

# WILEY



---

## Determinants and Effects of Corporate Lobbying

Author(s): Matthew D. Hill, G. Wayne Kelly, G. Brandon Lockhart and Robert A. Van Ness

Source: *Financial Management*, WINTER 2013, Vol. 42, No. 4 (WINTER 2013), pp. 931-957

Published by: Wiley on behalf of the Financial Management Association International

Stable URL: <https://www.jstor.org/stable/43280520>

---

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



Wiley and *Financial Management Association International* are collaborating with JSTOR to digitize, preserve and extend access to *Financial Management*

JSTOR

# Determinants and Effects of Corporate Lobbying

**Matthew D. Hill, G. Wayne Kelly, G. Brandon Lockhart,  
and Robert A. Van Ness\***

*We examine the determinants and value effects of corporate lobbying, controlling for corporate political action committee (PAC) campaign contributions. We find evidence that firms with greater potential payoffs from favorable policy and regulations lobby most actively, and that managers often utilize both lobbying and campaign contribution channels to influence the political climate affecting the firm. We also find that shareholders value the lobbying activities pursued by management on their behalf, particularly if the firm does not have a PAC that contributed to an election campaign. The results are robust to a number of tests designed to mitigate potential omitted-variable and self-selection bias.*

The question of whether political influence matters for business has been debated extensively in the economics and political science literature. The potential payoffs of political influence are often very large. Hence, it is not surprising that firms will seek to influence political and regulatory outcomes (Stigler, 1971; Grossman and Helpman, 1994), typically either through direct campaign contributions or indirectly through lobbying. However, it is less obvious which channel will dominate the other for firms with different types of characteristics.

The two channels work in different ways. Firms are not allowed to make direct contributions to political campaigns from the corporate treasury. Instead, they can form political action committees (PACs) to which firm directors, employees, and their families can contribute and can, in turn, support candidates for elections up to a maximum of \$5,000 per candidate per election. In contrast, lobbying expenditures are not limited and can be funded from the corporate treasury.<sup>1</sup>

Recent research has typically focused on the first channel. Cooper, Gulen, and Ovtchinnikov (2010) for example, analyze corporate PAC contributions to election candidates and find that the number of candidates supported by a corporate PAC is positively linked with the firm's future earnings and stock returns. We extend this line of research by analyzing the lobbying activities

---

*We thank Ken French for providing portfolio breakpoints and returns data via his website at Dartmouth University, Raghu Rau (editor), two anonymous referees, and Adam Yore (discussant, 2010 FMA Annual Meeting), for their comments. This research was conducted while Lockhart was an Assistant Professor of Finance at the University of Nebraska-Lincoln. All errors remain sole responsibility of the authors.*

*\*Matthew D. Hill is an Assistant Professor of Finance and the J. Ed Turner Chair of Real Estate at the University of Mississippi in University, MS. G. Wayne Kelly is an Associate Professor of Finance at the University of Southern Mississippi in Hattiesburg, MS. G. Brandon Lockhart is an Assistant Professor of Finance at Clemson University in Clemson, SC. Robert A. Van Ness is a Professor of Finance and Tom B. Scott Chair of Financial Institutions at the University of Mississippi in University, MS.*

<sup>1</sup> In a third channel, investigated by Faccio (2006), firms can also seek to influence policy when a large shareholder, officer, or board member of a firm is a politician. However, US senate rules against potential conflicts of interest limit the usefulness of studying this channel in our US context.

of US public firms. Specifically, we ask two research questions. First, which firm characteristics predict a firm's level of lobbying activity and, second, do shareholders capitalize this political activity into the firm's share price?

We collect lobbying expenditure and corporate PAC campaign contribution data for Center for Research in Security Prices (CRSP)-Compustat firms from 1998 to 2011. We find evidence that firms use both channels of influence to engage politically. For example, we find that 31.0% (17.0%) of sample firms lobby (contribute), and that 14.9% pursue both strategies at some point during the sample period. We also find evidence that firms allocate significantly greater resources to lobbying activities relative to (highly regulated) PAC contributions (Milyo, Primo, Groseclose, 2000). For the average firm in our sample, conditional on lobbying, expenditures are \$1.01 million, while conditioning on contributing, corporate PAC contributions are on the order of \$0.120 million. In a multivariate setting, we find that lobbying is positively related to size, investment opportunities, and industry concentration, while negatively related to cash flow, financial leverage, the number of elected politicians likely representing the firm's interests in Washington, and the distance in miles between the firm's physical headquarters and the respective state capital building.

We estimate regressions based on three valuation models to learn whether shareholders value the lobbying activities pursued by management over our sample period, controlling for their attempts to influence the political process directly via corporate PAC campaign contributions. We find strong evidence that shareholders value the lobbying activities pursued by management even after controlling for PAC contributions. The interaction between lobbying and campaign contributions is often negative in our value estimations, suggesting that shareholders place less value on the lobbying activities of firms that directly contributed to politicians prior to an election. The magnitudes of our value estimates indicate greater value to corporate PAC contributions relative to lobbying, consistent with an incremental value of lobbying.<sup>2</sup> Our conclusions regarding the value implications of corporate lobbying survive several robustness tests for omitted variables and selection.

Our research is related to that of Cooper et al. (2010), Faccio (2006), Faccio and Parsley (2009), Fisman (2001), and Goldman, Rocholl, and So (2009), who examine the value of political connections. To our knowledge, we are the first to analyze the value of lobbying activities controlling for the corporate PAC campaign contributions that Cooper et al. (2010) show are valued by shareholders.<sup>3</sup> Our results are particularly interesting given the implications of the US Supreme Court decision on *Citizens United vs. Federal Election Commission*, and because previous research has connected lobbying to managerial-shareholder agency problems (Hochberg, Sapienza, and Vissing-Jorgensen, 2009; Yu and Yu, 2011). The *Citizens United*

<sup>2</sup> It is true that lobbying and contributions occur throughout the calendar year. However, lobbying a particular politician occurs after their election, by definition. Shareholders likely know whether the firm's PAC contributed to campaigns prior to the lobbying activity. This timing predicts a negative sign on the interaction of lobbying and contributions. Lobbying will be valued most by shareholders of firms not contributing, and the incremental value of lobbying will be lower for firms that contribute.

<sup>3</sup> Kim (2008) finds mixed results when examining the market value impact of lobby expenditures. Inferences from the study are limited by the focus on S&P 500 firms in election years. Further, the implications are weakened by potential econometric issues such as omitted variables bias due to a parsimonious model, as well as sample selection bias. Kim (2008) notes that the model represents a "preliminary step" in understanding the returns to lobbying. Chen, Parsley, and Yang (2012) study issues related to firm performance and lobbying. In a working paper, Borisov, Goldman, and Gupta (2012) use the Jack Abramoff scandal as a natural experiment to estimate the effect of corrupt lobbying on market performance.

decision essentially gives political-free speech protection to the firm as if it were an individual, despite the fact that corporate political strategies reflect the decisions of managers (Hasen, 2012). Our results suggesting a positive association between shareholder wealth and lobbying activity are consistent with lobbying providing a means to strengthen operations and/or improve competitiveness.

The remainder of this paper is organized as follows. We provide a summary of our background motivation and existing research on corporate lobbying in Section I. We discuss the data sources and our sample in Section II. Section III contains the results on the determinants of corporate lobbying. Section IV presents our results on the implications of corporate lobbying on shareholder value. We conclude in Section V.

## I. Background and Existing Research on Corporate Lobbying

Absent managerial-shareholder agency problems and other market frictions, corporate lobbying should be observed only if lobbying returns a benefit to shareholders. Lobbying may benefit shareholders by increasing future cash flows and/or reducing the riskiness of future cash flows. Stigler (1971) identifies specific outcomes from lobbying including government contracts or appropriations, limiting competition, enabling entry to a new market, the acquisition of subsidies, and the influence of tax policies.

A growing literature examines various aspects of corporate lobbying and resulting outcomes for these firms. Richter, Samphantharak, and Timmons (2009) document significantly lower effective tax rates for lobbying firms. Alexander, Mazza, and Scholz (2009) find that firms lobbying for the cash repatriation tax holiday (as part of the 2004 American Jobs Creation Act) gain tax savings of \$220 per dollar of lobbying expense. Hochberg et al. (2009) show that proposed increases in shareholder protections led managers of firms most likely affected by managerial-shareholder agency problems to employ lobbyists in an attempt to influence the Sarbanes-Oxley Act and the resulting regulation. Yu and Yu (2011) find that lobbying expenses are 77% higher for firms revealed to have committed fraud, relative to nonfraudulent firms, and that the probability of fraud detection is inversely related to corporate lobbying activity. Further, they find that authorities were slower at discovering fraud committed by managers of lobbying firms, enabling managers to sell shares before the revelation of negative news. Duchin and Sosyura (2012) find that a one standard deviation increase in lobbying expenditures (firm size adjusted) increased the likelihood of gaining approval for Troubled Asset Relief Program (TARP) funds by 7.6 percentage points. Gao and Huang (2011) argue that hedge fund managers gain private information through connections with lobbyists. They show that hedge fund managers connected to lobbyists trade more heavily in politically sensitive stocks and subsequently outperform managers of nonconnected funds. Overall, prior studies suggest that lobbying activity has material implications for shareholders.

A recent study by Vidal, Draca, and Fons-Rosen (2012) provides evidence that firms are willing to pay more for the lobbying services of those with clear connections to politicians, presumably because the connections may provide greater value to the firm. For example, the authors determine that lobbyists formerly employed by the federal government generate the most lobbying revenues among lobbyists, and that lobbyists who were formerly staff members of US senators experience a 28% (\$182,000 at the median) drop in lobbying revenues when the senator leaves office.

Table I. Time Distribution

Table I describes corporate lobbying activity over the sample period. *%Lobbying* is the percentage of firms that lobby in a given year. *SummedLobbyExp* is the sum of inflation-adjusted lobbying expenses in a given year. *MeanLobbyExp* is the mean annual inflation-adjusted lobbying expenditure.

Year	Observations	%Lobbying	SummedLobbyExp (\$M)	MeanLobbyExp (\$M)
1999	2,124	11.205	241.319	0.114
2000	2,635	10.968	262.460	0.100
2001	2,440	12.541	306.221	0.126
2002	2,530	13.478	308.779	0.122
2003	2,387	15.124	329.599	0.138
2004	2,412	17.703	367.229	0.152
2005	2,338	18.691	381.418	0.163
2006	2,290	21.747	428.074	0.187
2007	2,212	22.830	470.649	0.213
2008	2,117	23.902	519.424	0.245
2009	2,066	25.121	628.683	0.304
2010	2,092	27.868	689.824	0.330
2011	1,964	27.800	655.783	0.334
	29,607	18.766	5,589.461	0.189

II. Data Source and Description

The Lobbying Disclosure Act of 1995 mandates disclosure to the Secretary of the Senate’s Office of Public Records (SOPR) of lobbying expenses incurred by all special interest groups. Since 1998, over \$37 billion in lobbying expenses have been reported and the annual average number of registered lobbyists exceeds 13,000. The Center for Responsive Politics (CRP) maintains a publicly available database of lobbying expenses reported to the SOPR (1998 to the present). We download the CRP lobbying expenditures data (1998–2011) and manually match by company name and industry to accounting data from Compustat. We exclude firms in the utility and financial industries. Our final sample consists of 29,607 observations for 5,244 unique firms in the CRSP-Compustat intersection over the fiscal years 1999–2011.

