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

Finance Working Paper N° 603/2019
August 2022

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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 both the 2003 dividend tax cut and hedge fund activism, corporate charitable contributions fall while investment rises, suggesting suboptimal investment caused by managerial private benefit extraction. Acquisition announcements of firms making large charitable contributions show negative stock market reactions that are more pronounced for acquirers with poor corporate governance.

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

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Abstract

Research Question/Issue

This study examines whether private benefits of control, as measured by corporate philanthropic activities, distort corporate financing and investment decisions.

Research Findings/Insights

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 both the 2003 dividend tax cut and hedge fund activism, corporate charitable contributions fall while investment rises, suggesting suboptimal investment caused by managerial private benefit extraction. Acquisition announcements of firms making large charitable contributions show negative stock market reactions that are more pronounced for acquirers with poor corporate governance.

Theoretical/Academic Implications

Our findings suggest that due to agency problems and managerial rent extraction, corporate philanthropic activities can distort corporate financing and investment decisions and yield corporate charitable contribution allocations that personally benefit a firm's CEO at shareholder expense.

Practitioner/Policy Implications

As corporate philanthropy imposes a significant cost to shareholders, managers may seek shareholder approval on corporate philanthropic activities. The Securities and Exchange Commission may also require timely disclosure of corporate donations.

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

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.[4] 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 *another* important direct measure of CEO rent extraction. We contribute to the literature by showing that managerial efforts to avoid restrictions on private benefit extraction by external capital providers create economically important distortions in corporate financing and investment decisions.

Concerns about the agency conflicts associated with the private benefits of corporate philanthropy have a long history in the corporate finance literature (Friedman, 1970; Jensen and Meckling, 1976; Atkinson and Galaskiewicz, 1988; Cespa and Cestone, 2007; Prior, Surroca, and Tribo, 2008; Masulis and Reza, 2015; Cai, Xu, and Yang, 2021). 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

[4] 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."

in corporate charitable contributions. We find that after a hedge fund acquires substantial firm ownership, corporate giving falls significantly as seen in Figure 1. These results are inconsistent with the hypothesis that corporate giving is a shareholder wealth maximizing decision (e.g., "trust hypothesis," which argues that corporate giving can build up good relations and trust with stakeholders). 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 the positive relations of advertising and (even) employee matching grants, which prior research has shown to increase firm value and employee morale.[5]

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).[6] To explore this issue, 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. 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.

[5] 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 collaborative studies with the firm. To the extent that such contributions are occurring, 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 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).

[6] 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.

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 Shyum-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 both require debt payments that reduce free cash flows and protective covenants that are tied to minimum financial ratios, they discourage managers from wasting valuable corporate resources since otherwise they risk 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 corporate control market, 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, thus reducing their alignment of interests with outside shareholders.

Corporate investment frequently requires external financing, while managers extracting large private benefits have incentives to avoid the added scrutiny of new external capital providers. Thus, pursuing new investment inevitably creates tension for such managers when they face 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 capital investment projects and internal sources of financing as each dollar of charitable donations is one less dollar of internal cash flow available to finance new corporate investment.[7] 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]

To address endogeniety concerns in the above analysis of external financing activities and investment, 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 are associated with increased investment and external financing. Our analysis suggests that agency problems due to CEO private benefits extraction has less of an impact on external financing and investment after the 2003 tax code change.

To provide further evidence on whether corporate giving is associated with an underinvestment problem, 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

[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; Alti, 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.

shareholder value. Now, we examine whether these reductions in corporate giving are associated with higher levels of corporate investment, rather than simply a general tightening of controls over expenditures. We find that investment-cash flow sensitivity rises following reductions in corporate giving, reflecting the disciplining role of hedge fund activism. Both the 2003 dividend tax cut and the hedge fund activism experiments suggest that reductions in managerial private benefit consumption due to exogenous reasons lead to a more efficient allocation of internal funds to capital projects, thus providing further support for the free cash flow hypothesis.

In a further test, 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 in the short run able to extract private benefits from current cash flows at the expense of reduced current investment, consistent with Jensen (1986). Categorizing firms as financially constrained following 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.

Another prediction of our 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.[9] Our findings are consistent with the negative effect of corporate giving on 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.

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.

To the best of our knowledge, this is the first study to show that corporate giving has a material effect on corporate investment and external financing activity. We also contribute to the literature by offering an explanation for the apparently conflicting findings on corporate giving and other CSR activities. Specifically, we argue 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

[9] 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.

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 to more accurately reflect a firm's socially responsible activities to exclude it from conventional CSR measures.[10]

2. Hypotheses and methodology

2.1. Hypotheses

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 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.

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

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 creditors can require a board to make major changes to the firm's operations and management before they agree to waive covenant violations. High leverage ratios also raise the risk of bankruptcy and financial distress. Thus, debt financing can 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. These arguments lead to the following hypothesis:

H1: Manager private benefit consumption through corporate giving creates managerial aversion to new external financing and especially to debt financing.

