CORPORATE LOBBYING AND FRAUD DETECTION¹

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ABSTRACT

This paper examines the relation between corporate lobbying and fraud detection. Using data on corporate lobbying expenses between 1998 and 2004, and a sample of large frauds detected during the same period, we find that firms' lobbying activities make a significant difference in fraud detection: compared to non-lobbying firms, firms that lobby on average have a significantly lower hazard rate of being detected for fraud, evade fraud detection 117 days longer, and are 38% less likely to be detected by regulators. In addition, fraudulent firms on average spend 77% more on lobbying than non-fraudulent firms, and spend 29% more on lobbying during their fraud periods than during their non-fraud periods. The delay in detection allows managers to postpone the negative market reaction and to sell more of their shares.

Keywords: corporate lobbying, corporate fraud, corporate governance

JEL: G3; K4

1. Introduction

Corporations have been one of the most important players in lobbying activities. Take Enron, for example: since its creation in 1985, lobbying had been a key part of Enron's strategy. The company maintained in-house high-profile lobbyists and hired top lobbying firms. It had spent more than \$5 million on lobbyists since 1997 and was registered to lobby in 28 states by the year of 2002. Before its fall as the biggest bankruptcy in the history of the United States, Enron had gained favorable treatments by lobbying Congress, federal and state governments, and various regulatory agencies on 49 occasions. These include the removal of price controls on natural gas, allowing certain types of debt off the book, and blocking government regulations on its derivatives trading.² John Dean, a former Counsel to President Richard Nixon, argued that Enron's lobbying activities and campaign contributions "…may have help slow detection if its troubles, and helped the company fly under the radar for as long as was possible given what now appear to be some egregious accounting and business practices".³

Enron is not the only corporation that has been active in lobbying. In 2005 alone, \$2.14 billion was spent on lobbying by corporations and industry groups. More than half of former congressmen or senate members work as lobbyists hired by corporations.⁴ Given the significant financial and human resources allocated to corporate lobbying, what impact does lobbying have on corporate governance? In this paper, we investigate how lobbying affects corporate governance in the context of fraud detection.

² "A most favored corporation: Enron prevailed in federal and state lobbying efforts 49 times." (The Center for Public Integrity Report, January 6, 2003). The report concludes that "(Enron's) successful efforts to deregulate electricity and natural gas markets paved the way to its rise, and the exemptions it won from regulatory scrutiny may have contributed to its collapse. Lobbying was a critical component in both the company's rise and fall."

³ "Some questions about Enron's campaign contributions: Did Enron successfully buy influence with the money it spent?" (Findlaw's Legal News and Commentary, January 18, 2002).

⁴ Source: http://www.politicalmoneyline.com.

Being able to detect fraud in a timely manner is an indication of the overall effectiveness of a corporate governance system. We observe that firms like Enron and WorldCom spent millions on lobbying and were able to avoid detection and continue their misconduct for years. These anecdotes suggest that lobbying may directly or indirectly affect economic agents who are designed to uncover fraud. In this paper we seek to understand the effect of lobbying activities on fraud detection by asking the following questions: Is there a systematic link between corporate lobbying and fraud detection? Are fraudulent firms more likely to spend more on lobbying? And how is the involvement in lobbying activities associated with fraud detection and the welfare of economic agents such as managers?

Using data on corporate lobbying expenses between 1998 and 2004 and a set of large corporate frauds detected during the same period, we find that corporate lobbying makes a significant difference in fraud detection. Fraudulent firms involved in lobbying have a significantly lower hazard rate of being detected than fraudulent firms not involved in lobbying after controlling for factors such as firm size, market to book ratio, motivations of fraud, type of detecting agents, and industry fixed effect. On average, fraudulent firms involved in lobbying are able to evade detection 117 days longer – and even longer after we control for firm size and industry. Further, fraudulent firms involved in lobbying are 38% less likely to be detected by regulators than those not involved in lobbying.

We find that fraud is associated with a systematically higher level of lobbying expense. Fraudulent firms on average spend significantly more on lobbying than firms not involved in fraud. To mitigate the problem of omitted variables, we adopt the *difference-in-difference* analysis and find that fraudulent firms increase their lobbying expenses after they commit fraud.

Lastly, we examine the welfare implications of the delay in fraud detection on firms and their managers. For a fraudulent firm with average annual lobbying expenses of \$2 million and fraud period of 2 years, a 90 days delay in fraud detection creates a net present value of \$36.5 million to the firm through delay in negative market reaction. We also find that during the fraud period, insider sales of the shares of firms with lobbying activities are about four times as much as those of firms without lobbying. Managers seem to benefit privately from the delay in fraud detection.

Our study thus sheds light on the recent debate about whether to improve the transparency in corporate political spending. Many firms have argued against detailed disclosure of political spending, citing objections such as the possibility of revelation of corporate strategy to competitors, distractions to management, and negligible impact on shareholder values.⁵ Our results suggest that political spending does affect the welfare of investors and that there is a need for more transparency in corporate political spending. Our results, however, should not be interpreted as evidence that the delay in fraud detection itself is the only motivation and consequence of lobbying, or that corporate lobbying is inefficient in general. Since our study focuses on examining the effect of lobbying on fraud detection, boarder issues such as why firms lobby to begin with and what type of firms are more likely to commit fraud are left for future research.

Our paper is related to the emerging literature on the impact of political connections. Most studies have focused on how political connections affect firms' value or stock returns

⁵ "Shining light on corporate political gifts" (The New York Times, December 16, 2005) and "Does your company keep political secrets?" (Fortune, May 31, 2006).

(Roberts, 1990; Fisman, 2001; Hertzel, Martin, and Meschke, 2002; Faccio, 2006; Faccio and Parsley, 2006; Fan and Wong, 2006; Fisman, Fisman, Galef, and Khurana, 2006; Jayachandran, 2006; Aggarwal, Meschke, and Wang, 2007). Several studies explore the effect of political connections on corporate finance aspects of firms, such as leverage (Johnson and Mitton, 2003; Mian and Khwaja, 2004), government bailouts during financial distress (Faccio, Masulis, and McConnell, 2006), firm's sales to government and exports (Agrawal and Knoeber, 2001), and tax benefits (Gupta and Swenson, 2003). In contrast, relatively few papers have directly studied the relationship between political connections and corporate governance systems. However, this relationship can be important since a large body of law and finance literature suggests that the legal system is fundamental to investor protection (for example, La Porta, Lopez-de-Silanes, Shleifer and Vishny, 2000) and corporations can significantly influence the legal system's operating efficiency and objectivity. Our study attempts to explore the effect of political connections on governance by examining the relation between corporate lobbying and fraud detection.

Our paper is also related to the literature on corporate fraud. Most existing papers on fraud examine factors that affect the incentives to commit fraud, such as executive compensation (Burns and Kedia, 2003; Johnson, Ryan, and Tian, 2005; Bergstresser and Philippon, 2006; Efendi, Srivastava, and Swanson, 2006; Peng and Röell, 2006) and board structure (Beasley, 1996; Agrawal and Chadha, 2005). There are only a limited number of studies on the detection of fraud. Dyck, Morse, and Zingales (2006a, 2006b) examine which monitoring devices are more effective in detecting fraud. Wang (2006) studies the interaction between corporate investment decisions and fraud detection. Our study contributes to the

literature by suggesting that corporate lobbying is another factor that affects fraud detection.

The rest of paper is organized as follows. Section 2 provides a brief description of corporate lobbying and a review of literature on the effect of political connections on corporations. Section 3 describes the construction of our data sample. Section 4 through Section 6 describe the tests used and present the results. Section 7 concludes the paper.

2. Background and literature

2.1 Corporate lobbying

Lobbying is the practice of attempting to directly influence the actions of government to follow policies desired by the lobbyist. The U.S. Lobbying Disclosure Act of 1995 defines lobbying as any nonexempt oral or written communication on behalf of a client to executive and legislative branch officials. A nonexempt communication is defined as lobbying contact if it is about the formulation, modification, or adoption of federal laws, executive orders, government contracts, etc.

