

Private Benefits of Corporate Philanthropy and Distortions to Corporate Financing and Investment Decisions

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Abstract

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Keywords: Corporate giving; charitable contributions; private benefits of control; investment decisions; financing decisions; hedge fund activism.

JEL Classifications: G30, G31, G32, G34, G3

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Abstract

We find that corporate giving represents a private benefit of control that distorts corporate investment and financing activity, consistent with free cash flow agency theory. Corporate giving discourages managers from pursuing external financing, especially debt issuance, to minimize outside monitoring. It creates preferences for internally financed cash acquisitions for the same reason. These distortions reduce shareholder wealth. Following the 2003 dividend tax cut or hedge fund activism, corporate charitable contributions fall, while investment rises, suggesting suboptimal investment caused by managerial private benefit extraction. Merger announcements show negative stock market reactions that are more pronounced for acquirers with poor corporate governance.

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1. Introduction

It has long been recognized that separation of corporate ownership and control creates managerial incentives to extract private benefits at the expense of shareholder wealth creation.² Since most private benefit consumption is difficult to observe, assessing the importance of such opportunistic behavior is a serious challenge to empirical researchers. Consequently, existing studies resort to using various *indirect* measures of managerial rent extraction such as price premiums on the sale of controlling share blocks (Dyck and Zingales, 2004) and the market value of a firm's liquid assets relative to its face value (Faulkender and Wang, 2006). Existing studies document a few direct channels of managerial rent extraction such as CEOs' private use of corporate jets (Yermack, 2006) and excessive managerial compensation (Bertrand and Mullainathan, 2000; Bebchuk and Fried, 2004) that lead to reduced firm value. In this study, we analyze corporate charitable activities as an important direct measure of CEO rent extraction and show that managerial efforts to avoid restrictions on private benefit extraction by external capital providers create economically important distortions in corporate financing and investment decisions. One advantage to focusing on corporate philanthropy as a source of managerial private benefits is that we are able to directly measure its costs given IRS filing and public disclosure requirements.

Concerns about the agency conflicts associated with the private benefits of corporate philanthropy have a long history in the corporate finance literature. Milton Friedman (1970) viewed corporate giving as a waste of corporate resources, while Jensen and Meckling (1976) identified it as a form of non-pecuniary benefits consumed by managers (pg. 312). Empirically, Atkinson and Galaskiewicz (1988) and Masulis and Reza (2015) show that CEO charity connections (CEO shareholdings) are positively (negatively) associated with the scale of corporate giving and especially with the identity of the firm's nonprofit recipients. It is striking that two out of three Fortune 500 firms that make charitable contributions include donations to charities linked

² Referring to managers, Adam Smith (1776) writes "it cannot well be expected that they should watch over [shareholders' money] with the same anxious vigilance with which the partners in a private [company] frequently watch over their own."

to their CEOs, who hold positions as a trustee, director, officer, or advisor to the recipient nonprofits. Moreover, corporate donations to CEO affiliated nonprofits equal about 16% of CEO total compensation. Cespa and Cestone, (2007), Cai, Xu, and Yang (2021), and Masulis and Reza (2015) show that CEOs also frequently use corporate giving to support the charitable interests of independent directors, which can compromise their independence. Investors appear to recognize this activity as rent extraction since the stock market reacts negatively to announcements of corporate giving activities linked to its officers or directors. Consistent with this perspective, Masulis and Reza (2015) find causal evidence that after the 2003 Dividend Tax Cut, which exogenously raised the opportunity costs of rent extraction in foregone after-tax cash dividends, managers significantly reduce corporate giving, particularly when they hold a substantial fraction of firm stock.³

To further validate that corporate giving represents a form of managerial rent extraction given its positive image as a social good, we investigate whether the disciplining role of hedge fund activism leads to a significant reduction in corporate charitable contributions. Brav, Jiang, Partnoy, and Thomas (2008) find significantly improved stock performance after hedge fund activism, which they attribute to a reduced free cash flow problem associated with better managerial incentives. There is also substantial evidence that hedge fund activists improve firms' long-term profitability (Brav, Jiang, Partnoy, and Thomas, 2008; Bebchuk, Brav, Jiang, and Keusch, 2020).

If corporate charitable contributions are indeed shareholder wealth creating, then we should not expect corporate giving to fall with hedge fund activism. Yet, we find that after a hedge fund acquires substantial firm ownership, corporate giving falls significantly as seen in Figure 1. Specifically, average (median) corporate giving before hedge fund activism is approximately \$15

³ Nevertheless, one could argue that corporate giving levels are too small to be economically important. However, existing studies, e.g., Yermack (2006), find that the actual size of the information effects associated with private benefits is much larger than the dollar amounts announced, which is indicative of the capitalization of a more general pattern of rent extraction implied by these private benefits. We also document significant economic effects of corporate giving in our analysis of the profitability of mergers and acquisitions below.

million (\$3.25 million), but it falls to only about \$5.5 million (\$2 million) after hedge funds acquire at least a 5% ownership position in target firms. These results are inconsistent with the hypothesis that corporate giving is a shareholder wealth maximizing decision. But this evidence is consistent with the hypothesis that corporate giving is generally a manifestation of a managerial rent extraction problem. We also find in later analysis that the negative relations of corporate giving with firm financing and investment decisions are fundamentally different from their relations with advertising and (even) employee matching grants, which prior research has shown to increase firm value and employee morale.

Drawing on free cash flow theory, we hypothesize that consumption of large private benefits such as corporate giving creates a managerial aversion to new external financing due to the threat of enhanced scrutiny of corporate expenditures by external capital providers (Jensen 1986).⁴ Given this managerial aversion to external financing, corporate giving can directly reduce internal cash flows available for investment, thereby exacerbating the underinvestment problem as managers forego investments to fund additional private benefit consumption. One further implication of this problem in the context of the existing investment literature is that the cash flow levels reported in financial statements are understated due to this managerial rent extraction.⁵ Studying corporate giving allows us to directly test for a relationship between managerial rent extraction and distortions in firm investment and financing decisions.⁶

⁴ While this theory is generally interpreted as stimulating overinvestment and empire building at weakly governed firms, the theory is more general. Jensen (1986) states that “[c]onflicts of interest between shareholders and managers ... are especially severe when the organization generates substantial free cash flow. The problem is how to motivate managers to disgorge the cash rather than investing it at below the cost of capital *or wasting it on organization inefficiencies*” which can include excess compensation and perquisites, shirking and managerial consumption of private benefits such as linked charitable giving, which can lead to underinvestment and organizational inefficiencies.

⁵ Corporate giving is economically important. For the set of firms with positive charitable contributions, we find that the mean, 75 and 90 percentiles of corporate giving over net income are 0.61%, 1.18% and 2.70%, respectively.

⁶ One important caveat concerning our analysis is that in some instances corporate giving can benefit shareholders. For example, an R&D intensive firm can make targeted charitable contributions to nonprofit research institutions that carry out studies in collaboration with the firm. To the extent that contributions of this form are occurring, the agency theory predictions will be weakened. Nevertheless, the net effect of corporate philanthropy documented in the literature is consistent with managerial agency problems rather than with firm value maximization (Galaskiewicz 1985; Galaskiewicz 1997, Cespa and Cestone 2007; Masulis and Reza 2015; Cai, Xu, and Yang 2021; Cheng, Hong, and Shue, 2019).

If corporate philanthropy is indeed a private benefit enjoyed by CEOs, then we should expect external suppliers of capital to place restrictions on its size. This is especially true for debt issues that impose protective covenant restrictions on firms. To explore this issue, we investigate whether there is evidence of managerial aversion to external financing, conditioning on large corporate giving activity. To test this proposition, we first estimate a model of net debt and equity issuances following Almeida and Campello (2010) to capture firms' external financing patterns. We find that a typical firm raises about 33.5 cents of new external capital for each dollar of internal cash flow shortfall. However, if a firm's charitable contribution rises from the 50th to the 90th percentile, then predicted external financing falls by 7.5 cents, which represents a tangible 22.4% fall in external financing level.

Consistent with managerial rent extraction, we find particularly strong aversion to external debt financing. Specifically, modeling a firm's net debt issuance in the spirit of Shyam-Sunder and Myers (1999), we find that a typical firm raises about 94 cents of new debt for every dollar rise in its financing deficit, which is defined as a firm's uses of funds minus its sources of funds. Yet, new debt issuance declines by 10.8 cents per dollar if a firm's charitable contributions rise from the 50th to 90th percentile level. Given debt contracts have both required repayments that reduce free cash flows and protective covenants tied to minimum financial ratios, they discourage managers from wasting valuable corporate resources since otherwise they risk future covenant violations, financial distress, or bankruptcy. Moreover, bank approvals of new loans involve a review of a firm's current financial condition and expenditures. Our finding that new debt issuance falls with corporate giving provides support for managerial aversion to debt discipline prediction. We also show that these external financing effects are more pronounced in firms where managers are more protected from the market for corporate control, serious product market competition, and monitoring by institutional investors and corporate boards, which are alternative governance mechanisms for disciplining managers and limiting their extraction of private benefits. The external financing effects are also more pronounced in firms where managers are relatively more

powerful and have less share ownership and thus, their interests are less aligned with outside shareholders.

Corporate investment frequently requires external financing, while managers extracting large private benefits have incentives to avoid the additional scrutiny of external capital providers. Thus, pursuing new investment inevitably creates a tension for such managers when they have limited internal funds to finance both capital expenditures and their private benefits of control. In this environment, we evaluate how private benefit consumption affects current investment decisions. When managers avoid monitoring by new external capital providers, we find that corporate giving distorts the relation between investment and internal sources of financing capital projects as each dollar of charitable donations is one less dollar of internal cash flow available to finance new corporate investment.⁷ Based on the quasi-natural experiments that we describe below, we argue that a reduced level of corporate giving raises the allocation of internal capital to profitable investment projects. Since these experiments mitigate the managerial incentive problem associated with free cash flows, our analysis suggests that a partial solution to the underinvestment problem is to impose stricter limits on managerial consumption of private benefits. These results also provide evidence against both financial constraint and empire building hypotheses, under which we predict a higher investment sensitivity to internal cash flows.

We find that the effect of corporate giving on corporate investment is economically important. Using the mean cash flow of a typical firm in our sample as a benchmark, we find that a rise from the 50th to the 90th percentile in corporate giving reduces investment expenditures by approximately 1%.⁸ A similar result continues to hold if we combine R&D expenses with capital

⁷ One implication of our analysis is that the investment sensitivity to internal cash flows (not adjusting for corporate giving) appears to be significantly higher in firms that spend more on managerial private benefit consumption. As a result, firms with agency problems associated with high free cash flows may be erroneously labeled as cash constrained under a conventional analysis of a firm's investment-cash flow relation, which then overstates the role of capital market frictions. This raises fresh doubts about how to interpret conventional investment-cash flow sensitivity estimates and whether they produce a reliable picture of a firm's actual financial constraints (Fazzari, Hubbard, and Petersen 1988; Kaplan and Zingales 1997; Gomes 2001; Alt 2003; Almeida and Campello 2007).

⁸ Note that the corporate giving distribution is strongly skewed, which makes the one standard deviation change metric less reliable.

expenditures. We also compare our results with the impacts of other determinants of corporate investment. For example, Julio and Yook (2012) use national election years as a measure of increased political uncertainty and find that it reduces corporate investments by 4.8%. Similarly, a one standard deviation rise in uncertainty about taxation, government spending or monetary policy is associated with a 6.3% fall in quarterly investments (Gulen and Ion 2016). Thus, while these well-known macroeconomic effects are clearly stronger, we find that a firm's private benefit extraction also has a tangible impact on its investment.

To address the *underinvestment problem* due to free cash flows, we conduct a quasi-natural experiment. Specifically, we use the 2003 dividend tax cut, which reduces individual income tax rates on dividends from 35% to 15% (Chetty and Saez 2005) and thus, dramatically raises the after-tax cost of private benefit consumption from 0.65 per dollar to 0.85 per dollar. We find that after the 2003 tax code change, firms substantially reduce charitable contributions. More importantly, subsequent reductions in corporate giving result in more investment as more internal cash flows are freed up for investment. This suggests a more efficient allocation of corporate resources away from CEO rent extraction to profitable investment projects. Our analysis also suggests that an underinvestment problem due to CEO private benefits extraction is less of a concern after the 2003 tax code change.

To provide further evidence on whether corporate giving is associated with underinvestment, we again consider the disciplining role of hedge fund activism on corporate charitable contributions. Earlier, we found that following hedge fund activism targeted firms reduce charitable contributions, consistent with these contributions not enhancing shareholder value. Now, we examine whether subsequent reductions in corporate giving after hedge fund activism, which should increase cash to finance capital projects, are associated with higher levels of corporate investment, rather than simply a general tightening of controls on expenditures. We find that investment-cash flow sensitivity increases after the reduction in corporate giving, reflecting the disciplining role of hedge fund activism. As predicted by the model, a drop from the 90th to the 50th percentile in corporate giving after a hedge fund acquires at least a 5% ownership

position in a target firm is associated with an approximate 2.88% increase in corporate investment. Both the 2003 dividend tax cut and the hedge fund activism experiments suggest that reductions in managerial private benefit consumption for exogenous reasons lead to a more efficient allocation of internal funds to capital projects, providing further support for the free cash flow hypothesis.