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 a fraction of investment. 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. 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 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, offering us an opportunity to more cleanly evaluate the impact of rent extraction on investment distortions. We argue that managers underinvest when extracting substantial private benefits from available internal cash flows. As a result, they avoid added monitoring that comes with tapping external capital markets to fund more investment. This leads to the following hypothesis:

H2: This corporate giving underinvestment effect is primarily concentrated in financially unconstrained firms, where managers face less external capital market monitoring.

Note that hypothesis H2 is also consistent with 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. We perform several subsample tests to analyze whether better corporate governance can moderate the impacts of corporate giving activity, since managers face greater constraints in their ability to extract rents. Thus, we expect to find less underinvestment in the face of strong corporate governance mechanisms, leading to the following hypothesis:

H3: The underinvestment problem due to managerial rent extraction should decline with stronger corporate governance.

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. This leads to the following hypothesis:

H4: 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 and external financing activity by increasing the after-personal tax return on investment. This effect is stronger when managers own a larger proportion of the firm's stock.

2.2. Methodology

To test hypothesis H1, 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):

$$\boldsymbol{External\ financing}_{i,t} = \alpha_1 cash\ flow_{i,t} + \alpha_2 Q_{i,t} + \alpha_3 firm\ size_{i,t} + \alpha_4 corporate\ giving_{i,t} + \beta_1 \left(corporate\ giving_{i,t}\ \text{x}\ cash\ flow_{i,t}\right) + controls + f_i + y_t + \varepsilon_{1i,t}. \quad (1)$$

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 firm's $financing\ deficit$, which is defined as uses minus sources of funds. We then augment this model by adding corporate giving and its interaction with the financing deficit. To adjust for firm size, we scale all variables by book value of total assets. The regression model of net debt issued is specified by equation (2) below:

$$\boldsymbol{Net\ debt\ issued_{i,t}} = \gamma_1 financing\ deficit_{i,t} + \gamma_2 corporate\ giving_{i,t} + \beta_2\left(corporate\ giving_{i,t}\ \text{x}\ financing\ deficit_{i,t}\right) + controls + f_i + y_t + \varepsilon_{2i,t}. \quad (2)$$

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.

To test hypothesis H2, we employ a statistical model that is standard in the 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):

$$\boldsymbol{Investment_{i,t}} = \delta_1 Q_{i,t-1} + \delta_2 Cash\ flow_{i,t} + \delta_3 Tangible\ assets_{i,t} + \delta_4(Tangible\ assets_{i,t}\ \text{x}\ Cash\ flow_{i,t}) + \delta_5 Firm\ size_{i,t} + \delta_6(Firm\ size_{i,t}\ \text{x}\ Cash\ flow_{i,t}) + \delta_7 Corporate\ giving_{i,t} + \beta_3(Corporate\ giving_{i,t}\ \text{x}\ Cash\ flow_{i,t}) + f_i + y_t + \varepsilon_{i,t}, \quad (3)$$

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 $(0.715 \text{ x } receivables + 0.547 \text{ x } inventory + 0.535 \text{ x } capital + cash\ holdings)$ 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).[11] 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 the coefficient $\beta_1$in equation (1) to be positive and coefficients β_2 and β_3 in equations (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. Note that under the rent extraction hypothesis, these coefficients are predicted to have signs opposite to the predictions under the "trust hypothesis," which posits that corporate giving builds up good relations and trust with stakeholders. The positive effect of corporate giving under the trust hypothesis should reduce both information asymmetry and the adjustment costs of security issuance decisions and strengthen the positive relation between internal cash flow and investment.

[11] 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.

To capture strong governance and thus test hypothesis H3, 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.

Lastly, 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 to test hypothesis H4. We discuss the details of this analysis in section 4.4.

3. Data

We analyze a sample of Compustat/CRSP firms over the 1998–2006 period to assess distortions in financing and investment decisions due to corporate giving. We merge 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.[12] We stop hand-collecting data in 2006 because the global financial crisis, which begins in the middle of 2007, had serious impacts on corporate investment decisions and firm liquidity (Campello, Giambona,

[12] 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.

Graham, and Harvey, 2011). As the global financial crisis affected both corporate giving and corporate investment/external financing activity, the identification of a plausible causal effect of corporate giving becomes problematic. To provide evidence using more recent data, we perform an out-of-sample analysis based on the corporate giving data of 2014. We discuss this analysis in the robustness section.

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 our sample represents 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, $Tangible\ assets$, 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.[13] 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 that corporate contributions linked to CEO affiliated nonprofits increase (almost) monotonically across the distribution of total amount of corporate giving.

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

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.[14]

As a further test of whether high rent extracting managers exhibit a particular aversion to external debt financing, we consider a model that explains net debt financing as a function of a 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 with 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 drops by about 10.8 cents.[15] This finding is consistent with hypothesis H1.

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

[14] 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 x 0.0791) for the stated change in corporate giving.

[15] 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 x 0.0791) for the stated change in corporate giving.

