Corporate lobbying: Resource-seeking or rent-seeking? Evidence from audit fees

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ABSTRACT

Theory and prior research suggest that corporate lobbying is a primary means that corporations use to influence government policies either for improving firm performance (i.e., strategic decisions) or for rent-seeking activities (i.e., agency costs) but the evidence between lobbying activities and auditor assessments of audit risk remains unclear. Our results show that lobbying firms are associated with higher audit risks and fees, consistent with the idea that lobbying is related to rent-seeking and higher agency costs. In cross-sectional analyses, we find that the positive association between lobbying and audit fees is weaker for firms with strong corporate governance. Further analysis shows that firm financial returns or low earnings quality mediate the relationship between lobbying and audit fees. The results suggest that practitioners, users of financial statements and regulators could benefit by recognizing that lobbying activities could signal managerial opportunistic behavior.

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Introduction

A recent strand in the political economy and management literature has focused on corporate political activities (CPAs)[1-] and the impact of CPAs on firm outcomes. CPAs can be broadly defined as "corporate attempts to shape government policy" (Hillman et al., 2004, 838) and they include lobbying (Yu and Yu, 2011), political contributions (Cooper et al., 2010) and the appointment of politicians and ex-government officials on the board and decision-making institutions of the firm (see Faccio, 2006; Johnson and Mitton, 2003). Within this group of activities, corporate lobbying has emerged as a primary instrument that firms use to influence policy formation, usually by engaging external and/or in-house lobbyists (Chen et al., 2015).[2]

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[1] Some studies also refer to CPA as "corporate political action" (Getz, 1997), "business political activity" (Keim and Baysinger, 1988) and/or "corporate political investment" (Hadani and Schuler, 2012).
[2] The 1995 Lobbying Disclosure Act (LDA) defines a lobbying contact as follows:...any oral or written communication (including electronic communication) to a covered executive branch official or a covered legislative branch official that is made on behalf of a client with regard to (i) the formulation, modification, or adoption of Federal legislation (including legislative proposals); (ii) the formulation, modification, or adoption of a Federal rule, regulation, Executive order, or any other program, policy, or position of the United States Government; (iii) the administration or execution of a Federal program or policy (including the negotiation, award, or administration of a Federal contract, grant, loan, permit, or license); or (iv) the nomination or confirmation of a person for a position subject to confirmation by the Senate.

Other political activities such as political contributions merely act as complementary activities designed to gain access to politicians (Kaiser, 2009).[3]

In this paper, we extend prior studies by examining whether external auditors are affected by clients' lobbying activities. Specifically, we investigate whether corporate lobbying is associated with auditors' assessments of their clients' audit risks and fee determination. In our main test we examine the association between corporate lobbying and audit fees. We are motivated to examine the relationship between corporate lobbying and audit fees for two reasons.

First, there are competing theories regarding the impact of corporate lobbying and corporate outcomes that could affect audit fees. On the one hand, the decision to lobby politicians or regulators may be driven by the notion that lobbying could help firms obtain economic advantages from governments, as postulated by Pfeffer and Salancik's (1978) resource dependence theory. Lobbying firms are more likely to receive valuable key resources, such as lower tax rates (Richter et al., 2009), favorable public policies (Goldberg and Maggi, 1999), government contracts and subsidies (Goldman et al., 2009; Schuler et al., 2002), and stimulus funds or bailouts from the government (Adelino and Dinc, 2014; Faccio et al., 2006).[4] This preferential government treatment could improve firms' financial performance and ultimately reduce their incentive to manipulate or misreport their earnings, to the extent that auditors could perceive lobbying firms as having lower audit risk and accordingly charge them lower audit fees. Furthermore, special treatment like offering bailouts to distressed lobbying firms could minimize firms' chances of entering into liquidation. The lower risk of bankruptcy would reduce the probability of shareholder lawsuits against auditors, leading auditors to assess their politically active clients more favorably in terms of audit risks. Overall, a prediction based on resource dependence theory suggests that corporate lobbying is negatively associated with audit fees.

On the other hand, based on agency theory, corporate lobbying has a 'dark side' and could be viewed as a manifestation of agency problems that may increase the opaqueness of the financial statements prepared by lobbying firms (Chaney et al., 2011; Jensen and Meckling, 1976). This line of argument is based on the idea that corporations are not required to disclose their political expenses to shareholders and that the decision to lobby is often made by firm executives without prior consultation with shareholders or board members (Cho et al., 2008; Deloitte, 2012; Humphries, 1991; Leong et al., 2013).[5] As a consequence, board members and shareholders are usually kept in the dark about the firm's political activities, providing managers an incentive to advance their personal agendas through lobbying, perhaps at the expense of shareholders' interests (Freed and Richardson, 2005). Thus, lobbying activity has often been associated with "significant issues of tax and accounting problems, fraud, bribery, conspiracy and other illegal actions" that could "expose [such] companies to significant legal, reputational and financial risk" (Center for Political Accountability, 2005, 2016).

Moreover, research has also shown that lobbying may be associated with the rent-seeking behavior of managers rather than strategic activity intended to benefit the firm (Stiglitz, 2013). In particular, corporate lobbying could be used as a mechanism to advance the private interests of executives, such as obtaining political appointments[6] or evading fraud detection (Yu and Yu, 2011). Prior studies also show that firms that actively lobby are less likely to face enforcement actions by regulators and receive lower penalties if they are prosecuted (Correia, 2014; Yu and Yu, 2011). Such leniency toward lobbying firms exacerbates the moral hazard problem and encourages such corporations to conceal material information from shareholders.[7] Thus, in line with agency theory, a positive association between corporate lobbying and the risk of financial misstatement is expected. The higher risk of misstatements is, in turn, likely to lead auditors to assess higher audit risks and audit fees. Overall, the competing arguments suggest that the association between a firm's lobbying activity and auditor's assessments of audit risk is an empirical question.

Second, interest is growing amongst regulators, the media, shareholder activist groups, and practitioners regarding the large amounts of money being spent on corporate lobbying and question whether this activity is in the best interests of shareholders (Drutman, 2011). Firms in the U.S. are reported to spend more than US$3 billion on lobbying annually and engage almost 41 percent of the lobbyists in Washington D.C.; moreover, more than half of former Senate or Congress members are employed as corporate lobbyists (Center for Responsive Politics, 2015; Federal Election Commission, 2012).[8] Controlling for inflation, the amount spent on lobbying today is equivalent to seven times the lobbying expenditures recorded in

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[3] In addition, companies spend approximately 10 times more on lobbying than on any other forms of political activities such as political donations. This could possibly be due to the lack of legal restrictions on the maximum amount that businesses could spend on lobbying (Milyo et al., 2000).

[4] For instance, Adelino and Dinc (2014) find that businesses that lobbied more were more likely to receive stimulus funds from the government and were even termed "prime recipients" for their ability to receive favorable treatment from the government. Similarly, Duchin and Sosyura (2012) and Blau et al. (2013) find that politically active financial institutions were more likely to receive Troubled Asset Relief Program (TARP) funds during the 2008 global financial crisis, although investments in such institutions have performed poorly compared to those of their non-politically active peers. Faccio (2006) and Faccio et al. (2006) similarly find that politically active firms are more likely to receive government bailouts.

[5] While firms are required to disclose their lobbying expenditure to the Federal Election Commission (FEC) under the Lobbying Disclosure Act (1995), the disclosed amount may only represent the tip of iceberg since corporations could have spent a larger amount on lobbying through various trade associations or business groups, which are hard to assess systematically.

[6] For instance, Jon Corzine, ex-CEO of Goldman Sachs (one of the most politically active firms), became Senator and then Governor of New Jersey. Others, like former Halliburton CEO Richard Bruce Cheney (better known as Dick Cheney), was appointed as the 46th Vice President of America.

[7] Companies such as Enron and WorldCom were among the most politically active firms that managed to avoid fraud detection by regulators for a long period, which may have allowed the executives to conduct massive accounting fraud and led to their collapse in the early 2000s.

[8] The reported lobbying amount is based on only the strictest meaning of "lobbying" as defined by American law—payments for the work of registered lobbyists and those employed to make direct contact with congressmen; it excludes lobbying expenses resulting from the employment of those in the area of public relations or through trade associations or other business groups (The Economist, 2015).

1983 (Antia et al., 2013; Drutman, 2011). Further, evidence of continuing concerns about whether lobbying activities represent the interest of shareholders is reflected in the shareholder resolutions filed in the 2022 proxy season (Hodgson, 2022; Smith and Keenan, 2018).

An illustration of how lobbying can have a deleterious effect on shareholders is evidenced by the activities of Enron. In fact, John Dean the former Counsel of President Richard Nixon argued that Enron's lobbying activities and campaign contributions may have helped the company "fly under the radar" given that it now appears that there were some egregious accounting practices (Yu and Yu, 2011). Surprisingly, since Enron and the weight of the regulatory oversight such as the Sarbanes Oxley Act 2002 as a result of the scandal, corporate lobbying continues to be the most common form of political activity in the US (Funk and Hirschman, 2017).

To examine the association between corporate lobbying and audit fees, we use US firm-year observations from 1998 to 2012. A firm is identified as a lobbying firm if it files a lobbying disclosure report with the Senate's Office of Public Records (SOPR) in that year. We choose audit fees to test the competing arguments of lobbying since auditors are informed players who have both the incentive and the information to assess the risk associated with the disclosures of the firm. As such, audit fee is sensitive to both the business and the disclosure risk faced by the firm. In turn, such a risk increases with rent-seeking and decreases with greater resource availability. Our regression results on the relationship between corporate lobbying and audit fees (controlling for variables reflecting standard audit fees in the model) reveal that lobbying firms are associated with higher audit fees, consistent with agency theory. We also conduct a battery of tests for endogeneity, such as Heckman inverse Mills ratio (IMR), two-stage least squares (2SLS) method, and a change model and our results remain robust.

