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Agency Problems of Corporate Philanthropy

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Abstract

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Keywords: Corporate governance; corporate philanthropy; corporate charities; agency

JEL Classification: G30; G34; J33; N3

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Abstract

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1. Introduction

This study investigates corporate charitable contributions as an important form of discretionary corporate expenditures. While corporate charitable contributions are frequent and often substantial,[1] there is no clear evidence in the literature on whether these expenditures have positive effects on firm revenues or performance or on shareholder wealth. Proponents assert that corporate giving is consistent with shareholder value maximization since it offers a channel for firms to promote their image to customers and to enhance their standing with regulatory agencies and legislators (Navarro, 1988; Brown, Helland and Smith, 2006). Counter-arguments suggest that corporate giving can often reflect conflicts of interests between shareholders and managers, where managers support their personal preferences toward charities with corporate funds and enhance their personal reputations and social networks.[2] Because it is difficult to measure the benefits that accrue to a corporation from charitable contributions, it is easier for CEOs to promote their personal preferences and thus, corporate giving decisions can substantially depart from firm value and shareholder wealth maximization. The ambiguity surrounding the benefits of corporate giving has attracted the attention of the popular media (see Monks and Minow, 2004) and prompted legislators and government agencies to call for greater disclosure of contributions where a connection to company executives or directors exists (see Appendix A and Securities and Exchange Commission, 1992).

Although several studies evaluate these competing hypotheses by focusing on the associations between corporate charitable contributions and other explanatory variables, no existing study has measured the relation between these contributions and the private preferences of CEOs, assessed the impact of corporate giving on company valuation or performance, or analyzed the channels through which corporate giving affects firm value. By addressing these issues, this study helps to identify the relative importance of these two alternative hypotheses concerning corporate giving.

[1]Total U.S. corporate giving in 2010 is $15.29 billion (Giving USA 2011 report).
[2]The classic example of corporate giving was at Occidental Petroleum where the founder, Armand Hammer, decided to build his own museum funded by the company, now known as the Armand Hammer Museum of Art and Culture Center or the Hammer Museum. In the case of one shareholder suit, Occidental agreed to limit the spending to $60 million for the construction of the museum and $35 million more for an annuity to be paid over 30 years. See Monks and Minow (2004) for more details.

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Our investigation begins with an analysis of the associations between corporate giving and measures of firm profit motives and agency theory. Our findings offer weak support for the conventional idea that corporate giving is profit-enhancing. Specifically, when we model the likelihood of corporate philanthropy as a function of a firm's profit motive, CEO attributes and corporate governance variables, we find insignificant relations with profit motive variables. However, modeling the determinants of the charitable giving level, we do find several significant associations with profit motivated measures; specifically firm intellectual property investment, visibility, and membership in a highly regulated industry. Although existing theoretical and empirical studies, e.g., Navarro (1988), consider advertising to be a major motivation for corporate giving, our results fail to support the predicted relation between corporate giving and firm advertising intensity. On the other hand, we uncover substantial evidence supporting agency theory motives. More specifically, Jensen and Meckling (1976) predict that a CEO's consumption of private benefits is negatively related to her firm ownership level and is positively related to a CEO's specific personal charity preferences (see Yermack, 2006 for other examples of CEO perquisite consumption). Consistent with Jensen and Meckling (1976), we find that CEO charity connections – an observable measure of a CEO's personal preference for charity – increase both the likelihood and amount of corporate giving by 21.5% and 1.5% respectively, whereas a 10% rise in CEO ownership reduces the likelihood and amount of corporate giving by 40% and 3% respectively.

To provide an exogenous source of variation about key CEO attributes, we use the 2003 dividend tax cut as a natural experiment. This tax reform reduced the personal dividend tax rate from a maximum rate of 35% to 15% (Chetty and Saez, 2005) and thus increased the cost of CEOs pursuing their private preferences toward charitable giving to the extent that these contributions reduce a firm's profitability and share value. This is especially true when CEO ownership levels are high since it directly reduces CEO wealth. Consistent with the implication of this Tax Reform Act for CEO incentives, we find that corporate giving significantly declines after 2003, and this effect becomes stronger as CEO ownership increases.

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In further analysis, we test whether corporate giving is incrementally beneficial for a sample of firms with relatively large expenditures on advertising and R&D, as these firms are often assumed to benefit most from charitable contributions (Navarro, 1988; Brown, Helland and Smith, 2006). We find no evidence to support this corporate giving incentive: in fact we find its relationships with advertising and R&D expenditures are statistically insignificant, while CEO ownership and personal charity connections remain significant in explaining a firm's level of corporate giving. On the other hand, we identify a more muted effect of CEO ownership and a more pronounced effect of CEO charity connections in subsamples of firms where managers are entrenched or weakly monitored by the board. These findings indicate that although agency problems associated with corporate giving appear to be widespread, they are more severe in firms exhibiting weaker corporate governance.

To further assess the explanatory power of the two competing hypotheses, we examine how corporate giving affects firm value through its impact on the market's valuation of a firm's cash holdings. Cash generally represents an important proportion of a firm's total asset, enabling firms to make investments rapidly without having to access external capital markets. Therefore, cash holding helps a firm avoid transaction costs and asymmetric information costs associated with external financing. However, corporate liquidity comes at a price. Cash reserves provide managers with an easy source of funds to make expenditures or invest in projects that offer them private benefits at the expense of shareholder value (Jensen and Meckling, 1976). As a result, shareholders have reasons to substantially discount the dollar value of cash retained by firms, and especially to discount the cash in firms that have weak board oversight and make large charitable contributions, since they indicate greater agency problems. Using the methodology developed by Faulkender and Wang (2006), we find that corporate giving has a substantial impact on firm value through its impact on cash: the estimated marginal value of cash is 8.1 cents lower if a firm raises its corporate giving from the sample median to the 75th percentile level. For firms with non-independent boards indicating expected weaker board oversight, the negative impact of corporate giving on firm value more than doubles. These findings are consistent with the view

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that shareholders anticipate a greater misuse of cash reserves as charitable giving rises, and therefore place a lower value on cash.

To provide a more direct and causal link between corporate giving and shareholder wealth, we (again) use the 2003 Tax Reform Act as a natural experiment. Earlier, we found that corporate giving declines after the tax cut. Now, we examine whether subsequent reductions in corporate giving lead to dividend increases. Specifically, by focusing on firms that make charitable contributions in 2002, we investigate how changes in charitable contributions are related to dollar dividends changes in 2004. We find that for a $1 million reduction in corporate giving after the tax-cut year, these firms on average raise dividends by at least $6.4 million. Thus, our experiment shows that firms reducing charitable giving immediately after the Tax Reform Act of 2003 are not reacting to weak earnings since they also raise dividends, consistent with senior managers reducing their consumption of the private benefits of control.

Having uncovered a body of evidence that corporate giving represents an agency problem, we conduct a series of tests to address how and why corporate giving destroys firm value. First, we examine whether corporate giving offers attractive avenues for managerial rent extraction by investigating the frequency and level of corporate contributions to charities where CEOs have charity ties, defined as holding positions as trustees, directors or advisors (henceforth, CEO-affiliated charities). We find that of the approximately two out of three firms that contribute to charities, their major donations include CEO-affiliated charities. Moreover, the average cost to a company from such contributions is larger than the combined costs of CEO corporate jet use and other perks (Yermack, 2006) and is comparable to a CEO's promised cash severance payments (Rusticus, 2006). Furthermore, CEO-affiliated charity contributions decline if CEO financial interests are more aligned with shareholder interests. These findings suggest that corporate giving is not solely determined by firm value maximization, but instead is a channel that serves managerial private interests.

Second, we conduct an event study of the first disclosure by a corporation of "charity awards". This allows us to gauge how investors perceive charitable contributions where company executives and

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directors have charitable ties, providing empirical evidence that is much less subject to endogeneity concerns. In revising the disclosure rules on compensation in 1992, the SEC recognized such awards as a form of compensation and required firms to report them in proxy statements. We document a three day cumulative abnormal return (CAR) of -0.87% (p-value = 0.014) for firms that report charity awards for the first time during the 1993-2010 period. This wealth loss substantially exceeds the nominal value of the announced charitable award programs, suggesting that the market capitalizes the costs of expected future contributions to these charities.

Third, we separately analyze the determinants of annual corporate giving to charities and contributions to charitable corporate foundations to evaluate the seriousness of an agency problem associated with these two channels of corporate giving. Foundations are tax-exempt nonprofit organizations that receive irreversible donations of typically large size from their sponsoring companies. Also, foundations typically make contributions at unknown future dates to charities only identified later. The critical factor for these foundations is the separation between the economic affairs of shareholders and those of foundations.[3] This separation negates any shareholder claim on any donations transferred to the foundations, and therefore poses a classic agency problem for firms that make charitable contributions through foundations. In further empirical analysis, we find that giving to foundations increases with both a CEO's charity connections and weaker corporate governance, while annual direct giving to charities increases with stronger corporate governance and is not related to a CEO's charitable affiliations. These results suggest that the adverse impact of corporate giving on firm value is largely due to the sizable irrevocable donations to corporate charitable foundations with no clear benefit to the corporation itself.

Thus far our results indicate that CEOs realize personal benefits from corporate giving. However, these benefits could still be part of an optimal compensation contract. Specifically, if boards reduce CEO compensation for the portion of corporate contributions that benefit them, then this evidence would lessen

[3]Consider the case of Lehman Brothers Foundation, for example. Although its sponsoring company was liquidated in 2008, the foundation still exists under the name of The Neuberger Berman Foundation. In the year of liquidation, the foundation had a market value of assets of $23.4 million, which was not distributed to company shareholders. As of November 2012, the foundation still uses that asset for philanthropic reasons.

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a CEO's private benefits.[4] So in our fourth line of analysis, we study the relation between CEO compensation and corporate giving. Because corporate giving is endogenous in the specified CEO compensation regression, we employ an instrumental variables framework to identify an exogenous shock to corporate giving.[5] By using natural disasters in the state where a firm is headquartered as an external shock inducing a short term rise in corporate giving (for firms whose own operations are not adversely affected by the disaster), we document that a 10% increase in giving is associated with a $504,000 rise in CEO compensation. This result contradicts the prediction of the optimal contracting hypothesis and indicates that the probability of a company paying excess CEO compensation is significantly higher when these companies make larger charitable contributions.

The last round of analysis studies a specific channel of entrenchment that aims to help explain the above relationship between corporate giving and excess CEO compensation. Cespa and Cestone (2007) argue that CEOs use corporate resources strategically to build ties with stakeholders to receive favorable treatment during future contract renewal or turnover decisions. We propose a more direct form of entrenchment that can occur if CEOs can direct firm donations to accommodate independent director charitable interests.[6] Specifically, we examine whether corporate supported charitable causes overlap with independent director charitable interests measured by their charitable affiliations and then evaluate the effect of this alignment on CEO compensation. Consistent with the agency hypothesis, we find a 69% overlap with the interests of independent directors, indicating that corporate giving serves independent director charity interests, which can also strengthen their ties to a CEO. In further analysis, we find that this particular alignment of charitable interests is positively associated with excess CEO compensation. These results suggest that CEOs also allocate corporate charitable contributions to advance their own financial interests through the potential co-option of independent directors.

[4]This is in the spirit of Fama's (1980) ex post settling up argument, under which boards would adjust compensation downward for corporate contributions that benefit managers.
[5]An endogenously determined level of CEO power could affect the relation between CEO compensation and corporate giving.
[6]This analysis is motivated by the giving practices at Enron. Lay's foundation (named after the company CEO, Kenneth Lay) and the Enron corporate foundation jointly donated money to research centers that employed two members of Enron's board, John Mendelson and Charles LeMaistre.

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While our evidence is consistent with the predictions of agency theory, it is likely that in many specific instances corporate giving at least partially benefits shareholders. However, such cases appear to be less frequent and the benefits are more indirect and difficult to measure, while these charitable contributions definitely represent a direct cost to shareholders. Taken together, the results of this study document another important mechanism for managerial rent extraction and entrenchment.

The remainder of this study is organized as follows. The next section presents a brief overview of theories of corporate philanthropy and develops predictions for our two main competing hypotheses. Section 3 presents sample construction and a description of the data. Section 4 presents empirical results and robustness tests. Section 5 concludes.

2. Theories and hypotheses

We consider two primary theories of corporate charitable contributions. The first theory posits that corporate giving is motivated by shareholder wealth maximization, whereas the second theory views corporate giving as a manifestation of private benefits of control. The following subsections discuss these theories and predictions and describe the variables used to test these predictions.

2.1. Shareholder wealth maximization theory

Under shareholder wealth maximization theory, corporate giving is undertaken to improve a company's financial performance, leading to the following hypothesis:

H1 (a): Corporate giving positively affects a firm's financial performance.

Two common approaches to assessing firm financial performance are operating performance and stock price performance. To test the shareholder wealth maximization hypothesis, we focus primarily on stock returns because operating performance is generally considered a major determinant of corporate giving (see Petrovits, 2006 and Galaskiewicz, 1997). One advantage to focusing on stock returns is that the endogeneity concerns around corporate giving are less problematic when the dependent variable of interest is a market-based measure. Short-term stock returns reflect investor reactions to corporate giving

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announcements and are forward looking. In addition, we use dividend changes around a major reduction in personal taxes to gauge the impacts of a rise in the after-tax cost of corporate giving.

In one model of corporate giving consistent with shareholder wealth maximization, Navarro (1988) specifies three dimensions of corporate giving, namely revenue enhancement, cost reduction, and tax minimization. Revenue enhancement represents corporate philanthropy that is part of an overall advertising strategy designed to promote a firm's image to raise demand for a firm's product. This perspective predicts a positive relation between a firm's giving-to-sales ratio and its propensity to advertise. Firms with large intellectual property investment or R&D expenditures can also find that corporate giving can enhance expected revenue. For example, an R&D intensive company can contribute to nonprofit research institutions such as universities and research institutes that carry out studies in collaboration with the company. Under a cost reduction scenario, firms can use charitable contributions to reduce the expected costs of government regulatory and enforcement actions. Since firms in highly regulated and out-of-favor industries are more vulnerable to regulatory decisions and litigation costs, they have greater incentives to maintain a good public image and thus make larger charitable contributions. Lastly, Navarro (1988) argues that the existence of corporate taxes does not affect the level of corporate giving since the marginal corporate income tax rate proportionally reduces a firm's expected revenue and expected costs of corporate giving, leaving corporate profits unaffected by the change in the corporate tax rate.[7] Likewise, the personal tax rate has no effect on corporate giving incentives since it proportionally reduces the after-personal tax cash flows associated with corporate giving, implying that both a firm's expected revenues and costs (corporate tax deductions) of corporate giving are proportionally reduced.

Some corporate social responsibility actions can be viewed as having incentives similar to making corporate charitable contributions. Corporate social responsibility (CSR) literature makes several predictions about when firms pursue CSR actions, which are rooted in firm profit enhancement or

[7]However, company-sponsored foundations can help firms optimally time tax deductions for charitable contributions. That is, firms are able to record larger deductions if they transfer contributions to foundations when their marginal tax rate is high. The empirical literature (see Table 3 in Petrovits, 2006) however finds a weak positive relation between foundation giving and corporate tax rates, probably because the costs overweigh the benefits.

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shareholder wealth maximization objectives. For example, Bernea, Heinkel and Kraus (2008) argue that the marginal impact of CSR expenditures is greater for firms in out-of-favor industries, suggesting a greater level of social expenditures for firms in these industries. Similarly, Benabou and Tirole (2010) propose a greater prevalence of investor-demanded CSR practices among more visible firms.[8] These arguments lead to the following hypothesis:

H2 (a): Corporate giving is positively related to a firm's advertising level, intellectual property investment, general visibility, and sales in out-of-favor industries, while it is insensitive to the corporate tax rate and the personal tax rate.