We undertake several falsification tests to validate our findings that corporate giving is not shareholder value creating. For example, we consider a specific type of corporate giving, namely employee matching grants, which could boost employee morale and increase community engagement. As such, these grants can be less prone to CEO rent extraction. We find that employee matching grants have no relationship to corporate investment. Since matching grants are not a large fraction of corporate giving, it is not surprising that when we exclude matching grants from corporate giving, our findings remain qualitatively the same.⁹ We also show that our benchmark regression estimates cannot be explained by charitable contributions being driven by a profit maximization motive. Specifically, when we replace corporate giving with its predicted value from a profit maximization model of corporate giving similar to that in Masulis and Reza (2015), we find that the relatively small component of corporate giving that is value enhancing does not affect corporate investment. In contrast, the excess component of corporate giving is negatively associated with investment levels.¹⁰

In a further test, we analyze corporate giving in firm-years after outside CEO appointments since new CEOs are unlikely to personally benefit from donations to the same charities the firm previously supported. Moreover, new CEOs are likely to have stronger external reputation incentives, making them more sensitive to reputational damage created by self-serving rent extraction (Milbourn 2003), especially early in their term as CEO. Our findings suggest the

⁹ The average employee matching grant as a percentage of the total amount of corporate giving is 0.58%.

¹⁰ We also examine whether corporate giving is an investment similar to advertising, which could suggest that the negative relation we document above could reflect a substitution effect between corporate giving and advertising. However, we find that advertising expense does not affect corporate investment, which we conjecture is mainly because such expenses have a positive effect on current cash flow (sales).

negative effect of corporate giving on investment is concentrated in firms with a long serving CEO or with a new internally selected CEO, where corporate giving recipients generally remain unchanged.

To further test the free cash flow hypothesis, we report a subsample analysis where we separately examine financially constrained and unconstrained firms. If the free cash flow hypothesis is correct, then the negative effect of corporate giving on current investments should be concentrated in a subsample of financially *unconstrained* firms. Since unconstrained firms can finance future investment shortfalls with future external financing, managers are able in the short run to continue extracting private benefits from current cash flows at the expense of reduced current investment, consistent with Jensen (1986). Categorizing firms as financially constrained following the standard measures in the literature, we find results consistent with the prediction that private benefits extracted to support corporate philanthropic activities reduce internal cash flows that lead to an underinvestment problem, but only for financially unconstrained firms.¹¹

A further prediction from this analysis is that the underinvestment problem is more pronounced in firms with weak corporate governance. To test this prediction, we analyze the effect of corporate giving after conditioning on strong or weak governance, where we use the following well known governance measures: antitakeover defenses, product market competition, institutional investor ownership, board independence, CEO-chairman duality, and CEO ownership. These key governance characteristics all have a strong theoretical basis and established empirical importance.¹² Our findings are consistent with the negative effect of corporate giving on

¹¹ Our evidence of lower levels of external financing for firms with higher corporate giving and underinvestment could be explained by firms having free cash flow problems due to a lack of profitable investment opportunities. However, the subsample analysis with financially unconstrained firms provides results inconsistent with this argument, since these firms can relatively easily tap the external capital market to finance investment opportunities. We also find in our later mergers and acquisition analysis that the negative effect of corporate giving on acquirer announcement returns is concentrated in the subsample of cash-financed deals where the acquirer's net change in debt is negative. This suggests that these M&A deals are primarily financed by internal cash holdings, implying that these acquirers are also financially unconstrained. Based on this body of the evidence, we argue that corporate giving leads to suboptimal financing and investment decisions.

¹² See Jensen and Meckling (1976), Core, Holthausen, and Larcker (1999), Cremers and Nair (2005), Bebchuk, Cohen, and Ferrell (2009), and Guo and Masulis (2015). Masulis (2020) provides a review of the board governance literature.

investment being more pronounced when a firm can not only avoid monitoring by external capital providers, but is also insulated from the market for corporate control, faces low product market competition, has less institutional investor monitoring, and has a sufficiently weak board relative to its CEO that they are unlikely to be able to effectively control the size of charitable donations or to determine how these charitable recipient are selected.

As an alternative measure of investment activity, we also examine the relation of corporate giving to external investment through acquisitions, events where we can observe market reactions to these corporate decisions. Existing studies use a variety of methods to estimate if firms have a free cash flow agency problem. For example, Lang, Stulz, and Walkling (1991) use high cash flows and low Q to predict firms with negative NPV projects, whereas Harford (1999) uses high cash reserves to identify firms with abnormally high agency problems. In our study, we use observable private benefit consumption in the form of corporate giving to identify a free cash flow problem.

In the following experiment, we document that firms with large charitable contributions realize significantly lower returns on acquisition announcements, suggesting that investors use the size of charitable giving as a proxy to estimate the expected rate of managerial rent extraction from a firm's newly acquired assets or the likelihood of inefficient empire building occurring. Moreover, we find that less positive announcement effects are concentrated in the internally financed cash acquisitions and in diversifying acquisitions. This is noteworthy because internally financed cash transactions allow managers to avoid monitoring by the external capital market and by target investment advisors. On the other hand, diversifying acquisitions can be attractive since they reduce managers' idiosyncratic risk bearing, even if the investment is not value enhancing to shareholders (Harford 1999). Regardless of which interpretation is correct, they both imply that large corporate charitable donations are consistent with a serious manager-shareholder agency problem.

Overall, our findings are strikingly consistent with the existing literature on corporate philanthropy (Navarro 1988; Galaskiewicz 1985; Galaskiewicz 1997; Brown, Helland, and Smith

2006; Cespa and Cestone 2007; Masulis and Reza 2015; Cai, Xu, and Yang 2021) and agency theory (Jensen and Meckling 1976; Jensen 1986; Lang, Stulz, and Walkling 1991; Harford 1999; Malmendier and Tate 2005). But at the same time, our findings stand in stark contrast to the recent literature on corporate social responsibility (CSR), which treats corporate charitable giving as one major CSR category and documents that overall CSR activities are positively associated with increases in firm value.

Our explanation for these apparently conflicting findings is that corporate philanthropy has a fundamentally different economic effect from other forms of CSR activities, even though it appears to contribute to the social good. While general CSR can be a valuable part of a firm's overall strategy for improving firm value, corporate giving is likely to be an exception when managers can extract private benefits through their influence over the choice of charitable recipients. Consistent with this argument, we find that unlike overall CSR activities, which enable firms to build trust with shareholders that can in the future mitigate the adverse effects of large negative stock market shocks (see Lins, Servaes, and Tamayo, 2017), this does not occur with corporate giving. Specifically, firms that make more nonprofit contributions before a financial crisis actually *underperform* the stock market during a financial crisis. This suggests that corporate giving actually leads to a loss of investor trust in a firm's management. Thus, the body of evidence we uncover supports treating corporate charitable giving as fundamentally different from other forms of CSR and excluding it from conventional measures of CSR to more accurately reflect a firm's socially responsible activities.¹³

2. Hypotheses and methodology

We argue that managerial rent seeking activities should be more pronounced in firms that are *less financially constrained*, since managers can largely avoid the disciplinary role of external capital providers. This is implicit in the Myers and Majluf (1984) model, which finds that raising outside financing is costly due to the associated adverse-selection and moral hazard problems of providing managers with more liquid assets. The existing empirical literature indicates the severity

¹³ Also see Chatterji, Levine, and Toffel (2009) for a discussion on the limitations of existing CSR measures.

of this problem. For example, Eckbo, Masulis, and Norli (2007) document that SEO announcements exhibit a negative 2% to 3% stock return, which along with sizable underwriting costs in the range of 3%–8% of gross proceeds, produce very costly flotation costs, consistent with the existence of large adverse selection and moral hazard problems. They also find that only a quarter of publicly listed firms undertake seasoned equity offerings (SEO) over their twenty-year sample period, consistent with a strong aversion to external equity financing by many firms.

The fact that external capital providers act as a monitor of a firm's senior managers reduces manager incentives to tap the external capital market, especially when simultaneously extracting sizable private benefits. For example, investment bankers are hired to assess a firm's performance and value before underwriting and marketing a firm's primary security offerings. Moreover, the market prices of a firm's securities reflect the expected managerial rent extraction associated with these new resources, which limits how much new stock can be easily sold without requiring a large price discount that dilutes the cash flow and voting rights of existing shareholders. This makes using equity capital more costly for managers who plan to use the additional capital as an opportunity for further rent extraction. More external debt capital also leads to closer scrutiny of a borrower's operations, which acts to discourage managers from extracting sizable private benefits. Moreover, substantial debt levels attract more extensive and tighter protective covenants, which increase the risk of technical default where debtholders can be required to make major changes in a firm's operations and management before creditors agree to waive any covenant violations. High leverage ratios also raise the risk of bankruptcy and financial distress. Thus, debt financing is likely to be unattractive to managers extracting substantial private benefits from existing corporate resources.

The above arguments are consistent with Jensen (1986), who predicts intensified agency problems in firms that can avoid monitoring by capital markets through their use of internal sources of capital. In our analysis, we measure private benefits of control by corporate giving, where managers have substantial influence over which charities receive corporate donations. Moreover, these donations often have direct links to the CEO or independent directors, thereby benefitting

managers as discussed earlier (Masulis and Reza, 2015; Cai, Xu, and Yang, 2021). These arguments lead to the following two hypotheses:

H1: Most corporate giving does not yield direct benefits to a firm, while many other corporate expenditures such as advertising and other forms of CSR activity do generate benefits.

To test hypothesis H1, we conduct short-run and long-run event studies as well as analyze the relation of corporate giving, advertising, and different types of CSR activities to corporate financing and investment decisions. Private benefits of control reduce internal cash flows available for investment, while advertising and other CSR activities in contrast are expected to improve current or future cash flows. Given that external capital raising is associated with closer monitoring of firm expenditures, managers extracting substantial private benefits should exhibit more reluctance to tap the external capital market. Quasi-natural experiments using the 2003 Dividend Tax Cut and hedge fund activism, which we explain in greater detail below, should also provide direct evidence on hypothesis H1, that corporate giving yields personal benefits to managers.

H2: Manager private benefit consumption through corporate giving creates manager aversion to new external financing and especially to debt financing.

To test hypothesis H2, we follow Almeida and Campello (2010) and model external financing as a function of cash flow, corporate giving, and other economically important variables. Following Almeida and Campello (2010), we define *external financing* as the ratio of total net equity issuances plus net debt issuances to book value of assets, *cash flow* as earnings before extraordinary items and depreciation to total assets, *Q* as the market value of assets to book value of assets, and *firm size* as natural log of sales. We also scale corporate giving by book value of assets. For this test, we estimate the following OLS regression model specified in equation (1):

$$\begin{aligned} \text{External financing}_{i,t} = & \alpha_1 \text{cash flow}_{i,t} + \alpha_2 Q_{i,t} + \alpha_3 \text{firm size}_{i,t} + \\ & \alpha_4 \text{corporate giving}_{i,t} + \beta_1 (\text{corporate giving}_{i,t} \times \text{cash flow}_{i,t}) + \text{controls} + f_i + y_t + \\ & \varepsilon_{1i,t}. \end{aligned} \quad (1)$$

We define f_i and y_t as firm and year fixed effects, respectively. The main coefficient of interest in equation (1) is β_1 , the interaction term which estimates aversion to external financing when managers extract private benefits from current cash flows through corporate charitable giving.

To analyze the effect of corporate giving on debt financing, we follow Shyum-Sunder and Myers (1999) and model *net debt issued* as a function of the *financing deficit* which is defined as uses of funds minus sources of funds. This model is then augmented by corporate giving and its interaction with the financing deficit. To adjust for differences in firm size, all the variables are scaled by book value of total assets. The regression model of net debt issued is specified in equation (2) below:

$$\mathbf{Net\ debt\ issued}_{i,t} = \gamma_1 \mathbf{financing\ deficit}_{i,t} + \gamma_2 \mathbf{corporate\ giving}_{i,t} + \beta_2 (\mathbf{corporate\ giving}_{i,t} \times \mathbf{financing\ deficit}_{i,t}) + \mathbf{controls} + f_i + y_t + \varepsilon_{2i,t} \quad (2)$$

As in equation (1), f_i and y_t refer to firm and year fixed effects, respectively. The main coefficient of interest here is β_2 , the interaction term which estimates manager aversion to debt financing when managers allocate more corporate resources to charitable contributions.

Our formulation of the investment problem is similar in spirit to a pure empire-building model with costly external finance, where managers extract private benefits as fraction γ of investment, $F(I)$. This is captured by adding a $\gamma F(I)$ term to the firm's objective function.¹⁴ In the problem that we analyze, the focus is more on perquisite consumption where opportunistic managers extract rents, which are normally treated as operating expenses that lower a firm's internal cash flows, W . This framework is similar to the Hart and Moore (1998) model, where managers can expropriate ex-post project returns, which importantly cannot be verified in a court of law, precluding a contracting solution to the agency problem. Intuitively, the operating assumption that distinguishes our study from prior empire building models is that managers do not

¹⁴ The parameter γ measures the intensity of the agency conflicts.

need to build empires to extract private benefits, they can use the selection of nonprofit recipients and the allocation of annual corporate donations.