Lobbying is one of the most prominent ways for corporations to influence legislation. In the 1997-1998 election cycle, expenditures on lobbying were \$2.6 billion, more than nine times the campaign contributions given by political action committees (PACs) (Milyo, Primo and Groseclose, 2000). Expenditures on lobbying in the United States reported to the federal government totaled \$1.45 billion in 1999. In comparison, PACs contributed \$259.8 million and soft money contributions totaled nearly \$500 million in the year 2000 election cycle (Baron, 2002).⁶

⁶ In contrast to campaign contribution, lobbying is less dependent on election cycle. It allows corporations to target specific legislations and agencies in addition to the representatives and senators. Unlike campaign

Corporations are required by the Lobby Disclosure Act of 1995 to file a semi-annual lobbying disclosure report with Secretary of the Senate's Office of Public Records if they spend more than \$25,000 on lobbying in any given year. Corporations' lobbying expenses are usually applied towards in-house lobbyists or specialized lobbying firms. Corporations can also spend on gifts, meals, and provide free trips for legislators. For example, in the past five years, congress members have received more than \$18 million in travel expenses from private organizations. More than half of the representatives and senators who leave office become lobbyists. Since 1998, about 250 former congress members and federal agency chiefs have become lobbyists.⁷ These lobbyists usually have inside connections to current members in Congress and can provide corporations with access to legislators.

Anecdotal evidence indicates that lobbying is an important tool for corporations who attempt to conceal fraud. One example is that of Weststar Energy, a public utility company whose CEO was indicted for fraud due to a series of mismanagements and whose fraud cost shareholders over \$793.4 million in 2002 alone. Weststar relied on intensive lobbying to implement plans to prevent failure and fraud from surfacing.⁸ In general, since involvement in lobbying activities is associated with a firm's business strategy, culture, even ethics, and confers a multitude of advantages, lobbying can potentially make fraud more difficult to uncover. First, corporations can directly influence fraud detection by regulators by lobbying watchdogs such as the Federal Election Commission (FEC), the Office of Government Ethics (OGE), and the Government Accountability Office (GAO)⁹. Second, corporations lobby for

contribution where the location is shown to be a primary determinant (Wright, 1985), any corporations can hire a lobbyist regardless where they are located.

⁷ Source: http://www.politicalmoneyline.com.

⁸ The Green Canary Report, 2005, The Center for Political Accountability.

⁹ For example, in the last six years, about 300 corporations and organizations have tried to influence GAO

favorable regulation rules. Examples include Enron's lobbying to allow certain types of debt off the books and to block regulation of its trading in energy derivatives. Third, since bad performance usually triggers fraud detection, fraudulent firms can reduce detection risk by gaining favorable business conditions through lobbying. For example, Global Crossing lobbied to block competition for building a transpacific fiber-optical cable, preventing rivals from dominating the market.¹⁰ Enron lobbied for removing price controls on natural gas and for de-regulation of the electric utility industry. Last, but not least, corporations use their lobbying ties to obtain political intelligence to help them better react to incoming policy changes. A recent example is the hiring of lobbyists by several hedge fund managers for tips and predictions regarding market-moving information through their political connections.¹¹

2.2 Literatures on political connections and fraud

Our paper is related to an emerging literature studying the impact of political connections on firms. To measure political connections, researchers have used a variety of proxies, such as family ties, personal relationships with officers, and geographic proximity. Most of the existing studies focus on firms' value and performance. Improvement in political connections such as the announcement of forming a new political connection is shown to be associated with positive stock price reactions (Faccio, 2006). Negative shocks to political connections – such as the announcement of sudden death, declining health, or career exit of politicians – lead to a decline in market value (Roberts, 1990; Fisman, 2001; Faccio and Parsley, 2006; Jayachandran, 2006). Political connection is also found to affect firms' long-run financial performance (Leuz and Oberholzer-Gee, 2006).

investigations.

¹⁰ "Global Crossing tossed more cash around town than Enron" (Business Week, February 11, 2002).

¹¹ "Hedge funds hire lobbyists to gather tips in Washington" (The Wall Street Journal, December 8, 2006).

An increasing number of studies investigate corporate political contributions and stock returns. For example, Ansolabehere, Snyder, and Ueda (2004), Cooper, Gulen, and Ovtchinnikov (2006), and Aggarwal, Meschke, and Wang (2007) document that a firm's political contributions are significantly related to its future returns. The effect is stronger for firm contributions to Democratic candidates and to politicians from the same home state (Cooper, Gulen, and Ovtchinnikov, 2006). Claessens, Feijien, and Laeven (2006) and Goldman, Rocholl, and So (2006) find that firms that are connected with or provide larger contributions than others to the winning party at election time experience higher stock returns following the election. Fan and Wong (2006) find Chinese public firms with politically connected CEOs tend to have worse post-IPO stock returns than those without politically connected CEOs. Hertzel, Martin, and Meschke (2002) show that soft money donations to the Republican Party rather than to the Democratic Party affect firm performance as measured by return on assets and Tobin's Q.

In contrast to numerous studies of the effect on firms' value, limited research has examined the impact of political connections on corporate finance aspects of firms. Politically connected firms have a higher level of debt (Johnson and Mitton, 2003; Chiu and Jon, 2004; Mian and Khwaja, 2004; Cull and Xu, 2005) and are more likely to receive government bailouts in the event of financial distress (Faccio Masulis, and McConnell, 2006). Agrawal and Knoeber (2001) find that the incidence of politically connected outside directors is crucial to firms that need to deal with the government, such as sales to government and exports. Gupta and Swenson (2003) document that firms' political contributions are positively associated with tax benefits. Fan and Wong (2006) show Chinese public firms with politically connected CEOs are more likely to have boards with lower degrees of professionalism.

Another strain of literature analyzes the impact of lobbying on policy outcomes in an international framework. Feijen and Perotti (2005) argue that lobbying for weak corporate governance leads to worsening financial fragility. Perotti and Volpin (2006) model incumbents' incentives to lobby for a weak corporate governance system such as a low level of investor protection in order to prevent potential entries from raising capital. Harstad and Svensson (2006) argue lobbying is more efficient than bribing only when a country reaches a certain level of economic development. Campos (2006) documents that lobbying and corruption are substitute for the influence in transitional economies.

Different from these studies, our paper directly investigates the relation between corporate lobbying and corporate governance in the context of fraud detection. We abstract from cross-country variation in corporate governance system and examine the effect of lobbying at firm level within a given stage of political development.

Our paper is also related to the literature on corporate fraud that has largely concentrated on the causes and consequences of fraud. An increasing number of studies examine the factors that tempt firms to commit fraud, such as high-powered executive incentives (Burns and Kedia, 2003; Johnson, Ryan, and Tian, 2005; Bergstresser and Philippon, 2006; Efendi, Srivastava, and Swanson, 2006; Peng and Röell, 2006), and weak board structure (Beasley, 1996; Agrawal and Chadha, 2005). There is also a large literature investigating the impact of corporate fraud. For example, Karpoff, Lee, and Vendrzyk (1999) find that firms indicted with procurement fraud suffer negative abnormal returns at announcement. However, firms with the largest defense contracts have less negative abnormal returns than those with smaller contracts. Goldman, Peyer, and Stefanescu (2007) find a negative effect of fraud discovery on the rival firms' stocks, especially if the industry is highly competitive.

Conversely, relatively few papers have studied fraud detection. Dyck, Morse, and Zingales (2006a, 2006b) examine the role of different monitoring devices in fraud detection and find that market-based institutions play a more significant role than regulatory-based institutions. Wang (2006) shows that more mergers and acquisitions and smaller R&D investment are associated with a higher likelihood of detection. In this study, we examine another factor that can potentially influence fraud detection: corporate lobbying.

3. Sample selection

3.1 The lobby sample

The Lobby Disclosure Act of 1995 requires that firms spending more than \$25,000 on lobbying must file with the Senate's Office of Public Records (SOPR). Appendix A provides an example of a lobbying report from General Electric, filed on August 16th, 2004 and signed by GE's Manager of Federal Government Relations. The first page is a summary of the lobbying expense by GE from January 1st to June 30th, 2004. Total spending by GE was \$8.44 million. The full report is 26 pages and the remainder provides information about specific areas and lobbying issues; for example, the second and third pages report GE's lobbying activities in aviation regulation (AVI), detailing specific lobbying issues, the House(s) of Congress and Federal agencies contacted, and the lobbyists involved.¹²

¹² One limitation of the Act is that it only requires corporations to provide information to the SOPR on total lobbying expense – not a detailed break-down of expenses in each lobbying area.

Starting in 1998, Political Money Line (PML) of Congressional Quarterly Inc. has maintained a database of the semi-annual expense records that companies, labor unions, and other organizations have spent to lobby Congress and federal agencies based on their lobbying disclosure reports filed with SOPR. We construct the lobby sample using lobby spending information obtained from PML.

To compute a firm's annual lobby spending, we sum its mid-year and year-end lobbying expenditures. In the case where a private subsidiary of a publicly-traded parent company lobbies, we attribute lobbying spending to the parent firm. One limitation is that we are unable to observe indirect lobbying efforts through firms' contributions to industrial organizations who lobby on their behalf. However, this should not affect our results significantly since industry-level lobbying activities focus mostly on benefiting the industry as a whole and are less bound to firm-level issues such as fraud detection.