Table I reports the distribution of corporate lobbying activity over our sample period. The maximum and minimum number of observations for a given year are 2,635 (2000) and 1,964 (2011), respectively. Results in Column 2 demonstrate a generally increasing trend in the percentage of firms that lobby (*%Lobbying*). The propensity to lobby increases from 11.2% to 27.8% over the sample period. The results also suggest increases in lobbying expenses. The variable *SummedLobbyExp* provides the sum of inflation-adjusted lobbying expenses for each annual cross section. Annual lobbying expenditures more than double over the sample period. Further, corporate lobbying expenditures for sample firms total \$5.589B. The annual mean lobby expenditure ranges from \$100,000 (2000) to \$334,000 (2011), unconditional on lobbying.<sup>4</sup>

Table II reports the distribution of lobbying participation and expenditures by industry affiliation. The results in Column 3 suggest substantial variation in lobbying participation (*%Lobbying*) across industries, consistent with the benefits of lobbying varying by industry. The Tobacco industry has the highest concentration of lobbying participation. In Column 4, the variable *%IndLobbyingExp* is the sum of lobbying expenses across all years for an industry divided by

<sup>4</sup> Thus, conditional upon lobbying, the annual mean lobbying expenditures range from \$911,743 in 2000 to \$1,201,439 in 2011 (from the table: 0.100/0.10968 for 2000 and 0.334/0.27800 for 2011, respectively).

Table II. Industry Distribution

Table II describes corporate lobbying activity over the sample period. %Lobbying is the percentage of observations that lobby in a given industry. SummedLobbyExp is the sum of inflation-adjusted lobbying expenses in an industry. %IndLobbyExp is the ratio of SummedLobbyExp to the total lobby expenditures reported by the sample firms.

Industry	(Firms)	% Lobbying	SummedLobbyExp (\$M)	% IndLobbyExp
Agriculture	111 (20)	17.117	47.432	0.849
Food	607 (102)	28.336	97.971	1.753
Candy and soda	78 (11)	11.538	5.804	0.104
Beer and liquor	106 (20)	32.075	75.192	1.345
Tobacco	52 (7)	69.231	155.072	2.774
Recreation	280 (63)	4.643	3.597	0.064
Entertainment	513 (97)	21.053	40.416	0.723
Print and pub.	259 (53)	31.274	28.943	0.518
Consumer goods	517 (88)	18.569	49.239	0.881
Apparel	538 (86)	8.364	6.635	0.119
Healthcare	698 (133)	30.086	86.334	1.545
Medical equip.	1,291 (255)	18.513	108.600	1.943
Pharmaceutical	2,000 (407)	21.650	637.079	11.398
Chemicals	702 (121)	31.054	200.033	3.579
Rubber and plastic	313 (63)	9.585	6.067	0.109
Textiles	139 (30)	16.547	3.106	0.056
Const. materials	682 (114)	13.490	46.476	0.832
Construction	453 (86)	10.817	22.825	0.408
Steel works	489 (83)	22.290	96.942	1.734
Fabricated prod.	138 (23)	2.899	0.138	0.002
Machinery	1,227 (199)	13.366	78.843	1.411
Electrical equip.	593 (100)	17.538	22.545	0.403
Autos and trucks	485 (83)	28.454	285.360	5.105
Aircraft	135 (21)	37.778	213.395	3.818
Shipbuilding	65 (13)	36.923	46.600	0.834
Defense	91 (11)	62.637	165.869	2.968
Precious metals	48 (8)	64.583	10.188	0.182
Mining	122 (19)	22.131	10.867	0.194
Coal	93 (16)	49.462	57.089	1.021
Oil and gas	1,433 (251)	18.842	471.533	8.436
Communication	884 (204)	28.959	596.267	10.668
Personal serv.	474 (82)	20.464	28.070	0.502
Business serv.	2,009 (420)	17.123	88.890	1.590
Computer hardw.	857 (166)	20.187	120.490	2.156
Computer softw.	2,447 (607)	13.282	271.934	4.865
Electronic equip.	2,167 (375)	15.321	505.805	9.049
Measuring equip.	878 (139)	13.554	21.910	0.392
Business supplies	456 (79)	28.728	93.353	1.670
Shipping cont.	100 (14)	40.000	25.184	0.451
Transportation	982 (163)	31.263	508.884	9.104
Wholesale	1,337 (260)	8.377	39.559	0.708
Retail	1,973 (334)	15.155	163.176	2.919
Restaurants	785 (144)	11.338	45.750	0.819



the sum of lobbying expenses for the entire sample. The industries with the five highest relative investments in lobbying include pharmaceuticals, communication, transportation, electronic equipment, and oil and gas, with lobbying expenditures reported by firms in these industries comprising 58.6% of the sample's aggregate lobby spending.

### III. Determinants of Corporate Lobbying

In this section, we discuss factors that potentially influence corporate lobbying activity and present the determinants model and econometric methods used. We conclude the section with a discussion of results on lobbying determinants.

#### A. Value Enhancement

Various studies conclude that managers seek political connections to improve the prospects of their firms. Subsequently, lobbying activity may result from managers' expectations that lobbying may lead to increased revenues, reduced costs, or a change in firm risk. Proxies for value enhancement characteristics include firm size, growth opportunities, industry affiliation, and industry competitiveness.

Several rationales predict a positive relation between lobbying behavior and firm size. Agrawal and Knoeber (2001) note that politics matter more for larger firms since political visibility increases with size. The authors determine that the incidence of politically useful directors is directly related to firm size. Brown, Helland, and Kiholm-Smith (2006) argue that visible firms with higher litigation risk and government oversight have an incentive to make charitable contributions to garner goodwill. Similarly, managers of larger firms may engage in lobbying to gain political intelligence or curry favor with politicians in hopes of providing new opportunities to increase firm value. Also, reputational effects may cause lobbyists to target larger, more visible firms as potential clients.

Scale economies also support a positive relation between lobbying and size. Larger firms have more incentive to influence political outcomes if legislation impacts variable costs. Additionally, if lobbyists incur fixed costs to engage in influence, then pricing to corporations will reflect size economies for lobbying services. Therefore, economies of scale predict a direct relation between lobbying and firm size.

Investment opportunities represent another plausible factor that affects lobbying activity. Managers anticipating improvement in growth prospects might incur the marginal costs of incremental lobbying activities. Further, the incentive to influence political outcomes should be greater for firms in growth industries. We proxy for investment opportunities with the market-to-book ratio of assets and research and development expenditures scaled by revenues.

The benefit of political connections likely varies by industry affiliation. Agrawal and Knoeber (2001) argue that the value of political connections is affected by the firm's reliance on the government as a customer and the degree of government regulation, where both factors are conditional upon industry affiliation. Brown et al. (2006) find increased charitable contributions for firms in more regulated industries. Lobbying might be more important to firms in industries more sensitive to government oversight or intervention.

The benefits of policy changes are greatest for firms in industries with fewer market participants as these benefits are spread across all firms in competitive industries, not just those actively investing in political capital (i.e., the free rider problem). Accordingly, lobbying should be directly related to industry concentration. Supporting this view, Pittman (1976) confirms increasing

corporate campaign contributions for firms in concentrated industries. We measure industry competitiveness using the Herfindahl index, calculated by Fama and French (1997) industry categories by fiscal year.

## **B. Agency Problems**

Agency conflicts attributable to excess free cash flow may lead to increasing lobbying activity. Managers may lobby simply to engage the political process to achieve personal utility instead of focusing their efforts on regulation or legislation affecting the firm's operating or legal environment. Thus, the free cash flow managerial-shareholder agency problem described in Jensen (1986) is a possible explanation for lobbying. Brown et al. (2006) find evidence consistent with agency explaining some corporate philanthropy.

We control for agency problems via cash flow and leverage. A positive relation between lobbying and cash flow supports the view that lobbying activity might be attributable to excess free cash flow. We include a measure of leverage to capture the beneficial monitoring function provided by creditors that may help mitigate a potential Jensen (1986) free cash flow problem for under-levered firms.

## **C. Campaign Contributions, Electoral College Votes, and Proximity to Politicians**

The final category of firm characteristics that we analyze as lobbying determinants includes corporate PAC campaign contributions, Electoral College votes, and the distance between firm headquarters and the respective state capital. As described below, competing views exist with respect to the impact of these characteristics on lobbying.

Campaign contributions may enable managers to build and/or maintain connections with politicians (Cooper et al., 2010). Consequently, we examine the relation between lobbying and campaign contributions, where contributions are also downloaded from the CRP website and hand-matched to Compustat.<sup>5</sup> Including corporate PAC contributions to candidates as an independent variable allows us to determine whether lobbying and contributions are complements or substitutes. A positive (negative) relation between these forms of political spending suggests they are complements (substitutes) in the political influence decision made by the firm.

In later analyses, it will be important to consider determinants of political engagement that are not related to shareholder value, specifically measures such as excess stock returns or the market-to-book ratio of assets. For example, a firm's demand for the services of a lobbyist might be influenced by the number of elected federal officials from the state in which the firm is headquartered. The greater the number of politicians charged with representing the firms and citizens of the state in which the firm is headquartered, the less likely the firm will need to hire a lobbyist to help transmit the message they wish communicated to Washington. Alternatively, the greater the number of representatives, the greater the need to hire a lobbyist to inform this large number of politicians. We proxy for this lobbying determinant with the natural log of the number of Electoral College votes owned by the state in which the firm's headquarters is physically located. Another potential determinant of political engagement is the distance from corporate headquarters to the capital building, where federal and state politicians and lobbyists typically keep offices. Proximity to the offices of policymakers may decrease the need for the services of a lobbyist to communicate with politicians. Alternatively, it may weaken the fixed costs of engaging a lobbyist. Finally, it is likely that the importance of Electoral College votes and the

---

<sup>5</sup> Consistent with Cooper et al. (2010), our corporate PAC campaign contributions are resources given directly to candidates, and not PAC contributions made to other PACs.



distance from headquarters to the state capital are conditional upon each other. Thus we also include their interaction as a potential lobbying determinant.

## D. Empirical Model: Determinants of Corporate Lobbying

The following model details our approach in estimating the determinants of corporate lobbying activity:

$$\begin{aligned} LobbyVar_{i,t} = & \beta_0 + \beta_1 Size_{i,t-1} + \beta_2 MB_{i,t-1} + \beta_3 R\&D_{i,t-1} + \beta_4 HFI_{i,t-1} \\ & + \beta_5 CF_{i,t-1} + \beta_6 Lev_{i,t-1} + \beta_7 PACVar_{i,t-1} + \beta_8 LN(Votes)_{i,t-1} \\ & + \beta_9 LN(Dist)_{i,t-1} + \beta_{10} LN(Votes)_{i,t-1} \times LN(Dist)_{i,t-1} \\ & + \text{industry and time dummies} + \varepsilon_{i,t}. \end{aligned} \quad (1)$$

We use Equation (1) to estimate the characteristics associated with lobbying participation via a probit model with the dependent variable as  $LobbyDV_{i,t}$ , a binary variable equal to one for observations with lobbying expenses in fiscal year  $t$ , and zero otherwise. Factors influencing the degree in which firms invest in lobbying are also of interest. Lobbying intensity is measured with continuous variables including  $LN(LobbyExp)_{i,t}$ , defined as the natural logarithm of \$1 plus the annual inflation-adjusted lobbying expenditure, and  $LobbyExpRatio_{i,t}$ , equal to the ratio of lobbying expenses to total assets. We use a Tobit model for the continuous lobbying variables given the mass of observations with the dependent variable equal to zero.