In this context, it is critical to account for the private benefits of control in the investment regressions. Yet, it is difficult to isolate (say) the excess portion of executive compensation or private benefit extraction (Morse, Nanda, and Seru 2011; Yermack 1997; Bebchuk, Grinstein and Peyer 2010) from the optimal level of managerial compensation. However, corporate charitable contributions provide a more direct measure of one important private benefit of control (Cespa and Cestone 2007; Galaskiewicz 1985; Galaskiewicz 1997; Masulis and Reza 2015), offering us an opportunity to more cleanly evaluate the impact of rent extraction on investment distortions. This leads to the following hypothesis:

H3: Managers underinvest when private benefit extraction from available internal cash flows is high to avoid added monitoring that comes from tapping the external capital market to fund more investment. This corporate giving underinvestment effect is primarily concentrated in financially unconstrained firms, where managers face little external capital market monitoring.

Note that hypothesis H3 is also a test of the Jensen (1986) free cash flow hypothesis, which states that managers with access to positive cash flows tend to waste corporate resources at the expense of outside shareholders. To test hypothesis H3, we employ a statistical model that is standard in this literature to facilitate comparisons to prior findings. Specifically, we consider an investment model in the spirit of Fazzari, Hubbard, and Petersen (1988), Kaplan and Zingales (1997), Malmendier and Tate (2005), and Almeida and Campello (2007), where we modify their basic specification linking investment with cash flows, tangible asset intensity, and firm size by adding corporate giving and its interaction with cash flow to obtain the following regression equation (3):

$$\begin{aligned} \text{Investment}_{i,t} = & \delta_1 Q_{i,t-1} + \delta_2 \text{Cash flow}_{i,t} + \delta_3 \text{Tangible assets}_{i,t} + \\ & \delta_4 (\text{Tangible assets}_{i,t} \times \text{Cash flow}_{i,t}) + \delta_5 \text{Firm size}_{i,t} + \delta_6 (\text{Firm size}_{i,t} \times \text{Cash flow}_{i,t}) + \\ & \delta_7 \text{Corporate giving}_{i,t} + \beta_3 (\text{Corporate giving}_{i,t} \times \text{Cash flow}_{i,t}) + f_i + y_t + \varepsilon_{i,t}, \end{aligned} \quad (3)$$

where the dependent variable *Investment* is the ratio of a firm's capital expenditures to beginning-of-period capital stock.

Our explanatory variables include *Q* which measures investment opportunities and is defined as the ratio of market value of assets to beginning-of-period capital stock, *cash flow* which is defined as income before extraordinary items plus depreciation divided by beginning-of-period capital stock, *tangible assets* which is as defined by Almeida and Campello (2007) to equal $(0.715 \times \text{receivables} + 0.547 \times \text{inventory} + 0.535 \times \text{capital} + \text{cash holdings})$ divided by book value of assets, *firm size* which is measured by the log of book value of assets, and *corporate giving* which is equal to total charitable contributions divided by beginning-of-period capital stock. f_i and y_t refer to firm and year fixed effects, respectively. We add *tangible assets* and *size* to our specification because pledgeable assets allow further investments through greater borrowing (Almeida and Campello 2007) and larger firms generally are less financially constrained (Malmendier and Tate 2005).

We scale all regression variables in equation (3), except *tangible assets* and *firm size*, by beginning-of-period capital stock to be consistent with Chen and Chen (2012).¹⁵ The coefficient δ_2 in equation (3) measures investment to cash flows sensitivity. The main coefficient of interest is the interaction term β_3 , which measures the degree to which corporate giving reduces capital expenditures. We expect coefficients β_1 , β_2 , and β_3 in equations (1), (2), and (3), respectively, to be negative. Given our use of firm and year fixed effects and controls for firm size, it is relatively difficult to see how the β_1 , β_2 , and β_3 coefficient estimates are merely measuring some unobserved time invariant firm characteristics.

We also perform several subsample tests to analyze whether better corporate governance can moderate the impacts of corporate giving activity using the above regression model (3), since managers are then more constrained in their abilities to extract rents. Thus, we expect to find less

¹⁵ Although we report results using beginning-of-period capital stock, in untabulated results we also scale regression variables by book value of assets and find similar results. Note that tangible asset intensity is generally scaled by total assets, which is a convention that we also follow.

underinvestment in the face of strong corporate governance mechanisms, leading to the following hypothesis:

H4: The underinvestment problem due to managerial rent extraction should decline with stronger corporate governance.

To capture strong governance, we employ six well-known corporate governance characteristics, namely antitakeover defenses, product market competition, institutional ownership, board independence, CEO-chairman duality, and CEO ownership. These corporate governance characteristics also have the benefit of a strong theoretical basis and established empirical significance.

Managerial rent extraction is also discouraged by a manager's personal cost of rent extraction. The manager's rent extraction cost is a positive function of the manager's percent ownership in the firm as predicted by Jensen and Meckling (1976) and a negative function of a manager's personal tax rate, which reduces their foregone after-tax cash flows from rent extraction.

H5: Personal tax rate cuts imply higher after-tax cost of managerial rent extraction, which lowers manager consumption of private benefits through corporate giving and increases corporate investment by increasing the after-personal tax return on investment. This effect is stronger when managers own a larger proportion of the firm's stock.

To test this hypothesis, we investigate the effect of the 2003 dividend tax cut that reduces the personal incomes tax rate from a maximum of 35% to 15% using a difference-in-differences methodology. We discuss the details of this analysis in section 4.6.

3. Data

We analyze a sample of Compustat/CRSP firms over the 1998–2006 period where we first assess distortions in financing and investment decisions due to corporate giving.¹⁶ We then merge

¹⁶ We stop hand-collecting data in 2006 because the global financial crisis which begins in the middle of 2007 had serious impacts on corporate investments and firm liquidity (Campello, Giambona, Graham, and Harvey 2011). Given

this firm-level financial data with corporate charitable contributions data from Masulis and Reza (2015), which studies Fortune 500 firms as of April 17, 2006. Corporate charitable contributions data is hand-collected from the National Directory of Corporate Giving (NDCG), which bases its information on IRS 990-PF filings of nonprofit organizations and public disclosures by individual firms. After removing thirty-two private firms, we hand-match firm contributions data with GVKEYs and PERMNOs (which are the company identifiers in Compustat and CRSP, respectively). After matching, we have a final sample of 2,551 firm-year contributions. Of this sample, we find that approximately 60% of firms make charitable contributions.¹⁷

Panel A of Table 1 provides summary statistics of the main variables, which are based on a sample of 1,317 firm-year observations with strictly positive corporate charitable contributions where the necessary Compustat/CRSP data is also available. We find that corporate capital expenditures as a fraction of a firm's capital stock (*investment*) average 0.204, which is similar to Chen and Chen's (2012) findings. Total assets of a typical firm (*size*) in our sample are approximately \$13.67 billion, which is similar to Masulis and Reza (2015), but larger than Malmendier and Tate (2005), who study a sample of firms compiled from Forbes magazine over the earlier 1984–1994 period. The average beginning-of-period Q is 1.826, which falls within the range of values reported in Chen and Chen (2012). Average cash flows as a fraction of a firm's capital stock (*cash flow*) is 0.717, which is somewhat higher than in Chen and Chen (2012), Almeida and Campello (2007), and Malmendier and Tate (2005). However, given that we are analyzing a sample of the largest and most profitable U.S. firms, this finding is not surprising. Moreover, Chen and Chen (2012) document an increasing trend in firm cash flows that overlaps with our sample period. Our measure of the fraction of tangible asset intensity, *Tangible assets*,

the absence of an economically meaningful event that exogenously changes the cost of corporate giving, we do not collect further charitable giving data in the post-crisis period.

¹⁷ To minimize the effect of extreme observations in our regressions, we winsorize all dependent and explanatory variables at the 1% and 99% level. All standard errors are robust and clustered at the firm level.

has an average value of 0.43, which is slightly lower than the statistic reported in Almeida and Campello (2007).

The main variable of interest, *corporate giving*, has an average value of 0.567%. Although small relative to these other explanatory variables, corporate giving is economically important as an instrument to measure private benefits and is large compared to a 0.3% average pension contribution scaled by total assets, which is known to have a significant economic effect on corporate investments (Rauh 2006). Moreover, if managers use corporate giving strategically to co-opt board members (Masulis and Reza 2015) or to build ties with outside entities that can give a CEO greater leverage in future contract renewal talks or help to expand a CEO's outside career opportunities (Cespa and Cestone 2007), then the negative effects of charitable contributions could be far reaching. In short, there are good reasons to view the level of corporate giving as a useful instrument for a broader measure of manager rent seeking behavior.

In addition to Masulis and Reza (2015), who document five different channels through which corporate philanthropic activities benefit CEOs, we provide in Panel B of Table 1 an additional piece of evidence that supports the conclusion that corporate giving is a commonly used rent extraction mechanism. Specifically, we sort firms according to their total charitable contribution levels and then report the amount of corporate contributions to nonprofit organizations affiliated with the CEO, defined as where a CEO holds a position as a director, trustee, advisor, etc. We use the biographical sections in firm annual reports and news articles in Businessweek and Forbes to obtain data on a CEO's affiliations to specific nonprofit organizations. We then use the Foundation Directory Online Database, which is available starting in 2004, to collect data on charity names and levels of corporate giving to CEO linked nonprofits.¹⁸ These affiliated contributions provide strong and measurable evidence of conflict of interests and a mechanism by which managers can extract rents at the expense of existing shareholders. We find

¹⁸ We limit our analysis to the Fortune 100 firms to keep the manual data collection procedure manageable.

that corporate contributions linked to CEO affiliated nonprofits increase (almost) monotonically across the distribution of total amount of corporate giving.

Affiliated donations are about 16% of CEO total compensation and are greater than the combined costs of CEO corporate jet use and other CEO perks, while they are similar to CEO cash severance payments (see Masulis and Reza 2015), which strongly suggests that corporate charitable contributions are an important avenue of managerial rent extraction. While CEOs directly benefit from affiliated contributions, unaffiliated charitable contributions can also help CEOs co-opt the board (Masulis and Reza 2015) and build ties outside the firm, which can enhance a CEO's career opportunities (Cespa and Cestone 2007). We should also observe that a CEO's direct affiliation to a charity is a conservative measure since it ignores a non-profit's direct links to other CEO family members or other senior executives or when a non-profit receives a large personal contribution from the CEO or a family member. Given these considerations, we hereafter treat total corporate giving, which includes CEO and independent director affiliated charitable contributions, as our private benefits of control measure.

Lastly, to put the relation among corporate cash flows, investment, external financing, and corporate giving in perspective, we also analyze their correlation structures. In untabulated analysis, we find that the correlation between cash flows and capital expenditures is 0.487 (p -value = 0.000), while the correlation between cash flows and corporate giving is 0.569 (p -value = 0.000), suggesting that corporate giving is more closely tied to a firm's cash flows than are its capital expenditures. Similarly, the correlation between external financing and cash flows is -0.376 (p -value = 0.000), while the correlation between external financing and corporate giving is -0.113 (p -value = 0.000). This is also consistent with strong aversion to external financing when managers are extracting large private benefits through corporate giving.

4. Results

4.1 Managerial aversion to external financing

Our analysis hinges on the assumption that private benefit consumption creates a managerial aversion to external financing in the spirit of the free cash flow agency theory (Jensen

1986). Accordingly, we begin our regression analysis by formally testing this prediction. Using OLS regressions of equation (1), we observe from model 1 in Table 2, Panel A that a typical firm raises about 33.5 cents of capital externally for each dollar of internal cash flow shortfall. Importantly, this effect falls by almost 7.5 cents if a firm is more active in corporate giving, measured by corporate giving rising from the 50th to the 90th percentile. This result suggests that managers try to reduce external financing when they are extracting substantial private benefits from the firm through corporate philanthropy.¹⁹

In a further test, we analyze whether managers exhibit a particular aversion to external debt financing. To test this prediction, we consider a model that explains net debt financing as a function of the firm's financing deficit, as defined in equation (2), and its interaction with corporate giving (Shyum-Sunder and Myers 1999). If managers try to avoid debt financing when they are extracting substantial private benefits through corporate giving, then the effect of a financing deficit on debt issuance should decline as a function of more corporate giving. Model 2 of Table 2, Panel A presents the results. We find that a typical firm raises about 93.8 cents of debt for every dollar of financing deficit. However, if a firm's charitable giving rises from the 50th to the 90th percentile, then debt issuance declines by about 10.8 cents.²⁰ This general result is consistent with Hypothesis 2.

Since different corporate governance mechanisms play a part influencing manager rent extraction (e.g., Giroud and Mueller 2011), we expect that managers who are largely protected from threats coming from the market for corporate control, strong product market competition, institutional investor monitoring, and corporate board discipline are less likely to raise external capital so as to avoid further oversight from the external capital market. This tendency is reinforced when managers have relatively more power than outside directors, as measured by CEO-chairman

¹⁹ The corporate giving levels at the 50th and 90th percentiles as a percent of total assets are 0.0007 and 0.0798, respectively. Using the coefficient *cash flow* x *corporate giving*, we find a 7.43 cents reduction in external financing (0.939×0.0791) for the stated change in corporate giving.

²⁰ The 50th and 90th percentiles of corporate giving as a percent of total assets are 0.0007 and 0.0798, respectively. Using the coefficients of the interaction of *financing deficit* with *corporate giving*, we find a fall of 10.8 cents in external debt issuance (-1.365×0.0791) for the stated change in corporate giving.

duality, and when CEO share ownership at the firm is low, causing poor alignment of interest with other shareholders.