The sample period starts from the second half of 1998 and ends in the first half of 2005. After matching with Compustat, we have 2,053 firm-year observations over 8 years. Throughout the paper, we label firms that are engaged in lobbying activities in the sample period as "lobbying firms" and firms that are not engaged in lobbying as "non-lobbying firms".

Table 1 presents the summary statistics of the lobby sample. An average (medium) firm spends \$2.03 million (\$1.17 million) on lobbying each year during our sample period. Lobbying expenses are also stable over time, as the yearly fluctuation is usually smaller than 10%. Since lobbying expenses are generally not tax deductible, the actual cost is higher than other types of deductible corporate expenses. As a comparison, the average executive's salary

and bonus from EXECOMP is about \$0.77 million during the same period, with any payoff below \$1 million being tax deductible. Panel B shows that firms tend to lobby on a regular basis: 47% of firms lobby every year in the 8 year period, and 73% of firms lobby at least 5 out of 8 years.

3.2 The fraud sample

We obtain a sample of large frauds from Dyck, Morse, and Zingales (2006a, 2006b), who assemble the sample based on companies that are subject to lawsuits from the Stanford Securities Class Action Clearinghouse.¹³ To control for frivolous lawsuits, they restrict the sample period to 1996-2004, after the passage of the Private Securities Litigation Reform Act of 1995 which was designed to reduce frivolous lawsuits. They exclude all cases where the judicial review process leads to their dismissal. In addition, they restrict the sample to corporate frauds with a settlement amount of at least \$2.5 million, a threshold level of payment suggested by previous studies that helps separate frivolous lawsuits from meritorious ones. To reduce the problem of undetected fraud, they restrict the sample to corporate frauds with assets of at least \$750 million in the year before the fraud is detected, as large firms are subject to more intense public scrutiny and lawyers have stronger incentive to identify their fraudulent activities.

The final sample of Dyck, Morse, and Zingales (2006a, 2006b) contains 239 frauds detected between 1996 and 2004. It also contains manually collected information on each fraud and its detection such as the motivation of the fraud, the economic agent that first brought the fraud to light, and the date when fraud was committed and the date when fraud

¹³ For a detailed description of the sample construction and related references, please see Dyck, Morse and Zingales (2006a, 2006b).

was detected. In this study, we exclude frauds detected before 1998 due to lack of lobbying information. Our final fraud sample contains 205 frauds detected between 1998 and 2004.

Panel A of Table 2 reports the frequency of frauds by the year when frauds occurred. A majority of the frauds – about 77% – are committed during the 1998-2001 period. Panel B reports the frequency of frauds by the year when frauds were detected. A significant fraction of frauds – over 45% – are detected between 2001 and 2002, a time coinciding with a significant stock market decline. Panel C presents the summary of the fraction of lobbying firms involved in fraud in a given year over the sample period. Similarly, we observe higher fraction of detected frauds in the lobby sample between 1999 and 2002.

For firms in the lobby sample and the fraud sample, we obtain accounting data, such as the book values of assets and equity, from COMPUSTAT. Stock prices and daily returns are from CRSP. For our insider trading analysis, we obtain the insider trading information from the Thomson Financial Insider Filing database.

4. Do lobbying firms evade detection longer?

Does corporate lobbying have any impact on fraud detection? We explore this question from three perspectives. First, we conduct a regression analysis to examine whether it takes longer to detect fraud by firms that are involved in lobbying activities. Next, we use survival analysis to examine whether fraudulent firms that lobby have a higher probability of evading detection than fraudulent firms that do not lobby. Finally, we investigate which economic agent for which lobbying activities have the most impact upon in delaying fraud detection.

4.1 Days taken to detect fraud

We define "days taken to detect fraud" as the length (number of days) of the period from the commission of a fraud to the detection of a fraud. Panel A of Table 3 reports the summary statistics. For an average firm in our sample, it takes 633 days for the fraud to be detected. However, there is a difference in the number of days it takes to detect fraud between firms that lobby and firms that do not lobby. For firms that do not lobby, the average is 594 days. For firms that do lobby, the average is 711 days – an additional 117 days (p = 0.10), or 20% more time. Using median instead of mean, we find that it takes 93 more days (p = 0.03), or 22% more time, to detect fraud from firms that lobby.

Next, we examine the effect of lobbying on the number of days taken to detect fraud from two perspectives: we first test the effect of lobbying using the dummy for lobbying activities – a variable equal to 1 if a firm is involved in lobbying during the sample period and 0 otherwise – as an independent variable in the regression. We also measure the effect of lobbying using average lobbying expenses.

Column 1 of Panel B, Table 3 reports the results from regressing days taken to detect fraud on the dummy for lobbying activities, controlling for size, market to book ratio, and industry fixed effect (Fama-French 10 industries). The fraud sample size drops from 205 observations in Table 2 to 192 due to the data requirement of control variables. The coefficient associated with the dummy for lobbying activities is positive (300.72) and significant. This suggests that on average it takes 300 more days to detect fraud for a lobbying firm than for a non-lobbying firm in the same industry with similar size and market to book ratio.

Column 2 of Panel B presents the results using average semi-annual lobbying expenses

instead of the dummy for lobbying activities. Again the coefficient is positive (149.84), and is significant at 5% level, suggesting that a million dollar increase in semi-annual lobbying expenses is associated with nearly 150 more days to detect a fraud.

Dyck, Morse, and Zingales (2006a, 2006b) classify the agent who first detected a fraud into one of the eight types – regulators, blockholders, employees and other stakeholders, firm, insiders, media, and professional services. They show that the type of detecting agent affects the speed of detection. In Columns 3 and 4 of Panel B we control for the fixed effect of the type of agents who first detected the fraud in addition to industry- and firm-specific characteristics. Jones and Weingram (1996) and Wang (2006) indicate that poor stock price performance leads to the detection of fraud. In Columns 5 and 6 we control for stock performance by including the average monthly abnormal stock returns (against CRSP valueweighted index) over 12 months prior to the time of fraud detection. In Columns 7 and 8 we control for the timing of fraud detection by including the fixed effect of the year of detection.

Columns 3 through 8 indicate that additional controls for previous period abnormal stock returns, detection year fixed effect, and type of detecting agents fixed effect do not alter our findings. Both the dummy for lobbying activities and the average annual lobbying expenses continue to be positively and significantly related to longer time to detect fraud.¹⁴

4.2 Survival analysis

Table 3 shows that it takes longer time to detect fraud by firms that are involved in lobbying activities. In this subsection we use survival analysis and explicitly examine whether fraudulent firms that lobby have a higher rate of evading detection than fraudulent

¹⁴ In untabulated regressions, we also control for corporate governance by including board size and for business complexity of the firm by including the number of business segments and the number of geographic segments. Our results remain unchanged and therefore are not reported.

firms that do not lobby.

We first estimate the proportion of fraudulent firms evading detection up until a given time and plot the real survival curves using the Kaplan-Meier method. The Kaplan-Meier method is a non-parametric approach that estimates a survivor function without covariates. It allows us to compute the conditional survival probability – the probability of a fraction of frauds evading detection by a given time on the condition that the fraud has evaded detection up until that time.

Figure 1 presents the plot based on Kaplan-Meier survival estimates for fraudulent firms' rate of evading detection. The red solid line is for lobbying firms and the grey dashed line is for non-lobbying firms. The line for lobbying firms is above the line for non-lobbying firms throughout the fraud period. This suggests that in any given day lobbying firms have a higher rate of evading detection than non-lobbying firms.

We then formally investigate the impact of lobbying on the survival rate. We use two models – Cox regression and Weibull regression – for the survival analysis, taking into account other factors that could potentially affect the probability of evading fraud detection at a given time, such as size and industry.

Cox regression is a widely used semi-parametric method for survival analysis that employs a proportional hazard model. Unlike the Kaplan-Meier approach, it estimates a survivor function with covariates. The hazard function produces the instantaneous failure rate (in this case, fraud detection) – the probability that a fraudulent firm is caught at time *t*, given that the fraud has not been yet caught up until *t*. The hazard rate h(t) is therefore calculated as the instantaneous probability of being detected for fraud at time *t* divided by the probability of surviving up to time t.

$$h(t) = \frac{\Pr(failing \ between \ times \ t \ and \ t + \Delta t)}{(\Delta t) \Pr(failing \ after \ time \ t)}$$

In the Cox proportional hazard model, the hazard rate is a function of the baseline hazard at time t, and the effects of x variables:

$$h(t) = h_0(t) \exp\left(\sum_{i=1}^k \beta_i x_i\right)$$

where h_0 is the baseline hazard or hazard for an observation with all the independent *x* variables equal 0, and coefficients $\beta_1, ..., \beta_k$ are estimated by Cox regression in terms of partial likelihood estimation.