Definitions for the independent variables included in Equation (1) follow.  $Size_{i,t-1}$  is the natural logarithm of the inflation-adjusted book value of assets.<sup>6</sup> The market-to-book ratio,  $M/B_{i,t-1}$ , is the ratio of the sum of the market value of equity and total liabilities scaled by total book assets.  $R\&D_{i,t-1}$  is research and development expenses scaled by sales. The Herfindahl index ( $HFI_{Ind,t-1}$ ) is the annual sum of squared market shares for all Compustat firms in each industry.  $HFI_{Ind,t-1}$  approaches a maximum value of one as the industry concentration approaches a monopoly.  $CF_{i,t-1}$  is cash flow, defined as operating income before depreciation minus interest expense, income taxes, and common dividends divided by assets. Leverage ( $Lev_{i,t-1}$ ) is the debt in current liabilities plus long-term debt scaled by assets.  $PACVar_{i,t-1}$  is a placeholder for one of three measures of PAC contributions that parallel the lobbying measures. These include a dummy variable ( $PACDV_{i,t-1}$ ), the natural log of one plus inflation-adjusted contributions [ $LN(PACContr_{i,t-1})$ ], and the ratio of contributions to the book value of assets ( $PACContrRatio_{i,t-1}$ ).  $LN(Votes)_{i,t-1}$  is the natural logarithm of a given state's Electoral College votes.  $LN(Dist)_{i,t-1}$  is the natural logarithm of one plus the distance in miles from the ZIP code of the firm's physical headquarters to the respective state capital building's physical location ZIP code. Firm characteristics are lagged one period. Industry and time dummies control for unobserved time and industry effects on lobbying. Industry dummies follow the Fama and French (1997) classifications.

<sup>6</sup> Compustat abbreviations and (codes) for determinants variables follow: total assets (AT, A6), price-fiscal year close (PRCCE, A199), common shares outstanding (CSHO, A25), total liabilities (LT, A181), research and development expenditures (XRD, A46), sales (SALE, A12), operating income before depreciation (OIBDP, A13), interest expense (XINT, A15), income taxes-total (TXT, A16), cash dividends-common (DVC, A21), debt in current liabilities (DLC, A34), and long-term debt (DLTT, A9). The market value of equity is common shares outstanding  $\times$  price-fiscal year close. If missing, research and development expenditures is set equal to \$0.

**Table III. Differences in Firm Characteristics: Lobbying and Nonlobbying Firms**

Table III provides descriptive statistics for the lobbying and nonlobbying subsamples. *LobbyDV* is a binary variable that is equal to one if the firm engaged in lobbying in a given year, and zero otherwise. *LobbyExp* is annual inflation-adjusted lobby expenditures. *LN(LobbyExp)* is the natural logarithm of \$1 plus inflation-adjusted lobby expenditures. *LobbyExpRatio* is lobbying expenditures scaled by total assets. *Size* is the natural logarithm of inflation-adjusted total assets. *M/B* is the sum of the market value of equity and total liabilities scaled by total assets. *R&D* is the ratio of research and development expenditures to revenues. *HFI* represents the industry-level Herfindahl index. *CF* is operating income before depreciation net of interest expense, income taxes, and common dividends and is scaled by total assets. *Lev* is the sum of debt in current liabilities and long-term debt divided by total assets. *PACDV* is an indicator variable that is equals to one if the firm reported campaign contributions, and zero otherwise. *PACContr* represents firms' annual inflation-adjusted campaign contributions. *LN(PACContr)* is the natural logarithm of \$1 plus inflation-adjusted campaign contributions. *PACContrRatio* is campaign contributions scaled by total assets. *LN(Votes)* is the natural logarithm of Electoral College votes for the state in which the firm is headquartered. *LN(Dist)* is the natural logarithm of one plus the distance from firm headquarters and the state capital.

Variables	(1)		(2)		Difference in Means	
	Lobbyers		Nonlobbyers		(1)-(2)	
	N	Mean	N	Mean	Difference	p-value
<i>LobbyDV</i> <sub><i>i,t</i></sub>	5,556	1.000				
<i>LobbyExp</i> <sub><i>i,t</i></sub> (\$M)	5,556	1.006				
<i>LN(LobbyExp)</i> <sub><i>i,t</i></sub>	5,556	12.530				
<i>LobbyExpRatio</i> <sub><i>i,t</i></sub>	5,556	0.000				
<i>Size</i> <sub><i>i,t-1</i></sub>	5,556	7.856	24,051	5.519	2.337	0.000
<i>M/B</i> <sub><i>i,t-1</i></sub>	5,556	2.035	24,051	1.907	0.127	0.000
<i>R&amp;D</i> <sub><i>i,t-1</i></sub>	5,556	0.145	24,051	0.223	−0.078	0.000
<i>HFI</i> <sub><i>Ind,t-1</i></sub>	5,556	0.091	24,051	0.080	0.011	0.000
<i>CF</i> <sub><i>i,t-1</i></sub>	5,556	0.058	24,051	0.026	0.033	0.000
<i>Lev</i> <sub><i>i,t-1</i></sub>	5,556	0.250	24,051	0.207	0.043	0.000
<i>PACDV</i> <sub><i>i,t-1</i></sub>	5,556	0.517	24,051	0.042	0.475	0.000
<i>PACContr</i> <sub><i>i,t-1</i></sub> (\$M)	5,556	0.073	24,051	0.002	0.071	0.000
<i>LN(PACContr)</i> <sub><i>i,t-1</i></sub>	5,556	5.600	24,051	0.400	5.200	0.000
<i>PACContrRatio</i> <sub><i>i,t-1</i></sub>	5,556	0.000	24,051	0.000	0.000	0.000
<i>LN(Votes)</i> <sub><i>i,t-1</i></sub>	5,556	2.852	24,051	2.943	−0.090	0.000
<i>LN(Dist)</i> <sub><i>i,t-1</i></sub>	5,556	4.092	24,051	4.209	−0.117	0.000

E. Determinants of Corporate Lobbying: Results

Table III presents the univariate characteristics for the lobbying and nonlobbying sub-samples. Approximately 18.77% of the observations report lobbying expenses. The mean inflation-adjusted annual lobbying expenditure for the sample of lobbyists is \$1.006M. The mean annual contribution for the sample of lobbyists (non-lobbyers) is approximately \$73,000 (\$2,000). Univariate statistics indicate that lobbying expenditures are substantially larger than campaign contributions, consistent with tabulations in Milyo et al. (2000) and Ansolabehere, de Figueiredo, and Snyder (2003).

Column 3 presents the differences in firm characteristics across lobbyist and nonlobbyer sub-samples. Lobbying firms are larger, have higher market-to-book ratios, lower research and development expenses, and are in more concentrated industries. The results are mixed with respect to

the agency-based explanations for lobbying. Lobbyers have significantly greater cash flow and more debt. Our finding that lobbyists have higher leverage ratios is consistent with evidence from Faccio, Masulis, and McConnell (2006) and Faccio (2010) suggesting that politically connected firms have improved access to external financing. Relative to nonlobbyers, lobbying firms have headquarters in states with fewer Electoral College votes and are located closer to state capitals.

Table IV presents the multivariate results from the three specifications of Equation (1). Column 1 reports marginal effects resulting from a probit examining the factors influencing lobbying participation, and the Tobit columns (Columns 2 and 3) report on the determinants of lobbying intensity.

Lobbying participation and intensity are directly and significantly (1% level) related to firm size implying that larger firms are more likely to lobby and have greater lobbying expenditures. The direct lobby-size relation is consistent with Agrawal and Knoeber's (2001) view that politics are more important to larger, more visible firms. This relation also supports the importance of scale economies in lobbying investment.

For each model, we find a significant, direct association between lobbying activity and  $M/B_{i,t-1}$  suggesting that investment opportunities influence lobbying behavior. However, this inference is weakened to some degree as research and development expenses are not significant.

To save space, we do not tabulate estimates for the industry dummies, but the findings are available upon request. Lobbying participation for 17 of the industry affiliations is significantly different from the Software industry (base case). Specifically, those industries estimated more (less) likely to lobby than the software industry include print & publication, medical equipment, pharmaceuticals, electrical equipment, and defense (candy and soda, entertainment, consumer goods, apparel, construction materials, construction, machinery, mining, oil & gas, wholesale, retail, and restaurants). Variation in industry-level lobbying intensity provides similar inferences.

In the tabulated regressions that include (unreported) industry fixed effects, industry concentration is never statistically significant. However, when we re-estimate the models without the industry dummies, we find that lobbying intensity is directly and significantly associated with  $HFI_{Ind,t-1}$ . This lobbying result complements Pittman's (1976) finding that industry concentration and campaign contributions are positively related.

In summary, quantitative and qualitative inferences for  $Size_{i,t-1}$ ,  $M/B_{i,t-1}$ , and the industry dummies are consistent with opportunistic managers using lobbyists to gain political connections that may enhance firm value. This inference is consistent with research that examines the determinants of other forms of political spending.

The results in Table IV are mixed with respect to an agency-based explanation for corporate lobbying. The manager-shareholder agency rationale for lobbying predicts that firms with greater cash flow will be more active lobbyists. However, each model indicates a negative and significant relation between lobbying and cash flow.<sup>7</sup> The negative and significant coefficient estimate for  $Lev_{i,t-1}$  suggests that firms with greater leverage exhibit less lobbying activity. This finding may reflect leverage's limiting effect on managers' ability to invest heavily (relative to the cross-section) in lobbying. The results (unreported) are unchanged if we include the interaction of cash flow and leverage, and the interaction coefficient is very small and not statistically significant. Thus, while philanthropy might result from agency problems and/or reflect the political leanings of management (Brown et al., 2006), our findings do not provide clear evidence implying that lobbying is an outcome of manager-shareholder agency problems for the average firm.

We find a direct association between lobbying behavior and involvement in campaign finance. Each proxy for campaign contributions is statistically significant at the 1% level. In terms

<sup>7</sup> The inverse relation between lobbying activity and cash flow remains if cash flow is scaled by revenues.

Table IV. Determinants of Corporate Lobbying Activity

Table IV presents the results on the determinants of corporate lobbying activity (participation and intensity) using variants of Equation (1). The sample consists of publicly-traded firm-years from 1999 to 2011. Three dependent variable specifications are used: *LobbyDV* is a binary variable that is equal to one if the firm engaged in lobbying in a given year, and zero otherwise; *LN(LobbyExp)* is the natural logarithm of \$1 plus inflation-adjusted lobby expenditures; *LobbyExpRatio* is the ratio of lobby expenses to total assets. Models are estimated with the aforementioned dependent variables using Probit and Tobit methodologies, respectively. *Size* is the natural logarithm of inflation-adjusted total assets. *M/B* is the sum of the market value of equity and total liabilities scaled by total assets. *R&D* is the ratio of research and development expenditures to revenues. *HFI* represents the industry-level Herfindahl index. *CF* is operating income before depreciation net of interest expense, income taxes, and common dividends and is scaled by total assets. *Lev* is the sum of debt in current liabilities and long-term debt divided by total assets. *PACDV* is an indicator variable that is equal to one if the firm reported campaign contributions in a given year, and zero otherwise. *LN(PACContr)* is the natural logarithm of \$1 plus inflation-adjusted campaign contributions. *PACContrRatio* is the ratio of campaign contributions to total assets. *LN(Votes)* is the natural logarithm of Electoral College votes for the state in which the firm is headquartered. *LN(Dist)* is the natural logarithm of one plus the distance from firm headquarters and the state capital. Models include untabulated industry effects. Intercepts are omitted from the table. *p*-values appear in parentheses below coefficients, and are based on firm-level clustered standard errors. The probit coefficients are marginal effects.

