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SHORT REPORT

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Political protection: The case of large-scale oil spills and the stock prices of energy firms

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Abstract

In this study, we utilize a sample of publicly traded US energy firms to investigate the stock market responses to 40 large-scale oil spills. Our findings reveal that the stock prices of extraction and refining firms experience significant declines during the periods surrounding these oil spill incidents, and energy pipeline firms exhibit a relatively smaller decrease. These results underscore the risk exposure shared by all energy firms, irrespective of their direct involvement in the oil spill incident. Furthermore, our study uncovers an intriguing dynamic—the influence of political connections established through lobbying activities. We observe that these political ties serve to significantly mitigate the negative market reactions to oil spills. Our results suggest that, from the market's perspective, firms with political connections are less vulnerable to the impending costs associated with oil spills when compared to their non-politically connected counterparts.

KEYWORDS

energy stock prices, financial markets, lobbying, oil spills, political connections

JEL CLASSIFICATION

G10, G14, D72, Q40, Q49

1 | INTRODUCTION

Starting with the seminal work of Stigler (1971), scholars have examined the interaction between governments and corporations and have argued that firms possessing political connections play a pivotal role in influencing the regulatory landscape.[1] As an anecdote, the 2008 financial crisis resulted in the largest government bailout in US history, and perhaps not surprisingly, bailout funds were directed to banks that had the strongest political connections.[2] This supports the global findings in Faccio et al. (2006) and suggests that politically-connected firms might not only have an influence on regulation but they might also become insulated from the effects of a specific crisis.[3] With this perspective in mind, we formulate and empirically examine the hypothesis that an industry-specific crisis, like a significant oil spill, might exert a disproportionate impact on energy companies lacking political affiliations when compared to those with political connections. One possible explanation for the validity of this claim is that energy firms with political ties are more inclined to influence the formulation of regulations or mitigate the industry's costs that may arise as a result of the oil spill.[4]

A significant portion of the extant literature addressing the aftermath of oil spills centers on quantifying both the economic and environmental repercussions of these events.[5] Admittedly, several studies have examined financial market participants' reactions to various types of energy disasters. For instance, prior work has explored how the nuclear incident at Chornobyl adversely affected the stock prices of electric utilities (see e.g., Bowen et al., 1983; Hill & Schneeweis, 1983; Kalra et al., 1993). Others have explored how the oil spills of Exxon Valdez and British Petroleum (BP) influenced the stock prices of subsamples of energy firms (see e.g., Fodor & Stowe, 2010; Friedman & Friedman, 2010; Mansur et al., 1991; Sabet et al., 2012). However, the results of these studies have focused primarily on the stock prices of energy firms that are most closely related to the events.[6] In general, the empirical results suggest that these energy disasters adversely affect the stock prices of closely related energy firms. However, the effect on the stock prices of unrelated energy firms has received limited attention. The objectives of this paper are twofold. First, given that energy disasters may produce potentially new costs for energy firms, whether in the form of regulatory changes or otherwise, we aim to analyze the stock price response to significant oil spills across a diverse range of both affiliated and non-affiliated energy companies.[7] Second, we further refine our initial set of tests by examining whether the energy firms have political connections established through corporate lobbying activities. We anticipate that politically connected energy firms will exhibit a less pronounced negative stock price response compared to non-connected firms, as investors might perceive that connected firms hold the capacity to influence regulations or mitigate potential costs.[8]

To investigate our research questions, we obtain a sample of energy firms in the Oil and Gas Extraction Industry, the Petroleum Refining Industry, and the Energy Pipeline Industry. We then conduct traditional event study tests (see e.g., Fama et al., 1969) surrounding 40 different large-scale oil spills. Our results show that, on average, energy firms experience significant negative stock-price reactions to large-scale oil spills. In particular, the average firm in our sample experienced a 50-basis point market-adjusted reduction in its stock return during the 3 days surrounding the oil spills. It is worth noting that our results are slightly stronger for extraction and refining firms, but they still hold for pipeline firms. These initial tests provide an important contribution to the literature by suggesting that the adverse effects associated with large-scale oil spills extend to energy firms that are not directly involved in the spill incidents.