To test the prediction that manager aversion to external capital raising rises with weaker corporate governance, we undertake a subsample analysis focusing individually on the levels of a firm antitakeover defenses, product market competition, institutional investor ownership, board independence, CEO-chairman duality, and CEO ownership. In Table 2, Panels B and C, we separately report on the relationships to total external financing and total debt financing, respectively. We find that the coefficient of the interaction between cash flow and corporate giving is positive for external financing and negative for debt financing. Moreover, both interaction coefficients are statistically significant in Panels B and C for the subsample of firms with weaker corporate governance measures. That is, the effect of corporate giving on the total level of external financings and especially debt financing is concentrated in the subsample of firms with very high antitakeover defenses, low product market competition, low institutional ownership, weak boards, CEO-chair duality, and low CEO ownership. The evidence suggests that managers of firms undertaking corporate giving exhibit a stronger aversion to external financing generally and debt financing in particular, when they are more insulated from the discipline exerted by other external and internal governance mechanisms.

4.2 Corporate giving and investments

We next evaluate the effect of corporate giving on investment. Panel A of Table 3 reports OLS regression estimates of equation (3). We begin with a simplified specification in model 1 where we explain corporate investment levels measured by capital expenditures as a simple function of investment opportunities measured by Q and cash flows. In this initial step, we reassess the findings of a standard investment model for a sample of large, profitable firms. We find that both investment opportunities and cash flow coefficients are positive and statistically significant. In particular, we find the estimated investment-cash flow sensitivity is 0.094 with a t -test statistic of 2.45. This investment-cash flow sensitivity estimate is consistent with many well-known studies, such as Almeida and Campello (2007), Rauh (2006), and Hadlock and Pierce (2010).

Model 2 adds corporate giving and its interaction with cash flow as additional regressors. We continue to find positive and statistically significant associations of cash flow and Tobin's Q with investment. The coefficient of corporate giving interacted with cash flow is negative and statistically significant at the 1% level, indicating that corporate giving reduces the impact of cash flow on investment, while at the same time reducing the reported level of cash flow. This result is consistent with the free cash flow hypothesis as the coefficient of the interaction term suggests an unwarranted effect of corporate giving on investments when managers have access to limited internal funds as well as a strong aversion towards external financing.

In models 3 and 4, we add tangible asset intensity, firm size, and their interactions with cash flow to isolate the corporate giving effect from tangible asset intensity and firm size, respectively. These control variables help explain time varying corporate investment, where the estimated coefficients of tangible assets, firm size, and their interactions with cash flows have signs consistent with the findings in Malmendier and Tate (2005) and Almeida and Campello (2007). Most importantly, after controlling for the commonly used determinants for corporate investment in models 3 and 4, we continue to find that corporate giving reduces capital expenditures.

Since corporate charitable contributions are treated as an operating expense, these results suggest that conventional ways of measuring cash flows may be misleading if managers make sizable charitable contributions to opportunistically realize benefits for themselves at the expense of realized cash flows. From this perspective, our study is related to the literature on executive rent extraction (Bertrand and Mullainathan 2001; Garvey and Milbourn 2006; Morse, Nanda, and Seru 2011; Yermack 1997). Our result on the effect of corporate giving is also economically important. Specifically, given the average cash flow of a typical firm in our sample, a rise from the 50th to

the 90th percentile in corporate giving is associated with approximately 1% decline in capital expenditures.²¹

The dependent variable in Panel B of Table 3 combines R&D with traditional capital expenditures, since R&D expenses are important long-term investments that also affect firm value (Almeida and Campello 2007; Rauh 2006). We repeat all four models from Panel A and find similar results for the control variables. The main coefficient of interest, the interaction of corporate giving and cash flows, continues to be negative and remains statistically significant at the 1% level. Consistent with Almeida and Campello (2007), who argue that intangible asset investment should not have a credit multiplier effect, we find that the coefficient on the interaction of firm tangible asset intensity and cash flow is only marginally significant when corporate investments include R&D expenses. Overall, our results using different control variables and firm and year fixed effects suggest that managerial rent extraction through corporate giving induces an underinvestment problem, which is consistent with Hypothesis 3.

4.3 Falsification tests

A key assumption of our baseline analysis is that corporate charitable contributions are a waste of corporate resources. Although we show considerable evidence in favor of this view in later sections, which is also consistent with much of the existing literature, one could continue to argue that corporate giving (or at least a part of it) is firm value enhancing and the negative coefficient that we document above might simply capture a substitution effect between two different types of investments, where corporate giving is one such investment.

If corporate giving enhances firm value, then it is important to know the specific channels through which it operates. For example, Benabou and Tirole (2010) argue for a greater prevalence of corporate philanthropic activities among more visible firms, suggesting a selection issue. However, this is unlikely to substantially weaken our findings because our baseline regression

²¹ Given a sample average cash flow of 0.717 and an average investment rate of 0.204, a change in corporate giving from the 50th to the 90th percentile leads to a -1.01% $((0.717 \times -0.231 \times (0.0135 - 0.0011))/0.204)$ change in capital expenditures.

specification considers firm fixed effects and controls for firm size and tangible asset intensity, and their interactions with cash flow. Another argument that resonates in the corporate giving literature is that charitable contributions are similar to advertising, which can enhance a firm's expected sales and earnings by creating customer goodwill (Navarro 1988; Brown, Helland, and Smith 2006). This could be particularly important for our regression analysis, as we did not account for the time-varying patterns in advertising expenditures.

To test the above conjecture, we perform the following falsification test. We replace corporate giving with advertising expenses in our baseline model and present the results in model 1 of Table 4. For a sample of firms reporting advertising expenses, we find a positive coefficient on the interaction of advertising expenses and cash flows that is statistically insignificant. This result shows that capital expenditures *do not* decline with advertising expenses. One possible reason for this finding is that advertising expenses can generate an almost immediate rise in sales revenue. Moreover, they are typically determined as a percentage of revenue. We conclude that corporate giving has a fundamentally different association with capital expenditures than has advertising expenses.

Our second falsification test provides more evidence on the free cash flow problem by focusing on a specific type of corporate giving: employee matching grants. These grants are aimed at boosting employee morale and increasing employee community engagement. Thus, these grants are much more likely to enhance firm earnings by improving employee productivity and reducing employee turnover. Also, given how these charities are decided, senior managers are less likely to directly benefit from this type of corporate giving. Model 2 of Table 4 presents the results of this falsification test. We find that employee matching grants have no statistical power to explain investment. Based on this result, we re-estimate our earlier benchmark regressions after excluding employee matching grants from total corporate giving and find qualitatively similar results.

Given that employee matching grants might enhance shareholder value, one could conjecture that other types of corporate philanthropy may also benefit shareholders. To test this line of argument, our third falsification test analyzes the predicted values of corporate giving

derived from a profit maximization model similar to Masulis and Reza (2015).²² Yet, we find in Table 4, model 3 that value enhancing philanthropic activities do not affect capital expenditures significantly. Overall, these falsification tests suggest that our benchmark results are not due to shareholder value enhancing motivations for corporate giving.

4.4 Subsample analysis

In this subsection, we analyze the incremental effects of corporate giving in different subsamples of firms where the negative effect of CEO rent extraction on investment is expected to be more pronounced. This analysis is in the spirit of Kaplan and Zingales's (1997) analysis of a firm's investment cost structure, $C(E, k)$, which is a function of external funds raised (E) and the wedge between internal and external costs of funds (k). The first few explanatory variables focus on k . Specifically, we separately condition on the most commonly used measures of firm financing constraints, namely the KZ index, relative firm size, firm credit ratings, and positive dividend payment patterns so as to separate the sample into relatively more or less financially constrained firms. We then focus on E and categorize firms according to their dependence on the external capital market.

Higher levels of the KZ index are widely used to classify firms as financially constrained (Lamont, Polk, and Saaá-Requejo 2001; Malmendier and Tate 2005; Baker, Stein, and Wurgler 2003).²³ Firm size is another commonly used measure to classify financially constrained and unconstrained firms (Malmendier and Tate 2005; Hadlock and Pierce 2010). Here, the intuition is that larger firms have more tangible assets that help facilitate their access to external financing. The third financing constraint measure is a firm's credit rating, which is based on its long-term credit rating provided by S&P. Firms with at least BBB rating have better access to external financing because they are able to tap both the bond and bank loan markets, and as a consequence

²² The specification explains corporate giving as a function of the number of employees, number of shareholders, firm size, effective marginal tax rate, R&D expenses, advertising expenses, operating performance, leverage, investment opportunities, assets per employee, and industry fixed effects.

²³ The KZ index is calculated as $-1.002(\text{cash flow}/k) + 0.283(Q) + 3.139(\text{debt}/k) - 39.368(\text{dividend}/k) - 1.315(\text{cash}/k)$ where k is defined as capital stock.

k is expected to be lower (Lemmon and Zender 2010; Farre-Mensa and Ljungqvist 2016). The last financing constraint measure is based on a firm's dividend payment pattern (Rauh 2006). Firms that primarily rely on internal capital for funding investments due to their financial constraints are less likely to pay cash dividends.

In Table 5, we consider how corporate giving affects investment for subsamples of financially constrained and unconstrained firms based on these alternative measures of financial constraints. We report results for *financially unconstrained* firms in models 1, 3, 5, and 7 of Table 5, and find that the effect of corporate giving is more negative than it is for the subsamples of *financially constrained* firms reported in models 2, 4, 6, and 8. Moreover, in the subsamples of financially constrained firms, the key variable of interest, cash flow x corporate giving, is never statistically significant.

In models 9 and 10 of Table 5, we divide firms according to their observable demand for external financing. Specifically, we follow Rauh (2006) and categorize firms as financially unconstrained if their cash flows are greater than their capital expenditures. For financially unconstrained firms in model 9, we find that corporate giving is associated with reduced capital expenditures, consistent with our earlier findings.²⁴ This evidence is also consistent with the argument that managers are less likely to extract private benefits when operating cash flows are inadequate and the firm must rely on external financing to cover remaining internal investment needs. Overall, this subsample analysis along with our baseline regressions and falsification tests offer robust evidence strongly supporting Hypotheses 2 and 3 that managers underinvest when private benefit extraction from internal cash flows is high and this finding appears to reflect manager aversion to additional monitoring that tapping the external capital market can trigger.

4.5 Corporate governance

²⁴ The chi-squared test also shows that the main key cross product coefficient is statistically different across the unconstrained and constrained subsamples of Table 5 when we use the same sampling criterion.

So far, our results suggest that managerial pursuit of private benefits through corporate giving is associated with reduced investment levels. Although we consider firm and year fixed effects and different conventional covariates that prior research shows to help explain investment, one could plausibly argue that large private benefits of control are manifestations of poor corporate governance. In this subsection, we test this line of argument for firms that make corporate charitable donations by considering cross-sectional differences in their antitakeover defenses, product market competition, institutional investor ownership, level of board independence, CEO power (measured by CEO-chairman duality), and CEO ownership.

We examine two alternative measures of antitakeover defenses, specifically the G-index and the E-index, motivated by Gompers, Ishii, and Metrick (2003) and Bebchuk, Cohen, and Ferrell (2009), respectively.²⁵ Several studies show that managers in firms with more antitakeover defenses are relatively immune to market discipline and therefore are more likely to make value reducing corporate decisions (Cremers and Nair 2005; Masulis, Wang, and Xie 2009). We next examine corporate sales to calculate the industry's Herfindahl-Hirschman index (HHI), since firms with less product market competition face weaker managerial discipline. Consistent with this view, Giroud and Mueller (2011) find that agency problems are more serious in firms with lower levels of product market competition.

There is a growing consensus that institutional investor ownership (Parrino, Sias, and Starks 2003; Edmans 2014) and board independence positively affects firm value (Masulis (2020)). Institutional investors through voice and threat of exit can place serious pressure on corporate managers to operate efficiently. Also, a large institutional investor ownership alleviates the free-rider problem that occurs when the ownership is divided over many small shareholders. Guo and Masulis (2015) show causal evidence of the benefits of board independence, while also highlighting the important role that an independent nominating committee plays. To test the importance of board composition, we define board independence conservatively as boards having

²⁵ We do not report results on the G-index since they are very similar to the results on the E-index.

at least 60% independent directors and a nominating committee composed solely of independent directors. We obtain this data from the RiskMetrics database.

As further governance measures, we analyze CEOs who hold the dual role of board chair, because this chair role provides CEOs with additional influence over the composition of major board committees and director nominations. Consistent with this argument, Core, Holthausen, and Larcker (1999), Goyal and Park (2002), and Bebchuk and Cohen (2005) show that CEOs with dual roles are better able to extract rents. We obtain information on these variables from RiskMetrics. Lastly, we include CEO ownership, which is motivated by Jensen and Meckling (1976), who argue that managers are less likely to extract private benefits if their economic interests are better aligned with the interests of minority shareholders by higher fractional ownership levels.

