Prosocial CEOs and Accounting Information Quality

Abstract: This paper examines the association between Chief Executive Officers' (CEOs') prosocial tendency and their companies' accounting information quality. We measure CEOs' prosocial tendency using their involvement with charitable organizations. Our results suggest that prosocial CEOs are less likely to manipulate financial statements, proxied by accounting irregularities identified by material non-reliance restatements and SEC or DOJ enforcement actions. Moreover, a company is less likely to have accounting irregularities and regulatory enforcement actions after a prosocial CEO replaces a non-prosocial CEO than after other types of CEO replacements. The effect of prosocial CEOs on accounting manipulations is concentrated in situations where firms are under financial distress, when Chief Financial Officers are also prosocial, and when the direct aim of the charitable organization(s) that CEOs are involved with is to improve the welfare of people in need. Further, we find that prosocial CEOs are less likely to withhold bad news and issue more earnings forecasts. Taken together, our results suggest that prosocial CEOs, who are less subject to the agency problem, provide higher quality accounting information to investors than non-prosocial CEOs.

Data Availability: All data are publicly available or available from the subscription sources identified in the text.

Prosocial CEOs and Accounting Information Quality

1. Introduction

Prosocial CEOs tend to engage in prosocial activities that primarily benefit others, such as serving on the board of a charitable organization (Feng et al. 2021). To the extent that prosocial CEOs do not behave according to narrow self-interests but instead care more about shareholders' interests, they are less subject to the agency problem than non-prosocial CEOs; that is, they are less likely to make choices that maximize their own benefits at the expense of shareholders' welfare. This paper investigates whether prosocial CEOs provide higher quality accounting information to shareholders since they are less likely to compromise on accounting information quality due to the agency problem.[1]

We argue that CEOs' prosocial tendency is particularly pertinent to accounting information quality. Poor accounting information quality harms trust between management and market participants and thus has a detrimental impact on capital market efficiency (Amiram et al., 2018). Prior studies have shown that decreased information quality is significantly negatively associated with long-term firm value and shareholders' interests (Karpoff et al., 2008b).[2] It is well-documented in the literature that one main reason behind poor information quality is the agency problem, such as managers' desire to raise stock-based compensation or benefit their own career (Amiram et al., 2018; Armstrong et al. 2013). Prosocial tendency, as a fundamental aspect of human nature, captures individuals' tendency to be concerned for others (Batson and Powell, 2003), which is in contrast to the tendency of agents to take actions to maximize their own gains at the cost of principals. Thus, the inherent link between a CEO's prosocial tendency and the

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[1] We follow the framework in Dechow et al. (2010) to define high accounting information quality as providing "more information about the features of a firm's financial performance that are relevant to a specific decision made by a specific decision-maker."

[2] Karpoff et al. (2008) document that, upon the revelation of accounting misconduct, firms lose 38 percent of their market values on average.

agency problem suggests that a CEO's prosocial tendency can affect accounting information quality significantly. We conjecture that prosocial CEOs, due to their care for shareholders' interests, provide shareholders with higher quality accounting information.

To investigate the relation between CEOs' prosocial tendency and accounting information quality, we focus mainly on the likelihood of firms' accounting manipulations including accounting irregularities identified by material non-reliance restatements and financial misrepresentation targeted by SEC or DOJ enforcement actions. We center our analyses on these events for two reasons. First, researchers have a high level of confidence that these events can identify firms whose managers are likely to manipulate financial statements intentionally (i.e., the type I error rate is low). Second, prior studies have documented that managers manipulate financial statements in order to benefit themselves but at significant costs to shareholders (e.g., significant stock price declines) (Amiram et al. 2018). Thus, given the tension between managers' self-interests and shareholders' interests, using these two measures provides us with a powerful setting to capture the effect of managers' prosocial tendency. Specifically, we investigate whether prosocial CEOs are less likely to engage in accounting manipulations.[3]

We identify prosocial CEOs using their involvement with charitable organizations. The primary goal of such organizations is to improve societal welfare. Specifically, we use the BoardEx database to obtain data on managers' off-the-job activities, including involvement with various foundations and charitable groups. Following Feng et al. (2021), we define a CEO as being prosocial (*Prosocial*) if she is involved with at least one organization that is classified as a charitable organization by the Internal Revenue Service (IRS). Feng et al. (2021) documents that CEOs' involvement with charitable organizations reflects their tendency to care various

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[3] We do not look at accrual management because accruals are a noisy measure of earnings management. Moreover, accrual management does not always hurt shareholders' interests, thus may not be driven by the agency problem. For example, earnings smoothing could potentially benefit shareholders by signaling lower volatility of firm performance.

stakeholders of the companies, including employees, customers, the society, and shareholders.

We find that the having a prosocial CEO is significantly and negatively associated with the likelihood of a company's accounting manipulations, after controlling for the CEO's involvement with other non-charitable organizations and firm characteristics including performance, risk, corporate governance, etc. This result is consistent with our expectation that prosocial CEOs are less likely to manipulate financial statements. In contrast, we find that a CEO's involvement with non-charitable organizations is not significantly associated with the company's accounting manipulations, suggesting that the negative association between CEOs' prosocial behavior and accounting manipulations is not driven by CEOs' involvement in general off-the-job activities, but by CEOs' prosocial tendencies. Economically, on average prosocial CEOs are 1.1% less likely to misstate their financial statements than non-prosocial CEOs, which is significant given that 6.1% of firm-years in our sample have restated financial statements as identified by non-reliance restatements.

It is possible, however, that the associations between having a prosocial CEO and accounting manipulations as documented above are driven by underlying firm characteristics, such as firm culture or tradition. To address this concern, we next focus on firms with CEO turnovers during our sample period and examine changes in the likelihood of accounting manipulations around different types of CEO turnovers. To the extent that fundamental firm characteristics do not change significantly around a CEO turnover, the change in the likelihood of accounting manipulations around CEO turnovers is more likely driven by the change in the CEO's prosocial type. Empirically, we find that after a prosocial CEO replaces a non-prosocial CEO, firms are less likely to have accounting irregularities and regulatory enforcement actions than after other types of CEO replacements. This result provides further support for the idea that prosocial CEOs are less likely to manipulate the financial statements.

To further our understanding of the relation between CEO prosocial tendency and information quality, we conduct three corroborating analyses. Our first test examines whether the positive association between CEO prosocial tendency and accounting information quality is concentrated in situations where managers have stronger incentives to manipulate earnings. Specifically, prior studies (e.g. Rosner, 2003; Dechow et al., 2011) have documented that managers of financially distressed firms have a strong incentive to manipulate earnings to reduce the impact of poor performance. We expect that the likelihood of accounting manipulations differ more between prosocial CEOs and non-prosocial CEOs when their firms are under financial distress. Using Altman's Z-score to identify firms with financial distress, we find that CEOs' prosocial tendency has a stronger effect of reducing earnings manipulation for firms under financial distress than for the other firms.

Our second test examines whether the positive association between CEO prosocial tendency and information quality also varies with CFO prosocial tendency. Preparing voluntary and mandatory disclosure for investors is typically the primary responsibility of the CFO (e.g., Mian 2001; Geiger and North 2006; Ge et al. 2011). Prior studies have shown that CFOs are significantly associated with accounting manipulations (e.g., Jiang et al. 2011). Given that CFOs' prosocial tendency is also likely to affect disclosure quality, we expect that having a prosocial CFO will enhance the positive association between CEO prosocial tendency and information quality. Similar to how we measure CEOs' prosocial tendency, we define a CFO to be prosocial if she volunteered in at least one charitable organization based on her personal information in BoardEx. We find that having a prosocial CFO enhances a prosocial CEO's effect on reducing earnings manipulation.

Our last test focuses on further refining our prosocial measure. The IRS's file lists a variety of different organizations as charitable even though some organizations are more related to

increasing the welfare of other people (e.g., American Red Cross) than other organizations (e.g., art museums). If CEOs who are involved with charitable organizations that focus on increasing the welfare of people in need tend to care more for the welfare of other people, we should document a more negative association between these CEOs and accounting manipulations. Consistent with this conjecture, we find that compared with other prosocial CEOs, CEOs who are involved in charitable organizations that directly aim to care people in need are even less likely to manipulate financial statements.

Taken together, we find that prosocial CEOs are less likely to manipulate financial statements than non-prosocial CEOs. This difference is concentrated in situations where CEOs are more concerned about their career, when CFOs of the firm are also prosocial, and when the charitable organization(s) that CEOs are involved with directly aim to improve the welfare of people in need. These analyses also help to address endogeneity concerns since it is unlikely that omitted variables systematically vary with companies' financial status, CFOs' prosocial tendency, as well as the type of charitable organizations that CEOs are involved with.

While our main analyses focus on accounting manipulations involving mandatory disclosures, CEOs' prosocial tendencies are also likely to affect firms' voluntary disclosure choices. The voluntary disclosure literature has documented that managers tend to withhold bad news for their own personal interests, such as for benefiting their career or profiting from inside trading (Kothari et al. 2009; Roychowdhury and Sletten 2012; Ali et al. 2019). Withholding bad news, however, hurts shareholders' interests as it increases firms' information asymmetry and cost of capital. Because prosocial CEOs are less likely to maximize their own interests at the cost of shareholders' welfare, we expect prosocial CEOs to be less likely to withhold bad news. Following Roychowdhury and Sletten (2012), we measure bad news withholding by comparing the informativeness of earnings announcements between bad news quarters and good news quarters.

Consistent with our expectation, we find that prosocial CEOs are more forthcoming in disclosing bad news to shareholders. Moreover, firms are less likely to withhold bad news after a prosocial CEO replaces a non-prosocial CEO than after other types of CEO turnover.

Our paper makes two contributions. First, we extend the literature on accounting information quality by identifying a fundamental managerial characteristic, prosocial tendency, as a determinant of information quality. Under the assumption that individuals seek to optimize their own gains without considering others' welfare, prior research has investigated how the severity of the agency problem is alleviated by corporate governance mechanisms. A recent stream of research recognizes that the above assumption does not always hold, and that individual characteristics also affect firms' reporting and disclosure outcomes (Bamber et al., 2010; Ge et al., 2010; Dyreng et. Al., 2010). More importantly, individual behavior is not only driven by economic incentives but also by individual preferences, ability, experiences, and other idiosyncrasies (Hanlon et al., 2021). Our study contributes to this line of research by showing that managers vary in their tendency of being narrowly self-interested and thus the extent to which they are subject to the agency problem, which has a significant impact on accounting information quality.