We examine the effect of lobbying on the probability of evading fraud detection using both the dummy for lobbying activities and average lobbying expenses. In addition to controlling for firm size, market to book ratio, and industry fixed effect (Fama-French 10 industries), we include the fixed effects of different types of agents who detect the fraud and fraud motivation based on the classifications in Dyck, Morse, and Zingales (2006a, 2006b).¹⁵

Columns 1 through 4 of Table 4 present the results from the Cox regression. The coefficients are reported in unexponentiated form. Column 1 shows that the coefficient associated with the dummy for lobbying activities is negative and significant, suggesting that lobbying is associated with lower hazard rate of being detected for fraud. Column 2 presents the results of the Cox regression with additional controls for the fixed effect of fraud motivation and type of agents who detect the fraud. We observe the same result – lobbying reduces the hazard rate of fraud being detected.

¹⁵ Dyck, Morse, and Zingales (2006a, 2006b) classify each fraud into one of the six motivations for fraud: personal profit, selling off shares of division or firm, merger/acquisition, organic growth, industry downturn, and firm value enhancement. They show that fraud detection is associated with the type of monitors and the nature of the fraud.

Columns 3 and 4 use average annual lobbying expenses instead of the lobbying dummy as the key independent variable. Our evidence suggests that the amount of lobbying expenses also reduces the hazard rate of being detected. After we account for detection type and fraud motivation fixed effect, the coefficient associated with average lobbying expenses is significant at 5% level.

Although Cox's proportional hazard model does not require specific underlying probability distribution, it does assume the hazard functions of any two individual fraudulent firms to be constant multiples of each other, or the hazard ratio to be constant. For robustness, we estimate the Weibull regression, using the dummy for lobbying activities or annual lobbying expenses, with or without detection type and motivation fixed effect. Weibull regression specifies a more general form of distribution – the Weibull distribution, which does not require failure rates to remain constant but allows them to increase or decrease smoothly over time.

Columns 5-8 of Table 4 report the results from the Weibull regression. The results are similar to those from the Cox regression: lobbying activities reduce firms' hazard rate of being detected, and the more money firms spend on lobbying, the lower the hazard rate.

To summarize, our results suggest that compared to fraudulent firms that do not lobby, fraudulent firms that are involved in lobbying activities have a higher probability to avoid being detected for fraud.

When analyzing the effect of corporate lobbying, one limitation is that due to data restrictions, we are unable to explore other aspects of corporate fraud besides fraud detection, such as the length of litigations and the arrangement of settlement, which could also be

affected by lobbying activities. Another limitation is that that we do not observe frauds that were not caught during the sample period, and cannot directly test whether lobbying affects the probability of fraud detection. However, by restricting our attention to large firms' frauds, this problem is less severe: due to the intense public scrutiny, the ability to sue based on previous misconducts, and the strong incentives to sue by plaintiff lawyers, there are less undetected frauds for large firms (Dyck, Morse, and Zingales, 2006a and 2006b). In addition, we can view frauds that were not caught as firms having very long fraud durations that exceed our sample period. Our results can then be seen as a sub-sample analysis with detection time truncated at 2004.

4.3 Type of detecting agents

Dyck, Morse, and Zingales (2006a, 2006b) identify the economic agents that first detected fraud for each case in their sample. They classify the type of agents into eight categories: regulators, analysts, blockholders, employees and other stakeholders, firm, insiders, media, and professional services. For example, a fraud is defined as being detected by a regulator if the agent who discovered fraud is an industry regulator, or is from a federal investigative agency, trade organization, or the SEC.¹⁶

So far, we have shown that corporate lobbying is associated with a longer period to uncover fraud and a higher probability of evading fraud detection. We now examine which economic agent lobbying activities have the most impact. We conjecture that lobbying has a

¹⁶ A fraud is considered as detected by a *blockholder* if the agent who discovered the fraud is an equity holder, a bank, or a short-seller. A fraud is considered as detected by *employees and other stakeholders* if the agent who brought the fraud to light is an employee, supplier, client, or competitor. Similarly, an agent who uncovered a fraud belongs to *professional services* if the agent is an auditor, a law firm, a rating agency, or an agent who provides other professional services. In addition, a fraud detector is classified as an *insider* if he or she is a board member, new manager, officer or director. For a detailed description of this classification and the identity of each fraud detector, please see Dyck, Morse, and Zingales (March, 2006a).

strong effect on detection by regulators since it is mainly targeted at government agents.

Panel A of Table 5 reports the fraction of frauds detected by each type of economic agent classified in Dyck, Morse, and Zingales (2006a, 2006b). Overall, 34 out of 205 fraud cases, or 17% of frauds in our sample, are detected by regulators. We then break down our fraud sample into the lobbying sub-sample and the non-lobbying sub-sample, based on whether or not a sample fraudulent firm is engaged in lobbying activities. We observe that the lobbying sub-sample has a lower fraction of frauds detected by regulators. In the non-lobbying sub-sample, 19% of frauds were caught by regulators. Based on the number of frauds detected, regulator is ranked next to the firm (22%) as the most effective agent in discovering corporate fraud. For the lobbying sub-sample, however, 12% of frauds were caught by regulators, representing a 38% decrease in detection rate by regulator compared to the non-lobbying sub-sample. Regulator only ranks 4th among all the eight types of parties, falling behind the firm, media, and analysts in terms of the fraction of frauds being detected.

Next, we regress the dummy of whether the fraud is detected by a particular type of agent against the dummy for lobbying activities, controlling for size and industry fixed effect. Panel B of Table 5 reports the results from the cross-sectional linear probability regression. Column 1 of Panel B presents the results for whether the fraud is detected by regulators. We observe that the coefficient associated with the dummy for lobbying activities is negative (-0.134) for regulator (p = 0.068). This indicates that controlling for industry and firm size, lobbying is associated with a lower probability of a fraud being detected by regulators.

The remaining columns of Panel B present the results of the regressions testing whether lobbying affects the probability of being detected by other types of monitors. We do not observe a significant relation between lobbying and fraud detection by other types of economic agents, as none of the coefficients associated with the dummy for lobbying activities is significant.

5. Do fraudulent firms spend more on lobbying expenses?

In the previous section, we documented the difference in fraud detection between fraudulent firms that are (or are not) involved in lobbying activities. If lobbying helps corporations to conceal fraud and evade detection, then we should also expect to observe a link between the amount of lobby spending and corporate fraud. In this section, we investigate whether fraudulent firms spend more on lobbying than non-fraudulent firms and spend more on lobbying during their fraud periods than their non-fraud periods.

5.1 Fraudulent vs. non-fraudulent firms

We first explore whether fraudulent firms spent more on lobbying expenses than nonfraudulent firms. We define a firm-year observation as in "fraud period" if the time period is later than the time when fraud took place and earlier than the time when the fraud was detected, and as in "non-fraud period" otherwise. We define a firm-year observation as "fraudulent firm" if a firm is in its fraud period, and otherwise as "non-fraudulent firm".

Panel A of Table 6 presents the summary statistics of lobbying expenses within the lobby sample. Among firms that lobby, a non-fraudulent firm on average spends \$1.97 million on lobbying each year over the sample period, while a fraudulent firm spends \$3.48 million, a 77% difference. The difference is also statistically significant, as the *p*-value from the *t*-test with unequal variance is 0.00.

Next, in a panel regression, we regress annual lobbying expenses against the dummy for fraud, controlling for size and market to book of equity ratio as well as industry and year fixed effects. The dummy for fraud is equal to 1 if a firm is in its fraud period and 0 otherwise. Industry classification is based on each firm's first 2-digit SIC code. All the standard errors in regressions are clustered at the firm level.

Panel B of Table 6 reports the panel regression results. Column 1 shows that for the entire lobby sample, the coefficient associated with the fraud dummy is positive (457.08) and highly significant. This indicates that each year, an average fraudulent firm spends \$0.457 million more on lobbying than a non-fraudulent firm of similar size and market to book ratio within the same industry. Since Dyck, Morse, and Zingales (2006a, 2006b) limit their sample to frauds with assets of at least \$750 million to prevent frivolous lawsuits, we re-estimate the above regression, restricting the lobby sample to only include firms with annual assets exceeding \$750 million. This restriction results in little reduction – 3.4% – in the lobby sample size, as a majority of firms in our lobby sample are large firms. We observe similar results from Column 2 of Panel B: large fraudulent firms spend \$0.472 million more than large non-fraudulent firms every year.

As a robust check, we also conduct a cross-sectional version of the above test. In the cross-sectional regression, a firm is defined as a fraudulent firm if it is detected for fraud during the entire sample period, and as a non-fraudulent firm otherwise. The results are similar to those from the panel regressions and hence are not reported.

