

# Is ESG a Managerial Style?\*

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# Is ESG a Managerial Style?

## Abstract

Utilizing a CEO fixed-effects approach, we find that innate managerial characteristics explain a substantial portion of the firm-level variation in ESG outcomes. We show that a CEO's work experience at a not-for-profit (NFP) organization is strongly correlated with these fixed effects and is associated with superior ESG performance. We document that one-in-three S&P1500 companies are now led by CEOs with NFP experience, representing a four-fold increase over the last two decades. Our results suggest that experience in serving the interests of a broader group of stakeholders better equips CEOs to achieve corporate ESG objectives.

*Keywords:* Chief Executive Officer; Managerial Style; Green Innovation; Pollution; Employee Satisfaction; Not-for-profit Organization

JEL: G30, G41, L21, Q50

*“Boards that seek to improve the ESG of their businesses could also be wise to consider appointing a CEO from a not-for-profit...[a CEO from] the not-for-profit world has a more advanced understanding of these issues and leaders in this space know how to apply an ethical lens to organisational issues.”*

— Stephen Crookbain, Executive Search Partner, Korn Ferry, August 2023.

## 1 Introduction

The literature on managerial style has demonstrated that managers play a significant role in explaining firm outcomes.<sup>1</sup> These idiosyncratic managerial styles are often shaped by past professional experiences. For instance, career experiences in the military, finance industry, or as an inventor have all been shown to have discernible effects on how CEOs manage their firms (Benmelech and Frydman, 2015; Custódio and Metzger, 2014; Custódio, Ferreira, and Matos, 2019; Islam and Zein, 2020).

In this paper, we examine the extent to which a company’s environmental, social, and governance (ESG) practices are impacted by managerial styles. Understanding why some firms are more committed to ESG imperatives than others is attracting unprecedented interest from policymakers, institutional investors, and the public at large. This is reflected in a dramatic rise in demand for greater reporting on corporate sustainability outcomes.<sup>2</sup> Moreover, the investment management industry is directing record levels of capital towards firms demonstrating a strong commitment to ESG.<sup>3</sup>

The existing literature finds that heterogeneity in nation-, industry- and firm-specific characteristics play a role in determining a firm’s ESG policies (see, for example, Cai, Pan, and Statman (2016), Dyck, Lins, Roth, and Wagner (2019), and Borghesi, Houston, and

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<sup>1</sup>Influential studies on managerial style include Bertrand and Schoar (2003); Hambrick and Mason (1984); Fee, Hadlock, and Pierce (2013); Malmendier, Tate, and Yan (2011).

<sup>2</sup>For instance, 92 percent of S&P 500 Companies now provide annual sustainability reports, compared to only 20 percent in 2011. See <https://www.ga-institute.com/nc/storage/press-releases/article/92-of-sp-500r-companies-and-70-of-russell-1000r-companies-published-sustainability-reports-in-202.html>

<sup>3</sup>For example, the assets under management (AUM) of investment funds focusing on sustainability principles reached 35 trillion USD in 2021 (more than one-third of aggregate global AUM), rising from 22.8 trillion USD only four years earlier. See <http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf>

Naranjo (2014)). However, such factors alone are unlikely to fully explain variations in ESG outcomes across firms. As a motivating example, consider the two leading semiconductor companies listed on the S&P 500, Qualcomm Inc. and Broadcom Inc. Despite being of similar size, operating in the same industry, and having a virtually identical set of institutional investors, they exhibit stark differences in their ESG outcomes. In 2020, for example, Broadcom’s ratio of Scope 1 carbon emissions to total sales was several times greater than that of Qualcomm. The example raises the prospect that unexplained differences in ESG outcomes across firms may be attributable to idiosyncratic managerial styles.

To investigate the role that managerial styles play in explaining ESG outcomes, we first follow the approach in the seminal study by Bertrand and Schoar (2003). In particular, by tracking manager movements across firms, we are able to estimate how much of the variation in ESG outcomes can be attributable to a manager fixed effect. We analyse the relation between these fixed effects and four types of ESG outcomes: the MSCI KLD corporate social responsibility (CSR) scores, employee satisfaction scores, green innovation outputs and the level of toxic chemical emissions.

Our results show that manager fixed effects account for a considerable degree of cross-firm variation in the above firm-level ESG measures. The F-test for the joint significance of the manager fixed effects is highly statistically significant. Further, considerable additional explanatory power is obtained in models that include manager fixed effects relative to those that only include firm fixed effects. This additional explanatory power is comparable in magnitude to that documented in Bertrand and Schoar (2003), suggesting that, similar to investment and financial policies, ESG practices are also significantly influenced by manager styles. Moreover, we consistently observe robust effects in a more precisely specified CEO-firm-matched panel, implying that CEOs, as the primary decision-makers within firms, play a crucial role in shaping corporate ESG policies, which is our focus

throughout the remainder of the paper.<sup>4</sup>

We next seek to delve deeper into the specific characteristics predisposing a CEO to be more adept at successfully pursuing ESG goals. While our baseline fixed effects models show that managers are important in shaping corporate ESG policies, they do not allow us to understand which specific managerial attributes or experiences matter. Thus, to augment our fixed effect approach, we examine a CEO’s career path to uncover factors that make them more likely to adopt an ESG-focused style.

An increasingly popular notion associated with the rising prominence of ESG, is that a corporation’s traditional purpose of solely maximizing shareholder wealth (i.e. shareholder primacy) is obsolete. Rather, an emerging “stakeholderism” view of the firm puts forward a much broader purpose, namely maximizing total stakeholder value.<sup>5</sup> Thus, a crucial attribute of an ESG-focused management style involves satisfying the needs of multiple firm stakeholders (e.g. employees, customers, suppliers, the local community, etc.) when developing corporate strategies and policies. We argue that career experience in the not-for-profit (NFP) sector accustoms a CEO to catering to such a diverse set of stakeholders. Given that NFP organizations are typically driven by non-financial goals (e.g., addressing environmental issues or promoting equitable treatment of employees and suppliers), CEOs with this background may exhibit an enhanced ability to address and prioritize the needs of a diverse set of non-financial stakeholders typically associated with large public companies.<sup>6</sup>

An example that helps to illustrate the role that NFP experience plays in cultivating

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<sup>4</sup>Other executives, such as Chief Operating Officers, may influence ESG policies. However, there is a limited representation of such executives in Execucomp; we find only 20% of the firm-years in our sample. Thus, they are not our focus.

<sup>5</sup>For example, in 2019, CEOs of leading US companies (e.g. Apple, Google, Amazon, Exxon Mobil etc.) pledged their commitment to a new “*Statement on the Purpose of a Corporation*” which set out that shareholder wealth maximization was not the only purpose of the corporation. Rather, corporations need to fulfill the needs of their stakeholders, including customers, suppliers, employees, and the local communities in which they operate

<sup>6</sup>These potential ESG-related benefits of *NFP CEOs* are highlighted in a recent media article entitled “*Should businesses look to the not-for-profit sector when hiring CEOs?*” found at: <https://www.raconteur.net/leadership/should-boards-look-at-not-for-profit-sector-when-recruiting-ceo>. The article also includes the views of Stephen Crookbain (quoted earlier), who is a senior partner at Korn Ferry, the top ranked executive search firm in the United States.

an ESG-oriented management style involves John Bryson, who was hired as the CEO of the publicly listed utility company Edison International after working at the Natural Resources Defense Council (one of the largest not-for-profit international environmental advocacy groups). Appendix A.1 outlines how his appointment was a key factor in enabling Edison to significantly reduce its carbon dioxide emissions, making it one of the most forward-thinking utility companies at the time.<sup>7</sup>

To assess the influence of a CEO’s NFP experience on their firm’s ESG outcomes, we first gather the employment history of each S&P 1500 CEO from BoardEx during the 1992-2019 period. If a CEO has worked for at least one NFP (as per BoardEx), they are designated as an *NFP CEO*. Remarkably, we observe a four-fold increase in the proportion of *NFP CEOs* over the past two decades, rising from approximately 8% of the S&P 1500 CEO population in 2000 to nearly 35% in 2019. Manual data checks show that this trend is not just an artifact of more accurate data coverage of CEO career histories. Rather, the growing prevalence of *NFP CEOs* appears to mirror the rising importance of ESG over our sample period. This suggests boards of directors are placing more weight on a candidate’s ESG credentials when selecting new leaders.

It is important to note that the above trend is consistent with what is termed the “selected style hypothesis” (Fee, Hadlock, and Pierce, 2013). That is, rather than a CEO causally imprinting their idiosyncratic style on the firm (i.e., the idiosyncratic style hypothesis), it is, in fact, the firm’s board that intentionally selects these characteristics based on the desired strategic direction of the firm. It is essential to note that both the “selected style” and “idiosyncratic style” interpretations of this trend imply that *NFP CEOs* possess a distinct ESG-enhancing skill set. Therefore, we consider documenting simple correlations between *NFP CEOs* and ESG outcomes as a valuable contribution of our paper. Nevertheless, in the subsequent sections, we also endeavor to discern whether at least some of the impact of *NFP CEOs* can be ascribed to an idiosyncratic style effect.

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<sup>7</sup>Three real-life examples of CEOs with not-for-profit experience can be found in Appendix A.1.

To analyze the impact of a CEO’s career experience on ESG outcomes, we first examine the correlation between *NFP CEOs* and the manager fixed effects previously estimated in our baseline models. We find a significant positive correlation between these two variables, suggesting that a meaningful component of the unobserved (time-invariant) manager-specific impact on ESG can be attributed to NFP experience. We next directly examine whether NFP experience is correlated with a firm’s ESG outcomes. We document a significantly positive correlation between CEOs with NFP experience and a firm’s ESG performance. For example, firms led by *NFP CEOs*, on average, obtain a 0.095 larger CSR score than their industry peers without *NFP CEOs*. Considering the mean score in our sample is 0.08, the influence of *NFP CEOs* is considerably large.

We rule out several potential confounding explanations for our results. Firstly, the rising prevalence of *NFP CEOs* could signify the evolving profile of a younger generation of corporate leaders. We account for this by controlling for CEO age and tenure. *NFP CEOs* might simply represent those with a more diverse career background, not solely NFP experience. We employ the General Ability Index, developed by Custódio, Ferreira, and Matos (2013), as an additional control variable to account for this possibility. We also control for other firm and CEO characteristics that might influence their ESG commitment, such as education, gender, and compensation.

Given our extended sample period, we are able to estimate our models with firm-fixed effects. Our focus here is to examine how a firm’s ESG performance is affected by a change in the CEO. This also allows us to control for all time-invariant firm characteristics that could potentially influence our findings. This is particularly important because a firm’s ESG focus can simply be driven by the nature of its business activities. This means that ESG measures, such as CSR scores, may not necessarily be comparable across firms (Borghesi, Houston, and Naranjo (2014)). We show that within a firm, an *NFP CEO*’s tenure is associated with a 0.071 higher *CSR Score* compared to periods where a non-*NFP CEO* is in charge. This represents an almost 100% increase in the score and corresponds

to roughly 21% of one standard deviation of the CSR score distribution at the firm level.

Our analysis also uncovers many cases where a CEO's NFP experience is obtained during their tenure as CEO. This typically occurs because they begin a new concurrent role, most commonly as a board member of an unrelated NFP organization. Studies in the CEO literature suggest that CEOs who sit on boards of other organizations during their tenure can derive important benefits through learning about new or alternative approaches to management (Bacon and Brown, 1975; Booth and Deli, 1996). Similar to these studies, we argue that when a CEO sits on an NFP board, their exposure to the causes served by these organizations may also help them learn about managing the needs of non-financial firm stakeholders, thus nudging them toward a more pro-ESG style. Such within-CEO variation in NFP experience also allows us to implement CEO-level fixed effects. Conceptually, this test relaxes the assumption that managerial style (captured previously in the manager fixed effect) is time-invariant and allows for style to evolve based on a CEO's professional experiences, even while they are a CEO in our sample. Importantly, the analysis allows us to control for time-invariant CEO characteristics, such as personality, culture, and values, that might explain both NFP experience and ESG outcomes. The results here show that for a given CEO, the ESG performance of their firm displays a substantial rise after they accumulate NFP experience relative to before. However, these results are subject to the caveat that the decision of a CEO to obtain NFP experience while they are CEO might be subject to the board's approval, meaning that it can also be driven by firm-related factors.

Beyond analyzing ESG ratings provided by MSCI, we also assemble our own database of real ESG outcomes achieved by our sample firms. This helps us to address two important common criticisms in the literature that may undermine our analysis. First, recent studies have shown that ESG ratings can differ across rating agencies and, in fact, can be in disagreement. Second, some firms may engage in greenwashing, whereby their ESG policies (which are often based on unaudited reports) are designed purely to maximize their rating score rather than delivering real ESG outcomes.



To capture a firm’s real ESG activities, we begin by collecting employee satisfaction data from Glassdoor. While the KLD “Employee Relations” rating provides information reported by the firm, the employee satisfaction ratings from Glassdoor reflect employees’ real opinions of their work environment. We also capture a company’s green innovation initiatives using the number of green patents it files. Finally, to investigate a company’s negative environmental effects, we utilize RESI scores from the U.S. Environmental Protection Agency (EPA) to measure toxic chemical emissions by firms. Our results show that firms led by *NFP CEOs* are associated with higher employee satisfaction ratings, more green patents, and less toxic emissions.

As mentioned earlier, the positive correlation we establish between *NFP CEOs* and firm ESG outcomes can be explained through a “selected style hypothesis,” wherein boards select leaders capable of helping the firm achieve its ESG objectives. The observed concurrent rise in both *NFP CEOs* and the importance of ESG aligns with this hypothesis. We provide further evidence of the selected style hypothesis by showing that firms are more likely to choose an *NFP CEO* successor when the outgoing CEO is also an *NFP CEO* or when the firm has a CSR committee in place. Both results imply that firms that display a past commitment to ESG in their hiring decisions tend to hire CEOs with NFP experience in the future.

Making either a causal or selection interpretation of our results needs not to be mutually exclusive. Both the selected and causal style hypotheses support the conclusion that a CEO’s NFP experience is important in enhancing a firm’s ESG performance. We next make an attempt to distinguish whether at least some of the baseline correlations we document are also due to an “idiosyncratic (causal) style” effect, whereby a CEO who is selected based on other traits happens to have NFP experience, which ends up being imprinted upon the firm. To do so, we examine plausibly exogenous CEO turnover events, defined as those occurring due to sudden deaths, health shocks, or personal reasons. Since the timing of such events is random, the board should have no reason to change firm strategy

and thus select a leader with a significantly different style. As a result, any changes in firm outcomes following these turnovers can be more directly attributed to shifts in CEOs' idiosyncratic styles rather than the firm deliberately adopting or abandoning a pro-ESG strategic direction.

Using a difference-in-difference approach, we show that firms exogenously switching from an *NFP CEO* to a non-*NFP CEO* experience an average decline in their CSR score compared to control firms that transition from a non-*NFP CEO* to another non-*NFP CEO*. We recognize that while the outgoing CEO's departure is exogenous, the incoming CEO is still subject to board selection, which raises concerns that our results could still be influenced by the selected style hypothesis. To address this, we follow Fee, Hadlock, and Pierce (2013) and limit the turnover sample to cases with a relatively restricted pool of potential CEO replacements. In these situations, the board's capacity to select a CEO with their preferred style is constrained, further diminishing the likelihood of a selected style. We observe that the negative impact of losing an *NFP CEO* on firm CSR score in this context is even more pronounced. Overall, this evidence suggests that our findings may also be partially attributed to the idiosyncratic style hypothesis.

Our study offers several contributions to existing literature. Firstly, we add to the literature on CEO skill sets and the matching of CEOs to firms by highlighting a significant trend in the evolution of desired CEO skill sets and experiences. As ESG concerns grow in importance for firms, boards are increasingly likely to appoint CEOs with pertinent non-profit experience. By 2019, approximately one in three CEOs possesses such expertise.

Second, we contribute to a large body of literature on how top managers' characteristics affect firms' decisions and outcomes.<sup>8</sup> More specifically, we provide systematic evidence

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<sup>8</sup>The literature is comprehensive starting from Bertrand and Schoar (2003), covering various aspects of CEO characteristics, including gender (Huang and Kisgen, 2013; Khan and Vieito, 2013; Faccio, Marchica, and Mura, 2016), age (Orens and Reheul, 2013; Serfling, 2014), education level (King, Srivastav, and Williams, 2016), overconfidence (Malmendier and Tate, 2005, 2008; Malmendier, Tate, and Yan, 2011; Galasso and Simcoe, 2011; Huang, Tan, and Faff, 2016), risk attitudes (Graham, Harvey, and Puri, 2013; Cain and McKeon, 2016), managerial skills (Kaplan, Klebanov, and Sorensen, 2012; Custódio, Ferreira, and Matos, 2013; Gounopoulos and Pham, 2018; Chen, Huang, Meyer-Doyle, and Mindruta, 2021), work experience (Custódio and Metzger, 2013, 2014), military background (Benmelech and Frydman, 2015), pilot

that manager fixed effects, which capture time-invariant CEO styles, play a significant role in explaining variations in ESG outcomes across firms. We then try to identify specific observable characteristics of a pro-ESG management style. We show how a CEO’s professional career experience in the not-for-profit sector can shape a pro-ESG management style. This stands in contrast to previous studies that have focused on a CEO’s personal attributes — including gender, parenthood, and marital status — as determinants of firm CSR outcomes. Career experiences in organizations that are concerned with achieving non-financial goals appear to enhance a CEO’s ability to meet diverse stakeholder needs in the context of leading large public corporations.

Finally, we contribute to the literature that examines the determinants of firms’ ESG engagement.<sup>9</sup> Unlike numerous previous studies that solely rely on KLD CSR scores, we employ several quantifiable measures of ESG, similar to Xu and Kim (2021). Our findings reveal that a pro-ESG management style has a substantial economic impact on real firm-level ESG outcomes.

