Estimating the value of connections to Vice-President Cheney

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Abstract

We estimate the market valuation of personal ties to Richard Cheney. Our proxies for personal ties are based on corporate board linkages that are prevalent in the network sociology literature. We consider a number of distinct political and personal events that either affected Cheney's political fortunes or his ability to hand out political favors. Specifically, we consider: (a) market reaction of connected companies to news of Cheney's heart attacks (b) market reaction of connected companies to Cheney being placed in charge of the vice-presidential search process and his surprise self-appointment; (c) correlation of the value of connected companies with probability of Bush victory in 2000; and (d) correlation of the value of connected companies with the probability of war in Iraq. Contrary to conventional wisdom, we find that in all cases the value of ties to Cheney is precisely estimated as zero. We interpret this as evidence that U.S. institutions are effective in controlling rent-seeking through personal ties with high-level government officials.

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In the two years following the Iraq War, the value of the oil services company Halliburton, which had been headed by Vice-President Richard Cheney prior to taking office, more than doubled, leading to a steady stream of allegations of corporate favoritism by the Vice-President. Both conventional wisdom and a vast body of research in political science have long held that business-government relations play an important role in corporate America. Following on the classic study of Bauer et al (1972), much of this literature has modeled corporate America as a collection of special interest groups, focusing on groups of firms lobbying and otherwise currying favor with government through business associations (see, for example, Hart (2004)). A more recent body of work analyzes business-politics relations at the level of the individual firm, looking at correlation between various measures of firm-level connections to government, such as lobbying and PAC expenditures, and measures of firm success (for example, Ansolabehere et al (2004); Jayachandran (2006)).

The case of Cheney differs in a crucial way from the corporate rent-seeking analyzed in these papers, however: allegations against the Vice-President focused on the importance of *personal* ties in generating firm value, rather than connections operating through formal lobbying or political finance institutions. In this realm, evidence is limited to anecdote and accusation. This is an important and surprising gap in the literature, given the strongly held conventional wisdom on the favor-giving by Cheney and others, and the mounting evidence on the value of personal political ties around the world.[2]

In this paper, we estimate the market valuation of personal connections to U.S. President Richard Cheney, utilizing methods from the emerging literature that uses financial markets to study political phenomena.[3] Specifically, we look at the stock market returns of companies with personal connections to Vice-President Cheney in reaction to news about his personal and political fortunes. This provides a market-based measure of investors' beliefs about the value provided by Cheney to well-connected companies.

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[2] For example, Faccio (2005) finds that the market values of firms with political ties are affected by unexpected electoral outcomes in a broad cross-section of countries, and Fisman (2001) finds that the values of companies with personal ties to President Suharto are negatively affected by sudden adverse changes in his health status.
[3] See, for example, Bernhard and Leblang (2006) for an overview and discussion.

Overall, our narrow purpose in this exercise is to evaluate the frequent media allegations of corporate favoritism by Vice-President Richard Cheney, i.e., has Cheney been pronounced guilty based on past associations, or do companies really benefit from their relations with him? While Halliburton's stock price did indeed appreciate considerably in the years following the Iraq invasion, so did that of every other company in Halliburton's industry. More broadly, we view this as a case study of the larger question of whether personal ties to high-level government officials play an important role in business-government relations in the U.S.

Our findings are as follows: In all events we study, there is a zero effect (often precisely estimated) on the stock prices of connected firms. That is, connected companies' returns are unaffected by events that would likely have affected Cheney's ability to provide favors. While prior evidence suggests that business-government relations are an important part of U.S. commerce, our results suggest that these connections are more institutional than personal. That is, there are well-organized institutions (such as political action committees and other lobbying entities) for facilitating these relations that differ from the deeply personalized favor exchange that characterize business-politics relations in so much of the world.

The rest of this paper is structured as follows. In Section 1, we describe our data, including a detailed discussion of our board-based measure of Cheney's connections and an overview of the events we study. Section 2 presents our event study results, and Section 3 concludes.

1. Data

1.1 Cheney Connections

Following the network sociology literature (see, for example, Mizruchi, 1992; Useem, 1984), we define personal connections to Vice-President Cheney based on board linkages. We examine three types of connected firms: (a) Halliburton, the company where Cheney served as CEO 1995-1999; (b) companies where Vice-President Cheney sat on the board during 1995-1999; (c) companies where at least one board member was appointed to Halliburton's board during 1995-1999.

Because our analysis hinges on the credibility of our measure of Cheney's personal business ties, we discuss in this remainder of this section why corporate board ties, particularly as they pertain to Vice-President Cheney, are the appropriate measure of personal networks. The social and economic meaning of relations among board members has been the source of extensive research as well as public concern in the United States ever since the Pujo Committee identified certain overlapping board memberships as harmful to the public and market early in the 20th century. Board ties have been shown to affect the process of information flow and the diffusion of practices among large corporations, including the adoption of poison pills (Davis, 1991), corporate acquisition activity (Haunschild, 1993), and CEO compensation (Khurana, 2002).

Central to our study, sociologists and organizational scholars have also found board ties to be the most effective means of operationalizing personal ties among the business elite (see Mizruchi, 1996 for a review). The cliché that relationships among board members are better characterized as intense, affect-laden, social relations – more a social club than an arms-length economic partnership – is, in fact, surprisingly true. Mace (1971) found that directors often describe their relations with fellow directors not in professional terms, but in terms more commonly used to describe friends, confidantes and close colleagues.