Independent Variables	(1)	(2)	(3)
<i>Size</i> <sub><i>i,t-1</i></sub>	0.358*** (0.000)	3.752*** (0.000)	0.000*** (0.000)
<i>M/B</i> <sub><i>i,t-1</i></sub>	0.084*** (0.000)	0.915*** (0.000)	0.000*** (0.000)
<i>R&amp;D</i> <sub><i>i,t-1</i></sub>	-0.032 (0.148)	-0.264 (0.306)	-0.000 (0.103)
<i>HFI</i> <sub><i>Ind,t-1</i></sub>	0.379 (0.543)	1.136 (0.853)	-0.000 (0.920)
<i>CF</i> <sub><i>i,t-1</i></sub>	-0.930*** (0.000)	-9.352*** (0.000)	-0.001*** (0.000)
<i>Lev</i> <sub><i>i,t-1</i></sub>	-0.302*** (0.007)	-2.488** (0.035)	-0.000** (0.015)
<i>PACDV</i> <sub><i>i,t-1</i></sub>	1.310*** (0.000)		
<i>LN(PACContr)</i> <sub><i>i,t-1</i></sub>		1.212*** (0.000)	
<i>PACContrRatio</i> <sub><i>i,t-1</i></sub>			17.869*** (0.000)
<i>LN(Votes)</i> <sub><i>i,t-1</i></sub>	-0.340*** (0.004)	-3.129** (0.013)	-0.000* (0.070)
<i>LN(Dist)</i> <sub><i>i,t-1</i></sub>	-0.139* (0.073)	-1.237 (0.124)	-0.000 (0.354)
<i>LN(Votes)</i> <sub><i>i,t-1</i></sub> * <i>LN(Dist)</i> <sub><i>i,t-1</i></sub>	0.053** (0.050)	0.469 (0.101)	0.000 (0.356)
<i>DV99</i>	-0.551*** (0.000)	-5.924*** (0.000)	-0.000*** (0.000)
<i>DV00</i>	-0.521*** (0.000)	-5.462*** (0.000)	-0.000*** (0.000)
<i>DV01</i>	-0.509*** (0.000)	-5.401*** (0.000)	-0.000*** (0.000)
<i>DV02</i>	-0.399*** (0.000)	-4.124*** (0.000)	-0.000*** (0.000)

(Continued)

Table IV. Determinants of Corporate Lobbying Activity (Continued)

Independent Variables	(1)	(2)	(3)
DV03	−0.335*** (0.000)	−3.536*** (0.000)	−0.000*** (0.000)
DV04	−0.227*** (0.000)	−2.319*** (0.000)	−0.000*** (0.000)
DV05	−0.234*** (0.000)	−2.426*** (0.000)	−0.000*** (0.000)
DV06	−0.091** (0.034)	−0.867** (0.043)	−0.000 (0.413)
DV07	−0.091** (0.029)	−0.990** (0.018)	−0.000 (0.180)
DV08	−0.079** (0.043)	−0.821** (0.031)	−0.000 (0.124)
DV09	0.013 (0.730)	0.091 (0.805)	0.000 (0.218)
DV10	0.093*** (0.001)	0.929*** (0.000)	0.000*** (0.000)
Method	Probit	Tobit	Tobit
Dependent variable	LobbyDV <sub>i,t</sub>	LN(LobbyExp) <sub>i,t</sub>	LobbyExpRatio <sub>i,t</sub>
Observations	29,607	29,607	29,607

\*\*\*Significant at the 0.01 level.  
\*\*Significant at the 0.05 level.  
\*Significant at the 0.10 level.

of economic significance, the coefficient estimate for  $PACDV_{i,t-1}$  indicates that contributing firms are 1.31 times more likely to lobby, relative to those firms without campaign contributions. The general positive relation between lobbying activity and campaign contributions is consistent with managers using multiple types of political spending to develop and maintain connections.

Lobbying activity is negatively related to  $LN(Votes)_{i,t-1}$ . This result suggests that firms with a lower stock of elected officials in Congress have a greater demand for the services of lobbyists to communicate their message to politicians. We find that the propensity to lobby is negatively related to  $LN(Dist)_{i,t-1}$ . Thus, firms located more closely to politicians' and lobbyists' state-level offices exhibit more lobbying activity. This result is consistent with the proximity to lobbyists and policymakers reducing the opportunity and/or transaction costs associated with lobbying participation. However, the  $p$ -values for the distance measure and interaction term  $LN(Votes)*CapCityDist$  increase to slightly greater than the standard 0.10 cutoff in the Tobit model for the  $LN(LobbyExp)_{i,t}$  ( $p$ -values of 0.124 and 0.101, respectively, in Column 2), and to greater than 0.350 in when we use a Tobit regression to explain lobbying expenses scaled by assets (Column 3).

Time dummies indicate an increase in lobbying activity over the sample period supporting the univariate evidence reported in Table I. The likelihood of lobbying participation in the base year (2011) exceeds that in each year from 1999 to 2008, while the propensity to lobby increases by 55.1% from 1999 to 2011. Lobbying expenses increase over the sample period, as well. Overall, the temporal increase in lobbying activity suggests that political involvement via lobbying is increasingly important over our sample period.

## IV. Shareholder Wealth and Corporate Lobbying

The second objective of this paper is to estimate the shareholder wealth effects associated with corporate lobbying activity (i.e., the lobbying effect). We test for the lobbying effect using the following model:<sup>8</sup>

$$\begin{aligned} r_{i,t} - R_{i,t}^B = & \gamma_0 \frac{1}{MVE_{i,t-1}} + \gamma_1 LobbyVar_{i,t-1} + \gamma_2 PACVar_{i,t-1} + \gamma_3 \frac{\Delta Earn_{i,t}}{MVE_{i,t-1}} \\ & + \gamma_4 \frac{\Delta Assets_{i,t}}{MVE_{i,t-1}} + \gamma_5 \frac{\Delta R\&D_{i,t}}{MVE_{i,t-1}} + \gamma_6 \frac{\Delta IntExp_{i,t}}{MVE_{i,t-1}} + \gamma_7 \frac{\Delta Div_{i,t}}{MVE_{i,t-1}} \\ & + \gamma_8 \frac{NF_{i,t}}{MVE_{i,t-1}} + \gamma_9 Lev_{i,t} + \text{industry and time dummies} + \varepsilon_{i,t}, \end{aligned} \quad (2)$$

where  $\Delta X$  indicates a change in  $X$  from period  $t - 1$  to  $t$ . The dependent variable is excess return measured as firm  $i$ 's annual stock return ( $t - 1$  to  $t$ ) minus the benchmark portfolio return during year  $t$ . We follow Faulkender and Wang (2006) and calculate benchmark returns using Fama-French size and book-to-market value-weighted portfolios. Control variables account for profitability ( $\Delta Earn_{i,t}$ ), financing choices ( $\Delta IntExp_{i,t}$ ,  $\Delta Div_{i,t}$ ,  $NF_{i,t}$ , and  $Lev_{i,t}$ ), investment policy ( $\Delta Assets_{i,t}$  and  $\Delta R\&D_{i,t}$ ), as well as industry (Fama and French, 1997) and time effects.<sup>9,10</sup> Including corporate PAC contributions to candidates ( $PACVar_{i,t-1}$ ) removes from the error term a variable correlated with lobbying (per the evidence in Section III above) and is found to be associated with stock returns in Cooper et al. (2010), mitigating a potential source of omitted variable bias.<sup>11</sup>

In separate specifications, we model lobbying participation ( $LobbyVar_{i,t-1}$ ) with a lobbying dummy, the number of lobbying reports filed, years lobbied, as well as lobbying intensity (with lobbying expenses). The specification for  $PACVar_{i,t-1}$  corresponds with  $LobbyVar_{i,t-1}$ . With the exception of the number of years lobbied, the lobbying, and contribution variables are lagged by one fiscal year. We lag these political variables because of a concern for lags in the payoffs to

<sup>8</sup> Equation (2) is an adjusted version of the model used by Faulkender and Wang (2006) to estimate the market value of cash. Other studies subsequently use the model to examine the shareholder wealth effects of various corporate activities. We thank an anonymous referee for suggesting that the intercept be scaled by lagged market equity. The results are not qualitatively affected by this choice.

<sup>9</sup> To ease presentation, we suppress the scaling of the regressors. For example,  $\Delta Earn_{i,t}$  refers to  $\frac{\Delta Earn_{i,t}}{MVE_{i,t-1}}$ .

<sup>10</sup> We follow Faulkender and Wang (2006) for data construction and screens and scale the financial variables (except for  $Lev$ ) by the lagged market value of equity ( $MVE$ ). Variable definitions, calculations, and Compustat mnemonics follow:  $MVE$  is market value of equity [share price (PRCCF:199)  $\times$  shares (CSHO:25)];  $Earn$  is earnings before extraordinary items [income before extraordinary items (IB:18) + interest expense (XINT:15) + deferred taxes (TXDI:50) + investment tax credit (ITCI:51)];  $Assets$  is assets (AT:6);  $R\&D$  is research and development expenses (XRD:46);  $IntExp$  is interest expense (XINT:15);  $Div$  is common dividends (DVC:21);  $Lev$  is calculated as total debt long-term debt (DLTT:9) + Debt in current liabilities (DLC:34) divided by the sum of total debt and market value of equity;  $NF$  is net financing (sale of common and preferred stock (SSTK:108) minus purchase of common and preferred stock (PRSTKC:115) plus issuance of long-term debt (DLTIS:111) minus reduction in long-term debt (DLTR). If missing, we set the variables deferred taxes, investment tax credits, and research and development expenses equal to \$0. To limit the effect of outlier observations, we drop observations when earnings (IB + XINT + TXDI + ITCI) scaled by lagged assets is less than  $-1.0$ . We require the absolute values of the standardized residuals (DFITS statistic of Belsley, Kuh, and Welsch, 1980) to be less than 2.5 [ $2.0 \times \sqrt{(k/n)}$ ], and we winsorize variables at the 1% and 99% tails.

<sup>11</sup> We thank the editor and an anonymous reviewer for suggesting our inclusion of this variable.



Table V. Differences in Mean Excess Returns: Lobbyers vs. Nonlobbyers

Table V provides differences in mean annual excess returns for lobbying and nonlobbying firms. Excess return is calculated as the annual return in year  $t$  minus the Fama-French (1993) size and book-to-market matched value-weighted portfolio return in year  $t$ .  $LobbyDV$  is an indicator variable that is equal to one if the firm reported lobbying expenditures in a given year, and zero otherwise. Excess returns are in percentage form.

Variable	$LobbyDV_{i,t-1} = 1$		$LobbyDV_{i,t-1} = 0$		Difference in Means	
	$N$	Mean	$N$	Mean	Difference	$p$ -value
$r_{i,t} - R_{i,t}^B$	5,556	0.014	24,051	−0.026	0.040***	0.000

\*\*\*Significant at the 0.01 level.

influencing legislation and regulations and due to delays in the reporting of lobbying expenses that existed during the sample period.

The valuation framework resembles a long-term event study as the dependent variable is an annual excess return and the variable of interest is lagged lobbying activity. Despite accounting for both expected stock returns and for expected financial characteristics realizations, it is a challenge to completely address concerns about potential endogeneity. Below, we describe several strategies we employ to address our concerns that the results are influenced by endogeneity.

A. Results: Shareholder Wealth and Corporate Lobbying

In this section, we present our results on the value of corporate lobbying. First, we detail the results of estimating Equation (2) and alternative versions for robustness. Next, we present the results for several other robustness tests including the results from two alternative valuation frameworks.

1. Shareholder Wealth and Lobbying Participation

Table V reports the differences in mean excess returns across lobbying and nonlobbying firms. Lobbyers have an average excess return of 1.4%, while the mean is −2.6% for nonlobbyers. The difference in means is statistically significant. Untabulated findings indicate significantly improved market performance for firms contributing to campaigns.