Second, we contribute to the literature on prosocial behavior and provide large-sample empirical evidence on one important benefit of hiring prosocial CEOs – reducing the agency problem. We focus on scenarios when CEOs are most likely to be subject to the agency problem and provide comprehensive evidence that prosocial CEOs are less likely to sacrifice information quality for their own benefit. Corroborating Feng et al. (2021), Our findings indicate that our measure of prosocial CEOs captures meaningful differences in their prosocial tendencies and can be useful in explaining variations in their decisions. Thus, our results also have implications for boards' hiring decisions.

2. Related literature and Hypothesis Development

It has long been recognized in the literature that when managers' interests are not fully aligned with shareholders' interests, managers have incentives to take actions that increase their own benefit at the cost of shareholders' interests (Jensen and Meckling, 1976). When preparing financial information for investors, the agency problem could lead managers to manipulate financial statements to benefit themselves at the cost of shareholders' welfare. Incentives to manipulate accounting information that stem from the agency problem include stock-based compensation and career concerns (Amiram et al., 2018; Armstrong et al., 2013; Bergstresser and Philippon, 2006; Efendi et al., 2007; Feng et al., 2011; Ali and Zhang, 2015). For example, Armstrong et al. (2013) document that managers' equity holdings tie their wealth to the company's risk (i.e., equity risk), thus giving managers incentives to misreport accounting information. However, the public revelation of such misreporting is extremely costly to shareholders. Prior studies have documented significant negative market reactions to announcements of misstatements (Palmrose et al. 2004; Karpoff et al. 2008). These negative returns are attributed to either 1) changes in investors' expected future cash flows (a numerator effect) due to direct effects such as expected litigation costs, or to indirect effects such as increases in future contracting costs (Graham et al. 2008; Karpoff et al. 2008) or 2) changes in investors' assessment of information risk (a denominator effect) (Hribar and Jenkins 2004).

Earlier research studying determinants of accounting information quality has assumed that each individual is homogeneously self-interested and has investigated how corporate governance, such as monitoring and incentive contracts, can be used to alleviate the agency problems and improve accounting information quality (e.g., Klein 2002). Starting with Bertrand and Schoar (2003), more recent literature has recognized the importance of manager-specific factors in explaining corporate policies, including accounting choices and disclosure strategies (Bamber et

al., 2010; Ge et al., 2010; Hanlon et al., 2021). A number of studies have focused on how certain managerial characteristics, such as overconfidence, gender, and off-the-job behavior, affect financial reporting decisions (e.g., Schrand and Zechman, 2012; Davidson et al., 2014).[4]

We add to this rich body of research by examining whether another aspect of management characteristics, prosocial tendency, significantly explains cross-sectional variations in accounting information quality. The importance of individuals' prosocial behavior has long been recognized by researchers (Batson and Powell, 2003). Researchers in philosophy, sociology, economics, and psychology have investigated the determinants and consequences of prosocial behavior. Bénabou and Tirole (2006) develop a comprehensive theoretical framework that explains the incentives underlying prosocial behavior. Their model reflects three key motivations: (1) intrinsic altruistic motivation (i.e., concern for others' welfare); (2) desire to establish social reputation (i.e., establish the image of being a generous person); (3) extrinsic motivation (i.e., direct or indirect financial rewards). The first two motivations both imply that prosocial individuals tend to take actions that display concern for others. In other words, even when individuals care about their own reputation, such concerns could still lead to prosocial behavior.

Regarding the consequences of prosocial behavior, most prior studies employ experimental or survey approaches to show that prosocial behavior is associated with greater psychological well-being, expanded social networks, and higher job productivity (Dunn, Aknin, and Norton, 2008; Meier and Stutzer, 2008; Flynn, 2003). Wally and Baum (1994) posit that CEOs' personal values influence their firms' decision-making processes. In the same spirit, Feng et al. (2021) argue that leadership's prosocial tendency is an important factor that affects firms' corporate policies. They find support for the idea that prosocial CEOs are more likely to make corporate decisions that

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[4] For example, Griffin et al. (2019) utilize usage of a marital infidelity website as a measure of personal misconduct. They find a positive connection between personal misconduct and professional misconduct across four settings (police misconduct, financial advisor misconduct, white-collar prosecutions, and corporate misconduct).

benefit a wide range of firm stakeholders (e.g., employees, customers, the society in general). No prior studies, however, have examined whether CEOs' prosocial tendency affects the quality of accounting information provided to investors.

Prosocial individuals tend to have other-regarding preferences and thus are less likely to engage in activities that benefit themselves at the cost of others, in contrast to managers who, as agents of shareholders, have the tendency to take self-serving actions. Therefore, prosocial CEOs should be less subject to the agency problem than non-prosocial CEOs. Given that the agency problem is a key factor influencing managers' tendency to engage in accounting manipulations, we expect that prosocial CEOs are less likely to distort information that would mislead shareholders but benefit themselves. This leads to our main hypothesis:

Hypothesis: Prosocial CEOs are less likely to engage in accounting manipulations.

Note that our hypothesis is not without tension. In order to cover up their misconduct, CEOs may engage in prosocial behavior strategically to build trust. For example, Bernard Madoff was well-known for his philanthropy work, through which he created a persona of integrity while engaging in enormous financial fraud. Under this explanation, we would expect a positive association between CEOs' prosocial tendency and the likelihood of accounting manipulations.

3. Variable Definitions, Data, and Descriptive Statistics

3.1 Variable Definitions

3.1.1 Measuring Prosocial Tendency

Following Feng et al (2021), we rely on the BoardEx database, which provides information on corporate top executives and board of directors, to identify the prosocial tendency of CEOs. For each CEO, we obtain their memberships and involvement at various off-the-job organizations from BoardEx, including leisure clubs, professional and charitable organizations. We then match these

organizations' names with organizations classified as charitable by the IRS.[5] If an individual has been involved with at least one charitable organization during her career, we identify her as prosocial, for whom a variable, *Prosocial,* equals one and zero otherwise.[6,7]

While we focus on CEOs' involvement with charitable organizations, we also identify if the individual has been involved with at least one non-charitable organization during her career. We define a variable, *OtherActivities,* to be equal to one if an individual has been involved with at least one non-charitable organization during her career. It is possible that an individual's involvement with charitable organizations is due to high ability or high energy instead of prosocial tendency. Thus, we use this variable to proxy for CEOs' ability and energy and include it as a control in all our analyses. In addition, Demerjian et al (2013) documents a positive association between managerial ability and earnings quality. Therefore, controlling for *OtherActivities* helps to alleviate the concern that the association between *Prosocial* and accounting information quality is driven by CEOs' high ability and energy rather than their prosocial tendency.

3.1.2 Measuring Accounting Manipulations

We use accounting manipulations to capture a company's accounting information quality, as proxied by restatements and regulatory enforcement actions. Companies issue financial

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[5] IRS lists all tax exempt organizations in the Exempt Organizations Business Master File Extract, which can be downloaded at https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-eo-bmf. A sub-category of tax exempt organizations is "Charitable Organizations" (subsection code 03 and classification code 1 in the Exempt Organizations Business Master File Extract). For more information on IRS classifications, see https://www.irs.gov/pub/irs-soi/eo_info.pdf.

[6] Because BoardEx does not provide data on the timing of individuals' involvement with charitable organizations for most individuals, our *Prosocial* variable is individual specific and time-invariant. Prior research (e.g., Eisenberg et al. 2002; Penner et al., 2005) has documented that prosocial tendencies are traceable to early childhood and are relatively enduring, suggesting that prosocial preferences tend to be fairly stable over time.

[7] As discussed in Section 2, prosocial behavior can be driven by three key motivations: (1) intrinsic altruistic motivation, (2) desire to establish social reputation, (3) extrinsic motivation (Bénabou and Tirole 2006). Feng et al. (2021) find that CEOs involved with charitable organizations are more likely to make corporate decisions that benefit employees, customers and the society, suggesting that CEOs are involved with charitable organizations mainly for the first two motivations, not for the third one. The first two motivations both suggest that prosocial individuals are likely to take actions that display concerns for others' welfare.

restatements to correct misapplication of GAAP in their past financial statements. These misstatements can be classified as involving either errors (i.e., unintentional misapplications of GAAP) or irregularities (i.e., intentional misreporting). We focus on irregularities as they are more likely to be driven by intentional misreporting stemming from the agency problem.[8] We utilize the additional requirements on Form 8-K disclosure imposed by the SEC's Rule 33-8400 and use material financial restatements to proxy for accounting irregularities. Specifically, in 2004, the SEC issued Rule 33-8400, which requires a company to file an 8-K under Item 4.02 to inform investors that reliance should not be placed on previously filed financial statements due to discovery of a material error. Therefore, if a company files an 8-K under Item 4.02 along with a restatement of a prior financial statement, the restatement is classified as non-reliance restatement. We obtain data on these non-reliance restatements from the Audit Analytics database. We construct an outcome variable, *Irregularity*, to be equal to one if a firm has misstated financial statements in a given year as identified in a subsequent non-reliance restatement and zero otherwise.

Our second measure of accounting manipulations is the likelihood of having a SEC or DOJ enforcement action taken against them for financial misrepresentation (Karpoff, Lee, and Martin 2008a, b; Karpoff et al., 2017). This measure for financial misrepresentation is based on the database developed by Karpoff, Lee, and Martin (2008a, b) which covers the period from 1978 through 2013. The database consists of enforcement actions initiated by the SEC and DOJ that include violations of accounting-related sections of the 1977 Foreign Corrupt Practices Act (FCPA).[9] These enforcement actions generally involve federal charges against firms whose financial statements are misrepresented due to inaccurate bookkeeping, internal control violations,

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[8] However, since managerial intent is unobservable and firms rarely admit intent, prior research uses a variety of methods to identify accounting irregularities. These methods include using keywords search in restatement announcements, the amount of restated earnings, whether there is an SEC enforcement action, whether the restatement involves the revenue account, etc. (Hennes et al. 2008; Ge et al, 2020).

[9] Further details on this dataset are explained in Karpoff et al. (2017).

and falsification of accounting records. Following Call et al. (2018), we construct an indicator variable *Enforcement* that is equal to one if a given firm-year falls within the violation period of a regulatory enforcement action involving financial misrepresentation.

3.2 Sample and Descriptive Statistics

We start our sample construction with 50,516 firm-years that are covered by both BoardEx and Compustat databases. The sample period is from 2000 to 2020, since the BoardEx database starts in year 2000. We obtain CEO information for each firm-year and identify 15,530 unique individuals. We collect financial data from Compustat, stock price and return data from CRSP, data on analysts from I/B/E/S, data on institutional holdings from Thomson Financial, auditor and internal control data from Audit Analytics, and information about Board of Directors from BoardEx to construct control variables. Requiring data needed to construct control variables leads to our final sample which consists of 43,154 firm-years with 14,083 unique CEOs.