In Table 6, we perform a subsample analysis based on these corporate governance measures. As managers are more likely to extract private benefits when corporate governance is weak, we expect the negative effect of corporate giving to be concentrated in firms where: takeover defenses are high, product market competition is low, institutional investor ownership is low, corporate boards are not strongly independent, CEOs hold the powerful board chair position, or CEO alignment of interests with shareholders is low. In Table 6, we report results for subsamples of firm-years with strong corporate governance measures in the odd numbered models and weak governance measures in the even numbered models. We find that the interaction of corporate giving with cash flows is negative and statistically significant, only in firms with weak corporate governance measures. Overall, the results of this section suggest that corporate giving has a more pronounced effect on investment decisions when manager and shareholder interests are not closely aligned due to weak corporate governance. This evidence is consistent with the hypothesis that the underinvest problem due to managerial rent extraction is more pronounced in weakly governed firms.²⁶

²⁶ Some of the cash flow coefficients are not statistically significant in several specifications reported in Tables 5 and 6. We find evidence that this is due to the inclusion of tangible assets and its interaction with cash flow in the regression models, which have statistically significant coefficients in all models. In alternative regression models, we find that

4.6 A natural experiment with the 2003 dividend tax cut

Despite finding a robust association between corporate giving and capital expenditures, a natural concern is whether this association is due to reverse causality. The concurrent timing of cash flow, corporate giving, and investment make this problem particularly challenging. Another potential concern with our analysis is that managers may strategically give away corporate resources when investment opportunities are depressed. While this does not contradict our hypothesis, one may argue that depressed investment opportunities can give rise to both high cash flows and high discretionary expenditures like corporate giving, raising suspicions about which of these two explanatory variables actually affects corporate investments.

To address these concerns, we conduct a quasi-natural experiment exploiting the 2003 Tax Reform Act, which reduced the personal tax rate on dividends by more than half from a maximum rate of 35% to 15% (Chetty and Saez 2005). This tax cut substantially increases the after-tax value of dividend distributions and was largely a surprise to the market (Lin and Flannery 2013). By cutting the personal tax rates on dividends, the 2003 Tax Reform Act provides a useful experiment since it exogenously raises the after-tax cost of foregoing a cash dividend through private benefits consumption. Consistent with this argument, Masulis and Reza (2015) find that corporate giving falls after 2003.²⁷ In this study, we provide new evidence by analyzing whether subsequent declines in corporate giving are associated with additions to corporate investment. Specifically, we separately interact the *Post-2003* indicator with cash flow and corporate giving and use two alternative statistical approaches to evaluate this natural experiment.

In the first formulation, we define a variable called *Corporate giving_{t,pre-2003}* that considers the set of firms making charitable contributions before 2003. We track the corporate giving patterns of these same firms before and after 2003 and then relate them to capital expenditures by interacting *Corporate giving_{t,pre-2003}* with the *Post-2003* indicator variable. If managers extract

the coefficient of cash flow is positive and statistically significant when we exclude tangible assets and its interaction with cash flow from the regressions.

²⁷ Using this 2003 dividend tax cut, Cheng, Hong, and Shue (2013) document a significant fall in CSR activity, Lin and Flannery (2013) find declines in leverage, and Dhaliwal, Krull, and Li (2007) report a fall in the cost of equity.

private benefits through corporate charitable contributions, then the higher costs of consuming private benefits after 2003 should reduce corporate giving, which then allows these firms to invest more in capital expenditures without needing to tap the external capital market. To test this proposition, Table 7, model 1 focuses on the interaction of *Post-2003* x *Cash flow_t* x *Corporate giving_{t,pre-2003}*, while also controlling for *Post-2003* x *Cash flow_t* and *Post-2003* x *Corporate giving_{t,pre-2003}* separately.

Examining only firms that made pre-2003 charitable contributions, we find that for a typical firm with the average cash flow, the effect of corporate giving on capital expenditures is negative and statistically significant only in the post 2003 period. All control variables have signs and significance levels consistent with the estimates in our baseline regressions. However, the negative coefficient on the interaction term between corporate giving and cash flows is no longer significant. This finding suggests that the power of our baseline results could potentially arise from a time-varying relation between corporate giving and capital expenditures over the pre- and post-2003 periods.²⁸ An alternate interpretation of our finding is that the investment-cash flow sensitivity increases in the post-2003 period for firms that reduce corporate giving after 2003, suggesting a more efficient allocation of internal capital funds when the cost of extracting managerial private benefit goes up.

In further investigations, we categorize firms by whether they overinvested in corporate giving before 2003, as managers of these firms are most likely to cut back on charitable contributions due to the increased cost of such private benefits. To test this proposition, we replace *Corporate giving_{t,pre-2003}* in model 4 of Table 7 with *Corporate giving of the treated_t*, which tracks the giving of firms that overinvested in corporate charitable contributions before 2003. To

²⁸ While we estimate year fixed effect regressions to control for time-varying observations, one can argue that reductions in corporate giving could be related to well-documented increases in dividends after 2003. In a further robustness test, we specifically control for dividend payments, which are scaled by beginning-of-period capital stock. We find that our results are robust to such inclusion. For example, in the amended model 1, we find that the coefficient of dividends = -0.015 (*t*-statistic = -2.84). More importantly, we find that the coefficient of *Post-2003* x *Cash flow_t* x *Corporate giving_{t,2003}* = -0.941 (*t*-statistic = -1.99), which is similar to the result reported in model 1, Table 7. This suggests that year fixed effects adequately track changes in dividends and related variables around 2003.

categorize firms as overinvesting in corporate giving, we employ an OLS model similar to the specification presented in model 3, Table 2 of Masulis and Reza (2015). The highest quartile of residuals in this regression equation measures overinvestment in corporate giving.²⁹ With this second specification, we again find that the negative effect of corporate giving on the investment is concentrated in the post 2003 period.

Perhaps more interestingly, we find in models 2, 3, 5, and 6 of Table 7 that the post-2003 negative effect of corporate giving is more pronounced in the subsample of firms with high CEO ownership, where a higher portion of the cost of corporate giving is borne by the CEO. Overall, the results of this subsection confirm our earlier finding by exploiting an exogenous tax shock to the cost of corporate giving. Of course, it may be the case that managers give away corporate resources when investment opportunities are depressed. However, it is difficult to conceive of an economic argument for why a typical firm has a very different set of investment opportunities immediately before versus after 2003, which would induce predictable opposite changes in corporate giving. Moreover, to the extent that the change in the cost of private benefits produces a substitution effect between capital expenditures and corporate giving, this identification strategy provides stronger evidence supporting our hypothesis.

4.7 Hedge fund activism: a shock to a firm's corporate governance

In an influential study, Brav, Jiang, Partnoy, and Thomas (2008) document improved stock performance in firms targeted by hedge fund activists. They argue that hedge fund activism reduces the expected free cash flow problems at target firms as they subsequently increase their payout and leverage ratios.³⁰ Consistent with Brav, et al (2008), Figure 1 shows that one particular way hedge funds help their target firms to boost performance is through rationing discretionary

²⁹ See footnote 12 for the details of this specification.

³⁰ Hedge fund activism includes communicating with the management about firm undervaluation, payout policy, capital structure, operational efficiency, takeover defenses, pay-for-performance sensitivity, etc.

expenditures.³¹ Specifically, we find that the median (average) amount of corporate charitable contributions in firm-years without hedge fund activism is \$3.25 million (\$15.30 million), whereas it is only \$2 million (\$5.55 million) in subsequent firm-years experiencing hedge fund activism.

While the observed changes in corporate charitable contributions are likely to be forced on a firm's board, one could argue that there are potentially more important cost reductions due to hedge fund activism, which could make firms even more cost-efficient and hence, more profitable. However, this concern should not undercut our analysis because the reductions in corporate giving would then be correlated with reductions in other discretionary expenditures that benefit managers at shareholder expense.

Based on the above argument, we re-estimate our baseline regression model after including an indicator for *HF activism_{it}*, which takes a value of 1 for all years after a hedge fund crosses the 5% stock ownership level at a target firm. We also interact *HF activism_{it}* with *Cash flow_{it}* x *Corporate giving_{it}*. Table 8 shows that the decline in corporate giving, documented in Figure 1, is associated with a rise in investment following the onset of hedge fund activism. This result again suggests a robust negative relation between corporate giving and investment, supporting Jensen's free cash flow hypothesis.³² In contrast, we find in untabulated results that advertising expenses/sales do not change around hedge fund activism, consistent with advertising expenses being viewed by hedge funds as fundamentally more beneficial than corporate giving.

4.8 M&A investments and announcement returns

Up to now, our investigation is primarily limited to capital expenditures, although our free cash flow hypothesis does not specify a particular form of investment. However, we cannot measure shareholder reaction to internal investments, because of the proprietary nature of a firm's

³¹ We thank Professor Alon Brav for generously sharing data on hedge fund activism during our sample period. Combining corporate giving with hedge fund activism, we find thirty-three unique instances when hedge funds acquire substantial ownership of target firms to actively change their business operations.

³² The positive coefficient of HF activism x cash flow interaction suggests that investment-cash flow sensitivity increases after hedge fund activism. Thus, the negative coefficient of the triple interaction term HF activism x cash flow x corporate giving also suggests an incremental rise in investment-cash flow sensitivity for firms that *reduce* corporate giving following hedge fund activism, which is the typical scenario.

internal business operations and the timing of its investments. In contrast, external investments through M&A transactions provide us with a useful opportunity to quantify shareholder reactions to such investment news. This is particularly helpful since we can estimate how shareholders react to new investments given their estimates of managers' rent extraction from current and prior cash flows.

Existing studies use different approaches to gauge the valuation effect of the private benefits of control in M&A transactions. For example, Lang, Stulz, and Walkling (1991) consider high cash flows in low Q firms and Harford (1999) considers excess cash holdings to capture free cash flow problems assuming managers in such firms actually waste resources in pursuing private benefits. Taking a more direct approach, Masulis, Wang, and Xie (2009) use the wedge between controlling shareholder voting and cash flow rights to measure the incentives to extract private benefits. In contrast, we are able to use the actual dollar costs of a specific private benefit to gauge shareholder reactions to the acquisition of new assets. The intuition is similar to the valuation of additions to cash holdings studied by Faulkender and Wang (2006). As managers extract more personal benefits, investors raise the discount on the expected value of new asset holdings under their control below their face value.

We analyze the M&A announcement returns for 1,072 completed acquisitions by our sample firms over the 1998-2006 period. Similar to many well-known studies, we use SDC data where acquirers begin with less than 50% of target shares and then attain 100% ownership after the deal completion. In our sample, the average and median target values are \$180 million and \$1,219 million, respectively, suggesting that some mergers in our sample are particularly large. The average deal size is 8.79% of acquirer's total assets, which is slightly greater than that reported in Guner, Malmendier, and Tate (2008). We find that 26.7% of these deals represent acquisitions of public firms, whereas approximately 53% of these deals represent diversifying acquisitions outside the acquirer's industry, based on the Fama-French 48 industry categories.

We analyze five-day abnormal stock return regressions around M&A announcements in Table 9. We calculate the cumulative abnormal returns (CARs) by taking the difference between

a stock's daily returns and the CRSP value-weighted index returns over the same five-day announcement period (event days -2, +2) using a conventional one-factor market model, where day 0 is the actual announcement date or first trading day after the announcement. For our sample of M&A transactions, the average CAR is 0.158% with a *t*-statistic of 2.53. Thus, average acquisition performance is better than that documented in several existing studies (Mueller, Schlingemann, and Stulz 2005; Guner, Malmendier, and Tate 2008), which could be due to the fact that our sample includes only large acquirers, i.e., Fortune 500 firms.

We next examine whether the heterogeneity across CARs can be partially explained by private benefits of corporate giving. Model 1 of Table 9 reports M&A announcement CAR regressions using all the explanatory variables from our baseline regression model, i.e., equation 3. Model 2 adds controls for other variables known to explain abnormal returns around M&A announcements (Mueller, Schlingemann, and Stulz 2005; Masulis, Wang, and Xie 2009; Lin, Officer, and Zou 2011). In all these models, the main variable of interest, the interaction between corporate giving and cash flow, which we find is consistently negative and highly statistically significant. This evidence suggests that shareholders forecast future rent seeking behavior of managers by examining their current consumption of private benefits. Economically, our results suggest that for a typical firm's average cash flow, an increase from the 50th to the 90th percentile in corporate giving is associated with a 0.64% reduction in cumulative abnormal returns around an acquisition announcement. This effect is economically significant when compared to the mean M&A announcement CAR of 0.158%.³³

In models 3 and 4, we separate the sample of M&A deals based on the overlap between acquirer and target industries. If the acquirer and target operate in different Fama-French 48 industries, we categorize the transaction as a diversifying acquisition. Harford (1999), among many others, argue that managers can reduce their undiversified portfolio risk and increase their ability to extract rents through diversifying acquisitions. Thus, diversifying acquisitions are

³³ In robustness tests, we separately control for industry-year fixed effects and industry fixed effects, in addition to the year fixed effects. The main results of our analysis remain unchanged.

predicted on average to be associated with lower M&A announcement-period returns. In our study, we expect to observe a more negative association with corporate giving in diversifying acquisitions, as they signal that managers are particularly focused on rent extraction. Consistent with this prediction, we find that the negative relation of announcement CARs and corporate giving is entirely concentrated in diversifying acquisitions.

In models 5 and 6, we further separate acquisitions by M&A currency, because managers are less constrained to pursue their private interests when they can avoid the scrutiny of the external capital market and target shareholders, and acquisitions internally financed with cash make this possible. Examining deals that are partially or completely cash financed, we find a negative and statistically significant effect of corporate giving on an acquirer's M&A deal announcement returns.³⁴ In contrast, for deals financed entirely with stock, we fail to identify any effect of corporate giving. This evidence suggests that the capital market discounts the future returns on investments by taking into account managers' past extraction of private benefits of control.³⁵

4.9 Is Corporate giving really an investment? An analysis of the 2009 financial crisis

Lins, Servaes, and Tamayo (2017) test whether firm investment in CSR activities builds trust with shareholders, which can pay off in relatively higher share value when the overall market suffers a negative shock like the recent Great Recession of August 2008 to March 2009 period. Specifically, they measure CSR activities as of 2006 to proxy for social capital investment using the KLD Stats database (now known as MSCI ESG Stats database). They find that during the Great Recession period, firms with higher investment in social capital experience better stock performance. It follows that one might reasonably expect corporate charitable contributions, as a

³⁴ We recognize that cash-financed acquisitions are not always financed with an acquirer's internal resources. Thus, we further analyze two subsamples of cash considerations that are based on the amount of net debt issued. We find that the negative effect of corporate giving is concentrated in the subsample of deals where net change in debt is negative. This result suggests that these acquirers are better able to avoid monitoring by external debt market. In contrast, we find no negative effect of corporate giving in the sample of firms that are net debt issuers.