In our second series of tests, we discover that the predominantly negative price response to the oil spills is largely attributed to energy firms that had not engaged in lobbying activities in the year leading up to the spills. For instance, among firms that had refrained from lobbying, the average three-day cumulative abnormal return surrounding the oil spills is −0.55%. However, for firms that had actively lobbied, the average three-day cumulative abnormal return does not exhibit a statistically significant deviation from zero. These findings highlight the positive perception of firm-level political involvement in the market, suggesting that energy companies with political connections are less exposed to the adverse effects associated with large-scale oil spills than their non-connected counterparts.

2 | DATA DESCRIPTION

The data used throughout this analysis come from two primary sources. From the Center for Responsive Politics (CRP), we obtain annual lobbying expenditures for each firm in our sample. These expenditures are obtained from lobbying disclosure reports that are provided in response to the 1995 Lobbying Disclosure Act. The CRP then aggregates the lobbying data from these reports and makes them publicly available to researchers. From the Center for Research and Security Prices (CRSP), we obtain daily stock prices, returns, trading volume, and shares outstanding. Three-digit SIC codes are used to identify extraction firms (SIC codes 131, 132, and 138), refining firms (SIC code 291), and pipeline firms (SIC code 461). There are 681 firms in the extraction sample, 69 firms in the refining sample, and 42 firms in the pipeline sample. We collect oil spill information from several different media sources. We note that the International Tanker Owners Pollution Federation (ITOPF) defines large-scale oil spills as those with more than 700 tonnes spilled.

Table 1 presents information on 40 distinct large-scale oil spills, including the spill dates, the maximum quantity of tonnes spilled, and their respective locations. Notably, the BP spill in April 2010 holds the record for the largest oil

TABLE 1 Oil spill events.

Event No	Dates	Max tonnes	Location
1	1998/01/12	5500	Nigeria
2	1999/12/12	25,000	France, Bay of Biscay
3	2000/08/01	850	Canada, British Columbia
4	2001/01/14	1150	Taiwan, Southern Coast
5	2001/06/25	9500	Nigeria
6	2001/10/04	932	US, Alaska
7	2002/10/06	12,200	Yemen, Gulf of Aden
8	2002/11/13	63,000	Spain, Galicia
9	2003/07/28	30,000	Pakistan, Karachi
10	2004/09/16	490,000	US, Gulf of Mexico (Louisiana)
11	2004/11/26	860	US, Delaware River, New Jersey
12	2004/12/08	1560	US, Unalaska Island, Alaska
13	2005/08/30	23,510	US, Louisiana
14	2006/06/19	6500	US, Lake Charles, Louisiana
15	2006/07/14	30,000	Lebanon
16	2006/08/11	1540	Philippines, Guimaras Strait
17	2007/10/23	1869	Mexico, Bay of Campeche
18	2007/11/11	1000	Ukraine, Russia, Strait of Kerch
19	2007/12/07	10,800	South Korea, Yellow Sea
20	2007/12/12	4000	Norway, Norwegian Sea
21	2008/07/28	8800	US, New Orleans, Louisiana
22	2008/08/01	1000	Nigeria
23	2009/08/21	30,000	Australia, Timor Sea
24	2010/01/23	1500	US, Port Arthur, Texas
25	2010/04/20	627,000	US, Gulf of Mexico

(Continues)

TABLE 1 (Continued)

Event No	Dates	Max tonnes	Location
26	2010/05/01	95,500	Nigeria, Niger Delta
27	2010/05/25	3700	US, Anchorage, Alaska and Singapore, Singapore Strait
28	2010/07/16	90,000	China, Yellow Sea
29	2010/07/26	3250	US, Kalamazoo River, Michigan
30	2010/08/07	800	India, Mumbai, Arabian Sea
31	2011/04/29	3800	Canada, Alberta
32	2011/12/21	5500	Nigeria, Bonga Field
33	2012/02/04	41,000	Venezuela, Maturín, Monagas
34	2013/03/09	760	US, Arkansas, Magnolia
35	2013/03/30	950	US, Arkansas, Mayflower
36	2013/07/06	4830	Canada, Québec, Lac-Mégantic
37	2013/09/25	2810	US, North Dakota, Tioga
38	2013/12/30	1300	US, North Dakota, Casselton
39	2014/12/06	4300	Israel, Eilat, Trans-Israel pipeline
40	2016/09/12	1092	US, Shelby County, Alabama