In additional tests, we examine whether the positive association between lobbying and audit fees is weaker for firms with strong corporate governance that is likely to mitigate agency costs. Our results using a smaller sample of firms show that the positive association between corporate lobbying and audit fees is weaker for firms with strong corporate governance (proxied by the presence of (1) more independent directors, (2) female board members, and (3) AC members with accounting or financial expertise). These results are consistent with the idea that strong (weak) corporate governance mitigates (exacerbates) the agency costs and rent- seeking activities of managers of firms that lobby. Moreover, we show that the higher audit fee is likely to be the result of the auditors charging a risk premium rather than increasing audit effort.

Finally, following DeFond et al. (2016) we examine the links between corporate lobbying and audit fees using the mediating path of firm returns (proxied by return on assets (ROA)) as well as risks of misstatements (proxied by discretionary accruals). We find that: (i) corporate lobbying is significant and positively associated with our proxies for the risk of misstatements which, in turn, are associated with higher audit fees; (ii) corporate lobbying is significant and negatively associated with ROA, which subsequently is associated with higher audit fees; (iii) there is no significant association between ROA and our proxies for risk of misstatements. These results suggest that corporate lobbying is likely to be associated with higher audit fees through higher misstatement risks or lower firm returns. We also show that the direct path between corporate lobbying and audit fees is significant and positive.

Our study contributes to the literature in several ways. First, to the best of our knowledge, this study is the first to examine the association between corporate lobbying and audit fees. While prior studies have examined political connections and audit fees in non-U.S. settings (e.g., Gul [2006] uses Malaysian data), our paper is the first to examine a firm's political activity from the lobbying perspective using U.S. data.[9] Unlike political connections, which are ambiguous and indirect, lobbying is disclosed and is a clear attempt to directly influence government in favor of corporations. In addition, past studies have shown that political connections are often associated with agency problems (Gul, 2006; Chaney et al., 2011). However, whether corporate lobbying is associated with agency problems remains an empirical question. Moreover, Gul (2006) uses a sample of Malaysian firms, which may not be generalizable to firms domiciled in countries such as the U.S. since the countries' institutional structures differ widely. For instance, auditors in the U.S. generally face higher litigation risks than those faced by their peers in other countries given the highly litigious environment in the U.S. Therefore, studies such as ours are necessary for enhancing our understanding of how auditors charge higher fees as a result of their clients' political activities which results in higher agency cost, particularly in the context of Western developed economies.

Second, we extend the literature on CPAs and financial reporting by examining the association between corporate lobbying and audit fees. Most studies have investigated the quality of accounting information in politically connected firms rather than the association between corporate lobbying and audit fees. For instance, Chaney et al. (2011) and Gross et al. (2016) show that firms with political connections are more likely to engage in earnings management, suggesting that the quality of earnings reported by politically connected firms is usually inferior to that reported by their non-politically active counterparts. Likewise, Stuart and Wang (2016) find that politically connected Chinese firms are 18 percent more likely to "cook" their books. We add to this line of literature by showing that corporate political activity via lobbying does affect auditors' assessment of risk. In other words, our findings suggest that auditors perceive clients that lobby as creating higher audit risk, particularly in terms of the higher risk of misstatements. Our results also provide evidence that CPAs such as lobbying could impose higher costs on the firm in terms of audit fees, contrary to the conventional wisdom that CPAs benefit the firm.

Third, we contribute to the debate on whether to improve transparency in CPAs (Bebchuk and Jackson, 2013). While an increasing number of businesses are disclosing their political expenses in the annual report, a large proportion of firms

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[9] In Gul (2006), a firm is considered to engage in political activity if one of its directors or major shareholders is connected to a politician or to the ruling party (this is termed "political connection"). However, the focus of our study is on corporate lobbying, which provides a different perspective on firms' political activities.

remain silent or are even opposed to disclosing their political expenses arguing on competitive strategic grounds and claiming that the impact of political expenses on shareholders is minimal (Center for Political Accountability, 2016).[10] Our results suggest that corporate lobbying does affect the welfare of stakeholders, including auditors, and that firms must improve their transparency concerning lobbying expenses (Yu and Yu, 2011).

Fourth, we complement the literature on board and audit committee (AC) governance by showing that the presence of independent directors, female directors as well as AC members with financial expertise mitigate the agency problem that could arise from lobbying activity. Our findings also add to studies that link board or AC governance to better financial reporting quality (Abbott et al., 2004; Ball et al., 2000; Dechow et al., 1995; Klein, 2002; Tsui et al., 2001; Xie et al., 2003), less opportunistic behavior (Levi et al., 2014), and better firm performance (Carter et al., 2003; Post and Byron, 2015). In short, this study adds to the existing body of knowledge by showing that corporate governance remains relevant in mitigating possible agency problems from an auditing perspective.

The remainder of this paper is organized as follows. In the next section, we review the literature and develop our hypotheses. The sample and variables used in this study are described in the following section. Next, we discuss the empirical findings. The last section summarizes and concludes the study.

Literature review and hypotheses development

Audit fee model

Simunic (1980) provides a framework for describing how audit-pricing decisions are affected by auditor assessments of the risks associated with the client firm. Auditors assess the amount of potential future losses that may arise from the firm-specific and institutional risks of the client and the likelihood of being held responsible for such losses (Gul, 2006; Simunic, 1980). Firm-specific risks are those associated with the client firm, such as the complexity of the firm's business structure, managers' incentives to misreport, and the likelihood of a bankruptcy filing. Institutional risks cover a wider scope, including the rule of law and the political environment of the company (Gul, 2006). Auditors assess both firm-specific and institutional risks when performing audits in order to minimize them to an acceptable level. A higher risk premium is charged when auditors perceive high audit risks.

Corporate lobbying and audit fees

According to the resource dependency theory (Pfeffer and Salancik, 1978), firms depend on governments for favorable public policies or revenues since the government occupies a major portion of the firms' task environment. Therefore, firm-level engagement in lobbying is necessary for firms to shape their relationship with governments so that uncertainties associated with their government dependence are reduced. Consistent with this view, studies have shown that lobbying adds value to the firm. Hill et al. (2013) show that corporate lobbying is positively associated with shareholder wealth; specifically, a standard deviation increases in one-year lagged lobbying expenses is associated with a 1.030 percent additional annual excess return. The channels through which lobbying could add value to a firm include lower import tariffs, lower tax rates, lenient regulatory requirements, and more government contracts. Thus, lobbying activity can improve the firm's financial bottom line and thus reduce managers' incentives to manipulate their earnings (Goldman et al., 2009; Richter et al., 2009; Schuler et al., 2002).

In addition, prior studies show that lobbying firms are more likely to receive preferential treatment through government assistance or bailouts when confronted with financially distressed situations. For example, Blau et al. (2013) and Duchin and Sosyura (2012) use the Troubled Asset Relief Program (TARP), a government initiative intended to stabilize the U.S. financial industry, as a setting for their study. They find that politically active financial institutions were more likely to receive TARP funds, although investments in such financial institutions underperformed investments in their non-politically active counterparts. In other words, firms with CPAs are less likely to enter into bankruptcy when their ventures fail to materialize since they are more likely to receive financial support from the government.

Businesses that conduct lobbying are also shown to have less likelihood of encountering strict enforcement from government agencies. Yu and Yu (2011) show that lobbying firms have a better ability to evade fraud detections. They reveal that lobbying firms take 117 days longer to be detected by regulators than firms that do not lobby. Correia (2014) adds to this evidence by showing that politically active firms are less likely to be involved in Security Exchange Commission (SEC) enforcement actions and face lower penalty costs when prosecuted by the SEC.

Taken together, the foregoing evidence suggests that firms with CPAs, particularly lobbying firms, have better financial outcomes, are less likely to enter into liquidation, and have a lower risk of encountering market and enforcement penalties

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[10] Following the Supreme Court's 2001 decision in *Citizens United v. Federal Election Commission*, the Securities and Exchange Commission (*SEC*) has been facing intense pressure from various interest groups, including investors and politicians, to require firms to disclose their political expenses to the shareholders in the annual report. In 2015, for instance, 44 Democratic Senators wrote a letter to the *SEC* chair asking the *SEC* to enact a rule requiring firms to disclose how their resources are used for political purposes. The *SEC* is currently soliciting public comments on whether such public disclosure on political spending is required, although it has previously declined to require such disclosure (Posner, 2015). On 7 February 2019, Corporate Political Disclosure Act of 2019 was introduced to require public companies to disclose political activity spending during the previous year. The *SEC* would be required to issue regulations to implement this legislation. However, the bill has not progressed in the House.

than their comparable non-politically active peers. Consequently, the benefits derived from lobbying may reduce both firm-specific risks (e.g., lower manager incentive to misreport and a lower likelihood of bankruptcy filing) and institutional risks (e.g., risk of government sanctions), which reduces audit risk and thus, audit fees.