As described above, since Rule 33-8400 became effective in year 2004, non-reliance restatement data from Audit Analytics begins in 2004. Therefore, our analyses involving non-reliance restatements have a sample period that is limited to 2004-2020, where we are able to obtain 39,776 firm-years. We obtain data on SEC or DOJ enforcement actions from Call, Martin, Sharp and Wilde (2018).[10] We merge this dataset with our sample and are able to identify 652 financial misrepresentations for 29,770 firm-years from 2000 to 2013 for our sample. Table 1 summarizes our sample selection procedure. [11]

Table 2 Panel A provides descriptive statistics of the variables used in our study. To reduce the impact of outliers, we winsorize all continuous variables at 1% and 99%. Panel A presents the

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[10] This dataset is publicly available and can be accessed at https://research.chicagobooth.edu/arc/journal-of-accounting-research/online-supplements.
[11] In our regression analyses, when *Irregularity* is dependent variable, we exclude firms with SEC or DOJ enforcement from the control group. Similarly, when *Enforcement* is dependent variable, we exclude firms with restatements from the control group.

mean, median, Q1 and Q3, and standard deviation of all variables used in our analyses. The mean *Prosocial* is 0.386, suggesting that 38.6% of firm-years in our sample have prosocial CEOs. In addition, untabulated results show that out of 14,083 unique CEOs, 4,795 CEOs are prosocial (i.e. involved in charitable organizations) and 8,583 CEOs are involved in other non-charity organizations. The mean *Irregularity* is 0.061, which means that 6.1% of firms-years in our sample have accounting irregularities. Meanwhile, the average *Enforcement* is 0.022, suggesting that during 2000-2013, 2.2% of our sample have financial misrepresentations investigated by the SEC or DOJ. These percentages of accounting irregularities and financial misrepresentations are comparable with prior studies such as Bertomeu, Cheynel, Floyd, and Pan (2021) and Call et al. (2018). *OtherActivities* has a mean of 0.659, suggesting that 65.9% of firm-years in our sample have CEOs who are involved with other non-charitable activities. In terms of firm characteristics, for example, the mean (median) firm size is 579.57 (567.66) million dollars (log-transformed as 6.362 and 6.342 respectively), book-to-market ratio is 0.508 (0.417), and leverage is 0.513 (0.495).[12]

Table 2 Panel B presents a Pearson (Spearman) correlations matrix for these variables. *Prosocial* is negatively correlated with both *Irregularity* and *Enforcement*, providing preliminary evidence that having a prosocial CEO is negatively associated with earnings manipulation. In addition, the correlations between *Prosocial* and most control variables are significant, highlighting the importance of controlling these firm characteristics. Finally, the signs and significance levels of the correlations between accounting quality measures and control variables are largely consistent with prior research. In terms of the correlations between control variables, the only relatively high correlations are the correlations between *Size* and *Analyst*, between *ROA*

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[12] Please see Section 4.1.1 and Appendix for more discussion and detailed definitions of firm characteristic and other control variables.

and *Loss*, and between *Size* and *BoardSize* (0.722, -0.812, and 0.633 for Pearson correlations, respectively), which are consistent with expectations.[13]

4. Empirical Results

4.1 Testing Hypothesis

4.1.1 Main Analysis

Our main hypothesis predicts that prosocial CEOs are less likely to manipulate financial statements. To test this hypothesis, we estimate the following linear probability model: [14]

$$\begin{aligned} Earnings\ Manipulation_{i,t} &= \alpha_0 + \alpha_1 Prosocial_{i,t} + \beta_1 OtherActivities_{i,t} + \beta_2 Size_{i,t} + \\ &\quad \beta_3 FirmAge_{i,t} + \beta_4 BTM_{i,t} + \beta_5 Analysts_{i,t} + \beta_6 InstOwn_{i,t} + \beta_7 ROA_{i,t} + \beta_8 Loss_{i,t} + \\ &\quad \beta_9 SalesGrowth_{i,t} + \beta_{10} SizeAdjRet_{i,t} + \beta_{11} Leverage_{i,t} + \beta_{12} Volatility_{i,t} + \\ &\quad \beta_{13} Complexity_{i,t} + \beta_{14} AbsAccruals_{i,t} + \beta_{15} Big4Auditor_{i,t} + \beta_{16} ICWeakness_{i,t} + \\ &\quad \beta_{17} Post404_{i,t} + \beta_{18} BoardSize_{i,t} + \beta_{19} BoardIndep_{i,t} + \beta_{20} DualRole_{i,t} + \\ &\quad \beta_{21} BoardCharity_{i,t} + \beta_{22} LocalAssoc_{i,t} + \beta_{23} Woman_{i,t} + \beta_{24} CPA_{i,t} + \beta_{25} Auditor_{i,t} + \\ &\quad \beta_{26} Legal_{i,t} + Industry\ fixed\ effects + Year\ fixed\ effects + \varepsilon \end{aligned} \quad (1)$$

Earnings Manipulation is one of the two indicator variables: *Irregularity* and *Enforcement*, as defined previously. *Prosocial* equals one if the CEO of that firm-year is involved with charitable organizations and zero otherwise. Our hypothesis predicts the coefficient on *Prosocial* to be significantly negative, i.e., prosocial CEOs are less likely to manipulate earnings.

In addition to controlling for the CEO's involvement in other activities (*OtherActivities*), we follow prior literature and control for variables that are potentially associated with a firm's earnings quality. These variables include firm size (*Size*), firm age (*FirmAge*), growth opportunities (*BTM*), analyst following (*Analyst*), and institutional ownership (*InstOwn*) (Dechow et al., 2010). We control for performance-related variables, including return on assets (*ROA*),

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[13] Because of these high correlations, we tested for multicollinearity. No variance inflation factor is greater than 10.
[14] We report a linear probability model instead of a non-linear logit or probit model because it is easier to implement fixed effects and interpret coefficients. Our results are robust to estimating the regressions with logit specification.

incidence of loss (*Loss*), and size-adjusted return (*SizeAdjRet*) because prior research has documented that CEOs have incentives to manage earnings to cover up poor performance (e.g., Cheng and Warfield, 2005; Dechow et al., 2010). We also control for other firm fundamental characteristics such as sales growth (*SalesGrowth*), leverage (*Leverage*), return volatility over the year (*Volatility*) and complexity of the firm's operations (*Complexity*). We include absolute value of the company's total accruals to control for the company's fundamental accrual generating process that could influence a firm's information quality (Dechow and Dichev, 2002).

Further, we include measures of auditors, internal control procedure and characteristics of the Board of Directors since these are viewed as monitors of the financial reporting system that constrain a manager's opportunity or ability to manage earnings (Kinney and McDaniel, 1989; Dechow etal.,1996; Beasley, 1996; Larcker et al., 2007; Klein, 2002). Specifically, we control for whether the firm's auditor is one of the Big-Four audit firms (*Big4Auditor*), whether the company has internal control weaknesses (*ICWeakness*), board size (*BoardSize*), board independence (*BoardIndep*), and whether the CEO is also the chairman of the board of directors (*DualRole*). When we use *Enforcement* as the dependent variable, the sample period is 2000-2013. Since we use SOX Section 404 reports to obtain internal control weakness data which are only available after 2004, we set *ICWeakness* to zero for years before 2004 and use a dummy variable *Post404* to indicate years after 2004.

We also control for prosocial tendencies of a firm's board of directors and its local area since they may affect the company's and its employees' general prosocial tendencies. We measure board of directors' prosocial tendencies as the percentage of board members who are involved with charitable organizations (*BoardCharity*). Following Bereskin, Campbell, and Kedia (2020), we measure local area's prosocial tendencies as the number of civic and social associations, including religious organizations, in the county of the firm's headquarters (*LocalAssoc*). We consider the

15

CEO's personal characteristics including gender (*Woman*), whether she is a Certified Public Accountant (*CPA*), whether she worked as an auditor in the past (*Auditor*), and whether she had experience in legal industry (*Legal*). Detailed variable definitions can be found in the Appendix. Finally, we include both year and industry fixed effects in the regression and cluster standard errors by firm.

Table 3 presents the results from estimating Equation (1). In Column (1), our dependent variable is *Irregularity*. Consistent with our hypothesis, we find that the coefficient on *Prosocial* is -0.010 and significant ($p < 0.05$). This result suggests that relative to having a non-prosocial CEO, having a prosocial CEO reduces a firm's likelihood of having an accounting irregularity by 1% on average. This is an economically significant improvement since Table 2 Panel A shows that 6.1% of the firms in our sample have accounting irregularities. In Column (2), where *Enforcement* is the dependent variable, the coefficient on *Prosocial* is -0.002 and significant at the 5% level. Given that mean *Enforcement* in our sample is 0.022, the effect of having a prosocial CEO on having financial misrepresentations sanctioned by regulators is economically meaningful. Taken together, these results are consistent with our hypothesis that prosocial CEOs are less likely to engage in accounting manipulations.

Turning to our control variables, the coefficient on *OtherActivities* is not significant in either column, suggesting that CEOs' involvement with non-charitable organizations is not significantly associated with accounting manipulations. The coefficients on the other control variables are generally consistent with prior literature. In Column (1), *Size* is significantly positive, consistent with large firms being more likely to detect financial misstatements and disclose them. *InstOwn* is significantly negative, suggesting that institutional investors, as sophisticated investors, can reduce the likelihood of accounting manipulations (Bushee, 1998). *Loss* is significantly positive, suggesting that firms with poor performance are more likely to be involved in accounting

manipulations. *Volatility* and *Complexity* are both significantly positive, suggesting that firms with high risk and uncertainty are more likely to have accounting irregularities. *ICWeakness* is significantly positive, consistently with prior research showing that firms with internal control weakness are more likely to have low earnings quality (Doyle et al., 2007). Both *BoardSize* and *BoardIndep* are negative and significant at the 10% level. This is consistent with the notion that effective Board of Directors curbs accounting irregularities through their monitoring role. Finally, *LocalAssoc* is negative and significant, which shows that firms that operate in geographical locations with higher prosocial tendencies are less likely to have accounting manipulations.

In Column (2), the coefficient on *OtherActivities* is negative and significant (p-value < 0.05), suggesting that CEOs' participation in general off-the-job activities is negatively associated with financial misrepresentation. Since involving in off-the-job activities is likely associated with the CEO's energy and ability, this result is consistent with the notion that earnings quality is positively associated with managerial ability as documented by Demerjian et al (2013). Coefficients on *Volatility*, *ICWeakness*, *BoardIndep* and *LocalAssoc* are similar to those in Column (1). In addition, both *Size* and *Analysts* are positively associated with *Enforcement*. This is probably because the SEC and DOJ tend to target and focus their limited resources on relatively large firms (Dechow et al., 2010). *ROA* is significantly negative, similar to the implication of *Loss* in Column (1). Both *Big4Auditor* and *CPA* are negatively associated with *Enforcement*, suggesting that firms with Big-Four auditors and with CEOs who are CPAs are less likely to have financial misrepresentations.