Note: The table reports the results of the 40 oil spills, used as events in the analysis. In the table, we report the dates of the oil spill. However, there are a few instances, when oil spills occurred during a non-trading day on a weekend. In these cases, we have included the next available trading day as the event day. We report the magnitude of the oil spill by reporting the estimated maximum number of tonnes spilled. We also report a short description of the location of each spill. As noted in the text, we only include large-scale oil spills as events and define such events as spills with more than 700 max tonnes. The International Tanker Owners Pollution Federation (ITOPF) defines large oil spills as those with more than 700 tonnes spilled.

spill in terms of maximum tonnes released—627,000. To align with the availability of lobbying data, we limit our sample to oil spills occurring after 1998. Out of the 40 oil spills, only eight publicly traded US firms were directly accountable for these incidents. As a result, our tests primarily concentrate on examining the spill-over effects of these oil spills on the remaining firms within the energy sector.

Table 2 provides some statistics that describe our sample. Size is the market capitalization in billions ($). Price is the daily closing share price for each stock. Volt is the difference between the natural log of the daily high ask price and the natural log of the daily low bid price (Alizadeh et al., 2002). Spread is the difference between the daily closing ask price and the closing bid price scaled by the quote midpoint. Turnover is daily share turnover, or the ratio of the daily trading volume on the event day scaled by the shares outstanding.[9] Lobbied is an indicator variable equal to one if a particular firm exhibited positive lobbying expenditures in the calendar year before the oil spill. LobAmt is the number of lobbying expenditures (in $ millions) in the calendar year before the oil spill. The average extraction firm has a market cap of $3.87 billion, a share price of $23.81, volatility of 4.55%, a bid-ask spread of 1.09%, and turnover of 0.98%. The average refining firm is much larger with a market cap of $29.98 billion, a share price of $44.90, volatility of 3.01%, a bid-ask spread of 0.43%, and turnover of 0.95%. The average pipeline firm is similar to that of an extraction firm with a market cap of $3.08 billion, a share price of $37.02, volatility of 2.67%, a bid-ask spread of 0.38%, and turnover of 0.34%. About 13.49% (or 13.55%) of extraction firms allocated nearly $700,000 (or $280,000) to lobbying activities during the years preceding the events. Approximately 30.66% of refining firms participated in lobbying activities in the years leading up to the oil spills, with an average expenditure of approximately $1.9 million.

TABLE 2 Summary statistics by energy firm type.

	Extraction firms (N = 7993)		Refining firms (N = 1021)		Pipeline firms (N = 487)	
	Mean	SD	Mean	SD	Mean	SD
	[1]	[2]	[3]	[4]	[5]	[6]
Size ($B)	3.8679	9.9247	29.9803	75.575	3.0812	4.1902
Price	23.81	25.26	44.90	28.39	37.02	18.27
Volt	0.0455	0.0666	0.0301	0.0261	0.0267	0.0247
Spread	0.0109	0.0243	0.0043	0.0107	0.0038	0.0066
Turnover	0.9795	2.3653	0.9484	1.3665	0.3384	0.4128
Return	−0.0006	0.0395	0.0002	0.0266	−0.0001	0.0223
Lobby	0.1349	0.3416	0.3066	0.4613	0.1355	0.3426
LobAmt ($M)	0.676	6.069	19.141	51.473	0.280	1.067

Note: The table reports statistics that summarize sub-samples of firms described in Table 1. In particular, we report summary statistics for Oil and Gas Extraction firms (in columns [1] and [2]), Refining firms (in columns [3] and [4]), and Pipeline firms (in columns [5] and [6]). The table reports the means and standard deviations of important variables used throughout the study. Size is the market capitalization on the event day for each firm (in $ billions). Price is the closing price on the event day. Volt is the natural log of the highest price and the natural log of the lowest price on the event day. Spread is the difference between the closing ask price and the closing bid price scaled by the spread midpoint. Turnover is the share turnover or the ratio of the daily trading volume on the event day scaled by the shares outstanding. Lobby is an indicator variable equal to unity if a particular firm exhibited positive lobbying expenditures in the calendar year before the oil spill. LobAmt is the number of lobbying expenditures (in $ millions) in the calendar year before the oil spill.