Additionally, we examine the relation between shareholder wealth and lobbying participation in a multivariate setting. Table VI presents our results after estimating Equation (2) with ordinary least squares (OLS). Standard errors are robust to heteroskedasticity and firm-level clustering.<sup>12</sup> The models explain roughly 17.5% of the variation in excess returns. We find positive (negative) and significant coefficient estimates for earnings, assets, research development expenditures, and dividends (interest expense, leverage, and net financing). The coefficient estimates for the variables exhibit little variation across model specification. Each specification for campaign contributions confirms that risk-adjusted returns increase with participation in PAC financing, consistent with inferences from Cooper et al. (2010).

In Column 1, we define lobbying with an indicator variable ( $LobbyDV_{i,t-1}$ ) equal to one if the firm reported lobbying expenses in the previous year, and zero otherwise. Our results suggest that

<sup>12</sup> Inferences for the primary variables of interest are unchanged if we cluster standard errors by industry. However, coefficients for research and development expenses and net financing are sometimes not statistically significant with industry clustering.

Table VI. Excess Returns and Corporate Lobbying Participation

Table VI provides OLS regression results after estimating the relation between excess returns and lobbying participation. The dependent variable is excess returns, calculated as a firm’s annual return in year  $t$  minus the firm’s size and book-to-market matched value-weighted portfolio return in year  $t$ .  $\Delta X$  represents the change in  $X$  from year  $t-1$  to  $t$ . Financial variables other than  $Lev$  are scaled by the lagged market value of equity.  $LobbyDV$  ( $PACDV$ ) is an indicator variable set equal to one if the firm reported lobbying expenditures (campaign contributions) in a given year, and zero otherwise.  $LN(LobbyReps)$  ( $LN(CandSupp)$ ) is the natural logarithm of one plus the number of lobbying reports filed in a given year (candidates supported in a given year).  $LN(YrsLobby)$  ( $LN(YrsPACContr)$ ) is the natural logarithm of one plus the number of years a firm reports lobbying expenditures (campaign contributions).  $Earn$  is earnings before extraordinary items.  $Assets$  is total assets.  $R\&D$  is research and development expenses.  $IntExp$  is interest expense.  $Div$  is common dividends.  $NF$  is net financing, calculated as the sale of common and preferred stock minus the purchase of common and preferred stock plus the issuance of long-term debt minus the reduction in long-term debt.  $Lev$  is debt in current liabilities plus long-term debt divided by the sum of total debt and the market value of equity. Models include unreported time and industry dummies. Standard errors are robust to heteroskedasticity and firm-level clustering. Intercepts are omitted from the table.  $p$ -values appear in parentheses below coefficients.

Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)
$LobbyDV_{i,t-1}$	0.021*** (0.004)	0.032*** (0.000)				
$PACDV_{i,t-1}$	0.042*** (0.000)	0.069*** (0.000)				
$LobbyDV_{i,t-1} \times PACDV_{i,t-1}$		−0.046*** (0.004)				
$LN(LobbyReps)_{i,t-1}$			0.010** (0.036)	0.018*** (0.001)		
$LN(CandSupp)_{i,t-1}$			0.011*** (0.000)	0.021*** (0.000)		
$LN(LobbyReps)_{i,t-1} \times LN(CandSupp)_{i,t-1}$				−0.009*** (0.000)		
$LN(YrsLobby)_i$					0.021*** (0.000)	0.026*** (0.000)
$LN(YrsPACContr)_i$					0.013*** (0.000)	0.034*** (0.000)
$LN(YrsLobby)_i \times LN(YrsPACContr)_i$						−0.012*** (0.001)
$\Delta Earn_{i,t-1}$	0.440*** (0.000)	0.440*** (0.000)	0.441*** (0.000)	0.441*** (0.000)	0.439*** (0.000)	0.439*** (0.000)
$\Delta Assets_{i,t-1}$	0.265*** (0.000)	0.265*** (0.000)	0.265*** (0.000)	0.265*** (0.000)	0.263*** (0.000)	0.263*** (0.000)
$\Delta R\&D_{i,t-1}$	0.584*** (0.006)	0.586*** (0.006)	0.583*** (0.006)	0.586*** (0.006)	0.574*** (0.006)	0.573*** (0.007)
$\Delta IntExp_{i,t-1}$	−1.844*** (0.000)	−1.842*** (0.000)	−1.848*** (0.000)	−1.845*** (0.000)	−1.836*** (0.000)	−1.834*** (0.000)
$\Delta Div_{i,t-1}$	1.129*** (0.005)	1.133*** (0.005)	1.122*** (0.006)	1.119*** (0.006)	1.101*** (0.007)	1.109*** (0.006)
$NF_{i,t-1}$	−0.070*** (0.003)	−0.071*** (0.003)	−0.071*** (0.003)	−0.070*** (0.003)	−0.068*** (0.005)	−0.068*** (0.004)
$Lev_{i,t-1}$	−0.492*** (0.000)	−0.493*** (0.000)	−0.491*** (0.000)	−0.491*** (0.000)	−0.495*** (0.000)	−0.496*** (0.000)
Observations	29,607	29,607	29,607	29,607	29,607	29,607
Adjusted R <sup>2</sup>	0.164	0.164	0.163	0.164	0.165	0.165

\*\*\*Significant at the 0.01 level.  
\*\*Significant at the 0.05 level.  
\*Significant at the 0.10 level.

stocks of lobbying firms significantly outperform non-lobbying firms. The coefficient estimate on  $LobbyDV_{i,t-1}$  implies a 2.1% differential in excess returns for lobbying firms.<sup>13</sup>

The results in Column 2 present a negatively signed and significant ( $p$ -value = 0.004) coefficient estimate for the interaction  $LobbyDV_{i,t-1} \times PACDV_{i,t-1}$ . This finding suggests that the positive effect of contributing to campaigns is significantly reduced for firms that also lobby and vice versa. The estimated cross-effect is consistent with shareholders viewing participation in lobbying and campaign financing as substitutes in terms of value from this political activity.

Next, we examine the relation between excess returns and lobbying participation using  $LN(LobbyReps)_{i,t-1}$ , defined as the natural logarithm of one plus the number of lobbying reports filed in the prior fiscal year. We argue that the number of reports might be a direct proxy for lobbying participation. The results in Column 3 indicate that the lobbying results in Column 1 continue to hold after measuring lobbying participation with the number of reports filed. When we interact  $LN(LobbyReps)_{i,t-1}$  and log of the number of unique candidates supported ( $LN(CandSupp)_{i,t-1}$ ), Column 4 results suggest that lobbying reports are associated with shareholder value for firms contributing to fewer than three to six candidates.

In Columns 5 and 6, we include the length of time that a firm has employed lobbyists in Equation (2). The variable  $LN(YrsLobby)_i$  is the natural logarithm of one plus the number of years the firm lobbied. The results suggest that shareholder wealth is directly and significantly related to years lobbied. This finding is consistent with political connections increasing with the length of lobbying relationships. In terms of economic effects, the coefficient estimate on  $LN(YrsLobby)_i$  suggests that firms lobbying for five years outperform nonlobbying firms by 3.8% ( $0.021 * [\ln(5+1)] - 0.021 * [\ln(1)]$ ). The negative and significant interaction between years lobbied and years contributed is consistent with the cross-effects reported in Columns 2 and 4.

## 2. Shareholder Wealth and Lobbying Expenses

We proceed by examining the relation between excess returns and lobbying expenditures. This relation warrants attention as the benefits of political influence are presumably related to the amount spent on lobbying. Table VII presents our results after modeling lobbying and campaign contribution variables with  $LobbyExp_{i,t-1}$  and  $PACContr_{i,t-1}$ , where lagged lobbying expenses and lagged campaign contributions, respectively, are scaled by the prior period market value of equity.

The findings in Column 1 suggest a direct and significant ( $p$ -value = 0.004) relation between shareholder wealth and prior period investment in lobbying. Economically, a standard deviation increase in  $LobbyExp_{i,t-1}$  is associated with a 1.030% additional annual excess return. This effect increases to 1.405% if the standard deviation of  $LobbyExp_{i,t-1}$  is calculated conditional on lobbying.<sup>14</sup> Excess returns are also positively related to campaign contributions, a result not analyzed in Cooper et al. (2010).

Untabulated results suggest that the excess return-lobbying expense relation is robust to several model specifications. After industry-adjusting  $LobbyExp_{i,t-1}$  at the mean, we continue to find that shareholder wealth is positively related to lobbying expenditures. Another model specification includes the change in lobby expenses along with prior period lobbying expenses (both scaled by the lagged market value of equity) and their interaction. The magnitude of  $LobbyExp_{i,t-1}$  is similar

<sup>13</sup> The inferences do not change if we use contemporaneous lobbying and contributions dummies (and their interaction) instead of lagged values.

<sup>14</sup> The coefficient on  $LobbyExp_{i,t-1}$  may be interpreted as the shareholders' valuation of an extra dollar spent on lobbying. Thus, the results suggest that an additional dollar spent on lobbying in the prior period increases the market value of equity by \$52.92, implying a 5,192% return on the marginal lobbying dollar. Although this estimate is high, it is approximately four times smaller than estimates reported by Alexander et al. (2009), who analyze the return on lobbying investment by firms influencing the repatriation tax holiday within the 2004 American Jobs Creation Act.

Table VII. Excess Returns and Corporate Lobbying Expenditures

Table VII provides OLS regression results after estimating the relation between excess returns and lobbying expenditures. The dependent variable is excess returns, calculated as a firm’s annual return in year  $t$  minus the firm’s size and book-to-market matched value-weighted portfolio return in year  $t$ .  $\Delta X$  represents the change in  $X$  from year  $t-1$  to  $t$ . Financial variables other than  $Lev$  are scaled by the lagged market value of equity.  $LobbyExp$  ( $PACContr$ ) represents lobbying expenditures (campaign contributions) reported in a given year.  $Earn$  is earnings before extraordinary items.  $Assets$  is total assets.  $R\&D$  is research and development expenses.  $IntExp$  is interest expense.  $Div$  is common dividends.  $NF$  is net financing, calculated as the sale of common and preferred stock minus the purchase of common and preferred stock plus the issuance of long-term debt minus the reduction in long-term debt.  $Lev$  is debt in current liabilities plus long-term debt divided by the sum of total debt and the market value of equity. Models include unreported time and industry dummies. Standard errors are robust to heteroskedasticity and firm-level clustering. Intercepts are omitted from the table.  $p$ -values appear in parentheses below coefficients. <sup>a</sup>indicates the coefficient is scaled by  $10^6$ .

Independent Variables	(1)	(2)	(3)	(4)
$LobbyExp_{i,t-1}$	52.292*** (0.004)	66.773*** (0.003)	58.023*** (0.003)	64.858*** (0.002)
$PACContr_{i,t-1}$	1,782.942*** (0.000)	1,998.575*** (0.000)	1,930.004*** (0.000)	2,202.474*** (0.000)
$LobbyExp_{i,t-1} \times$ $PACContr_{i,t-1}$				−2.042 <sup>a</sup> (0.146)
$\Delta Earn_{i,t}$	0.437*** (0.000)	0.466*** (0.000)	0.441*** (0.000)	0.437*** (0.000)
$\Delta Assets_{i,t}$	0.267*** (0.000)	0.275*** (0.000)	0.268*** (0.000)	0.267*** (0.000)
$\Delta R\&D_{i,t}$	0.590*** (0.005)	0.805*** (0.005)	0.613*** (0.005)	0.594*** (0.005)
$\Delta IntExp_{i,t}$	−1.843*** (0.000)	−1.776*** (0.000)	−1.883*** (0.000)	−1.841*** (0.000)
$\Delta Div_{i,t}$	1.224*** (0.002)	1.114** (0.016)	1.157*** (0.009)	1.220*** (0.003)
$Lev_{i,t}$	−0.498*** (0.000)	−0.464*** (0.000)	−0.501*** (0.000)	−0.498*** (0.000)
$NF_{i,t}$	−0.076*** (0.002)	−0.137*** (0.000)	−0.073*** (0.003)	−0.076*** (0.002)
Sample	Full	Excludes Top-5 Lobbying Industries	Excludes Lobbying ≥ \$10 million	Full
Observations	29,607	22,141	27,687	29,607
Adjusted $R^2$	0.165	0.183	0.166	0.165

\*\*\*Significant at the 0.01 level.  
\*\*Significant at the 0.05 level.  
\*Significant at the 0.10 level.

and remains statistically significant ( $LobbyExp_{i,t-1}$  decreases from 52.292 in Column 1 to 46.616 with  $p$ -value = 0.023). However, the change in lobbying expenses is not statistically significant (estimate of 33.973 with  $p$ -value of 0.627). The persistent nature of lobbying activity, and the delayed nature of lobbying reporting that exists over our sample period, likely weakens the power of the change in lobbying expenses to identify a relation between lobbying and shareholder value. We pursue this issue a bit further with additional robustness tests discussed in the next section.