5.2 Does change in fraud status affect lobbying expenses?

Table 6 provides evidence that fraudulent firms spend significantly more on lobbying

than non-fraudulent firms over the period of 1998-2004. Nevertheless, it is possible that other factors may affect both lobby spending and corporate fraud. To mitigate the problem of omitted variables, we examine time-series variation in the lobbying expenses of fraudulent firms. We ask the question: Do firms spend more on lobbying during their fraud periods than during their non-fraud periods?

In our fraud sample, there are 57 firms that are involved in lobbying activities over the period of 1998-2004. For each of these fraudulent firms, we calculate its annual lobbying expenses by summing its mid-year and year-end lobbying expenditures. If we do not observe its lobbying information in a given year, we assume the lobbying expense in that year is zero. Panel A of Table 7 presents the summary statistics for the annual lobbying expenses of fraudulent firms. On average, a fraudulent firm spends \$1.61 million on lobbying each year during its non-fraud period, but spends \$2.08 million – 29% more – on lobbying each year during its fraud period.¹⁷ The difference is also statistically significant (p = 0.04).

Panel B of Table 7 reports the results of multivariate panel regression. In Column 1, we regress annual lobbying expenses on the dummy for fraud, controlling for firm and year fixed effects. Adding firm fixed effect absorbs all the cross-sectional variations and allows us to examine time-series variation separately. By controlling for year fixed effect in addition to firm fixed effect, all the time-series variations in lobbying expenses come from the difference between fraud period and non-fraud period. The results indicate that an average firm spends significantly more – an additional \$0.455 million – each year during its fraud period than

¹⁷ The analyses reported in Table 7 are time-series analyses within the fraud sample. They involve observations in the fraud period or non-fraud period in which a fraudulent firm's lobbying expenses are zero. They are different from these in Table 6, which are panel analyses within the lobby sample and do not contain firms with zero lobbying expenses.

during its non-fraud period.

In Column 2 of Panel B, we regress the change of annual lobbying expenses on the change in fraud status. For a given year t, we define the change in annual lobbying expenses as the difference in a fraudulent firm's lobbying expenses between year t and year t -1. Change in fraud status is equal to 1 when a firm moves from non-fraud period to fraud period, -1 when it moves from fraud period to non-fraud period, and 0 otherwise. We observe that controlling for firm fixed effect and year fixed effect, change in fraud status is positively associated with change in lobby spending. This implies that after a firm commits fraud, it increases its lobbying expenses significantly; when a firm moves from fraud period to non-fraud period, it decreases its lobby spending.

To summarize, Tables 6 indicates that among firms that are involved in lobbying activities, fraudulent firms spend significantly more on lobbying expenses than non-fraudulent firms. Table 7 indicates that among fraudulent firms that lobby, they spend more on lobbying during their fraud periods than during their non-fraud periods. These findings thus provide evidence in support of our previous results that corporate lobbying affects fraud detection.

6. Welfare implications of delay in fraud detection

The previous tests show that a firm engaged in lobbying activities is able to evade fraud detection significantly longer than a non-lobbying firm. The average difference is 117 more days and the median difference is 93 more days. How does delay in detection affect firms and their managers? We now examine two outcomes of delaying fraud detection: delay in

negative market reactions and insider trading.¹⁸

6.1. Delay in negative market reactions

The discovery of fraud is usually accompanied by the dramatic decline in the market value of the fraudulent firm (Karpoff, Lee, and Vendrzyk, 1999; Goldman, Peyer, and Stefanescu, 2007). One natural benefit of delaying fraud detection is delaying the negative market reaction when fraud surfaces, which generates positive present value for firms.

Panel A of Table 8 reports the summary statistics of the abnormal return of fraudulent firm's stock on the day the fraud is discovered. The abnormal return, measured against the CRSP value-weighted market index over the one-day window, is on average -21%. There is no significant difference in abnormal returns between the lobbying sub-sample and the non-lobbying sub-sample.

We estimate the advantage of delaying this negative decline in firm value using a simple NPV approach for the lobbying sub-sample. We make the following simplifying assumptions: annual risk free rate is 4% and the average time it takes to detect a fraud is 2 years. Since the medium delay in fraud detection is 93 days (Panel A, Table 3), for conservativeness of our analysis, we assume the average delay in detection is 90 days.

We calculate abnormal market value change on detection day by multiplying abnormal return on detection day by the market value of the firm on the day before the fraud is detected. Panel B of Table 8 shows that the average abnormal market value loss on the day that the fraud is discovered is \$4.45 billion for a firm that lobbies. With an annual discount

¹⁸ In a separate study, de Figueiredo and Silverman (2006) directly estimate the returns to lobbying using data on universities' educational earmarks. They report the average again of \$11-\$17 for lobbying universities with representation on the Senate Appropriation Committee and \$20-\$36 for those with representation on the House Appropriation Committee. Instead of addressing the general benefit of lobbying on various interest groups, we concentrate on measuring the benefits of lobbying accrued to one particular group – corporate managers and current shareholders – by delaying fraud detection.

rate of 4%, the present value to the firm from delaying negative reaction for 90 days is \$40.75 million, calculated as the difference between the present value of immediate market value loss (discounted for 2 years), and the present value of delayed market value loss (discounted for 2 years).

Meanwhile, an average fraudulent firm spends \$2.08 million in lobbying expenses during the sample period (Panel A, Table 7). The present value of the cost at the time when fraud is committed is \$4.28 million, about 10% of the \$40.75 million present value from delaying negative reaction for 90 days. We then take the difference between the present value of the gain from delaying negative market reaction and the present value of the cost of lobbying. The average NPV of lobbying is \$36.47 million.

6.2. Insider sales during fraud period

Another party that can potentially benefit from the delay of fraud detection is managers. Since it takes longer to discover fraud for firms that are engaged in lobbying activities, managers have more time to sell their shares before the decline in the firm's share value occurs.

We collect insider trading information for fraudulent firms from the Thomson Financial Insider Trading Database. Following Peng and Röell (2006), we calculate the aggregate dollar value of the firm's stock from insider sales activity during the fiscal year from insiders such as directors, CEOs, COOs, CFOs, presidents, and chairmen of the board. We also compute the daily dollar value from insider selling transactions over the fraud period.

We break down our fraud sample into the lobbying sub-sample and the non-lobbying sub-sample, and compare the insider trading patterns between the two sub-sample firms.

Panel A of Table 9 presents the summary statistics. During the fraud period, insiders from lobbying firms on average sold \$440.33 million in shares, about 277% more than the \$116.79 million in shares sold by insiders from non-lobbying firms. This difference is also statistically significant (p = 0.00). In contrast, the average purchase in shares over the fraud period by insiders of firms that are involved in lobbying activities is around \$98 million, less than the average \$150 million insider purchase from non-lobbying firms. The difference in cumulative purchase is not statistically significant.

We observe the same results at a daily level instead of the aggregate level over the entire fraud period. Insiders at an average firm that lobbies sold \$0.63 million each day over its fraud period, which is 133% more than the \$0.27 million sold each day by insiders from an average non-lobbying firm. The difference in daily insider sales is again significant. On the other hand, insiders in the lobbying sub-sample purchased \$0.16 million each day over the fraud period, which is \$0.05 million less than the \$0.21 million share purchased by insiders from the non-lobbying sub-sample. The difference in purchase between the two sub-samples is not significant.

Next, we investigate whether the difference in value realized from insider sales is robust after controlling factors such as industry and firm size. We regress cumulative sales by insiders during the fraud period on dummy for lobbying activities, industry dummies, firm size, and fraud duration.

Panel B of Table 9 reports the regression results. Column 1 shows that the coefficient associated with the dummy variable for lobbying activities is positive (379.67) and significant (p = 0.03). After controlling for industry, firm size and market to book ratio, the

aggregate insider sales of shares during the fraud period are nearly \$380 million more for firms that are involved in lobbying than for firms that are not. Column 2 of Panel B shows that additional control of fraud duration does not alter our findings. Insider sales over the fraud period continue to be higher for firms that lobby than for firms that do not lobby.

7. Conclusions

This study explores the connection between corporate lobbying activities and fraud detection. Using lobbying expenses data from 1998 to 2004, we provide evidence that spending on lobbying makes a significant difference in fraud detection: firms involved in lobbying have a significantly lower hazard rate of being detected for fraud and are able to evade detection 117 days longer than firms not involved in lobbying. Fraudulent firms involved in lobbying activities are 38% less likely to be detected by regulators. In addition, fraudulent firms spend 77% more on lobbying expenses than non-fraudulent firms, and 29% more on lobbying during their fraud periods than during their non-fraud periods. The delay in detection allows managers to defer negative market reactions and sell more of their shares.