3 | EMPIRICAL RESULTS

We estimate cumulative abnormal returns (CARs) using a daily market model with a pre-event estimation period that extends for the time window [t-255 to t-46], where day t is the day of the event in question.

$$R_{i,t} = \alpha + \beta R_{m,t} + \varepsilon_{i,t} \tag{1}$$

The dependent variable in Equation (1) is the raw stock return for each firm i on day t. The independent variable is the value-weighted average return of the universe of publicly traded stocks available on CRSP. Parameter estimates are obtained for both α and β during the pre-estimation period. Then, during each event window, daily abnormal returns are estimated using the residual returns, ε. CARs are then the summed residual returns during the various event windows. In the tables that follow, we report daily CARs for various event windows. However, for brevity, we focus our discussion on the three-day event window (−1, +1) surrounding the oil spills.

3.1 | Univariate tests – Daily CARs

Table 3 reports the results of univariate tests of CARs for energy firms surrounding the sample oil spills. Panel A displays the results for all energy firms around the oil spills. The average three-day CAR is −52 basis points for all firms. When annualized, this CAR represents an underperformance of the market by more than 40%. The other event windows produce negative CARs that are also reliably different from zero. Panels B, C, and D show the results for extraction, refining, and pipeline firms separately. The average three-day CAR surrounding the oil spills is −55 basis points for extraction firms, −52 basis points for refining firms, and −12 basis points for pipeline firms. We note, however, that the average three-day CAR for pipeline firms is not statistically different from zero. Therefore, the

TABLE 3 Cumulative abnormal returns for all energy firms and for subsamples of energy firms.

	CAR (−5, 5) [1]	CAR (−3, 3) [2]	CAR (−1, 1) [3]	CAR (0, 1) [4]	CAR (0, 3) [5]	CAR (0, 5) [6]
Panel A. All firms (*N* = 9501)						
Mean	−0.0152***	−0.0081***	−0.0052***	−0.0037***	−0.0070***	−0.0089***
Median	−0.0121	−0.0058	−0.0044	−0.0033	−0.0061	−0.0074
t-statistics	(−13.31)	(−8.93)	(−8.95)	(−7.55)	(−10.19)	(−10.41)
Panel B. Extraction firms (*N* = 7993)						
Mean	−0.0168***	−0.0087***	−0.0055***	−0.0041***	−0.0075***	−0.0094***
Median	−0.0138	−0.0069	−0.0050	−0.0038	−0.0072	−0.0083
t-statistics	(−12.82)	(−8.42)	(−8.19)	(−7.14)	(−9.60)	(−9.61)
Panel C. Refining firms (*N* = 1021)						
Mean	−0.0097***	−0.0066***	−0.0052***	−0.0017	−0.0039**	−0.0063***
Median	−0.0070	−0.0020	−0.0030-	−0.0009	−0.0009	−0.0038
t-statistics	(−3.92)	(−3.14)	(−4.10)	(−1.61)	(−2.55)	(−3.52)
Panel D. Pipeline firms (*N* = 487)						
Mean	−0.0010	−0.0013	−0.0012	−0.0027**	−0.0049**	−0.0057***
Median	−0.0007	−0.0032	−0.0006	−0.0020	−0.0056	−0.0063
t-statistics	(−0.36)	(−0.53)	(−0.80)	(−2.27)	(−2.49)	(−2.57)

Note: The table reports the cumulative abnormal returns (CARs) for energy firms over various event windows surrounding the oil spills. Panel A reports the mean CARs for the full sample of energy firms. Panels B through D report the mean CARs for the subsamples of extraction firms, refining firms, and pipeline firms. CARs are obtained by estimating a market model during a pre-event estimation period [*t*-255 to *t*-46] where intercept and slope parameters are obtained. With these estimated parameters, residual returns, or abnormal returns, are estimated and summed across the various event windows. We note that the market return used in the market model is the CRSP value-weighted market index. The table reports both mean and median CARs as well as corresponding t-statistics in parentheses testing whether the mean CARs are significantly different from zero. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

results appear to be stronger for extraction and refining firms. Nevertheless, these findings provide support for the notion that the stock prices of energy firms generally decline surrounding large-scale oil spills. This holds in Figure 1, which reports abnormal returns for the 11-day window surrounding the oil spill events. The figure shows that abnormal returns begin to decrease on the day after the event day until day $t + 3$.