³⁵ In a robustness test, we re-estimate diversifying vs. non-diversifying acquisitions and cash vs. stock acquisitions without deal characteristics to address concerns about the possible endogeneity of these controls. We find that the main coefficient of interest remains similar to those reported in models 2, 3, 5, and 6.

recognized category of CSR activity, to exhibit a similar effect. Thus, one might be concerned that our analysis does not account for the positive effect of corporate philanthropy on a stock's value when it is likely to be most important, i.e., during economic downturns.

We address this concern by estimating a stock return regression model following the basic approach of Lins, Servaes, and Tamayo (2017). Our modification is to replace overall CSR activity by corporate charitable contributions.³⁶ We then examine both raw returns (buy-and-hold returns) and abnormal stock returns around the 2008 Great Recession period. Abnormal stock returns are measured by adjusting raw stock returns for a conventional one factor market model, where the stock's beta is estimated over the 60 months ending in June 2008. The predictions are clear: If corporate giving represents investment in corporate reputation and if these donations increase trust between the firm and shareholders, then we should find that firms with more charitable donations perform better during the financial crisis period as Lins Servaes, and Tamayo find. In contrast, if corporate giving is fundamentally different from the other components of CSR and instead represents extraction of private benefits, then the market is likely to react more negatively in a financial crisis to high corporate giving firms. This outcome could reflect investor concern about prior manager rent extraction either being repeated or going undetected, which would weaken a firm's financial condition and reduce its profitable investment.

Table 10 presents results on both raw returns and abnormal returns. We find that the coefficient of corporate giving is negative and statistically significant at the 5% level across all regressions. Economically, holding all variables at their mean values in model 4, a rise from the 50th to the 90th percentile in corporate giving before the financial crisis is associated with a -2.12% abnormal stock return over August 2008 to March 2009 period. This evidence is just the opposite to the findings of Lins, Servaes, and Tamayo (2017) for overall CSR activity. Thus, our finding contradicts the basic premise that corporate charitable contributions is like other CSR

³⁶ Our results also hold if we scale the total amount of corporate giving by sales or book value of assets, where both the numerator and the denominator are measured end-of-the-period. Our results do not change if we use beginning-of-the-period sales or book value of assets.

expenditures, which are found to be investments in shareholder reputation or trust creation. Instead, this test reaffirms our agency hypothesis that corporate giving is a manifestation of a free cash flow problem.

5 Conclusion

Corporate charitable contributions provide managers with the ability to expropriate rents at shareholder expense. We uncover significant new evidence that private benefit consumption creates a managerial aversion to external financing, especially debt financing. Corporate giving also reduces internal cash flows available for capital expenditures, causing firms to underinvest. Overall, our results are consistent with Jensen's (1986) free cash flow hypothesis, which predicts that managers consume more firm resources at shareholders' expense when they are able to avoid external capital market monitoring.

We provide falsification tests where we use advertising expenses and employee matching grants in place of total corporate giving to show that the influence of corporate giving on investment is qualitatively different from that of advertising expenditures or employee matching grants that typically enhance expected sales, earnings, employee morale, and community engagements. Our conclusions are further supported by employing a quasi-natural experiment that exploits the 2003 dividend tax cut as an exogenous shock that raises private benefit extraction costs. We find following the tax code change in 2003 that corporate giving falls, while investment rises. We also study hedge fund activism to analyze a specific channel through which cash flow problems are mitigated. We find that hedge fund activism is associated with reductions in excess expenses, including corporate giving, but is not associated with reductions in advertising expenditures. Moreover, reductions in corporate giving are associated with subsequent increases in investment. We also show that the negative corporate giving relation to investment is more pronounced in financially unconstrained firms, which are less subject to external capital market monitoring, discipline from the market for corporate control, and strong product market competition as well as weak monitoring by boards and institutional investors.

Investment distortions due to private benefits of control have adverse share price implications. We document significant price discounts for internally cash-financed M&As when acquiring firms donate more, suggesting that shareholders expect similar manager rent extraction from newly acquired assets. While CSR activity generates trust in shareholders (Lins, Servaes, and Tamayo, 2017), we document the opposite for corporate charitable contributions. Specifically, we find that firms that donated more resources in 2006 have worse stock performance during the 2008-2009 Great Recession period.

One implication of this study is that shareholders can benefit from participating in a firm's decision to make charitable contributions and by requiring firms to plan ahead for corporate giving and in choosing the appropriate recipients much like they do for advertising expenses. In addition, the SEC and shareholders should consider requiring timely disclosure of corporate charitable contributions and any senior managers' or corporate directors' direct ties to the charities receiving these corporate donations. Based on the above analysis, we also recommend that a firm's CSR activities exclude or at least separate out corporate donations from other socially responsible activities.

Appendix A: Robustness

As additional tests, we re-estimate the baseline investment regression models by scaling all the variables by beginning-of-period book value of total assets instead of capital stock. The interaction between cash flow and corporate giving continues to be negative and statistically significant. The remaining control variables have similar estimates to our baseline investment regression models.

As an alternative approach to testing the free cash flow hypothesis, we analyze whether firms continue to make substantial charitable contributions after CEO turnovers, especially when the new CEO is recruited from outside the firm. If charitable contributions represent CEO private benefit extraction, then when a new CEO arrives, it is unlikely that the new CEO will exhibit the same preferences for corporate charitable contributions and the recipient charities. Moreover, outside CEO hires are often associated with greater reputation concerns (Milbourn 2003), which suggests that these outside CEOs are more likely to discount private benefits that are associated with specific corporate giving recipients. On the other hand, if these charitable contributions are beneficial to firms and their shareholders, then we would expect these contributions to continue in terms of their size and the choice of recipients under the new CEOs, even if they are externally appointed.

We find in this untabulated analysis that following CEO turnovers the negative effect of corporate giving on capital expenditures is statistically significant only in the subsample of firm-years when an internal candidate is appointed CEO. This result again suggests that entrenched managers support corporate giving at the cost of foregone profitable investments. We also perform subsample analysis based on CEO tenure and find that the negative effect of corporate giving on investment is significant primarily in the subsample of firms where CEO tenure is greater than the

sample median, suggesting that this relation between corporate giving and investment is due to the greater managerial power of long tenured CEOs.³⁷

While our analysis supports a strong negative effect of corporate giving on investment, it does not specify what type of investments are adversely affected. Consequently, in further analysis, we focus on advertisement and R&D expenses separately using equation (3) as the base specification. In untabulated results, we find when we use R&D expenses as the dependent variable that there is a significant negative corporate giving coefficient (-0.263 with a t -statistic = -2.87). We also find a significant negative corporate giving coefficient when advertising expenses is the dependent variable (-0.785 with a t -statistic = 2.61).³⁸ Overall, these results suggest that corporate giving significantly crowds out R&D and advertising expenses, which are expenditures not associated with rent extraction and are widely believed to enhance firm value.

³⁷ Given that CEO tenure in our sample is slightly above 18 years, it is reasonable to assume that CEO tenure is highly positively correlated with CEO age. Therefore, this evidence also suggests that older CEOs have less career concerns and thus, extract more rents through corporate charitable contributions.

³⁸ While this evidence contradicts Brown, Helland, and Smith (2006) who report that corporate giving is complementary to advertising expenses, it is consistent with the results in Masulis and Reza (2015) where advertising expenses do not have any explanatory power in a model of corporate giving.

Appendix B: Variable definitions

Variable	Definitions
<i>Investments and corporate giving</i>	
Investment / k	Capital expenditures / beginning-of-period capital stock. Capital stock is defined as the total (net) amount of property, plant, and equipment.
(Investment + R&D) / k	(Capital expenditures + R&D expenses) / beginning-of-period capital stock.
Corporate giving	Corporate giving amount / beginning-of-period capital stock.
Cash flow	Earnings before extraordinary items and depreciation / beginning-of-period capital stock.
Q	(market value of common stock + total liability + preferred stock – deferred taxes) / beginning-of-period capital stock.
Firm size	Log(total book value of assets).
Tangible assets	$(0.715 \times \text{receivables} + 0.547 \times \text{inventory} + 0.535 \times \text{capital} + \text{cash holdings}) / \text{total assets}$.
KZ index	$-1.002(\text{cash flow}/k) + 0.283(Q) + 3.139(\text{debt}/k) - 39.368(\text{dividend}/k) - 1.315(\text{cash}/k)$.
Post-2003	Equals 1 for all years after 2003 and 0 otherwise.
Corporate giving _{pre-2003}	Set of firms that make charitable contributions before 2003.
Corporate giving of the treated	Corporate giving of firms that overinvested in charitable contributions before 2003 based on the estimated optimal charitable giving level based on a charitable giving model from Masulis-Reza (2015).
HF activism	Equals 1 for all years after hedge fund holdings cross the 5% stock ownership level in target firms and 0 otherwise (Source: Brav, et al 2008).
Deal value / k	Amount paid to the target by the acquirer / beginning-of-period capital stock.
CAR (-2, +2)	Five-day cumulative abnormal return around event date 0 measured by taking the difference between the stock's daily return and CRSP value-weighted index daily return.
Stock price run-up	Buy-and-hold abnormal return (BHAR) using the CRSP value-weighted index as the market portfolio.
Leverage	Book value of debts / market value of total assets.
All cash deal	Equals 1 if consideration is cash and 0 otherwise.
Friendly deal	Equals 1 if the target's attitude towards the deal is friendly.
Diversifying deal	Equals 1 if bidder and target do not share the same Fama-French 48 industry and 0 otherwise.
Public target	Equals 1 if the target is a public firm and 0 otherwise.
<i>External financing and corporate giving</i>	
External financing	(Net equity issuance + net debt issuance) / total assets.
Cash flow	Earnings before extraordinary items and depreciation / total assets.
Cash holding	Cash and cash equivalents / total assets.
Inventory	Inventory / total assets.
PPE	Property, plant, and equipment / total assets.
Debt / equity	(Long-term debt + debt in current liabilities) / total assets.
Net debt issued	Net debt issued / total assets.

Financing deficit	(Dividends + capital expenditures + net increase in working capital + current portion of long-term debt at start of period – operating cash flows after interest and taxes) / total assets.
<i>Stock return and corporate giving</i>	
Raw return	Buy and hold returns.
Abnormal return	Raw return – expected return, which is based on the market model estimated over the 60 month period ending in July 2008.
Sales	Total revenue.
Ln(market capitalization)	Log(equity market capitalization).
Long-term debt	Long-term debt / total assets.
Short-term debt	Debt in current liabilities / total assets.
Cash holdings	(Cash + cash equivalents) / total assets.
Profitability	Operating income / total assets.
Book-to-market	Book value of assets / market value of assets.
Negative B/M	Equals 1 if book-to-market ratio is negative and 0 otherwise.
Momentum	Raw return between August 2007 and July 2008.
Idiosyncratic risk	Variance of the residual estimated from a market model over the 5-year period ending in July 2008 (using monthly data).

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Figure 1: Average and median charitable contributions of publicly listed Fortune 500 firms before and after hedge fund activism (HFA) during 1998-2006. The darker (lighter) column presents median (average) values.

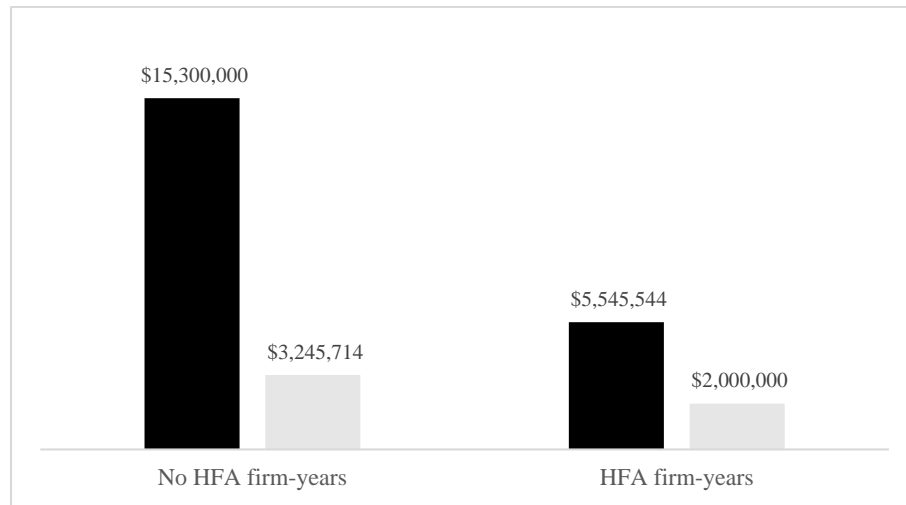


Table 1: Summary statistics

The sample consists of 2,551 firm-year observations of Fortune 500 firms with corporate charitable contributions during 1998-2006. All variables are defined in the Data section and Appendix B. Panel A presents summary statistics of the main variables of the paper. Panel B reports CEO affiliated corporate giving based on the distributions of corporate donations.