To test this hypothesis empirically, we construct several variables to proxy for the firm's profit motive. Following Navarro (1988) and Brown, Helland and Smith (2006), we formulate *ad-to-sales* and *R&D-to-sales* ratios to measure a firm's propensity to advertise and its intellectual property investment, respectively. We define *assets (log)*, *number of employees (log)*, and *number of shareholders (log)* to measure a firm's overall visibility and indicator variables for *sin* and *non-environmentally-friendly* industries to identify its presence in out-of-favor industries such as alcoholic beverages, tobacco, coal and others listed in Appendix C. We also include indicator variables for industries that have particularly strong reasons to make larger charitable contributions for several reasons. *Financial*, *regulated* and *pharmaceutical* industries face strong regulatory oversight, so corporate giving has a cost reduction motive since it can yield more favorable regulatory treatment. On the other hand, image is an important asset for *retail* industries, so firms in these industries are likely to contribute more to charities out of a revenue enhancement motive. To measure corporate tax rate, we define the *marginal tax rate* following Graham and Mills (2008).[9] Also, since there is no cross-sectional variation in CEO personal taxes, we must rely on time-series variation arising from regulatory changes to evaluate the impact of personal tax on corporate giving. Appendix C contains the definitions of these variables.

2.2. Agency theory

[8]Fisman, Heal and Nair (2006) also predict more giving in competitive industries, but they fail to empirically support their claim.
[9]We thank Professor John R. Graham for generously providing data on marginal tax rates.

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Looking at corporate giving as an agency problem assumes that such giving does not yield greater expected revenue or lower costs than the dollar value of this giving, but instead represents a diversion of corporate resources, which reduces firm value on a dollar for dollar basis with the size of the charitable contribution.[10] Such corporate giving can also be symptomatic of governance problems at a firm. These arguments lead to the following hypothesis:

H1 (b): Corporate giving negatively affects financial performance.[11]

In their seminal paper, Jensen and Meckling (1976) consider conflicts of interest and agency costs inherent elements in any principal-agent relation. They observe that when owner-managers reduce their firm ownership below 100%, incentives increase for utility-maximizing managers to consume more corporate resources. Thus, a clear prediction of their model is that the private benefits of corporate giving will vary inversely with CEO percentage ownership. Jensen and Meckling (1976) also note that "agency costs … will depend on the tastes of managers, [and] the ease with which they can exercise their own preferences" (p. 328). So, private benefits of corporate giving should be positively related to a CEO's personal preference for charity and negatively related to the strength of a firm's corporate governance, which places constraints on a CEO pursuing private benefits of control. The agency theory view also predicts a positive relation between corporate giving and the corporate and personal tax rates, since the personal cost to managers of corporate giving declines linearly with the corporate and personal tax rates.

The CSR literature also offers agency theoretic motivations for corporate giving. For example, Cheng, Hong and Shue (2011) argue that managers with a relatively low ownership stake invest more in CSR activities (pet projects in their model). These arguments lead to the following hypothesis:

H2 (b): Corporate giving is positively related to a CEO's personal preference for charity and the corporate and personal tax rates, but is negatively related to a CEO's fractional ownership of the firm and the strength of its corporate governance.

[10]There can be some expected revenue enhancement or cost reduction that are less than the cost of the corporate giving.
[11]For reasons discussed earlier, we use stock returns to measure company performance and dividend changes to gauge the impact of corporate giving on shareholder wealth.

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To measure a CEO's personal preference for charity, we define a variable called *CEO charity connection* that takes the value of one if the CEO is personally affiliated with nonprofit organizations as an officer, director or advisor, and zero otherwise.[12] To measure a manager's fractional ownership, we define *CEO ownership* as the sum of a CEO's share ownership percentage and the percentage of shares exercisable from CEO stock option holdings scaled by the option's delta, defined as the first derivative of the Black-Scholes option value with respect to stock price.

Following Jensen (1993), Yermack (1996), Hermalin and Weisbach (1998), and Bebchuk, Cohen and Ferrell (2008), we consider board size, fraction of independent directors, CEO-chairman duality, the E-index and non-CEO director ownership in the firm as factors that affect a firm's governance structure.[13] *Board size* is the logarithm of number of directors, while fraction of independent directors refers to the number of independent directors divided by board size. The *E-index* developed by Bebchuk, Cohen and Ferrell (2008) is defined as the sum of six antitakeover defense indicators: that take a value of one for firms with staggered boards, limits on shareholder bylaw amendments, poison pills, golden parachutes, supermajority requirements for mergers, and supermajority requirements for charter amendments. Lastly, *director ownership* is the sum of non-CEO director percentage shareholdings in the company. Appendix C presents the definitions of the variables.

3. Sample

3.1. Data

We focus on the Fortune 500 companies as of April 17, 2006 and hand-collect corporate giving data from the National Directory of Corporate Giving (NDCG). To ensure accuracy, the NDCG only includes corporate giving that is verified by companies themselves or compiled from reliable public

[12]A separate literature that focuses on individual charitable contributions finds that social connectedness plays an important role (see List and Price, 2010). While these studies consider individual backgrounds such as race as measures of connectedness, we opt for CEO *participation* in nonprofit organizations. Thus, our measure should be a cleaner proxy to assess an individual's preference for charity.

[13]In robustness, we include indicators for a fully independent nominating committee, an outside blockholder-director, dual class shares, a CEO-founder or founding family member, and a classified board (in place of the E-index).

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records based on 990-PF filings with the IRS for foundation giving.[14] In contrast, direct annual giving is voluntarily disclosed by a corporation publicly or to the NDCG upon its request. Using all directories between 1997 and 2007 to construct a database that spans the 1996-2006 period, we collect data on corporate contributions to charities and foundations. We then add these amounts to obtain total firm contributions (see Appendix B for details). Figure 1 shows that Fortune 500 firms represent a substantial percentage of aggregate corporate charitable contributions in the US.[15] This percentage ranges from 16% in 2000 to 32.2% in 2003. We hand match firm-level contributions data with PERMNOs and GVKEYs (company identification numbers in CRSP and Compustat, respectively) for all our sample firms.

We next require that all necessary data be available in CRSP, Compustat, Execucomp, and RiskMetrics. In particular, firm assets, sales, leverage, number of employees and shareholders, advertising and R&D expenses, return on assets (ROA), Tobin's q, free cash flow, and SIC industry classifications are taken from Compustat. One-year cumulative stock returns and volatility are based on data taken from CRSP. Information on CEO shareholdings, exercisable options, unexercisable options, and total compensation is from Execucomp, while information on board size, fraction of independent directors, total director share ownership, CEO-chairman duality, and the E-index is taken from RiskMetrics.

Of the companies in the Fortune 500 universe, we identify 32 private firms without the necessary data. After removing these companies and merging all the databases with hand-collected contributions data, the final sample has 2,421 firm-year observations from 406 firms in the 1996-2006 sample period.

3.2. Descriptive statistics

Panels A and B of Table 1 present the distribution of giving and its determinants, most of which are discussed in Section 2. We consider two additional CEO attributes and several other firm characteristics. We include CEO reputation because reputational damage from being identified by the

[14]Corporate giving data from NDCG includes grants to individuals, employee matching gifts and in-kind gifts. The individual items are often not separately available.

[15]In Figure 1, we exclude the first four years of our sample because of data availability. Total corporate contributions data is not available before 1997 while NDCG directories were not issued in 1998 and 2000.

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media as be pursuing self-serving activities may exceed any gain that a highly reputable CEO can accrue from corporate giving.[16] Using the CEO reputation variables in Milbourn (2003), we define *tenure* and *outside appointment* to measure a CEO's tenure with the company and outside recruitment status, respectively. Motivated by existing studies, firm-level control variables include *asset/employee*, *leverage*, *ROA*, *Tobin's q*, and a *free cash flow indicator*.[17] The *free cash flow indicator* captures CEO empire building incentives (Jensen, 1986). *Leverage* can be thought of as a governance variable that measures creditor incentives to monitor the firm and thereby mitigate the problems associated with free cash flows. Detailed descriptions on the formulation of these variables are provided in Appendix C.

Panel A of Table 1 reports that the average amount of direct corporate giving to charities for our sample firms, including firms making no contributions, is $2.5 million per year, while the average amount of corporate donations transferred to foundations is $6.5 million per year. Adding these two sources, the average total amount of corporate giving is $9 million per year, slightly less than the amount documented in Brown, Helland and Smith (2006).[18]

For CEO attributes, we find that 71% of the Fortune 500 CEOs are connected with nonprofits or charitable organizations. This suggests that most CEOs have active charitable interests. The sum of a typical CEO's stock and option ownership is 1.8%, which is slightly higher than that reported by Yermack (2006), who only considers stock ownership. In addition, the typical CEO has worked for the firm for an average of 17 years, held the CEO position for 4 years and is likely to be recruited internally. We find that only 21.5% of CEOs are external appointments, similar to that reported in Milbourn (2003).

Turning to the firm's corporate governance, the median sample firm has an 11 member board, a majority of whom are independent, and a CEO who chairs the board. On average the sample firms have

[16]For example, when a pro-life activist group boycotted Berkshire Hathaway, its CEO Warren E. Buffett cancelled its corporate giving program, which through its funding to the Buffett Foundation frequently supported organizations that promoted population control. Source: The Chronicle of Philanthropy (July 24, 2003).
[17]These are control variables in Yermack (2006), Petrovits (2006), and Galaskiewicz (1997).
[18]The difference could be due to stricter data collection procedure of this study (see Appendix B). Excluding firms making no charitable contributions, the average annual corporate giving amounts to charities and to a firm's sponsored foundation are $22.8 million and $12.3 million, respectively.

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two of the six major antitakeover provisions included in the Bebchuk-Cohen-Ferrell (2008) *E-index*. In addition, directors as a whole (excluding the CEO) own 0.78% of the outstanding shares in a typical firm.

Turning to firm attributes reported in Table 1, Panel A, we find that on average a sample company has approximately 29,500 employees, 24,000 shareholders, $13.11 billion of assets, and an average marginal tax rate of 33%. Moreover, it annually spends 1.2% and 2.0% of sales on advertising and R&D expenses, respectively. These statistics are similar to those documented in Brown, Helland and Smith (2006). Moreover, the average company has a leverage ratio of 18.2%, an ROA of 13.5% and a Tobin's q of 1.9, while approximately 14% of the free cash flow observations are negative. Panel B of Table 1 shows the distribution of firms across the Fama-French 48 industries. We find that Fortune 500 firms are clustered in retail (10.7%), utilities (9.3%), banking (6.3%), insurance (5.9%), oil (4.3%), business services (4.2%), and wholesale industries (4.1%).

Panel C of Table 1 presents univariate comparisons between giving and non-giving firms. Giving firms, which represent 59.2% of the sample, have greater visibility when measured by asset size and number of employees or shareholders. In addition, these firms spend a greater fraction of their sales on advertising and R&D expenses. These findings are consistent with the shareholder wealth maximization theory. On the other hand, a significantly greater percentage of CEOs in giving firms have charitable connections. These giving firm CEOs have lower (stock and option) ownership, which may reflect giving firms' typically larger size, are less likely to be recruited from outside the firm, and are more likely to be board chairmen. These firms are also characterized by larger boards (although slightly more independent), lower non-CEO director share ownership, and a higher Graham and Mills (2008) marginal corporate tax rate measure. Consistent with our findings on non-CEO director ownership, in untabulated analysis, we find that director-blockholders are significantly less prevalent in giving firms (1.32% versus 3.24%).[19] Moreover, a larger fraction of giving firms has positive free cash flows. These facts are consistent with agency theory predictions and suggest potential governance or agency conflicts in giving firms.

[19]A director-blockholder is defined as an outside director with at least 5% stock ownership of the firm.

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4. Empirical Results

4.1. Determinants of corporate giving

This section evaluates the profit maximization and agency cost theories of corporate giving by focusing on firm-level panel data. We estimate the following regression equation:

$$Corp\ giving_{i,t+1} = \alpha + \beta.(profit\ motives_{i,t}) + \gamma.(CEO\ attributes_{i,t}) + \delta.(governance_{i,t}) + \zeta.X_{i,t} + y_t + \varepsilon_{i,t}, \quad (1)$$

where *profit motives*, *CEO attributes*, and *governance* are a vector of characteristics described in the previous section.[20] The subscripts i and t refer to firm and year, respectively. The vector X includes other firm level characteristics, while y_t denotes year fixed effects. All the explanatory variables are taken from the year prior to the corporate giving year. In robustness analysis, we find that contemporaneous explanatory variables yield similar results.

We report logit and tobit estimates to assess the likelihood and expected amount of corporate giving, respectively. To standardize giving data across firms, we follow Navarro (1988) and divide corporate giving by company sales. We then take the natural logarithm of one plus scaled corporate giving to address the right skewness of giving data. Since giving is a small fraction of sales, we also multiply the logarithmic function by 10^3. Therefore, the dependent variable in the tobit specification is log(1 + corporate giving / sales) x 10^3, which we designate as the giving ratio. A tobit model is used since the corporate giving ratio is (left) censored at zero.

Panels A and B of Table 2 present logit and tobit regression estimates, respectively. The first two models of each panel separately test the predictions of shareholder wealth maximization and agency theories, while the third model jointly investigates the explanatory power of the two theories. In the last column of both panels, the marginal effects of logit and tobit regressions are presented based on model 3. We find that both the likelihood and amount of corporate giving decline as a CEO becomes more aligned with shareholder interests, while they rise when a CEO has a personal affiliation with specific charities.

[20]For profit motives, we consider two additional variables. Since Compustat has missing data for advertising and R&D expenses, we define two indicator variables, i.e., *ad indicator and R&D indicator*, that take the value of zero if the data is missing and one otherwise (Flannery and Rangan, 2006).

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Specifically, a 10% increase in *CEO ownership* above the sample mean reduces the likelihood of corporate giving by 40% and the giving ratio (conditional on it being positive) by 3%, whereas a *CEO charity connection* increases them by 21.5% and 1.5%, respectively.[21] Other CEO attributes, i.e., *tenure* and *outside appointment*, have weak power to explain the likelihood or the amount of corporate giving and lack statistical significance.

In contrast to previous studies (Navarro, 1988; Brown, Helland, and Smith, 2006), we find that the *ad-to-sales* ratio, one of the main variables associated with the shareholder wealth maximization hypothesis, is insignificant. This variable is only significant in models where robust standard errors are not clustered at the firm level.[22] We also find that firms in *sin* and *non-environmentally-friendly* industries do not contribute more to charities, which fails to support the prediction that firms in out-of-favor industries contribute more to charities (Bernea, Heinkel, and Kraus, 2008). However, there is some evidence consistent with the shareholder wealth maximization hypothesis. Firms that are more visible (Benabou and Tirole, 2010), invest more in R&D (Brown, Helland and Smith, 2006), and firms in *financial* and *pharmaceutical* industries are associated with more giving. However, these results are not robust as their statistical significance is unstable across alternative regression specifications in Panels A and B of Table 2. Lastly, consistent with the shareholder wealth maximization theory, we find that the *marginal tax rate* estimate is insignificant.

Governance variables have little success in explaining the likelihood or the amount of corporate giving. Only the *E-index* is found to increase the giving ratio significantly. However, its economic effect is much lower than that of the *CEO charity connection*. Finally, most firm level control variables (except *Tobin's q*) are not significant determinants of corporate giving.

4.1.1. A natural experiment

[21]The coefficient estimates of *CEO ownership* and *CEO ownership*^{2} have opposite signs, implying a diminishing marginal effect of *CEO ownership* on corporate giving. We calculate that the sign changes at about 14.07% ownership level.