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 chi-squared tests also show that the main key cross product coefficient is statistically different across the two subsamples of Panels B and C, Table 2 when we use the same sampling criterion, except for the institutional ownership criterion. This 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 of Malmendier and Tate (2005) and Almeida and Campello (2007). Most importantly, after controlling for commonly used corporate investment determinants reported 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.[16]

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 H2.

4.3 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 conventional measures of firm financing constraints,

[16] 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 x -0.231 x (0.0135 - 0.0011))/0.204) change in capital expenditures.

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).[17] 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 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 4, we consider how corporate giving affects investment for subsamples of financially constrained and unconstrainted 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 4, 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

[17] The KZ index is calculated as -1.002(cash flow/k) + 0.283(Q) + 3.139(debt/k) - 39.368(dividend/k) - 1.315(cash/k) where k is defined as capital stock.

financially constrained firms, the key variable of interest, *cash flow* x *corporate giving*, is never statistically significant.

In models 9 and 10 of Table 4, 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. The chi-squared tests also show that the main key cross product coefficient is statistically different in the unconstrained and constrained subsamples of Table 4 when we use the same sampling criterion. This evidence is also consistent with the argument that managers are less likely to extract private benefits when operating cash flows are inadequate and firms must rely on external financing to cover remaining internal investment needs.[18]

While the above analysis focuses on firm financial constraints, it is important to note that the subsample criteria we use above may not measure a firm's financial flexibility. Therefore, we evaluate the effect of financial flexibility by further splitting the financially unconstrained samples based on the sample median of cash holdings (Arslan-Ayaydin, Florackis, and Ozkan, 2014). We find that the interaction term between corporate giving and cash flow is negative and statistically significant in samples of firms that are relatively more financially flexible. In financially constrained samples, we find a more negative estimate of the interaction term in the subsamples of firms with relatively more cash holdings. However, these coefficient estimates are often not statistically significant. Overall, the subsample analysis along with our baseline regressions offer

[18] This subsample analysis provides contradictory evidence to the "trust hypothesis," which predicts that corporate giving builds up good relations and trust with stakeholders, which in turn reduces adjustment costs in issuance decisions or information asymmetry or both. Therefore, the trust hypothesis predicts a negative coefficient of the interaction term between corporate giving and cash flow, which we do not observe.

robust evidence strongly supporting hypotheses H1 and H2 that managers underinvest when private benefit extraction from internal cash flows is high and these findings appear to reflect manager aversion to additional monitoring that tapping the external capital market can trigger.

4.4 A natural experiment with the 2003 dividend tax cut

Despite finding a robust effect of corporate giving on corporate investment and financing decisions, a natural concern is whether this is a result of reverse causality. The concurrent timing of cash flow, corporate giving, and investment/financing activity makes 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 give rise to both high cash flows (or lower the need for external financing) 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.[19] In this study, we provide new evidence by analyzing whether subsequent

[19] 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.

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 specification, we define a variable called *Corporate giving*$_{t,pre\text{-}2003}$ 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*$_{t,pre\text{-}2003}$ with the *Post-2003* indicator variable. If managers extract private benefits through corporate charitable contributions, then the higher costs of consuming private benefits after 2003 should reduce corporate giving (and agency problems in general), which then reduces managerial aversion to external financing and allows these firms to invest more in capital expenditures. To test this proposition, we report results on external financing, net debt issued, and investment in panels A, B, and C, respectively. Table 5, model 1 focuses on the interaction of *Post-2003* x *Cash flow*$_t$ x *Corporate giving*$_{t,pre\text{-}2003}$, while also controlling for *Post-2003* x *Cash flow*$_t$ and *Post-2003* x *Corporate giving*$_{t,pre\text{-}2003}$ separately. Note that *Financing deficit*$_t$ replaces *Cash flow*$_t$ in the analysis of net debt issued in Panel B to be consistent with equation (2).

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 net debt issued and capital expenditures (external financing) is negative (positive) and statistically significant only in the post 2003 period. However, the 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/external financing activity over the pre- and post-2003 periods.[20]

[20] 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

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*$_{t,pre\text{-}2003}$ in model 4 of Table 5 with *Corporate giving of the treated*$_t$, which tracks the giving of firms that overinvested in corporate charitable contributions before 2003. To 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. With this second specification, we again find that the effect of corporate giving on the investment/financing activity is concentrated in the post 2003 period.

Perhaps more interestingly, we find in models 2, 3, 5, and 6 of Table 5 that the post-2003 effect of corporate giving is more pronounced in firms with high CEO ownership, where a higher portion of corporate giving expenses 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 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

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 of Panel C, we find that the coefficient of dividends = -0.015 (*t*-statistic = -2.84). More importantly, we find that the coefficient of *Post-2003* × *Cash flow*$_t$ × *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.

and corporate giving, this identification strategy provides stronger evidence supporting our fourth hypothesis (H4). These results also provide evidence inconsistent with the trust hypothesis.

4.5 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 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 6. 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 explanation for this finding is that advertising expenses can generate an almost immediate rise in sales revenue. Moreover, advertising is 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 6 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 appear to enhance shareholder value, one might conjecture that other types of corporate philanthropy could benefit shareholders as well. 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).[21] Yet, we find in Table 6, 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.