4.1.2 Analysis Based on CEO Turnover

Although the results discussed above are consistent with our hypothesis, one alternative explanation is that the negative association between prosocial CEOs and accounting manipulations is driven by underlying firm characteristics such as firm culture. For example, Liu (2016) finds

that firms with a corruption culture are more likely to engage in earnings management and accounting fraud. It is possible that prosocial CEOs avoid working for companies with corruption culture or that companies with corporate culture of being honest and transparent are more likely to hire prosocial CEOs, leading to a negative association between having a prosocial CEO and accounting manipulations. To address this concern, we investigate whether a change in CEO prosocial type is associated with a change in accounting information quality using a sample of firms with CEO turnovers. To the extent that firm characteristics do not change significantly around a CEO turnover, the change in accounting information quality in this subsample is more likely to be driven by the change in the CEO's prosocial type. Specifically, we estimate the following regression:

$$
\begin{aligned}
Earnings\ Manipulation_{i,t} = {} & \alpha_0 + \alpha_1 ProsocialImprove_i + \alpha_2 Post_{j,t} + \\
& \alpha_3 ProsocialImprove_i \times Post_{j,t} + \sum \beta \cdot Controls + Industry\ fixed\ effects + \\
& Year\ fixed\ effects + \varepsilon
\end{aligned}
\tag{2}
$$

For firm i, $Post_{i,t}$ equals one if year t is after a CEO turnover, and zero otherwise. Since *Post* can only be defined around one CEO turnover for each firm, we keep firms with only one CEO turnover during our sample period for this analysis.[15] *ProsocialImprove$_i$* equals one for all years of firm i if its CEO turnover involves a replacement of a non-prosocial CEO with a prosocial CEO, and zero otherwise. The coefficient on *ProsocialImprove* (α_1) represents the difference in the likelihood of earnings manipulations before the CEO turnover between firms with *ProsocialImprove* equal to one and firms with *ProsocialImprove* equal to zero. The coefficient on *Post* (α_2) captures the difference in the likelihood of having an earnings manipulation between the first CEO and the successor CEO for all firms with *ProsocialImprove* equal to zero. The coefficient on the interaction between *ProsocialImprove* and *Post* (α_3) captures the incremental change in the

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[15] As a robustness check, we keep only the first CEO turnover for firms with more than one CEO turnover in the turnover sample and our results are qualitatively the same.

likelihood of earnings manipulations after the CEO turnover for firms replacing non-prosocial CEOs with prosocial CEOs relative to firms with other types of CEO turnover. If a prosocial CEO is less likely to manipulate earnings, the likelihood of having an earnings manipulation should decrease more after the CEO turnover for firms replacing non-prosocial CEOs with prosocial CEOs than for firms with other types of CEO turnovers. We thus expect α_3 to be negative. We include the same controls as those in equation (1).

Table 4 presents results from the estimation of Equation (2). In Column (1) where *Irregularity* is the dependent variable, the coefficient on *Post* is insignificant. This result suggests that on average, there is no significant change on the likelihood of having accounting irregularities after a CEO turnover for firms with *ProsocialImprove* equal to zero. However, the coefficient on the interaction term, *Post×ProsocialImprove*, is -0.050 and significant. This result suggests that the likelihood of having accounting irregularities decreases significantly more after the CEO turnover for firms replacing a non-prosocial CEO with a prosocial CEO than for other firms. In Column (2), we observe a similar result when *Enforcement* is the dependent variable, suggesting that average likelihood of having financial misrepresentations targeted by regulatory enforcement decreases more when firms replace a non-prosocial CEO with a prosocial CEO than when firms have other types of CEO turnover.

In sum, our CEO turnover analyses further strengthen our inference that prosocial CEOs are less likely to be involved in earnings manipulations and thus improve accounting information quality, and that this effect is unlikely to be driven by the underlying firm characteristics.

4.2 Cross-Sectional Tests

In this subsection, we examine whether the association between a CEO's prosocial tendency and earnings manipulation is stronger when a firm is under financial distress and when a firm has a CFO who is also prosocial. In addition, since there is a variety of different charitable

organizations under IRS's definition, we further identify charitable organizations that are more related to caring about people in need and consider a CEO's involvement with these organizations to indicate stronger prosocial tendency.

First, we consider whether a company is under financial distress. When a company is under financial distress, the agency problem is particularly severe as managers have greater career concerns. Consistent with this idea, prior studies have documented that managers of financially distressed firms have strong incentives to manipulate earnings to reduce the negative impact of poor performance emanating from financial distress (Rosner, 2010; Dechow et al., 2010). Thus, we expect a bigger difference between prosocial and non-prosocial CEOs in terms of the likelihood of earnings manipulations for financially distressed firms. To identify firms under financial distress, we calculate Altman's Z-score for each firm-year and construct an indicator variable, *FinDistress*, which equals one if the firm's Z-score in that year is below 1.81 (Altman, 1968), and zero otherwise. We interact *FinDistress* with *Prosocial* and expect the coefficient to be negative based on our conjecture that the effect of a CEO's prosocial tendency on reducing earnings manipulation is stronger for firms under financial distress.

Second, Chief Financial Officers (CFOs) are directly responsible for financial reporting. Prior studies have shown that CFOs have a significant impact on financial reporting and disclosure outcomes (e.g., Ge et al., 2010; Jiang et al., 2010). As a result, we expect that the presence of prosocial CFOs will strengthen the association between CEO prosocial tendency and earnings manipulation. We obtain each firm-year's CFO information and construct an indicator variable, *ProsocialCFO*, which equals one if the CFO is involved with charitable organizations and zero otherwise. We interact *ProsocialCFO* with *Prosocial* and expect the coefficient on the interaction to be negative since a prosocial CFO can enhance a prosocial CEO's effect on earnings manipulation.

20

Table 5 Panel A presents results for these two cross-sectional tests. In Columns (1) and (2) where we focus on financial distress, the coefficients on the interaction of *Prosocial* and *FinDistress* are negative and significant. This result suggests that the CEO's prosocial tendency has a stronger effect of reducing earnings manipulation for firms under financial distress than for other firms, consistent with our expectation. In Columns (3) and (4), we compare firms with and without prosocial CFOs. The coefficients on the interaction of *Prosocial* and *ProsocialCFO* are negative and significant in both columns, suggesting that having a prosocial CFO enhances a prosocial CEO's effect on reducing earnings manipulation.

In our main analyses, we rely on the IRS's tax-exempt organizations file to identify charitable organizations. The IRS's file lists a variety of different organizations as charitable even though some organizations are more related to increasing the welfare of other people than other organizations. For example, charitable organizations related to human services such as American Red Cross and homeless person services are more directly related to caring for other people than charitable organizations such as art museums and sports training organizations. If prosocial CEOs are less likely to manipulate accounting information because they are concerned for shareholders' interests, we should find that the association between CEOs' prosocial tendency and earnings manipulations is stronger for prosocial CEOs who are involved with charitable organizations aiming to directly increase the welfare of other people. Among IRS' charitable organizations, we identify organizations that are more related to increasing the welfare of other people, such as education, medical research, youth development, human services related. [16] We then construct an indicator variable, *Prosocial_Refined*, which equals one when the CEO is involved with these

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[16] To identify organizations that are more related to caring other, each of the four authors go over the IRS classification list independently and then use the intersection of organizations identified by each author. Alternatively, we use the union of organizations identified by each author and our results still hold. Nevertheless, we acknowledge that the construction process of *Prosocial_Refined* is subjective.

organizations, and zero otherwise. [17] We include this variable as another treatment variable in our regressions of accounting manipulation measures. The coefficient on *Prosocial_Refined* should be negative if prosocial CEOs with *Prosocial_Refined* equal to one have an even lower likelihood of manipulating financial statements than the other prosocial CEOs.

Table 5, Panel B presents regression result based on this further classification of charitable organizations. In both Column (1) and (2), the coefficient on *Prosocial* remains significantly negative. More importantly and consistent with our expectation, the coefficient on *Prosocial_Refined* is significantly negative ($p<0.01$ in both columns). This result suggests that compared with the other prosocial CEOs, CEOs who are involved in charitable organizations more related to caring for other people are even less likely to manipulate financial statements.

5. Additional Analyses and Robustness Tests

5.1 Additional Analyses using Voluntary disclosure

In our main analyses, we use the manipulation of mandatory financial reports to capture accounting information quality. Companies also voluntarily disclose information to investors; and these voluntary disclosures are highly informative and benefit investors by reducing information asymmetry and cost of capital (e.g., Beyer et al. 2011). In this section, we examine the quality of another important type of information companies provide to investors: voluntary disclosure. Specifically, we examine a company's tendency to withhold bad news and the frequency of issuing management forecasts.

Prior studies (e.g., Kothari et al. 2009) have documented that managers have incentives to

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[17] Specifically, *Prosocial_Refined* equals one when the IRS activity code (National Taxonomy of Exempt Entities code, NTEE code) for the organization is one of the following: B, C20, C27, C30, C32, C34, C35, C36, E, F, G, H, L40, L41, O, P, T, and zero otherwise. Full explanation for the NTEE codes is available at https://nccs.urban.org/publication/irs-activity-codes.

withhold bad news relative to good news. Moreover, managers withhold bad news mainly for their own personal interests, such as benefiting their career or profiting from inside trading (Kothari et al. 2009; Roychowdhury and Sletten 2012; Ali et al. 2019). Withholding bad news, however, hurts shareholders' interests as it leads to higher information asymmetry and cost of capital. Therefore, as suggested by Kothari et al. (2009), withholding bad news is largely due to the agency problem. Because prosocial CEOs are less subject to the agency problem, we expect prosocial CEOs to be less likely to withhold bad news.

Following Roychowdhury and Sletten (2012), we take three steps to measure managers' tendency to withhold bad news relative to good news. We first calculate two returns: EA returns, defined as the absolute cumulative market-adjusted returns three days around earnings announcements (EA), and non-EA return, defined as the absolute cumulative market-adjusted returns during non-EA period, i.e., two trading days after the prior quarter's EA to one trading day before current EA. Second, we construct a variable *Ln(NewsRatio)*, calculated as the natural logarithm of EA return divided by non-EA return, multiplied by 100. This variable captures the informativeness of an earnings announcement relative to the non-earnings announcement period in a given quarter. Finally, we construct a bad news quarter indicator variable, *BadNews*, which equals one if the cumulative market-adjusted return from two days after the prior EA to one day after the current EA is negative. Roychowdhury and Sletten (2012) argue that if managers withhold bad news rather than voluntarily disclose it before earnings announcements, earnings announcements should be more informative and *Ln(NewsRatio)* should be higher for bad news quarters (*BadNews* =1) than for good news quarters. They find consistent empirical evidence.