## 2 Data

### 2.1 Measuring NFP experience

An extensive literature on CEO characteristics argues that past career or life experiences contribute to the formation of a management style (Bernile, Bhagwat, and Rau, 2017; Custódio and Metzger, 2014; Custódio, Ferreira, and Matos, 2019; Islam and Zein, 2020). Following this literature, we hypothesize that CEOs with experience working in the not-for-profit sector are predisposed to a more ESG-focused management style. Since these organizations are typically focused on achieving non-financial outcomes that aim to increase the welfare of a broader group of stakeholders, then it is plausible that such experience

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experience (Sunder, Sunder, and Zhang, 2017), inventor background (Islam and Zein, 2020), etc.

<sup>9</sup>This literature is vast, and we refer the details to a survey by Gillan, Koch, and Starks (2021).

equips CEOs with the knowledge or skill to more effectively balance the complex, and often conflicting demands of shareholders with those of other corporate stakeholders.

To determine which CEOs possess NFP experience, we begin with a sample of S&P 1500 company executives listed in ExecuComp from 1992 to 2019. For each CEO in this database, we gather their not-for-profit (NFP) work experience from BoardEx, which offers detailed employment history for directors and senior managers.<sup>10</sup> We are able to successfully map approximately 94% of CEO-firm-years in ExecuComp to BoardEx. This represents 7,346 unique CEOs across 3,539 firms.

Our focus is to identify whether the above CEOs have worked at an NFP. We primarily rely on three specific BoardEx tables for this information: *Employment History*, *Other Activity*, and *NFP-association*. Boardex provides an organization type indicator that offers additional information on whether the entities where the executive has worked or had an affiliation with are NFPs. We verify the legitimacy of the NFP organizations identified by BoardEx by cross-referencing their names with organizations that file IRS 990 forms (typically filed by tax-exempt charitable entities) using data provided by the National Center for Charitable Statistics (NCSS). We find that 95% of Boardex NFPs can be matched to this data. Our empirical results are largely unaffected if we exclude those unmatched organizations from our CEO NFP experience measure.

After identifying each CEO's NFP experience, we then construct a firm-year indicator variable ( $I_{NFP}$ ) equal to one if the firm's CEO (as determined by ExecuComp's *ceoann*) has obtained NFP experience up to the focal year, and zero otherwise. Additionally, we construct a continuous variable ( $C_{NFP}$ ), representing the natural logarithm of one plus the total number of NFP experiences a CEO has accumulated up to the focal year. We designate CEOs with not-for-profit experience as *NFP CEOs* and those without such experience as *non-NFP CEOs*. In total, we are able to identify 1,606 CEOs that have not-

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<sup>10</sup>We use the WRDS linking table to match ExecuComp companies to BoardEx data. We ensure accurate CEO matching across databases by verifying names and demographic information (e.g., age, gender). In cases of ambiguity, we manually cross-check CEOs' employment histories using additional internet sources (e.g., Wikipedia, LinkedIn, Bloomberg).

for-profit experience during the sample period, which represents about 22% of all CEOs in our sample.

Among the 1,606 CEOs with NFP experience in our sample, 764 acquired this experience after becoming CEOs. Since CEOs taking outside roles during their tenure can be a contentious issue (Perry and Peyer, 2005), it is important to understand the nature of these experiences. The majority of these CEOs sit on boards of charity organizations. For instance, we find that the most common NFP organization at which CEOs accumulate their NFP experience during their tenure is *United Way*, with 124 CEOs having a role at this NFP, as reported by BoardEx. As of 2015, *United Way* was the largest NFP organization in the U.S. by amount of donations received. It comprises a network of local NFPs that obtain funds from workplace giving campaigns, and then distribute these funds to local NFPs.<sup>11</sup> Most CEOs appear to sit on the board of the local branches of this NFP network and, therefore, presumably play a role in selecting which local charities to support. Some other relatively common NFPs with which CEOs hold formal roles during their tenure are the John F. Kennedy Center for Performing Arts (29 cases), Catalyst Inc (20 cases)<sup>12</sup>, and the American Heart and American Cancer Societies (18 cases).<sup>13</sup> Experiences with these NFPs remain consistent with our argument that they provide CEOs with first-hand exposure to the causes served by these NFPs and allow them to learn about catering to non-financial stakeholders. It is important to note, however, that even when we exclude CEOs who obtained NFP experience during their tenure from our sample, our results remain qualitatively unchanged.

Figure 1 illustrates a significant increase in the prevalence of *NFP CEOs* over time. The overall proportion of *NFP CEOs* rises from 8% in 1992 to 34.5% in 2019, depicted

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<sup>11</sup> *United Way's* Local NFP branches are typically focused on either health, education, or economic mobility initiatives.

<sup>12</sup> Catalyst Inc. is a global NFP that advocates for increasing the representation of women in corporate leadership, particularly those from racially and ethnically marginalized groups, and promoting equal access to career opportunities.

<sup>13</sup> We find that only a handful of CEOs sit on a board of an affiliated NFP, e.g., Bill Gates sitting on the board of the Gates Foundation.

by the green line. When we specifically look at CEOs who acquired their not-for-profit experience before their tenure, we observe a similar upward trend, shown by the orange line. A key concern with this trend is the possibility that it reflects improved data coverage of CEO career histories in later years rather than a real increase. To address this concern, we perform two checks.

Firstly, we investigate whether Boardex’s coverage of CEO career histories has expanded over time. We analyze the work histories of CEOs, examining changes in the average number of *for-profit* positions (such as board member, CFO, COO, etc.) held by a CEO in the database over time. Additionally, we look at how the average number of firms and industries that CEOs have worked for in the past varies over time. If the increase in *NFP CEOs* results from enhanced reporting of CEO career histories in more recent years, we would expect to see a similar rise in the number of *for-profit* past positions held by CEOs. However, as depicted in Figure 2 Panel A, the extent of CEOs’ *for-profit* work experiences remains relatively constant over time, suggesting that the noticeable increase in *NFP CEOs* is not merely a consequence of changes in data collection practices.

Second, the growing prevalence of *NFP CEOs* may also arise because BoardEx specifically improves its data collection of NFP organizations that a CEO has worked with over time. To address this concern, we attempt to manually verify the accuracy of a CEO’s NFP experience for a subset of our sample. For this purpose, we download the annual reports filed by organizations that are exempt from income tax (IRS Form 990), typically filed by charitable organizations. These forms require nonprofits to disclose the names of the organization’s officers, directors, trustees, key employees, and highly compensated employees. The Amazon Open Data Program allows us to download these forms from 2011 onwards. We match officers, directors, and highly compensated employees named in these forms to our sample of CEOs.<sup>14</sup> As shown in Figure 2 Panel B, the rising proportion

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<sup>14</sup>The main challenge for the matching process is that IRS Form 990 only provides individual names for matching, which can be problematic for common names. Thus, to ensure matching accuracy, we require that the address of a corresponding NFP organization be within 100 miles of the CEO’s work location in the reporting year of the 990 form. Given the variety of very small nonprofits filing Form 990, we also require

of *NFP CEOs* from 2012 to 2019 using 990 forms (i.e., dark green line) is similar to the one constructed using BoardEx data (i.e., light green line). The consistent upward trend suggests that changes in NFP experiences among CEOs over time are unlikely to be driven by changes in data coverage in BoardEx.

## 2.2 Measuring ESG Outcomes

### 2.2.1 ESG Ratings: MSCI KLD CSR score

To capture firm-level ESG performance, our first measure is constructed based on ESG ratings from the MSCI KLD database, which provides environmental, social, and governance ratings of large publicly traded companies. Following Servaes and Tamayo (2013), we focus on five dimensions reported in the KLD database: community, diversity, employee relations, environment, and human rights. The KLD database provides both strengths and concerns regarding the firm’s performance for each of the dimensions considered. Because the number of strength and concern indicators for each dimension varies over time, a simple summation among strengths and concerns does not allow us to compare CSR scores across years. To overcome this issue, we construct an adjusted CSR scores following Deng, Kang, and Low (2013). Specifically, the adjusted CSR score is calculated by first dividing the strength and concern scores for each dimension by the respective number of strength and concern indicators in that year and then taking the difference between the adjusted strength score and the adjusted concern score.<sup>15</sup> Upon merging our sample of CEOs’ with the KLD database, our primary dataset comprises 29,915 firm-year observations spanning

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matched NFP organizations to have an asset size larger than one million dollars to ensure that the NFP is of sufficient scale, such that an *NFP CEO’s* experience is meaningful. This may result in an understatement of our sample CEO’s NFP experience when relying on 990 forms.

<sup>15</sup>As an example, taken from Deng, Kang, and Low (2013), suppose that in 2004, the summations of the KLD strength indicators across the seven dimensions are 0, 1, 1, 2, 1, 0, and 1, and the numbers of strength indicators across the seven dimensions are 4, 3, 3, 5, 7, 4, and 4. According to our definition, the adjusted total strength score for the firm is equal to  $0/4+1/3+1/3+2/5+1/7+0/4+1/4 = 1.45$ . If the adjusted total concern is 1.25, which is calculated in the same way as the adjusted total strength score, then the adjusted CSR score is  $1.45 - 1.25 = 0.2$ .

from 1995 to 2018.<sup>16</sup>

CSR ratings, while widely utilized, are subject to various limitations, including measurement errors and biases, as highlighted by Berg, Kölbl, and Rigobon (2022). Moreover, these ratings may be subject to greenwashing, where firms give an impression of environmental responsibility without substantial ESG commitments. To ensure that our results are robust to such limitations with ESG ratings, we turn to alternative ESG measures that are less susceptible to these drawbacks, as described below.

### 2.2.2 Employee Satisfaction: Glassdoor.com

One of the key facets of a firm’s ESG engagement is fostering positive employee relations (Bauman and Skitka, 2012). Although employee relations information is partly captured in a firm’s CSR score through the measurement of programs enhancing employee welfare, this score does not necessarily reflect the actual perceptions of workers towards their employers. To analyze the influence of *NFP CEOs* on employee perceptions of their firm, we carefully match our sample companies to employee-level review data provided by Glassdoor. This platform allows both current and former employees of a firm to voluntarily and anonymously review various aspects of their companies, including salaries, interview experiences, senior management, and corporate benefits.<sup>17</sup>

The data we collect includes employees’ overall ratings of the firm (*Rating*) and optional ratings of five distinct subcategories: *Career Opportunities*, *Compensation & Benefits*, *Work/Life Balance*, *Senior Management*, and *Culture & Values*. Each score ranges from 1 to 5, with 1 representing the lowest satisfaction level and 5 indicating the highest. The sample period for this dataset spans from 2011 to 2019, a time frame in which all five

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<sup>16</sup>Note that the KLD database provides non-missing CUSIP information after 1995. So, our sample period for KLD ESG rating test effectively starts from 1995.

<sup>17</sup>To ensure the validity of reviews and to deter the company’s self-promotion, Glassdoor employs several mechanisms. For instance, it mandates email verification from an active email address or a valid social networking account. Moreover, site administrators moderate the review content using an algorithm designed to detect fraud and remove invalid reviews (Green, Huang, Wen, and Zhou, 2019).



categories are available on Glassdoor.<sup>18</sup> For each firm-year observation in our sample, we construct firm-level aggregate employee satisfaction scores by averaging the employee-level scores for that particular year.

### 2.2.3 Green Innovation

A firm’s commitment to ESG can be objectively assessed through its investment in environmental technology innovations, commonly referred to as green innovation. Such investments are essential for enhancing sustainability and advancing the green economy. To evaluate a company’s commitment to green innovation, we analyze patent data sourced from the PatentsView database of the United States Patent and Trademark Office (USPTO). We employ the International Patent Classification (IPC) and Collaborative Patent Classifications (CPC) systems to categorize patents related to environmental technology (ENV-TECH) following the OECD guidelines (Haščič and Migotto, 2015). The ENV-TECH category encompasses eight environmental technology families across three domains: environmental management, water-related adaptation technologies, and climate change mitigation technologies (CCMTs). Within the domain of environmental management, further subdivisions include air pollution prevention, water pollution prevention, and waste management. A patent is classified as a green patent if it falls within the ENV-TECH classification according to IPC/CPC terms. We map patents to firms using extended data from Kogan, Papanikolaou, Seru, and Stoffman (2017). For the purposes of this paper, we quantify the level of a firm’s green innovation by counting the number of green patents filed (and ultimately granted) to a firm within a given year.

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<sup>18</sup>Although Glassdoor was founded in 2008, the senior management category within the rating system was only introduced in 2011. Therefore, our analysis regarding employee satisfaction rates begins from 2011. Our findings remain consistent if we consider only the other four categories from 2008 to 2019. Additionally, Glassdoor has recently added a new category called diversity, which we exclude from our analysis due to its limited historical data.

## 2.2.4 Toxic Chemical Emissions

Toxic chemical emissions have a detrimental impact on local communities, which are crucial stakeholders for corporations (Currie and Schmieder, 2009; Deryugina, Heutel, Miller, Molitor, and Reif, 2019). Minimizing these emissions is a primary objective of the U.S. Environmental Protection Agency (EPA) and an essential element of sustainable development. All qualifying polluting facilities in the United States are mandated to report their toxic chemical emissions under the EPA’s Toxic Release Inventory (TRI) program. The EPA Risk-Screening Environmental Indicators (RSEI) dataset (Version 239), derived from TRI data, provides toxic-weighted pollution information spanning from 1988 to 2019. We incorporate this facility-level pollution dataset into our analysis by manually matching the parent company names of each facility to our sample company names. This matching process yielded 77,702 facility-year observations from 1992 to 2019.

We employ two measures of toxicity-weighted chemical emissions: the *RSEI score* and the *Hazard score*. The *RSEI score* is adjusted for the population exposed, while the *Hazard score* is not. Utilizing such measures enables us to consider the varying impacts of different chemical releases on humans and the environment.<sup>19</sup> Given that variations in chemical releases could stem from differences in facility-level production, we construct *Adjusted RSEI Score* and *Adjusted Hazard Score* that account for facility-level production volumes through simple simulation.<sup>20</sup>

## 2.3 Control Variables

We control for standard firm-level characteristics in the literature that explain CSR outcomes. First, we use the natural logarithm of the book value of total assets to control for

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<sup>19</sup>A straightforward approach to assess toxic emissions is by using the raw release figures in tons provided by the TRI program. However, aggregating raw release numbers from various chemicals poses a challenge due to the vast differences in toxicity levels among chemicals. For instance, 1 mg of nicotine could be lethal, whereas it would require approximately 800 mg of methanol to have a similar effect. Simply summing the raw releases introduces significant measurement errors concerning toxicity.

<sup>20</sup>The methodology for simulating production volumes and adjusting pollution scores is elaborated in Appendix A.2.

firm size (McWilliams and Siegel, 2001). Research and development costs (R&D) scaled by total assets and property, plant, and equipment (PPE) are used to account for firms' investment in innovation or production efficiency which can affect their CSR activities. We also control for the book value of debt divided by total assets (leverage), considering that CSR decisions can be related to firms' access to finance (Cheng, Ioannou, and Serafeim, 2014). Superior financial performance or market valuation is likely to stimulate companies to make more ESG commitments to maintain a good corporate reputation. In order to control for this, we include return on assets (ROA) and Tobin's Q in our models (Ioannou and Serafeim, 2012).

It may be contended that CSR activities are shaped by a company's strategic vision rather than the CEO's influence. To address this viewpoint, we utilize two measures in our analysis. Firstly, we account for the presence of a corporate foundation within a company. Such foundations may indicate a stronger commitment to ESG objectives. To ensure our findings are not merely reflective of these foundations' influence, we incorporate an indicator variable in our regression models that is set to one if the firm operates its own not-for-profit foundation.<sup>21</sup> Secondly, we introduce an indicator variable that is assigned a value of one if the company's board of directors has established a CSR committee, and zero otherwise. This measure serves to identify firms with a pronounced focus on CSR, suggesting that certain companies inherently prioritize CSR initiatives more than others.

Company decisions pertaining to ESG policies could be influenced by the preferences of its board of directors or pressures from institutional investors, rather than being solely attributable to management style. To mitigate these concerns, we include controls for board independence (measured by the ratio of independent directors) and the extent of institutional ownership. Furthermore, we incorporate the E-Index, which comprises six anti-takeover provisions, as a control variable to account for external governance factors

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<sup>21</sup>A CEO's experience with non-profit organizations may come from their involvement with one of their company's affiliated NFP foundations. Our results remain unchanged even after excluding such firms from our dataset.

that could impact CSR activities.

We also control for a set of CEO characteristics that may impact their firms' ESG performance, such as age (Hegde and Mishra, 2019), gender (Borghesi, Houston, and Naranjo, 2014), tenure length, overconfidence (Hirshleifer, Low, and Teoh, 2012), education backgrounds, and whether they have a Ph.D. in STEM fields (Sunder, Sunder, and Zhang, 2017).<sup>22</sup> We include the general ability index (GAI) developed by Custódio, Ferreira, and Matos (2019) in our analyses to control for experiences other than NFP. To eliminate the potential impact of other CEO styles on firms' ESG performance, we also control for an *NFP CEO's* founder status, inventor background and military experience, as suggested by Lee, Kim, and Bae (2016); Islam and Zein (2020); Benmelech and Frydman (2015).

## 2.4 Summary Statistics and Univariate Analysis

Table 1 provides an overview of the summary statistics and univariate comparisons between firm-year observations for companies with and without *NFP CEOs*. Panel A of the table details the ESG outcomes examined in this study. On average, firms under the leadership of *NFP CEOs* report a 0.31 overall CSR score according to the MSCI KLD CSR metrics, a figure approximately 16 times greater than that of firms headed by *non-NFP CEOs*, with this difference being statistically significant at the 1% level. Specifically, all components of the CSR score—including community, diversity, employment, environment, and human rights—are notably higher for firms led by *NFP CEOs*. Moreover, these firms are associated with higher strength scores compared to their counterparts without *NFP CEOs*, whereas the difference in concern scores between the two groups does not have statistical or economic significance.