[22]The result suggests a strong time-varying firm effect, which may be due to the sample construction. In contrast to previous studies, this study is based on NDCG database and considers more firms and a wider time range. Moreover, it considers total contributions while previous studies (e.g., Brown, Helland, and Smith, 2006) consider cash contributions.

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A common critique of estimated associations of corporate giving and CEO attributes, especially CEO ownership, is that they are endogenously determined. In this section, we address this issue by using a natural experiment. We use the 2003 dividend tax cut, which reduced the personal tax rate on dividend income. Specifically, the dividend tax rate was reduced from a maximum rate of 35% to 15% (Chetty and Saez, 2005). Since a manager's choice of private benefits is positively affected by the personal income tax rate and negatively affected by manager ownership in the firm, the Tax Reform Act increased the cost of pursuing private benefits, especially for managers with high share ownership levels.[23] In contrast, under shareholder wealth maximization, personal tax rate changes have no predicted effect on charitable giving.[24]

In Panel A of Table 3, we compare corporate charitable contributions before and after 2003 as a function of *CEO ownership*. The main variable of interest is the interaction term *CEO ownership* x $post_{2003}$, where $post_{2003}$ is the post-tax reform indicator variable. We include $post_{2003}$ to capture the unconditional change in giving and year fixed effects to capture temporal effects such as business cycles.[25] Consistent with the agency predictions for this, we find that corporate giving declines after the 2003 Tax Reform Act, and this effect is stronger as CEO ownership rises. The marginal impact of *CEO ownership* on corporate giving rises by 50% after 2003, which is an economically important effect. This finding is consistent with Cheng, Hong and Shue (2013) who examine the effects of this tax cut on CSR activity and find a significant reduction after the tax cut. In model 2, we repeat the analysis with a placebo period where the tax change is assumed to occur in 2002 rather than 2003. The insignificant *CEO ownership* x $post_{2002}$ interaction coefficient reinforces the earlier result from model 1. The coefficients of $post_{2003}$ and $post_{2002}$ are negative in the two models, but only $post_{2003}$ in model 1 is statistically significant.

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[23]Consider a manager with the following value function. $V \equiv \lambda(1-e)(1-\tau_c)(1-\tau_d) + \alpha e - {\gamma e^2}/{2}$, where λ is a manager's share ownership percentage, e is discretionary expenses, τ_c is the corporate income tax rate, τ_d is the personal income tax rate, $\alpha \in [0,1]$ is a manager's fraction of gains from discretionary expenses, and $\gamma \in [0,1]$ is the firm's governance quality. Solving this function for e gives $e^* = [\alpha - \lambda(1-\tau_c)(1-\tau_d)]/\gamma$. Therefore, we obtain ${\partial e^*}/{\partial \tau_d} = {\lambda(1-\tau_c)}/{\gamma} > 0$, ${\partial^2 e^*}/{\partial \lambda} = -{[(1-\tau_c)(1-\tau_d)]}/{\gamma}$, and ${\partial^2 e^*}/{\partial \tau_d \partial \lambda} = {(1-\tau_c)}/{\gamma} > 0$.

[24]We thank Harrison Hong for suggesting this natural experiment. However, the analysis of the impact of corporate giving changes on dividend changes in a later section of this paper is our own contribution to the experimental design.

[25]Results are similar when we consider the experiment without year fixed effects.

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A possible concern with this natural experiment is that our results may be due to confounding macroeconomic effects occurring contemporaneously with the 2003 Tax Reform Act. To address this concern, we conduct an analysis of two subsamples similarly affected by concurrent economy-wide changes, but where tax effects are predicted to be stronger or weaker. We expect to observe similar *CEO ownership* x $post_{2003}$ estimates if the observed change is due to macroeconomic factors, but significantly different estimates if the Tax Reform Act strongly affects CEO incentives to extract private benefits of control through corporate giving.

In Panel B we test the incremental effect of ownership after the Tax Reform Act in subsamples of firms where we expect weaker or stronger private benefit effects of corporate giving; namely at firms with CEO charity ties and firms with high dollar dividend payouts. The 2003 Tax Reform Act should have a less pronounced impact on corporate charitable contributions if the marginal benefits of corporate giving for CEOs with charity connections continue to exceed the cost of their private benefits. On the other hand, the effect of the Tax Reform Act should be more pronounced for firms that pay large dividends as these firms can now offer greater after-tax dividends by lowering corporate giving.

Consistent with these agency predictions, model 1 estimates the model for firms with CEO ties and shows that the coefficient of *CEO ownership* x $post_{2003}$ is not statistically significant, suggesting that the incremental effect of CEO ownership after the individual dividend tax cut is weaker when CEOs have charitable ties. Model 2 examines firms that pay dividends above the sample mean. We document a large negative coefficient of *CEO ownership* x $post_{2003}$, which is statistically significant. This coefficient estimate indicates that the main effect of *CEO ownership* after the Tax Reform Act is driven by large dividend-paying firms, as shareholders of these firms are more likely to realize tax benefits from substituting dividends in place of corporate giving.[26]

4.1.2. Subsample analysis

[26]In untabulated results, we also find that the effect is weaker for low dividend paying firms.

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In this subsection, we measure the incremental effects of CEO incentives and shareholder wealth enhancing motives by studying subsamples of firms conditional on whether they are more prone to governance problems or more likely to benefit from corporate giving, respectively. First, we consider subsamples of firms with stronger or weaker governance structures based on their managerial entrenchment (Bebchuk, Cohen, and Ferrell, 2008) and board independence (Hermalin and Weisbach, 1998) characteristics. This analysis predicts more (less) corporate giving as agency conflicts increase (decrease) in samples of firms where shareholder rights are weakly enforced (strongly enforced). Panel A of Table 4 presents the results. In the first model, which considers firms with three or more antitakeover defenses as weaker governed firms, we find a more pronounced positive effect of a *CEO charity connection* and a statistically insignificant effect of *CEO ownership*. Moreover, corporate giving in this sample increases with the *E-index* and decreases with *director ownership*. In contrast, for firms with fewer than three antitakeover defenses, the effects of a *CEO charity connection* and *CEO ownership* are similar in magnitude to the earlier results.

Since social dependence cannot be easily measured and Fortune 500 firms typically have a large fraction of independent directors (see Panel A, Table 1 of this paper and Table 1 of Yermack, 2006), we classify a board as independent if at least 60% of directors are independent and it has a fully independent nominating committee.[27] We require a fully independent nominating committee based on recent evidence of Guo and Masulis (2013) who document that the nominating committee has a significant incremental effect on board independence, which they attribute to directors fearing not being renominated if they alienate the CEO. The third and fourth regression models in Panel A examine firms with and without an independent board, respectively. The results based on board independence and non-independence have similar economic implications, but have opposite signs to those based on the *E-index*, namely we find a more pronounced effect of a *CEO charity connection* and a muted effect of *CEO ownership* for firms with

[27]The RiskMetrics database does not report nominating board members before 1998, so our subsample analysis is based on the 1998-2006 period. In a robustness test, we consider the whole sample and define a board as independent if there is at least 70% independent outside representation. Our results continue to hold.

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non-independent boards or nominating committees. Taken together, this analysis suggests that agency conflicts in corporate giving are a broad based problem, which is more serious in poorly governed firms.

Second, in Panel B of Table 4 we consider firm observations with non-missing data on advertising and R&D expenses as these firms are thought to benefit most from corporate giving. The marginal effects of *CEO charity connection* and *CEO ownership* are 1.61% (p-value = 0.003) and 0.27% (p-value = 0.061) respectively, which are similar to the estimates based on the full sample. Also, we find that the marginal effects of *ad-to-sales* and *R&D-to-sales*, the two main variables of shareholder value maximization theory, are statistically insignificant (p-values = 0.365 and 0.180, respectively). These results cast further doubt on the claim that corporate giving is positively related to shareholder wealth maximization. Overall, the results of Table 2, 3 and 4 support the agency hypothesis of corporate giving, but are generally inconsistent with the firm value maximization motivation for corporate giving.

4.2. Corporate giving and financial performance

4.2.1. Equity value of corporate cash holdings

To measure the impact of corporate giving on firm value through its impact on cash holding, we follow the cash valuation analysis of Faulkender and Wang (2006). They regress yearly excess stock returns, $r_{i,t}$ - $R^B_{i,t}$, on changes in firm cash holdings, ΔC_{it} , and other control variables and designate the coefficient of the change in cash as the marginal value investors place on an additional dollar of liquid assets. Faulkender and Wang (2006) find that the marginal value of cash declines with larger cash holdings, higher leverage, better access to capital markets and a firm's preference for cash dividends over stock repurchases. We augment their model with a measure of corporate giving. Specifically, we estimate the following regression:

$$r_{i,t} - R^B_{i,t} = \alpha + \beta.(\textit{corporate giving ratio}_{i,t}) + \gamma.(\Delta C_{it}/M_{i,t-1} \text{ x } \textit{corporate giving ratio}_{i,t}) + \delta.(\Delta C_{it}/M_{i,t-1}) + \theta'.X_{i,t} + \varepsilon_{i,t}. \quad (2)$$

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The dependent variable in equation (2) is firm *i*'s excess stock return over fiscal year *t*. As in Faulkender and Wang (2006), we calculate excess returns by deducting the Fama-French size and book-to-market portfolio returns ($R^B_{i,t}$) from the firm's raw stock returns ($r_{i,t}$). As an alternative measure, we calculate excess returns from the firm's raw stock returns after subtracting the firm's industry portfolio returns ($R^{Ind}_{i,t}$) based on its Fama-French 48 industry.[28]

The key explanatory variables are the *corporate giving ratio* which is defined as log (1 + corporate giving / sales) x 10^3 and $\Delta C_{i,t}$ which represents the change in cash from year *t-1* to *t*. $\Delta C_{i,t}$ is scaled by the l-year lagged market value of equity ($M_{i,t-1}$). Consistent with Faulkender and Wang (2006), the vector *X* includes changes in earnings (ΔE_t), changes in net assets (ΔNA_t), changes in R&D (ΔRD_t), changes in dividend (ΔD_t), changes in interest (ΔI_t), 1-year lagged cash holdings (C_{t-1}), leverage (L_t), and net equity and debt financing (NF_t). All these control variables are scaled by $M_{i,t-1}$, with the exception of leverage, which is scaled by total assets. *X* also includes interactions of changes in cash with cash holding and leverage. The main coefficient of interest in equation (2) is γ, which is expected to be negative if corporate giving entails inefficient use of cash and management extraction of greater rents.

Panels A and B of Table 5 present summary statistics and regression estimates, respectively. Summary statistics are based on the Fortune 500 firms having data available from Compustat and CRSP. Because our sample represents relatively large firms, the summary statistics in Panel A differ from those of Faulkender and Wang (2006). For example, in our sample the change in cash divided by market value of equity has a mean (median) of 2.8% (0.6%), whereas in Faulkender and Wang (2006), it has mean (median) of 0.4% (-0.01%).

Panel B presents regression estimates for the two alternate specifications of excess returns. We find a negative and highly statistically significant coefficient on the interaction of corporate giving and the change in cash for both excess stock return specifications. This relation is also economically

[28]We consider the universe of Fortune 500 firms to calculate average industry returns based on the argument that they constitute the sample of closest comparables. Later in robustness tests, we also consider the universe of firms listed in NYSE, AMEX and NASDAQ exchanges. These results are very similar.

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important. For example, in model 1 the equity value of cash is approximately 8.1 cents lower if a firm changes its total giving from the sample median to the 75th percentile level. Untabulated analysis shows that the negative impact of corporate giving on firm value rises from -8.1 cents to -20.4 cents, for a sample of firms with non-independent boards where board oversight is expected to be weaker. These results suggest that managers extract private benefits from corporate cash holdings in firms that make large charitable contributions. Because investors perceive such manager benefits to be costly to the firm, they place a lower value on each extra dollar of cash the firm holds. This finding is consistent with the hypothesis that corporate giving impinges on a firm's financial performance. Other explanatory variables in Panel B have signs and explanatory power consistent with Faulkender and Wang (2006).

In the above analysis, corporate giving is set equal to zero if firms do not voluntarily disclose direct giving and do not make donations to their foundations. This procedure is appropriate if these non-reporting firms make negligible contributions. We view this as a reasonable operating assumption because (1) the NDCG database only contains charitable contributions that are verified by the companies or complied from reliable public records and (2) contribution recipients are typically tax-exempt institutions that must disclose their revenue sources in IRS Form 990-PF filings, which are available for public inspection.[29] Nevertheless, we perform two robustness tests to validate the earlier findings.

As our first robustness test, we assign the sample's median value to any missing *corporate giving ratio*, which we set equal to zero in our earlier analysis. Results of this analysis are similar to the earlier findings. Specifically, the interaction term *corporate giving ratio* x $\Delta C_{it}/M_{i,t-1}$ estimate is -0.197 (p-value = 0.022) when stock returns are adjusted for size and book-to-market portfolio returns (i.e., model 1) and missing corporate giving values are replaced with their sample median. As a second approach, whenever *corporate giving ratio* is missing, we exclude the observation since there is substantial uncertainty as to whether a firm has actually contributed. In the reduced sample of 1,541 firm-year observations, the results

[29]When collecting data, we find that firms use direct giving very infrequently. For example, Coca-Cola contributed $37.48 million and $7.52 million in 2003 and 2004 respectively, and Microsoft contributed $107.12 million and $246.90 million in 1998 and 2002 respectively. For these firms, it is reasonable to assign zero direct giving for the other years.

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continue to be qualitatively similar to our main findings. For example, the coefficient of the interaction term is -0.192 (p-value = 0.036) for size and book-to-market adjusted stock returns. This additional robustness analysis also indicates that sample selection is not driving our cash valuation results.

4.2.2. Dividends and corporate giving

In section 4.1.1, we find that corporate giving declines after the 2003 Tax Reform Act. However, we do not investigate whether the firms that subsequently reduce corporate giving are also associated with increases in cash dividend payments. We now perform this latter analysis. Specifically, we specify a dividend payment model similar to Chetty and Saez (2005), with the addition of a firm's dollar level of charitable contributions and its interaction with the $post_{2003}$ indicator variable. Under an agency theoretic view of corporate giving, the interaction term *total contributions ($)* x $post_{2003}$ is predicted to have a negative coefficient for this specification.

Examining firms that make charitable contributions in 2002, Table 6 shows the relation between changes in charitable contributions and post-2003 changes in dollar dividends. Specifically, we find that the coefficient of *total contributions ($)* x $post_{2003}$ is negative and statistically significant in models with and without the control variables, consistent with the agency theory prediction. Economically, a $1 million reduction in corporate giving after the Tax Reform Act is associated with $6.4 million to $10.2 million increase in dividends based on the models 1 and 2 estimates in Table 6. We find support that the 2003 dividend tax cut significantly curbed managerial consumption of private benefits and evidence that the post-2003 dividend increases in part reflect a reduction in charitable giving.

Turning to the control variables, we see in regression model 2 that they have signs consistent with prior research and are generally statistically significant. Similar to Chetty and Saez (2005), we find that the coefficient of $post_{2003}$ is positive and statistically significant only when the regression model excludes

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the control variables.[30] We also find that the coefficients of *total contributions ($)* and its interaction with the $post_{2003}$ indicator continue to be statistically significant.

4.3. The channels of value destruction

Thus far the evidence suggests corporate giving is a manifestation of agency conflicts which reduce firm value. We next examine specific channels through which corporate giving destroys value.