While the economic benefits derived from engaging in lobbying could reduce audit fees, there are counter arguments that suggest detrimental effects. Heavy dependence on government favors and assistance may expose firms to higher institutional risks, particularly when the government fails to remain in power (Leuz and Oberholzer-Gee, 2006). In other words, corporate lobbying may fail and lose its value when changes in the political scene or government occur. For example, Goldman et al. (2009) find that a shift in control of both the House and Senate from Democrats to Republicans in the 1994 midterm elections reduced the government procurement contracts flowing to firms connected to Democrats. Hence, the institutional risk is arguably higher for firms engaging in more political activities.

Corporate lobbying may result in agency problems since such activities are likely to heighten the information asymmetry between managers and stakeholders, particularly shareholders (Chaney et al., 2011). Companies are not legally obliged to disclose their lobbying expenses to shareholders, and decisions to lobby are often made without prior consultation with board members or shareholders, which keeps shareholders largely uninformed about the firm's political activities (Bebchuk and Jackson, 2013; Freed and Richardson, 2005; Humphries, 1991). While several federal laws, such as the Lobbying Disclosure Act (1995), govern the lobbying activities of firms, such laws require companies only to disclose their lobbying expenditures to the Federal Election Commission (FEC), not to the shareholders. Furthermore, the figures reported to the FEC may represent only the tip of the iceberg since larger amounts could have been made through various trade associations or business groups, which is usually hard to assess systematically. The secrecy regarding corporate lobbying expenditures makes it difficult for shareholders to evaluate whether such expenditures are aligned with the company's real interests or are being made merely for the executives' private interests, such as obtaining political positions (Hadani and Schuler, 2012). Worse, it is difficult for shareholders to determine whether lobbying activity is being conducted for purposes that may expose firms to legal, reputational, and/or financial risks. Given the risk and secrecy of corporate lobbying, higher audit risk is expected, auditors are likely to respond to the increased risk by charging higher audit fees.

In addition, Hillman and Hitt (1999) argue that corporate lobbying is a market-like process of political quid pro quo in which politicians supply public policy to corporations, which then provide goods, money, information, and votes to politicians in return. Such a quid pro quo relationship (akin to bribery) is likely to occur only when a certain level of secrecy is ensured, as transparency in such dealings may highlight inefficiencies in politically active firms and could attract unwanted scrutiny for both the politicians and the lobbying firms involved (Gross et al., 2016). A revelation of favoritism and rent-seeking behavior may also impose personal costs on both local politicians and firm executives, particularly in the form of damaged reputations and career prospects (Piotroski et al., 2015). Given these costs, lobbying firms may withhold relevant information from shareholders and thereby reduce the reliability of the reported financial information (Chaney et al., 2011). The lenient enforcement of disclosure rules faced by lobbying firms further facilitates opacity in firms' lobbying expenditures (Correia, 2014; Yu and Yu, 2011). Auditors may respond to the higher audit risk by charging higher audit fees (Gul, 2006). Given the competing arguments, we set up the following null hypothesis for testing:

$H_0 1$: There is no association between corporate lobbying and audit fees.

Research design and sample

Model specification

The classic audit fee model developed by Simunic (1980) has been widely used in the audit fee literature. The model has since been developed with some variations, and now includes other factors that could affect audit fees (e.g., Francis et al., 2005; Krishnan et al., 2007). We employ an audit fee model that is commonly used in the literature and add the test variable *LNLOBBY* to examine hypothesis H1. The model is specified as below:

$$
\begin{aligned}
AFEE_{i,t} = \partial &+ \beta_1 LNLOBBY_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 CURRRENT_{i,t} + \beta_4 YE_{i,t} + \beta_5 SEGMENT_{i,t} + \beta_6 FOREIGN_{i,t} + \beta_7 NAF_{i,t} \\
&+ \beta_8 GROWTH_{i,t} + \beta_9 LEVERAGE_{i,t} + \beta_{10} QUICK_{i,t} + \beta_{11} ROA_{i,t} + \beta_{12} DEBTEQ_{i,t} + \beta_{13} ICWEAK_{i,t} + \beta_{14} BIG4_{i,t} \\
&+ \beta_{15} SPECIALIST_{i,t} + \beta_{16} DONATIONDM_{i,t} + \beta_{17} LITIGATION_{i,t} + \beta_{18} OFFICESIZE_{i,t} + \omega^s Year\_FE_{s,t} \\
&+ \varphi^y Industry\_FE_{y,t} + \varepsilon_{i,t}
\end{aligned}
\tag{1}
$$

Our dependent variable, audit fee (*AFEE*), is measured as the natural logarithm of the total audit fees paid to the external auditor. The audit fee data are sourced from Audit Analytics. The test variable, defined as the natural logarithm of the firm's total annual lobbying expenditure (*LNLOBBY*), is taken from the Center for Responsive Politics (CRP) database.[11] The CRP compiles all lobbying information from the lobbying disclosure reports filed with the Secretary of the Senate's Office of Public

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[11] As a result, our sample is limited to firms that file lobbying disclosure reports with SOPR. To address the concern that our results may not be generalizable to firms that do not file lobbying disclosure reports, we conduct additional tests by including firms that do not file lobbying disclosure reports in our sample (see the Additional Analyses section).

Records (SOPR). The total annual lobbying expenditure of each firm is derived by summing up the mid-year and year-end (or quarterly) totals reported by the firm. The control variables used in the study's audit fee model are generally consistent with those used in past audit fees studies and broadly relate to client firm size, audit complexity, and risk (Gul et al., 2003; Simunic, 1980). Client firm size is measured as the natural logarithm of the firm's total assets (*SIZE*), while the current ratio (*CURRENT*), year-end month (*YE*), total number of business segments (*SEGMENT*), extent of foreign operations (*FOREIGN*), and non-audit fees (*NAF*) are proxies for audit complexity. Client firm risk is controlled by including firm growth (*GROWTH*), leverage (*LEVERAGE*), quick ratio (*QUICK*), return on assets (*ROA*), total debt over total equity (*DEBTEQ*), and an indicator variable for possible internal control weakness (*ICWEAK*). Audit quality is also considered and is proxied by two dummy variables, *BIG4* and *SPECIALIST*. *SPECIALIST* takes the value of 1 if the audit firm is the largest audit service provider (proxy by audit fees) for the given industry in the given fiscal year, 0 otherwise.[12] To ensure that our results are not driven by other forms of CPA, we also control for a firm's political campaign contributions (*DONATIONDM*) in the model. It is coded 1 if a firm has made a contribution through its Political Action Committees (PACs) and 0 otherwise. Litigation risk, *LITIGATIONDM*, is included as audit fees may be higher because of increased risk. It is coded as 1 if there is a securities class action lawsuit in a given year and 0 otherwise. *OFFICESIZE* is also included to capture the office level effect on audit fees. The location data on audit offices are identified from the audit report in *SEC* filings as reported by Audit Analytics. *OFFICESIZE* is measured as the natural logarithm of total assets of all clients for which the audit office conducted audits in a given year.[13] Year and industry fixed effects are also included in the model.[14] A detailed definition of the variables is provided in Table 1.

Sample and data

The initial sample of this study consists of all firms appearing in the CRP database from 1998 to 2012. We then merge the initial sample with the Audit Analytics and Compustat database. We then remove firms in the financial and utility industries (SIC Codes 4000–4999 and 6000–6999) because such corporations are highly regulated and have financial structures different from firms in other sectors (Pittman and Fortin, 2004). After observations with missing information are deleted, our final sample consists of 4,824 firm-year observations.[15] Table 2 shows the sample construction of our study.

Empirical results

Descriptive statistics

Table 3 Panel A presents descriptive statistics for the variables used in this study. All continuous dependent and independent variables are winsorized at the top and bottom one percentile of their distributions to mitigate the influence of outliers. Mean audit fees total $4.937 million and corporate lobbying on average totals $0.717 million. About 92.5 percent of the sample is audited by a Big 4 auditor while only 4.3 percent of the sample is audited by specialist auditors.

The correlation coefficients of the variables are shown in Table 3 Panels B and C. The correlation between *LNLOBBY* and *AFEE* is significant and positive, thus providing preliminary support to our first hypothesis. Except for *ICWEAK*, all other determinants of audit fees are significantly correlated with *AFEE*. A multicollinearity test suggests that collinearity is not an issue in the interpretation of our multivariate regression results discussed below, since the VIF scores are all below 10 (Wooldridge, 2009).

Regression results

The results on the association between corporate lobbying and audit fees (Equation [1]) are shown in Table 4. We find that our main variable of interest, *LNLOBBY*, is positive and is significantly ($p < 0.01$) associated with audit fees.[16] The coef-

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[12] We have also used alternative measures of specialist auditors such as a dummy variable of 1 if the audit firm is top three audit service provider (proxy by audit fees or the number of clients audited) for the given industry in the given fiscal year, 0 otherwise. We find our main finding remain despite the alternative measures used.

[13] We also use alternative measures for this measure, i.e., the natural logarithm of audit fees received by the audit office from all clients for which it conducted audits in a given year, the natural logarithm of total (audit and non-audit) fees received by the audit office from all clients for which it conducted audits in a given year and, the natural logarithm of total number of clients of the office minus one received by the audit office for which it conducted audits in a given year. Our main finding remains despite the alternative measures used.

[14] We also conduct additional tests using firm fixed effects model to ensure robustness. As for the industry proxy, we also rerun our main model using the SIC two-digit measure as an alternative to the Fama French measure. Our main finding remains qualitatively similar.