Similar patterns are observed when evaluating firms' ESG engagement through Glassdoor employee satisfaction scores. Companies guided by *NFP CEOs* tend to achieve higher

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<sup>22</sup>Data availability hinders our ability to control for the effects of CEO marital status and parenthood of daughters, as conducted by Hegde and Mishra (2019) and Cronqvist and Yu (2017). We posit that there is a limited correlation between a CEO's work experience in not-for-profit institutions and their marital or parenting status.

ratings in aspects such as work-life balance, company culture, career opportunities, compensation, and senior management. Additionally, our analysis reveals that firms are more prolific in producing green patents when led by *NFP CEOs*. Furthermore, these firms are also characterized by lower toxicity-weighted chemical emissions. Collectively, the univariate analysis highlights a positive correlation between CEOs’ not-for-profit experience and enhanced ESG performance within firms.

Panel B in Table 1 presents the summary statistics for other variables used in this study. Regarding firm characteristics, firms led by *NFP CEOs*, on average, have lower Tobin’s Q, lower PPE (Property, Plant, and Equipment), and lower R&D expenses. However, they exhibit larger size, higher leverage, a higher level of board independence, a higher E-index (indicating more effective anti-takeover measures), and are more likely to have a corporate foundation and a CSR committee. In terms of CEO-level characteristics, *NFP CEOs*, on average, are older, have longer tenure, are more likely to be female, earn higher total compensation, and are associated with a higher general ability index than *non-NFP CEOs*.

### 3 Empirical Analysis and Results

#### 3.1 Manager Fixed Effects and Firm ESG outcomes

To analyze whether managerial style can explain firm ESG outcomes, we follow the approach of Bertrand and Schoar (2003). The main objective of this approach is to show how much of the variation in firms’ ESG policies/outcomes can be attributed to manager fixed effects after controlling firm-fixed effects, year-fixed effects, and other time-varying firm characteristics. To do so, for each dependent variable of interest, we estimate the following regression:

$$Y_{i,t+1} = \alpha_i + \gamma_t + \beta X_{i,t} + \lambda_{CEO} + \lambda_{Others} + \epsilon_{i,t+1} \quad (1)$$

where  $Y_{i,t+1}$  represents a particular outcome outlined in Section 2,  $\gamma_t$  denotes year-fixed effects, and  $\alpha_i$  signifies firm-fixed effects.  $X_{it}$  encompasses a vector of time-varying firm-level controls, and  $\epsilon_{i,t+1}$  represents the error term. Equation (1) also contains fixed effects for managers observed across multiple firms. In order to examine the impact of either CEOs or other top executives on corporate policies separately, two distinct groups of manager-fixed effects are created:  $\lambda_{CEO}$  corresponds to fixed effects for managers who serve as CEOs in their last observed position, and  $\lambda_{Others}$  which pertains to fixed effects for non-CEO managers in their last observed role.<sup>23</sup>

Similar to Bertrand and Schoar (2003), this identification relies on variations arising from managers transitioning between firms. Otherwise, the manager-fixed effects would be perfectly collinear with firm-fixed effects. Therefore, we begin with all top managers in ExecuComp from 1992 to 2019 and focus on those who have worked for multiple firms over time. Specifically, managers employed by at least two firms are identified as “movers”, and only those who have worked for a minimum of three years in each firm are retained in our sample, allowing them the opportunity to imprint their styles on the firm. All firm-year observations are preserved if the firm employs at least one “mover” throughout the entire sample period.

Table 2 Panel A presents the results from estimating Equation (1). The dependent variables listed in Column 1 consist of various ESG-related outcomes, with the first row displaying the results for the benchmark model that solely includes firm and year fixed effects.<sup>24</sup> The second row reports the adjusted  $R^2$  and the  $F$ -statistics for the joint significance test on the manager fixed effects when CEO fixed effects are incorporated into the model. Finally, the third row reports the adjusted  $R^2$  and the  $F$ -statistics on the manager

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<sup>23</sup>It should be noted that we estimate equation (1) with robust standard errors. As noted in Schoar, Yeung, and Zuo (2023), for a large unbalanced panel, it is impossible to test the joint significance of the manager fixed effects using clustered standard errors due to a degrees of freedom issue. Therefore, we use robust standard errors following Schoar, Yeung, and Zuo (2023).

<sup>24</sup>For the tests related to facility-level toxic weighted chemical releases (i.e., *Adj. RSEI Score*), we use facility level fixed effects instead of firm fixed effects, as these are facility-level measures, as described in Section 2.

fixed effects when both CEOs and all other executives are included in the sample.

The first ESG outcome reported in the table is the adjusted CSR score from KLD. The adjusted  $R^2$  of for the baseline model is 56.19%. When CEO fixed effects are added to the benchmark model, the adjusted  $R^2$  increases to 57.70%. Further, including all manager fixed effects raises the adjusted  $R^2$  to 61.76%, signifying a 5.57 percentage point increase relative to the benchmark model. Additionally, we explore several other real ESG outcome measures. For employee satisfaction scores, green patents filed (log), and the adjusted *RSEI score*, the inclusion of manager fixed effects leads to an increase in the adjusted  $R^2$  by 0.83%, 3.03%, and 0.38%, respectively. Such incremental explanatory power is comparable to that found in Bertrand and Schoar (2003), which studies investment and financial policies. In all specifications, the *F-statistics* are substantially high, rejecting the null hypothesis that the manager fixed effects are jointly equal to zero. Overall, the results in Table 2 Panel A indicate that manager fixed effects, our proxy for managerial style, significantly influence firms' ESG policies.

While we closely follow the approach used by Bertrand and Schoar (2003), we place additional emphasis on the effects of CEOs as they are the primary decision-makers within a firm. To do this, we concentrate exclusively on managers who held CEO positions across multiple firms (i.e., akin to “CEO-to-CEO” movers as defined in Bertrand and Schoar (2003)). Specifically, we pinpoint managers who have served as CEOs in at least two different firms, referred to as “CEO movers”, and maintain all firm-year observations for firms that employed a minimum of one “CEO mover” during the sample period. The results are presented in Table 2 Panel B. Adding CEO fixed effects increases the adjusted  $R^2$  by 2.44%, 1.46%, and 0.28% relative to the benchmark model for the adjusted CSR score, the number of green patents filed (log) and adjusted *RSEI score*, respectively. The *F-test* shows that for the CEO fixed effects, the null hypothesis of no joint effect is rejected.<sup>25</sup>

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<sup>25</sup>It is important to note that the CEO fixed effects cannot be estimated when we use employee satisfaction ratings as the outcome variable in this setting as we are left with only 28 firm-year observations with non-missing employee ratings from Glassdoor that include firms hiring at least one “CEO mover” during the sample period.

While the fixed effects approach allows us to demonstrate that managerial styles explain firm ESG outcomes, it does not allow us to understand which specific managerial traits or career experiences contribute to an ESG-focused management style. As previously discussed, we conjecture that experience serving the interest of non-financial stakeholders in the not-for-profit sector plausibly equips CEOs to more effectively pursue corporate ESG objectives. If this is the case, measures of such career experience should display a significant positive correlation with the manager-level fixed effects estimated in our models. To examine this correlation, we regress NFP experience on the CEO fixed effects estimated above. The results are reported in Panel C of Table 2.

We find that the fixed effects can explain about 33%-45% of the variations in NFP experience, as suggested by the adjusted  $R^2$  in row 1 and 4. This correlation remains robust when including firm fixed effects and various other CEO characteristics in the model, as suggested in other rows. The results of the F-test show that the CEO fixed effect in explaining NFP experience is jointly significant at the 1% level. This also suggests that these two approaches capture distinct variations, as expected, since our NFP experience measure varies significantly over time.

## 3.2 *NFP CEOs* and Firm ESG Outcomes

### 3.2.1 *NFP CEOs* and ESG Ratings

Next, we examine the correlation between *NFP CEOs* and a firm's ESG outcomes. Although prior analyses show a positive correlation between NFP experience and CEO fixed effects, this correlation does not necessarily mean that CEO NFP experience will positively influence firm-level ESG outcomes. Therefore, in this section, we evaluate the effect of *NFP CEOs* on such outcomes by estimating the following model:

$$Y_{i,t+1} = \beta_0 + \beta_1 NFP\_CEO_{i,t} + \gamma X_{i,t} + \lambda + \epsilon_{i,t+1} \quad (2)$$



where  $Y$  is the ESG outcome of interest described in Section 2;  $NFP\_CEO$  denotes the measure of NFP experience (i.e., either  $I_{NFP}$  or  $C_{NFP}$ );  $X_{i,t}$  is a vector of firm- and CEO-level control variables;  $\lambda$  represents various fixed effects and  $\epsilon_{i,t+1}$  is the error term.

Table 3 presents the regression results when the dependent variable  $Y$  is the adjusted CSR score. The model in Column (1) is estimated with industry and year-fixed effects. The results from this model show that adjusted CSR scores for firms led by *NFP CEOs* are, on average, 0.095 higher than those led by *non-NFP CEOs* within the same industry and after accounting for time trends and various firm and CEO characteristics. This effect increases the average adjusted CSR score by 4.75 times compared to *non-NFP CEO* led firms. This effect is both statistically significant and economically meaningful. Likewise, the coefficient for our continuous measure  $C_{NFP}$  in Column (2) is 0.122 and is also statistically significant at the 1% level. In Columns (3) and (4), we employ industry-by-year fixed effects to control for industry-year trends and incorporate firm-fixed effects to account for time-invariant but firm-specific unobservable factors. We still observe that the coefficients for  $I_{NFP}$  and  $C_{NFP}$  are positive and statistically significant at the 1% level.

As previously discussed, our sample includes numerous instances where a CEO gains NFP experience during their tenure. This within-CEO variation enables us to implement CEO-level fixed effects. In doing so, we relax the assumption that a CEO's style must be time-invariant. Rather, we assume that a CEO's style can evolve based on their exposure to new ideas and experiences. Prior studies show that career experience *over time* shapes a CEO's style (Custódio, Ferreira, and Matos, 2013; Custódio, Ferreira, and Matos, 2019). Further, studies by Bacon and Brown (1975), Booth and Deli (1996), and Fahlenbrach, Low, and Stulz (2010) suggest that CEOs who sit on boards of other organizations during their tenure can derive important benefits through learning about new or alternative approaches to management. In our setting, by sitting on outside NFP boards, CEOs may become more ESG-aware or ESG-focused and may acquire the capabilities needed to more effectively serve the interest of non-financial stakeholders at their firms. A CEO-fixed

effects specification can also alleviate concerns that time-invariant but CEO-specific unobservable characteristics drive the results. For example, predetermined differences between CEOs, such as their family values, culture, or just innate differences in character, might also explain a pro-ESG style and NFP experiences.

The results in Columns (5) and (6) show a positive and statistically significant coefficient for *NFP CEOs* when we include CEO fixed effects. It is worth noting that if a CEO's innate pro-ESG preference (assuming it is time-invariant) is the sole driver of our results, the CEO fixed effect should fully account for this. However, the coefficient of *NFP CEOs* in these models remains positive and statistically significant, suggesting that the positive relationship between an *NFP CEO* and a firm's ESG performance is not likely to be solely driven by a CEO's innate characteristics. Similar results are also observed using firm-CEO pair fixed effects, as displayed in Columns (7) and (8). The robust positive coefficients for  $I_{NFP}$  and  $C_{NFP}$  indicate that CEOs can enhance their firms' ESG performance within their tenure as they acquire not-for-profit experience.<sup>26</sup> It is important to note however, that these results are subject to the caveat that the decision of a CEO to obtain NFP experience while they are CEO might be subject to the board's approval, meaning that it can also be driven by firm-related factors.

To alleviate concerns that our results may be driven by the non-linear effects of the observables, we also employ a propensity score matching approach reported in Internet Appendix C. In particular, we apply a nearest neighbor-matching technique to match each firm-year where an *NFP CEO* is in charge with a firm-year observation where a *non-NFP CEO* is in charge based on several firm characteristics, as well as industry and year. The results remain robust to this approach.

Another concern is that an NFP organization may want to build its reputation or raise its fundraising ability by only inviting highly profiled individuals to sit on its board. This

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<sup>26</sup>CEOs may strategically seek to work in firms with better ESG performance rather than improving the performance of their current firms. This concern would also be largely mitigated under CEO-firm pair fixed effects.

would lead to NFPs disproportionately selecting high-profile CEOs. In other words, our sample of CEOs who acquire NFP experience during their tenure may just be picking a sample of high-profile CEOs, whose profile might somehow be correlated with better ESG outcomes. To mitigate this concern, we re-estimate the association between *NFP CEO* and firm CSR scores using the sample excluding observations where CEOs acquire their NFP experience during their tenure.<sup>27</sup> The results, as reported in Internet Appendix C, remain largely unchanged, indicating that our main results are less likely to be driven by CEOs with a high profile after they took office.

We next examine each component of the CSR score to gain a deeper understanding of the positive relationship documented above. Table 4 presents the regression results with industry and year-fixed effects for Equation 2. Firstly, we assess the strength score and concern score separately. Columns (1) and (2) reveal that the coefficients for  $I_{NFP}$  and  $C_{NFP}$  are positive and statistically significant at the 1% level for the strength score. In contrast, Columns (3) and (4) display a negative relationship between a CEO's not-for-profit experience and the concern score, but the coefficients are not statistically significant. These findings suggest that firms led by *NFP CEOs*, on average, do not exhibit fewer ESG-related concerns but possess a higher number of ESG strengths compared to their peer firms without *NFP CEOs* within the same industry. We also evaluate the five components of adjusted CSR (community, diversity, employee relations, environment, and human rights). As illustrated in Columns (5) through (14), the coefficients for  $I_{NFP}$  and  $C_{NFP}$  are all positive for each component. Specifically, the effects are statistically significant at the 1% level for diversity, environment, and employee relations but insignificant for community and human rights. Overall, these results indicate that diversity, environment, and employee relations components are the main components underlying the observed positive correlation

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<sup>27</sup>We exclude a) *NFP CEOs* who acquired their first NFP experience after they became CEO and b) *NFP CEOs* who obtained their NFP experience both before and after they became CEOs. This leaves only *NFP CEOs* who obtained NFP experience before they became CEOs and did not obtain additional NFP experience during their tenure. Note that for these tests *NFP CEOs* will be fully absorbed if CEO-by-firm fixed effects are included in the specification.

between CEO not-for-profit experience and adjusted CSR score.<sup>28</sup>

### 3.2.2 *NFP CEOs* and Real ESG Actions and Effects

To provide a more comprehensive picture of the relationship between *NFP CEOs* and firms' ESG engagement, in this section, we focus on more direct measures of a firm's real ESG actions and outcomes. Recall that Columns (9) and (10) of Table 4 demonstrate a positive association between *NFP CEOs* and the employee relations components of a firm's CSR score, indicating that firms under the leadership of an *NFP CEO* tend to engage in more activities that improve employee relations (e.g. employee health and safety programs and human capital development). However, the employee relations ratings from KLD do not necessarily reflect employees' actual perceptions of their firm. For this reason, we rely on anonymous employer reviews from Glassdoor.

Columns (1) and (2) in Table 5 Panel A shows that firms managed by *NFP CEOs* are more likely to receive higher overall employee ratings than their industry-peer firms run by *non-NFP CEOs*. Specifically, we find that firms with *NFP CEOs* obtain higher employee satisfaction ratings in subcategories related to corporate culture and values, senior management, career opportunities, and compensation.

We continue our examination by exploring the connection between *NFP CEOs* and firms' decisions related to green innovation. Table 5 Panel B presents the empirical findings when we regress the log one plus number of green patents as our dependent variable on *NFP CEOs* and include industry and year fixed effects. We also control for the total

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<sup>28</sup>A natural extension for analyzing the CSR components is to investigate whether there is a "learning" effect, where CEOs with specific experiences contribute to improvements in certain CSR aspects. For instance, one might hypothesize that a CEO with a background in environment-related non-profits would enhance a company's environmental performance. However, our untabulated analysis, utilizing the National Taxonomy of Exempt Entities (NTEE) codes of these non-profits, does not support this hypothesis. This could be attributed to the fact that the non-profits in our sample are disproportionately social-related, with less than 2% being environment-related, as classified by the NTEE. Another reason for the non-results is that the NTEE codes may not accurately reflect the full scope of a non-profit's activities, thus impeding our ability to precisely align CEO experience with specific CSR categories. For example, in the international affairs category, many organizations also engage in environmental activities. Consequently, without a more precise classification system to map these experiences to firm ESG outcomes, our study cannot conclusively assert the presence of a "learning" effect of CEO experience in CSR performance.

number of patents held by the firm to adjust for the differences in patenting activities.<sup>29</sup> We find a positive relationship between *NFP CEOs* and the development of green patents. Specifically, Column (1) shows that the coefficient for the dummy variable  $I_{NFP}$  is 0.069 and is statistically significant at the 1% level, suggesting that firms led by *NFP CEOs* are associated with approximately 6.9% more green patents than their counterparts without *NFP CEOs*. We delve deeper into this positive association by examining various categories of a firm’s green innovations. Columns (3) through (12) demonstrate that *NFP CEOs* are positively correlated with all green innovation subcategories. Most notably, innovations pertaining to greenhouse gas emissions (i.e., climate change mitigation technologies), air pollution abatement, and water conservation exhibit strong statistical significance.