3.2 | Univariate tests – Daily CARs conditioning on firm-level political activity

Next, we condition our previous results on whether or not a particular firm had engaged in lobbying activities in the calendar years before the oil spills. The results from these univariate tests are reported in Table 4.[10] Panel A of Table 4 displays the average CARs for lobbying firms, while Panel B presents results for non-lobbying firms. Panel C reports the differences between the two. Our findings reveal that lobbying firms exhibit statistically insignificant three-day CARs, whereas non-lobbying firms show a significant average CAR of −55 basis points. The difference in average three-day CARs between politically connected firms and non-connected firms is 39 basis points, which is statistically significant at the 1% level. Similar results are observed for the different event windows. These findings support the notion that politically connected firms experience a less adverse stock price response to large-scale oil spills than non-connected firms.

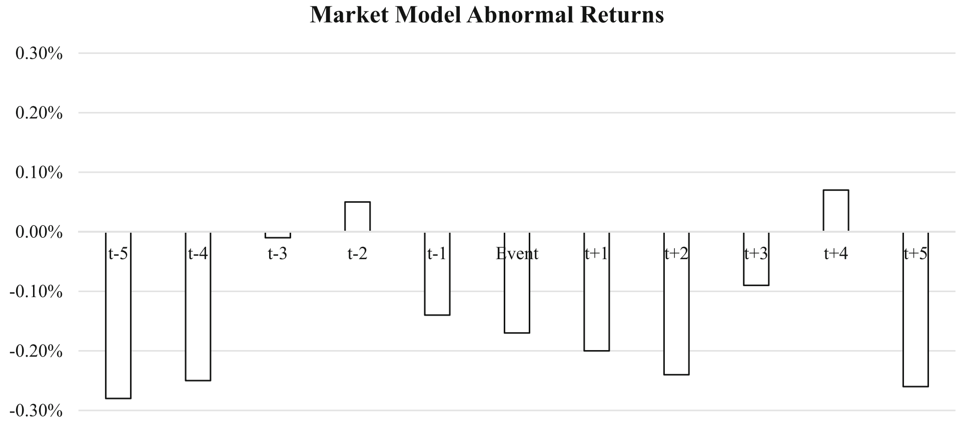

FIGURE 1 The figure shows the abnormal returns from a standard market model around the 11 days surrounding large-scale oil spills.

TABLE 4 Cumulative abnormal returns by lobbying and non-lobbying energy firms.

	CAR (−5, 5)	CAR (−3, 3)	CAR (−1, 1)	CAR (0, 1)	CAR (0, 3)	CAR (0, 5)
	[1]	[2]	[3]	[4]	[5]	[6]
Panel A. Firms that had lobbied (*N* = 773)						
Mean	−0.0061**	−0.0033	−0.0016	−0.0006	−0.0035**	−0.0041*
Median	−0.0048	−0.0010	−0.0001	−0.0004	−0.0021	−0.0030
t-statistics	(−2.27)	(−1.55)	(−1.29)	(−0.50)	(−2.11)	(−1.96)
Panel B. Firms that had not lobbied (*N* = 8728)						
Mean	−0.0161***	−0.0085***	−0.0055***	−0.0040***	−0.0073***	−0.0093***
Median	−0.0128	−0.0066	−0.0048	−0.0036	−0.0067	−0.0081
t-statistics	(−13.12)	(−8.80)	(−8.87)	(−7.58)	(−9.97)	(−10.23)
Panel C. Differences between mean CARs						
Difference	0.0100***	0.0052**	0.0039***	0.0034***	0.0038**	0.0052**
t-statistics	(3.39)	(2.22)	(2.81)	(2.59)	(2.10)	(2.28)

Note: The table reports the cumulative abnormal returns (CARs) for energy firms over various event windows surrounding the oil spills. Panel A reports the mean CARs for the sample of energy firms that had positive lobbying expenditures in the calendar year before the oil spill. Panel B reports the mean CARs for the sample of firms without lobbying expenditures in the calendar year before the oil spill. Panel C reports the difference in CARs between lobbying and non-lobbying firms. CARs are obtained by estimating a market model during a pre-event estimation period [*t*-255 to *t*-46] where intercept and slope parameters are obtained. With these estimated parameters, residual returns, or abnormal returns, are estimated and summed across the various event windows. We note that the market return used in the market model is the CRSP value-weighted market index. The table reports both mean and median CARs as well as corresponding t-statistics in parentheses testing whether the mean CARs are significantly different from zero. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