Columns 2 and 3 of Table VII shed light as to whether the lobbying effect is driven by potentially important subsamples of the data. First, we drop observations in industries that lobby

the most heavily (Column 2).<sup>15</sup> Then, in an effort to ensure that inferences are not driven by firms spending the most on lobbying, we restrict the sample to observations with annual inflation-adjusted lobby expenditures less than \$10 million (Column 3). The results for both samples imply increased excess returns for firms with higher prior period lobbying expenditures. The economic significance for  $LobbyExp_{i,t-1}$  increases after restricting the sample. In summary, the robustness tests in Columns 2 and 3 suggest that the lobbying effect is not driven by these industries or firms for which lobbying might be especially important.

The final column displays results for the interaction between  $LobbyExp_{i,t-1}$  and  $PACContr_{i,t-1}$ . The interaction point estimate is negatively signed, but is not statistically significant. Unlike results in Table VI, this finding suggests that shareholders view lobbying expenses and campaign contributions as distinct ways to gain political connections, possibly due to operational differences distinguishing these forms of political spending.

Next, we examine the robustness of the lobbying effect to different sources of endogeneity. First, we consider the possibility that an unobservable is correlated with both excess returns and lobbying expenditures. To address this concern, we re-estimate a version of Equation (2) with firm fixed effects, but without the industry dummies. Columns 1–3 of Table VIII present fixed effect results for the full sample without the lobbying-intensive industries and without observations where lobbying expenses exceed \$10 million, respectively. The direct and significant association between excess returns and lobbying expenditures is robust to the inclusion of firm fixed effects for the full and restricted samples.

As another robustness test, we estimate a version of Equation (2) using the Blundell-Bond generalized method of moments (GMM) methodology. This specification regresses year  $t$  excess returns on year  $t-1$  excess returns, the independent variables in Equation (2), and fixed firm effects. The estimation controls for potential changes in expected returns in year  $t$  that might be conditional upon excess returns in year  $t-1$ , but not captured by the benchmark returns or the control variables in Equation (2).

The Blundell-Bond two-step GMM results appear in Columns 4–6 of Table VIII, following the sample conditions of Columns 1–3. The relation between excess returns and lobbying expenditures remains positive and statistically significant for the three samples.

Lobbying policymakers is an outcome of an unobserved decision function. If unobserved factors that influence the lobbying decision are jointly correlated with excess returns and the regressors in Equation (2), then the observed lobbying effect might be due to selection bias. To address this concern, we examine the excess returns-lobbying relation using a Heckman (1979) two-step model. Specifically, the Heckman (1979) two-step estimates a first stage probit regression predicting lobbying participation. First-stage regressors include each of the determinants reported in Column 1 of Table IV and the controls in Equation (2). The second stage regression includes the inverse Mills' ratio and all first-stage regressors excluding the three instruments.<sup>16</sup>

<sup>15</sup> Specifically, we drop the five industries with the greatest  $\%IndLobbyExp$  from Table II (communication, pharmaceuticals, electronic equipment, oil & gas, and transportation).

<sup>16</sup> To save space, we tabulate only the second stage results for the variables included in Equation (2) and the inverse Mills' ratio. All three instruments are statistically significant in the three first-stage regressions (Columns 7–9) at the 1% level (the largest  $p$ -value is 0.002). We also test for evidence of weak instruments, but find none. A univariate correlation matrix of the instruments and first- and second-stage dependent variables indicates that the instruments are statistically correlated with the decision to lobby, but not with excess returns. The largest correlation coefficient for the three instruments and excess returns is 0.0047, and the smallest  $p$ -value for these correlations is 0.447. Further, a regression of excess returns on the three instruments reveals no ability for the instruments to explain a variation in excess returns in a multivariate setting, as the smallest point estimate  $p$ -value is 0.397 and the regression's  $F$ -test for joint significance has a  $p$ -value of 0.722.



Table VIII. Robustness Tests: Excess Returns and Corporate Lobbying Expenditures

Table VIII provides robustness tests concerning the relation between excess returns and lobbying expenditures. The dependent variable is excess returns, calculated as a firm's annual return in year  $t$  minus the firm's size and book-to-market matched value-weighted portfolio return in year  $t$ .  $\Delta X$  represents the change in  $X$  from year  $t - 1$  to  $t$ . Financial variables other than  $Lev$  are scaled by the lagged market value of equity. *LobbyExp* (*PACContr*) represents lobbying expenditures (campaign contributions) reported in a given year. *Earn* is earnings before extraordinary items. *Assets* is total assets. *R&D* is research and development expenses. *IntExp* is interest expense. *Div* is common dividends. *NF* is net financing, calculated as the sale of common and preferred stock minus the purchase of common and preferred stock plus the issuance of long-term debt minus the reduction in long-term debt. *Lev* is debt in current liabilities plus long-term debt divided by the sum of total debt and the market value of equity.  $\lambda$  is the inverse Mill's ratio. Models include unreported time and industry dummies. Intercepts are omitted from the table.  $p$ -values in Columns 1-3 are based on standard errors clustered at the firm level.  $p$ -values in Columns 4-6 are based on Windmeijer (2005) two-step robust standard errors.  $p$ -values in Columns 7-9 are based on Heckman (1979) two-step robust standard errors.

Independent Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>LobbyExp</i> <sub><math>t-1</math></sub>	184.275*** (0.000)	203.634*** (0.000)	191.976*** (0.000)	121.663** (0.023)	219.358*** (0.001)	112.084* (0.054)	117.156*** (0.000)	138.174*** (0.000)	126.444*** (0.000)
<i>PACContr</i> <sub><math>t-1</math></sub>	3,422.248*** (0.000)	3,412.090*** (0.000)	3,448.838*** (0.000)	1,361.610 (0.132)	540.266 (0.563)	2,442.382*** (0.015)	2,033.963*** (0.002)	1,945.184*** (0.013)	2,446.343*** (0.001)
$\Delta$ <i>Earn</i> <sub><math>t</math></sub>	0.379*** (0.000)	0.401*** (0.000)	0.382*** (0.000)	0.184*** (0.001)	0.287*** (0.000)	0.171*** (0.002)	0.337*** (0.000)	0.418*** (0.000)	0.347*** (0.000)
$\Delta$ <i>Assets</i> <sub><math>t</math></sub>	0.174*** (0.000)	0.194*** (0.000)	0.174*** (0.000)	0.111** (0.038)	0.105* (0.072)	0.107** (0.015)	0.129*** (0.000)	0.152*** (0.000)	0.147*** (0.000)
$\Delta$ <i>R&amp;D</i> <sub><math>t</math></sub>	0.054 (0.813)	0.302 (0.325)	0.083 (0.724)	-0.839 (0.351)	-0.869 (0.365)	-0.406 (0.625)	-0.044 (0.894)	-0.347 (0.448)	0.043 (0.901)
$\Delta$ <i>IntExp</i> <sub><math>t</math></sub>	-0.653*** (0.002)	-0.642*** (0.009)	-0.655*** (0.003)	-2.624*** (0.000)	-3.068*** (0.000)	-2.655*** (0.000)	-1.242*** (0.000)	-1.192*** (0.005)	-1.233*** (0.001)
$\Delta$ <i>Div</i> <sub><math>t</math></sub>	-0.047 (0.915)	-0.141 (0.773)	-0.123 (0.800)	-11.091*** (0.000)	-9.181*** (0.000)	-6.348*** (0.009)	-0.909 (0.214)	-0.673 (0.436)	-0.760 (0.345)
<i>Lev</i> <sub><math>t</math></sub>	-1.298*** (0.000)	-1.283*** (0.000)	-1.333*** (0.000)	-0.964*** (0.000)	-0.959*** (0.000)	-0.855*** (0.000)	-1.244*** (0.000)	-1.235*** (0.000)	-1.282*** (0.000)
<i>NF</i> <sub><math>t</math></sub>	0.054** (0.047)	-0.014 (0.665)	0.053* (0.061)	0.291** (0.020)	0.374*** (0.004)	0.270** (0.017)	0.176*** (0.000)	0.157*** (0.001)	0.157*** (0.000)
$r_{i,t-1} - R^B_{i,t-1}$				-0.064*** (0.000)	-0.061*** (0.000)	-0.073*** (0.000)	(0.000)		
$\lambda_{i,t}$								0.061 (0.171)	0.086** (0.045)
Sample	Full	Excludes Top-5 Lobbying Industries	Excludes Lobbying $\geq$ \$10 million	Full	Excludes Top-5 Lobbying Industries	Excludes Lobbying $\geq$ \$10 million	Full	Excludes Top-5 Lobbying Industries	Excludes Lobbying $\geq$ \$10 million
Methodology	Firm fixed effects	Firm fixed effects	Firm fixed effects	Blundell-bond	Blundell-bond	Blundell-bond	Heckman	Heckman	Heckman
Observations	29,607	22,141	27,687	22,836	17,090	21,079	5,556	3,958	4,962

\*\*\*Significant at the 0.01 level.  
\*\*Significant at the 0.05 level.  
\*Significant at the 0.10 level.



The results in Columns 7–9 of Table VIII suggest that the positive relation between excess returns and lobbying expenditures is robust to controls for selection bias.  $LobbyExp_{i,t-1}$  retains statistical significance at the 1% level for each model. The inverse Mills' ratio ( $\lambda_{i,t}$ ) is positively signed and statistically significant for two of the three samples. The positive coefficient on the inverse Mills' ratio suggests that surprise lobbying firms have even greater excess returns.<sup>17</sup>

## B. Robustness Tests of the Valuation Framework

Our final tests examine the robustness of the lobbying effect to the choice of valuation model. Additional frameworks include Fama and French (1998) value regressions and regressions of monthly portfolio returns. The former is used extensively in the literature as an alternative to Equation (2), most often to value cash holdings (Pinkowitz, Stulz, and Williamson, 2006; Dittmar and Mahrt-Smith, 2007; Bates, Kahle, and Stulz, 2009), and the latter was used by Cooper et al. (2010) to value corporate PAC campaign contributions.