4.3.1. CEO-affiliated contributions

CEO-affiliated contributions refer to the amount of money a firm contributes to nonprofit organizations where the CEO is a director, trustee, advisor, or holds some other official position. The following analysis requires the names of CEO-affiliated charities and the firm contribution levels to these charities during the CEO's tenure in office. The primary data sources for CEO affiliated charities are the biographical sections of annual reports, Businessweek and Forbes. The main data source for the charity names and levels of corporate giving is the Foundation Directory Online database, which is available from 2004. This database tracks all donations distributed by firm-sponsored foundations, but includes only a partial list of donation amounts distributed to charities by corporations since these disclosures are voluntary. As a consequence, a caveat of this analysis is that reported affiliated contributions underestimate actual contributions. Because this two-way data matching process is highly labor intensive, we focus on the Fortune 100 CEOs as of 2006.[31]

Table 7 presents the evidence on CEO affiliated corporate giving. Panel A reports that about 82% of CEOs are affiliated with one or more nonprofit organizations, while 62% (or 76% conditional on a CEO having a nonprofit affiliation) of firms make donations to CEO-affiliated organizations, suggesting that corporate contributions to CEO-affiliated charities is widespread, even with data on only a portion of

[30]Chetty and Saez (2005) argue that high dividend paying firms are extremely concentrated, making the estimate of the tax response fragile when control variables are added.

[31]To illustrate data collection on affiliated contributions, consider the case of Mr. Miles D. White, the CEO of Abbott Laboratories. Mr. White is on the board of trustees at The Field Museum in Chicago, the Museum of Science and Industry, the Lyric Opera of Chicago, Joffrey Ballet of Chicago, The Culver Educational Foundation, Art Institute of Chicago, and Northwestern University. After identifying these affiliated nonprofits, we search the Foundation Directory Online database to check whether they receive donations from Abbott. We find that all nonprofits except The Culver Education Foundation received a total of $15.2 million from 2004 to 2010.

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corporate charitable contributions. Panel B examines whether such contributions are economically large. We find that the average annual (total) CEO-affiliated contributions across the Fortune 100 for the 2004-2010 period is $2.5 ($154.4) million, which equals 15.7% of average annual CEO compensation and represents an annual cost to the corporation of approximately $675,000. Comparing this result with existing studies, we find that CEO-affiliated charitable contributions are greater than the combined costs of corporate jet use and other perks (see Table 2 in Yermack, 2006) and similar in magnitude to CEO personal donations through their family foundations (Yermack, 2009) and CEO cash severance payments (Rusticus, 2006).[32] In Panel C, we estimate a tobit regression of CEO-affiliated contributions on CEO attributes, firm size and indicators for industries most likely to benefit from giving. The analysis indicates more affiliated giving in firms where CEO ownership is low and thus, where CEO financial interests are less aligned with shareholders. These regression results also suggest that more CEO-affiliated giving occurs in relatively larger firms and firms in regulated industries.

In summary, the evidence on CEO-affiliated contributions documents a new form of rent extraction. Earlier studies document rent extraction through many avenues such as excessive compensation (Bebchuk and Fried, 2004), option backdating (Heron and Lie, 2007), and the use of corporate jets (Yermack, 2006). While there are clear conflict-of-interest concerns given that CEO-affiliated contributions are economically large and managers can accrue private benefits from these contributions, the SEC does not currently require firms to disclose this information to shareholders, except in the special case of charity awards. When a company has an established charity award program it is required to disclose any corporate giving to officer and director affiliated charities. But, there is no disclosure requirement for any other type of corporate giving.

4.3.2. Charity awards

[32]Yermack (2009) reports that CEOs and chairmen donate an average of $1.7 million through their family foundations over the two and a half year period, whereas Yermack (2006) documents annual perk consumption of $216,000 that includes jet use, financial counseling, car transportation, club fees, etc.

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Charitable award arrangements allow firms to contribute in the name of its officers and directors for the benefit of a charity of their choice and this typically occurs at the conclusion of their service to the company. As a part of its proxy reform rules on compensation, the SEC mandated that publicly listed firms disclose the names of executives and directors associated with charitable awards or legacy programs beginning in October 1992. We use the data generated by this reporting requirement to study how shareholders reacted to charity awards. If shareholders believe that firms can attract desirable executives and board members who are instrumental in safeguarding their interests, we would expect stock prices to react positively to news of these awards. Alternatively, if shareholders perceive that charity awards are symptomatic of waste and entrenched managers consuming excess rents, we would expect stock prices to react negatively when firms report charity awards in proxy statements for the first time.

Since the SEC's EDGAR website reports proxy statements starting in 1994, we rely on microfiche files stored at Vanderbilt University for the year 1993 to gather data on proxy filing dates. In our sample of Fortune 500 firms, 53 firms disclose charity awards where at least one director (excluding the CEO) has an affiliation during 1993–2010. We focus on these companies to study the stock price reactions when a charity award is first disclosed to shareholders.[33]

Abnormal stock returns are presented in Figure 2 and Table 8. We use a firm's proxy filing date as the event day, although we recognize that investors may not obtain immediate access to the information due to delays associated with mailing out proxy statements. If a firm files a preliminary proxy statement before the final filing, then the preliminary statement filing date is used (Yermack, 2006). Firm-level abnormal returns are calculated using standard event-study methodology based on different market adjustments. For parsimony, we report results based on the Fama-French-Carhart four factor model although we obtain similar results using other standard market adjustment procedures. Figure 2 presents average CARs for the ten trading days (or two weeks) prior to the event day to the ten trading days after

[33]Research on executive compensation and managerial rent extraction often scrutinize proxy statements for disclosures of questionable expense items. For example, Fich and Shivdasani (2005) examine stock option plans of outside directors, Wei and Yermack (2011) CEO inside debt, and Yermack (2006) CEOs personal use of corporate jets. Yermack (2006) reports that proxy statement release dates are on average associated with a weakly positive stock return, probably because managers strategically disclose favorable news in these documents.

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the event. The abnormal returns for the sample are distributed around zero up to the proxy filing date and then begin to trend downward.[34]

As shown in Panel A of Table 8, the mean CAR over the [+1, +3] window is -0.87% and is statistically significant with a *p*-value of 0.014. We reach a similar conclusion using the Wilcoxon signed-rank test. In untabulated analysis, we exclude nine firms that made other major news announcements over the [-4, +4] event window and find a three day CAR of -1.11% (*p*-value = 0.003) for the remaining sample.[35] These findings indicate that shareholders react negatively to insider-affiliated giving. This economic loss far exceeds the value of charitable award programs announced and is likely to reflect the market's assessment of the expected future costs of additional contributions to charities.

In Panel B of Table 8, we present regression analysis of stock price reactions to charity awards as a function of *CEO ownership* and *CEO charity connection*. We document a statistically significant negative coefficient of *CEO charity connection* (*p*-value = 0.022), indicating that negative reaction to charity awards are more pronounced if the CEO of a firm has charity interests. We also find that the *CEO ownership* variable has a statistically significant positive sign (*p*-value = 0.099), which suggests that shareholders react to the disclosure of charity awards less negatively if CEO interests are more aligned with shareholders.

4.3.3. Donations to charities versus donations to company-sponsored foundations

Firms can directly contribute to charities or make donations to their sponsored foundations. In both cases, firms are not required by SEC disclosure regulations, nor by state or federal laws to disclose giving information (Kahn, 1997). However, foundations are obligated to report to all their activities annually on IRS Form 990-PF. Thus, databases on foundation giving (Foundation Directory online and NDCG) contain complete information on contributions made to foundations. Data on individual firm's direct giving is from the NDCG directory, which reports contributions voluntarily verified by the

[34]Yermack (2009) documents price declines on event day one when investigating stock returns for dates of executive stock gifts.
[35]Major news includes new director appointment, elimination of classified board and cumulative voting, debt issuance, tender offers, creating dual class shares, negative earnings revisions by analysts, quarterly losses, and sales of a portion of the business.

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companies themselves or compiled from reliable sources. With this data, we examine the intensity of agency problems across these two channels of corporate giving.

Agency problems are likely to be more severe for contributions transferred to foundations for several reasons. First, company-sponsored foundations cannot redistribute any of its assets back to company or its shareholders, so any foundation donations represent a permanent loss of firm assets for uncertain future benefits, which can harm shareholders. Second, the economic and accounting effects of foundation giving do not occur simultaneously. The economic effect of foundation giving takes place when foundations ultimately contribute to charities, whereas the accounting effect takes place when firms transfer donations to foundations. Petrovits 2006 argues that this difference offers opportunistic managers an opportunity to time the transfer of funds to foundations by managing corporate earnings and to make it less transparent which particular charities ultimately receive contributions. Third, monitoring activities in foundations are performed by representatives of sponsoring firms (Fama and Jensen, 1983). Absent residual claimants and external monitoring, but with considerable control over foundation boards through their influence over foundation board appointments (Carter and Werbel, 2002), managers are likely to be able to use foundation assets in ways that are not consistent with value maximization, but instead benefit their preferred charities. Finally, the public may discount any positive reputation benefits of a firm's foundation contributions given that a firm is only indirectly involved in the actual distribution of charitable giving and there are generally significant delays in making these contributions, so the positive publicity benefits are likely to be small.

Table 9 analyzes annual program giving and foundation giving where these two forms of giving are separately analyzed in two separate tobit regressions based on the specification in equation (1). The model 1 estimates of program giving show that firms with more reputable CEOs (in terms of *tenure* and *outside appointment*) and better governance structures (relatively higher *fraction of independent directors* and non-CEO *director ownership*) are more likely to donate directly to charities annually. Moreover, we find that CEO charity interests are much less likely to be one of a firm's major direct annual giving

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recipients On the other hand, model 2 analyzes foundation giving and shows that firms tend to engage in it when governance is weaker, as measured by the *E-index* and *director ownership*. Interestingly, the marginal effects of *CEO ownership* are similar for both annual program giving and foundation giving. Taken together, this evidence indicates that transfers of corporate resources to foundations are more prone to agency conflicts than annual program donations to charities which are publicly disclosed.

4.3.4. Corporate giving and CEO compensation

The evidence uncovered thus far is consistent with managerial rent extraction as a motivation for corporate giving. However, this argument may be weakened if firms adjust the compensation contracts of their senior executives who benefit from corporate charitable contributions (Fama, 1980). To explore this question, we estimate the following fixed effect model of CEO compensation taking into account CEO-affiliated corporate giving.

$$Log(CEO\ compensation_{it}) = \alpha + \beta.(Corporate\ giving_{it}) + \gamma.X_{it} + f_i + y_t + \varepsilon_{it}\ , \qquad (3)$$

where i and t refer to firm and year, respectively. For the dependent variable, we calculate the natural logarithm of CEO compensation (total of salary, bonus, restricted stocks, Black-Scholes valued stock options, long-term incentives, etc.) to reduce its right skewness. The main explanatory variable of interest is *corporate giving*. The covariate X is a vector consisting of firm-level characteristics (*logarithm of assets*, *stock return*, *ROA*, *volatility*), CEO attributes (*tenure as CEO* and an *outside appointment* indicator), and firm-level governance characteristics (*board size*, *fraction of independent directors*, *director ownership*, and the *E-index*). The terms f_i and y_t refer to firm and year fixed effects, respectively.

The main concern with this specification is that corporate giving is highly endogenous. For example, suppose that the level of CEO excess compensation is a good measure of CEO power. Under the managerial power hypothesis, firm charitable contributions are correlated with CEO compensation, a situation that raises reverse causality issues. To mitigate this concern, we estimate an instrumental variables (IV) model with three exogenous state level instrumental variables based on a firm's

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headquarters state to predict the corporate giving level. The state level instruments are the density of high net worth individuals, average individual charitable contributions as a fraction of gross income, and recent natural disasters in the firm's headquarters state, all of which are described below.

Firms and individuals are two alternate sources of charity contributions. Since the density of high net worth individuals and their individual contributions at the state-level are likely to reduce the demand for corporate giving without directly affecting CEO compensation, we use them as instrumental variables for corporate giving. Following Becker, Cronqvist and Fahlenbrach (2010), we collect data on the number of high net worth individuals by state from the Statistics of Income program at the IRS and calculate the state population density level for every year in the sample.[36] Data on individual contributions is collected from the National Center for Charitable Statistics (NCCS). It provides statewide average gross income (AGI) and average charitable giving data as reported on the IRS tax return Form 1040, Schedule A, by households who itemize deductions during 1996-2006. We divide state level average individual contributions by state level AGI. We find that these two instruments have a simple correlation of approximately 0.2.

Natural disasters as an instrumental variable

As a third instrument, we focus on local natural disasters. Firms often donate generously after major disasters occur nearby. For example, our sample of firms donated over $223 million within the first month of hurricane Katrina. A firm's visibility, headquarter location, and whether its operations are interrupted are all expected to affect the likelihood of its giving shortly after natural disasters. As a result, our third instrument is based on a higher probability of donations when disasters occur in the firm's headquarter state. This source of exogenous shocks affects corporate giving without directly influencing CEO compensation. Therefore, natural disasters are likely to satisfy the relevancy and exclusion requirements of a valid instrumental variable.

[36]This source reports state level data on high net worth individuals for 1995, 1998 and 2001. In 1995, net wealth ranges from $0.6 to $10 million. For the latter two years, the lower limit is increased to $1.0 million and the ceiling is removed.

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Natural disasters that generate damages of at least $500 million in the affected states are treated as significant events. We collect this data from the Center for Research on the Epidemiology of Disasters (CRED) at the Université Catholique de Louvain. Panel A of Table 10 presents information on the types of natural disasters, total damages, and the number of affected states. Droughts, earthquakes, extreme temperatures, floods, storms and wildfires are six different types of natural disasters occurring in the US over our sample period, having total damages ranging from $3.6 billion in 2000 to $157.53 billion in 2005 (when hurricane Katrina affected the Gulf coast area). These disasters affected a minimum of 6 and a maximum of 34 states during 1996-2006. New York State is not included among the affected states in 2001 since the events associated with 9/11 represented a terrorist attack rather than a natural disaster.[37]

To identify firms whose contributions are likely to be affected by disasters, we define a variable called *natural disaster* that takes the value of one if natural disasters occur in a given year in the state where the firm's headquarters is situated. We interact this variable with end-of-the-year firm size and firm operating performance measures to identify how both highly visible firms and firms that are operationally unaffected or mildly affected contribute to these natural disaster causes.[38] Of course, the timing of the corporate giving after natural disasters is important to define. Many firms contribute immediately after natural disasters while others participate in the later rebuilding of community infrastructure. To consider both of these possibilities, we assume that natural disasters occurring in the fourth quarter of a year will affect a firm's contribution both in the current and the following year. A drawback of this IV is that its power is based on the subsample of firms that are headquartered in states affected by natural disasters.[39]

In untabulated results, we perform a Hausman test to check for endogeneity of corporate giving. Specifically, we modify equation 3 by adding the corporate giving residual from the first-stage

[37]However, our results are robust to the inclusion of 9/11.

[38]The first stage regression is similar to a difference-in-differences regression which can be written as Δcorporate giving = a + b. natural disaster + c. ΔROA + d. ΔROA * natural disaster + e and includes all the second stage independent variables.

[39]Firms not headquartered in disaster affected states could also make charitable contributions to the disaster affected communities for several reasons. For example, firms may depend on suppliers headquartered in the affected states or customers concentrated in the disaster affected states. Our IV approach does not consider the impact of such external shocks on corporate giving.

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regressions discussed below. The *p*-value on the coefficient of the residual serves as a test of exogeneity. We reject the exogeneity of corporate giving in the specified regression at the 7% level.