[15] The relatively small sample size is due mainly to missing lobbying data. We also rerun our main model by considering firms that do not file lobbying disclosure reports. Specifically, we replace *LNLOBBY* with *LNLOBBY_A*, where missing lobby values are replaced with zeros and *LOBBYDUM*, which takes a value of 1 if a firm filed a lobbying disclosure report and 0 otherwise. We find that our main results remain qualitatively similar to the results obtained with the larger sample (see Additional Analyses section).

[16] We also conduct other (untabulated) tests to ensure that our results are robust. First, we use the one-year lag of *LNLOBBY* in our main model and find that our results are qualitatively similar (coefficient = 0.0806, t = 4.17). Second, we conduct the tests with firm fixed effects and find that the results are qualitatively similar to those shown in Table 4 (coefficient = 0.1851, t = 3.46). Third, we replace our dependent variable, *AFEE*, with abnormal audit fees, and the results are also qualitatively similar (coefficient = 0.0703, t = 3.89). Finally, we run the test by removing 11 firm-year observations that are related to auditors as lobbyists and obtain similar results (coefficient = 0.0759, t = 4.10).

Table 1
Variable Definitions.

Variable	Definition	Source of Information
AFEE	natural logarithm of audit fees	Audit Analytics
LNLOBBY	natural logarithm of total annual lobbying expenditure	Center for Responsive Politics (CRP)
SIZE	natural logarithm of total assets	Compustat
CURRENT	ratio of current assets to total assets	Compustat
YE	1 if the firm's fiscal year-end is December 31 and 0 otherwise	Compustat
SEGMENT	natural logarithm of number of business segments	Compustat Historical Segment
FOREIGN	ratio of foreign sales to total sales	Compustat Historical Segment
NAF	natural logarithm of non-audit fees	Audit Analytics
GROWTH	ratio of the market value of common stock to total assets	Compustat
LEVERAGE	ratio of current liabilities to total assets	Compustat
QUICK	ratio of current assets less inventory to current liabilities	Compustat
ROA	ratio of net income to total assets	Compustat
DEBTEQ	ratio of total debt to total equity	Compustat
ICWEAK	1 if the firm's disclosure controls were found to be ineffective and 0 otherwise	Audit Analytics
BIG4	1 if the firm is audited by Big 4 auditor and 0 otherwise	Audit Analytics
SPECIALIST	1 if the firm is audited by a largest audit service provider (proxy by audit fees) for the given industry in the given fiscal year and 0 otherwise.	Audit Analytics
DONATIONDM	1 if a firm made contributions through its Political Action Committee (PAC) and 0 otherwise	Center for Responsive Politics (CRP)
LITIGATIONDM	1 if there is a litigation case in the given year and 0 otherwise	Securities Class Action ClearingHouse (SCAC)
OFFICESIZE	natural logarithm of total assets of all clients for which the audit office conducted audits in a given year.	Compustat
INDBOARD	ratio of independent board members to total board members	BoardEx
FEMALEDM	1 if the board consists of at least one female board member and 0 otherwise	BoardEx
ACEXPERTISE	1 if the board consists of at least one board member with an accounting or finance degree, possesses a CPA qualification, or is in the position of a CEO or comparable senior position with financial oversight responsibilities	BoardEx

Table 2
Sample Construction.

	Firm Years
Firm years 1998–2012 (CRP database)	14,542
Less: observations with missing data in Audit Analytics	(2,256)
Less: observations in the financial and utility industries	(3,549)
Less: observations with missing data for control variables	(3,913)
Final sample	4,824

ficient value indicates that every-one percent increase in lobbying expenditure is associated with a 0.0762 percent increase in audit fees. Thus, the results provide support for the argument that lobbying could be a manifestation of the agency problem[17] whereby auditors respond to the higher audit risks (resulting from the agency problem) by charging higher audit fees. Overall, we can conclude that corporate lobbying is positively associated with audit fees. The explanatory power of our model is above 80 percent, which is consistent with most prior U.S. audit fee studies.

Most of the control variables are significant and in the anticipated direction. Firm size (*SIZE*) and firm complexity (measured by *CURRENT*, *SEGMENT*, *FOREIGN,* and *NAF*) are positively associated with *AFEE* but negatively associated with *GROWTH*, *QUICK*, and *ROA*. As expected, *ICWEAK* is positively associated with *AFEE*. In contrast to most prior studies, our results indicate a significantly negative relation between *AFEE* and *YE*. This could be due to the small number of firms (29.1 percent) in our sample that use December 31 as their financial year-end (almost 60 percent of the sample firms in prior studies use December 31 as their financial year-end). *DONATIONDM* is not significantly associated with *AFEE*, suggesting that auditors do not treat lobbying activity and political donations as substitutes.[18] One plausible explanation for the finding is that lobbying is the primary means by which corporations influence public policy, while political contributions merely buy access to politicians (Correia, 2014; Kaiser, 2009). Since the ability to influence public policy is more important to the bottom line of the firm, it

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[17] As mentioned, secrecy and suppressed information regarding lobbying firms and regulators' leniency in penalizing lobbying companies that report inaccurate financial information magnify the uncertainty and agency problem surrounding lobbying firms, to the extent that auditors perceive such firms to have higher audit risk (Chaney et al., 2011; Correia, 2014; Gul, 2006; Yu and Yu, 2011).

[18] We also consider the natural logarithm of the total political contributions (*LNDONATION*) of a firm as an additional control variable and obtain qualitatively similar results, albeit with a smaller sample.

Table 3

Panel A: Descriptive Statistics of Sample (n = 4,824).

Variable	Mean	Std. Dev.	25-percentile	Median	75-percentile
AFEE (million $)	4.937	7.453	1.021	2.400	5.600
LOBBY (million $)	0.717	1.596	0.055	0.170	0.610
SIZE	7.893	1.897	6.703	7.984	9.208
CURRENT	0.472	0.192	0.336	0.455	0.606
YE	0.291	0.454	0.000	0.000	1.000
SEGMENT	1.793	0.686	1.099	1.792	2.303
FOREIGN	0.408	0.263	0.185	0.403	0.582
NAF (million $)	13.302	1.762	12.206	13.454	14.478
GROWTH	2.125	1.643	1.249	1.640	2.404
LEVERAGE	0.253	0.187	0.156	0.224	0.315
QUICK	1.892	1.927	0.957	1.358	2.036
ROA	0.012	0.236	0.006	0.049	0.090
DEBTEQ	0.503	11.097	0.079	0.385	0.764
ICWEAK	0.036	0.185	0.000	0.000	0.000
BIG4	0.925	0.263	1.000	1.000	1.000
SPECIALIST	0.043	0.203	0.000	0.000	0.000
DONATIONDM	0.486	0.500	0.000	0.000	1.000
LITIGATIONDM	0.038	0.191	0.000	0.000	0.000
OFFICESIZE	16.102	1.635	16.089	16.547	16.851
INDBOARD (n = 3,982)	0.737	0.148	0.667	0.769	0.857
FEMALEDM (n = 3,982)	0.710	0.454	0.000	1.000	1.000
ACEXPERTISE (n = 1,604)	0.708	0.455	0.000	1.000	1.000

Panel B: Pearson Correlation Matrix of Sample Variables (n = 4,824)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1)	AFEE	1	**0.51**	**0.85**	**−0.29**	−0.03	**0.40**	**0.32**	**0.62**	**−0.19**	**0.14**	**−0.33**
(2)	LNLOBBY		1	**0.55**	**−0.15**	−0.03	**0.24**	**0.06**	**0.42**	0.04	0.04	**−0.12**
(3)	SIZE			1	**−0.43**	−0.01	**0.39**	**0.26**	**0.71**	**−0.18**	0.00	**−0.33**
(4)	CURRENT				1	**0.14**	**−0.17**	0.04	**−0.29**	**0.32**	**0.33**	**0.45**
(5)	YE					1	0.05	**−0.06**	−0.02	−0.00	**0.08**	0.00
(6)	SEGMENT						1	**0.11**	**0.31**	**−0.25**	0.04	**−0.23**
(7)	FOREIGN							1	**0.22**	−0.01	**0.08**	−0.03
(8)	NAF								1	**−0.10**	**0.10**	**−0.29**
(9)	GROWTH									1	**0.05**	**0.30**
(10)	LEVERAGE										1	**−0.45**
(11)	QUICK											1

Panel C: Pearson Correlation Matrix of Sample, continued from Panel B (n = 4,824)