We augment the Fama and French (1998) methodology by including measures for lobby activity and campaign contributions, as demonstrated below.

$$\begin{aligned} \frac{MVA_{i,t}}{BVA_{i,t}} = & \delta_0 \frac{1}{BVA_{i,t}} + \delta_1 LobbyVar_{i,t-1} + \delta_2 PACVar_{i,t-1} + \delta_3 \frac{Earn_{i,t}}{BVA_{i,t}} \\ & + \delta_4 \frac{dEarn_{i,t}}{BVA_{i,t}} + \delta_5 \frac{dEarn_{i,t+2}}{BVA_{i,t}} + \delta_6 \frac{R\&D_{i,t}}{BVA_{i,t}} + \delta_7 \frac{dR\&D_{i,t}}{BVA_{i,t}} \\ & + \delta_8 \frac{dR\&D_{i,t+2}}{BVA_{i,t}} + \delta_9 \frac{Div_{i,t}}{BVA_{i,t}} + \delta_{10} \frac{dDiv_{i,t}}{BVA_{i,t}} + \delta_{11} \frac{dDiv_{i,t+2}}{BVA_{i,t}} \\ & + \delta_{12} \frac{IntExp_{i,t}}{BVA_{i,t}} + \delta_{13} \frac{dIntExp_{i,t}}{BVA_{i,t}} + \delta_{14} \frac{dIntExp_{i,t+2}}{BVA_{i,t}} + \delta_{15} \frac{dBVA_{i,t}}{BVA_{i,t}} \\ & + \delta_{16} \frac{dBVA_{i,t+2}}{BVA_{i,t}} + \delta_{17} \frac{dMVA_{i,t+2}}{BVA_{i,t}} + \text{industry and time dummies} + \mu_{i,t}, \end{aligned} \quad (3)$$

where the scale factor for each financial variable is the book value of assets ( $BVA_{i,t}$ ). The dependent variable is  $MVA_{i,t}$ , defined as the sum of the market value of equity and total liabilities. In the first specification,  $LobbyVar_{i,t-1}$  is a dummy variable that is equal to one if the firm reports lobbying expenditures, and zero otherwise. The second specification uses the ratio of lobbying expenditures to the book value of assets.  $PACVar_{i,t-1}$  is the campaign contribution analog to the lobbying specification.  $Earn_{i,t}$  is earnings, defined as earnings before extraordinary items.  $R\&D_{i,t}$  is research and development expenditures.  $Div_{i,t}$  is common dividends.  $IntExp_{i,t}$  is interest expense.  $X_t$  represents the level of variable  $X$  in year  $t$ .  $dX_t$  is the change in  $X$  from  $t-2$  to  $t$ , and  $dX_{t+2}$  is the change in  $X$  from period  $t$  to  $t+2$ .<sup>18</sup>

Table IX reports our results after estimating Equation (3) with different econometric methodologies. The results using the adjusted Fama and French (1998) value regressions confirm our

<sup>17</sup> This is because the inverse Mills' ratio has larger values for observations that lobby, but have a lower predicted probability of lobbying. Thus, the observation's decision to lobby is likely influenced by a factor unobserved by the probit regression. The statistically significant coefficient on the inverse Mills' ratio indicates this unobservable selection factor is indeed statistically related to excess returns, justifying a selection model for robustness checks of Equation (2).

<sup>18</sup> We follow Fama and French (1998) in our variable construction, and their choice to mitigate the effect of outlier observations, by trimming at their 0.5% and 99.5% tails. We thank an anonymous referee for suggesting the intercept be scaled by book assets. The results are qualitatively unaffected by this choice.

Table IX. Firm Value and Corporate Lobbying Activity

Table IX examines the relation between firm value and lobbying. The dependent variable is market assets minus book assets scaled by book assets, all at time  $t$ , following Fama and French (1998).  $X_t$  represents the level of variable  $X$  in year  $t$ .  $dX_t$  is the change in  $X$  from  $t - 2$  to  $t$ , and  $dX_{t+2}$  is the change in  $X$  from period  $t$  to  $t + 2$ . All variables are scaled by the book value of assets ( $BVA$ ). The dependent variable is the market value of assets ( $MVA$ ), defined as the sum of the market value of equity and total liabilities.  $LobbyDV$  ( $PACDV$ ) is an indicator variable set equal to one if the firm reported lobbying expenditures (campaign contributions) in a given year, and zero otherwise.  $LobbyExp$  is lobbying expenditures.  $PACContr$  is campaign contributions.  $Earn$  is earnings, defined as earnings before extraordinary items.  $R\&D$  is research and development expenditures.  $Div$  is common dividends.  $IntExp$  is interest expense.  $\lambda$  is the inverse Mill's ratio. Models include time dummies. Except for the firm fixed effects model (Column 3), the models include industry dummies. Standard errors are robust to heteroskedasticity and firm-level clustering. Intercepts are omitted from the table.  $p$ -values appear in brackets below coefficients. The  $p$ -values in Columns 1-3 are based on standard errors clustered at the firm level. The  $p$ -values in Column 4 are based on Windmeijer (2005) two-step robust standard errors. The  $p$ -values in Column 5 are based on Heckman (1979) two-step robust standard errors.

Independent Variables	(1)	(2)	(3)	(4)	(5)
$LobbyDV_{i,t-1}$	0.134*** (0.000)				
$PACDV_{i,t-1}$	-0.076** (0.025)				
$LobbyExp_{i,t-1}$		283.857*** (0.000)	-7.205 (0.932)	347.971* (0.093)	184.020*** (0.002)
$PACContr_{i,t-1}$		-2,965.548** (0.015)	-708.561 (0.562)	418.644 (0.895)	-163.038 (0.940)
$Earn_{i,t}$	1.086*** (0.000)	1.221*** (0.000)	0.877*** (0.000)	1.797*** (0.000)	2.879*** (0.000)
$dEarn_{i,t}$	0.651*** (0.000)	0.590*** (0.000)	0.387*** (0.000)		0.114 (0.515)
$dEarn_{i,t+2}$	1.162*** (0.000)	1.193*** (0.000)	0.762*** (0.000)		2.018*** (0.000)
$R\&D_{i,t}$	4.633*** (0.000)	4.638*** (0.000)	3.671*** (0.000)	5.400*** (0.000)	7.151*** (0.000)
$dR\&D_{i,t}$	1.109** (0.013)	0.991** (0.026)	0.185 (0.651)		1.202* (0.071)
$dR\&D_{i,t+2}$	4.554*** (0.000)	4.679*** (0.000)	3.010*** (0.000)		7.269*** (0.000)
$Div_{i,t}$	9.309*** (0.000)	9.293*** (0.000)	3.427** (0.050)	3.801* (0.054)	10.723*** (0.000)
$dDiv_{i,t}$	2.141* (0.056)	2.145* (0.058)	2.021** (0.020)		1.551 (0.454)
$dDiv_{i,t+2}$	5.065*** (0.000)	4.979*** (0.000)	1.961** (0.011)		6.512*** (0.000)
$IntExp_{i,t}$	-7.475*** (0.000)	-7.441*** (0.000)	-4.039*** (0.001)	-5.202 (0.106)	-8.299*** (0.000)
$dIntExp_{i,t}$	-3.312*** (0.000)	-3.446*** (0.000)	-3.424*** (0.000)		-3.880** (0.020)
$dIntExp_{i,t+2}$	-7.154*** (0.000)	-7.256*** (0.000)	-4.874*** (0.000)		-6.616*** (0.000)
$dBVA_{i,t}$	0.489*** (0.000)	0.491*** (0.000)	0.241*** (0.000)		0.324*** (0.000)

(Continued)

Table IX. Firm Value and Corporate Lobbying Activity (Continued)

Independent Variables	(1)	(2)	(3)	(4)	(5)
$dBVA_{i,t+2}$	0.635*** (0.000)	0.626*** (0.000)	0.722*** (0.000)		0.453*** (0.000)
$dMVA_{i,t+2}$	-0.210*** (0.000)	-0.207*** (0.000)	-0.322*** (0.000)	-0.116*** (0.000)	-0.212*** (0.000)
$MVA_{i,t-1}$				1.006 (0.252)	
$\lambda$					0.166* (0.064)
Method	OLS	OLS	Firm Fixed Effects	Blundell-Bond	Heckman
Observations	16,907	16,774	16,774	17,596	3,314

\*\*\*Significant at the 0.01 level.  
\*\*Significant at the 0.05 level.  
\*Significant at the 0.10 level.

earlier findings, as estimates from OLS, Blundell-Bond GMM, and the Heckman (1979) self-selection model suggest that firm value is positively and significantly related to prior period lobbying activity. The evidence in Column 1 suggests that the market-to-book ratios of lobbying firms exceed nonlobbying firms by 0.134. The lobbying effect is not statistically significant when we estimate Equation (3) with fixed firm effects (Column 3).<sup>19</sup>

As a final test, we analyze excess returns of portfolios formed based on lobbying and campaign contributions. Cooper et al. (2010) present evidence that portfolios formed on campaign contribution activity provide positive excess returns (alphas). We follow their approach and create two lobbying activity indexes and two campaign contributions activity indexes to form portfolios at the end of October of each year, where returns are calculated over the following 12 months. Our first lobbying index is based on lobbying expenditures such that firms with the largest lobbying expenses have the greater portfolio weights. The second lobbying index is based on the lobbying reports filed. Firms with more lobbying reports are more active lobbyists and, as such, receive greater portfolio weights. Our first PAC-candidate contribution index weights a portfolio based on the total dollars contributed to all of the candidates supported by the firm’s PAC. Our final contribution index is formed on the number of candidates supported, where portfolio weight is determined by the number of unique candidates supported.

Table X reports alphas from capital asset pricing model (CAPM), Fama-French three-factor, and Fama-French-Carhart four-factor regressions for monthly portfolio returns from November 1998 to October 2011.<sup>20</sup> Panels A and B (C and D) report lobbying activity-weighted (campaign contribution activity-weighted) portfolio returns. Column 1 reports alphas when regressors are

<sup>19</sup> This loss of significance may result if the relation between firm value and lobbying is stronger in the cross section than in the time-series. We suspect that persistence in lobbying activity, combined with the inclusion of both the firm fixed effects and the forward and the backward changes of explanatory variables in Equation (3), may reduce the power of  $LobbyExp_{i,t-1}$  to identify a lobbying-value relation.

<sup>20</sup> CAPM, Fama-French three-factor, and Fama-French-Carhart four-factor returns are obtained from Ken French’s website. Standard errors are Newey-West (1987) with 13 lags.

**Table X. Monthly Abnormal Returns for Lobbying and PAC-Candidate Contributing Firms, 11/1999-10/2011**

Table X reports alphas from CAPM, Fama-French 3-Factor, and Fama-French-Carhart 4-Factor regressions explaining monthly portfolio returns (including dividends) of portfolios formed based on political activity indices. The index weighting for the Panel A (B) dependent variable is lobbying expenditures (number of lobbying reports filed). The index weighting for the Panel C (D) dependent variable is dollars contributed to candidates by corporate PACs (number of unique candidates supported by corporate PACs). Portfolios are reformed at the end of each October. Column 1 alphas include as regressors only the respective asset pricing model noted by rows. Columns 2 and 3 add to the noted asset pricing models another portfolio return series (as noted in the column headings). *p*-values are reported based on Newey-West (1987) standard errors with 13 lags, and appear in parentheses below the alphas.