A majority of the existing studies on the effect of political connections have focused on asset prices. Our paper contributes to this literature by providing evidence of how political connections may affect corporate governance in the context of fraud detection. It also contributes to the literature on corporate fraud by identifying a new factor – corporate lobbying – that is significantly associated with fraud detection. Lastly, while law and finance literature has recognized the important role of the legal system for corporate governance, the legal/regulation system is usually treated as exogenous in empirical international studies.

Since lobbying activities are known to affect legislation, our evidence that lobbying has consequences on corporate governance raises the question of the validity of the exogenous assumption of legal system in international studies.

We also wish to point out that our results should not be interpreted as evidence of the inefficiency of corporate lobbying in general. In fact, lobbying is one of the main means by which various groups promulgate their views to legislators. Just as a corrupted election does not invalidate an entire voting system, our evidence in this study imposes no implication that we should ban corporate lobbying. Instead, our findings shed light on the recent debate about whether to improve the transparency in corporate political spending. By providing evidence that political spending does affect the welfare of investors, our study suggests a need for more transparency in corporate political spending.

Appendix A An Example of a Lobbying Report from General Electric

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Clerk of the House of Representatives Secretary of the Senate Legislative Resource Center Office of Public Records 232 Hart Building B-106 Cannon Building Washington, DC 20510 Washington, DC 20515

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LOBBYING REPORT

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Lobbying Disclosure Act of 1995 (Section 5) - All Filers Are Required to Complete This Page

1.	I. Registrant Name General Electric Company (Including subsidiaries)							
3	Registrant Address Croj	Adhess Check if diffe 1299 Penosylvania Ave Washington	nani dan previously reported nate, NW Sate/Zip (or Country)	i Snite DC	1100 20094	USA		
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4.	Contact No Peter D.	Prowill	Telephone E-	nwil(optio	44) }		5. Senate ID # 15997-12	
7.	Client Min	ne 🖾 Selí	•				6. House ID # 31108000	

TYPE OF REPORT 8. Year 2004 Midyear (Ianuary 1-June 30) 🔯 OR Year End (July 1-December 31) 🗆

9. Check if this filing anends a previously filed version of this report \Box

10. Check if this is a Termination Report 🔲 😕 Termination Date 11. No Lubbying Activity

12. Lobbying Firms	13. Organizations
INCOME relating to lobbying activities for this reporting period was:	EXPENSES relating to lobbying activities for this reporting period were:
Less than \$10,000 🛛	Less than \$19,000 🕞
\$10,000 or more >> \$ Income (material \$20,000) Provide a good faith estimate, rounded to the nearest \$20,000 of all lobbying related income from the client (including all payments to the registrant by any other entity for tobbying activities on behalf of the client).	\$10,000 or more \$8,440,000.00 Expenses (neurorst \$20,000) 14. REPORTING METHOD. Check box to indicate expense accounting method. See instructions for description of options. Image: Method A. Reporting amounts using LDA definitions only Image: Method B. Reporting amounts under section 6033(b)(8) of the lateral Report Code
A	Method C. Reporting amounts under section 162(e) of the Internal Revenue Code
We O MP	Date 8/16/2004

Regi	strant Name:	General Electric Company (Including subsidiaries)	ō.
Clier	u Name:	self	e S
LOB	BYING ACT	IVITY. Select as many codes as necessary to reflect the general issue areas in which the registrant	¢
enga	ged in lobbyin	g on behalf of the client during the reporting period. Using a separate page for each code, provide	51
infor	mation as requ	ested. Attach additional page(s) as needed.	ça N
15.	General issue	area code <u>AVI</u> (one per page)	1
16	Specific Lobi	vine issues	1 2+
	H.R.108-284	Emergency Wartime Supplemental Appropriations Act, 2004, Support	(X)
	H.R.4200, N: and procure: Support exte Civil aircraft	tional Defense Authorization Act for Fiscal Year 2005, Provisions relating to turbo jet engine- nent aston of the war risk insurance program tariffs and subsidies	developu
	Support rete	ation of the Loan Guarantee Program	
	Suport Cape	Town Trenty	
	Propertion 2	Project	

Check if None

- 17. House(s) of Congress and Federal agencies contacted Department of Defense Department of State Department of Transportation Department of Trensury Executive Office of the President Federal Aviation Administration House of Representatives
- 18. Name of each individual who acted as a lobbyist in this issue area

Name	Covered Official Position (if applicable)	New
Cooper, Themas		Na
Dorn, Nancy		No
Fulton, Kethryn		No
Gadbaw, R. Michael		No
Merber, Solig S.		No
Pomeroy, Glenn		No
Prewitt, Peter D.		No

19. Interest of each foreign easity in the specific issues listed on line 16 above 🛛 🖉 Check if None

	Al O. At musica	
Signature		
Printed Name and Title	Peter D. Prowitt - Manager, Federal Government Relations	Page 2 of 26

Registrat	nt Name: <u>General Electric Com</u>	ngany (Including subsidiaries)	0 0
Client Na	ame: <u>self</u>		ō
[lem	Description	Data	
16	Lobbying lasues	Support extension of the war risk insurance program Civil aircraft tariffs and subsidies Support retuntion of the Lean Guarantee Program Support Cape Town Trenty Propulsion 21 Project	φ 4 α
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186 18c	New Labbyist	Ne	
184 186 184	Lobbyist Name Cavered Official Polition New Lobbyist	Ringe, Durwood W. No	

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Figure 1

Survival estimates of fraudulent firms: Lobby vs. Not lobby

The figure below presents the plot based on Kaplan-Meier survival estimates for fraudulent firms' rate of evading detection during the sample period of 1998-2004. The red solid line is the probability of evading detection up until a given time for fraudulent firms that lobby. The grey dashed line is the probability of evading detection up until a given time for fraudulent firms that do not lobby.



Summary statistics for lobbying firms

The lobby sample consists of 2,053 firms that are involved in lobbying activities between 1998 and 2005. Information regarding these firms and their lobby expenditures is from Political Money Line of Congressional Quarterly Inc. A firm's annual lobby spending (in thousand dollars) is the sum of its mid-year and year-end lobbying expenditures. In the case where a private subsidiary of a publicly-traded parent company lobbies, we attribute lobbying spending to the parent firm.

Panel A: Annual lobby spending (in thousand dollars)						
Year	Mean	Median	25 percentile	75 percentile	STD	Number of firms
1998	2,213	1,320	800	2,840	2,555	211
1999	1,895	1,120	660	2,480	1,971	242
2000	1,987	1,140	660	2,453	2,209	240
2001	1,927	1,140	598	2,696	2,121	251
2002	2,081	1,230	690	2,375	2,279	245
2003	1,986	1,139	620	2,220	2,368	280
2004	1,956	1,110	640	2,180	2,451	304
2005	2,199	1,336	760	2,590	2,550	280
Total	2,027	1,167	680	2,480	2,325	2053

Panel B: Frequency of lobbying activities from 1998 to 2005

Number of years of lobbying	Number of firms	%
8	968	47.15
7	210	10.23
6	132	6.43
5	190	9.25
4	168	8.18
3	153	7.45
2	144	7.01
1	88	4.29
Total	2,053	100

Summary statistics for fraudulent firms

The fraud sample is from Dyck, Morse, and Zingales (2006a, 2006b) and consists of 205 frauds detected between 1998 and 2004. The sample is based on the Stanford database of security class actions with assets of at least \$750 million in the year before the fraud is detected, and with settlements of at least \$2.5 million. *Starting year* is the year when a firm commits a fraud, and *detecting year* is the year when a fraud is detected. *Duration of fraud* is the number of days over a fraud period, where fraud period is defined as the period between the time when a firm commits a fraud and the time when the fraud is detected. Panel A reports the annual frequency and the average duration of fraud based on the year when a fraud is committed. Panel B reports the annual frequency and the average duration of fraud based on the year when a fraud is detected. Panel C reports the annual fraction of frauds within the lobby sample.

Panel A: Number of frauds by starting year						
Starting year	Count	%	Duration of fraud (days)			
			Mean	Median		
1995	3	1.46	1,297	1,400		
1996	1	0.49	930	930		
1997	19	9.27	830	599		
1998	40	19.51	730	520		
1999	42	20.49	827	987		
2000	42	20.49	572	436		
2001	33	16.10	421	437		
2002	14	6.83	298	253		
2003	10	4.88	305	293		
2004	1	0.49	126	126		
Total	205	100.00	633	456		

Panel B: Number of frauds by detecting year						
Detected year	Count	%	Duration of fraud (days)			
			Mean	Median		
1998	21	10.24	411	288		
1999	23	11.22	393	350		
2000	23	11.22	410	252		
2001	33	16.10	460	400		
2002	60	29.27	756	641		
2003	28	13.66	1,038	924		
2004	17	8.29	766	459		
Total	205	100.00	633	456		

Table 2 continued.