To investigate whether prosocial CEOs are less likely to withhold bad news than non-prosocial CEOs, we estimate the following regression:

$$Ln(NewsRatio)_{i,t,q} = \alpha_0 + \alpha_1 Prosocial_{i,t} + \alpha_2 BadNews_{i,t,q} + \alpha_3 Prosocial_{i,t} \times$$
$$BadNews_{i,t,q} + \beta_1 OtherActivities_{i,t} + \beta_2 Size_{i,t,q} + \beta_3 FirmAge_{i,t,q} + \beta_4 BTM_{i,t,q} +$$
$$\beta_5 Analyst_{i,t,q} + \beta_6 InstOwn_{i,t,q} + \beta_7 ROA_{i,t,q} + \beta_8 Loss_{i,t,q} + \beta_9 SalesGrowth_{i,t,q} +$$
$$\beta_{10} SizeAdjRet_{i,t,q} + \beta_{11} Leverage_{i,t,q} + \beta_{12} Volatility_{i,t} + \beta_{13} Complexity_{i,t,q} +$$
$$\beta_{14} AbsAccruals_{i,t,q} + \beta_{15} Big4Auditor_{i,t} + \beta_{16} ICWeakness_{i,t} + \beta_{17} Post404_{i,t} +$$
$$\beta_{18} BoardSize_{i,t} + \beta_{19} BoardIndep_{i,t} + \beta_{20} DualRole_{i,t} + \beta_{21} BoardCharity_{i,t} +$$
$$\beta_{22} LocalAssoc_{i,t} + \beta_{23} Woman_{i,t} + \beta_{24} CPA_{i,t} + \beta_{25} Auditor_{i,t} + \beta_{26} Legal_{i,t} +$$
$$+\beta_{27} InsiderSales_{i,t,q} + \beta_{28} BiasAdj_{i,t,q} + \beta_{29} TradeDays_{i,t,q} + \beta_{30} HighTech_{i,t,q} +$$
$$Industry\ fixed\ effects + Year\ fixed\ effects + \varepsilon \qquad (3)$$

In this equation, subscript i refers to firm i, t refers to fiscal year t, and q refers to fiscal quarter q.

The coefficient on *Prosocial* (α_1) represents the difference in the informativeness of EAs for good

news quarters between prosocial CEOs and non-prosocial CEOs. The coefficient on *BadNews*

(α_2) represents the difference in the informativeness of EAs between bad news and good news

quarters for non-prosocial CEOs. A positive α_2 is consistent with bad news withholding. We are

interested in the coefficient on the interaction term of *Prosocial* $\times$ *BadNews*, α_3, which captures

the incremental effect of the CEO's prosocial tendency on bad news withholding. If a prosocial

CEO is less likely to withhold bad news, the difference in the informativeness of EAs between bad

news and good news quarters for firms with prosocial CEOs should be smaller than that difference

for firms with non-prosocial CEOs. Thus, we expect α_3 to be negative.

In addition to the control variables used previously, following Roychowdhury and Sletten

(2012), we also include following control variables: insider sales during the quarter (*InsiderSale*),

the ratio of news released during a random three-day window in the quarter relative to the rest of

the quarter (*BiasAdj*), the number of trading days in the quarter (*TradeDays*), and whether the firm

is in high technology industry (*HiTech*). We require firm-quarter level data and obtain 163,551

firm-quarters from 2000 – 2020 for this analysis.

Column (1) of Table 6, Panel A presents analysis result on bad news withholding. The

coefficient on *Prosocial* is insignificant, suggesting that during good news quarters, there is no

difference in the informativeness of EAs between firms with prosocial CEOs and those with non-prosocial CEOs. The coefficient on *BadNews* is 0.136 and significant at 1%, consistent with non-prosocial CEOs withholding bad news and leaving more news released through earnings announcements. Finally, the coefficient on *Prosocial × BadNews* is -0.026 and significant at 5% level, suggesting that prosocial CEOs are less likely to withhold bad news than non-prosocial CEOs, consistent with our expectation.

Management forecasts are one of main voluntary disclosure mechanisms firms use to inform investors, analysts, and other market participants about future earnings (e.g., Hirst et al. 2008). Roychowdhury and Sletten (2012) find that withholding bad news is concentrated in firms not issuing earnings forecasts. Hence, our second voluntary disclosure measure is the number of annual EPS management forecasts issued during the year, *NumForecasts*. We obtain management forecasts data from the I/B/E/S guidance database. Our sample period for this analysis begins in 2002, after Reg FD and the Sarbanes–Oxley Act became effective, which significantly altered management forecasting behavior (e.g., Black, Christensen, Kiosse, and Stephen, 2017). Using a sample of 41,155 firm-years from 2002-2020, we estimate Equation (1) by replacing the dependent variable, *Earnings Manipulation*, with *NumForecasts*. Column (2) of Table 6 Panel A presents results from this analysis. The coefficient on *Prosocial* is 0.167 and significant at the 5% level, suggesting that prosocial CEOs, on average, issue 0.167 more forecasts in a year. Since the average number of earnings forecasts in a year is 2.198 (untabulated), this increase on earnings forecasts is also economically meaningful.

We also conduct analyses on the above two voluntary disclosure measures using the subsample of firms with CEO turnovers, similar to the analyses in Section 4.1.2. Table 6 Panel B presents the results of this analysis. In Column (1) where we examine bad news withholding, our focus is on the three-way interaction term *ProsocialImprove×Post×BadNews*. The coefficient on

this term is -0.109 and significant at the 5% level. This result suggests that the tendency to withhold bad news decreases significantly more after CEO turnovers for firms replacing a non-prosocial CEO with a prosocial CEO than for other firms. In Column (2), when we examine the number of earnings forecasts, we find that the coefficient on the interaction term *ProsocialImprove×Post* is 0.134 and significant at 5% level, suggesting that the frequency of earnings forecast issuance increases significantly more after CEO turnovers for firms replacing a non-prosocial CEO with a prosocial CEO than for other firms. The results from these CEO turnover analyses further strengthen our inference that prosocial CEOs are less likely to withhold bad news and issue more earnings forecasts, thus providing high quality information to investors.

5.2 Robustness Tests

Armstrong et al. (2013) find that the sensitivity of a manager's wealth to changes in risk (portfolio vega) creates a positive incentive for the manager to manipulate earnings. To further validate the robustness of our results, we control for vega in all our empirical analyses for S&P 1500 firms from 2004-2014.[18] Untabulated results show that our results continue to hold when we control for portfolio vega using this subsample.

In our main analyses, we rely on 8-K filings under Item 4.02 to identify non-reliance restatements, which is our proxy for financial statement irregularities. We also check the robustness of our results by using an alternative way to identify irregularities. Audit Analytics classifies restatements into the ones associated with accounting issues, financial fraud, errors and others. We define restatements associated with accounting issues and financial fraud as irregularities and the other restatements as errors. In untabulated analyses, we find that having a prosocial CEO significantly decreases the likelihood of having a restatement related to accounting

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[18] We limit to S&P 1500 firms as vega is calculated using ExecutiveComp data, which only covers S&P 1500 firms. We thank Cho, Tsui and Yang (2021) for sharing their data on portfolio vega with us.

issues and fraud, but is not associated with the likelihood of having a restatement due to error and others. The different results between irregularities and errors suggests that prosocial CEOs, who are less subject to the agency problem, are less likely to manipulate financial statements. However, prosocial CEOs are as likely to make errors in financial statements as non-prosocial CEOs.

Finally, we count the number of 8-K filings under Item 8.01 Other Events during a firm-year and use it as an alternative measure of disclosure transparency (Lerman and Livnat, 2010). We find that having a prosocial CEO significantly increases the company's 8-K filings under Item 8.01, similar to our findings using management earnings forecasts.

6. Conclusions

This study investigates whether prosocial CEOs provide higher quality accounting information to investors than non-prosocial CEOs. Following Feng et al. (2021), we measure CEOs' prosocial behavior using their involvement with charitable organizations. Because prosocial CEOs are more likely to be concerned about shareholders' welfare, we expect prosocial CEOs to be less likely to manipulate accounting information for their own interests but at the costs of shareholders. Consistent with this expectation, we find that firms with prosocial CEOs are less likely to have accounting irregularities and SEC or DOJ enforcement actions. Moreover, these associations are concentrated in situations where CEOs are more concerned about their career, when CFOs of the firm are also prosocial, and when the charitable organization(s) that CEOs are involved with directly aim to improve the welfare of people in need. Besides the quality of mandatory financial reports, we also find that prosocial CEOs are less likely to withhold bad news and voluntarily issue managements more frequently. In sum, our results suggest that CEOs' prosocial tendency, a fundamental personal characteristic, significantly impacts the quality of accounting information available to investors.