[21] 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.

4.6 Corporate governance

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.[22] 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; Mande, Park, and Son, 2011). We next examine corporate sales to calculate the industry's Herfidahl-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 or effectiveness positively affects firm value (Garcia-Sanchez, Garcia-Meca, 2018; Masulis, 2020). Institutional investors through voice and threat of exit can place serious pressure on corporate managers to operate efficiently. Also, a large

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

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 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 7, 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. The chi-squared test also shows that the main key cross product coefficient is statistically different across the two subsamples of Table 7 when we use the same sampling criterion, except for the institutional ownership and CEO duality criteria. 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 third hypothesis (H3) that the underinvest problem due to managerial rent extraction is more pronounced in weakly governed firms.[23]

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.[24] 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 expenditures.[25] 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 since reductions in corporate giving would be correlated with reductions in other discretionary expenditures that benefit managers at shareholder expense.

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

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

[25] 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.

Based on the above argument, we re-estimate our baseline regression model after including an indicator for *HF activism*$_t$, 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*$_t$ with *Cash flow*$_t$ x *Corporate giving*$_t$. 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.[26] 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 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 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

[26] 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.

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%.[27]

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 predicted on average to be associated with lower M&A announcement-period returns. In our study,

[27] 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.

we expect to observe a more negative association with corporate giving in diversifying acquisitions, as such acquisitions signal that managers are more focused on rent extraction than shareholder wealth creation. Consistent with this prediction, we find the negative relation between announcement CARs and corporate giving is concentrated in diversifying acquisition subsample.

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.[28] 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.[29]

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

[28] 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.

[29] 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.

performance. It follows that one might reasonably expect corporate charitable contributions, as a 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.[30] 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

[30] 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.

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 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.

4.10 Robustness

While the main analysis uses corporate giving data between 1998–2006, we perform an out-of-sample analysis based on 2014 corporate giving data to show that our results are robust to a different sample period and a larger sample of firms. Specifically, we hand-collect corporate giving data of S&P 1500 firms using the 2013 National Directory of Corporate Giving.[31] We find that about 52% of S&P 1500 firms contributed to nonprofits, which is less than 60% of Fortune 500 firms in our main sample. We then reestimate our main analysis of corporate investment and financing activities (i.e., regressions reported in Panel A, Table 2 and Table 3). We find in untabulated results that the main coefficient of interest, i.e., the interaction between cash flow (or financing deficit) and corporate giving, exhibits signs and statistical significance levels similar to those reported in Tables 2 and 3.

We also consider an alternate regression specification in the spirit of Gulen and Ion (2016) to evaluate the effect of corporate giving on investment. Specifically, we drop the interaction term between cash flow and corporate giving in equation (3). In this specification, the main variable of

[31] We gather the names of corporate foundations and corporate giving programs from this directory. We then collect the 2014 corporate giving data from the Foundation Directory Online.

interest is corporate giving. We find that the coefficient estimate of corporate giving is negative, but only marginally significant for the overall sample (*t*-statistic = -1.68). In the quasi-natural experiment with the 2003 dividend tax cut, we find that the *Corporate giving*$_{t,pre\text{-}2003}$ x *Post-2003* coefficient is negative and statistically significant. In a further test, we also find that the coefficient estimate of corporate giving is negative and statistically significant for the sample of unconstrained firms. Lastly, we analyze the alternative corporate investment specification with the newly collected corporate giving data. We find that the corporate giving coefficient estimate is negative and statistically significant, while other control variables have signs and statistical significance levels similar to the benchmark regression models reported in Table 3.

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 in academic research and in CSR/ESG investing.

Appendix A: Variable definitions

Variable	Definitions
Investments and corporate giving	
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 × receivables + 0.547 × inventory + 0.535 × capital + cash holdings)/total assets.
KZ index	-1.002(cash flow/k) + 0.283(Q) + 3.139(debt/k?) - 39.368(dividend/k) - 1.315(cash/k).
Post-2003	Equals 1 for all years after 2003 and 0 otherwise.
Corporate giving$_{\text{pre-2003}}$	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.
External financing and corporate giving	
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.
Stock return and corporate giving	
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.