First-stage regressions

We first match the instruments with each firm's headquarters state. We hand-collect historical data on firm headquarters from the NDCG. The specification of the first stage regression is

$$log\ (Corporate\ giving_{it}) = a + b'.(Z_{it}) + c.X_{it} + f_i + y_t + u_{it}, \qquad (4)$$

where Z is a vector of instruments: *density of high net worth people*, *individual contributions/AGI*, and a *natural disaster* indicator. The other variables and notations are described previously. For a firm with given characteristics, CEO attributes, and governance structures, these instruments are likely to add exogenous variation to the *average* level of corporate giving.

Panel B of Table 10 presents regression estimates of total corporate giving as well as its two components: annual program giving and foundation giving. Although the *density of high net worth people* and *individual contributions/AGI* ratio have their anticipated signs, they are not statistically significant, possibly because of their low time series variability. However, *natural disaster* is negative and highly significant, implying that firms contribute less when a state affected by a natural disaster is also the location of the firm's headquarters. This suggests that firm operations are often disrupted by the disaster and that we need to control for this potential outcome.

Many arguments can be offered in favor of this finding. Firms reduce community assistance programs if their operations are adversely affected, if they expect sales to declines, etc. On the other hand, operationally unaffected firms headquartered in a state hit by a disaster are likely to contribute more. Specifically, we find that a 10% increase in concurrent ROA of a firm in a state hit by a disaster raises the total giving ratio by 39%. Firm visibility in the state hit by a natural disaster has a meaningful, but lower economic impact. More specifically, a 10% increase in firm size is associated with 1.6% increase in corporate giving. In the next two columns of Panel A, we estimate similar regression specifications, but

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consider annual program and foundation giving separately to identify the relative impacts on the two forms of corporate giving. The evidence suggests that program giving is more sensitive to natural disasters. Relative to foundation giving, program giving falls to a greater extent (by 42.2%).[40] However, firms not directly affected by these disasters are likely to be 21.4% more responsive in terms of subsequent program giving.[41] This finding regarding program giving is consistent with the views of industry experts, and is suggestive of the strength of *natural disaster* as an instrument.[42] We find that the explanatory power of the first stage regressions, as measured by adjusted R^2, ranges between 20.1% and 49%. Annual direct giving is sporadic, making it relatively difficult to predict.

We use an *F*-statistic from the first-stage regressions on corporate giving to test the joint significance of instruments and the other exogenous variables. This is a commonly used weak instruments test (see Stock and Yogo, 2005). Depending on the regression specifications, we find *F*-statistics in the range of 10.2 to 16.7. This evidence supports the statistical significance of our instruments and thus, the IVs meet the relevance requirement of a valid instrument.

Second-stage regressions

The predicted values of corporate giving for each firm-year are used to estimate the CEO compensation model specified by equation (3). Panel C of Table 10 presents the results for CEO compensation. In all three statistical models, the estimated coefficients of corporate giving are positive, ranging from 0.34 to 0.73, and consistently exhibit statistical significance at the 10% level or better. Using the lowest coefficient estimate, we obtain a 3.4% rise in CEO compensation for a 10% increase in predicted total corporate giving. Economically, a 10% increase in total corporate giving raises CEO compensation by $504,133 (above its $6.5 million mean value). This evidence contradicts the optimal contracting hypothesis and supports the managerial power hypothesis, which states that CEOs have power

[40]We calculate the difference between the coefficients of *natural disaster* in model 2 and 3 in Table 10, and divide the difference by the smaller estimated coefficient of *natural disaster*. That is (1.07-0.75)/0.75=42.23%.

[41]Here, we consider (*natural disaster* x *ROA*) and follow the procedure outlined in Footnote 39. That is, we calculate (2.15-1.77)/1.77=21.42%.

[42]For example, Mr. Matthew Nelson, Managing Director at the Council on Foundations, said that "companies have the ability to respond to immediate needs, such as disasters, because they can get volunteers from employees, match donations and give away product". Source: The Wall Street Journal (Dec 10, 2007).

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to extract excess rents. The fact that a marginal increase in foundation giving (model 3) raises CEO compensation by a greater amount suggests that managerial agency problems are more serious at firms that contribute directly to corporate foundations. This supports our earlier findings on donations transferred to company-sponsored foundations. Consistent with prior studies, we also find that CEO compensation has a significant positive relation to firm size and a CEO's external appointment status. Other control variables are insignificant after controlling for the predicted level of corporate giving. In summary, the evidence here is supportive of Bebchuk and Fried's (2004) managerial power hypothesis and indicates that corporate giving is likely to be a form of rent extraction.

4.3.5. Board member charitable interests and corporate giving

In this section, we analyze the relation between independent director charity interests and corporate giving. The existing literature suggests that managers build reputation with stakeholders through the use of corporate giving and CSR activities. For example, Galaskiewicz (1985, 1997) finds that CEOs make valuable connections with local elites when their firms make charitable contributions, and Cespa and Cestone (2007) assert that CEOs use CSR activities strategically to build relations with social and environmental activists, who offer CEOs favorable treatment during future turnover decisions. We argue that a more direct form of entrenchment occurs when CEOs strategically support making firm donations to independent director charitable interests. For this purpose, we analyze whether firms support charitable donations when independent director have ties to non-profits and then evaluate the effect of this alignment on CEO compensation. This analysis is similar in spirit to Hwang and Kim (2009), who find that a CEO's social ties with independent directors result in excessive CEO compensation. The analysis here differs from theirs in the sense that this study considers the social ties to independent directors that are created by targeted corporate giving.

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We again focus on Fortune 500 firms during 2005-2006 and obtain information on independent director charitable affiliations from company proxy statements filed in this period.[43] The evidence on the relation between independent director charity interests and corporate giving to specific charities is presented in Panel A of Table 11. We measure director charity interests in the same way we measure CEO charity interests. We find that 64% of independent directors with charitable affiliations are associated with educational institutions, 47% with miscellaneous philanthropic organizations, 22% with arts and cultural organizations, etc. For the same set of firms, we identify each firm's top three charitable causes that receive corporate contributions of at least $1 million in 2005 and 2006 using the Foundation Directory Online database. Of all firms making charitable contributions, 32% contribute to educational institutions, 28% contribute to health and human services, 24% contribute to philanthropic organizations, and 18% support arts and culture as one of their top three charity recipients. After combining these two data sources, we find a match between at least one of a firm's independent director interests and a firm's top three supported charities in 68.8% of the sample of corporations making charitable contributions.

We evaluate the effect of the link between independent director charitable interests and corporate contributions on CEO compensation in Panel B of Table 11 in 2005-2006 to assess whether corporate giving benefits CEOs. Specifically, we regress CEO compensation on an indicator for *director supported cause* by considering a sample of firms with and without independent boards. *Director supported cause* takes the value of one if at least one of the three major causes supported by corporate giving matches at least one independent director's charity interests, and zero otherwise. If CEOs do not benefit from pursuing independent director causes, we would expect no association between compensation and *director supported cause*. Contrary to this prediction, we find in model 1 of Panel B that the coefficient estimate of this variable is positive and statistically significant (p-value = 0.035) for the sample of firms with independent boards. However, in model 2 we find insignificant results for firms without independent boards. Thus, our increased entrenchment story is only applicable to firms with nominally independent

[43]We exclude CEOs and non-independent directors for this analysis.

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boards, as it should be. This evidence suggests a strategic use of corporate giving to build social ties between the CEO and independent directors, which compromises director independence and leads to further CEO benefits such as excess compensation.

4.4. Robustness

As robustness checks, we re-estimate all of our prior regressions after Compustat, CRSP, RiskMetrics and Execucomp data are winsorized at the 1% and 99% level. The statistical significance of both *CEO charity connection* and *CEO ownership* remain unchanged in the logit and tobit regression specifications reported in Table 3. Moreover, there is evidence of a greater negative impact of *CEO ownership* on contributions transferred to foundations (relative to the model 2 of Table 9). We also estimate a cross-sectional model of the amount of corporate giving by averaging the dependent and explanatory variables from Table 2 over the sample period. Our results continue to support the agency theory hypothesis. In further robust analysis, we exclude firms in the financial industry as these firms often sponsor local charities as a form of advertising. We find a more pronounced effect of *CEO ownership* on corporate giving in the reduced sample of 2,083 firm-year observations.

We also consider whether a firm has dual class shares, a CEO-founder or founding family member, a fully independent nominating committee, and a blockholder-independent director as additional corporate governance measures.[44] The analysis yields statistically insignificant coefficients for all of these measures in the logit and tobit models. We also replace the fraction of independent directors with an independent board indicator variable and a firm's *E-index* with a classified board indicator. These control variables also yield insignificant coefficient estimates.

The evidence on equity value of cash holdings is re-estimated using two alternative approaches. First, excess returns are calculated from a firm's Fama-French 48 industry return where the whole Compustat universe of firms is used for robustness. The coefficient of $\Delta C_{it}/M_{i,t-1}$ x *corporate giving ratio*$_{i,t}$

[44]CEO-founder data is hand-collected, while the remaining data is drawn from RiskMetrics. A director-blockholder is a director who owns at least 5% of the firm's stock.

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(γ) is -0.203 and remains significant with a *p*-value of 0.011. Second, it could be argued that unobserved risk components of giving firms are different from those of firms that do not give to charitable causes. We re-estimate the regression model of excess returns with firm fixed effects to control for unobserved idiosyncratic risks. The estimated coefficient of the interaction term of the change in cash and the corporate giving ratio from equation (2) is -0.17 and is significant with a *p*-value of 0.026.

Finally, the compensation regressions in Table 10 are re-estimated after we winsorize all the variables at the 1 and 99% levels. We document a 1.9% (versus 3.5% when the data is not winsorized) increase in CEO compensation for a 10% increase in predicted total corporate giving. This implies that large charitable contributions strongly influence the size of the corporate giving coefficient.

5. Conclusion

This study clearly shows that CEOs gain from corporate giving. The data indicates that 62% of firms contribute to CEO-affiliated charities, with more affiliated contributions in firms where CEO financial interests are less aligned with shareholders. CEOs also appear to opportunistically transfer contributions to foundations, and these large transfers reduce shareholder cash flow rights significantly. Furthermore, CEOs substitute cash dividends for corporate giving when a dividend tax cut increases a CEO's personal cost of consuming private benefits of control. CEOs also appear to use corporate giving strategically to support charities where independent director have affiliations, which can strengthen the CEO's social bonds with these directors. Various regression specifications confirm that corporate giving is not purely a firm value maximizing tool, but is a manifestation of managerial-shareholder agency problem where managers have considerable influence over how and where corporate contributions are channeled. Such forms of corporate giving serve the personal interests of CEOs and compromise the independence of outside directors and result in lower stock returns.

The results reported here shed doubt on principal-agent models where both principals and agents have ambiguous discretionary spending objectives, especially when public disclosure is not required. One implication of this analysis is that an SEC requirement to promptly disclose insider-affiliated corporate

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giving could help limit this activity and thereby benefit outside minority shareholders. Several interesting avenues of research remain unexplored. First, employee matching grant programs are quite common, but do they enable firms to hire and retain higher quality employees? If yes, then does this increase firm profitability? Or are matching programs part of a long held cultural tradition? Second, legal professionals tend to differentiate corporate giving from CSR activity, while many companies "claim to have embraced CSR and then point to the glossy reports of their company foundation [grants] to demonstrate the degree of their commitment" (Altschuller, 2010), highlighting that one major form of CSR for many firms is corporate giving. Future research might also examine whether shareholders understand such distinctions and demand firms to pursue activities which better position them competitively.

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References:

Altschuller, Sarah A, 2010, Distinctions with Differences: The Lawyer's Role in Distinguishing CSR and Corporate Philanthropy, *International Law News*, 39 (1), 11-13.

Bebchuk, Lucian, Alma Cohen and Allen Ferrell, 2008, What Matters in Corporate Governance?, *Review of Financial Studies*, 22 (2), 783-827.

Bebchuk, Lucian and Jesse Fried, 2004, Pay without Performance: The Unfulfilled Promise of Executive Compensation, *Harvard University Press: Cambridge and London*.

Becker, Bo, Henrik Cronqvist and Rüdiger Fahlenbrach, 2011, Estimating the Effects of Large Shareholders Using a Geographic Instrument, *Journal of Financial and Quantitative Analysis*, 46, 907-942.

Benabou, Roland and Jean Tirole, 2010, Individual and Corporate Social Responsibility, *Economica*, 77, 1-19.

Bernea, Amir, Robert Heinkel and Alan Kraus, 2008, Doing Less Badly by Doing Good: Corporate Social Responsibility, *Working paper*.

Brown, William O., Eric Helland and Janet Kiholm Smith, 2006, Corporate Philanthropic Practices, *Journal of Corporate Finance*, 12, 855-877.

Carter, Suzanne M. and James D. Werbel, 2002, The CEO's Influence on Corporate Foundation Giving, *Journal of Business Ethics*, 40 (1), 47-60.

Cespa, G. and G. Cestone, 2007, Corporate Social Responsibility and Managerial Entrenchment, *Journal of Economics and Management Strategy*, 16**,** 741-771.

Cheng, Ing-Haw, Harrison Hong and Kelly Shue, 2011, Do Managers Do Good with Other Peoples' Money? *Working paper*.

Chetty, Raj and Emmanuel Saez, 2005, Dividend Taxs and Corporate Behavior: Evidence from the 2003 Dividend Tax Cut, *The Quarterly Journal of Economics*, 791-833.

Cohen, Rick, 2002, Corporate Giving: De-cloaking Stealth Philanthropy, *The Nonprofit Quarterly*, 9, 47-49.

Core, John and Wayne Guay, 1999, The Use of Equity Grants to Manage Optimal Equity Incentive Levels, *Journal of Accounting and Economics*, 28, 151-184.

EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be – Université Catholique de Louvain – Brussels – Belgium.

Fama, Eugene F., 1980, Agency Problems and the Theory of the Firm, *The Journal of Political Economy*, Vol. 88, No. 2, 288-307.

Electronic copy available at: https://ssrn.com/abstract=2234221

Faulkender, Michael and Rong Wang, 2006, Corporate Financial Policy and the Value of Cash, *The Journal of Finance*, LXI (4), 1957-1990.

Fisman, R., G. Heal and V. Nair, 2006, A Model of Corporate Philanthropy, *Working Paper*.

Fich, Eliezer and Anil Shivdasani, 2005, The Impact of Stock-Option Compensation for Outside Director Appointments by Fortune 1000 Firms, *Journal of Business*, 78 (5), 1943-1971.

Flannery, M. J., Rangan, K. P., 2006, Partial Adjustment toward Target Capital Structures, *Journal of Financial Economics*, 79, 469-506.

Galaskiewicz, Joseph, 1985, Social Organization of an Urban Grants Economy: A Study of Business Philanthropy and Nonprofit Organizations, *Orlando, FL: Academic Press*.

Galaskiewicz, Joseph, 1997, An Urban Grants Economy Revisited: Corporate Charitable Contributions in the Twin Cities, 1979-1981, 1987-1989, *Administrative Science Quarterly*, 42, 445-471.

Graham, John R. and Lilian Mills, 2008, Using Tax Return Data to Simulate Corporate Marginal Tax Rates, *Journal of Accounting and Economics*, 46, 366-380.

Guo, Lixiong and Masulis, Ronald W., 2013, Board Structure and Monitoring: New Evidence from CEO Turnover, *Working paper*

Hermalin, Benjamin, and Michael Weisbach, 1998, Endogenously chosen board of directors and their monitoring of the CEO, *American Economic Review*, 88, 96-118.

Hwang, Byoung-Hyoun and Seoyoung Kim, 2009, It Pays to Have friends, *Journal of Financial Economics*, 93, 138-158.

Jensen, Michael C., 1986, Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers, *The American Economic Review*, 76, No. 2, 323-329.

Jensen, Michael C., 1993, The Modern Industrial Revolution, Exit and The Failure of Internal Control Systems, *The Journal of Finance*, 48, 831-880.