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Appendix. Variable Definitions

Variable	Definition	Database
Analysts	Natural logarithim of one plus the number of analysts that form the most recent consensus estimate on IBES.	IBES
Auditor	An indicator variable equal to one if the CEO worked as an auditor before, and zero otherwise. We identify CEOs with auditor experience if any of their prior role names contain the word "auditor".	BoardEx
BadNews	An indicator variable equal to one if the cumulative abnormal market-adjusted return from two days after the prior EA to one day after the current EA is negative, and zero otherwise.	CRSP
BiasAdj	The natural logarithm of the ratio of cumulative market-adjusted returns during a random three-day window in the quarter relative to the cumulative market-adjusted returns outside of that window in the same quarter.	CRSP
Big4Auditor	Indicator variable equal to one if the firm is audited by one fo the Big 4 auditors.	Audit Analytics
BoardCharity	The percentage of a firm's board members that are involved with charities.	BoardEx
BoardIndep	Percent of number directors on the board that are independent.	BoardEx
BoardSize	Number of directors on the board.	BoardEx
BTM	Compustat CEQQ divided by market value. If missing CEQQ, then book is defined as Compustat ATQ less LTQ.	Compustat, CRSP
Complexity	The first principal component of total segments, foreign transactions, and restructuring charges.	Compustat
CPA	An indicator variable equal to one if the CEO has a CPA, and zero otherwise. We identify CEOs with a CPA if any of their qualifications contain "cpa", "chartered public accountant", "chartered accountant", "certified public acocuntant", or "certified accountant".	BoardEx
DualRole	An indicator variable equal to one if the CEO of the firm is also the chairman of the board of directors.	BoardEx
Enforcement	An indicator variable equal to one if the firm-year falls within a violation period of a financial misrepresentation enforcement action taken against the firm. These enforcement actions include violations of the accounting provisions enacted under the 1977 Foreign Corrupt Practices Act (FCPA).	Call, Martin, Sharpe, and Wilde (2018)
FinDistress	An indicator variable equal to one if the firm's Z-score (Altman, 1968) is <1.81. Z-score is calculated as $1.2 \times$(Current Assets – Current Liabilities)/Total Assets + $1.4 \times$Retained Earnings/Total Assets + $3.3 \times$Pretax Income/Total Assets + $0.6 \times$Market Value of Equity/Total Liabilities + Net Sales/Total Assets. A higher Z-Score indicates lower likelihood of bankruptcy.	Compustat

FirmAge	Number of years from the first date that data on the firm is available on Compustat.	Compustat
HiTech	An indicator variable equal to one if the firm belongs to these SIC industry codes: 2833–2836, 3570–3577, 3600–3674, 7371–7379, or 8731–8734.	Compustat
ICWeakness	An indicator variable equal to one if an internal control weakness was identified in that fiscal year.	Audit Analytics
InsiderSale	An indicator equal to one for firm-quarters with net insider sales. Net insider sales are calculated as stock sales minus stock purchases.	Thomson Financial
InstOwn	Percentage of institutional ownership.	Thomson Reuters 13F
Irregularity	An indicator variable equal to one if a firm has misstated financial statements in a given year as identified in a subsequent non-reliance restatement, and zero otherwise.	Audit Analytics
Legal	An indicator variable equal to one if the CEO has worked in the legal industry before, and zero otherwise. We identify CEOs with legal experience if any of their prior roles are in industries that contain the word "legal" or "law".	BoardEx
Leverage	Total liabilities divided by total assets at the end of fiscal year.	Compustat
Ln(NewsRatio)	100 x Abs(*EARet*)/Abs(*NonEARet*). Abs(*EARet*) is the absolute value of cumulative market-adjusted returns on trading days -1 to +1 relative to the EA date. Abs(*NonEARet*) is the absolute value of the cumulative market-adjusted non-earnings-announcement period returns, defined as 2 trading days after the prior quarter's earnings announcement date to 1 trading day after the current EA date.	CRSP
LocalAssoc	The number of social and civic associations per 10,000 people in the county of the firm's headquarters.	Northeast Regional Center for Rural Development
Loss	An indicator variable equal to one if EPS is negative. EPS is defined as actual EPS from IBES or Compustat EPSFXQ if IBES EPS is unavailable.	Compustat, IBES
NumForecasts	Number of annual EPS management forecasts issued in the year.	IBES
OtherActivities	An indicator variable equal to one if the CEO is involved in any non-charities, and zero otherwise. Non-charities are organizations that are not defined as "Charitable Organizations" by the IRS.	Combination of IRS and BoardEx
Post	An indicator variable equal to one if the year is after a CEO turnover, and zero otherwise.	
Post404	An indicator variable equal to one if the year is after 2004, and zero otherwise.	
Prosocial	An indicator variable equal to one if the CEO has been involved with any charities, and zero otherwise. Charities are organizations defined as "Charitable	Combination of IRS and BoardEx

	Organizations" by the IRS.	
Prosocial_Refined	An indicator variable equal to one if the CEO has involvement in charities with the IRS activity code (National Taxonomy of Exempt Entities code, NTEE code): B, C20, C27, C30, C32, C34, C35, C36, E, F, G, H, L40, L41, O, P, T, and zero otherwise. Full explanation for the NTEE codes is available at https://nccs.urban.org/publication/irs-activity-codes.	Combination of IRS and BoardEx
ProsocialCFO	An indicator variable equal to one if the CFO has been involved with any charities, and zero otherwise. Charities are organizations defined as "Charitable Organizations" by the IRS.	Combination of IRS and BoardEx
ProsocialImprove	An indicator variable. For a given CEO turnover event, if a charitable CEO replaces a non-charitable CEO, this variable equals one for all the years when both CEOs are in position. For the other types of CEO turnovers, this variable equals zero for all the years when both CEOs are in position.	Combination of IRS and BoardEx
ROA	Income before extraordinary items divided by average total assets for the fiscal year.	Compustat
SalesGrowth	Percentage change in sales over the prior fiscal year.	Compustat
Size	Natural logarithm of total assets at the end of fiscal year.	Compustat
SizeAdjRet	Raw stock returns for the firm calculated over the 12 months prior to the end of the fiscal year, adjusted for the average return of all firms in the same size decile. Size deciles are formed at the end of each fiscal year.	CRSP, Compustat
TradeDays	The number of trading days in that quarter.	CRSP
Volatility	Standard deviation of raw daily returns for the firm adjusted for CRSP value-weighted returns in the 12 months prior to the end of the fiscal year.	CRSP
Woman	An indicator variable equal to one if the CEO is a woman, and zero otherwise.	BoardEx

Table 1. Sample Construction

This table presents data on our sample construction process. The initial sample of public-firm CEOs is obtained from BoardEx, then intersected with Compustat. Subsequently, only firm-years with sufficient data to calculate our control variables from 2000-2020 are retained, providing us with a final sample of firm-years of 43,154. Of these observations, 39,776 firm-years have data available to perform analyses involving non-reliance restatements from 2004 – 2020, and 29,770 firm-years have data available from Call, Martin, Sharpe and Wilde (2018) to perform analyses involving SEC/DOJ enforcement actions from 2000-2013.

	Number of observations
Number of public-firm CEOs in BoardEx with employment history between 2000 - 2020	15,530
Compustat firm-years available for BoardEx CEOs between 2000 - 2020	50,516
Less: Firm-years without sufficient data to calculate all control variables	-7,362
Final sample of firm-years	43,154
Firm-years with Non-Reliance Restatement data available from Audit Analytics, 2004-2020	39,776
Firm-years with SEC or DOJ enforcement data available from Call, Martin, Sharpe and Wilde (2018), 2000-2013	29,770

Table 2. Summary Statistics

This table presents summary statistics for the sample used in testing our main hypothesis. The sample period is from year 2000 to 2020. Sample includes 14,083 unique CEOs and 43,154 firm-years. Panel A descriptive statistics for variables used in our main analyses. Panel B presents the Pearson (above the diagonal) and Spearman (below the diagonal) correlations among the variables. Correlations significant at the 10% level are marked in bold. Definitions of all variables are reported in the Appendix. All continuous variables are winsorized at 1% and 99%.

Panel A: Descriptive statistics

Variable	N	Mean	Std Dev	P25	Median	P75
Prosocial	43,154	0.386	0.487	0.000	0.000	1.000
Irregularity	39,776	0.061	0.239	0.000	0.000	0.000
Enforcement	29,770	0.022	0.060	0.000	0.000	0.000
OtherActivities	43,154	0.659	0.474	0.000	1.000	1.000
Size	43,154	6.362	2.044	4.896	6.342	7.750
FirmAge	43,154	22.218	16.324	10.005	17.011	30.523
BTM	43,154	0.508	0.628	0.229	0.417	0.689
Analysts	43,154	1.666	0.937	1.099	1.792	2.398
InstOwn	43,154	0.433	0.376	0.000	0.437	0.801
ROA	43,154	0.032	0.271	-0.035	0.033	0.078
Loss	43,154	0.330	0.470	0.000	0.000	1.000
SalesGrowth	43,154	0.167	0.603	-0.024	0.070	0.200
SizeAdjRet	43,154	0.025	0.476	-0.257	-0.036	0.205
Leverage	43,154	0.513	0.314	0.307	0.495	0.666
Volatility	43,154	0.131	0.081	0.076	0.110	0.162
Complexity	43,154	0.452	1.530	-0.701	0.349	0.977
AbsAccruals	43,154	0.151	0.436	0.032	0.069	0.139
Big4Auditor	43,154	0.736	0.441	0.000	1.000	1.000
ICWeakness	43,154	0.060	0.237	0.000	0.000	0.000
Post404	43,154	0.820	0.050	0.000	0.000	0.000
BoardSize	43,154	8.185	2.257	7.000	8.000	9.000
BoardIndep	43,154	0.815	0.100	0.750	0.857	0.889
DualRole	43,154	0.207	0.405	0.000	0.000	0.000
BoardCharity	43,154	0.505	0.503	0.286	0.500	0.778
LocalAssoc	43,154	1.484	0.882	0.633	0.880	1.343
Woman	43,154	0.033	0.178	0.000	0.000	0.000
CPA	43,154	0.069	0.253	0.000	0.000	0.000
Auditor	43,154	0.015	0.122	0.000	0.000	0.000
Legal	43,154	0.018	0.135	0.000	0.000	0.000

Table 2. Summary Statistics (Cont.)

Panel B: Pearson (above the diagonal) and Spearman (below the diagonal) correlation matrix