Panel C: Frauds in the lobby sample						
Year	Number of frauds	Fraction of frauds	Total			
1998	8	3.79%	211			
1999	15	6.20%	242			
2000	22	9.17%	240			
2001	17	6.77%	251			
2002	16	6.53%	245			
2003	6	2.14%	280			
2004	1	0.33%	304			
2005	0	0.00%	280			
Total	85	4.14%	2,053			

Does it take longer to detect fraud from firms involved in lobbying activities?

The sample period is 1998-2004. A lobbying firm is defined as a firm that is engaged in lobbying activities during the sample period, and a non-lobbying firm is a firm that is not engaged in lobbying activities. *Days taken to detect fraud* is the number of days over a fraud period, where fraud period is defined as between the time when a firm commits fraud and the time when the fraud is detected. In Panel A, *t*-test of difference in days taken to detect fraud between lobbying firms and non-lobbying firms is based on uneven variance. In Panel B, the dependent variable is days taken to detect fraud. *Dummy for lobbying activities* is equal to 1 if a firm engaged in lobbying activities during the sample period, and 0 otherwise. *Average lobbying expenses* is the average semi-annual lobbying expenses (in million dollars) that a lobbying firm spent during the sample period. *Size* is the log value of market value of equity in the year before fraud detection. *Market to book ratio* is the market to book value of equity in the year before the time the fraud is detected. *Detection year* is equal to 1 if a firm is detected for fraud in a particular year and 0 otherwise. *Type of detecting agents* is one of the eight categories of the parties who first detected a fraud: regulators, analysts, blockholders, employees and other stakeholders, firm, insiders, media, and professional services. The industry classification of each company is defined by the Fama-French 10 industries. Robust standard errors clustered at firm-level are reported in (.). ***, **, * = significant at 1%, 5%, and 10%, respectively.

Panel A: Summary statistics of a	lays taken to detect fraud	l				
Days	Mean	Median	25 percentile	75 percentile	STD	Ν
All	632.96	456	252	976	490.20	205
Lobbying firms	711.12	510	346	1,066	498.02	68
Non-lobbying firms	594.17	417	241	922	483.41	137
Difference	116.95	93	105	143.5		
T-test: lobbying firms vs. non-lo	bbying firms			<i>p</i> = 0.10		

Dependent variable: Days taken to detect	fraud							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dummy for lobbying activities	300.72		284.59		272.61		243.31	
	(92.89)***		(93.58)***		(95.04)***		(85.74)***	
Average lobbying expenses		149.84		154.98		152.13		115.96
		(60.86)**		(61.09)**		(61.30)**		(56.91)**
Size	-78.66	-66.89	-66.81	-59.77	-65.57	-58.52	-69.64	-58.71
	(23.64)***	(23.49)***	(24.86)***	(24.94)**	(25.76)**	(25.53)**	(23.49)***	(23.50)**
Market to book ratio	-6.78	-6.01	-6.35	-5.38	-6.14	-5.00	-0.96	-0.17
	(4.65)	(4.71)	(4.72)	(4.77)	(4.79)	(4.82)	(4.47)	(4.52)
Abnormal stock return before detection					-110.41	-339.81	-979.22	-1,218.74
					(770.68)	(769.25)	(715.23)	(717.18)*
Constant	665.19	689.55	499.77	523.09	499.73	513.53	697.08	728.16
	(44.77)***	(44.28)***	(111.12)***	(111.65)***	(115.52)***	(116.08)***	(138.91)***	(140.40)***
Detection year fixed effect	No	No	No	No	No	No	Yes	Yes
Type of detecting agents fixed effect	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	192	192	192	192	189	189	189	189
R-squared	0.15	0.13	0.19	0.18	0.19	0.18	0.37	0.35

Survival analysis: Do lobbying firms evade detection longer?

The sample period is 1998-2004. The dependent variable is the hazard ratio for Cox regression or Weibull regression. *Dummy for lobbying activities* is equal to 1 if the firm is involved in lobbying activities during the sample period and 0 otherwise. *Average lobby spending* (in million dollars) is the annual average lobbying expenses a firm has occurred during the sample period. *Size* is the log value of market value of equity in the year before fraud detection. *Market to book ratio* is the market to book value of equity in the year before fraud detection. *Type of detecting agents* is one of the eight categories of the parties who first detected a fraud: regulators, analysts, blockholders, employees and other stakeholders, firm, insiders, media, and professional services. *Fraud motivation* is one of the six motivations for fraud: personal profit, selling off shares of division or firm, merger/acquisition, organic growth, industry downturn, and firm value enhancement. The industry classification of each company is defined by the Fama-French 10 industries. The coefficients reported are in unexponentiated form. ***, **, * = significant at 1%, 5%, and 10%, respectively.

Dependent Variable: Hazard Ratio	Cox Regression					Weibull r	egression	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dummy for lobbying activities	-0.63	-0.69			-0.68	-0.77		
	(0.20)***	(0.21)***			(0.20)***	(0.21)***		
Average lobbying expenses			-0.12	-0.14			-0.12	-0.17
			(0.06)*	(0.07)**			(0.06)*	(0.07)**
Size	0.14	0.13	0.10	0.11	0.15	0.15	0.12	0.14
	(0.05)***	(0.06)**	(0.05)**	(0.06)**	(0.05)***	(0.06)***	(0.05)**	(0.06)**
Market to book ratio	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.02
	(0.01)**	(0.01)**	(0.01)**	(0.01)*	(0.01)**	(0.01)**	(0.01)**	(0.01)*
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Type of detecting agents fixed effect	No	Yes	No	Yes	No	Yes	No	Yes
Fraud motivation fixed effect	No	Yes	No	Yes	No	Yes	No	Yes
Observations	192	192	192	192	192	192	192	192
Prob. > χ^2	0.003	0.000	0.023	0.002	0.001	0.008	0.032	0.002

Table 5What type of detection that lobbying reduces?

The sample period is 1998-2004. A lobbying firm is defined as a firm that is engaged in lobbying activities in the sample period, and a non-lobbying firm is a firm that is not engaged in lobbying activities. Panel A reports the frequency of different type of agents that discovered fraud for lobbying firms and non-lobbying firms, respectively. Fraud detectors are based on the classification of Dyck, Morse, and Zingales (2006a, 2006b): regulators, analysts, blockholders, employees and other stakeholders, firm, insiders, media and professional services. *Rank* is the ranking based on the number of frauds detected by a particular agent among all the eight types. Panel B reports the results from cross-sectional linear probability regressions for each type of fraud detectors. The dependent variable is a dummy variable equal to 1 if the fraud is detected by a particular type of party and 0 otherwise. *Dummy for lobbying activities* is equal to 1 if a firm is engaged in lobbying activities during the sample period, and 0 otherwise. *Size* is the log value of asset in the year before fraud detection. The industry classification of each company is defined by the Fama-French 10 industries. Robust standard errors clustered at firm-level are reported in (.). ***, **, * = significant at 1%, 5%, and 10%, respectively.

Panel A: Summary statistics of frequency of frauds	detected						
	Non-lobbying firms				Total		
Party who discovered fraud	Count	Percentage	Rank	Count	Percentage	Rank	
Regulators	26	18.98%	2	8	11.76%	4	34
Analysts	12	8.76%	6	10	14.71%	3	22
Blockholders	5	3.65%	8	1	1.47%	8	6
Employees and other stakeholders	21	15.33%	3	7	10.29%	6	28
Firm	30	21.90%	1	15	22.06%	1	45
Insiders	16	11.68%	5	8	11.76%	4	24
Media	7	5.11%	7	13	19.12%	2	20
Professional services	20	14.60%	4	6	8.82%	7	26
Total	137	100%		68	100%		205

Table	5	continued.

Dependent variable: Wh	ether fraud is det	tected by certa	in type of whis	tleblowers				
	Regulators	Media	Firm	Professional services	Insiders	Blockholders	Employees and other stakeholders	Analyst
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dummy for lobbying activities	-0.134	0.057	-0.030	0.016	0.026	-0.013	0.071	0.007
	(0.068)*	(0.069)	(0.080)	(0.062)	(0.059)	(0.023)	(0.070)	(0.072)
Size	0.020	0.022	0.021	0.014	-0.052	-0.000	-0.039	0.014
	(0.022)	(0.016)	(0.023)	(0.014)	(0.022)**	(0.004)	(0.018)**	(0.016)
Constant	0.078	-0.138	0.037	-0.031	0.621	0.005	0.486	-0.059
	(0.190)	(0.134)	(0.202)	(0.118)	(0.196)***	(0.037)	(0.178)***	(0.121)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	195	195	195	195	195	195	195	195
R-squared	0.12	0.07	0.03	0.07	0.08	0.05	0.06	0.07

Do fraudulent firms spend more on lobbying expenses?