3.3 | Multivariate tests – CARs conditioning on firm-level political activity

To control for other potential confounding factors surrounding the oil spills, we estimate specifications of the following OLS regression equation using pooled stock-event observations:

$$\mathrm{CAR}_{i,j} = \beta_1 \mathrm{Lobbied}_{i,j} + \beta_2 \mathrm{Size}_{i,j} + \beta_3 \mathrm{Price}_{i,j} + \beta_4 \mathrm{Spread}_{i,j} + \beta_5 \mathrm{Turnover}_{i,j} + \beta_6 \mathrm{Volt}_{i,j} + \beta_0 + \gamma + \delta + \varepsilon_{i,j}, \quad (2)$$

where the dependent variable is the stock-level CAR in various event windows around the oil spills. The key independent variable of interest is Lobbied, which is equal to one if firm *i* lobbied in the calendar year before event *j*. Additionally, we control for firm size, price, spread, turnover, and volatility. We also include industry fixed effects, γ, and year fixed effects, δ, in all of the model specifications.

Table 5 reports the results from the estimation of Equation (2). Focusing on column [3] of Table 5, we find that the only variable that produces a meaningful coefficient is the variable of interest, Lobbied. The coefficient in column [3] is 0.0034, which suggests that energy firms that had lobbied had significantly higher CARs (34 basis-point difference) than energy firms that had not lobbied.[11] These results support our univariate tests and suggest that corporate lobbying may indeed protect energy firms from potential new costs associated with oil spills. These results are robust across each event window.

TABLE 5 Multivariate tests on cumulative abnormal returns.

	CAR (−5, +5)	CAR (−3, +3)	CAR (−1, +1)	CAR (0, +1)	CAR (0, +3)	CAR (0, +5)
	[1]	[2]	[3]	[4]	[5]	[6]
Lobbied	0.0071***	0.0048**	0.0034**	0.0023*	0.0039**	0.0062***
	(2.31)	(2.06)	(2.49)	(1.92)	(2.13)	(2.65)
Size	0.0342	0.0272*	0.0104	0.0117	0.0130	0.0083
	(1.49)	(1.71)	(1.00)	(1.48)	(1.09)	(0.57)
Price	−0.0041	−0.0063*	−0.0015	−0.0020	−0.0064**	−0.0083***
	(−1.01)	(−1.86)	(−0.70)	(−0.99)	(−2.49)	(−2.76)
Spread	0.0162	0.0281	0.0234	−0.0296	0.0463	0.0134
	(0.19)	(0.29)	(0.29)	(−0.31)	(0.58)	(0.19)
Turnover	−0.0003	0.0006	0.0006	0.0007*	0.0007	0.0004
	(−0.27)	(0.86)	(1.32)	(1.68)	(1.06)	(0.48)
Volt	−6.9E-6	0.0492	0.0262	0.0109	0.0245	0.0132
	(0.01)	(1.19)	(0.88)	(0.38)	(0.83)	(0.48)
Constant	0.0424***	0.0144	−0.0152**	−0.0259***	−0.0372***	−0.0374***
	(3.64)	(1.45)	(−2.44)	(−4.96)	(−5.36)	(−4.71)
Adj. R^2	0.0959	0.0658	0.0733	0.0701	0.0710	0.0795
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Robust SE	Yes	Yes	Yes	Yes	Yes	Yes
N	9501	9501	9501	9501	9501	9501

Note: The table reports the results from estimating specifications of the following regression equation using pooled stock-event observations:

$$\mathrm{CAR}_{i,j} = \beta_1 \mathrm{Lobbied}_{i,j} + \beta_2 \mathrm{Size}_{i,j} + \beta_3 \mathrm{Price}_{i,j} + \beta_4 \mathrm{Spread}_{i,j} + \beta_5 \mathrm{Turnover}_{i,j} + \beta_6 \mathrm{Volt}_{i,j} + \beta_0 + \gamma + \delta + \varepsilon_{i,j},$$

where the dependent variable is the stock-level cumulative abnormal return (CAR) in various event windows around the oil spills. The key independent variable of interest is Lobbied, which is equal to one if firm *i* lobbied in the calendar year before event *j*. Additionally, we control for firm size, price, spread, turnover, and volatility. We also include industry fixed effects, γ, and year fixed effects, δ, in all of the model specifications. Below each coefficient, we report t-statistics that are obtained from robust standard errors. *, **, and *** denote statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