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]
[1] Prosocial		-0.027	-0.014	0.416	0.309	0.157	-0.038	0.231	0.079	0.096	-0.129	-0.010	0.049	0.140	-0.172	0.017	-0.103	0.172	-0.054	0.262	0.142	0.120	0.523	0.074	0.082	-0.015	-0.003	0.044
[2] Irregularity	-0.027		0.132	-0.016	-0.048	-0.065	0.010	-0.037	-0.062	-0.036	0.034	0.031	-0.026	-0.002	0.069	-0.055	0.027	-0.001	0.214	-0.050	-0.075	0.021	-0.022	-0.012	-0.012	-0.010	-0.002	-0.005
[3] Enforcement	-0.014	0.132		0.009	0.032	-0.030	-0.007	0.043	-0.006	-0.001	-0.004	0.011	0.003	-0.003	0.026	-0.010	0.002	0.015	-0.007	0.008	-0.028	0.021	0.028	-0.007	-0.008	0.000	0.002	-0.002
[4] OtherActivities	0.416	-0.016	0.009		0.319	0.122	-0.026	0.240	0.075	0.077	-0.112	-0.009	0.047	0.149	-0.138	0.030	-0.097	0.186	-0.048	0.266	0.143	0.098	0.368	0.066	0.050	0.028	0.032	0.036
[5] Size	0.315	-0.051	0.031	0.319		0.323	-0.016	0.722	0.309	0.295	-0.361	-0.005	0.131	0.397	-0.432	0.292	-0.304	0.492	-0.100	0.633	0.391	0.090	0.510	0.055	0.001	0.022	0.045	0.017
[6] FirmAge	0.195	-0.067	-0.023	0.157	0.390		0.120	0.072	0.035	0.214	-0.257	-0.191	0.074	0.138	-0.347	0.192	-0.249	0.038	-0.051	0.313	0.225	0.006	0.235	0.119	-0.001	0.026	0.037	0.016
[7] BTM	-0.043	0.002	-0.007	-0.032	-0.035	0.034		-0.229	-0.081	-0.166	0.029	-0.192	-0.283	-0.232	0.034	-0.001	-0.156	-0.096	0.019	-0.054	-0.041	-0.006	-0.086	0.029	-0.010	0.024	0.008	0.000
[8] Analysts	0.227	-0.037	0.043	0.240	0.726	0.108	-0.161		0.328	0.266	-0.253	0.115	0.098	0.157	-0.269	0.165	-0.123	0.444	-0.105	0.469	0.301	0.074	0.407	-0.023	0.013	-0.002	0.018	-0.011
[9] InstOwn	0.094	-0.061	-0.003	0.090	0.345	0.056	-0.070	0.371		0.159	-0.181	0.062	0.109	0.058	-0.196	0.186	-0.109	0.243	-0.037	0.154	0.188	-0.007	0.071	-0.022	-0.004	0.022	0.025	-0.004
[10] ROA	0.096	-0.013	0.005	0.097	0.366	0.194	0.050	0.203	0.185		-0.812	0.197	0.303	-0.115	-0.394	-0.018	-0.242	0.138	-0.115	0.165	0.031	0.074	0.145	0.074	-0.007	0.009	0.008	-0.009
[11] Loss	-0.129	0.034	-0.004	-0.112	-0.360	-0.244	0.068	-0.245	-0.195	-0.570		-0.145	-0.280	0.010	0.439	-0.004	0.327	-0.163	0.109	-0.222	-0.082	-0.070	-0.179	-0.091	0.004	-0.023	-0.018	0.002
[12] SalesGrowth	-0.024	0.013	0.008	-0.021	-0.075	-0.147	-0.071	0.007	-0.014	-0.099	0.052		0.192	-0.072	0.002	-0.147	0.082	0.018	-0.004	-0.039	-0.073	0.030	-0.038	-0.036	-0.020	-0.019	-0.006	-0.008
[13] SizeAdjRet	0.022	-0.005	0.008	0.027	0.049	0.011	-0.200	0.038	0.070	0.168	-0.191	0.077		-0.009	-0.093	-0.011	-0.086	0.078	-0.071	0.084	0.036	0.025	0.067	0.022	-0.013	0.001	0.006	0.003
[14] Leverage	0.094	0.000	-0.006	0.102	0.236	0.108	-0.292	0.090	0.026	-0.167	0.061	-0.032	-0.030		-0.083	0.150	-0.099	0.162	0.021	0.301	0.244	0.022	0.209	0.070	0.002	0.044	0.024	0.002
[15] Volatility	-0.141	0.061	0.026	-0.112	-0.383	-0.293	0.029	-0.247	-0.214	-0.364	0.415	0.100	0.119	0.030		-0.123	0.293	-0.182	0.075	-0.317	-0.190	-0.042	-0.245	-0.105	-0.004	-0.027	-0.039	-0.026
[16] Complexity	0.005	-0.063	-0.018	0.016	0.290	0.217	-0.017	0.170	0.195	0.074	-0.030	-0.097	-0.032	0.094	-0.133		-0.105	0.138	0.030	0.187	0.241	-0.037	0.066	-0.030	0.004	-0.010	0.015	-0.013
[17] AbsAccruals	-0.055	0.010	0.010	-0.056	-0.180	-0.150	-0.070	-0.075	-0.070	-0.286	0.179	0.190	0.040	-0.041	0.203	-0.083		-0.124	0.054	-0.209	-0.113	-0.032	-0.135	-0.078	0.008	-0.032	-0.028	-0.002
[18] Big4Auditor	0.172	-0.001	0.015	0.186	0.486	0.078	-0.093	0.454	0.275	0.156	-0.163	-0.031	0.039	0.107	-0.167	0.124	-0.074		-0.096	0.371	0.268	0.026	0.311	0.046	0.012	0.003	0.005	0.004
[19] ICWeakness	-0.054	0.214	-0.007	-0.048	-0.101	-0.054	0.007	-0.102	-0.044	-0.089	0.109	0.019	-0.057	0.038	0.068	0.025	0.026	-0.096		-0.086	-0.035	-0.012	-0.087	-0.031	0.001	-0.007	-0.002	0.009
[20] BoardSize	0.274	-0.047	0.016	0.268	0.646	0.375	-0.065	0.470	0.166	0.175	-0.224	-0.059	0.023	0.199	-0.274	0.170	-0.115	0.351	-0.087		0.488	0.040	0.437	0.121	0.014	0.007	0.039	0.017
[21] BoardIndep	0.102	-0.069	-0.034	0.112	0.304	0.201	-0.044	0.261	0.195	0.038	-0.035	-0.050	-0.006	0.145	-0.122	0.211	-0.044	0.230	-0.024	0.337		-0.122	0.274	0.057	0.035	0.037	0.047	0.009
[22] DualRole	0.120	0.021	0.021	0.098	0.094	0.022	-0.003	0.069	-0.001	0.058	-0.070	0.007	0.021	0.007	-0.036	-0.043	-0.018	0.026	-0.012	0.057	-0.133		0.093	0.020	-0.055	-0.045	-0.017	-0.013
[23] BoardCharity	0.481	-0.022	0.027	0.326	0.536	0.337	-0.073	0.405	0.087	0.112	-0.176	-0.049	0.024	0.137	-0.198	0.059	-0.070	0.264	-0.080	0.450	0.197	0.100		0.100	0.037	0.013	0.036	0.045
[24] LocalAssoc	0.071	-0.013	-0.009	0.069	0.060	0.130	0.019	-0.025	-0.018	0.074	-0.098	-0.040	0.005	0.043	-0.097	-0.033	-0.050	0.047	-0.030	0.125	0.036	0.015	0.077		0.012	0.009	0.011	0.020
[25] Woman	0.082	-0.012	-0.008	0.050	0.005	0.011	-0.007	0.013	-0.003	-0.017	0.004	-0.008	-0.013	0.003	0.001	0.001	0.009	0.012	0.001	0.014	0.030	-0.055	0.025	0.008		-0.010	0.001	0.016
[26] CPA	-0.015	-0.010	0.000	0.028	0.019	0.021	0.013	-0.002	0.022	0.018	-0.023	-0.018	-0.006	0.029	-0.024	-0.013	-0.022	0.003	-0.007	0.003	0.036	-0.045	0.006	0.007	-0.010		0.285	-0.016
[27] Auditor	-0.003	-0.002	0.002	0.032	0.043	0.041	0.003	0.017	0.026	0.012	-0.018	-0.013	-0.002	0.015	-0.031	0.015	-0.015	0.005	-0.002	0.041	0.043	-0.017	0.033	0.005	0.001	0.285		-0.017
[28] Legal	0.044	-0.005	-0.002	0.036	0.021	0.022	-0.012	-0.011	-0.004	-0.010	0.002	0.003	0.001	0.010	-0.017	-0.012	0.000	0.004	0.009	0.024	0.003	-0.013	0.052	0.026	0.016	-0.016	-0.017	

Table 3. Prosocial CEOs and Accounting Manipulations

This table presents results from linear probability model regression of accounting manipulations on whether the CEO is prosocial. In Column (1), the sample includes 39,733 firm-year observations for the period of 2004-2020. The dependent variable, *Irregularity*, equals one if a firm has misstated financial statements in a given year as identified in a subsequent non-reliance restatement, and zero otherwise. In Column (2), the sample includes 29,130 firm-year observations for the period of 2000-2013. The dependent variable, *Enforcement*, equals one if the firm-year falls within a violation period of a financial misrepresentation enforcement action taken against the firm enacted under the 1977 Foreign Corrupt Practices Act (FCPA). *Prosocial* is an indicator variable that equals one if the CEO of the firm in year *t* is involved in charitable organizations, and zero otherwise. The definitions of all other independent variables are reported in the Appendix. Standard errors are clustered at the firm level, and *t*-statistics are reported in the brackets. Industry and year fixed effects are included. Significance at the 10%, 5%, and 1% level is denoted *, **, and ***, respectively.

	Irregularity	*Enforcement*
	(1)	(2)
Prosocial	-0.010	-0.002
	[-2.15]**	[-1.98]**
OtherActivities	-0.002	-0.002
	[-0.42]	[-2.00]**
Size	0.005	0.002
	[2.16]**	[4.06]***
FirmAge	-0.000	-0.000
	[-0.60]	[-1.32]
BTM	0.003	-0.000
	[0.81]	[-0.54]
Analysts	0.001	0.002
	[0.17]	[2.34]**
InstOwn	-0.014	-0.002
	[-2.22]**	[-1.41]
ROA	0.010	-0.003
	[1.25]	[-1.77]*
Loss	0.008	0.001
	[1.96]**	[0.74]
SalesGrowth	0.001	0.000
	[0.52]	[0.04]
SizeAdjRet	-0.004	-0.001
	[-1.29]	[-1.26]
Leverage	0.010	-0.001
	[1.62]	[-0.84]
Volatility	0.101	0.013
	[4.01]***	[2.07]**
Complexity	0.003	0.000
	[2.75]***	[0.51]
AbsAccruals	-0.001	0.001
	[-0.43]	[1.05]

Big4Auditor	0.004	-0.003
	[0.84]	[-3.34]***
ICWeakness	0.141	0.025
	[4.16]***	[1.88]*
Post404		0.002
		[1.39]
BoardSize	-0.002	-0.000
	[-1.84]*	[-1.59]
BoardIndep	-0.042	-0.020
	[-1.71]*	[-3.83]***
DualRole	-0.000	0.001
	[-0.09]	[1.04]
BoardCharity	-0.009	-0.001
	[-1.39]	[-1.13]
LocalAssoc	-0.016	-0.002
	[-2.11]**	[-1.88]*
Woman	-0.003	-0.002
	[-0.29]	[-1.19]
CPA	-0.006	-0.003
	[-0.91]	[-1.69]*
Auditor	0.011	0.001
	[0.91]	[0.45]
Legal	-0.007	-0.001
	[-0.55]	[-0.25]
Intercept	0.178	0.033
	[5.39]***	[2.68]***
Industry Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Clustered Errors	Yes	Yes
N of Observations	39,733	29,130
Adj. R^2	9.70%	4.20%

Table 4. Changes in Accounting Manipulations around CEO Turnovers

This table presents regression results using firm-years around CEO turnovers. In Column (1), the sample includes 21,722 firm-years around CEO turnovers for the period of 2004-2020. The dependent variable, *Irregularity*, equals one if a firm has misstated financial statements in a given year as identified in a subsequent non-reliance restatement, and zero otherwise. In Column (2), the sample includes 16,554 firm-year observations around CEO turnovers for the period of 2000-2013. The dependent variable, *Enforcement,* equals one if the firm-year falls within a violation period of a financial misrepresentation enforcement action taken against the firm enacted under the 1977 Foreign Corrupt Practices Act (FCPA). *ProsocialImprove* equals one for all firm-years for which the CEO turnover involves a replacement of a non-prosocial CEO with a prosocial CEO, and zero otherwise. *Post* equals one if the year is after a CEO turnover, and zero otherwise. The definitions of all other independent variables are reported in the Appendix. Standard errors are clustered at the firm level, and *t*-statistics are reported in the brackets. Industry and year fixed effects are included. Significance at the 10%, 5%, and 1% level is denoted *, **, and ***, respectively.