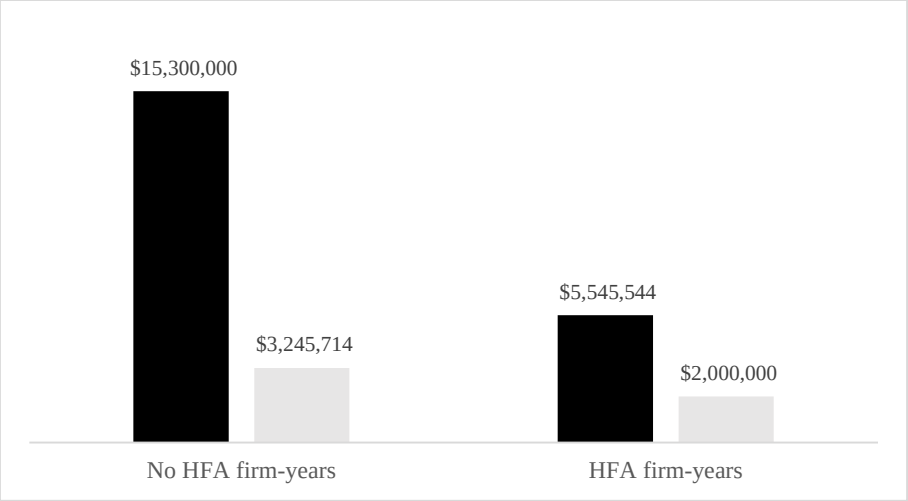

Table 1: Summary statistics

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 A. 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 A. 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$_t$	0.104	0.107
	(1.50)	(1.52)
Cash flow$_t$ x Corporate giving$_t$	0.939*	
	(1.91)	
Cash flow$_t$	-0.335***	
	(-5.23)	
Financing deficit$_t$ x Corporate giving$_t$		-1.365***
		(2.94)
Financing deficit$_t$		0.938***
		(12.58)
Q_t	-0.002	
	(-0.48)	
Firm size$_t$	-0.018***	
	(-3.49)	
Cash holding$_{t-1}$	-0.029	
	(-0.61)	
Inventory $_{t-1}$	0.060	
	(1.26)	
PPE $_{t-1}$	-0.053	
	(-1.44)	
Debt / equity $_{t-1}$	-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$_t$	Coefficients: Cash flow$_t$	Coefficients: Cash flow$_t$ x Corporate giving$_t$
E-index < 2	(1)	619	0.505	-0.065	-0.371***	0.088
				(-0.56)	(-3.10)	(0.11)
E-index ≥ 2	(2)	1,339	0.459	0.179*	-0.286***	1.028*
				(1.96)	(-3.58)	(1.67)
HHI < sample median	(3)	896	0.343	0.053	-0.409***	-0.396
				(0.52)	(-6.00)	(-0.60)
HHI ≥ sample median	(4)	1,062	0.428	0.064	-0.241**	0.862**
				(0.54)	(-2.00)	(2.21)
Institutional ownership ≥ sample median	(5)	983	0.209	0.147	-0.175**	0.401
				(1.41)	(-2.25)	(0.61)
Institutional ownership < sample median	(6)	975	0.380	-0.043	-0.229*	0.363***
				(-0.34)	(-1.67)	(2.64)
Board indep. = 1	(7)	1,341	0.316	0.151	-0.239***	0.808
				(1.59)	(-3.36)	(1.39)
Board indep. = 0	(8)	617	0.294	0.029	-0.129**	0.604***
				(0.24)	(-2.15)	(3.98)
Duality = 0	(9)	528	0.287	-0.051	-0.137*	1.059
				(-0.15)	(-1.71)	(0.47)
Duality =1	(10)	1,430	0.271	0.120	-0.389***	0.939*
				(1.56)	(-4.49)	(1.88)
CEO ownership ≥ sample median	(11)	971	0.345	0.062	-0.267***	0.435
				(0.51)	(-2.64)	(0.47)
CEO ownership < sample median	(12)	987	0.256	0.286*	-0.167*	1.767*
				(1.95)	(-1.85)	(1.87)