		(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1)	AFEE	**0.30**	**0.08**	0.00	**0.26**	**0.30**	**0.36**	**0.05**	**0.37**	**0.37**	**0.38**	**0.10**
(2)	LNLOBBY	**0.18**	0.00	**−0.04**	**0.11**	**0.17**	**0.46**	**0.06**	**0.15**	**0.23**	**0.24**	0.01
(3)	SIZE	**0.41**	**0.10**	**−0.11**	**0.26**	**0.27**	**0.42**	**0.05**	**0.32**	**0.26**	**0.41**	0.00
(4)	CURRENT	**−0.10**	**−0.16**	0.05	**−0.10**	**−0.11**	**−0.20**	0.00	**−0.11**	−0.04	**−0.13**	0.04
(5)	YE	−0.00	**−0.05**	0.00	**0.03**	−0.01	**−0.07**	−0.00	0.02	**−0.04**	**−0.04**	0.07
(6)	SEGMENT	**0.17**	0.03	−0.03	**0.07**	**0.12**	**0.21**	**−0.05**	**0.09**	**0.11**	**0.10**	−0.01
(7)	FOREIGN	0.03	−0.02	−0.02	**0.07**	**0.12**	−0.02	0.01	**0.10**	0.04	**0.05**	**0.11**
(8)	NAF	**0.25**	**0.09**	**−0.08**	**0.19**	**0.26**	**0.33**	**0.06**	**0.20**	**0.06**	**0.30**	**−0.07**
(9)	GROWTH	**0.05**	**−0.11**	−0.02	−0.03	−0.04	**−0.08**	0.01	−0.06	−0.05	0.01	**−0.09**
(10)	LEVERAGE	**−0.13**	−0.02	**0.11**	**−0.06**	0.07	0.05	0.01	**−0.07**	0.08	0.08	−0.00
(11)	QUICK	**−0.04**	**−0.13**	−0.01	**−0.05**	**−0.10**	**−0.20**	0.02	−0.06	**−0.11**	**−0.18**	−0.00
(12)	ROA	1	0.03	**−0.11**	**0.15**	0.03	**0.19**	**−0.04**	**0.20**	**0.15**	**0.18**	−0.00
(13)	DEBTEQ		1	−0.01	0.04	0.03	**0.09**	−0.01	0.05	−0.00	0.04	−0.05
(14)	ICWEAK			1	**−0.06**	−0.00	**−0.06**	**0.07**	**−0.07**	**−0.04**	**−0.09**	−0.01
(15)	BIG4				1	0.02	**0.15**	0.03	**0.78**	**0.16**	**0.11**	0.04
(16)	SPECIALIST					1	**0.10**	0.03	0.03	−0.01	**0.06**	−0.04
(17)	DONATIONDM						1	0.01	**0.17**	**0.19**	**0.20**	0.01
(18)	LITIGATIONDM							1	0.02	−0.02	0.00	0.00
(19)	OFFICESIZE								1	**0.24**	**0.13**	0.07
(20)	INDBOARD (n=3,982)									1	**0.21**	**0.15**
(21)	FEMALEDM (n=3,982)										1	**0.07**
(22)	ACEXPERTISE (n=1,604)											1

All variables are defined in Table 1.

Boldface indicates statistical significance at 10% or less. All variables are defined in Table 1.

Table 4
Corporate Lobbying and Audit Fees.

Dependent Variable	*AFEE*
LNLOBBY	0.0762***
	−4.12
SIZE	0.4537***
	−55.31
CURRENT	0.2940***
	−4.39
YE	−0.1608***
	(-9.92)
SEGMENT	0.1201***
	−9.86
FOREIGN	0.2058***
	−6.43
NAF	0.0964***
	−14.61
GROWTH	−0.0229***
	(-3.80)
LEVERAGE	0.7339***
	−7.57
QUICK	−0.0293***
	(-4.04)
ROA	−0.2704***
	(-5.06)
DEBTEQ	0.0039
	−0.82
ICWEAK	0.3320***
	−6.42
BIG4	0.0532
	−0.96
SPECIALIST	0.4105***
	−12.45
DONATIONDM	0.0075
	−0.46
LITIGATIONDM	0.0254
	−0.66
OFFICESIZE	0.0267***
	−2.70
Constant	8.2790***
	−37.03
Year Fixed Effects	Yes
Industry Fixed Effects	Yes
N	4,824
Adj. R^2	0.8667

This table shows the regression results of corporate lobbying and audit fees. All regressions are with industry and year fixed effects and the *t*-statistic value (calculated based on heteroscedasticity robust standard errors) is reported in parentheses. Coefficients marked with *, **, *** are significant at 10 %, 5 %, and 1 % respectively. All variables are defined in Table 1.

seems natural that auditors would be more concerned about corporate lobbying activity than political donations. Furthermore, unlike political contributions, there is no maximum cap on the amount firms can spend on lobbying; companies spend approximately 10 times more on lobbying than on political contributions (Milyo et al., 2000). The lack of restrictions and the larger amounts spent on lobbying may attract more regulator and public attention. Auditors may respond to the higher (lower) audit risk by charging a higher (lower) risk premium, resulting in the significant and positive (negative) association between lobbying and audit fee but not for political donations. Finally, *LITIGATIONDM* is not significantly associated with *AFEE* whereas *OFFICESIZE* is positively significantly associated with *AFEE*.

Robustness tests

Heckman selection

To address the issue of sample selection bias, we first calculate the inverse Mills ratio (*IMR*) by modeling the probability that a firm engages in high versus low lobbying activity using a function of variables that may explain the firm's lobbying expenditure, as shown below (also known as the "first stage model")[19]:

---

[19] Heckman (1976) and Heckman (1979) state that selection bias is usually controlled by modeling the selection mechanism explicitly and adjusting the estimation of the parameters in the structural equation for the selection effect. This can be achieved by including a correction term, known as the "inverse Mills ratio" (IMR), in the structural equations. The ratio is computed from the first stage and signifies how the variables included in the first stage are associated with the sample selection in the second stage.

$$PROBIT\left(TLOBBYDUM_{i,t}\right) = \partial + \beta_1 SIZE_{i,t} + \beta_2 CURRENT_{i,t} + \beta_3 YE_{i,t} + \beta_4 SEGMENT_{i,t} + \beta_5 FOREIGN_{i,t} + \beta_6 NAF_{i,t}$$
$$+ \beta_7 GROWTH_{i,t} + \beta_8 LEVERAGE_{i,t} + \beta_9 QUICK_{i,t} + \beta_{10} ROA_{i,t} + \beta_{11} DEBTEQ_{i,t}$$
$$+ \beta_{12} ICWEAK_{i,t} + \beta_{13} BIG4_{i,t} + \beta_{14} SPECIALIST_{i,t} + \beta_{15} PPENT_{i,t} + \beta_{16} CASH_{i,t}$$
$$+ \beta_{17} FIRMAGE_{i,t} + \beta_{18} DONATIONDM_{i,t} + \beta_{19} LITIGATIONDM_{i,t} + \beta_{20} OFFICESIZE_{i,t}$$
$$+ \omega^s Industry_{s,t} + \varphi^y Year_{y,t} + \varepsilon_{i,t} \tag{2}$$

where *TLOBBYDUM* is a dummy variable that takes the value of 1 if the firm's total lobbying expenditure is above median and 0 otherwise. The explanatory variables used in Equation (2) are similar to the ones used in the main model; additional control variables, known as "exclusion restrictions," are also included in the equation (see Börsch-Supan and Köke, 2002). We thus mitigate the possible collinearity problem that may arise between the IMR and other control variables in the second-stage regression. The additional control variables are fixed assets (*PPENT*), the firm's cash and short-term investment (*CASH*), and firm age (*FIRMAGE*) (Hart, 2001; Hillman et al., 2004; Newton and Uysal, 2013).[20] *PPENT* is the sum of total property, plant, and equipment scaled by starting-period total assets; *CASH* is the ratio of the firm's cash and short-term investment in a given year over the starting period of total assets; *FIRMAGE* is the natural logarithm of firm age, where age is defined as the total number of years since the firm first appeared in the Compustat database. The remaining variables are as defined in Table 1. The calculated IMR is then included in Equation (1), known as the "second-stage regression.".

Table 5 Column 1 shows the results of the probit model (first stage). Lennox et al. (2012) point out that Heckman model should include at least one variable in the first stage that does not appear in the second stage. This variable is known as "exclusion restrictions". Absence of "exclusion restrictions" in the first stage could lead to severe multicollinearity issue in the second stage, thus complicate inferences made from the Heckman model. Consistent with this notion, we consider *CASH*, *FIRMAGE* and, *PPENT* as our exclusion restrictions. Of the three additional control variables, *CASH* and *FIRMAGE* are positively associated with higher lobby expenditure while *PPENT* is not. We also check for multicollinearity and find that the highest VIF score (for the inverse Mill's ratio) is 8.91, which is less than the cutoff point of 10. When the IMR is included in the second-stage regression as shown in Column 2, the positive association between corporate lobbying and audit fees remains (coefficient = 0.0771, t = 3.45) while IMR is insignificant. The results suggest that our main result remains after considering for possible sample selection bias.

Two-stage least square (2SLS)

We further control for the possible endogeneity issue between corporate lobbying and audit fees by performing a two-stage least squares (2SLS) regression. First, corporate lobbying expenditure (*LNLOBBY*) is regressed against a number of instrumental variables (IVs) and control variables. The main objective of this regression is to obtain the predicted value of lobbying expenses, which is considered to be less sensitive to the error term. This study uses IVs that are strongly correlated with the endogenous variables (*LNLOBBY*) but that may not be completely exogenous.[21] The first potential IV is the averaged lobbying expenses of peer firms within the industry in a given year (*PEERLOBBY*).[22] A firm's own lobbying expenditure is excluded from *PEERLOBBY* since this measure is a firm-level variable, and susceptibility to endogeneity is reduced when the firm's own lobbying expenses are removed. It is expected that peer lobbying is highly correlated with the endogenous variables since the political activity of rival firms has been shown to affect a firm's decision to spend on its own political activity (Hersch and McDougall, 2000). In short, *PEERLOBBY* is highly correlated with the endogenous variables but not with its own lobbying expenses since a firm's own lobbying expenses have been removed from *PEERLOBBY* (fairly exogenous).