Jensen, Michael C. and William H. Meckling, 1976, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3, 305-360.

Heron, Randall A. and Erik Lie, 2007, Does Backdating Explain the Stock Price Pattern Around Executive Stock Option Grants?, *Journal of Financial Economics*, 83, 271-295.

Kahn, Faith Stevelman, 1997, Pandora's Box: Managerial Discretion and the Problem of Corporate Philanthropy, *UCLA Law Review*, 44, 579-676.

List, John A. and Michael K. Price, The Role of Social Connections in Charitable Fundraising: Evidence from a Natural Field Experiment, *Journal of Economic Behavior and Organization*, 69 (2), 160-169.

Milbourn, Todd T, 2003, CEO Reputation and Stock-based Compensation, *Journal of Financial Economics*, 68, 233-262.

Electronic copy available at: https://ssrn.com/abstract=2234221

Monk, Robert A.G. and Minow N., 2004, Corporate Governance, *Blackwell Publishing*, 3rd edition.

Navarro, Peter, 1988, Why do Corporations Give to Charity? *Journal of Business*, 61 (1), 65-93.

Petrovits, Christine M., 2006, Corporate-sponsored Foundations and Earnings Management, *Journal of Accounting and Economics* 41, 335-362.

Rusticus, Tjomme O., 2006, Executive Severance Agreements, *Working paper*.

Stock, James H. and Motohiro Yogo, 2005, Testing for Weak Instruments in Linear IV Regression, Ch. 5 in J.H. Stock and D.W.K. Andrews edition, Identification and Inference for Econometric Models: Essays in Honor of Thomas J. Rothenberg, *Cambridge University Press*.

U.S. Securities and Exchange Commission, 1992, Executive Compensation Disclosure, Release No. 33-6962 (October 16), as corrected in Release No. 33-6966 (November 9).

Wei, Chenyang and David Yermack, 2011, Investor Reactions to CEOs' Inside Debt Incentives, *Review of Financial Studies*, 24 (11), 3813-3840.

Yermack, David, 1996, Higher Market Valuation of Companies with a small Board of Directors, *Journal of Financial Economics*, 40, 185-211.

Yermack, David, 2006, Flights of Fancy: Corporate Jets, CEO Perquisites, and Inferior Shareholder Returns, *Journal of Financial Economics* 80, 211-242.

Yermack, David, 2009, Deductio *Ad Absurdum*: CEOs Donating Their Own Stock to Their Own Family Foundations, *Journal of Financial Economics*, 94, 107-123.

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Appendix A: List of legislatorial proposals for corporate giving disclosure

There have been several efforts by legislators to enforce disclosure of corporate giving data. We list such events below.

i. Republican Congressman Paul Gillmor introduced H.R. 944 and H.R. 945 to the House of Representatives in 1997. This bill excluded disclosure requirements for contributions made to educational institutions and local charities. However, this bill empowered shareholders to vote on corporate giving.

ii. After the collapse of Enron, WorldCom and other companies, some policymakers tried to enforce stringent disclosure requirements on corporate giving. Consequently, the first draft of the Sarbanes-Oxley Act of 2002 passed by the House required firms to disclose such information (Petrovits, 2006).

iii. On February 13, 2002, Paul Gillmor again introduced a bill, H.R. 3745. This bill required disclosure requirements for substantial contributions made to insider-affiliated charities.

iv. Later in February 2002, Democrat John LaFalce introduced H.R. 3818 that restricts firms from providing charitable contributions to any group affiliated with directors. This bill also required information disclosure for officers and their immediate family members if they sit on the boards of nonprofit organizations, independent of whether the organization received any charitable contributions from these firms.

v. Eventually, corporate giving disclosure clauses were added in the Corporate and Auditing Accountability, Responsibility and Transparency Act (CAARTA), sponsored by Republican Michael Oxley. Faced with opposition from the Council on Foundations and the Independent Sector, this aspect of firm disclosure was dropped in the final version of the Sarbanes-Oxley Act (Cohen, 2002).

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Appendix B: Criteria for coding of corporate giving data

We maintain the following criteria for coding purposes.

i. If the directory (NDCG) only reports information on a firm's giving program or its foundation without stating the amount of giving, the contribution through program or foundation is recorded as zero.

ii. A firm may have several foundations which can transfer money among themselves. Since such transfers are not new donations, we exclude them from the total amount of money foundations receive in a year.

iii. Company-sponsored public foundations are not included as they usually have other donors and the total amount of giving for a specific firm cannot be easily separated from that of others.

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Appendix C: Definition of variables

Variable	Definitions
	Determinants of corporate giving decisions
CEO charity connection	Equals 1 if the CEO is related to nonprofit organizations, e.g., academic institutions, arts and culture, animal/wildlife and environment organizations, nonprofit charitable organizations, civil rights organizations, think tanks, and research centers. Source: biographical sections of annual reports, Businessweek, Forbes and www.nndb.com.
CEO ownership	$\frac{No.\ of\ CEO\ shares}{Total\ shares\ outstanding} + \frac{No.\ of\ CEO\ options}{Total\ shares\ outstanding} * delta$. Calculation follows Core and Guay's (1999) methodology.
Tenure	The current fiscal year minus the year when the CEO joined the company. Source: Execucomp; when missing, Businessweek and www.nndb.com.
Outside appointment	Equals 1 if the CEO is recruited from outside.
Board size	The logarithm of total number of board members.
Fraction of independent directors	The number of independent directors divided by board size.
Director ownership	The summation of share ownership by all directors at a firm.
CEO-chair duality	An indicator variable that takes the value of 1 if CEO is also the chairman and 0 otherwise.
E-index	This is as defined in Bebchuk, Cohen and Ferrell (2008) and comprises of classified board, limits to shareholder bylaw amendments, poison pill, golden parachute, supermajority requirements for mergers, and charter amendments.
Ad-to-sales	Advertising expenses / sales.
Ad indicator	Equals 0 if the data is missing in Compustat and 1 otherwise.
R&D-to-sales	R&D expenses/sales.
R&D indicator	Equals 0 if the data in Compustat is missing and 1 otherwise.
Asset	Log(1 + firm's asset) where firm asset is expressed in millions.
Number of employees	Log(1 + number of employees) where the number of employees is in thousands.
Number of shareholders	Log(1 + number of shareholders) where the number of shareholders is in thousands.
Marginal tax rate	Simulated corporate marginal tax rates. See Graham and Mills (1998) for detail.
Leverage	Total long-term debt / total assets.
ROA	Operating income before depreciation/assets.
Tobin's q	(Total assets – total common equity + annual closing price (fiscal) x common shares outstanding) / total assets.
Free cash flow	Income before extraordinary items + depreciation and amortization – capital expenditure.

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Free cash flow indicator	Equals 1 if free cash flow is greater than 0.
Assets-to-employee	Assets/number of employees.
Financial industry	Banking + insurance + trading.
Regulated industry	Utilities + communication.
Pharmaceutical industry	Medical equipments + pharmaceutical products.
Sin industry	Beer & liquor + tobacco products + defense.
Retail industry	Food products + consumer goods + apparel + retail.
Non-environmentally-friendly industry	Steel works + non-metallic and industrial metal mining + coal + petroleum and natural gas + SICs between 0800 and 0899 (forestry) + 2810 and 2819 (industrial inorganic chemicals) + 2400-2439 (lumber and wood products).
$Post_{2003}$	Equals 1 for years 2003 to 2006 (dividend tax cut years) and 0 otherwise.
	CEO compensation and corporate giving
Total giving ratio	Log(1 + corporate giving / sales) x 10^3. Program and foundation giving ratios are similarly calculated.
Total compensation	Log(TDC1) where TDC1 = salary + bonus + restricted stocks + stock options (Black-Scholes value) + long-term incentives + others.
Density of high net worth people	State level density of individuals with net wealth of at least $1 million.
Individual contribution/AGI	State level itemized charitable contributions (as reported on the IRS tax return Form 1040) divided by state level average gross income.
Natural disaster	Equals 1 if natural disasters occur in the firm's headquarters state. We consider natural disasters generating damage of at least $500 million in the same calendar year or the last quarter of the prior year.
Log(assets)	Log(1 + firm's asset) where firm asset is expressed in millions.
ROA	Operating income before depreciation/assets.
Stock return	The cumulative stock return during the year.
Volatility	1-year variance of stock returns.
Tenure as CEO	Equals current year – appointment year as CEO.
Outside appointment	An indicator variable that takes the value of 1 if the CEO is recruited from outside. If CEO's joining year precedes the year of employment as CEO, we calculate outside as 1.
Board size	The logarithm of total number of board members.
Independent board indicator	Takes the value of 1 if at least 70% of board members are independent. The calculation omits gray or linked directors.
Director ownership	The summation of share ownership by all directors at a firm.
E-index	This is as defined in Bebchuk, Cohen and Ferrell (2008) and comprises of classified board, limits to shareholder bylaw amendments, poison pill, golden parachute, supermajority requirements for mergers, and charter amendments.
	Corporate giving and the value of cash

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R	Cumulative stock returns over a year.
R^B	Fama-French size and book-to-market matched yearly portfolio returns. Source: Kenneth French's website.
R^{Ind}	Fama-French 48 industry portfolio returns.
ΔC_t	Changes in cash.
C_{t-1}	Level of cash.
ΔE_t	Changes in earnings before extraordinary items.
ΔNA_t	Changes in net assets.
ΔRD_t	Changes in R&D.
ΔI_t	Changes in interests.
ΔD_t	Changes in common dividends.
L_t	All debt / Market value of total assets.
NF_t	New equity issues + Net new debt issues.

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Figure 1: Charitable contributions of publicly-listed Fortune 500 firms and all corporations in the USA. Data on Fortune 500 firms is collected from the National Directory of Corporate Giving, while data on all corporate contributions is from the Giving USA reports.

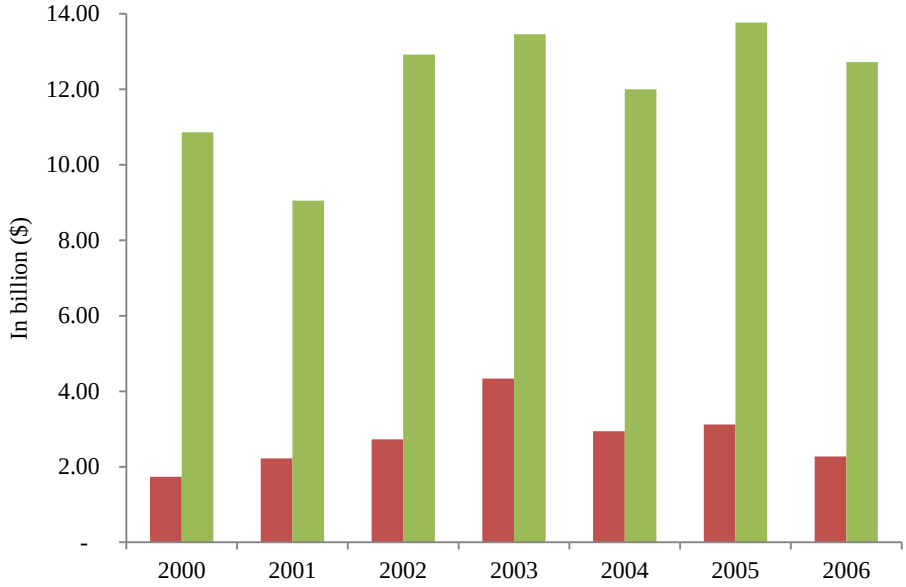

Figure 2: Cumulative average abnormal returns for the first disclosure of charity awards. The sample consists of 53 firms whose proxy statements are investigated during 1993 – 2010. Abnormal returns are calculated using the Fama-French-Carhart four factor model.

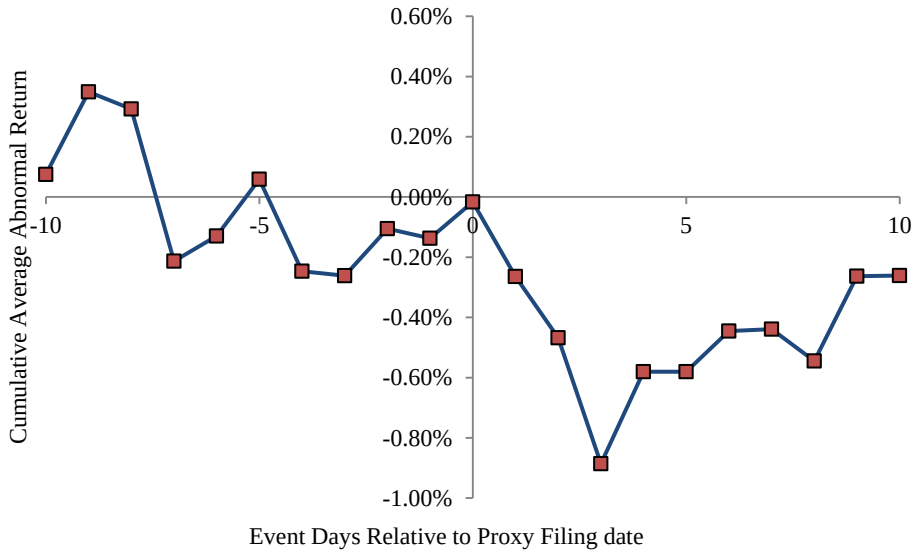

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Table 1
Descriptive statistics

This table provides summary statistics and industry frequency distributions of publicly-listed Fortune 500 firms during 1996 to 2006. Variable definitions are presented in the Appendix C. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively.