Panel C: Net debt issued

Subsampling criteria	Model	Observations	Adjusted R^2	Coefficients: Corporate giving$_t$	Coefficients: Financing deficit$_t$	Coefficients: Financing deficit$_t$ x Corporate giving$_t$
E-index < 2	(1)	710	0.632	0.102	0.785***	0.618
				(1.08)	(6.39)	(0.32)
E-index ≥ 2	(2)	1,579	0.736	0.142	0.952***	-1.299***
				(1.58)	(10.67)	(-2.65)
HHI < sample median	(3)	1,013	0.666	-0.013	0.907***	-0.469
				(-0.67)	(7.76)	(-1.39)
HHI ≥ sample median	(4)	1,276	0.759	0.203	0.935***	-1.240**
				(1.56)	(9.32)	(-2.42)
Institutional ownership ≥ sample median	(5)	1,131	0.515	0.018	0.875***	-0.393
				(0.26)	(10.57)	(-0.61)
Institutional ownership < sample median	(6)	1,158	0.641	0.170*	0.992***	-1.497***
				(1.91)	(11.85)	(-2.98)
Board indep. = 1	(7)	1,514	0.581	0.115	0.934***	-0.838
				(1.22)	(8.69)	(-0.97)
Board indep. = 0	(8)	775	0.765	0.009	0.894***	-2.619*
				(0.09)	(11.68)	(-1.94)
Duality = 0	(9)	623	0.553	-0.004	0.814***	-2.017
				(-0.05)	(4.85)	(-1.46)
Duality =1	(10)	1,666	0.690	0.066	0.943***	-0.896***
				(1.23)	(12.24)	(-3.44)
CEO ownership ≥ sample median	(11)	1,135	0.426	0.043	0.890***	-0.180
				(1.14)	(8.27)	(-0.52)
CEO ownership < sample median	(12)	1,154	0.669	0.170	0.969***	-1.512***
				(1.48)	(10.94)	(-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 A. 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	1.295	1.400
		(1.62)	(1.59)	(1.47)
$Cash\ flow_t$ x $Corporate\ giving_t$		-0.204***	-0.206***	-0.231***
		(-2.82)	(-2.75)	(-3.04)
Q_{t-1}	0.005***	0.006***	0.006***	0.006***
	(3.06)	(3.10)	(2.95)	(2.78)
$Cash\ flow_t$	0.094**	0.095**	-0.010	0.054
	(2.45)	(2.46)	(-0.34)	(0.73)
$Tangible\ assets_t$			-0.486***	-0.458***
			(-3.67)	(-3.52)
$Cash\ flow_t$ x $Tangible\ assets_t$			0.253***	0.246***
			(3.24)	(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	1.143	1.310
		(1.12)	(1.22)	(1.43)
$Cash\ flow_t$ x $Corporate\ giving_t$		-0.192*	-0.209**	-0.263***
		(-1.94)	(-2.02)	(-2.87)
Q_{t-1}	0.009*	0.009*	0.009*	0.008*
	(1.90)	(1.96)	(1.91)	(1.82)
$Cash\ Flow_t$	0.034	0.034	-0.182	-0.093
	(0.40)	(0.41)	(-0.97)	(-0.62)
$Tangible\ assets_t$			-1.334**	-1.167***
			(-2.26)	(-2.64)
$Cash\ flow_t$ x $Tangible\ assets_t$			0.521	0.500*
			(1.62)	(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: 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 A. 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	0.001	0.006	0.005	0.006	0.004	0.006	0.004	0.006	0.003
	(9.11)	(9.12)	(12.72)	(10.61)	(15.31)	(10.90)	(9.33)	(4.07)	(9.14)	(5.83)

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	0.545	1.639	0.220	2.327	0.150	1.209	1.915	1.412	-11.172
	(1.63)	(0.19)	(1.62)	(0.67)	(1.57)	(0.17)	(1.52)	(0.40)	(1.65)	(-0.78)
Cash flow$_t$ x Corporate giving$_t$	-0.190***	0.790	-0.437*	-0.122	-1.202*	-0.121	-0.216***	-0.544	-0.218***	-15.635
	(-2.73)	(0.47)	(-1.80)	(-1.23)	(-1.87)	(-1.37)	(-2.92)	(-0.17)	(-2.84)	(-0.57)
Q_{t-1}	0.007***	0.007***	0.006**	0.005**	-0.000	0.008***	0.007***	0.006	0.004**	0.014
	(2.75)	(3.82)	(2.01)	(2.19)	(-0.16)	(6.12)	(4.09)	(1.64)	(2.39)	(1.17)
Cash flow$_t$	0.022	-0.369	0.079	0.037	0.268*	-0.066	0.047	-0.649	0.102	0.418
	(0.37)	(-0.43)	(0.89)	(0.32)	(1.75)	(-0.64)	(0.85)	(-1.39)	(1.24)	(0.49)
Firm size$_t$	-0.054	0.030*	0.031	-0.039	-0.035	0.007	-0.032	-0.023	0.000	0.053
	(-0.73)	(1.41)	(0.77)	(-1.44)	(-0.94)	(0.18)	(-0.78)	(-0.37)	(0.00)	(0.83)
Cash flow$_t$ x Firm size$_t$	-0.004	0.036	-0.010	-0.011	-0.024*	0.002	-0.009***	0.063	-0.006	-0.023
	(-0.80)	(0.42)	(-1.34)	(-0.85)	(-1.89)	(0.22)	(-2.83)	(1.46)	(-0.96)	(-0.32)
Tangible assets$_t$	-0.595***	-0.089	-0.511***	-0.432**	-0.550***	-0.264	-0.430***	-0.871***	-0.396***	0.225
	(-2.86)	(-0.67)	(-3.54)	(-3.47)	(-3.98)	(-1.38)	(-3.29)	(-2.87)	(-2.73)	(0.50)
Cash flow$_t$ x Tangible assets$_t$	0.166	0.220	0.305**	0.326**	0.199***	0.363*	0.267**	0.408**	0.187**	-0.227
	(1.42)	(0.83)	(2.82)	(3.38)	(3.43)	(1.78)	(2.36)	(2.47)	(2.12)	(-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 5: 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*$_{t,pre\text{-}2003}$ 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 A. 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					
	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$_{t,pre\text{-}2003}$	0.039	0.051	0.028			
	(0.33)	(1.26)	(0.98)			
Post-2003 x Cash flow$_t$ x Corporate giving$_{t,pre\text{-}2003}$	0.601***	0.892***	0.571*			
	(2.87)	(3.01)	(1.75)			
Cash flow$_t$	0.463*	0.351*	0.481			
x Corporate giving$_{t,pre\text{-}2003}$	(1.86)	(1.93)	(1.29)			
Corporate giving$_{t,pre\text{-}2003}$	0.103	0.372	0.074			
	(1.23)	(0.95)	(1.01)			
Post-2003 x Corporate giving of the treated$_t$				0.051	0.062	0.077
				(0.41)	(0.95)	(0.29)
Post-2003 x Cash flow$_t$				0.751***	0.749***	0.483*
x Corporate giving of the treated$_t$				(3.18)	(3.49)	(1.92)
Cash flow$_t$				0.274	0.317	0.154
x Corporate giving of the treated$_t$				(1.45)	(1.27)	(0.81)
Corporate giving of the treated$_t$				0.701	0.670	0.574
				(0.95)	(1.09)	(1.19)
Post-2003 x Cash flow$_t$	-0.002	-0.016	0.001	-0.056	-0.062	-0.008
	(-0.05)	(-0.41)	(0.17)	(-0.68)	(-1.25)	(-0.72)
Adjusted R^2	0.247	0.250	0.218	0.195	0.234	0.208
Observations	1,694	840	854	1,469	720	749
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Panel B:	Net debt issued					
	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$_{t,pre\text{-}2003}$	0.258	0.317	0.159			
	(1.16)	(0.95)	(1.37)			
Post-2003 x Financing deficit$_t$	-1.430**	-1.572***	-1.085*			
x Corporate giving$_{t,pre\text{-}2003}$	(-2.89)	(-3.17)	(-1.67)			
Financing deficit$_t$	-0.850	-0.817*	-0.619			
x Corporate giving$_{t,pre\text{-}2003}$	(-1.61)	(-1.74)	(-1.17)			
Corporate giving$_{t,pre\text{-}2003}$	0.020	0.049	0.029			
	(0.87)	(1.12)	(0.61)			
Post-2003 x Corporate giving of the treated$_t$				0.106	0.096	0.117
				(0.79)	(1.17)	(0.51)
Post-2003 x Financing deficit$_t$				-0.927***	-1.252***	-0.914
x Corporate giving of the treated$_t$				(-3.18)	(-3.41)	(-1.66)
Financing deficit$_t$				-0.395*	-0.472*	-0.317
x Corporate giving of the treated$_t$				(-1.82)	(-1.89)	(-1.53)
Corporate giving of the treated$_t$				0.094	0.077	0.062
				(0.05)	(0.28)	(0.17)
Post-2003 x Financing deficit$_t$	0.261	0.384	0.174	0.160	0.195	0.121
	(1.59)	(1.45)	(1.10)	(0.91)	(1.20)	(1.33)