Finally, we examine a firm’s toxic chemical emissions. Our analysis uses two facility-year-level emissions measures from the RSEI database. We estimate Equation (2) with facility fixed effects, facility-level industry by year, and state-by-year fixed effects following Xu and Kim (2021).<sup>30</sup> Table 5 Panel C presents the findings. It indicates that there is a statistically significant negative relationship between CEOs’ *NFP* experience and pollution measures. This suggests that firms led by *NFP CEOs* are associated with lower levels of toxic chemical emissions. Furthermore, the economic significance of this relationship is noteworthy. The coefficient on  $I_{NFP}$  reveals that, on average, pollution levels are approximately 28.2% lower when a facility is led by an *NFP CEO* compared to when the same facility is led by a *non-NFP CEO*, after controlling for industry-specific time trends. These results remain consistent even when the dependent variable is changed to  $\ln(\text{Adjusted Hazard Score})$ , as demonstrated in Columns (3) and (4).

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<sup>29</sup>Our results are robust to using Poisson regression as recommended by Cohn, Liu, and Wardlaw (2022).

<sup>30</sup>For this analysis, the industry classification is based on the six-digit NAICS code for each operating facility provided in TRI. Facilities from the same firm may have different classifications, which provides a more detailed industry classification compared to the primary industry classification offered by Compustat. Additionally, the facility fixed effects are necessary for this test because the adjusted pollution scores can only be compared within facilities, as explained in A.2.

### 3.2.3 Heterogeneous Effects of NFP Experience

Not all NFP experiences are equal. For instance, one might initially presume that hands-on experience within an NFP organization equips a CEO with skills to implement ESG initiatives in their for-profit organization, potentially offering more value than a mere board position. Similarly, it could be anticipated that experiences in charity organizations would be more valuable than those acquired at a university, as charitable work is often more directly aligned with the ESG activities within their for-profit firms. In this section, we examine the heterogeneous effects of different NFP experiences on ESG outcomes.

Firstly, we decompose NFP experience into three categories based on the roles they assumed within the organizations: board-position experience, top-management experience (i.e., founders, C-suites, presidents), and operational-staff experience (i.e., rank-and-file workers and middle managers).<sup>31</sup> Based on the distribution in 2019, 59% of *NFP CEOs* have board-position-related NFP experience and about 37% derive their experience from operational positions. These roles are typically middle-management or even rank-and-file staff, who often have hands-on involvement in the organization. Only 4% of *NFP CEOs* have top-management-related NFP experience (i.e., founders, C-suite executives, or presidents)<sup>32</sup>.

The findings presented in Table I.1 Panel A indicate that CEOs with NFP experience in board positions or operational roles are linked to better ESG outcomes. This is consistent with the notion that operational experience provides CEOs with valuable firsthand insights into NFP operations, potentially leading to more informed ESG decisions in for-profit firms. The significant results for board experience suggests that being on the board of an NFP provides a CEO with experience in representing the interest of non-financial stakeholders,

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<sup>31</sup>This classification is based on the role name information from BoardEx. Board positions are identified for roles such as board members or directors. Top management roles refer to positions such as founders, presidents, and C-suite executives. We explicitly exclude roles such as division CEOs, and associated/vice C-suite positions in this category to focus on the highest hierarchy in the organization. All remaining positions are categorized as operational staff following a manual inspection.

<sup>32</sup>A detailed distribution of NFP experiences can be found in Figure I.1 in the Internet Appendix.

thus providing them with relevant experience in fulfilling the needs of these stakeholders at public firms. The impact of top-management-related NFP experience remains unclear due to its limited representation in the sample.

We further categorize NFP experiences based on the type of NFP organization, employing data from the National Center for Charitable Statistics to manually classify the NFPs listed in BoardEx according to their tax-exempt codes. The distribution of *NFP CEO* experiences in 2019, depicted in Figure I.1, reveals that a significant majority of these experiences stem from public or private charities, accounting for 92%, while a smaller portion is linked to non-charity NFPs, such as schools/universities, churches, and hospitals. This distribution challenges our ability to distinctly compare experiences from different NFP types due to the dominance of charity-related experiences. As expected, the findings presented in Internet Appendix Table I.1 Panel B indicate that ESG outcomes are primarily influenced by CEOs with charity-based NFP experience, reflecting their dominance in the dataset. The impact of experiences within non-charity NFPs remains positive but is less significant, attributed to their rarer occurrences.

## 4 Selected Style vs. Idiosyncratic style

Our findings suggest that a CEO's management style has a significant impact on a firm's ESG outcomes. However, our empirical analysis so far does not allow for a causal interpretation of the results. There are two different but related interpretations of the positive correlation we find. One is that *NFP CEOs* impose their ESG-related preferences onto the firms they lead (i.e., idiosyncratic style hypothesis). Alternatively, firms that wish to pursue ESG objectives may deliberately hire *NFP CEOs* (i.e., selected style hypothesis). It should be noted that these two interpretations can both be simultaneously responsible for our results (they are not mutually exclusive) and both imply that CEOs with NFP experience have desirable traits that can be tapped to lead firms to more effective ESG

engagement. In this section, we show that both selected style and idiosyncratic style effects are likely to be present in our baseline results.

## 4.1 Selected Style

One of the most crucial responsibilities of the board of directors is hiring and dismissing the CEO. The selected style hypothesis posits that a board aiming to achieve ESG targets may purposefully choose a CEO with NFP experience to facilitate the firm’s ESG objectives. To provide empirical evidence on the selected style hypothesis, we undertake the following two analyses.

First, utilizing all CEO turnover events for which we have valid records of both outgoing and incoming CEOs, we regress the incoming CEO’s NFP experience indicator on the outgoing CEO’s NFP experience indicator to examine whether there is a consistent pattern in the board’s selection of CEOs concerning their NFP experience. If the board does not specifically choose its CEO based on their NFP experience, then the entry of *NFP CEOs* into the role would appear random, indicating no significant relationship between the NFP experience of outgoing and incoming CEOs. Conversely, if the board strategically chooses *NFP CEOs* to improve corporate ESG outcomes, we would expect to see a significant positive correlation, signifying the board’s continuous strategy. To address the potential concern that the board might select CEOs based on other characteristics correlated with their NFP experience, we include various CEO characteristics as control variables in our analyses.

Table 6 presents the regression results. Column (1) explores the within-industry variation among these CEO turnover events and shows that the probability of selecting a successor CEO with not-for-profit experience, on average, is 29.4% higher for a firm that was previously led by an *NFP CEO* than its industry-peer firm that was previously run by a *non-NFP CEO*. Column (2) uses firm fixed effects and indicates that within the same firm, the probability of hiring an *NFP CEO* is 6.7% higher when the outgoing CEO has



not-for-profit experience. Overall, these findings suggest that after controlling for an array of CEO characteristics, firms led by CEOs with not-for-profit experience are more likely to choose another CEO with not-for-profit experience following a CEO turnover event. Since most turnover events are usually related to retirements, financial performance, or personal issues (rather than being motivated by ESG factors), this strong positive correlation suggests that boards select CEOs based on their NFP experience to continue to pursue ESG-related policies.

Second, we regress the successor CEO's not-for-profit experience indicator on the presence of a CSR committee. Many firms establish CSR committees to provide advice to the board regarding firms' ESG targets. Previous literature documents that the existence of a CSR committee tends to have a positive association with the firm's ESG performance (e.g., Radu and Smaili, 2021; Baraibar-Diez and D. Odriozola, 2019). Thus, we use the existence of a CSR committee to capture the board's commitment to ESG engagement. We identify the presence of a CSR committee using information from the Boardex board committee table, considering a committee as a CSR committee if its name contains keywords related to the environment, health, safety, sustainability, public, CSR, responsibility, community, or social issues.

Column (3) of Table 6 shows that the probability of selecting an *NFP CEO* is 6.5% higher for firms with a CSR committee than their industry-peer firms without a CSR committee. We also find a positive association between the presence of a CSR committee and the probability of selecting an *NFP CEO* under the firm fixed effects model in Column (4). This correlation however is not statistically significant, which is likely due to the lack of within-firm variation in the existence of CSR committees across turnovers.

In untabulated results, we further investigate the association between the existence of a CSR committee and the firm's CEO appointment decisions by constructing an additional four dummy variables to indicate different types of CEO turnovers. We examine four distinct categories of transitions i) *non-NFP CEO* replaced by *non-NFP CEO*, ii) *non-*

*NFP CEO* replaced by *NFP CEO*, iii) *NFP CEO* replaced by *non-NFP CEO*, and iv) *NFP CEO* replaced by *NFP CEO*. We find that firms with a CSR committee are more likely to replace an *NFP CEO* with another *NFP CEO* and less likely to replace a *non-NFP CEO* with another *non-NFP CEO*.

## 4.2 Idiosyncratic Style

The analysis above provides evidence for the selected style hypothesis. In this subsection, we investigate whether the positive relationship between *NFP CEOs* and a firm’s ESG engagement is at least partly driven by an idiosyncratic style effect. To provide causal evidence, we rely on CEO turnover events which occur due to plausibly exogenous reasons and are thus unlikely to be associated with a firm’s strategic change of policies or leadership styles. The exogenous turnovers we use are exclusively those where the CEOs involuntarily depart due to death, severe illness, or personal issues as identified by Gentry, Harrison, Quigley, and Boivie (2021).

We define “treated” turnovers as those where a *non-NFP CEO* succeeds an *NFP CEO*, while “control” turnovers involve a *non-NFP CEO* being replaced by another *non-NFP CEO*. For each treated turnover, we identify a matched control turnover that takes place in the same industry and year. Overall, we identify 20 treated turnovers and 25 control turnovers. Our analysis focuses on examining ESG outcomes from three years before to three years after the CEO turnover year. To illustrate the change in firms’ ESG outcomes around the event year, Figure 3 plots the mean adjusted CSR score for treated and control firms from  $t-3$  to  $t+3$  relative to the event year. The solid line (in orange) and dashed line (in blue) represent treated and control firms, respectively. The figure shows no significant difference in the mean adjusted CSR score between treated and control firms in the pre-turnover period.<sup>33</sup> However, there is a significant drop in the mean adjusted CSR score

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<sup>33</sup>In untabulated results, we conduct a diagnostic test to determine if the parallel trend assumption is violated for the difference-in-difference analysis. This assumption requires that, in the absence of exogenous CEO turnover events, the differences in adjusted CSR scores between treated firms and control firms should

for treated firms compared to control firms following the CEO turnover. Thus, Figure 3 indicates that replacing an *NFP CEO* with a *non-NFP CEO* negatively impacts firms' ESG engagement.

To more rigorously analyze the patterns observed in Figure 3, we utilize difference-in-difference regression analysis to examine the effect of *NFP CEOs* on firm ESG engagement around exogenous CEO turnover years. Specifically, the regression model we use is shown in Equation 3:

$$Y_{i,t+1} = \alpha + \beta_1 Treat_i \times Post_{i,t} + \beta_2 Treat_i + \beta_3 Post_{i,t} + \epsilon_{i,t+1} \quad (3)$$

where the ESG outcome measures (i.e.,  $Y_{i,t+1}$ ) comprises the adjusted CSR score from KLD, the overall employee satisfaction rating from Glassdoor, and the logarithm of one plus the total green patents from PatentsView. We leave out toxic emissions in this analysis because there are insufficient observations to draw statistical inferences. The binary variable  $Post_{i,t}$  takes the value of one during the post-turnover period and zero in the pre-turnover period. The binary variable  $treat_{i,t}$  equals one for firms that experienced a transition from an *NFP CEO* to a *non-NFP CEO*, and zero for the firms that underwent a change from one *non-NFP CEO* to another *non-NFP CEO*.<sup>34</sup> The coefficient on the interaction term (i.e.,  $\beta$ ) is the difference-in-difference estimator for the treatment effect, which captures the difference in firm ESG engagement between the treated group and control group from before to after exogenous CEO turnovers. A negative and statistically significant  $\beta$  estimator indicates that *NFP CEOs* have a causal impact on firms' ESG outcomes.

Table 7 Panel A presents the findings using firm and year-fixed effects. From Columns

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be similar before the event, and the effect should not exist until the event occurs. To analyze this, we use dummy variables  $t_{-1}$ , and  $t_{-2}$  to indicate the years before the CEO turnover year. Then, we interact these dummies with  $treat_{i,t}$  and do not discover significant differences between treated and control groups before the turnover.

<sup>34</sup>As we utilize firm fixed effects in our model, this variable is absorbed by the fixed effect and is only relevant when interacted with the *Post* variable.

1 to 3, we observe that the coefficient on the interaction term  $turnover_{i,t} \times treat_{i,t}$  exhibits a negative sign across all ESG outcome variables, in line with the predictions of the idiosyncratic style hypothesis. However, the effect is statistically significant at the 1% level only for the adjusted CSR score, while statistically insignificant for the remaining outcome variables, potentially due to the small sample of turnovers.

Given the small sample of turnovers, we next analyze an expanded set of treated turnovers by including CEO transitions from *non-NFP CEOs* to *NFP CEOs*. Given these turnovers reverse the NFP status of the CEO relative to our original set, we multiply the outcome variables for this group by  $-1$  so that the two samples can be combined. It is important to note that the drawback of this expanded sample is that the transition from *non-NFP CEOs* to *NFP CEOs* may be subject to selection concerns due to the increasing popularity of *NFP CEOs* over time, as illustrated in Figure 1. Nevertheless, as shown in Columns 4 to 6 of Panel A, the results for the adjusted CSR score remain largely unchanged for the expanded set of treated turnovers. Notably, however, the results for employer ratings now become both economically and statistically significant. Overall, these results indicate that at least some of the variation in our baseline results is driven by an idiosyncratic or causal managerial style effect.

It should be noted that the exogenous CEO turnover events still cannot fully rule out endogeneity concerns, as the board of directors may also select the style of successor CEOs. For example, the timing of the exogenous turnovers may, by chance, coincide with the board's decision to change corporate ESG policy. To further mitigate such concerns, we adopt the methodology proposed by Fee, Hadlock, and Pierce (2013). They argue that if a board intends to change corporate policies by choosing a CEO with a different style, the board's ability to find a replacement CEO to implement the desired post-turnover changes will be greater when there is a deeper pool of potential replacements. In other words, the change in firm outcomes due to the selected style is more likely to occur when there are more potential replacement CEO candidates. Thus, restricting our sample to

turnover events that occur when there is a shallow pool of replacement CEOs can help to strengthen our causal interpretation.

Following Fee, Hadlock, and Pierce (2013) and Islam and Zein (2020), we use the population around the firms' headquarters as the proxy for the pool of CEO replacements and assign a firm into a low-density population subsample when U.S. Census data indicates that fewer than 7.5 million people live within a 100-mile radius of the firm's headquarter. The results based on the low-density population subsample are presented in Table 7 Panel B. In Columns 1 to 3, we use the transitions from *NFP CEOs* to *non-NFP CEOs* as a treatment group. The results are quite similar to what we observed in Panel A. For example, the effect on adjusted CSR score is  $-0.446$  in the low-density population subsample, which is even larger than the full exogenous turnover sample (i.e.,  $-0.283$  as shown in Panel A Column 1). The results remain largely unaffected even when employing an alternative definition of the treatment group, as demonstrated in Columns 4 to 6, serving as a robustness check. Taken together, Panel B provides further supporting evidence that the effects of idiosyncratic style observed in the exogenous CEO turnover events are less likely to be driven by the board's selection of a replacement CEO.

## 5 NFP Experience and Firm Performance

Our analysis suggests that *NFP CEOs* are associated with better ESG performance. However, one could argue that this comes at the cost of firm performance. In this subsection, we investigate whether *NFP CEOs* are linked to poorer firm performance, presenting our findings in Table 8. Columns (1) and (2) utilize Tobin's Q as a performance metric, revealing that firms with *NFP CEOs* don't have lower Tobin's Q than their industry peers. Additionally, Columns (3) and (4) show that *NFP CEOs* have comparable performance, as measured by ROA, relative to their industry counterparts.

Furthermore, we use measures from Demerjian, Lev, and McVay (2012) to evaluate

firm efficiency and CEOs' managerial ability. Columns (5) and (6) show positive but insignificant coefficients on both  $I_{NFP}$  and  $C_{NFP}$  while the estimates in Columns (7) and (8) are only significant at 10% level, suggesting that firms led by *NFP CEOs* have comparable efficiency to those led by *non-NFP CEOs*. This indicates that *NFP CEOs* have similar management skills to their peers. If ESG commitment hinders *NFP CEOs*, their productivity might decline and be reflected in their compensation. However, Columns (9) and (10) show no evidence of this, with insignificant coefficients on  $I_{NFP}$  and  $C_{NFP}$ .

We acknowledge potential endogeneity concerns with these statistical relationships. To mitigate these concerns, we evaluate the market reactions<sup>35</sup> to *NFP CEOs* exogenous turnover events. If the market perceives the dismissal of *NFP CEOs* as detrimental to firm value, it should reflect more negatively compared to the dismissal of *non-NFP CEOs*. Recognizing that market reactions to CEO dismissals may also imply expectations about the succeeding CEO, we distinguish between two scenarios: 1) the replacement of an *NFP CEO* with a *non-NFP CEO*, and 2) the replacement of a *non-NFP CEO* with another *non-NFP CEO*. The findings, detailed in Panel B of Table 8, indicate no significant difference (Column 3) in market reactions between these two scenarios. This suggests that the market does not interpret the dismissal of *NFP CEOs* as either diminishing or enhancing firm value. Supporting our primary findings, this outcome aligns with the notion that *NFP CEOs* do not compromise firm performance for superior ESG outcomes. Our results, as shown in Columns 5 to 7, are also robust to matched control turnovers based on size and industry.<sup>36</sup>

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<sup>35</sup>We compile data on the announcement dates of CEO departures by manually searching for news on each turnover event.

<sup>36</sup>In untabulated results, we also compare market reactions across the other three turnover situations — *NFP CEO* to *non-NFP CEO*, *non-NFP CEO* to *NFP CEO*, and *non-NFP CEO* to *non-NFP CEO*. There is no significant differences in market responses.