Panel A: Summary statistics

Variable	Mean	Std. dev.	10th	25th	Median	75th	90th
Program contribution (million)	2.470	21.900	0	0	0	0	0.185
Foundation contribution (million)	6.514	21.600	0	0	0.046	4.000	13.525
Total contribution (million)	8.984	32.300	0	0	0.406	5.480	17.600
CEO attributes							
CEO charity connection	0.714	0.452	0	0	1	1	1
Ownership (%)	1.760	3.836	0.142	0.318	0.666	1.477	3.333
Tenure (years)	18.022	11.993	3	7	17	28	35
Outside appointment	0.215	0.411	0	0	0	0	1
Governance variables							
Board size	11.252	2.590	8	9	11	13	15
Fraction of independent directors	0.711	0.156	0.500	0.615	0.733	0.833	0.900
Director ownership (%)	0.778	4.085	0.002	0.022	0.072	0.226	0.746
CEO-chairman duality	0.873	0.333	0	1	1	1	1
E-index	1.575	1.122	0	1	2	2	3
Profit maximizing variables							
Ad-to-sales	0.012	0.026	0	0	0	0.013	0.040
R&D-to-sales	0.020	0.047	0	0	0	0.019	0.062
Assets (log)	9.481	1.319	7.928	8.527	9.381	10.233	11.278
Number of employees (log)	3.416	1.072	2.116	2.717	3.401	4.078	4.812
Number of shareholders (log)	3.231	1.581	1.068	2.166	3.329	4.223	5.204
Marginal tax rate	0.333	0.059	0.300	0.347	0.350	0.350	0.355
Firm characteristics							
Leverage	0.182	0.143	0.025	0.071	0.148	0.268	0.370
ROA	0.135	0.078	0.035	0.084	0.127	0.184	0.236
Tobin's q	1.902	1.267	1.058	1.168	1.455	2.139	3.237
Free cash flow indicator	0.863	0.344	0.000	1.000	1.000	1.000	1.000
Observations					2421		

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Panel B: Industry distribution

Name	No.	% of sample	Name	No.	% of sample
Agriculture	3	0.12%	Shipbuilding, Railroad equipment	7	0.29%
Food	84	3.47%	Defense	8	0.33%
Soda	12	0.50%	Precious metals	5	0.21%
Beer	34	1.40%	Non-metallic and industrial metal mining	7	0.29%
Smoke	13	0.54%	Coal	6	0.25%
Toys	8	0.33%	Oil	103	4.25%
Fun	0	0.00%	Utilities	224	9.25%
Printing and Publishing	21	0.87%	Communication	60	2.48%
Consumer goods	71	2.93%	Personal services	8	0.33%
Apparel	23	0.95%	Business services	101	4.17%
Healthcare	30	1.24%	Computers	79	3.26%
Medical equipment	34	1.40%	Electronic equipment	92	3.80%
Pharmaceutical products	73	3.02%	Measuring and control equipment	13	0.54%
Chemicals	76	3.14%	Business supplies	60	2.48%
Rubber and Plastic products	0	0.00%	Shipping containers	9	0.37%
Textiles	7	0.29%	Transportation	63	2.60%
Construction materials	31	1.28%	Wholesale	100	4.13%
Construction	57	2.35%	Retail	260	10.74%
Steel works	32	1.32%	Restaurants, hotels, motels	44	1.82%
Fabricated products	0	0.00%	Banking	152	6.28%
Machinery	87	3.59%	Insurance	142	5.87%
Electrical equipment	27	1.12%	Real estate	0	0.00%
Automobiles and trucks	57	2.35%	Trading	36	1.49%
Aircraft	34	1.40%	Other	28	1.16%

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Panel C: Univariate comparisons of giving and non-giving firms

	Non-contributing		Contributing		Difference	*p*-value of difference
	Mean	Std. dev.	Mean	Std. dev.		
CEO attributes						
CEO charity connection	0.565	0.496	0.815	0.388	-0.250***	0.000
Ownership (%)	2.179	4.027	1.471	3.672	0.708***	0.000
Tenure (years)	17.293	11.990	18.524	11.974	-1.231**	0.013
Outside appointment	0.231	0.422	0.204	0.404	0.027	0.120
Governance variables						
Board size	10.673	2.571	11.651	2.528	-0.978***	0.000
Fraction of independent directors	0.698	0.162	0.719	0.152	-0.021***	0.000
Director ownership (%)	1.070	4.968	0.577	3.333	0.493***	0.007
CEO-chairman duality	0.857	0.350	0.884	0.320	-0.027*	0.053
E-index	1.580	1.108	1.572	1.132	0.008	0.868
Profit maximizing variables						
Ad-to-sales	0.010	0.024	0.014	0.027	-0.004***	0.000
R&D-to-sales	0.018	0.044	0.022	0.049	-0.004*	0.062
Assets (log)	9.084	1.154	9.754	1.356	-0.670***	0.000
Number of employees (log)	3.133	0.983	3.610	1.087	-0.477***	0.000
Number of shareholders (log)	2.804	1.575	3.525	1.518	-0.721***	0.000
Marginal tax rate	0.329	0.064	0.335	0.055	-0.006**	0.013
Firm characteristics						
Leverage	0.185	0.141	0.180	0.145	0.005	0.442
ROA	0.133	0.073	0.136	0.081	-0.003	0.288
Tobin's q	1.816	1.063	1.961	1.387	-0.145***	0.004
Free cash flow indicator	0.840	0.367	0.879	0.327	-0.039***	0.008
Number of observations	987		1434			
% of observations	40.77%		59.23%			

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Table 2
Corporate giving decisions

The sample considers corporate giving of Fortune 500 firms during 1996 to 2006. We use logit and tobit regressions to explain a firm's likelihood and amount of giving, respectively. All regressions are estimated with an intercept term. Robust standard errors are clustered at the firm level. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively. Variable definitions are in Appendix C.

Panel A: Logit models of corporate giving

	Dependent variable: Corporate giving = 1						
	Model 1		Model 2		Model 3		
	Estimates	*p*-value	Estimates	*p*-value	Estimates	*p*-value	dy/dx
CEO attributes							
CEO charity connection			1.025***	0.000	0.888***	0.000	0.215
CEO ownership (%)			-0.236***	0.000	-0.169***	0.004	-0.040
CEO ownership^2			0.008***	0.000	0.006***	0.004	0.001
Tenure (years)			0.006	0.419	0.003	0.665	0.001
Outside appointment			0.154	0.462	0.131	0.541	0.031
Governance							
Board size			0.060	0.106	0.001	0.978	0.000
Fraction of independent directors			0.355	0.467	0.148	0.770	0.035
Director ownership (%)			-0.030	0.244	-0.019	0.420	-0.004
CEO-chairman duality			-0.041	0.829	-0.185	0.341	-0.043
E-index			0.033	0.664	0.124	0.116	0.029
Profit maximizing variables							
Ad-to-sales	3.224	0.443			2.935	0.490	0.696
Ad indicator	-0.190	0.383			-0.157	0.477	-0.037
R&D-to-sales	0.760	0.746			0.821	0.734	0.195
R&D indicator	0.158	0.490			0.052	0.824	0.012
Assets (log)	0.269**	0.032			0.200	0.130	0.047
Number of employees (log)	0.284**	0.013			0.283**	0.016	0.067
Number of shareholders (log)	0.134**	0.038			0.058	0.376	0.014
Marginal tax rate	0.596	0.505			0.666	0.479	0.158
Firm characteristics							
Leverage	0.597	0.398	0.569	0.402	0.644	0.379	0.153
ROA	1.386	0.344	0.476	0.742	1.107	0.444	0.262
Tobin's q	0.083	0.298	0.150*	0.083	0.121	0.151	0.029
Free cash flow indicator	0.126	0.483	0.121	0.508	0.082	0.656	0.020
Asset/employee	0.000	0.675	0.000	0.581	0.000	0.750	0.000
Industries							
Financial	0.504	0.210	0.639*	0.074	0.652	0.116	0.144
Regulated	-0.066	0.858	-0.314	0.277	-0.137	0.716	-0.033
Pharmaceuticals	-0.151	0.774	-0.252	0.588	-0.380	0.479	-0.093
Retail	0.217	0.437	0.238	0.323	0.277	0.317	0.064
Sin	0.798	0.313	0.666	0.410	0.684	0.421	0.146
Non-environmentally-friendly	0.419	0.233	0.135	0.688	0.306	0.403	0.070
Year fixed effects	Yes		Yes		Yes		
Log likelihood	-1466.435		-1448.515		-1406.070		
Pseudo R^2	0.104		0.111		0.137		
Observations	2421		2413		2413		

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Panel B: Tobit models of corporate giving levels

	Dependent variable: Corporate giving ratio = log(1 + corporate giving / sales) x 10^3						
	Model 1		Model 2		Model 3		
	Estimates	*p*-value	Estimates	*p*-value	Estimates	*p*-value	dy/dx
CEO attributes							
CEO charity connection			1.017***	0.000	0.880***	0.000	0.015
CEO ownership (%)			-0.262***	0.000	-0.196***	0.000	-0.003
CEO ownership^2			0.009***	0.000	0.007***	0.000	0.000
Tenure (years)			0.002	0.793	0.001	0.903	0.000
Outside appointment			-0.101	0.647	-0.135	0.551	-0.002
Governance							
Board size			0.048	0.143	0.013	0.714	0.000
Fraction of independent directors			0.445	0.297	0.128	0.769	0.002
Director ownership (%)			-0.034	0.181	-0.023	0.300	-0.000
CEO-chairman duality			0.172	0.347	0.024	0.892	0.000
E-index			0.071	0.418	0.162*	0.080	0.003
Profit maximizing variables							
Ad-to-sales	0.410	0.922			0.389	0.921	0.006
Ad indicator	0.028	0.901			0.062	0.772	0.001
R&D-to-sales	5.881*	0.053			6.035**	0.045	0.100
R&D indicator	0.152	0.593			0.036	0.892	0.001
Assets (log)	0.189*	0.087			0.117	0.298	0.002
Number of employees (log)	0.089	0.356			0.087	0.362	0.001
Number of shareholders (log)	0.177**	0.011			0.098*	0.100	0.002
Marginal tax rate	0.120	0.888			0.075	0.926	0.001
Firm characteristics							
Leverage	0.838	0.208	0.596	0.300	0.903	0.163	0.015
ROA	2.201	0.114	0.700	0.619	1.784	0.184	0.030
Tobin's q	0.164	0.147	0.289**	0.013	0.205*	0.072	0.003
Free cash flow indicator	0.168	0.364	0.076	0.685	0.135	0.449	0.002
Asset/employee	0.000	0.752	0.000	0.911	0.000	0.574	0.000
Industries							
Financial	1.028**	0.024	0.930***	0.006	1.125**	0.015	0.019
Regulated	0.066	0.842	-0.136	0.559	0.022	0.945	0.000
Pharmaceuticals	1.847*	0.057	2.176**	0.036	1.639*	0.083	0.027
Retail	0.358	0.265	0.295	0.295	0.418	0.211	0.007
Sin	0.557	0.258	0.386	0.417	0.521	0.322	0.009
Non-environmentally-friendly	0.298	0.289	0.057	0.816	0.200	0.466	0.003
Year fixed effects	Yes		Yes		Yes		
Log likelihood	-3786.802		-3757.397		-3734.225		
Observations	2421		2413		2413		
Left censored observations	987		980		980		

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Table 3
A natural experiment using the 2003 individual dividend tax cut

The sample considers corporate giving of Fortune 500 firms during 1996-2002 and 2004-2006. It excludes year 2003 corporate giving data as the 2003 Tax Reform Act was officially signed into law at the end of May. Tobit regressions include all the explanatory variables in Table 2, an intercept term and year fixed effects, all of which are suppressed for brevity. $Post_{2003}$ takes the value of 1 for the year 2003 and onwards (2003 being the dividend tax cut year) and 0 otherwise. $Post_{2002}$ is similarly defined. Panel B considers firms with CEO charity connections (model 1) and firms with higher than sample mean dividend distributions (model 2). Robust standard errors are clustered at the firm level. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively. Variable definitions are in Appendix C.

Panel A: CEO ownership

	Dependent variable: Corporate giving ratio = log(1 + corporate giving / sales) x 10^3					
	2003 Dividend tax cut			Placebo		
	Estimates	*p*-value	dy/dx	Estimates	*p*-value	dy/dx
$Post_{2003}$	-0.738*	0.052	-0.011			
$Post_{2002}$				-0.218	0.429	-0.004
CEO ownership (%) x $Post_{2003}$	-0.089**	0.032	-0.001			
CEO ownership (%) x $Post_{2002}$				-0.029	0.528	-0.001
CEO ownership (%)	-0.153**	0.012	-0.002	-0.145**	0.029	-0.003
CEO ownership^2	0.006***	0.004	0.000	0.005***	0.009	0.000
Log likelihood	-3255.024			-3035.019		
Observations	2067			2067		
Left censored observations	833			833		

Panel B: Dividend payouts and CEO charity connections

	Dependent variable: Corporate giving ratio = log(1 + corporate giving / sales) x 10^3					
	CEO charity connections (1)			High dividend payers (2)		
	Estimates	*p*-value	dy/dx	Estimates	*p*-value	dy/dx
$Post_{2003}$	-0.224	0.431	-0.005	0.211	0.707	0.002
CEO ownership (%) x $Post_{2003}$	-0.035	0.351	-0.001	-1.223**	0.036	-0.011
CEO ownership (%)	-0.132**	0.039	-0.003	1.230	0.138	0.011
CEO ownership^2	0.005**	0.012	0.000	-0.220	0.124	-0.002
Log likelihood	-2443.135			-997.007		
Observations	1475			491		
Left censored observations	466			141		

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Table 4
Subsample analyses based on firm governance and profit motives

The sample considers corporate giving of Fortune 500 firms during 1996 to 2006. Tobit regressions include all the explanatory variables in Table 2, an intercept term and year fixed effects, all of which are suppressed for brevity. Robust standard errors are clustered at the firm level. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively. Variable definitions are in Appendix C.

Panel A: Subsamples based on managerial entrenchment and board independence

	Dependent variable: Corporate giving ratio = log(1 + corporate giving / sales) x 10^3							
	E-index ≥ 3		E-index < 3		Board independence = 1		Board independence = 0	
	Estimates	*p*-value	Estimates	*p*-value	Estimates	*p*-value	Estimates	*p*-value
CEO attributes								
CEO charity connection	1.310**	0.015	0.760***	0.000	0.726**	0.018	0.953***	0.000
CEO ownership (%)	0.030	0.896	-0.175***	0.000	-0.319***	0.004	-0.104*	0.053
CEO ownership^2	-0.022	0.275	0.006***	0.000	0.009*	0.052	0.003	0.167
Tenure (years)	0.016	0.574	0.000	0.946	0.008	0.594	0.001	0.947
Outside appointment	0.217	0.666	-0.065	0.758	-0.165	0.609	-0.126	0.522
Governance								
Board size	0.061	0.551	-0.003	0.934	-0.002	0.977	0.016	0.636
Fraction of independent directors	1.452	0.213	-0.215	0.631	-0.265	0.816	0.282	0.601
Director ownership (%)	-0.049*	0.084	-0.020	0.403	-0.048*	0.092	-0.001	0.965
CEO-chairman duality	0.462	0.494	-0.039	0.816	0.186	0.540	-0.034	0.863
E-index	0.656*	0.100	0.101	0.250	0.325**	0.045	0.055	0.400
Log likelihood	-911.621		-2719.020		-1977.542		-1102.806	
Observations	535		1878		1196		841	
Left censored obs.	213		767		474		330	

Panel B: Subsample of firms with positive advertising and R&D expenses

	Dependent variable: Corporate giving ratio = log(1 + corporate giving / sales) x 10^3	
	Advertising and R&D expenses > 0	
	Estimates	*p*-value
CEO attributes		
CEO charity connection	1.859***	0.010
CEO ownership (%)	-0.311*	0.096
CEO ownership^2	0.010	0.136
Tenure (years)	-0.044	0.205
Outside appointment	-0.999	0.215
Governance		
Board size	-0.264	0.119
Fraction of independent directors	1.078	0.528
Director ownership (%)	0.025	0.797
CEO-chairman duality	0.020	0.973
E-index	-0.093	0.715
Profit maximizing variables		
Ad-to-sales	-6.324	0.413
R&D-to-sales	6.284*	0.085
Assets (log)	-0.166	0.690
Number of employees (log)	0.979**	0.046
Number of shareholders (log)	0.020	0.915
Marginal tax rate	0.096	0.976
Log likelihood	-741.540	
Observations	386	
Left censored observations	123	

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Table 5
Market value of cash holdings and corporate giving

The sample considers corporate giving of Fortune 500 firms during 1996 to 2006. All dependent variables except for leverage are scaled by 1-year lagged market value of equity, M_{t-1}. The OLS regression specifications, including variable definitions, follow Faulkender and Wang (2006). Corporate giving ratio is defined as the log(corporate giving / sale) x 10^3. Regressions in Panel B controls for Fama-French 48 industry and year fixed effects, and are estimated with an intercept term. Robust standard errors are clustered at the firm level. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively. Variable definitions are in Appendix C.