	Irregularity	*Enforcement*
	(1)	(2)
ProsocialImprove	-0.001	0.002
	[-0.23]	[0.48]
Post	0.005	0.001
	[0.93]	[1.30]
ProsocialImprove x Post	-0.050	-0.002
	[-1.94]*	[-2.51]**
OtherActivities	0.003	-0.002
	[0.35]	[-0.50]
Size	0.005	0.002
	[2.90]***	[4.07]***
FirmAge	-0.000	-0.000
	[-1.66]	[-1.60]
BTM	0.003	-0.000
	[1.05]	[-0.56]
Analysts	0.001	0.002
	[0.30]	[2.35]**
InstOwn	-0.014	-0.002
	[-2.97]***	[-1.45]
ROA	0.010	-0.003
	[1.34]	[-1.77]*
Loss	0.008	0.001
	[2.32]**	[0.70]
SalesGrowth	0.001	0.000
	[0.72]	[0.06]
SizeAdjRet	-0.004	-0.001
	[-1.27]	[-1.26]
Leverage	0.010	-0.001
	[2.35]**	[-0.90]
Volatility	0.101	0.013
	[4.25]***	[2.06]**

Complexity	0.003	0.000
	[2.65]**	[0.43]
AbsAccruals	-0.001	0.001
	[-0.43]	[1.08]
Big4Auditor	0.004	-0.003
	[0.93]	[-3.36]***
ICWeakness	0.041	0.002
	[3.75]***	[1.40]
Post404		-0.025
		[-1.87]*
BoardSize	-0.002	-0.000
	[-2.38]**	[-1.66]*
BoardIndep	-0.044	-0.020
	[-3.07]***	[-3.85]***
DualRole	-0.000	0.001
	[-0.00]	[1.16]
BoardCharity	-0.012	-0.002
	[-3.20]***	[-1.71]*
LocalAssoc	-0.016	-0.002
	[-5.31]***	[-1.89]*
Woman	-0.005	-0.002
	[-0.84]	[-1.38]
CPA	-0.006	-0.003
	[-1.40]	[-1.69]*
Auditor	-0.012	0.001
	[-1.87]*	[0.50]
Legal	-0.008	-0.001
	[-1.03]	[-0.29]
Intercept	0.179	0.033
	[3.93]***	[2.69]***
Industry Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Clustered Errors	Yes	Yes
N of Observations	21,722	16,554
Adj. R^2	9.70%	4.20%

Table 5. Cross-Sectional Tests and Refined Prosocial Measure

This table presents results from cross-sectional tests and tests using a refined classification of charitable organizations. Panel A presents results from cross-sectional tests involving financial distress and prosocial CFOs. In Column (1) and (3), the dependent variable is *Irregularity*, which equals one if a firm has misstated financial statements in a given year as identified in a subsequent non-reliance restatement, and zero otherwise. In Columns (2) and (4), the dependent variable is *Enforcement,* which equals one if the firm-year falls within a violation period of a financial misrepresentation enforcement action taken against the firm enacted under the 1977 Foreign Corrupt Practices Act (FCPA). *FinDistress* equals one if the firm's Z-score is lower than 1.81, and zero otherwise. *ProsocialCFO* equals one for the firm-year if the CFO of the firm is involved with charitable organizations, and zero otherwise. Panel B presents regression results using a refined classification of charitable organizations. *Prosocial_Refined* is an indicator variable equal to one for CEOs involved with charities that are more related to increasing the welfare of others, and zero other wise. Standard errors are clustered at the firm level, and *t*-statistics are reported in the brackets. Year and industry fixed effects are included. Significance at the 10%, 5%, and 1% level is denoted *, **, and ***, respectively.

Panel A: Cross-sectional tests

	Irregularity	*Enforcement*	*Irregularity*	*Enforcement*
	(1)	(2)	(3)	(4)
Prosocial	-0.008	-0.004	-0.007	-0.001
	[-1.64]	[-1.68]*	[-1.44]	[-1.33]
FinDistress	0.014	-0.001		
	[2.75]***	[-0.98]		
Prosocial x FinDistress	-0.011	-0.002		
	[-1.69]*	[-2.52]**		
ProsocialCFO			-0.004	-0.001
			[-0.56]	[-1.51]
Prosocial x ProsocialCFO			-0.019	-0.003
			[-1.90]*	[-2.63]***
Controls	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Clustered Errors	Yes	Yes	Yes	Yes
N of Observations	39,733	29,130	39,733	29,130
Adj. R²	9.70%	3.10%	9.70%	3.10%

Table 5. Cross-Sectional Tests and Refined Prosocial Measure (Cont.)

Panel B: Refined classification of charitable organizations

	Irregularity	*Enforcement*
	(1)	(2)
Prosocial	-0.005	-0.001
	[-1.86]*	[-1.78]*
Prosocial_Refined	-0.009	-0.004
	[-3.37]***	[-2.62]***
Controls	Yes	Yes
Industry Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Clustered Errors	Yes	Yes
N of Observations	39,733	29,130
Adj. R²	9.70%	3.10%

Table 6. Prosocial CEOs and Voluntary Disclosure

This table presents results from OLS regressions of prosocial CEOs on voluntary disclosure choices. In Panel A Column (1), the sample includes 163,551 firm-quarter observations for the period of 2000-2020. The dependent variable in Column (1) is *Ln(NewsRatio)*, which measures the informativeness of quarterly earnings announcements. *BadNews* is an indicator variable that is equal to one if the cumulative abnormal market-adjusted return from 2 days after the prior EA to 1 day after the current EA is negative, and zero otherwise. In Column (2), the sample includes 41,155 firm-year observations for the period of 2002-2020. The dependent variable in Column (2) is *NumForecasts,* which is the number of annual EPS management forecasts issued in the year. Panel B presents results for analyses of voluntary disclosure using firm-quarters or firm-years around CEO turnovers. *ProsocialImprove* equals one for all firm-quarters or firm-years for which the CEO turnover involves a replacement of a non-prosocial CEO with a prosocial CEO, and zero otherwise. *Post* equals one if the quarter or year is after a CEO turnover, and zero otherwise. The definitions of all other independent variables are reported in the Appendix. Standard errors are clustered at the firm level, and *t*-statistics are reported in the brackets. Industry and year fixed effects are included. Significance at the 10%, 5%, and 1% level is denoted *, **, and ***, respectively.

Panel A: Main analysis

	Ln(NewsRatio)	NumForecasts
	(1)	(2)
Prosocial	0.001	0.167
	[0.06]	[2.28]**
BadNews	0.136	
	[13.29]***	
Prosocial × BadNews	-0.026	
	[-2.21]**	
OtherActivities	0.028	-0.019
	[1.75]*	[-0.44]
Size	-0.005	0.023
	[-0.88]	[1.88]*
FirmAge	-0.000	0.013
	[-0.17]	[6.35]***
BTM	-0.006	-0.003
	[-0.71]	[-0.16]
Analysts	0.117	0.464
	[13.28]***	[13.99]***
InstOwn	0.051	0.842
	[3.19]***	[10.97]***
ROA	0.504	-0.077
	[7.64]***	[-1.39]
Loss	-0.164	-0.457
	[-14.32]***	[-14.43]***
SalesGrowth	-0.033	-0.032
	[-2.84]***	[-3.00]***
SizeAdjRet	0.034	0.035
	[1.92]*	[2.06]**
Leverage	-0.039	0.165
	[-1.99]**	[2.42]**

44

Volatility	-0.150	-1.120
	[-3.10]***	[-6.68]***
Complexity	0.020	0.041
	[4.88]***	[2.71]***
AbsAccruals	0.012	-0.020
	[0.44]	[-1.60]
Big4Auditor	0.036	0.032
	[2.54]**	[0.60]
ICWeakness	0.089	0.053
	[1.66]*	[1.34]
Post404	-0.015	-0.072
	[-0.77]	[-0.47]
BoardSize	0.000	0.026
	[0.08]	[1.93]*
BoardIndep	0.036	0.628
	[1.13]	[3.07]***
DualRole	0.003	0.120
	[0.27]	[2.23]**
BoardCharity	-0.025	0.230
	[-1.83]*	[2.96]***
LocalAssoc	0.003	0.306
	[0.17]	[3.27]***
Woman	-0.033	-0.076
	[-1.16]	[-0.71]
CPA	-0.017	0.057
	[-0.79]	[0.70]
Auditor	-0.028	0.123
	[-0.62]	[0.71]
Legal	0.001	-0.037
	[0.03]	[-0.27]
InsiderSale	0.051	
	[4.05]***	
BiasAdj	0.108	
	[30.99]***	
TradeDays	-0.007	
	[-22.78]***	
HiTech	-0.038	
	[-1.96]*	
Intercept	4.145	-1.311
	[62.58]***	[-5.45]***
Industry Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Clustered Errors	Yes	Yes
N of Observations	163,551	41,155
Adj. R^2	4.60%	28.20%

Table 6. Prosocial CEOs and Voluntary Disclosure (Cont.)

Panel B: Analysis involving CEO turnovers

	Ln(NewsRatio)	NumForecasts
	(1)	(2)
ProsocialImprove	0.091	-0.068
	[2.63]**	[-1.60]
Post	-0.013	-0.000
	[-0.96]	[-0.01]
ProsocialImprove x Post	-0.119	0.134
	[-1.78]*	[2.07]**
BadNews	0.151	
	[6.90]***	
BadNews x Post	0.008	
	[0.33]	
ProsocialImprove x BadNews	-0.103	
	[-1.65]	
ProsocialImprove x Post x BadNews	-0.109	
	[-2.55]**	
Controls	Yes	Yes
Industry Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Clustered Errors	Yes	Yes
N of Observations	128,060	28,368
Adj. R^2	4.70%	28.20%