## 6 Conclusion

In this study, we investigate how corporate ESG policies are affected by a CEO's style. We show that CEO fixed effects explain a significant amount of variation in firm-level ESG outcomes. We then attempt to understand which individual CEO-specific factors could explain the effect. In particular, we examine the possibility that CEOs with experience in the not-for-profit sector might be better equipped to address the needs of multiple firm stakeholders and thus achieve superior ESG outcomes. We document a large increase in the number of CEOs having such experience. By 2019, one in three CEOs has NFP experience. Further, we document that firms led by these CEOs are more likely to obtain higher CSR ratings, are associated with improved employee satisfaction ratings, devote more effort to green innovation, and emit less toxic pollution into the environment.

We also attempt to understand the relative roles played by the selected style and idiosyncratic style hypotheses in explaining our results. We first analyze all CEO turnover events that take place in our sample. We show that the selection of CEOs with not-for-profit experience is not a random decision. Instead, there is a strong pattern whereby firms are more likely to select successor CEOs with not-for-profit experience when the outgoing CEO also has not-for-profit experience. Further, such a pattern is stronger when the board has a CSR committee. However, we also provide additional evidence that at least some of the effects we document are due to an idiosyncratic (causal) style effect. Focusing on only exogenous CEO turnover events, we show that firms that experience a switch from an *NFP CEO* (*non-NFP CEO*) to a *non-NFP CEO* (*NFP CEO*), on average, suffer a larger decline (increase) in ESG performance compared to control firms. The results are considerably stronger when we restrict the sample to cases where there is a limited pool of replacement CEO candidates, further supporting the causal style hypothesis.

Overall, our results have important implications for understanding why some CEOs are more capable of providing ESG leadership within their firms. Career exposure to mission-driven organizations appears to play an important role in helping CEOs to more

effectively reconcile the interests of shareholders and other important firm stakeholders. This translates into markedly superior ESG outcomes that do not appear to come at the expense of shareholder value.



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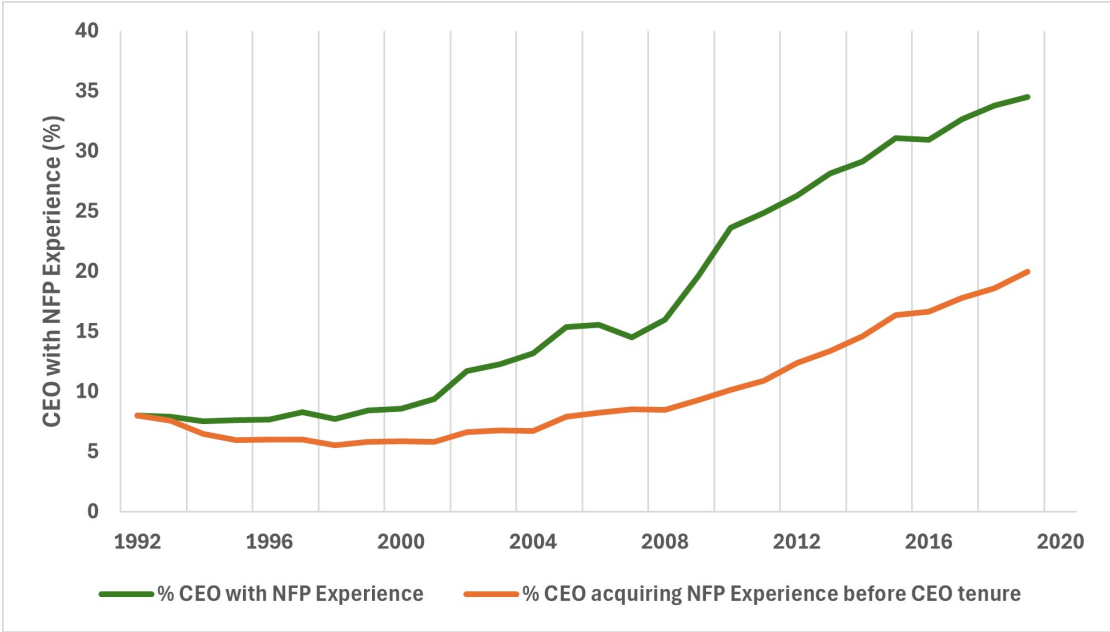
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# 7 Tables and Figures

**Figure 1:** Distribution of *NFP CEOs* over time

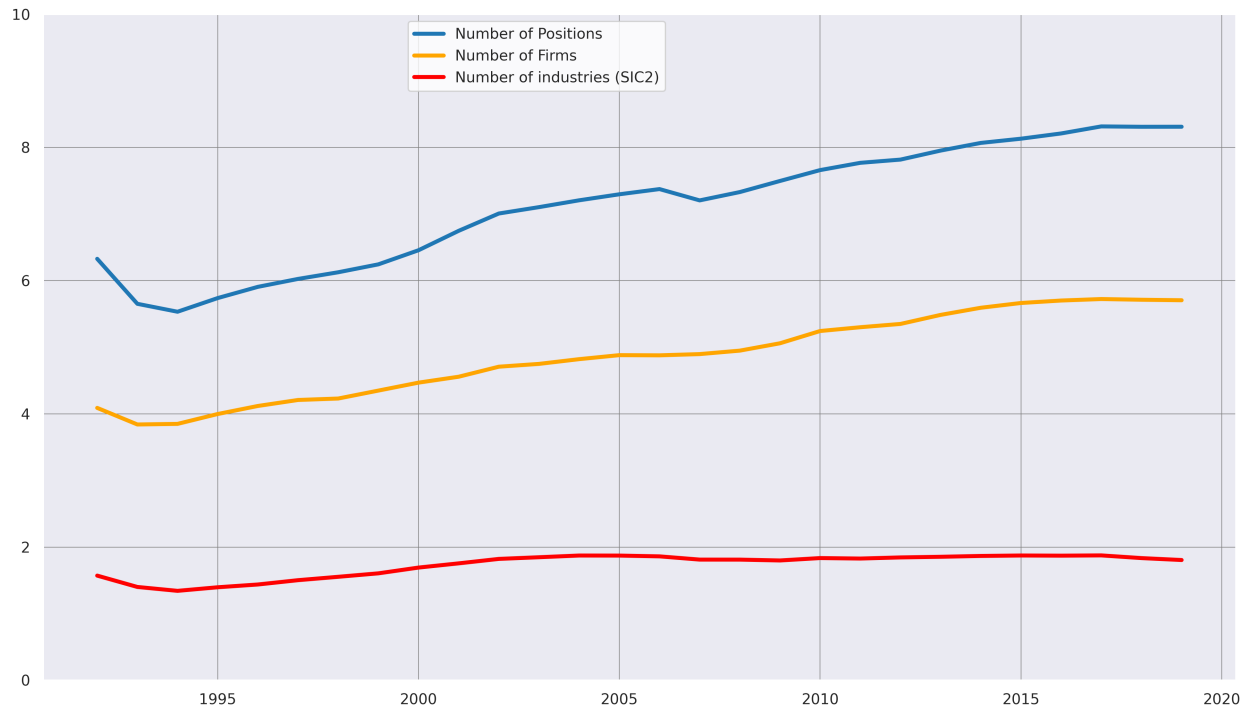
This figure presents the yearly distribution of all *NFP CEOs* and CEOs who obtained their *NFP* experience before being appointed as a CEO.



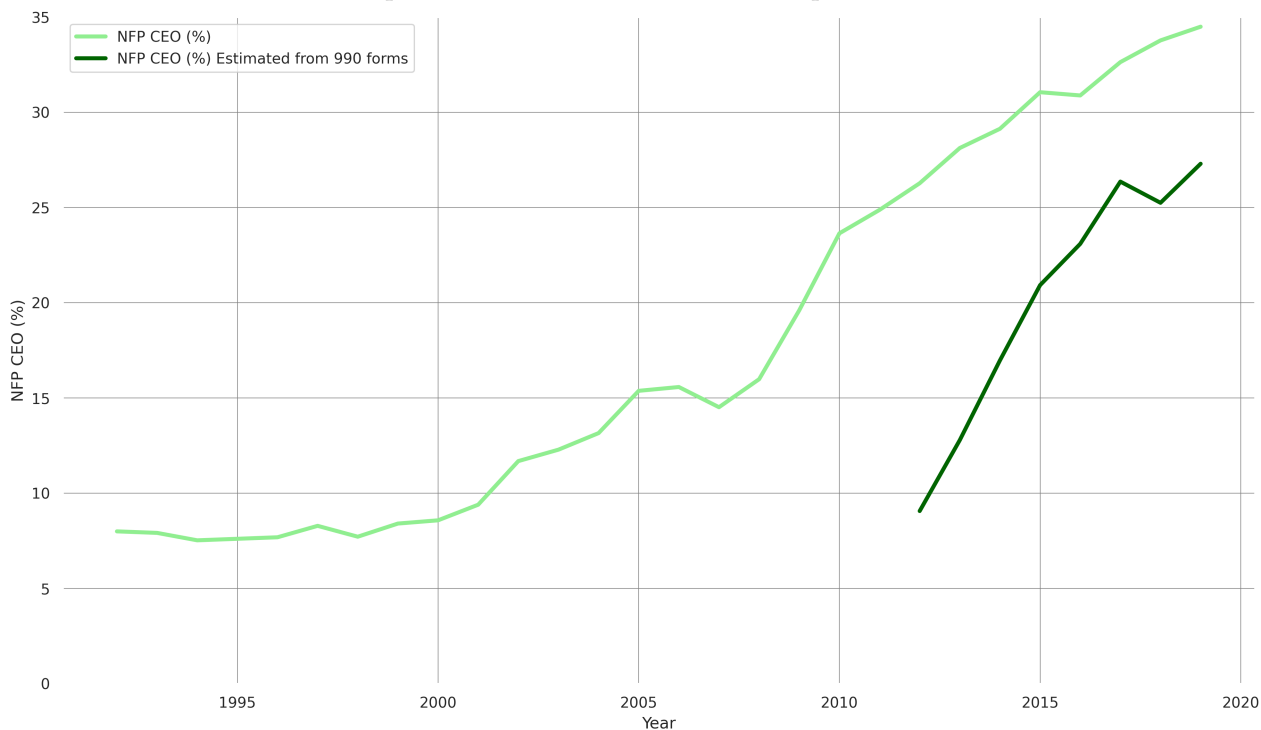
**Figure 2: Distribution of *NFP CEOs* and Other Work Experience**

This figure illustrates the distribution of CEOs with NFP experience and their other work experiences. Panel A details the average number of positions ever held, firms worked for, and industries worked in by *NFP CEOs*. In Panel B, the light green line represents the percentage of *NFP CEOs* as identified through Boardex records, while the dark green line indicates the percentage of *NFP CEOs* estimated via Form 990 filings.

**Panel A — Other work experience**

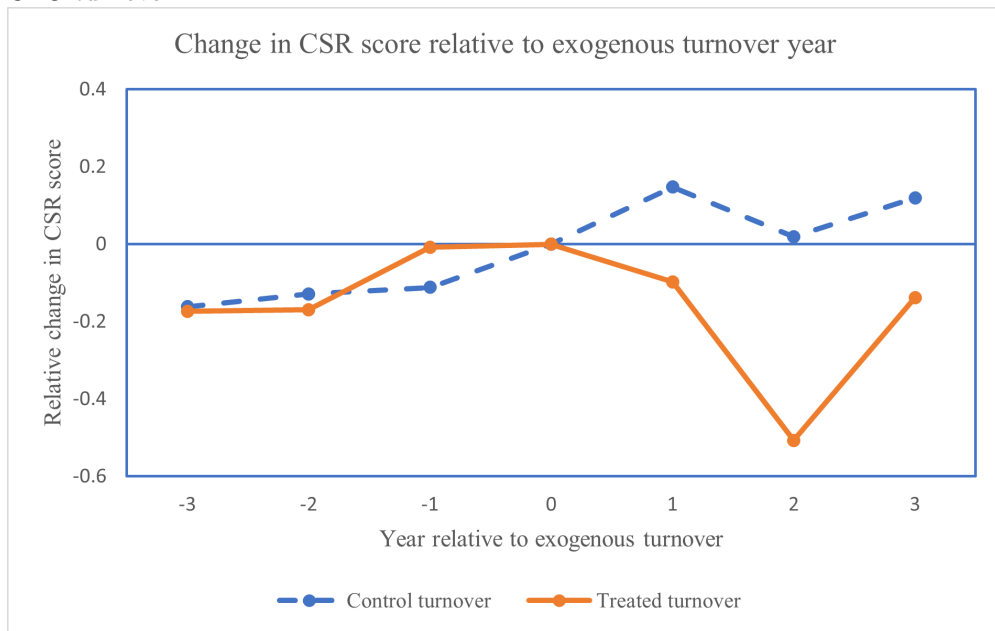


**Panel B — Boardex NFP experience and 990 forms NFP experience**



**Figure 3:** Relative change in the mean CSR score around CEO turnover events

This figure plots the relative changes in the CSR measures for the three-year period before and after the exogenous CEO turnover.



**Table 1: Summary statistics**

This table presents summary statistics of the variables employed in this study. All variables are constructed at the firm-year level, except for the facility-year level pollution measures. *NFP CEOs* are defined as CEOs who obtained NFP experience up to the focal year. T-tests are conducted to compare the means between groups with and without *NFP CEOs*. Panel A displays the summary statistics for environmental and social outcome variables. Panel B provides the summary statistics for various firm and CEO characteristics utilized in our tests. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% level, respectively. Detailed variable definitions are provided in Appendix B.

	<i>NFP CEOs</i>				<i>non-NFP CEOs</i>				Diff.	t-stat
	N	Mean	Median	std. dev	N	Mean	Median	std. dev		
<b>Panel A: Environmental and Social Outcomes</b>										
<b>MSCI KLD: CSR Score</b>										
CSR Overall	6,474	0.31	0.12	0.75	23,442	0.02	0.00	0.54	0.29***	35.39
CSR Strength	6,470	0.57	0.29	0.73	23,426	0.28	0.12	0.45	0.29***	39.57
CSR Concern	6,474	0.26	0.00	0.40	23,442	0.27	0.20	0.33	-0.00	-0.48
CSR Community	6,474	0.05	0.00	0.28	23,442	0.02	0.00	0.18	0.03***	10.82
CSR Diversity	6,474	0.10	0.00	0.37	23,442	-0.04	0.00	0.31	0.14***	31.18
CSR Employment	6,474	0.07	0.00	0.23	23,442	0.01	0.00	0.19	0.05***	19.14
CSR Environment	6,474	0.08	0.00	0.22	23,442	0.03	0.00	0.16	0.06***	24.07
CSR Humanity	6,474	0.01	0.00	0.16	23,442	-0.00	0.00	0.12	0.01***	5.42
<b>Glassdoor: Employee Satisfaction</b>										
Glassdoor Overall	1,967	3.32	3.35	0.49	3,429	3.19	3.19	0.53	0.12***	8.50
Glassdoor W/L Balance	1,967	3.26	3.31	0.52	3,429	3.17	3.16	0.53	0.09***	6.31
Glassdoor Culture	1,967	3.28	3.32	0.55	3,429	3.16	3.16	0.60	0.12***	7.40
Glassdoor Career Prosp.	1,967	3.10	3.11	0.47	3,429	3.00	3.00	0.50	0.10***	7.13
Glassdoor Compensation	1,967	3.39	3.44	0.50	3,429	3.24	3.26	0.56	0.15***	9.86
Glassdoor Management	1,967	2.89	2.90	0.50	3,429	2.79	2.77	0.54	0.09***	6.28
<b>USPTO: Green Innovation</b>										
Green Pat. (log)	5,022	0.46	0.00	1.06	22,283	0.28	0.00	0.72	0.18***	14.74
GHG Pat. (log)	5,022	0.41	0.00	0.99	22,283	0.23	0.00	0.66	0.18***	15.33
Air Pat. (log)	5,022	0.15	0.00	0.60	22,283	0.07	0.00	0.39	0.07***	10.82
Waste Mgmt. Pat. (log)	5,022	0.06	0.00	0.30	22,283	0.03	0.00	0.20	0.03***	9.02
Water Pollu. Pat. (log)	5,022	0.06	0.00	0.30	22,283	0.03	0.00	0.21	0.03***	7.86
Water Convers. Pat. (log)	5,022	0.05	0.00	0.35	22,283	0.02	0.00	0.17	0.03***	10.38
<b>RESI: Facility-level Pollution</b>										
Adj. RSEI Score	13,420	-0.72	-0.80	5.64	39,876	0.02	0.18	5.20	-0.74***	-13.85
Adj. Hazard Score	15,128	13.47	12.69	6.51	44,588	13.99	13.77	5.85	-0.52***	-9.14
<b>Panel B: Control Variables</b>										
<b>Firm Characteristics</b>										
Tobin's Q	6,473	1.80	1.42	1.09	23,441	1.93	1.53	1.19	-0.13***	-8.00
Leverage	6,452	0.25	0.22	0.18	23,356	0.23	0.21	0.19	0.02***	7.37
ROA	6,474	0.05	0.04	0.06	23,439	0.04	0.04	0.08	0.00	0.80
Size	6,474	8.73	8.66	1.66	23,442	7.80	7.69	1.56	0.93***	41.75
PPE	6,251	0.24	0.16	0.23	22,468	0.25	0.17	0.23	-0.01***	-3.63
R&D	6,474	0.02	0.00	0.04	23,442	0.03	0.00	0.05	-0.01***	-14.09
Institutional Ownership (%)	6,462	75.22	78.09	20.62	23,379	75.32	78.85	21.16	-0.10	-0.33
I(Corporate NFP)	6,474	0.03	0.00	0.18	23,442	0.02	0.00	0.15	0.01***	3.64
Board Independence	6,206	0.78	0.82	0.13	22,129	0.74	0.77	0.14	0.04***	21.33
I(Board Has CSR committee)	6,474	0.17	0.00	0.38	23,442	0.09	0.00	0.28	0.08***	19.49
E-Index	6,402	3.09	3.00	1.17	22,841	2.94	3.00	1.24	0.15***	8.77
<b>CEO Characteristics</b>										
Total Compensation (log)	6,460	8.46	8.59	1.36	23,313	8.11	8.15	1.07	0.35***	21.84
CEO Age	6,473	57.28	57.00	6.74	23,425	55.80	56.00	7.30	1.49***	14.73
Tenure	6,474	9.06	7.00	7.34	23,442	8.04	6.00	7.05	1.02***	10.26
Founder CEO	6,472	0.05	0.00	0.22	23,430	0.07	0.00	0.25	-0.02***	-5.27
General Ability Index	6,440	5.32	5.00	2.14	23,295	4.38	4.11	1.79	0.94***	35.85
Overconfidence (holder67)	6,472	0.25	0.00	0.43	23,430	0.29	0.00	0.45	-0.04***	-6.67
Male	6,474	0.95	1.00	0.22	23,442	0.98	1.00	0.15	-0.03***	-10.54
Ivy League	6,472	0.30	0.00	0.46	23,430	0.23	0.00	0.42	0.07***	12.01
MBA	6,472	0.40	0.00	0.49	23,430	0.34	0.00	0.47	0.06***	8.26
PhD	6,472	0.06	0.00	0.24	23,430	0.06	0.00	0.24	-0.00	-0.43
Technical Education	6,472	0.02	0.00	0.12	23,430	0.02	0.00	0.14	-0.00**	-1.99
No School Information	6,472	0.02	0.00	0.16	23,430	0.08	0.00	0.27	-0.06***	-16.06
Military CEO	6,472	0.03	0.00	0.17	23,430	0.02	0.00	0.15	0.01**	2.41