Panel A: Descriptive statistics

Variable	10th	25th	Mean	Median	75th	90th
$r - R^B$	-0.609	-0.356	-0.121	-0.122	0.075	0.298
$r - R^{Ind}$	-0.336	-0.172	-0.014	-0.027	0.117	0.295
ΔC_t	-0.051	-0.010	0.028	0.006	0.038	0.108
C_{t-1}	0.008	0.022	0.226	0.061	0.155	0.417
ΔE_t	-0.055	-0.009	0.012	0.009	0.030	0.080
ΔNA_t	-0.143	-0.007	0.156	0.047	0.180	0.567
ΔRD_t	0.000	0.000	0.000	0.000	0.000	0.003
ΔI_t	-0.007	-0.002	0.001	0.000	0.002	0.010
ΔD_t	0.000	0.000	0.001	0.000	0.002	0.005
L_t	0.026	0.072	0.186	0.154	0.274	0.377
NF_t	-0.100	-0.043	0.015	-0.007	0.034	0.143

Panel B: OLS with industry and year fixed effects

Dependent variable (model):	$r - R^B$ (1)		$r - R^{Ind}$ (2)	
	Estimates	*p*-value	Estimates	*p*-value
Corporate giving ratio$_t$ x ΔC_t	-0.197	0.021**	-0.199	0.007***
Corporate giving ratio$_t$	0.006	0.205	0.005	0.068*
C_{t-1} x ΔC_t	-0.153	0.001***	-0.128	0.000***
L_t x ΔC_t	-0.018	0.961	-0.125	0.720
ΔC_t	0.797	0.000***	0.690	0.001***
ΔE_t	0.654	0.000***	0.522	0.000***
ΔNA_t	0.027	0.170	0.028	0.103
ΔRD_t	-0.092	0.961	0.799	0.644
ΔI_t	-1.450	0.035**	-1.126	0.073*
ΔD_t	1.410	0.285	0.472	0.688
C_{t-1}	0.068	0.028**	0.038	0.178
L_t	-0.115	0.125	-0.065	0.351
NF_t	-0.219	0.004***	-0.208	0.003***
Industry fixed effects	Yes		Yes	
Year fixed effects	Yes		Yes	
Adjusted R^2	30.66%		8.14%	
Observations	2671		2671	

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Table 6
Dividends and corporate giving

The sample focuses on Fortune 500 firms that make charitable contributions in year 2002. Sample years include two years around the 2003 Tax Reform Act. All variables are measured in millions of dollars. OLS regressions are estimated with an intercept term. Robust standard errors are clustered by Fama-French industry. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively.

	Dependent variable: Dividends ($)			
	Model 1		Model 2	
	Coefficients	*p*-value	Coefficients	*p*-value
$Post_{2003}$	126.162*	0.090	-26.052	0.662
Total contributions ($)	17.442***	0.000	11.124	0.001***
Total contributions ($) * $Post_{2003}$	-10.174**	0.022	-6.418	0.043**
After tax earnings ($)			0.125	0.045**
Total assets ($)			0.003	0.001***
Adjusted R^2	24.96%		60.51%	
Observations	449		449	

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Table 7
Firm contributions to charities affiliated with its CEO

CEO-affiliated charities refer to nonprofit organizations where a CEO holds a position of director, trustee, advisor, etc. Affiliated donations indicate firm donations directed to CEO-affiliated charities. Data on CEO-affiliated nonprofits is collected from annual reports, Businessweek and Forbes. Data on affiliated donations are extracted from the Foundation Directory Online database. The sample considers CEOs of firms from the 2006 Fortune 100 during their tenure between 2004 and 2010. Panel C estimates a tobit regression of CEO-affiliated corporate giving on CEO attributes and other control variables. Robust standard errors are clustered at the firm level. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively. Variable definitions are in Appendix C.

Panel A: CEO affiliations with nonprofit organizations

	Number	Percentage
Total number of CEOs	105	100.00
CEOs with affiliated organizations (a)	86	81.90
CEOs with affiliated donations (b)	65	61.90
% of charities with CEO-affiliation receiving corporate donations, i.e. (b)/(a)		75.58

Panel B: Magnitude of affiliated contributions

	Obs.	Dollar value	Mean	Std
Affiliated donations ($mil) (a)	63	154.44	2.45	4.55
Average CEO compensation ($mil) (b)	63	982.53	15.60	6.95
Affiliated donations as a % of average CEO compensation, i.e. (a)/(b)		15.72%	15.72%	

Panel C: Regression analysis of CEO-affiliated charity contribution levels

	Dependent variable: Level of affiliated corporate giving (‘000)	
	Estimates	*p*-value
CEO attributes		
CEO stock ownership	-2.702 **	0.031
Tenure (years)	-21.136	0.347
Outside appointment	-485.513	0.391
Control variables		
Assets (log)	521.917 *	0.067
Financial	1240.391	0.111
Regulated	1259.598 *	0.063
Pharmaceuticals	1821.895	0.118
Retail	-40.330	0.945
Sin	277.512	0.693
Non-environmentally-friendly	334.091	0.585
Log likelihood	-1815.437	
Observations	514	
Left censored observations	326	

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Table 8
Stock price reactions to initial disclosures of charity awards

Panel A presents mean cumulative abnormal returns of 53 firms that disclose charity awards for the first time during 1993 – 2010. Abnormal returns are calculated using standard event-study methodology using the Fama-French-Carhart four factor model. The event date zero is the firm's proxy filing date with the SEC. The last column in Panel A reports the *p*-value for the significance of the frequency of negative CARs using a Wilcoxon signed-rank test. Panel B shows estimates from an OLS regression model of firm-level CARs as a function of an intercept, CEO ownership and CEO charity connection. Standard errors are robust to heteroskadasticity.

Panel A: Event study results

Model	Event window	Observations	Mean CAR	*p*-Value	*Wilcoxon p-Value*
Market model	[1, 3]	53	-0.833%	0.020	0.065
CAPM			-0.820%	0.022	0.071
Three-factor			-0.865%	0.014	0.059
Four-factor			-0.869%	0.014	0.038

Panel B: OLS regression analysis with CARs

	Estimate	*p-value*
CEO ownership	0.038 *	0.099
CEO charity connection	-0.017 **	0.022
Adjusted-R^2	1.09%	
Observations	53	

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Table 9
Donations to corporate foundations and annual donations to charities

The sample considers corporate giving of 2006 Fortune 500 firms during 1996 to 2006. All tobit regressions include an intercept term. Robust standard errors are clustered at the firm level. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively. Variable definitions are in Appendix C.

	Model 1			Model 2		
Dependent variables:	Program giving = log(1 + prog. cont. / sales) x 10^3			Foundation giving = log(1 + found. cont. / sales) x 10^3		
	Estimates	*p*-value	dy/dx	Estimates	*p*-value	dy/dx
CEO attributes						
CEO charity connection	0.216	0.628	0.001	0.788***	0.000	0.019
CEO ownership (%)	-0.484***	0.010	-0.003	-0.132***	0.007	-0.003
CEO ownership^2	0.016***	0.004	0.000	0.004***	0.006	0.000
Tenure (years)	0.045**	0.012	0.000	-0.004	0.684	0.000
Outside appointment	0.968*	0.057	0.006	-0.239	0.288	-0.006
Governance						
Board size	-0.112	0.183	-0.001	0.032	0.305	0.001
Fraction of independent directors	2.257*	0.086	0.014	-0.086	0.825	-0.002
Director ownership (%)	0.065*	0.087	0.000	-0.050*	0.058	-0.001
CEO-chairman duality	0.944**	0.048	0.006	-0.046	0.762	-0.001
E-index	0.072	0.669	0.000	0.158*	0.064	0.004
Profit maximizing variables						
Ad-to-sales	10.969	0.178	0.068	-2.276	0.574	-0.055
Ad indicator	0.473	0.321	0.003	-0.054	0.780	-0.001
R&D-to-sales	8.111	0.133	0.050	3.697	0.189	0.090
R&D indicator	-0.513	0.301	-0.003	0.127	0.630	0.003
Assets (log)	0.583*	0.074	0.004	0.049	0.642	0.001
Number of employees (log)	0.201	0.367	0.001	0.042	0.618	0.001
Number of shareholders (log)	-0.125	0.311	-0.001	0.114**	0.050	0.002
Marginal tax rate	-0.761	0.728	-0.005	-0.061	0.933	-0.001
Firm characteristics						
Leverage	0.159	0.912	0.001	0.727	0.237	0.018
ROA	-0.651	0.850	-0.004	1.501	0.236	0.036
Tobin's q	0.190	0.333	0.001	0.176*	0.091	0.004
Free cash flow indicator	0.755	0.101	0.005	0.043	0.805	0.001
Asset/employee	0.000	0.182	0.000	0.000	0.916	0.000
Industries						
Financial	0.264	0.779	0.002	1.008**	0.024	0.025
Regulated	0.646	0.413	0.004	-0.071	0.817	-0.002
Pharmaceuticals	0.543	0.637	0.003	1.082	0.187	0.026
Retail	-0.815	0.148	-0.005	0.514	0.120	0.012
Sin	-1.137	0.234	-0.007	0.665	0.148	0.016
Non-environmentally-friendly	0.152	0.833	0.001	0.091	0.728	0.002
Year fixed effects	Yes			Yes		
Log likelihood	-1109.635			-3197.306		
Observations	2413			2413		
Left censored observations	2151			1129		

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Table 10
CEO compensation and corporate giving

Panel A presents the descriptive statistics of natural disasters across USA states during 1996 to 2006. This panel presents information on natural disaster types, its monetary damages and the states it affected. Panels B-D present two-stage least squares estimates where the instrument for corporate giving is a firm-year indicator for firms headquartered in states with natural disasters. The sample considers 2006 Fortune 500 firms during 1996 to 2006. Both stages of regressions consider firm and year fixed effects, and are estimated with an intercept term. We define giving ratio as log(1 + corporate giving / sales) x 10^3. Robust standard errors are clustered at the firm level. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively. Variable definitions are in Appendix C.

Panel A: Natural disasters

Year	Type of natural disasters	Total value of damage (in $mil)	Number of states affected
1996	Flood, storm	6,100	25
1997	Flood, storm	8,000	27
1998	Extreme temperature, storm	12,880	24
1999	Drought, extreme temperature, storm	12,860	33
2000	Drought, Wildfire	3,600	19
2001	Earthquake, storm	8,000	8
2002	Drought, flood, storm	9,200	19
2003	Storm, wildfire	17,970	27
2004	Flood, storm	55,300	28
2005	Storm	157,530	6
2006	Flood, storm	4,400	19

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Panel B: First stage, fixed effect regressions

	Model 1		Model 2		Model 3	
Dependent variable:	Total giving ratio		Program giving ratio		Foundation giving ratio	
Explanatory variables	Estimates	*p*-value	Estimates	*p*-value	Estimates	*p*-value
Density of high net worth people	-2.643	0.327	-1.135	0.537	-1.514	0.447
Individual contribution/AGI	-1.551	0.696	-0.130	0.948	-1.430	0.428
Natural disaster	-1.821***	0.009	-1.071*	0.056	-0.753**	0.046
Natural disaster * log(assets)	0.157**	0.021	0.091*	0.076	0.067*	0.081
Natural disaster * ROA	3.922***	0.009	2.154*	0.064	1.774	0.110
Natural disaster * Stock return	-0.165	0.175	-0.043	0.662	-0.122	0.209
Log(assets)	-0.255	0.144	-0.019	0.871	-0.235**	0.068
Stock return	0.143	0.119	0.031	0.399	0.111	0.199
ROA	-1.853	0.171	-1.424*	0.085	-0.434	0.515
Volatility	1.358	0.328	0.958	0.227	0.400	0.716
Tenure as CEO	0.007	0.363	0.004	0.229	0.003	0.541
Outside appointment	-0.079	0.462	-0.028	0.619	-0.052	0.402
Board size	0.001	0.946	-0.006	0.614	0.007	0.671
Fraction of independent directors	0.472	0.171	0.163	0.386	0.310	0.274
Director ownership (%)	0.005	0.330	0.004	0.125	0.001	0.715
E-index	0.070	0.381	0.060	0.311	0.010	0.866
Year fixed effects	Yes		Yes		Yes	
Firm fixed effects	Yes		Yes		Yes	
Adjusted R^2	43.51%		20.13%		49.00%	
Observations	2381		2381		2381	
Weak instrument test (*F*-stat.)	16.99		21.91		10.17	

Panel C: Second stage, fixed effect regressions

	Model 1		Model 2		Model 3	
Dependent variable:	Total compensation		Total compensation		Total compensation	
Explanatory variables	Estimates	*p*-value	Estimates	*p*-value	Estimates	*p*-value
Total giving ratio (predicted)	0.339*	0.067				
Program giving ratio (predicted)			0.679**	0.036		
Foundation giving ratio (predicted)					0.727*	0.070
Log(assets)	0.342***	0.010	0.264**	0.014	0.411***	0.001
Stock return	0.020	0.887	0.034	0.750	0.008	0.940
ROA	1.036	0.458	1.319	0.110	0.773	0.391
Volatility	-2.444	0.167	-2.650	0.237	-2.211	0.110
Tenure as CEO	-0.006	0.317	-0.006	0.166	-0.005	0.251
Outside appointment	0.173**	0.025	0.165**	0.019	0.179**	0.015
Board size	-0.012	0.349	-0.007	0.518	-0.016	0.153
Fraction of independent directors	-0.425	0.258	-0.381	0.203	-0.458	0.178
Director ownership (%)	-0.005	0.474	-0.005	0.388	-0.004	0.550
E-index	0.056	0.373	0.038	0.458	0.074	0.124
Year fixed effects	Yes		Yes		Yes	
Firm fixed effects	Yes		Yes		Yes	
Adjusted R^2	56.04%		46.27%		46.21%	
Observations	2381		2381		2381	

Panel D: Distribution of log(total compensation), total compensation is in thousand dollars

	10th	25th	Mean	Median	75%	90%
log(tdc1)	7.614	8.250	8.775	8.813	9.930	9.996

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Table 11

Alignment of independent director interests with causes supported through corporate giving

Information on independent directors' charity interests for Fortune 500 firms is retrieved from 2005 and 2006 proxy statements. The sample in Panel A is conditional on positive director charity affiliations. The causes of corporate giving exceeding $1 million are based on philanthropic activities during 2005-2006. The source of this information is the Foundation Directory Online database. The fixed effect (industry) regressions in Panel B control for all control variables in Panel C, Table 10 as well as year fixed effects. The sample in Panel B considers firms with independent boards (model 1) and non-independent boards (model 2) separately. Robust standard errors are clustered by Fama-French industry. ***, ** and * denote statistical significance based on two sides tests at the 1%, 5% and 10% level, respectively.

Panel A: Director interests and corporate giving causes

Interests of independent directors		Corporate giving causes (first three)	
Purpose	% of directors	Purpose	% of firms
Agriculture/food	0.00	Agriculture/food	1.05
Animals/wildlife and environment	11.81	Animals/wildlife and environment	2.53
Arts & culture	22.15	Arts & culture	18.11
Civil/human rights	10.34	Civil/human rights	0.63
Community development and employment	4.64	Community development and employment	4.63
Crime/law enforcement	1.05	Crime/law enforcement	0.00
Education	63.71	Education	32.42
Health centers and health research institutes	25.53	Health centers and health research institutes	3.79
Housing/shelter	1.69	Housing/shelter	2.11
Health and human services	3.80	Health and human services	28.00
International/foreign affairs	14.35	International/foreign affairs	5.05
Philanthropic organizations	46.62	Philanthropic organizations	23.58
Recreation	7.38	Recreation	0.63
Religion	2.95	Religion	0.42
Research centers & think tanks	18.35	Research centers & think tanks	1.05
Safety/disasters	1.48	Safety/disasters	1.47
Science/social science	4.85	Science/social science	1.47
Youth development	12.24	Youth development	3.37

Match between the interests of directors and the first three causes supported through corporate giving is 68.80%.

Panel B: Industry fixed effect OLS regressions with year fixed effects

	Dependent variable: Total compensation			
	Board independence = 1		Board independence = 0	
	Estimates	*p*-value	Estimates	*p*-value
Director supported cause	0.295**	0.035	0.145	0.372
Controls	Yes		Yes	
Industry fixed effects	Yes		Yes	
Adjusted R^2	26.45%		77.51%	
Observations	486		143	

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