	(1)	(2)	(3)
<i>Panel A. Dependent Variable = Lobby Expenditure (\$) Weighted Portfolio Returns</i>			
	<b>Without Contributions Portfolio Returns</b>	<b>With \$ of Candidates Weighted Returns</b>	<b>With # to Candidates Weighted Returns</b>
CAPM alpha	0.0052** (0.014)	0.0007 (0.103)	0.0006 (0.218)
FF 3-factor alpha	0.0044*** (0.000)	0.0006 (0.121)	0.0006 (0.215)
FFC 4-factor alpha	0.0048*** (0.000)	0.0010* (0.079)	0.0009* (0.097)
<i>Panel B. Dependent Variable = Lobby Reports (#) Weighted Portfolio Returns</i>			
	<b>Without Contributions Portfolio Returns</b>	<b>With \$ of Candidates Weighted Returns</b>	<b>With # to Candidates Weighted Returns</b>
CAPM alpha	0.0074** (0.012)	0.0034** (0.015)	0.0033** (0.022)
FF 3-factor alpha	0.0052*** (0.001)	0.0015* (0.096)	0.0014 (0.158)
FFC 4-factor alpha	0.0058*** (0.000)	0.0024** (0.018)	0.0023** (0.033)
<i>Panel C. Dependent Variable = Contributed to Candidates (\$) Weighted Portfolio Returns</i>			
	<b>Without Lobby Weighted Returns</b>	<b>With Lobby \$ Weighted Returns</b>	<b>With # Lobby Reports Weighted Returns</b>
CAPM alpha	0.0055** (0.028)	−0.0003 (0.576)	−0.0002 (0.770)
FF 3-factor alpha	0.0045*** (0.000)	0.0005 (0.258)	0.0005 (0.246)
FFC 4-factor alpha	0.0050*** (0.000)	0.0007 (0.164)	0.0007 (0.144)
<i>Panel D. Variable = Contributed to Candidates (#) Weighted Portfolio Returns</i>			
	<b>Without Lobby Weighted Returns</b>	<b>With Lobby \$ Weighted Returns</b>	<b>With # Lobby Reports Weighted Returns</b>
CAPM alpha	0.0056** (0.024)	−0.0009 (0.475)	−0.0008 (0.546)
FF 3-factor alpha	0.0045*** (0.000)	0.0013** (0.039)	0.0013** (0.028)
FFC 4-factor alpha	0.0050*** (0.000)	0.0017** (0.010)	0.0017*** (0.007)

\*\*\*Significant at the 0.01 level.  
\*\*Significant at the 0.05 level.  
\*Significant at the 0.10 level.

limited to the standard respective asset pricing models, while Columns 2 and 3 add other portfolio returns as regressors.<sup>21</sup>

Panel A presents positive alphas for lobby expenditure-weighted portfolios. The estimated alphas range from 44 to 52 basis points per month, without controlling for campaign contribution portfolio returns. However, when we add portfolio returns based on contributions to candidates (Column 2) or based on the number of candidates supported (Column 3), the alphas are smaller and significant for only the Fama-French-Carhart model.

The alphas increase for the portfolios based on the number of lobbying reports filed by or on behalf of the firm (Panel B relative to Panel A). Further, the lobbying report weighted alphas are significant for five of the six regressions that include the PAC contribution portfolio weighted returns as a regressor. We interpret this as evidence of shareholder value from lobbying beyond that attributed to corporate campaign contributions. In fact, the results in Panel C suggest no significant abnormal returns for portfolios based on PAC contribution dollars after controlling for lobbying activity portfolio returns.

Panel D replicates some of the results from Cooper et al. (2010) by regressing the returns of portfolios weighted by the number of candidates supported. Four of the six alphas in Columns 2 and 3 remain significant; however, alphas generated from the CAPM have negative point estimates.

Generally, the alphas are similar in magnitude to those found in Cooper et al. (2010). Overall, the portfolio results provide evidence of positive abnormal returns associated with stocks of lobbying firms, beyond that which is attributable to corporate campaign contributions.

## V. Conclusion

In this paper, we analyze two research questions regarding corporate lobbying activity. First, what firm characteristics best describe the firm's decision to lobby politicians and regulators? Second, we investigate whether shareholders of lobbying firms capitalize this political activity pursued by management on their behalf into the firm's share price.

We first document that lobbying has increased over the sample period, and that there is important variation in lobbying activity across industries. We find a strong connection between corporate PAC contributions and lobbying suggesting that many firms use multiple channels of potential political influence to influence regulatory and policy outcomes. Our results also suggest that firms with greater potential payoffs from favorable policy and regulations are those that lobby more actively. We find no clear evidence that managerial-shareholder agency problems account for the lobbying activities of the average politically active firm.

Other researchers have analyzed both determinants and value of corporate PAC contributions to candidate campaigns. We view contributions as *ex ante* attempts to influence political and regulatory outcomes; *ex ante* in the sense that the contributions are made prior to an election. Lobbying is defined as communications to policymakers after they are in office. Thus, lobbying is a channel of influence distinct from PAC contributions. This study is the first to analyze the value of lobbying from the shareholders' perspective, controlling for PAC activity.

We find strong evidence that shareholders' value lobbying activity by the firm's management, especially if the firm's PAC has not contributed to candidates. The value results are particularly

<sup>21</sup> For example, the CAPM alpha in Column 1 of Panel A is for a regression explaining lobby expenditure weighted portfolio returns with only an intercept and the market risk premium. Regressions in Column 2 of Panel A include the market risk premium and portfolio returns weighted by PAC dollars contributed to candidates (unique candidates supported).

important given the recent US Supreme Court ruling on *Citizens United vs. Federal Election Commission*. This ruling establishes the firm as an individual in the eyes of the law regarding freedom of political speech (Bebchuck and Jackson, 2010; Hasen, 2012). Corporate governance regulators and scholars must now determine whether managers have a custodial obligation to the shareholders for their preferences for the firm's political speech. As such, the question of shareholder value for political activity is clearly interesting and important.

We find economically large estimates of value associated with both contributions and lobbying. Our results beg the question as to why firms do not continue to lobby until the marginal payoff equals the marginal cost. Practically, lobbyists have the incentive to filter some messages from firms to politicians, as lobbyists are in a repeated game with politicians and desire a reputation for providing useful information (Hasen, 2012). Politicians enforce this filtering as they have time budget constraints on meetings with lobbyists. These two frictions act to limit the ability of the firm to spend on lobbying until the marginal benefit equals the marginal cost. This interpretation is supported by the research of Vidal et al. (2012), who find that lobbyists previously employed by US senators are the highest earning lobbyists. In other words, firms are willing to pay a premium for the services of those lobbyists who offer more certainty over the allocation of the politician's time and attach credibility to their message. Competition among lobbyists (as of 2012 there were over 12,000 registered active lobbyists) likely leaves some value in the hands of shareholders.

## References

- Agrawal, A. and C. Knoeber, 2001, "Do Some Outside Directors Play a Political Role?" *Journal of Law and Economics* 44, 179-198.
- Alexander, R., S. Mazza, and S. Scholz, 2009, "Lobbying ROI: An Empirical Analysis Under the American Jobs Creation Act of 2004," *Journal of Law and Politics* 25, 401-457.
- Ansolabehere, S., J. de Figueiredo, and J. Snyder, 2003, "Why Is There so Little Money in US Politics?" *Journal of Economic Perspectives* 17, 105-130.
- Bates, T., K. Kahle, and R. Stulz, 2009, "Why Do US Firms Hold So Much More Cash Than They Used To?" *Journal of Finance* 64, 1985-2021.
- Bebchuck, L. and R. Jackson, Jr., 2010, "Corporate Political Speech: Who Decides?" *Harvard Law Review* 124, 83-117.
- Belsley, D., E. Kuh, and R. Welsch, 1980, *Regression Diagnostics: Identifying Influential Data and Sources of Collinearity*, New York, NY, Wiley.
- Borisov, A., E. Goldman, and N. Gupta, 2012, "The Value of (Corrupt) Lobbying," Indiana University Working Paper.
- Brown, W., E. Helland, and J. Kiholm-Smith, 2006, "Corporate Philanthropic Practices," *Journal of Corporate Finance* 12, 855-877.
- Chen, H., D. Parsley, and Y. Yang, 2012, "Corporate Lobbying and Financial Performance," University of Colorado-Boulder Working Paper.
- Cooper, M., H. Gulen, and A. Ovtchinnikov, 2010, "Corporate Political Contributions and Stock Returns," *Journal of Finance* 65, 687-724.
- Dittmar, A. and J. Mahrt-Smith, 2007, "Corporate Governance and the Value of Cash Holdings," *Journal of Financial Economics* 83, 599-634.



- Duchin, R. and D. Sosyura, 2012, "The Politics of Government Investment," *Journal of Financial Economics* 106, 24-48.
- Faccio, M., 2006, "Politically Connected Firms," *American Economic Review* 96, 369-385.
- Faccio, M., 2010, "The Characteristics of Politically Connected Firms," *Financial Management* 39, 905-928.
- Faccio, M., R. Masulis, and J. McConnell, 2006, "Political Connections and Corporate Bailouts," *Journal of Finance* 61, 2597-2635.
- Faccio, M. and D. Parsley, 2009, "Sudden Deaths: Taking Stock of Geographic Ties," *Journal of Financial Quantitative Analysis* 44, 683-718.
- Fama, E.F. and K.R. French, 1993, "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics* 33, 3-56.
- Fama, E. and K. French, 1997, "Industry Costs of Equity," *Journal of Financial Economics* 43, 153-193.
- Fama, E. and K. French, 1998, "Taxes, Financing Decisions, and Firm Value," *Journal of Finance* 53, 819-843.
- Faulkender, M. and R. Wang, 2006, "Corporate Financial Policy and the Value of Cash," *Journal of Finance* 61, 1957-1990.
- Fisman, R., 2001, "Estimating the Value of Political Connections," *American Economic Review* 91, 1095-1102.
- Gao, M. and J. Huang, 2011, "Capitalizing on Capitol Hill: Informed Trading by Hedge Fund Managers," National University of Singapore Working Paper.
- Goldman, E., J. Rocholl, and J. So, 2009, "Do Politically Connected Boards Affect Firm Value?" *Review of Financial Studies* 22, 2331-2360.
- Grossman, G. and E. Helpman, 1994, "Protection for Sale," *American Economic Review* 84, 833-850.
- Hasen, R., 2012, "Lobbying, Rent Seeking, and the Constitution," *Stanford Law Review* 64, 191-254.
- Heckman, J., 1979, "Sample Selection Bias as a Specification Error," *Econometrica* 47, 153-161.
- Hochberg, Y., P. Sapienza, and A. Vissing-Jorgensen, 2009, "A Lobbying Approach to Evaluating the Sarbanes-Oxley Act of 2002," *Journal of Accounting Research* 47, 519-583.
- Jensen, M., 1986, "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," *American Economic Review* 76, 323-329.
- Kim, H., 2008, "Corporate Lobbying Revisited," *Business and Politics* 10, 1-23.
- Milyo, J., D. Primo, and T. Groseclose, 2000, "Corporate PAC Campaign Contributions in Perspective," *Business and Politics* 2, 75-88.
- Newey, W.K. and K.D. West, 1987, "A Simple, Positive Semi-Definite, Heteroskedasticity and Autocorrelation Consistent Covariance Matrix," *Econometrica* 55, 703-708.
- Pinkowitz, L., R. Stulz, and R. Williamson, 2006, "Does the Contribution of Corporate Cash Holdings and Dividends to Firm Value Depend on Governance? A Cross-Country Analysis," *Journal of Finance* 61, 2725-2751.
- Pittman, R., 1976, "The Effects of Industry Concentration and Regulation on Contributions in Three 1972 US Senate Campaigns," *Public Choice* 23, 71-80.
- Richter, B., K. Samphantharak, and J. Timmons, 2009, "Lobbying and Taxes," *American Journal of Political Science* 53, 893-909.

- Stigler, G., 1971, "The Theory of Economic Regulation," *Bell Journal of Economics and Management Science* 2, 3-21.
- Vidal, J., M. Draca, and C. Fons-Rosen, 2012, "Revolving Door Lobbyists," *American Economic Review* 102, 3731-3748.
- Windmeijer, F., 2005, "A Finite Sample Correction for the Variance of Linear Efficient Two-Step GMM Estimators," *Journal of Econometrics* 126, 25-51.
- Yu, F., and X. Yu, 2011, "Corporate Lobbying and Fraud Detection," *Journal of Financial and Quantitative Analysis* 46, 1865-1891.