The second IV used is the Herfindahl–Hirschman Index (*HHI*), a proxy for measuring market concentration. The variable is chosen for two main reasons. First, *HHI* is an industry-wide measure, which is less likely to be prone to an endogeneity issue. In other words, the variable is likely to be exogenous.[23] Second, prior studies have found that industry structure is a good determinant of CPAs (Hillman et al., 2004; Schuler et al., 2002). Firms in less-concentrated markets are shown to have little economic incentive to incur costs for political activity given that the collective benefits derived from favorable public policy would be shared by many other firms within that industry. A firm is thus likely to adopt the free-riding strategy by not engaging in political activities but enjoying the potential benefits derived from other firms' political activities. By contrast, when an industry is highly concentrated or features only a few major players, the motivation to call for political action would be greater since the potential economic gain from political activities may counteract the free-riding problem (Antia et al., 2013; Olson, 1965). Taken together, *HHI* is likely to be highly correlated with the endogenous variables and is therefore considered as the second IV of our study. The model is specified as below:

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[20] The rationale for the additional control variables (exclusion restrictions) is as follows. We expect that older and cash-rich firms are more likely to have the necessary human and financial resources to engage in lobbying, while firms with greater fixed assets are expected to lobby less (Hillman and Hitt, 1999) because the latter are usually capital-intensive and require huge sums to be invested in fixed assets, thereby reducing the resources available for other corporate activities such as lobbying. Hence, a negative association between fixed assets (*PPENT*) and *TLOBBYDUM* is expected.

[21] In practice, it is difficult to obtain an appropriate IV. Furthermore, obtaining an IV that is purely exogenous is made more difficult because the correlation between IV and the error term is not observable.

[22] In line with industry fixed effects, the industry classification used for all IVs is based on the 48 Fama and French (1997) industry groupings.

[23] Börsch-Supan and Köke (2002) state that good and uncontroversial instruments are those that are determined outside the firm but that affect it. Both IVs we chose fulfill this condition. For instance, peer firms' political strategy (*PEERLOBBY*) and market concentration (*HHI*) are both beyond a firm's control but strongly influence a firm's lobbying decisions.

Table 5
Heckman Selection.

Dependent Variable	(1) TLOBBYDUM	(2) AFEE
LNLOBBY		0.0771***
		(3.45)
SIZE	0.7990***	0.4540***
	(14.29)	(30.48)
CURRENT	−0.8708	0.2874***
	(−1.51)	(4.23)
YE	−0.0467	−0.1597***
	(−0.46)	(−9.79)
SEGMENT	0.093	0.1196***
	(1.15)	(9.61)
FOREIGN	−1.5338***	0.2087***
	(−7.18)	(5.10)
NAF	0.0972**	0.0955***
	(2.28)	(13.81)
GROWTH	0.1951***	−0.0231***
	(4.13)	(−3.23)
LEVERAGE	0.0172	0.7420***
	(0.02)	(7.48)
QUICK	−0.1482*	−0.0283***
	(−1.95)	(−3.81)
ROA	0.718	−0.2805***
	(1.22)	(−4.94)
DEBTEQ	−0.0812***	0.0037
	(−2.95)	(0.74)
ICWEAK	0.5548*	0.3316***
	(1.93)	(6.29)
BIG4	−0.2746	0.0662
	(−0.81)	(1.20)
SPECIALIST	−0.237	0.4040***
	(−1.03)	(11.89)
PPENT	−0.1921	
	(−0.58)	
CASH	1.3590***	
	(2.85)	
FIRMAGE	0.2449***	
	(3.64)	
DONATIONDM	1.9128***	0.01
	(18.57)	(0.29)
LITIGATION DM	−0.0555	0.0257
	(−0.21)	(0.67)
OFFICESIZE	0.2767***	0.0248**
	(2.71)	(2.23)
IMR		−0.0005
		(−0.03)
Constant	−11.6962***	8.3055***
	(−8.51)	(27.76)
Year Fixed Effects	YES	YES
Industry Fixed Effects	YES	YES
N	4,747	4,747
Adj. R^2	0.4137	0.8658

This table shows the regression results of the Heckman model. Column (1) calculates the inverse Mills ratio (IMR) by modeling the probability that a firm engages in high versus low lobbying activity whereas Column (2) depicts the findings of the association between lobbying and audit fees by including the calculated IMR. TLOBBYDUM is coded 1 if a firm's total lobby expenses for the year are above the median and 0 otherwise. PPENT is the sum of total property, plant, and equipment (PPENT) scaled by starting period total assets (AT). CASH is the ratio of a firm's cash and short-term investment (CHE) in a given year over the starting period of total assets (AT); FIRMAGE is the natural logarithm of firm age where firm age is the number of years since the firm first appeared in the Compustat database. Definitions of the remaining variables are as mentioned in the text and Table 1. All regressions are with industry and year fixed effects and the t-statistic value (calculated based on heteroscedasticity robust standard errors) is reported in parentheses. Coefficients marked with *, ** and *** are significant at 10, 5 %, and 1 % level respectively.

$$LNLOBBY_{i,t} = \partial + \beta_1 PEERLOBBY_{i,t} + \beta_2 HHI_{i,t} + \beta_3 SIZE_{i,t} + +\beta_4 CURRENT_{i,t} + \beta_5 YE_{i,t} + \beta_6 SEGMENT_{i,t} + \beta_7 FOREIGN_{i,t}$$
$$+ \beta_8 NAF_{i,t} + \beta_9 GROWTH_{i,t} + \beta_{10} LEVERAGE_{i,t} + \beta_{11} QUICK_{i,t} + \beta_{12} ROA_{i,t} + \beta_{13} DEBTEQ_{i,t} + \beta_{14} ICWEAK_{i,t}$$
$$+ \beta_{15} BIG4_{i,t} + \beta_{16} SPECIALIST_{i,t} + \beta_{17} DONATIONDM_{i,t} + \beta_{18} LITIGATIONDUM_{i,t} + \beta_{19} OFFICESIZE_{i,t}$$
$$+ \omega^s Industry_{s,t} + \varphi^y Year_{y,t} + \varepsilon_{i,t} \tag{3}$$

Table 6 depicts the findings for the 2SLS test. Following Larcker and Rusticus (2010), we show that the over-identifying restriction test is insignificant, thus rejecting the null hypothesis that the instruments used in the model are invalid. The partial R^2 shows that the partial explanatory power of the instruments is 0.0195 while the significant Hausman test and partial F-statistic suggest that the instruments are appropriate, strong, and valid. Column 2 of Table 6 shows the second stage of the 2SLS, where audit fee is regressed against the predicted value of lobbying expenditure (LOBBYPRED) from stage one. Consistent with our main findings, we find that LOBBYPRED is significant and positively associated with audit fees. The results suggest that our main findings remain robust after the potential endogeneity problem is controlled for.

Change model

We also estimate a change model using the change in audit fees and the independent variables as per Equation (1),[24] measured as the change value in year t and t-1. The $\Delta LNLOBBY$ is coded 1 if the difference between $LNLOBBY_t$ and $LNLOBBY_{t-1}$ is positive, 0 if there is no difference between $LNLOBBY_t$ and $LNLOBBY_{t-1}$, and −1 if the difference between $LNLOBBY_t$ and $LNLOBBY_{t-1}$ is negative. The coefficient on $\Delta LNLOBBY$, untabulated, is 0.0118 (t = 2.02), suggesting that higher audit fees are charged when there is an upward change in corporate lobbying expenditures. This result is consistent with the three robustness tests discussed above.

Additional analyses

Moderating effects of corporate governance

Prior corporate governance research suggests that strong corporate governance could mitigate a firm's agency and moral hazard problem. We, therefore, examine whether the positive association between lobbying and audit fees is weaker for firms with strong corporate governance. We are motivated to examine this issue because prior studies suggest that auditors consider corporate governance when executing an audit (Cohen et al., 2002). Similarly, Tsui et al. (2001) provide evidence that governance affects audit risk by showing a negative association between board independence and audit fees, while more recent studies provide evidence that the presence of independent or gender-diverse boards is linked to better corporate governance (Carter et al., 2003; Chen and Jaggi, 2000; Post and Byron, 2015; Srinidhi et al., 2011). Recent research also suggests that the characteristics of the audit committee (AC) are a good proxy for corporate governance since the AC is responsible for the selection, hiring, and compensation of auditors and has strong monitoring responsibilities over management with respect to financial reporting (Abbott et al., 2004; DeZoort, 1997; DeZoort and Salterio, 2001). We thus examine whether the positive association between lobbying and audit fees is likely to be weaker for firms with strong corporate governance, proxied by the presence of (1) more independent directors, (2) female board members, and (3) AC members with accounting or financial expertise.

To test whether corporate governance affects the association between lobbying and audit fees, we run separate regressions for a sub-sample of firms with "strong" and "weak" corporate governance. First, we split the sample into quartiles using the proportion of independent board members (INDBOARD) and estimate the audit fees model as in Equation (1) by comparing the coefficient of LNLOBBY between the bottom and top quartile. Second, we split the sample into firms with no female board directors and firms with at least one female director and then estimate the audit fees model as in Equation (1) and compare the LNLOBBY coefficients. Third, we split the sample into firms with no expert board members on the audit committee and firms with at least one, and perform similar tests.