**Table 2: Effects of Managers on ESG performance**

This table presents the  $F$ -test results on the fixed effects of managers with respect to firms' ESG outcomes. All specifications contain year-fixed effects and time-varying firm characteristics including *Firm Size*, *Tobin's Q*, *leverage*, *ROA*, *PPE*, *R&D*, *Institutional Ownership*,  $I(\text{Board has CSR committee})$ ,  $I(\text{Corporate NFP})$ , *Board independence* and *E-index*. In Panel A, the sample includes all firm-year observations where at least one top executive works in another firm during the entire sample period. The classification of *CEOs* or *Other executives* is based on the last position of each manager following Bertrand and Schoar (2003). Panel B retains all firm-year observations where the firm hires at least one CEO who also held a CEO position at another firm during the entire sample period. Panel C reports the results of the  $F$ -test on the CEO fixed effects with respect to their NFP work experiences. For each  $F$ -test, we report the value of the  $F$ -statistic, the  $p$ -value, and the number of constraints in parentheses. Detailed variable definitions are provided in Appendix B.

Panel A: All top Executive-Movers						
	<i>Fixed Effects</i>	<i>F-test for FEs</i>				<i>Adjusted R<sup>2</sup></i>
		<i>CEOs</i>		<i>Other executives</i>		
CSR Overall	Firm					56.19%
CSR Overall	Firm, CEO	6.00	(0.00, 252)			57.70%
CSR Overall	Firm, CEO, Other	7.88	(0.00, 252)	12.44	(0.00, 677)	61.76%
Emp. Rating.	Firm					62.84%
Emp. Rating.	Firm, CEO	2.61	(0.00, 20)			63.18%
Emp. Rating.	Firm, CEO, Other	2.21	(0.00, 20)	2.06	(0.00, 55)	63.67%
Green Pat.	Firm					78.73%
Green Pat.	Firm, CEO	4.09	(0.00, 230)			79.65%
Green Pat.	Firm, CEO, Other	2.55	(0.00, 230)	17.23	(0.00, 684)	81.76%
Adj. RSEI Score	Facility					86.90%
Adj. RSEI Score	Facility, CEO	25.77	(0.00, 61)			87.04%
Adj. RSEI Score	Facility, CEO, Other	21.80	(0.00, 61)	6.01	(0.00, 112)	87.28%

Panel B: CEO-Movers Only				
	<i>Fixed Effects</i>	<i>F-test for CEO FEs</i>		<i>Adjusted R<sup>2</sup></i>
CSR Overall	Firm			54.93%
CSR Overall	Firm, CEO	4.70	(0.00, 58)	57.37%
Green Pat.	Firm			80.04%
Green Pat.	Firm, CEO	2.72	(0.00, 73)	81.50%
Adj. RSEI Score	Facility			90.02%
Adj. RSEI Score	Facility, CEO	33.85	(0.00, 11)	90.30%

Panel C: Relations between FE and NFP Exp.				
	<i>Fixed Effects and Ctrl.</i>	<i>F-tset for CEO FEs</i>		<i>Adjusted R<sup>2</sup></i>
$I_{NFP}$	CEO	124.87	(0.00, 74)	33.69%
$I_{NFP}$	CEO, firm	87.51	(0.00, 64)	64.09%
$I_{NFP}$	CEO, firm, CEO chars.	44.30	(0.00, 62)	67.61%
$C_{NFP}$	CEO	79.86	(0.00, 74)	44.62%
$C_{NFP}$	CEO, firm	86.19	(0.00, 64)	71.45%
$C_{NFP}$	CEO, firm, CEO chars.	53.74	(0.00, 62)	74.23%

**Table 3: NFP CEOs and CSR ratings**

This table reports the estimates from regressions examining the relationship between *NFP CEOs* and firm CSR scores. The sample period spans from 1995 to 2018. The dependent variable, *CSR Overall*, represents the adjusted CSR score comprising five components: *Community, Diversity, Employee, Environment, Humanity*. The independent variables of interest are  $I_{NFP}$ , an indicator variable that equals one if the CEO has NFP experience up to the focal year, and  $C_{NFP}$ , which is the natural logarithm of one plus the total number of CEO's NFP experiences up to the focal year. Fixed effects used in regressions are indicated in each column, including *Year FE, Industry (4-digit SIC) FE, Industry  $\times$  Year FE, Firm FE, CEO FE*, and *CEO-Firm-Pair FE*. Standard errors are clustered at the firm level, and t-statistics are reported in parentheses. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% level, respectively. Detailed variable definitions are provided in Appendix B.

	CSR Overall							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$I_{NFP}$	0.095*** (5.28)		0.071*** (3.43)		0.092*** (2.85)		0.091*** (2.79)	
$C_{NFP}$		0.122*** (5.70)		0.105*** (4.39)		0.138*** (3.53)		0.136*** (3.45)
Tobin's Q	0.027*** (4.08)	0.027*** (4.04)	0.000 (0.03)	0.000 (0.03)	0.006 (0.58)	0.006 (0.61)	0.004 (0.41)	0.004 (0.44)
Leverage	-0.091** (-2.06)	-0.091** (-2.07)	0.069 (1.20)	0.066 (1.15)	0.030 (0.43)	0.029 (0.42)	0.014 (0.21)	0.013 (0.18)
ROA	0.382*** (4.85)	0.383*** (4.86)	0.046 (0.55)	0.044 (0.53)	0.004 (0.04)	0.006 (0.07)	-0.006 (-0.07)	-0.005 (-0.05)
Size	0.169*** (16.80)	0.168*** (16.65)	-0.002 (-0.10)	-0.001 (-0.05)	0.026 (0.99)	0.027 (1.04)	0.011 (0.40)	0.013 (0.46)
PPE	0.118* (1.76)	0.115* (1.70)	-0.304** (-2.20)	-0.305** (-2.21)	-0.050 (-0.35)	-0.050 (-0.35)	-0.074 (-0.50)	-0.072 (-0.49)
R&D	1.023*** (4.58)	1.008*** (4.49)	-0.275 (-0.80)	-0.276 (-0.82)	-0.256 (-0.73)	-0.245 (-0.70)	-0.332 (-0.94)	-0.321 (-0.91)
Institutional Ownership (%)	-0.000 (-1.14)	-0.000 (-1.10)	-0.001 (-1.33)	-0.001 (-1.28)	-0.000 (-0.15)	-0.000 (-0.10)	-0.000 (-0.16)	-0.000 (-0.12)
Has Corporate NFP	0.140*** (2.80)	0.141*** (2.82)	0.167*** (2.86)	0.171*** (2.95)	0.182*** (2.91)	0.184*** (2.96)	0.160*** (2.60)	0.162*** (2.64)
Board Independence	0.375*** (7.11)	0.375*** (7.10)	0.107 (1.53)	0.106 (1.51)	0.180*** (2.59)	0.180*** (2.59)	0.170** (2.41)	0.170** (2.41)
Has CSR committee	0.091*** (3.12)	0.090*** (3.10)	0.065 (1.24)	0.067 (1.27)	0.030 (0.49)	0.028 (0.47)	0.033 (0.53)	0.032 (0.51)
E-Index	0.006 (0.98)	0.006 (1.01)	0.000 (0.00)	0.000 (0.04)	0.004 (0.38)	0.004 (0.39)	0.004 (0.42)	0.004 (0.43)
ln(Total Pay)	-0.004 (-0.47)	-0.005 (-0.51)	-0.008 (-1.32)	-0.008 (-1.27)	-0.005 (-0.63)	-0.004 (-0.57)	-0.006 (-0.72)	-0.005 (-0.66)
CEO Age	-0.001 (-0.75)	-0.001 (-0.72)	0.001 (0.35)	0.001 (0.36)	0.031 (1.43)	0.032 (1.47)	0.023 (1.07)	0.024 (1.12)
CEO Tenure	-0.004*** (-3.26)	-0.004*** (-3.44)	-0.003* (-1.70)	-0.003* (-1.86)	0.006 (0.97)	0.006 (0.89)	0.005 (0.64)	0.005 (0.60)
Founder CEO	-0.016 (-0.61)	-0.014 (-0.53)	0.068 (1.46)	0.070 (1.52)	-1.119*** (-6.80)	-1.102*** (-6.77)		
General Ability Index	-0.005 (-1.13)	-0.005 (-1.30)	-0.017*** (-2.95)	-0.018*** (-3.17)	0.046*** (2.58)	0.045*** (2.51)	0.052*** (2.77)	0.050*** (2.69)
Overconfidence (holder67)	-0.033*** (-3.07)	-0.034*** (-3.12)	-0.009 (-0.76)	-0.009 (-0.82)	-0.014 (-1.12)	-0.015 (-1.14)	-0.013 (-0.99)	-0.013 (-1.02)
Male CEO	-0.302*** (-7.07)	-0.299*** (-7.04)	-0.155*** (-2.97)	-0.152*** (-2.89)				
Ivy League	0.040** (2.33)	0.039** (2.27)	0.030 (1.18)	0.029 (1.13)				
MBA	0.010 (0.66)	0.010 (0.70)	0.009 (0.43)	0.010 (0.45)				
PhD	-0.035 (-1.23)	-0.033 (-1.19)	-0.014 (-0.30)	-0.013 (-0.29)				
Technical Education	0.028 (0.62)	0.026 (0.58)	-0.092 (-1.30)	-0.096 (-1.35)				
No School Information	-0.004 (-0.17)	-0.005 (-0.19)	-0.027 (-0.66)	-0.027 (-0.64)				
Military CEO	0.020 (0.51)	0.022 (0.58)	-0.091 (-1.48)	-0.085 (-1.37)				
Year FE	✓	✓						
Industry FE	✓	✓						
Industry $\times$ Year FE			✓	✓	✓	✓	✓	✓
CEO-Firm-Pair FE							✓	✓
Firm FE			✓	✓				
CEO FE					✓	✓		
Obs.	20,717	20,717	18,746	18,746	18,100	18,100	18,053	18,053
Adj. $R^2$	0.40	0.40	0.62	0.62	0.68	0.68	0.68	0.68

**Table 4: NFP CEOs and CSR decomposition**

This table presents the regression estimates examining the relationship between *NFP CEOs* and the decomposition of aggregate adjusted CSR score. The sample period spans from 1995 to 2018. The outcome variables consist of *CSR Strength* which is the aggregate adjusted CSR score of strength categories, and *CSR Concern* which is the aggregate adjusted CSR score of concern categories. The adjusted scores for *Community*, *Diversity*, *Employee*, *Environment*, *Humanity* are reported separately. The variables of interest are  $I_{NFP}$ , an indicator variable that equals one if the CEO has NFP experience up to the focal year, and  $C_{NFP}$ , which is the natural logarithm of one plus the total number of CEO's NFP experiences up to the focal year. The baseline controls from Table 3 are included in the models but not reported in the table. Fixed effects used are indicated in each column. Standard errors are clustered at the firm level, and t-statistics are reported in parentheses, with significance denoted by \*, \*\*, or \*\*\* for the 10%, 5%, and 1% levels, respectively. Detailed variable definitions are provided in Appendix B.

	CSR Strength		CSR Concern		Diversity		Environment		Employment		Community		Human	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
$I_{NFP}$	0.082*** (5.28)		-0.014 (-1.35)		0.043*** (5.09)		0.022*** (4.05)		0.020*** (3.42)		0.009 (1.31)		0.001 (0.19)	
$C_{NFP}$		0.115*** (5.73)		-0.009 (-0.69)		0.054*** (5.53)		0.032*** (4.74)		0.027*** (3.89)		0.010 (1.29)		0.000 (0.03)
Baseline Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obs.	20,711	20,711	20,717	20,717	20,717	20,717	20,717	20,717	20,717	20,717	20,717	20,717	20,717	20,717
Adj. $R^2$	0.48	0.48	0.40	0.40	0.37	0.37	0.32	0.32	0.29	0.29	0.13	0.13	0.12	0.12

**Table 5: NFP CEOs and real ESG actions and outcomes**

This table reports the regression estimates examining the relationship between an *NFP CEO* and a firm’s real ESG actions and outcomes. The variables of interest are  $I_{NFP}$ , an indicator variable that equals one if the CEO has NFP experience up to the focal year, and  $C_{NFP}$  which is the natural logarithm of one plus the total number of CEO’s NFP experiences up to the focal year. Panel A reports the results of the analysis for employee satisfaction ratings from Glassdoor. *Emp. Rating Overall* represents the overall employee satisfaction level. It is decomposed into five subcategories including work-life balance, company culture, career opportunities, compensation, and senior management. Panel B reports the results of the analysis of the number of green patents from PatentViews and OECD. *Green Pat.* represents the natural logarithm of the one plus the total number of green patents, and it is further classified into patents regarding greenhouse gas emission, air pollution prevention, waste management, water pollution prevention, and water-related adaptation technologies. The total number of patents held by the firm is controlled in these analyses. Panel C reports the results of the analysis for the facility-level toxicity-weighted pollution measures from RSEI. Adj. RSEI Score and Adj. Hazard Score represent the facility-level toxicity-weighted chemical releases with and without the adjustment to the exposed population, respectively. Both measures are scaled by the simulated facility-level production (Please see Appendix for details). Baseline controls used in Table 3 are included in the models (not reported). Fixed effects used are indicated in each column. Standard errors are clustered at the firm level, and t-statistics are reported in parentheses. Statistical significance levels are denoted by \*, \*\*, and \*\*\* for 10%, 5%, and 1% level, respectively. Detailed variable definitions are provided in Appendix B.

Panel A - Employee Satisfaction

	Emp. Rating Overall		W/L Balance		Culture		Career Prosp.		Compensation		Management	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
$I_{NFP}$	0.071*** (3.25)		0.033 (1.39)		0.076*** (2.93)		0.053** (2.57)		0.046** (1.98)		0.070*** (3.27)	
$C_{NFP}$		0.081*** (3.69)		0.023 (0.94)		0.076*** (2.88)		0.060*** (2.88)		0.052** (2.10)		0.074*** (3.42)
Baseline Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obs.	5,299	5,299	5,299	5,299	5,299	5,299	5,299	5,299	5,299	5,299	5,299	5,299
$R^2$	0.37	0.37	0.38	0.38	0.36	0.36	0.34	0.34	0.51	0.51	0.31	0.31

Panel B - Green Innovation

	Green Pat.		GHG		Air		Waste Mgmt.		Water		Water Cons.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
$I_{NFP}$	0.069*** (2.83)		0.067*** (2.82)		0.025* (1.82)		0.006 (1.02)		0.007 (0.91)		0.016** (2.37)	
$C_{NFP}$		0.075** (2.45)		0.070** (2.34)		0.030* (1.72)		0.011 (1.40)		0.015 (1.36)		0.025** (2.13)
Baseline Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obs.	25,517	25,517	25,517	25,517	25,517	25,517	25,517	25,517	25,517	25,517	25,517	25,517
$R^2$	0.49	0.49	0.47	0.47	0.37	0.37	0.23	0.23	0.23	0.24	0.31	0.31

Panel C - Toxic Chemical Release

	Adj. RSEI Score		Adj. Hazard Score	
	(1)	(2)	(3)	(4)
$I_{NFP}$	-0.282*** (-2.84)		-0.200** (-2.01)	
$C_{NFP}$		-0.336*** (-3.01)		-0.266** (-2.29)
Baseline Controls	✓	✓	✓	✓
Facility FE	✓	✓	✓	✓
Facility Industry × Year FE	✓	✓	✓	✓
State × Year FE	✓	✓	✓	✓
Obs.	49,265	49,265	55,640	55,640
$R^2$	0.89	0.89	0.90	0.90

**Table 6:** Selected style analysis

This table presents the results of an analysis that examines the relationship between the presence of NFP experience in dismissed CEOs and the subsequent appointment of a CEO with NFP experience. The analysis uses data on CEO turnover events from 1992 to 2018 from Gentry et al. (2021). The outcome variable is  $I_{NFP}$  of the successive CEO, which is equal to one if the successive CEO has NFP experience and zero otherwise. The variable of interest,  $I_{NFP}$  of the dismissed CEO, is equal to one if the dismissed CEO has NFP experience and zero otherwise. *Has CSR Committee* is an indicator variable that equals one if there is a presence of a corporate social responsibility (CSR) committee on the board and zero otherwise. The baseline controls used in Table 3 are included in the models but not reported. Fixed effects are used and indicated in each column. Standard errors are clustered at the firm level, and t-statistics are reported in parentheses. The significance levels are denoted by \*, \*\*, and \*\*\* for the 10%, 5%, and 1% level, respectively. The detailed variable definitions are provided in Appendix B.