4 | CONCLUSION

This study reveals that large-scale oil spills have a consistently negative impact on the stock market performance of US energy firms, irrespective of their direct involvement in the spill incidents. Perhaps more interestingly, firms engaged in lobbying activities exhibit comparatively milder negative returns during oil spills compared to their non-lobbying counterparts. In certain specifications, firms engaged in lobbying activities exhibit average CARs that are statistically indistinguishable from zero around the oil spill events, whereas non-lobbying firms encounter negative and statistically significant CARs. These findings substantiate the idea that political connections, particularly through lobbying activities, wield a tangible and substantial influence within financial markets, further enriching the extensive and continually expanding body of literature in this field.[12]

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ENDNOTES

[1] See for example, Peltzman (1976), Shleifer and Vishny (1994), Grossman and Helpman (1996), Morck et al. (2000), Johnson and Mitton (2003), and Baldwin and Robert-Nicoud (2007).

[2] See for example, Duchin and Sosyura (2012), Blau et al. (2013), and Blau (2017).

[3] The existing literature also reveals that, on the whole, market participants tend to hold a favorable view of political connections, as firms with political affiliations generally command higher valuations compared to those without such connections (see e.g., Borisov et al., 2016; Faccio, 2006; Fisman, 2001; Roberts, 1990). The valuation effects could stem from lighter regulatory costs, lower tax liabilities (Richter et al., 2009), lower operating expenditures (Hochberg et al., 2009), lower costs of capital (Chiu & Joh, 2004; Cull & Xu, 2005; Johnson & Mitton, 2003; Khwaja & Mian, 2005), more favorable judicial outcomes (Unsal et al., 2017), and a lower likelihood of being detected of fraud (Yu & Yu, 2011).

[4] Studies that examine the association between political connections and lower costs include Johnson and Mitton (2003), Chiu and Joh (2004), Cull and Xu (2005), Khwaja and Mian (2005), Richter et al. (2009), Hochberg et al. (2009).

[5] See for example, Cohen (1986), Grigalunas et al. (1986), Goldberg (1994), Cohen (1995), Patten and Nance (1998), Loureiro et al. (2006), Garza-Gil et al. (2006), Liu and Wirtz (2009), Loureiro et al. (2009), Al-Majed et al. (2012), among others.

[6] For instance, the findings in Sabet et al. (2012) suggest that the BP oil spill negatively affected BP and four of BP's primary subcontractors. This is particularly true during the period when a moratorium was imposed by regulators in response to the spill. However, when the sample is extended to other energy firms, the market reaction becomes insignificant.

[7] Alternatively, supply shocks caused by oil spills might increase commodity prices, such as gas prices, leading to greater profitability of energy firms in the long run (Dekel & Scotchmer, 1990). Our first objective tests between these alternatives.

[8] Research shows that firms that are politically connected are able to lower their regulatory burden (see e.g., Baldwin & Robert-Nicoud, 2007; Grossman & Helpman, 1996; Johnson & Mitton, 2003; Morck et al., 2000; Peltzman, 1976; Stigler, 1971).

[9] We note that each of these stock characteristics is measured on the event days listed in Table 2.

[10] In unreported tests, we replicate our analysis in Table 4 but include firms that had lobbied in the prior 5 years as opposed to firms that had lobbied in the prior calendar year. Results are qualitatively similar to those reported in Table 4, suggesting that our findings are robust to how we define firms that are politically connected.

[11] In other robustness tests, we replicate the analysis from Table 5 but include institutional ownership as an additional control variable. Given data limitations, we only have ownership data beginning in the year 2000. When including ownership as an additional control, we still find that the variable Lobbied produces a positive and significant coefficient in five of the six columns and in the latter three columns that capture the post-event returns. These results support the conclusions drawn in the analysis and highlight the significance of lobbying activity on the return response of energy firms surrounding large-scale oil spills. Additionally, these unreported robustness results ease the concern that corporate governance issues affect our findings given the results in Chung and Zhang (2011) that show that institutional ownership is a reliable proxy for governance issues.

[12] See for example, Stigler (1971), Peltzman (1976), Roberts (1990), Grossman and Helpman (1996), Morck et al. (2000), Fisman (2001), Johnson and Mitton (2003), Chiu and Joh (2004), Cull and Xu (2005), Khwaja and Mian (2005), Faccio (2006), Faccio et al. (2006), Baldwin and Robert-Nicoud (2007), Richter et al. (2009), Hochberg et al. (2009), Yu and Yu (2011), Duchin and Sosyura (2012), Blau et al. (2013), Borisov et al. (2016), Unsal et al. (2017), and Blau (2017).

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