The results presented in Table 7 columns (1) and (2) show that the positive association between corporate lobbying and audit fees is significant only for firms with weak corporate governance (where INDBOARD is the lowest quartile) but insignificant for firms with strong corporate governance (where INDBOARD is the highest quartile). We then divide the sample into firms with no female board members (weak corporate governance) and firms with at least one female board member (strong corporate governance). Table 7 columns (3) and (4) show that the coefficients of LNLOBBY is 0.2155 (t = 3.69) for sample firms with no female board member and 0.0630 (t = 2.80) for sample firms with at least one female board member. The positive coefficient of LNLOBBY for the weak corporate governance sample is about three times larger than that for the sample with strong corporate governance, and the coefficients are statistically different with a z-score value of −3.513.[25]Likewise, Table 7 columns (5) and (6) show that the positive coefficient of LNLOBBY for firms with no experts on the audit committee (0.1476, t = 2.52) is about two times higher than and statically different from the coefficient of LNLOBBY for firms with at least one expert on the board (0.0690, t = 1.73). Overall, our results suggest that the positive association between corporate lobbying and audit fees is weaker for firms with strong corporate governance (through the presence of more independent, women, and expert AC board members).[26]

Alternative independent variables

We also consider alternative measures of lobbying expenditure to ensure that our main findings are robust. Specifically, we use the ratio of total annual lobbying expenditure scaled by total assets (LOBBYAT); total cumulated lobbying expenditure

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[24] YE is excluded from the regression, as there is no variation for the variable.
[25] We follow Paternoster et al. (1998) and Clogg et al. (1995) in testing whether the regression coefficients of the subsamples are different.
[26] In addition, we interact LNLOBBY with our corporate governance measures (as described above) and find that the presence of strong corporate governance weakens the positive association between corporate lobbying and audit fees.

Table 6
Two-stage Least Square (2SLS).

Dependent Variable	(1) LNLOBBY	(2) AFEE
HHI	0.1100	
	(0.26)	
PEERLOBBY	−0.5735***	
	(−7.87)	
LOBBYPRED		0.3850**
		(2.43)
SIZE	0.1192***	0.4165***
	(21.24)	(19.83)
CURRENT	0.1637***	0.2366***
	(3.70)	(3.26)
SEGMENT	0.0407***	0.1079***
	(5.20)	(7.73)
FOREIGN	−0.1780***	0.2623***
	(−7.81)	(5.98)
NAF	0.0153***	0.0911***
	(3.60)	(12.56)
GROWTH	0.0294***	−0.0320***
	(7.40)	(−4.14)
LEVERAGE	−0.0393	0.7649***
	(−0.64)	(7.69)
QUICK	−0.0089*	−0.0259***
	(−1.83)	(−3.41)
ROA	−0.1865***	−0.2115***
	(−6.15)	(−3.37)
DEBTEQ	−0.0103***	0.0075
	(−3.48)	(1.49)
OFFICESIZE	−0.0120**	0.0309***
	(−2.50)	(2.98)
YE	−0.0284***	−0.1528***
	(−2.59)	(−8.96)
ICWEAK	−0.0147	0.058
	(−0.52)	(1.02)
BIG4	0.0548	0.3804***
	(1.39)	(10.06)
SPECIALIST	0.2531***	−0.0731*
	(23.82)	(−1.68)
DONATIONDM	0.0464	0.0131
	(1.50)	(0.33)
LITIGATIONDM	−0.0339	9.2134***
	(−0.27)	(47.86)
Constant	0.1192***	0.4165***
	(21.24)	(19.83)
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
N	4,817	4,817
Adj. R^2	0.5067	0.8597
Partial R^2	0.0195	
Partial F-statistic	Fp = 31.3157 (p = 0.00)	
Over-identifying restrictions test	χ2 = 0.16283 (p = 0.46)	
Hausman test	F = 5.0117 (p = 0.03)	

Column (1) shows the results of the first stage while Column (2) depicts the findings of the second stage of the two-stage least square (2SLS). *PEERLOBBY* is the averaged lobbying expenditure of peer firms within the industry in a given year; *HHI* measures the market concentration, proxied by the Herfindahl–Hirschman Index; *LOBBYPRED* is the predicted value of lobbying expenditure from stage one of the 2SLS. Definitions of the remaining variables are as mentioned in the text and Table 1. All regressions are with industry and year fixed effects and the *t*-statistic value (calculated based on heteroscedasticity robust standard errors) is reported in parentheses. Coefficients marked with *, ** and *** are significant at the 10, 5 %, and 1 % levels respectively.

throughout the sample year (*LNCUMLOBBY*); a dummy variable of 1 if a firm filed a lobbying disclosure report with SOPR during the sample period and 0 otherwise (*LOBBYDUM*); and the natural logarithm of total lobbying expenditure with missing values replaced by 0 (*LNLOBBY_A*).[27] Our untabulated results shows that all alternative measures of corporate lobbying are significant and positively associated with audit fees.

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[27] The justification for using alternative lobby measures is as follows. We use scaled total lobbying expenditure (*LOBBYAT*) to account for the differences in firm size and cumulated lobbying expenses (*LNCUMLOBBY*) and the greater possibility of lobbying firms receiving favorable public policies due to the better trust and working relationships cultivated with politicians throughout the lobbying period. A lobby dummy (*LOBBYDUM*) and the natural logarithm of total lobbying expenditure with missing values replaced by 0 (*LNLOBBY_A*) are used to control for the missing values of lobbying expenditure. As a result, we obtain a total sample of 23,511 firm-year observations for both *LOBBYDUM* and *LNLOBBY_A*.

Table 7

Corporate Lobbying, Corporate Governance, and Audit Fees.

	INDBOARD		FEMALEDM		ACEXPERTISE	
Dependent Variable = AFEE	(1) Lowest Quartile	(2) Highest Quartile	(3) None	(4) At least one	(5) None	(6) At least one
LNLOBBY	0.1117**	0.0104	0.2155***	0.0630***	0.1476**	0.0690*
	(2.06)	(0.27)	(3.69)	(2.80)	(2.52)	(1.73)
Constant	7.3951***	10.4386***	8.3756***	7.9513***	7.1022***	8.2626***
	(23.45)	(14.62)	(22.53)	(31.27)	(13.76)	(13.27)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
N	1211	905	1156	2826	469	1135
Adj. R^2	0.8059	0.8430	0.7884	0.8496	0.8914	0.8478
Z-score	−2.1387		−3.5127		−1.5803	

This table shows the regression results of corporate lobbying, corporate governance and audit fees. T-values (calculated based on heteroscedasticity robust standard errors) are reported in parentheses. Coefficients marked with *, **, *** are significant at 10 %, 5 %, and 1 % respectively. Definitions of the variables are as mentioned in the text and Table 1

Audit risk vs Audit effort

Simunic (1980) shows that the observable differences in the fees paid to auditors are driven by two main factors: audit risk (i.e., the auditor's expected future loss arising from the engagement, such as litigation risk resulting from firm-specific risks) and audit effort (e.g., the audit resources required). Thus, we attempt to determine whether the positive association between corporate lobbying and audit fees is due to the greater audit risk and/or effort.

We use an auditor response index (COMPAUD) as our comprehensive measure of audit risk.[28] Studies indicate that auditors use various means to offset their audit risk, particularly litigation risk, such as (1) the issuance of modified opinions (Krishnan and Krishnan, 1996); (2) upward adjustments in audit fees to cover for the potential losses arising from future litigation (Pratt and Stice, 1994); and (3) the practice of adjusting client portfolios by accepting new audit engagements and resigning from engagements they perceive as implying high audit risk (see Krishnan and Krishnan, 1996). In line with this argument, we follow Elder et al. (2009) in constructing our proxy of audit risk. We first create three groups. Group 1 consists of firms with no modified audit opinion and no change in auditor; Group 2 comprises firms with modified audit opinions but no change in auditor; and Group 3 consists of firms with modified audit opinions and a change in auditor, thus being the group with the most severe auditor response to audit risk. We then sort our sample firms by group numbers of 1 to 3 and subsequently sort all firms within each group according to the audit fee increase in ascending order. Using this order, we calculate the fractional ranks of these firms and use the fractional ranks as the auditor response index (COMPAUD). A high COMPAUD suggests that auditors perceive the clients as having higher audit risk, resulting in a more severe response from the auditors. Table 8 shows that LNLOBBY is significant and positively associated with COMPAUD (coefficient = 0.0946, t = 1.74). This result suggests that firm lobbying is likely to increase the risk perceived by auditors, thus leading auditors to charge higher audit fees, issue modified opinions, and resign from the engagement.

We also examine whether the positive association between corporate lobbying expenditure and audit fee is due to higher audit effort. Following prior studies, audit report lag is used as a proxy for audit effort (see Blankley et al., 2014). For our audit effort measure, we find that LNLOBBY is negatively associated with audit report lag (−0.0664, t = −5.76, untabulated), which suggests that corporate lobbying is associated with lower audit effort. These results suggest that the higher audit fees charged by auditors to lobbying firms are likely due to the increase in the perceived audit risk.

Path analysis

Thus far, in our analysis, we have tested for the association between corporate lobbying and audit fees and show that high corporate lobbying is associated with higher audit fees. We now turn to provide an understanding of some of the underlying accounting issues that relate corporate lobbying to audit risks/audit fees. To provide a better understanding of the links, we follow DeFond et al. (2016) and perform path analysis using structural equation model to test whether misstatement risk is a mediating variable between corporate lobbying affects audit fees. The model decomposes the correlation between lobbying and audit fees into two indirect paths through the mediating variables misstatement risk and firm returns. We posit that corporate lobbying affects audit fees indirectly through misstatement risk (proxied by absolute discretionary accrual and other proxies[29]) and/or firm returns (proxied by ROA). We estimate the following models in the path analysis:

$$AFEE_{i,t} = \beta_0 + \beta_1 LNLOBBY_{i,t} + \beta_2 ROA_{i,t} + Controls + \varepsilon_{i,t} \tag{4}$$

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[28] We also use pure auditors' modified opinions (MO) as a proxy for audit risk and obtain qualitatively similar results. Data on modified audit opinions are taken from the Compustat database. Following Bradshaw et al. (2001), we create an audit opinion indicator variable (MO) that takes the value of 1 for a modified "unclean" opinion (code #2 to #5) and 0 for an unqualified "clean" opinion (code #1).