The sample contains firms that were involved in lobbying activities during the period of 1998-2004. We define a firm-year observation as in fraud period if the time period is later than the time when fraud took place and earlier than the time when the fraud was detected, and as in non-fraud period otherwise. We define a firm-year observation as fraudulent firm if a firm is in its fraud period, and otherwise as non-fraudulent firm. A firm's *annual lobby spending* (in thousands dollars) is the sum of its mid-year and year-end lobbying expenditures. *Dummy for fraud* is a variable equal to 1 if a firm is in its fraud period and 0 otherwise. *Size* is the log value of market value of equity in the year before fraud detection. *Market to book ratio* is the market to book value of equity in the year before fraud detection. In Panel A, *t*-test of difference in average annual lobbying expenses between fraudulent and non-fraudulent lobbying firms is based on uneven variance. In Panel B, the industry classification of each company is defined by the first 2 digits SIC codes. Robust standard errors clustered at firm-level are reported in (.). ***, **, * = significant at 1%, 5%, and 10%, respectively.

Panel A: Summary statistics for annual lobby spending (in thousand dollars)							
	Maan	Madian	25	75	STD	N	
	Mean Median		percentile	percentile	510	IN	
Fraudulent lobbying firms	3,477	2,870	960	5,320	2,912	85	
Non-fraudulent lobbying firms	1,965	1,158	680	2,320	2,276	1,968	
T-test: fraudulent vs. non-fraudul	ent lobby:	ing firms	<i>p</i> = 0.00				
Panel B: Multivariate panel regre	ession						
Dependent Variable: Annual lobb	y spendin	g (in thous	and dollars)				
	Full	Sample		Assets ≥ 75			
	(1)			(2)			
Dummy for fraud	457	.08		472.04			
	(159	9.66)***		(160.71)***			
Size	292	.24		307.96			
	(38.	23)***		(40.60)***			
Market to book ratio	1.05	5		0.76			
	(1.7	3)		(1.88)			
Constant	-1,6	13.77		-1,761.19			
	(347.27)***			(376.17)**	*		
Year fixed effect	Yes			Yes			
Industry fixed effect	Yes			Yes			
Observations	1,74	41		1,679			
R-squared	0.39			0.41			

Do fraudulent firms spend more on lobbying during the period of fraud?

The sample contains fraudulent firms that were involved in lobbying activities during the sample period of 1998-2004. If a fraudulent firm lobbies in a particular year, its annual lobbying expenses are computed by summing its mid-year and year-end lobbying expenditures; if it does not lobby in a particular year, we treat its lobbying expenditure in that year as zero. Panel A compares the annual lobbying expenses occurred during the fraud period and during the non-fraud period. A firm-year observation is in fraud period if the time period is after a fraud is committed and before a fraud is detected, and otherwise in non-fraud period. *t*-test of difference in annual lobbying expenses between fraud period and non-fraud period is based on uneven variance. In Panel B, the dependent variable is *annual lobby spending* (in thousand dollars), or *change in lobby spending* (in thousand dollars) defined as change in annual lobbying expenses from previous year. *Dummy for fraud* is equal to 1 if a firm is in fraud period to fraud period, -1 when a firm moves from fraud period to non-fraud period, and 0 otherwise. Robust standard errors clustered at firm-level are reported in (.). ***, **, * = significant at 1%, 5%, and 10%, respectively.

Panel A: Summary statistics of annual lobby spending (in thousand dollars)									
Period	Mean	Median	25 percentile	75 percentile	STD	N			
Fraud period	2,082	772	0	3,148	2,824	142			
Non-fraud period	1,610	660	0	2,320	2,367	266			
T-test: Fraud period vs.	non-fraud	period	<i>p</i> = 0.04						
Panel B: Multivariate p	anel regres	ssion with fi	rm fixed effect						
Dependent variable:	pendent variable: Annual lobby spending				Change in lobby spending				
		(in thousan	d dollars)	(in thous	and dollar	s)			
		(1)		(2)				
Dummy for fraud		455.24							
		(126.42)*	***						
Change in fraud status				602.85					
				(142.61)*	***				
Constant		2,070.53		676.36					
		(172.06)*	***	(212.55)*	***				
Firm fixed effect		Yes		Yes					
Year fixed effect		Yes		Yes					
Observations		408		357					
R-squared		0.79		0.1					

Delay of negative market reaction when fraud is detected

The sample period is 1998-2004. Panel A compares the abnormal return on the day when fraud is discovered between lobbying firms and non-lobbying firms based on market model. A lobbying firm is defined as a firm that is engaged in lobbying activities in the sample period, and a non-lobbying firm is a firm that is not engaged in lobbying activities. The abnormal return is the market-adjusted return measured against the CRSP value-weighted market index over the one-day window when fraud is discovered. Panel B reports the net present value estimation of the benefit of delaying negative market reaction. *Abnormal market value change on detection day* is calculated as the abnormal return on detection day multiplied by the market value of the firm on the day before the fraud is detected. *PV(delay in negative reaction)* is the difference between the present value of immediate market value loss (discounted for 2 years), and the present value of delayed market value loss (discounted for 2 years plus 90 days). *PV(lobbying expenses over 2 years)* is the present value of average lobbying expenses for 2 years.

Panel A: Summary statistics for abnormal return on the detection day (market model)								
Abnormal return	Mean	Median	25 percentile	75 percentile	STD	Ν		
Lobbying firms	-21%	-14%	-28%	-5%	21%	57		
Non-lobbying firms	-21%	-18%	-31%	-6%	22%	139		
Panel B: Net present value (NPV) estimation of the benefit of delaying negative market reaction Assumptions: Average delay = 90 days, annual risk free rate = 4%, average time to detect fraud = 2 years								
Variables (in millions of dollar)	Mean	Median	25 percentile	75 percentile	STD			
Abnormal market value change on detection day	-4,451.81	-2,136.04	-5,314.53	-819.11	5,689.11			
PV(delay in negative reaction)	40.75	19.55	7.50	48.65	52.08			
PV(lobbying expenses over 2 years)	4.28	1.85	1.20	6.87	4.54			
PV(delay in negative reaction)- PV(lobbying expenses)	36.47	16.53	4.18	45.82	51.16			

Insider trading

The sample period is 1998-2004. Insider trading data are from the Thomson Financial Insider Trading Database. Panel A compares insider trading patterns between lobbying firms and non-lobbying firms during their fraud periods. Fraud period is defined as the period after a fraud is committed and before it is detected. *Cumulative sales (purchase) of shares by insiders* is total value (in millions of dollars) from selling (purchasing) shares of the firm by insiders. *Daily average sales (purchase) by insiders* is calculated as cumulative sales (purchase) of shares by insiders by insiders over the fraud period divided by the number of days in the fraud period. Panel B reports the results from multivariate regression. The dependent variable is cumulative sales of shares by insiders during the fraud period. *Dummy for lobbying activities* is equal to 1 if a firm engaged in lobbying activities during the sample period, and 0 otherwise. *Fraud duration* is the number of days within the fraud period. *Size* is the log value of market value of equity in the year before fraud detection. *Market to book ratio* is the market to book value of equity in the year before fraud detection. The industry classification of each company is defined by the Fama-French 5 industries. ***, **, = significant at 1%, 5%, and 10% respectively.

Panel A: Summary statistics for insider trading during fraud period						
Variables (in millions of dollars)	Lobbying firms	Non-lobbying firms	T-value			
Cumulative sales of shares by insiders	440.33	116.79	-2.63***			
Cumulative purchase of shares by insiders	97.5	149.73	0.46			
Daily average sales by insiders	0.63	0.27	-1.99**			
Daily average purchase by insiders	0.16	0.21	0.38			
N	51	141				
Panel B: Multivariate regression						
Dependent variable: Insider sales during fra	ud period (in mill	ions)				
Dummy for lobbying activities		379.67	273.11			
	((175.67)**	159.99)*			
Fraud duration			0.22			
			(0.14)			
Size		-7.94	7.84			
		(41.38)	(42.38)			
Market to book ratio		-5.59	-4.53			
		(6.00)	(6.01)			
Constant		110.76	-150.15			
		(323.54) ((361.74)			
Industry fixed effect		Yes	Yes			
Observations		167	167			
R-squared		0.09	0.11			