Panel A: Summary statistics of giving firms					
	Average	Standard deviation	25th percentile	Median	75th percentile
Corporate giving _t (%)	0.567	2.081	0.025	0.111	0.372
Investment _t	0.204	0.173	0.107	0.167	0.249
Firm size _t	9.523	0.980	8.806	9.641	10.431
Q _{t-1}	1.826	1.146	1.153	1.413	2.087
Cash flow _t	0.717	1.181	0.173	0.366	0.807
Tangible assets _t	0.430	0.126	0.349	0.436	0.516

Panel B: Dollar values of CEO affiliated corporate giving conditional on the total amount of corporate donations								
	P5	P10	P25	Median	P75	P90	P95	> P95
CEO affiliated Giving	\$260,771	\$405,333	\$1,207,669	\$1,579,103	\$1,048,979	\$2,290,922	\$3,048,126	\$5,688,728

Table 2: External financing and corporate charitable contributions

This table is based on a sample of publicly traded Fortune 500 firms with corporate giving data available during 1998-2006. Panel A explains external financing, which is the sum of net equity issuances and net debt issuance as a function of corporate giving and other variables reported in Almeida and Campello (2010) and Shyam-Sunder and Myers (1999). Panels B and C report subsample analysis of external financing and net debt issuance based on six corporate governance mechanisms, respectively. For brevity, we only report the main variables of interest in panels B and C. All variables are defined in Appendix B. Standard errors are robust and clustered at the firm level. *t*-statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Panel A: External financing and net debt issued		
	External financing	Net debt issued
	(1)	(2)
Corporate giving _{<i>t</i>}	0.104 (1.50)	0.107 (1.52)
Cash flow _{<i>t</i>} x Corporate giving _{<i>t</i>}	0.939* (1.91)	
Cash flow _{<i>t</i>}	-0.335*** (-5.23)	
Financing deficit _{<i>t</i>} x Corporate giving _{<i>t</i>}		-1.365*** (2.94)
Financing deficit _{<i>t</i>}		0.938*** (12.58)
Q _{<i>t</i>}	-0.002 (-0.48)	
Firm size _{<i>t</i>}	-0.018*** (-3.49)	
Cash holding _{<i>t-1</i>}	-0.029 (-0.61)	
Inventory _{<i>t-1</i>}	0.060 (1.26)	
PPE _{<i>t-1</i>}	-0.053 (-1.44)	
Debt / equity _{<i>t-1</i>}	-0.003* (-1.65)	
Adjusted R ²	0.393	0.683
Observations	1,958	2,289
Year fixed effects	Yes	Yes
Firm fixed effects	Yes	Yes

Panel B: External financing

Subsampling criteria	Model	Observations	Adjusted R ²	Coefficients		
				Corporate giving _t	Cash flow _t	Cash flow _t x Corporate giving _t
E-index < 2	(1)	619	0.505	-0.065 (-0.56)	-0.371*** (-3.10)	0.088 (0.11)
E-index ≥ 2	(2)	1,339	0.459	0.179* (1.96)	-0.286*** (-3.58)	1.028* (1.67)
HHI < sample median	(3)	896	0.343	0.053 (0.52)	-0.409*** (-6.00)	-0.396 (-0.60)
HHI ≥ sample median	(4)	1,062	0.428	0.064 (0.54)	-0.241** (-2.00)	0.862** (2.21)
Institutional ownership ≥ sample median	(5)	983	0.209	0.147 (1.41)	-0.175** (-2.25)	0.401 (0.61)
Institutional ownership < sample median	(6)	975	0.380	-0.043 (-0.34)	-0.229* (-1.67)	0.363*** (2.64)
Board indep. = 1	(7)	1,341	0.316	0.151 (1.59)	-0.239*** (-3.36)	0.808 (1.39)
Board indep. = 0	(8)	617	0.294	0.029 (0.24)	-0.129** (-2.15)	0.604*** (3.98)
Duality = 0	(9)	528	0.287	-0.051 (-0.15)	-0.137* (-1.71)	1.059 (0.47)
Duality = 1	(10)	1,430	0.271	0.120 (1.56)	-0.389*** (-4.49)	0.939* (1.88)
CEO ownership ≥ sample median	(11)	971	0.345	0.062 (0.51)	-0.267*** (-2.64)	0.435 (0.47)
CEO ownership < sample median	(12)	987	0.256	0.286* (1.95)	-0.167* (-1.85)	1.767* (1.87)

Panel C: Net debt issued

Subsampling criteria	Model	Observations	Adjusted R ²	Coefficients		
				Corporate giving _t	Financing deficit _t	Financing deficit _t x Corporate giving _t
E-index < 2	(1)	710	0.632	0.102 (1.08)	0.785*** (6.39)	0.618 (0.32)
E-index ≥ 2	(2)	1,579	0.736	0.142 (1.58)	0.952*** (10.67)	-1.299*** (-2.65)
HHI < sample median	(3)	1,013	0.666	-0.013 (-0.67)	0.907*** (7.76)	-0.469 (-1.39)
HHI ≥ sample median	(4)	1,276	0.759	0.203 (1.56)	0.935*** (9.32)	-1.240** (-2.42)
Institutional ownership ≥ sample median	(5)	1,131	0.515	0.018 (0.26)	0.875*** (10.57)	-0.393 (-0.61)
Institutional ownership < sample median	(6)	1,158	0.641	0.170* (1.91)	0.992*** (11.85)	-1.497*** (-2.98)
Board indep. = 1	(7)	1,514	0.581	0.115 (1.22)	0.934*** (8.69)	-0.838 (-0.97)
Board indep. = 0	(8)	775	0.765	0.009 (0.09)	0.894*** (11.68)	-2.619* (-1.94)
Duality = 0	(9)	623	0.553	-0.004 (-0.05)	0.814*** (4.85)	-2.017 (-1.46)
Duality = 1	(10)	1,666	0.690	0.066 (1.23)	0.943*** (12.24)	-0.896*** (-3.44)
CEO ownership ≥ sample median	(11)	1,135	0.426	0.043 (1.14)	0.890*** (8.27)	-0.180 (-0.52)
CEO ownership < sample median	(12)	1,154	0.669	0.170 (1.48)	0.969*** (10.94)	-1.512*** (-2.63)

Table 3: Baseline regressions on corporate investment and private benefits

Samples in both panels are based on 1,317 annual observations of Fortune 500 firms with corporate giving data available. We use OLS regressions to estimate the effect of corporate giving on investment as specified in equation (3). All variables are defined in the Data section and Appendix B. Standard errors are robust and clustered at the firm level. t -statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Panel A: Capital expenditures				
	Investment _t / k _{t-1}			
	(1)	(2)	(3)	(4)
Corporate giving _t		1.257 (1.62)	1.295 (1.59)	1.400 (1.47)
Cash flow _t x Corporate giving _t		-0.204*** (-2.82)	-0.206*** (-2.75)	-0.231*** (-3.04)
Q _{t-1}	0.005*** (3.06)	0.006*** (3.10)	0.006*** (2.95)	0.006*** (2.78)
Cash flow _t	0.094** (2.45)	0.095** (2.46)	-0.010 (-0.34)	0.054 (0.73)
Tangible assets _t			-0.486*** (-3.67)	-0.458*** (-3.52)
Cash flow _t x Tangible assets _t			0.253*** (3.24)	0.246*** (3.33)
Firm size _t				0.021 (0.65)
Cash flow _t x Firm size _t				-0.006 (-1.09)
Adjusted R ²	0.626	0.632	0.659	0.660
Observations	1,317	1,317	1,317	1,317
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes

Panel B: Capital expenditures and R&Ds				
	(Investment _t + R&D _t) / k _{t-1}			
	(1)	(2)	(3)	(4)
Corporate giving _t		0.963 (1.12)	1.143 (1.22)	1.310 (1.43)
Cash flow _t x Corporate giving _t		-0.192* (-1.94)	-0.209*** (-2.02)	-0.263*** (-2.87)
Q _{t-1}	0.009* (1.90)	0.009* (1.96)	0.009* (1.91)	0.008* (1.82)
Cash Flow _t	0.034 (0.40)	0.034 (0.41)	-0.182 (-0.97)	-0.093 (-0.62)
Tangible assets _t			-1.334** (-2.26)	-1.167*** (-2.64)
Cash flow _t x Tangible assets _t			0.521 (1.62)	0.500* (1.69)
Firm size _t				0.116 (1.03)
Cash flow _t x Firm size _t				-0.008 (-0.98)
Adjusted R ²	0.703	0.704	0.742	0.660
Observations	1,317	1,317	1,317	1,317
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes

Table 4: Falsification tests

The sample analyzed in model 1 is based on firm-year observations for which we have advertising data during 1998-2006, whereas models 2 and 3 consists of 1,317 annual observations of Fortune 500 firms with employee matching grant data and positive corporate giving data available, respectively. All variables are defined in the Data section and Appendix B. Standard errors are robust and clustered at the firm level. *t*-statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

	Investment _{<i>t</i>} / <i>k</i> _{<i>t-1</i>}		
	(1)	(2)	(3)
Advertising _{<i>t</i>}	-0.075 (-0.92)		
Cash flow _{<i>t</i>} x Advertising _{<i>t</i>}	0.008 (0.66)		
Employee matching grant _{<i>t</i>}		0.000 (0.63)	
Cash flow _{<i>t</i>} x Employee matching grant _{<i>t</i>} (10 ³)		-0.011 (-0.65)	
Predicted corporate giving _{<i>t</i>}			0.015 (1.40)
Cash flow _{<i>t</i>} x Predicted corporate giving _{<i>t</i>}			-0.002 (-0.01)
Q _{<i>t-1</i>}	0.004** (2.49)	0.005*** (2.68)	0.005*** (3.46)
Cash flow _{<i>t</i>}	-0.074 (-1.32)	0.017 (0.21)	-0.006 (-0.08)
Firm size _{<i>t</i>}	-0.014 (-0.46)	0.011 (0.26)	0.013 (0.42)
Cash flow _{<i>t</i>} x Firm size _{<i>t</i>}	0.010 (1.48)	-0.003 (-0.43)	-0.000 (-0.03)
Tangible assets _{<i>t</i>}	-0.407*** (-3.56)	-0.455*** (-3.24)	-0.417*** (-3.95)
Cash flow _{<i>t</i>} x Tangible assets _{<i>t</i>}	0.186** (2.50)	0.255*** (3.32)	0.244*** (4.54)
Adjusted R ²	0.733	0.652	0.652
Observations	981	1,317	1,310
Year fixed effects	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes

Table 5: Subsample analysis of corporate investment and private benefits

This table is based on a sample of Fortune 500 firms with positive corporate giving data during 1998-2006. Panel A presents averages of corporate giving based on the sampling criteria. Panel B reports OLS regression estimates using equation (3). All variables and subsampling criteria are defined in the Data section and Appendix B. Standard errors are robust and clustered at the firm level. *t*-statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Panel A										
	KZ < sample median	KZ ≥ sample median	Size ≥ sample median	Size < sample median	Rating better than BBB	Rating worse than BBB	Dividend payers	Dividend non- payers	Investment < Cash flow	Investment ≥ Cash flow
Corporate giving _t	0.010 (9.11)	0.001*** (9.12)	0.005 (10.608)	0.005 (10.608)	0.006 (15.31)	0.004*** (10.90)	0.006 (9.33)	0.004* (4.07)	0.006 (9.135)	0.003*** (5.831)
Panel B										
	KZ < sample median (1)	KZ ≥ sample median (2)	Size ≥ sample median (3)	Size < sample median (4)	Rating ≥ BBB (5)	Rating < BBB (6)	Dividend payer (7)	Dividend non- payers (8)	Investment < Cash flow (9)	Investment ≥ Cash flow (10)
	Investment _t / k _{t-1}									
Corporate giving _t	1.207 (1.63)	0.545 (0.19)	1.639 (1.62)	0.220 (0.67)	2.327 (1.57)	0.150 (0.17)	1.209 (1.52)	1.915 (0.40)	1.412 (1.65)	-11.172 (-0.78)
Cash flow _t x Corporate giving _t	-0.190*** (-2.73)	0.790 (0.47)	-0.437* (-1.80)	-0.122 (-1.23)	-1.202* (-1.87)	-0.121 (-1.37)	-0.216*** (-2.92)	-0.544 (-0.17)	-0.218*** (-2.84)	-15.635 (-0.57)
Q _{t-1}	0.007*** (2.75)	0.007*** (3.82)	0.006** (2.01)	0.005** (2.19)	-0.000 (-0.16)	0.008*** (6.12)	0.007*** (4.09)	0.006 (1.64)	0.004** (2.39)	0.014 (1.17)
Cash flow _t	0.022 (0.37)	-0.369 (-0.43)	0.079 (0.89)	0.037 (0.32)	0.268* (1.75)	-0.066 (-0.64)	0.047 (0.85)	-0.649 (-1.39)	0.102 (1.24)	0.418 (0.49)
Firm size _t	-0.054 (-0.73)	0.030* (1.41)	0.031 (0.77)	-0.039 (-1.44)	-0.035 (-0.94)	0.007 (0.18)	-0.032 (-0.78)	-0.023 (-0.37)	0.000 (0.00)	0.053 (0.83)
Cash flow _t x Firm size _t	-0.004 (-0.80)	0.036 (0.42)	-0.010 (-1.34)	-0.011 (-0.85)	-0.024* (-1.89)	0.002 (0.22)	-0.009*** (-2.83)	0.063 (1.46)	-0.006 (-0.96)	-0.023 (-0.32)
Tangible assets _t	-0.595*** (-2.86)	-0.089 (-0.67)	-0.511*** (-3.54)	-0.432** (-3.47)	-0.550*** (-3.98)	-0.264 (-1.38)	-0.430*** (-3.29)	-0.871*** (-2.87)	-0.396*** (-2.73)	0.225 (0.50)
Cash flow _t x Tangible assets _t	0.166 (1.42)	0.220 (0.83)	0.305** (2.82)	0.326** (3.38)	0.199*** (3.43)	0.363* (1.78)	0.267** (2.36)	0.408** (2.47)	0.187** (2.12)	-0.227 (-0.37)
Adjusted R ²	0.631	0.670	0.566	0.790	0.664	0.712	0.615	0.671	0.667	0.809
Observations	658	659	658	659	442	851	1,076	241	1,089	228
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 6: Investment, corporate giving, and corporate governance