	$I_{NFP}$ of the successive CEO			
	(1)	(2)	(3)	(4)
$I_{NFP}$ of the dismissed CEO	0.294*** (17.77)	0.067*** (3.55)		
Has CSR committee			0.065** (2.55)	0.013 (0.34)
Baseline Controls	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Industry FE	✓		✓	
Firm FE		✓		✓
Obs.	4,741	3,885	3,870	3,101
Adj. $R^2$	0.25	0.36	0.17	0.39

**Table 7: Idiosyncratic style analysis using exogenous CEO turnover**

This table presents the results of a difference-in-difference (DID) analysis of exogenous CEO turnover events. The sample covers three years before and after the turnover event. The outcome variables assessed in this test are *CSR Overall*, *Emp. Rating Overall*, and *Green Pat.* The treated turnovers in Columns 1 to 3 refer to the firms experiencing the transition from *NFP CEOs* to *non-NFP CEOs*, while the treated turnovers in Columns 4 to 6 include the transition from *NFP CEOs* to *non-NFP CEOs* and the transition from *non-NFP CEOs* to *NFP CEOs*. The control turnovers refer to the firms experiencing the transition from *non-NFP CEOs* to *non-NFP CEOs*. The independent variables include *Post* which equals 1 for the post-turnover period and 0 for the pre-turnover period, *Treat* which equals one for treated firms and zero for control firms, and *Post* × *Treat* which is the DID estimator. Panel A reports results for all exogenous CEO turnovers, while Panel B reports results for a subsample with a limited pool of CEO candidates as measured by a local population of fewer than 7.5 million people living within a 100-mile radius of the firm headquarters. All specifications contain time-varying firm characteristics including *Firm Size*, *Tobin's Q*, *Leverage*, *ROA* (not reported). Fixed effects used are indicated in each column. Standard errors are clustered at the firm level, and t-statistics are reported in parentheses. The significance levels are denoted by \*, \*\*, and \*\*\* for the 10%, 5%, and 1% levels, respectively. Detailed variable definitions are provided in Appendix B.

Panel A - All exogenous turnovers

	Treatment: NFP to Non-NFP			Treatment: NFP to Non-NFP & Non-NFP to NFP		
	CSR Overall	Green Pat.	Emp. Rating Overall	CSR Overall	Green Pat.	Emp. Rating Overall
	(1)	(2)	(3)	(4)	(5)	(6)
Treat × Post	-0.283*** (-2.70)	-0.023 (-0.24)	-0.892 (-1.54)	-0.243*** (-2.72)	0.015 (0.12)	-1.075** (-2.75)
Post	-0.044 (-0.44)	-0.027 (-0.45)	0.989* (2.08)	0.039 (0.42)	0.005 (0.08)	0.421 (0.94)
Year FE	✓	✓	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓	✓	✓
Obs.	231	289	79	294	392	121
R <sup>2</sup>	0.82	0.90	0.89	0.85	0.86	0.72

Panel B - Exogenous turnovers in firms with headquarters in low-density population areas

	Treatment: NFP to Non-NFP			Treatment: NFP to Non-NFP & Non-NFP to NFP		
	CSR Overall	Green Pat.	Emp. Rating Overall	CSR Overall	Green Pat.	Emp. Rating Overall
	(1)	(2)	(3)	(4)	(5)	(6)
Treat × Post	-0.446*** (-3.67)	-0.012 (-0.24)	-0.658 (-1.60)	-0.355*** (-2.79)	0.021 (0.46)	-0.464 (-1.78)
Post	-0.002 (-0.01)	-0.031 (-0.74)	0.467 (1.21)	0.083 (0.74)	-0.054 (-1.61)	0.271 (1.06)
Year FE	✓	✓	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓	✓	✓
Obs.	130	154	51	166	217	74
R <sup>2</sup>	0.88	0.94	0.96	0.82	0.92	0.67

**Table 8: Do NFP CEOs sacrifice firm performance**

This table presents the examination results on the relationship between NFP CEOs and firm performance. Panel A reports OLS regression estimates. The dependent variables include Tobin’s Q and ROA; Management Score, and Firm Efficiency, which are measures of the manager’s ability from Demerjian, Lev, and McVay (2012); the natural logarithm of the CEO’s total compensation ( $\ln(\text{Total Pay})$ ). The variables of interest are  $I_{NFP}$ , an indicator variable that equals one if the CEO has NFP experience up to the focal year, and  $C_{NFP}$ , which is the natural logarithm of one plus the total count of the CEO’s NFP experiences up to the focal year. Baseline controls used in Table 3 are included in the models (not reported). Standard errors are clustered at the firm level, and t-statistics are presented in parentheses. Panel B reports the market’s reaction to exogenous CEO turnover events using three models: the market model, the Fama-French three-factor, and the Carhart four-factor model, to compute the cumulative abnormal returns surrounding CEO turnover events. Returns are expressed in percentage points, and t-statistics are reported to assess the mean differences across different turnover groups. \*\*\*, \*\*, \* indicates significance level at 1%, 5% and 10%, respectively. Detailed variable definitions are provided in Appendix B.

**Panel A - Firm Performance regression**

	Q		ROA		Mgmt. Score		Firm Eff.		ln(Total Pay)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$I_{NFP}$	0.050 (1.59)		0.003 (1.52)		0.006 (1.12)		0.009* (1.69)		-0.037 (-1.04)	
$C_{NFP}$		0.068* (1.91)		0.003 (1.49)		0.006 (0.91)		0.012* (1.82)		-0.023 (-0.70)
Baseline Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Industry FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obs.	22,778	22,778	22,779	22,779	16,144	16,144	16,144	16,144	23,440	23,440
Adj. $R^2$	0.38	0.38	0.17	0.17	0.36	0.36	0.49	0.49	0.40	0.40

**Panel B - Market Reaction to Turnover Events**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	NFP to Non-NFP	Non-NFP to Non-NFP	Diff. (1)-(2)	t-stat	Matched Non-NFP to Non-NFP	Diff. (1)-(6)	t-stat
CAR(-1, 1)-Mkt	-3.54	-1.14	-2.40	-1.47	-0.97	-2.57	-1.04
CAR(-2, 2)-Mkt	-2.62	-1.46	-1.16	-0.58	-0.91	-1.71	-0.54
CAR(-5, 5)-Mkt	-2.82	-2.07	-0.75	-0.30	-1.18	-1.64	-0.57
CAR(-1, 1)-FF3	-3.39	-1.06	-2.33	-1.44	-0.62	-2.78	-1.18
CAR(-2, 2)-FF3	-2.39	-1.28	-1.11	-0.55	-0.06	-2.33	-0.76
CAR(-5, 5)-FF3	-3.22	-1.94	-1.28	-0.55	-0.22	-3.01	-1.37
CAR(-1, 1)-FF3+Mom	-3.33	-1.08	-2.25	-1.39	-0.45	-2.88	-1.23
CAR(-2, 2)-FF3+Mom	-2.29	-1.33	-0.96	-0.48	0.37	-2.65	-0.88
CAR(-5, 5)-FF3+Mom	-2.97	-1.59	-1.38	-0.60	0.96	-3.93*	-1.91

# Appendix A.

## Appendix A.1. *NFP CEOs Examples*

### Appendix A.1.1. John Edgar Bryson

An example of an *NFP CEO* is John Edgar Bryson, who was the CEO of Edison International. Bryson co-founded the Natural Resources Defense Council (NRDC), a not-for-profit international environmental advocacy group. He also took the role of president of the California Public Utilities Commission (PUC), which promotes the use of energy-saving equipment among California utilities. During his tenure at the NRDC, he sued Southern California Edison (SCE) for \$6 million for not negotiating in good faith with nonutility power companies. Nevertheless, the chairman of SCE, Howard Allen, wanted Bryson to join the company to bring a new perspectives into the business.

*“John’s appointment suggests that the carriers of the environmental ethic may now be able to carry out those ideas from a position of power, rather than as critics of those who hold power.” — Richard E. Ayers, a cofounder of NRDC*

Bryson was committed to combining chairmanship with environmentalism. After becoming chairman and chief executive officer of Edison International and Southern California Edison, Bryson supported a strong effort by Edison to promote demand-side management as a conservation and clean-up effort. He guided Southern California Edison to cut carbon dioxide emissions by 20% during his tenure, making Edison one of the most forward-thinking utility companies in addressing greenhouse gas emissions. John had company engineers re-design facilities to reduce the strength of electromagnetic fields produced by power lines and substations. He also promoted nontraditional technologies, including electrified trains that would reduce automobile traffic and smog in Los Angeles and efficient photovoltaic cells for solar energy use.

### Appendix A.1.2. David S. Taylor

Another example is David S. Taylor, whose NFP experience was with Feeding America in 2006. Feeding America is the largest domestic hunger-relief organization in the United States. Taylor became the CEO of P&G in 2015. A media article in the *The Enquirer*, published by an online local Cincinnati media outlet, described his appointment in the following way:

*“His non-profit leadership style provides clues into how he will seek to turn around the \$76.3 billion company.”*<sup>37</sup>

In 2019, P&G joined forces with more than 40 companies from across the plastics and consumer goods value chain to form The Alliance to End Plastic Waste, a not-for-profit organization that plans to help end plastic waste in the environment. Taylor took the lead to serve as the first chairman of the Alliance. In addition, under Taylor, P&G and its brands are also committed to influencing attitudes, changing behaviors, and driving positive impacts on society and the environment.

### Appendix A.1.3. Susan Story

Susan Story was the CEO of American Water, which is a public utility company in the United States, from 2014 until 2020. Story has a history of active involvement in community, industry, education, and economic development efforts. In 2012, she was elected to serve on the board of directors for the Alliance

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<sup>37</sup>see <https://www.cincinnati.com/story/money/2015/10/10/next-ceo-fights-hunger-pg-ways/73667970/>



to Save Energy, a not-for-profit that promotes energy efficiency to achieve a healthier economy, a cleaner environment, and greater energy security. According to Story, joining the Alliance to Save Energy was vital for enhancing the operations and corporate social performance of the company she managed.

*“The energy-water nexus is a critical area of focus for American Water’s environmental and operational efforts. Energy use affects how we provide vital services to our customers, and it also impacts how much those services cost. Our energy and water efficiency measures are key to meeting our commitment to sustainability as well as to our operational efficiency goals.”*

Under Story, American Water was named as one of the 100 Most Sustainable Companies by Barron’s Magazine for three consecutive years, from 2017 through 2020. The company reduced annual water usage by 3.3 billion gallons through conservation, recycled more than a billion gallons of water a year by 2020, and will invest more than \$8 billion to improve aging infrastructure to reduce and eliminate water leaks over the next few years. In addition, American Water was recognized by the Women’s Business Enterprise National Council (WBENC) on the 20th annual list of America’s Top Corporations for Women’s Business Enterprises (WBEs), the only national award honoring corporations for world-class supplier diversity programs that reduce barriers and drive growth for women-owned businesses.

## Appendix A.2. Production-adjusted Pollution Amount

The difference in chemical releases across facilities can be attributed to different production levels. Chemical releases per unit of production should be calculated to compare facility performance in terms of pollution prevention. Unfortunately, facilities do not report the production level in the TRI program. Instead, they provide the change in level of production related to a particular chemical from the previous year,  $\Delta Prod_{f,c,t}$ . In order to adjust the chemical release according to the production level, we set the production level of facility  $f$  to be one for its first year recorded by the database and calculate the cumulative average change in production level for all chemicals, i.e.  $\Delta Prod_{f,t} = \overline{\Delta Prod_{f,c,t}}$  for subsequent years. In other words, the production level for facility  $f$  in year  $t + \tau$  is calculated as:

$$Prod. Level_{f,t+\tau} = 1 \times \prod_{t=t}^{\tau} (1 + \Delta Prod_{f,t}). \quad (A.1)$$

The production-adjusted chemical release then becomes:

$$Adj. Chemical Release_{f,t+\tau} = \frac{Release_{f,t+\tau}}{Prod. Level_{f,t+\tau}}. \quad (A.2)$$

The adjusted chemical release of a particular facility is not the release per unit of production. It is normalized to be comparable to its first year release. It should be noted that this adjustment does not allow for cross-sectional comparisons, but can be exploited to capture time-series variations at the facility level. Based on this argument, we include the facility-level fixed effects in the release-related regressions.

# Appendix B.

**Table B.1: Variable Description**

Variable Name	Abbrev.	Description
<b>Variables of Interest</b>		
<i>NFP CEO Style Indicator</i>	$I_{NFP}$	Dummy variable equals one if the CEO has not-for-profit experience and zero otherwise [BOARDEX]
<i>NFP CEO Experience</i>	$C_{NFP}$	Natural logarithm of one plus the total number of not-for-profit organizations that CEO get participated in [BOARDEX]
<b>Environmental and Social Outcomes</b>		
CSR Overall		Adjusted CSR score: sum of community, diversity, employee, environment, humanity
CSR Strength		Adjusted CSR strength score: sum of the adjusted strength scores for community, diversity, employee, environment, humanity
CSR Concern		Adjusted CSR concern score: sum of the adjusted concern scores for community, diversity, employee, environment, humanity
CSR Community		Adjusted community score: (sum of strength scores/number of strength items) – (sum of concern scores/number of concern items) under community category
CSR Diversity		Adjusted diversity score: (sum of strength scores/number of strength items) – (sum of concern scores/number of concern items) under diversity category
CSR Employment		Adjusted employee relations score: (sum of strength scores/number of strength items) – (sum of concern scores/number of concern items) under employee relations category
CSR Environment		Adjusted environment score: (sum of strength scores/number of strength items) – (sum of concern scores/number of concern items) under environment category
CSR Humanity		Adjusted humanity score: (sum of strength scores/number of strength items) – (sum of concern scores/number of concern items) under human rights category
Overall Employee Satisfaction	Glassdoor Emp. Rating Overall	Aggregate employee satisfaction scores of five components (work-life balance, company culture, career opportunities, compensation and senior management) [Glassdoor.com.]
Employee Work-life Balance Rating	Glassdoor W/L Balance	Employee satisfaction scores with respect to their work-life balance [Glassdoor.com.]
Employee Culture Rating	Glassdoor Culture	Employee satisfaction scores with respect to the firm culture [Glassdoor.com.]
Employee Career Opportunities Rating	Glassdoor Career Prosp.	Employee satisfaction scores with respect to their future career prospects [Glassdoor.com.]
Employee Compensation Rating	Glassdoor Compensation	Employee satisfaction scores with respect to their compensation [Glassdoor.com.]
Overall Employee Satisfaction	Glassdoor Management	Employee satisfaction scores with respect to the company management [Glassdoor.com.]
Log(1+ Num. of All Green Patents)	Green Pat. (log)	The natural logarithm of total number of all green patents filed by the company
Log(1+ Num. of Greenhouse Gas Patents)	GHG Pat. (log)	The natural logarithm of one plus the total number of all patents dealing with greenhouse gas filed by the company
Log(1+ Num. of Air Patents)	Air Pat. (log)	The natural logarithm of one plus the total number of all patents dealing with air pollution filed by the company
Log(1+ Num. of Waste Management Patents)	Waste Mgmt. Pat. (log)	The natural logarithm of one plus the total number of all patents related to waste management filed by the company
Log(1+ Num. of Water Pollution Patents)	Water Pollu. Pat. (log)	The natural logarithm of one plus the total number of all patents dealing with water pollution filed by the company
Log(1+ Num. of Water Conservation Patents)	Water Conserv. Pat. (log)	The natural logarithm of one plus the total number of all patents related to water conservation filed by the company
Adj. RSEI Score		Natural logarithm of the facility-level RSEI score scaled by simulated production level
Adj. Hazard Score		Natural logarithm of the facility-level RSEI score scaled by simulated production level
<b>Firm characteristics</b>		
Ln(assets)	Size	Natural log of (1 + Firm's total asset [COMPUSTATAT])
Tobin's Q		Sum of total assets plus market value of equity minus book value of equity divided by total assets [COMPUSTAT (AT+CSHO× PRCC_F - CEQ) / AT].
Leverage		Firm's total debt divided by total assets [COMPUSTAT (DLTT + DLC)/AT]
Return on Assets	ROA	Earnings before interest and taxes divided by total assets [COMPUSTAT EBIT/AT]
Property, plant, and equipment	PPE	Property, plant, and equipment scaled by asset [COMPUSTAT PPENT/AT]
R&D expenses	R&D	R&D Research and development expenses divided by total assets [COMPUSTAT XRD/AT]
Institutional Ownership		Total stock ownership of institutions [Thomson Reuters INSTOWN].
Board Independence		Number of independent directors divided by the number of directors [ISS]
E-Index		An index reflecting the CEOs' entrenchment level, which is constructed following Bebchuk, Cohen, and Ferrell (2009) [ISS]
Has Corporate NFP		An indicator variable that equals 1 if the firm has a corporate-running NFP
Has CSR Committee		An indicator variable that equals 1 if the Board has a CSR Committee

