the Dyck et al. (2010) database. *p*-values are reported in parentheses. **Panel D** presents tests of penalty type for nonfounder and founder respondents named by the SEC and DOJ in enforcement actions. Data definitions and sources are supplied in Table 1.

	Panel A: Full Sample of Class Action Lawsuits as a Measure of Corporate Fraud			Panel B: Matched Sample of Class Action Lawsuits as a Measure of Corporate Fraud			Panel C: Founder-Firm Corporate Fraud		
	<i>Dependent Variable = Corporate Fraud</i>						<i>Dependent Variable = Corporate Fraud in Founder Firms</i>		
Founder Firm	2.449*** (0.00)	-	2.519*** (0.00)	4.038*** (0.00)	-	4.134*** (0.00)	Internal Detection	0.704 (0.28)	0.833 (0.67)
Heir Firm	-	1.294 (0.74)	1.497 (0.25)	-	1.203 (0.73)	1.411 (0.53)	Firm Size	-	0.930 (0.63)
Firm Size	1.590*** (0.00)	1.592*** (0.00)	1.598*** (0.00)	1.121 (0.26)	1.110 (0.30)	1.134 (0.22)	Firm Age	-	0.266 (0.00)
Firm Age	0.793* (0.07)	0.674*** (0.00)	0.782** (0.05)	1.272 (0.18)	0.986 (0.93)	1.247 (0.22)	Debt Ratio	-	0.260 (0.23)
Debt Ratio	1.593 (0.19)	1.618 (0.19)	1.560 (0.22)	2.341 (0.29)	2.304 (0.26)	2.243 (0.31)	Market-to-Book	-	0.989 (0.78)
Market-to-Book	1.226*** (0.00)	1.245*** (0.00)	1.229*** (0.00)	1.333** (0.01)	1.336** (0.01)	1.335*** (0.01)	Firm Perf.	-	0.041 (0.20)
Firm Perf.	0.082** (0.01)	0.071** (0.01)	0.081** (0.01)	1.133 (0.93)	0.836 (0.89)	1.056 (0.97)	Constant	0.568 (0.01)	121.43 (0.00)
Constant	0.002*** (0.00)	0.004*** (0.00)	0.002*** (0.00)	0.060** (0.01)	0.272 (0.16)	0.059*** (0.01)			
Observations	4,071	4,071	4,071	328	328	328	Observations	216	216
χ^2	111.43	101.39	122.69	21.24	10.54	22.03	χ^2	1.19	40.24
<i>p</i> -value	0.000	0.000	0.000	0.068	0.649	0.0779	<i>p</i> -value	0.275	0.000
<i>pseudo</i> - R ²	0.0814	0.0676	0.0825	0.0724	0.0354	0.0738	<i>pseudo</i> - R ²	0.0051	0.294

Panel D: Regulatory Emphasis or Targeting

	Nonfounder Respondents		Founder Respondents		t-statistic	Pr > t
	Obs.	Penalty	Obs.	Penalty		
Monetary Penalties	2,415	6.893 \$mm	681	15.660 \$mm	-1.1787	0.239§
Incarceration	522	29.6 months	151	55.6 months	-4.190	0.000§
Probation	522	33.0 months	151	38.7 months	-4.345	0.000

§ Brownie et al.'s modified t-test for samples with unequal variances.