The table is based on a sample of Fortune 500 firms with corporate giving data available during 1998-2006. All variables, including the new corporate governance variables, are defined in the *corporate governance* section and Appendix B. Standard errors are robust and clustered at the firm level. *t*-statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

Subsampling criteria	Model	Observations	Adjusted R ²	Coefficients		
				Corporate giving _t	Cash flow _t	Cash flow _t x Corporate giving _t
E-index < 2	(1)	465	0.616	0.867 (0.69)	0.211 (0.91)	0.394 (0.61)
E-index ≥ 2	(2)	852	0.705	1.032 (1.34)	0.057 (0.66)	-0.227*** (-3.23)
HHI < sample median	(3)	673	0.661	-0.129 (-0.15)	0.307*** (7.46)	0.707 (1.56)
HHI ≥ sample median	(4)	644	0.735	2.072 (1.44)	-0.006 (-0.04)	-0.189*** (5.77)
Institutional ownership ≥ sample median	(5)	692	0.737	2.018 (0.91)	0.045 (0.48)	-0.017 (-0.59)
Institutional ownership < sample median	(6)	625	0.618	3.613 (2.37)	-0.085 (-0.42)	-1.180** (-2.53)
Board indep. = 1	(7)	655	0.733	0.676 (0.99)	0.226*** (4.43)	-0.147 (-0.84)
Board indep. = 0	(8)	662	0.712	1.425 (1.02)	-0.003 (-0.02)	-0.216* (-1.80)
Duality = 0	(9)	359	0.805	3.353 (1.25)	0.023 (0.13)	-1.193 (-1.54)
Duality = 1	(10)	958	0.612	1.272 (1.27)	0.102 (0.95)	-0.149* (-1.70)
CEO ownership ≥ sample median	(11)	629	0.728	0.726 (0.87)	-0.190 (-0.58)	-0.225 (-0.71)
CEO ownership < sample median	(12)	688	0.634	5.738 (1.58)	0.170 (1.63)	-0.601** (-2.13)

Table 7: Natural experiment using the 2003 dividend tax cut

This table reports on corporate giving by Fortune 500 firms during 1998-2006, with a focus on pre- and post-2003 dividend tax cut periods. In models 1-3, *Corporate giving_{t,pre-2003}* is defined as the sample of firms that made charitable contributions before 2003. In models 4-6, we estimate if a firm overinvested in charitable contributions before 2003. We define firm overinvestment in corporate giving if the difference between a firm's actual donation level and its predictable donation level (considering an OLS model similar to model 3, Table 2 of Masulis and Reza (2015)) falls in the highest quartile. All variables are defined in the Data section and Appendix B. Standard errors are robust and clustered at the firm level. *t*-statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

	Investment _t / k _{t-1}					
	Whole sample (1)	CEO ownership > sample median (2)	CEO ownership < sample median (3)	Whole sample (4)	CEO ownership > sample median (5)	CEO ownership < sample median (6)
Post-2003 x Corporate giving _{t,pre-2003}	0.569 (0.32)	7.634 (1.04)	1.247 (1.13)			
Post-2003 x Cash flow _t x Corporate giving _{t,pre-2003}	-0.939** (-2.00)	-3.415* (-1.94)	-1.533* (-1.96)			
Cash flow _t	0.557 (0.69)	1.666 (0.99)	0.213 (0.38)			
x Corporate giving _{t,pre-2003}						
Corporate giving _{t,pre-2003}	1.146 (0.57)	-2.630 (-0.76)	0.604 (0.49)			
Post-2003 x Corporate giving of the treated _t				-0.275 (-0.22)	-3.837 (-0.91)	-1.033 (-0.92)
Post-2003 x Cash flow _t				-0.602*** (-3.67)	-0.067** (-2.11)	-0.028 (0.964)
x Corporate giving of the treated _t						
Cash flow _t				0.593 (0.83)	-0.119 (-0.08)	0.051 (0.926)
x Corporate giving of the treated _t						
Corporate giving of the treated _t				0.339 (0.23)	2.219 (0.70)	0.995 (0.366)
Post-2003 x Cash flow _t	0.011 (0.56)	0.005 (0.19)	0.034 (1.59)	0.008 (0.39)	0.002 (0.06)	1.033 (0.357)
Q _{t-1}	0.007*** (2.82)	0.003 (1.55)	0.005** (2.48)	0.006*** (2.68)	0.003 (1.08)	0.005** (0.014)
Cash flow _t	0.031 (0.48)	0.278** (2.52)	-0.122 (-0.82)	0.049 (0.74)	0.251 (1.34)	0.157 (0.453)
Firm size _t	0.002 (0.06)	-0.032 (-0.74)	0.066* (1.69)	0.010 (0.34)	-0.032 (-0.58)	0.019 (0.72)
Cash flow _t x Firm size _t	-0.004 (-0.77)	-0.028 (-2.80)	0.006 (0.43)	-0.008 (-1.29)	-0.024 (-1.48)	-0.023 (-1.19)
Tangible assets _t	-0.321*** (-2.63)	-0.727 (-4.06)	-0.339*** (-3.31)	-0.501*** (-3.94)	-0.690*** (-3.09)	-0.287** (-2.01)
Cash flow _t x Tangible assets _t	0.209*** (2.74)	0.323 (3.30)	0.313*** (4.53)	0.248*** (3.48)	0.304*** (2.69)	0.236 (1.54)
Adjusted R ²	0.634	0.597	0.742	0.641	0.587	0.758
Observations	1,683	875	808	1,377	716	661
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Table 8: Investment, corporate giving, and Hedge fund activism

This table analyzes the effect of hedge fund activism on the relation between corporate giving and investment. *HF activism* takes the value of 1 for years after a hedge fund acquires more than 5% firm ownership, and 0 otherwise. All other variables are defined in the Data section and Appendix B. Standard errors are robust and clustered at the firm level. *t*-statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

	Whole sample
HF activism _{<i>t</i>}	-0.041 (-1.43)
HF activism _{<i>t</i>} x Corporate giving _{<i>t</i>}	8.161** (2.41)
Cash flow _{<i>t</i>}	0.032 (0.53)
HF activism _{<i>t</i>} x Cash flow _{<i>t</i>} x Corporate giving _{<i>t</i>}	-1.610** (-2.04)
HF activism _{<i>t</i>} x Cash flow _{<i>t</i>}	0.103*** (2.99)
Cash flow _{<i>t</i>} x Corporate giving _{<i>t</i>}	-0.193* (-1.81)
Corporate giving _{<i>t</i>}	0.245 (0.40)
Q _{<i>t-1</i>}	0.004*** (2.67)
Firm size _{<i>t</i>}	-0.013* (-1.93)
Cash flow _{<i>t</i>} x Firm size _{<i>t</i>}	-0.001 (-0.22)
Tangible assets _{<i>t</i>}	0.026 (0.50)
Cash flow _{<i>t</i>} x Tangible assets _{<i>t</i>}	0.066 (1.01)
Adjusted R ²	0.399
Observations	1,312
Year fixed effects	Yes
Firm fixed effects	Yes

Table 9: M&A performance and corporate charitable contributions

This table is based on M&A transactions by a sample of Fortune 500 firms with corporate giving data available during 1998-2006. We report five-day (-2, +2) cumulative abnormal returns calculated using a conventional one-factor market model around initial M&A announcement dates. All M&A related variables are defined in section 4.8 and Appendix B. Standard errors are robust and clustered at the year level. *t*-statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

M&A announcement analysis

	CAR (-2, +2)					
	Whole sample		Diversifying acquisition = 1	Diversifying acquisition = 0	Stock Financed	Cash Financed
	(1)	(2)	(3)	(4)	(5)	(6)
Corporate giving _{<i>t</i>} x 10 ²	0.951 (1.42)	1.204 (1.29)	3.304 (1.31)	0.916 (0.86)	1.132 (0.62)	1.135 (1.58)
Cash flow _{<i>t</i>} x Corporate giving _{<i>t</i>} x 10 ²	-0.468** (-2.30)	-0.582** (-2.47)	-1.771*** (-4.13)	-0.304 (-1.49)	-0.977 (-0.93)	-0.515** (-2.47)
Deal value _{<i>t</i>}	-0.399*** (-3.78)	-0.343*** (-3.13)	-0.270 (-1.12)	-0.307*** (-2.95)	-0.457*** (-2.96)	-0.208 (-1.40)
Q _{<i>t-1</i>}	-0.009 (-0.60)	0.005 (0.32)	0.026 (0.95)	-0.002 (-0.17)	0.064* (1.80)	-0.006 (-0.39)
Cash flow _{<i>t</i>}	0.352 (0.42)	1.001 (1.17)	1.279 (0.71)	-0.790 (-1.03)	3.701 (1.33)	0.580 (0.67)
Firm size _{<i>t</i>}	-0.764*** (-4.46)	-0.719*** (-4.16)	-0.503* (-1.68)	-0.828*** (-3.91)	-1.146** (-2.26)	-0.592*** (-3.09)
Cash flow _{<i>t</i>} x Firm size _{<i>t</i>}	-0.029 (-0.34)	-0.081 (-0.95)	-0.177 (-1.21)	-0.008 (-0.10)	-0.256 (-1.02)	-0.061 (-0.69)
Tangible assets _{<i>t</i>}	-1.933 (-0.98)	-1.233* (-1.62)	-3.407 (-0.86)	0.204 (-0.10)	4.240 (0.57)	-2.408 (-1.19)
Cash flow _{<i>t</i>} x Tangible assets _{<i>t</i>}	1.257 (1.21)	-0.809 (0.84)	3.985 (1.57)	-0.472 (-0.58)	-1.035 (-0.31)	1.141 (1.00)
Stock price run-up		-1.230* (-1.60)	-1.327 (-1.38)	-1.202 (-1.13)	-3.968** (-2.60)	-0.494 (-0.61)
Leverage		2.840** (1.97)	-0.466 (-0.25)	5.974*** (3.34)	8.349** (2.56)	1.148 (0.85)
All cash deal		-0.355 (-0.99)	0.504 (0.87)	-0.730* (-1.73)		
Friendly deal		-0.218 (-0.12)	2.112 (0.69)	-2.838** (-2.14)	-3.304 (-0.74)	0.374 (0.20)
Diversifying deal		-0.427 (-1.57)			-0.580 (-0.83)	-0.362 (-1.20)
Public target		-0.862** (-2.17)	0.351 (-0.60)	-1.270** (-2.55)	-0.749 (-0.75)	-0.713** (-1.94)
Adjusted R ²	0.052	0.068	0.097	0.121	0.223	0.047
Observations	1,072	1,072	501	571	166	906
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Table 10: Stock performance in economic downturns: Is corporate giving an agency problem or an investment in shareholder trust?

This table is based on a sample of publicly traded Fortune 500 firms with their 2006 corporate giving data available. Models 1 and 3 (2 and 4) consider raw (abnormal) stock returns. Control variables are defined in a similar manner to Lins, Servaes, and Tamayo (2017), which are presented in Appendix B. Standard errors are robust and clustered at the firm level. *t*-statistics are reported in parenthesis. ***, **, and * denote statistical significance based on two-sided tests at the 1%, 5%, and 10% level, respectively.

	Raw return (1)	Abnormal return (2)	Raw return (3)	Abnormal return (4)
Corporate giving	-16.579** (-2.64)	-16.655** (2.65)	-16.873** (-1.96)	-16.606** (-2.00)
Ln(market capitalization)			0.022* (1.86)	0.019 (1.66)
Long-term debt			0.220 (1.45)	0.269* (1.92)
Short-term debt			-0.596*** (3.33)	-0.561*** (-3.29)
Cash holdings			0.352 (1.21)	0.400 (1.38)
Profitability			0.628 (1.10)	0.674 (1.21)
Book-to-market			-0.029 (-0.13)	-0.009 (-0.04)
Negative B/M			-0.091 (-1.04)	-0.058 (-0.61)
Momentum			0.031 (0.26)	-0.012 (-0.10)
Idiosyncratic risk			-4.630 (-0.38)	-5.764 (-0.52)
Four-factor loadings	Yes	Yes	Yes	Yes
Industry FEs	Yes	Yes	Yes	Yes
Observations	199	199	197	197
Adjusted R ²	0.312	0.351	0.374	0.394

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