### Table B.1: Variable Description

Variable Name	Abbrev.	Description
Firm Efficiency	Firm Eff.	A measure of the relative efficiency of the firm within its industry is generated based on DEA methodology. For more details, please refer to Demerjian, Lev, and McVay (2012).
<b>CEO characteristics</b>		
Tenure		CEO tenure in years [EXECUCOMP BECAMECEO]
Male		Dummy variable that equals one if the CEO is male and zero otherwise [EXECUCOMP GENDER]
Age		The age of the CEO in the corresponding year [EXECUCOMP AGE]
Total Compensation (log)	ln(Total Pay)	The logarithm of the total compensation of the CEO [EXECUCOMP TDC1]
General Ability Index	GAI	An index of general managerial capital developed by Custódio, Ferreira, and Matos (2013) that captures general skills transferable across firms or industries.
Managerial Ability Score	Mgmt. Score	The unexplained portion of regressing total firm efficiency on six firm characteristics, including firm size, firm market share, cash availability, life cycle, operational complexity, and foreign operations. For more details, please refer to Demerjian, Lev, and McVay (2012).
Founder CEO		A dummy variable that is equal to one if CEO is a founder and zero otherwise
Ivy League		A dummy variable that is equal to one if the CEO graduated from an Ivy League institution and zero otherwise [BOARDX]
MBA		A dummy variable that is equal to one if the CEO holds an MBA degree and zero otherwise [BOARDX]
PhD		A dummy variable that is equal to one if the CEO holds a Ph.D. degree and zero otherwise [BOARDX]
Technical Education		A dummy variable that is equal to one if the CEO holds an undergraduate or post-graduate degree in engineering, physics, operation research, chemistry, mathematics, biology or pharmacy and zero otherwise [BOARDX]
No School Information		A dummy variable that is equal to one if the school information of a CEO is not available and zero otherwise [BOARDX]
Overconfident CEO	Overconfidence (holder67)	An indicator variable that is equal to one for all years after the CEO's options exceed 67% moneyness and zero otherwise, as defined in Hirshleifer et al. (2012). [EXECUCOMP opt_unex_exer_est_val / Opt_unex_exer_num; COMPSTAT prcc_f ]
CAR(-t, t)-Mkt		Abnormal return accumulated from $t$ day before until $t$ day after the CEO exogenous turnover event, which was calculated based on market model [CRSP]
CAR(-t, t)-FF3		Abnormal return accumulated from $t$ days before until $t$ days after the CEO exogenous turnover event, which was calculated based on Fama-French 3 factor model [CRSP]
CAR(-t, t)-FF3 + Mom		Abnormal return accumulated from $t$ days before until $t$ days after the CEO exogenous turnover event, which was calculated based on Fama-French Plus Momentum model (Carhart (1997) model)[CRSP]

## C Internet Appendix for “Is ESG a Managerial Style?”

### C.1 Robustness on Empirical Results

First, we re-estimate the relationship between *NFP CEO* style and firms’ ESG engagement and real outcomes using a matched sample. The matched sample is constructed by applying the nearest-neighbor score matching procedure. For each observation with an *NFP CEO*, we pick an observation without an *NFP CEO* in the same industry (2-digit SIC) and year based on firm size, Tobin’s Q, leverage, ROA, PPE, R&D expenditure, board independence and E-index. Table I.2 reports the estimation results. Panel A assesses the covariant balance of the matched sample. We find that most of the firm characteristics are indifferent between the groups with and without *NFP CEOs* except that the firms with *NFP CEOs* are more likely to have a CSR committee but less likely to have a corporate foundation and tend to have lower institutional ownership. Panel B reports the regression results for the main outcome variables. The results remain largely unchanged.

Second, CEOs may become involved in not-for-profit organizations because of their high profile as a CEO. That is, a not-for-profit organization may want to increase its profile by inviting a public firm’s CEO to take a role in the organization. The concern is our measure of *NFP CEOs* may simply represent CEOs with high profiles. To mitigate this concern, Table I.3 re-estimates the association between *NFP CEO* and firm CSR scores using the sample excluding observations in which CEOs generated new NFP experiences during their tenure. The results remain largely unchanged, indicating that our main results are less likely to be driven by a CEO’s high profile after they took office.

Third, we investigate the possibility that a CEO’s not-for-profit experiences could be a reflection of the corporate donation efforts (e.g., not-for-profit organizations award the CEO a position when the firm makes a donation). This channel might drive our results because ESG actions such as reduction in toxic release and the increase in green innovation may be correlated with corporate donations. To address this, we obtain a list of corporate foundations by manually matching private foundation data from National Center for Charitable Statistics to firms. Corporate foundations (e.g., Merck Company Foundation) are designed to make charitable donations to not-for-profits on behalf of the firm. In addition, to capture those donations that are not received from corporate foundations (i.e., firms can donate to not-for-profits directly), we obtain donor data from IRS 990 forms from the Amazon Open Data Program, collect donor names for all 990 form electronic filers and manually match the donor’s name to the firm<sup>38</sup>. In Table I.4, we repeat our analysis by

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<sup>38</sup>Electronic filers account for more than 65% of all filers, and we are unable to obtain 990 forms filed on

removing all firms that ever made a donation directly and removing firm-year observations after the firm established a corporate NFP in our sample. Our findings remain consistent with the previous results.

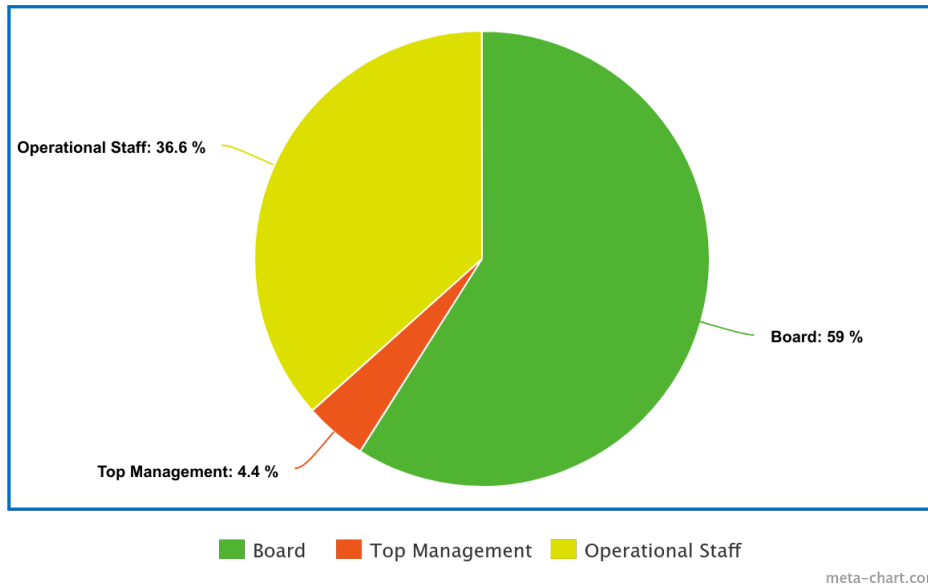
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paper. However, this is unlikely to create a bias because corporate foundations make multiple donations to different not-for-profits. We only need one of the donations made by an electronic filer to capture the donor.

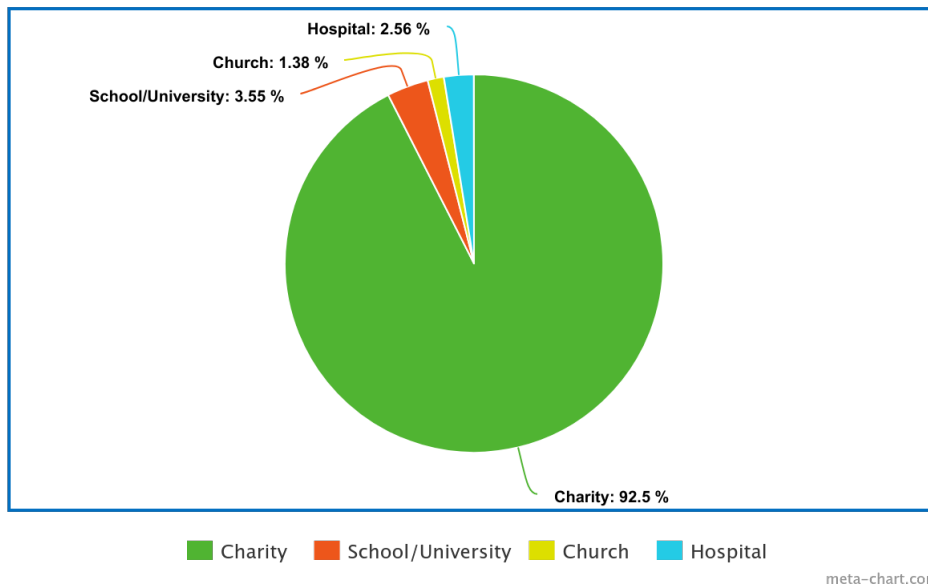
**Figure I.1: Breakdown of NFP experiences**

This figure illustrates the distribution of NFP experiences among CEOs, categorized by the nature of their roles and the types of NFP organizations they are associated with, based on data from 2019. The first graph categorizes NFP experience into three main roles: board positions, top management (including founders, C-suite executives, and presidents), and operational staff (encompassing both low-level workers and middle managers). The second graph distinguishes NFP experiences based on the type of organization, separating charity organizations from non-charities (e.g., schools, universities, hospitals, and churches).

NFP Position Distribution 2019



NFP type Distribution 2019



**Table I.1: Heterogenous effects of NFP experience on Firm ESG performance**

This table presents the results of the heterogenous effects of NFP experience on firm ESG performance. Dependent variables are measures of ESG performance (i.e., CSR score, green innovation, employee satisfaction, and industrial pollution). In Panel A, we split experiences into board-position experience, top-management (founder/C-suites/president) experience, and Operational-Staff (low-level workers and middle managers) experience. In Panel B, we split experiences based on whether the NFP is a charity or non-charity (e.g., School/University, Hospital, Church, etc.). Baseline controls used in Table 3 are included in the models (not reported). Standard errors are clustered at the firm level, and t-statistics are reported in parentheses. \*\*\*, \*\*, \* indicates significance level at 1%, 5% and 10%, respectively. Detailed variable definitions are provided in Appendix B.

**Panel A - Decomposing the NFP experience by role**

	CSR Overall (1)	Green Pat. (2)	Emp. Rating Overall (3)	Adj. RSEI Score (4)
NFP Board Member	0.094*** (4.57)	0.053* (1.70)	0.043* (1.76)	-0.180** (-2.13)
NFP Top Manager	-0.021 (-0.35)	-0.073 (-0.69)	-0.015 (-0.14)	-0.339 (-0.88)
NFP Operational Staff	0.074*** (3.06)	0.079** (2.01)	0.039 (1.33)	-0.211** (-2.18)
Baseline Controls	✓	✓	✓	✓
Industry FE	✓	✓	✓	
Year FE	✓	✓	✓	
Facility FE				✓
Industry × Year FE				✓
State × Year FE				✓
Obs.	20,717	14,442	4,606	34,168
Adj. $R^2$	0.40	0.53	0.35	0.89

**Panel B - Decomposing the NFP experience by type**

	CSR Overall (1)	Green Pat. (2)	Emp. Rating Overall (3)	Adj. RSEI Score (4)
Charity Experience	0.093*** (5.01)	0.058** (2.02)	0.072*** (3.11)	-0.220*** (-2.75)
Non-Charity Experience	0.003 (0.05)	0.091 (0.85)	-0.113 (-1.46)	-0.165 (-0.74)
Controls	✓	✓	✓	✓
Industry FE	✓	✓	✓	
Year FE	✓	✓	✓	
Facility FE				✓
Industry × Year FE				✓
State × Year FE				✓
Obs.	20,717	14,442	4,606	34,168
Adj. $R^2$	0.40	0.53	0.35	0.89

**Table I.2: Robustness: Matched Sample Results**

This table re-estimates the association between *NFP CEO* style and firms' ESG engagement and real outcomes (main results in Tables 3 and 5) using a matched sample. We apply the nearest-neighbor score matching procedure and match each observation with an *NFP CEO* to the observation without an *NFP CEO* in the same industry and year based on various firm characteristics. Panel A reports the t-tests for the differences in means between the groups with and without *NFP CEOs*. Panel B reports the regression results. The outcome variables include *CSR Overall*, which is the aggregate adjusted CSR score of five components (*Community, Diversity, Employee, Environment, Humanity*); *Emp.Rating Overall*, which is the overall employee satisfaction ratings from Glassdoor; *Green Pat.*, which is the natural logarithm of one plus the total number of green patents; *Adj. RSEI Score*, which captures firms' toxicity weighted chemical emissions. Regarding the variables of interest,  $I_{NFP}$  is the indicator variable that is equal to one if the CEO has NFP experience up to the focal year and zero otherwise.  $C_{NFP}$  is the natural logarithm of one plus the total number of CEO's NFP experiences up to the focal year. Baseline controls used in Table 3 are included in the models (not reported). Fixed effects used are indicated in each column. Standard errors are clustered at the firm level, and t-statistics are reported in parentheses. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% level, respectively. Detailed variable definitions are provided in Appendix B.

Panel A - Matched sample t-tests for firm characteristics

	Group With <i>NFP CEOs</i>				Group Without <i>NFP CEOs</i>				Diff.	t-stat
	N	Mean	Median	std. dev	N	Mean	Median	std. dev		
Tobin's Q	4,778	1.80	1.43	1.05	4,778	1.78	1.40	1.07	0.01	0.64
Leverage	4,778	0.23	0.22	0.17	4,778	0.24	0.22	0.18	-0.00	-0.89
ROA	4,778	0.05	0.04	0.06	4,778	0.05	0.04	0.06	0.00	0.52
Size	4,778	8.53	8.44	1.60	4,778	8.50	8.47	1.59	0.03	0.93
PPE	4,778	0.23	0.15	0.23	4,778	0.23	0.14	0.23	-0.00	-0.04
R&D	4,778	0.02	0.00	0.04	4,778	0.02	0.00	0.04	-0.00	-1.05
Institutional Ownership (%)	4,767	75.14	77.52	20.30	4,763	76.60	80.08	20.50	-1.46***	-3.49
Has Corporate Foundation	4,778	0.03	0.00	0.17	4,778	0.04	0.00	0.20	-0.01**	-2.56
Board Independence	4,778	0.78	0.80	0.13	4,778	0.78	0.80	0.13	-0.00	-0.15
Has CSR committee	4,778	0.16	0.00	0.36	4,778	0.12	0.00	0.33	0.03***	4.89
E-Index	4,778	3.13	3.00	1.18	4,778	3.14	3.00	1.17	-0.01	-0.44

Panel B - Regression Results

	CSR Overall		Emp. Rating Overall		Green Pat.		Adj. RSEI Score	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$I_{SE}$	0.083*** (4.39)		0.067** (2.51)		0.056* (1.94)		-0.173 (-0.99)	
$C_{SE}$		0.104*** (4.70)		0.081*** (2.87)		0.072** (2.15)		-0.232 (-1.23)
Baseline Controls	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓		
Industry FE	✓	✓	✓	✓	✓	✓		
Facility FE							✓	✓
Facility Industry × Year FE							✓	✓
State × Year FE							✓	✓
Obs.	8,245	8,245	2,333	2,333	5,727	5,727	14,057	14,057
Adj. $R^2$	0.41	0.41	0.38	0.38	0.57	0.57	0.91	0.91



**Table I.3:** Robustness: Excluding *NFP CEOs* who obtain NFP experience after they became CEOs

This table re-estimates the association between an *NFP CEO* and a firm's CSR score using the sample excluding cases in which CEOs generated new NFP experiences during their tenure. The outcome variable *CSR Overall* is the aggregate adjusted CSR score of five components (*Community, Diversity, Employee, Environment, Humanity*). Regarding the variables of interest,  $I_{NFP}$  is an indicator variable that is equal to one if the CEO has NFP experience up to the focal year and zero otherwise.  $C_{NFP}$  is the natural logarithm of one plus the total number of the CEO's NFP experiences up to the focal year. Baseline controls used in Table 3 are included in the models (not reported). Fixed effects used are indicated in each column. Standard errors are clustered at the firm level, and t-statistics are reported in parentheses. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% level, respectively. Detailed variable definitions are provided in Appendix B.

	CSR Overall			
	(1)	(2)	(3)	(4)
$I_{NFP}$	0.107*** (3.74)		0.097*** (2.77)	
$C_{NFP}$		0.107*** (2.92)		0.109** (2.48)
Baseline Controls	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Industry FE	✓	✓		
Firm FE			✓	✓
Obs.	15,095	15,095	14,947	14,947
Adj. $R^2$	0.39	0.39	0.59	0.59

**Table I.4:** Robustness: *NFP CEOs* and ESG rating for non-donor firms

This table re-estimates the association between an *NFP CEO* and a firm's CSR score using the sample where the firms do not conduct donation activities. The outcome variable *CSR Overall* is the aggregate adjusted CSR score of five components (i.e., *Community, Diversity, Employee, Environment, Humanity*). Regarding the variables of interest,  $I_{NFP}$  is the indicator variable which is equal to one if the CEO has NFP experience up to the focal year and zero otherwise.  $C_{NFP}$  is the natural logarithm of one plus the total number of the CEO's NFP experiences up to the focal year. Baseline controls used in Table 3 are included in the models (not reported). Detailed variable definitions are provided in Appendix B. Fixed effects used are indicated in each column. Standard errors are clustered at the firm level, and t-statistics are reported in parentheses. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% level, respectively. Detailed variable definitions are provided in Appendix B.

	CSR Overall							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$I_{NFP}$	0.071*** (3.52)		0.070*** (2.74)		0.129*** (3.03)		0.130*** (3.06)	
$C_{NFP}$		0.099*** (3.82)		0.097*** (3.26)		0.150*** (3.03)		0.153*** (3.08)
Baseline Controls	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓						
Industry FE	✓	✓						
Industry × Year FE			✓	✓	✓	✓	✓	✓
CEO-Firm-Pair FE							✓	✓
Firm FE			✓	✓				
CEO FE					✓	✓		
Obs.	15,190	15,190	13,277	13,277	12,760	12,760	12,717	12,717
Adj. $R^2$	0.36	0.36	0.58	0.58	0.65	0.65	0.65	0.65