Adjusted R^2	0.638	0.641	0.592	0.592	0.548	0.601
Observations	1,992	1,002	990	1,851	931	920
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Panel C:	$Investment_t / k_{t-1}$					
	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	7.634	1.247			
	(0.32)	(1.04)	(1.13)			
Post-2003 x Cash $flow_t$ x Corporate $giving_{t,pre-2003}$	-0.939**	-3.415*	-1.533*			
	(-2.00)	(-1.94)	(-1.96)			
Cash $flow_t$	0.557	1.666	0.213			
x Corporate $giving_{t,pre-2003}$	(0.69)	(0.99)	(0.38)			
Corporate $giving_{t,pre-2003}$	1.146	-2.630	0.604			
	(0.57)	(-0.76)	(0.49)			
Post-2003 x Corporate giving of the $treated_t$				-0.275	-3.837	-1.033
				(-0.22)	(-0.91)	(-0.92)
Post-2003 x Cash $flow_t$				-0.602***	-0.067**	-0.028
x Corporate giving of the $treated_t$				(-3.67)	(-2.11)	(0.964)
Cash $flow_t$				0.593	-0.119	0.051
x Corporate giving of the $treated_t$				(0.83)	(-0.08)	(0.926)
Corporate giving of the $treated_t$				0.339	2.219	0.995
				(0.23)	(0.70)	(0.366)
Post-2003 x Cash $flow_t$	0.011	0.005	0.034	0.008	0.002	1.033
	(0.56)	(0.19)	(1.59)	(0.39)	(0.06)	(0.357)
Adjusted R^2	0.634	0.597	0.742	0.641	0.587	0.758
Observations	1,683	875	808	1,377	716	661
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Table 6: 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 A. 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.

	$Investment_t / k_{t-1}$		
	(1)	(2)	(3)
$Advertising_t$	-0.075		
	(-0.92)		
$Cash\ flow_t$ x $Advertising_t$	0.008		
	(0.66)		
$Employee\ matching\ grant_t$		0.000	
		(0.63)	
$Cash\ flow_t$ x $Employee\ matching\ grant_t$ (10^3)		-0.011	
		(-0.65)	
$Predicted\ corporate\ giving_t$			0.015
			(1.40)
$Cash\ flow_t$ x $Predicted\ corporate\ giving_t$			-0.002
			(-0.01)
Q_{t-1}	0.004**	0.005***	0.005***
	(2.49)	(2.68)	(3.46)
$Cash\ flow_t$	-0.074	0.017	-0.006
	(-1.32)	(0.21)	(-0.08)
$Firm\ size_t$	-0.014	0.011	0.013
	(-0.46)	(0.26)	(0.42)
$Cash\ flow_t$ x $Firm\ size_t$	0.010	-0.003	-0.000
	(1.48)	(-0.43)	(-0.03)
$Tangible\ assets_t$	-0.407***	-0.455***	-0.417***
	(-3.56)	(-3.24)	(-3.95)
$Cash\ flow_t$ x $Tangible\ assets_t$	0.186**	0.255***	0.244***
	(2.50)	(3.32)	(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 7: 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 A. 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.