[29] We also use other widely used accrual models as a proxy for misstatement risk. Among them include Modified Jones model (Dechow et al., 1995), Dechow and Dichev (2002) model and Kothari et al. (2005) model and find qualitatively similar results for the path analysis- results available on request.

Table 8
Corporate Lobbying and Auditors' Response to Audit Risk.

Dependent Variable	COMPAUD
LNLOBBY	0.0946*
	(1.74)
Control	Yes
Year Fixed Effects	Yes
Industry Fixed Effects	Yes
N	2,868
Adj. R^2	0.0411

This table shows the ordered probit regression results for corporate lobbying and auditors' response to audit risk. *COMPAUD* is the auditor response index calculated based on Elder et al. (2009). A high *COMPAUD* suggests a more severe response from the auditor in response to audit risk and vice versa. *T*-values (calculated based on heteroscedasticity robust standard errors) are reported in parentheses. Coefficients marked with *, **, *** are significant at 10 %, 5 %, and 1 % respectively.
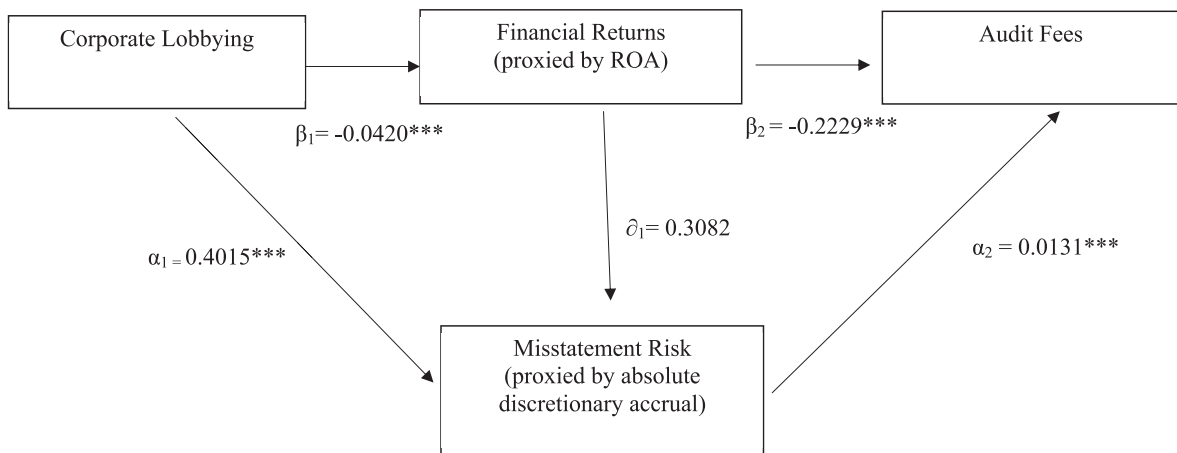
Fig. 1. Path Analysis between Corporate Lobbying and Audit Fees.

$$AFEE_{i,t} = \beta_0 + \beta_1 LNLOBBY_{i,t} + \beta_2 MISTATEMENT_{i,t} + Controls + \varepsilon_{i,t} \quad (5)$$

$$AFEE_{i,t} = \beta_0 + \beta_1 LNLOBBY_{i,t} + \beta_2 MISTATEMENT_{i,t} + \beta_3 ROA_{i,t} + Controls + \varepsilon_{i,t} \quad (6)$$

$$MISTATEMENT_{i,t} = \beta_0 + \beta_1 LNLOBBY_{i,t} + \beta_2 ROA_{i,t} + Controls + \varepsilon_{i,t} \quad (7)$$

$$MISTATEMENT_{i,t} = \alpha_0 + \alpha_1 LNLOBBY_{i,t} + Controls + \varepsilon_{i,t} \quad (8)$$

$$ROA_{i,t} = \alpha_0 + \alpha_1 LNLOBBY_{i,t} + Controls + \varepsilon_{i,t} \quad (9)$$

where *MISTATEMENT* is the various proxies for accruals earnings management and ROA is defined as the ratio of net income to total assets. In this section we only report the results for the earnings accruals model used in Jones (1991) and *Controls* are similar to those that are in the main model except ROA. Fig. 1 depicts the indirect paths for the above models.

Table 9 reports the results from the path analysis. The direct path coefficient between corporate lobbying and audit fees is significantly positive at p < 0.01, with a coefficient of 0.1712, consistent with our conjecture that higher lobby activity leads to greater audit fees. The path coefficient between corporate lobby and misstatement risk [p(*LNLOBBY, MISTATEMENT*)] is significantly positive (coefficient = 0.4015), indicating that firms with greater lobbying expenses has higher misstatement risk. Likewise, the path coefficient between misstatement risk and audit fees [p(*MISTATEMENT, AFEE*)] is also significant and positively associated with audit fees (coefficient = 0.0131), suggesting that the association between corporate lobbying and audit fees could be mediated by the misstatement risk.[30]

In regards to firm returns (proxied by ROA), the path coefficient between corporate lobby and firm returns [p(*LNLOBBY, ROA*)] is significantly negative (coefficient = -0.0420), indicating that firms with greater lobbying expenses are likely to have

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[30] Untabulated goodness of fit test shows that the model explains the variation in *MISTATEMENT* (R-squared= 0.0295), ROA (R-squared= 0.2465) and *AFEE* (R-squared= 0.7932) relatively well.

Table 9
Path Analysis.

Direct Path	
$p(LNLOBBY, AFEE)$	0.1712 ***
Mediated Path for misstatement risk	
$p(LNLOBBY, MISTATEMENT) = \alpha_1$	0.4015***
$p(MISTATEMENT, AFEE) = \alpha_2$	0.0131***
$p(LNLOBBY, ROA) = \beta_1$	−0.0420***
$p(ROA, AFEE) = \beta_2$	−0.2229***
$p(ROA, MISTATEMENT) = \partial_1$	0.3082
Controls	Yes
n	4,432

lower firm returns. Similarly, the path coefficient between firm returns and audit fees [$p(ROA, AFEE)$] is also significant and negatively associated with audit fees (coefficient = −0.2229), suggesting that the positive association between corporate lobbying and audit fees could be mediated by the firm returns.

We also tested whether the association between corporate lobbying and audit fees could be mediated through firm returns and subsequently misstatement. Our results indicate that the path coefficient between firm returns and misstatement [$p(ROA, MISTATEMENT)$] is insignificant ($\partial_1 = 0.3082$), suggesting that the association between lobbying and audit fees is mediated through firm returns or misstatement risk only.

Conclusion

The objective of this study is to examine the association between corporate lobbying and audit fees. Two competing sets of theories motivate the examination of this relationship. Resource dependence theory argues that lobbying allows firms to obtain necessary resources such as subsidies, trade protection, and even bailouts from the government and thereby reduces the firms' need to misreport their earnings. Agency theory views corporate lobbying as a manifestation of agency problems that may increase the opacity of the financial statements prepared by lobbying firms (Chaney et al., 2011; Jensen and Meckling, 1976).

Our results show that auditors charge higher audit fees for lobbying firms, suggesting that auditors perceive lobbying companies as being associated with higher agency costs and therefore higher audit risk. Additional tests using the COMPAUD measure suggest that auditors charge lobbying firms a fee premium (rather than an "additional effort price") because of the increased perceived audit risk. We also find that the positive association between corporate lobbying and audit fees is moderated by the presence of strong corporate governance as proxied by (1) more independent directors, (2) the presence of female board members, and (3) the presence of AC members with accounting or financial expertise. Our final set of tests using path analysis show that misstatement risks (proxied by various measures of discretionary accruals) and firm returns (proxied by ROA) mediate the relationship between corporate lobbying and audit fees. In other words, firms with corporate lobbying are likely to manipulate earnings (low firm returns), thus causing auditors to assess higher audit risks for these firms, resulting in higher audit fees.

This study has several practical implications. First, it adds to the audit literature by showing that auditors consider client's lobbying activity when executing an audit and such activity is associated with higher audit risk premium. Second, while prior studies argue that lobbying activity may bring some advantages to the firm, one should view the supposed benefits more cautiously. For example, lobbying leads to a higher audit risk premium and is one of the many costs that firms should consider when engaging in lobbying activity.[31] It may be useful for some firms to conduct a cost-benefit analysis of lobbying activities and, in particular, consider the cost in terms of higher audit fees.

As with most empirical work, this study has several limitations. First, while we argue that auditors charge a fee premium as a result of higher agency costs associated with lobbying, we cannot rule out the fact that auditors may be responding to some specific unobservable factors that are correlated with lobbying activities (and these factors increase risk so they are priced). Second, given that our data are limited to U.S. listed firms that lobby in the U.S., generalizing our findings to other types of firms and/or CPAs should be viewed with caution. Moreover, we did not investigate corporate lobbying activity at the state or local government level. A firm may be better off by engaging in lobbying activity (such as receiving contracts from local governments and local tax benefits) when state or local regulations are laxer. Third, while we run some endogeneity tests, we cannot completely rule out endogeneity problems in our analysis. Similarly, while we control for corporate governance variables it may be possible that other corporate governance variables that we did not consider could affect the results. We leave these issues to future research.

Data availability

Data will be made available on request.

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[31] Other costs may include exposing firms to legal, reputational, and/or financial risks.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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