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

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

This table analyzes the effect of hedge find 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 A. 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$_t$	-0.041
	(-1.43)
HF activism$_t$ x Corporate giving$_t$	8.161**
	(2.41)
Cash flow$_t$	0.032
	(0.53)
HF activism$_t$ x Cash flow$_t$ x Corporate giving$_t$	-1.610**
	(-2.04)
HF activism$_t$ x Cash flow$_t$	0.103***
	(2.99)
Cash flow$_t$	-0.193*
x Corporate giving$_t$	(-1.81)
Corporate giving$_t$	0.245
	(0.40)
Q_{t-1}	0.004***
	(2.67)
Firm size$_t$	-0.013*
	(-1.93)
Cash flow$_t$ x Firm size$_t$	-0.001
	(-0.22)
Tangible assets$_t$	0.026
	(0.50)
Cash flow$_t$ x Tangible assets$_t$	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 A. 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$_t$ x 10^2	0.951	1.204	3.304	0.916	1.132	1.135
	(1.42)	(1.29)	(1.31)	(0.86)	(0.62)	(1.58)
Cash flow$_t$ x	-0.468**	-0.582**	-1.771***	-0.304	-0.977	-0.515**
Corporate giving$_t$ x 10^2	(-2.30)	(-2.47)	(-4.13)	(-1.49)	(-0.93)	(-2.47)
Deal value$_t$	-0.399***	-0.343***	-0.270	-0.307***	-0.457***	-0.208
	(-3.78)	(-3.13)	(-1.12)	(-2.95)	(-2.96)	(-1.40)
Q_{t-1}	-0.009	0.005	0.026	-0.002	0.064*	-0.006
	(-0.60)	(0.32)	(0.95)	(-0.17)	(1.80)	(-0.39)
Cash flow$_t$	0.352	1.001	1.279	-0.790	3.701	0.580
	(0.42)	(1.17)	(0.71)	(-1.03)	(1.33)	(0.67)
Firm size$_t$	-0.764***	-0.719***	-0.503*	-0.828***	-1.146**	-0.592***
	(-4.46)	(-4.16)	(-1.68)	(-3.91)	(-2.26)	(-3.09)
Cash flow$_t$ x Firm size$_t$	-0.029	-0.081	-0.177	-0.008	-0.256	-0.061
	(-0.34)	(-0.95)	(-1.21)	(-0.10)	(-1.02)	(-0.69)
Tangible assets$_t$	-1.933	-1.233*	-3.407	0.204	4.240	-2.408
	(-0.98)	(-1.62)	(-0.86)	(-0.10)	(0.57)	(-1.19)
Cash flow$_t$ x Tangible assets$_t$	1.257	-0.809	3.985	-0.472	-1.035	1.141
	(1.21)	(0.84)	(1.57)	(-0.58)	(-0.31)	(1.00)
Stock price run-up		-1.230*	-1.327	-1.202	-3.968**	-0.494
		(-1.60)	(-1.38)	(-1.13)	(-2.60)	(-0.61)
Leverage		2.840**	-0.466	5.974***	8.349**	1.148
		(1.97)	(-0.25)	(3.34)	(2.56)	(0.85)
All cash deal		-0.355	0.504	-0.730*		
		(-0.99)	(0.87)	(-1.73)		
Friendly deal		-0.218	2.112	-2.838**	-3.304	0.374
		(-0.12)	(0.69)	(-2.14)	(-0.74)	(0.20)
Diversifying deal		-0.427			-0.580	-0.362
		(-1.57)			(-0.83)	(-1.20)
Public target		-0.862**	0.351	-1.270**	-0.749	-0.713**
		(-2.17)	(-0.60)	(-2.55)	(-0.75)	(-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 A. 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**	-16.655**	-16.873**	-16.606**
	(-2.64)	(2.65)	(-1.96)	(-2.00)
Ln(market capitalization)			0.022*	0.019
			(1.86)	(1.66)
Long-term debt			0.220	0.269*
			(1.45)	(1.92)
Short-term debt			-0.596***	-0.561***
			(3.33)	(-3.29)
Cash holdings			0.352	0.400
			(1.21)	(1.38)
Profitability			0.628	0.674
			(1.10)	(1.21)
Book-to-market			-0.029	-0.009
			(-0.13)	(-0.04)
Negative B/M			-0.091	-0.058
			(-1.04)	(-0.61)
Momentum			0.031	-0.012
			(0.26)	(-0.10)
Idiosyncratic risk			-4.630	-5.764
			(-0.38)	(-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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