One possible contributing factor to the sociable atmosphere is the reality that most board nominations do not emanate from shareholders, but from the existing board itself, with the CEO significantly influencing the process. That is, most boards are entities in which the sitting CEO has significant influence on choosing new board members (Bebchuk and Fried, 2005). Thus, researchers have found that most directors have some prior social connection to, or are even close friends with, the existing CEO. Useem (1984) found that among the largest U.S. corporations, boards of directors, including the CEO of the firm, usually have a prior history of personal contact and professional relationships with newly appointed directors, often sharing membership in elite social clubs and educational backgrounds with a corporation's top executives. These friendship ties are further reinforced by the general boardroom culture where not only are collegiality and friendship emphasized, but a direct avoidance of conflict and confrontation is the norm (Khurana, 2002).

Thus, to summarize, board membership more broadly creates a context for a kind of reciprocal attraction and friendship among a fraternity of individuals. In its strongest form, it creates a sense of deep and shared obligations among a group of similar individuals.

This broad theme of reciprocal relations among board members is directly applicable to Vice-President Cheney's selection of board members. Further bolstering this view is the role that the vice-president played in transforming Halliburton's board after becoming CEO – according to our data, his tenure was marked by near-complete turnover of the board, with many of the new appointments going to those with pre-existing ties to Cheney. These included quail-hunting partners Roger Staubach and William Bradford, and former Secretary of State Lawrence Eagleburger, who served with Cheney in the government of the first President Bush, among others. Thus, the Halliburton board under Cheney was distinguished by a set of board members with both strong prior personal associations to Cheney, and by a deep sense of reciprocal relations with Cheney, given that they owed their board positions to his influence.

Based on the above motivation, we define an individual to be *Cheney-connected* if he was appointed to Halliburton's board of directors during 1995-1999, the period during which Cheney served as the company's CEO. We then define *Cheney-connected companies* to be those with Cheney-connected individuals (or Cheney himself) on their boards during the period 2000-2003. In theory, we might further distinguish between companies where the connected individual was a board member of the company, and those where the connected individual served as CEO. One might argue that the latter group of companies is more strongly connected, since the connected individual within the firm is more strongly incentivized to use any connections to benefit the company; in practice, however, we do not find that our results are affected when we limit the sample to only companies where the Halliburton board member served as CEO of another company. To summarize, we have three types of connected companies:

(a) Cheney-connected individual is on the company's board of directors
(b) Cheney as board member 1995-1999
(c) Cheney as CEO during 1995-1999 (i.e., Halliburton)

In all that follows, we will report results based on Halliburton separately from the full-sample results, since it is a particularly salient company.

To identify this set of companies, we use data from Compustat's Execucomp database. We begin by creating a list of all Halliburton board members whose tenure began during 1995-1999, which generates a list of Execucomp identifiers for all Cheney-connected individuals. To generate the list of companies connected to these individuals, we search for all company-year observations where the connected individual served on the board of directors during 2000-2003. In a number of cases, firms had multiple Cheney connections. For example, Cheney sat on the board of EDS, and a board member of EDS during 2000-2003 was also appointed to Halliburton's board during Cheney's tenure as CEO.

The full set of companies is listed in Table 1, along with basic measures of firm size and profitability in 2000. For comparison, we also list the median characteristics of the S&P 500 firms. Our connected sample is notably smaller (lower sales) and more profitable (higher return on assets and Tobin's Q) than the S&P overall. We also list the firm's industry classification; not surprisingly, the list is concentrated in oil and gas as well as heavy manufacturing.[4]

1.2 Events affecting the value of Cheney connections

Paralleling the earlier literature that uses the health status of leaders (Fisman, 2001; Faccio, 2005) as a shock to connections, we examine unexpected changes in Cheney's health as a shock to the value of connections. We first identified all relevant dates through an open-ended search of the *New York Times* and *Wall Street Journal* during 2000-2004 with the keywords CHENEY and HEALTH. This yielded a number of stories, including health check-ups, the Vice-President's two heart attacks and the occasion on which doctors implanted a pacemaker in the chest of the Vice-President to correct an irregular heartbeat. We exclude the health check-ups as relatively minor events, which generally stated that the Vice-President was in reasonable health; we also exclude the pacemaker installation, because it was announced on a late Friday afternoon

[4] We avoid trying to classify firms according to their need for government connections. When we limit the sample to oil, gas, and heavy manufacturing, industries that are perhaps more subject to government oversight, our point estimates are not substantially affected.

(likely timed by the White House to minimize public attention) and because information about the procedure may have been leaked prior to the announcement (see Della Vigna and Pollet, 2005 for an extended analysis about the timing of release of bad news).

Not surprisingly, the White House played down the seriousness of both heart attacks. However, media reports surrounding these events reflected genuine concern. After Cheney's third heart attack, on November 22, 2000, the New York Daily News noted that his " 'very slight heart attack' prompted speculation yesterday about his ability to withstand the rigors of the vice presidency,"[5] and after his fourth heart attack, on March 5, 2001, USA Today worried that "In a worst-case scenario, Cheney himself could die... In Cheney's case, that's not a far-fetched consideration."[6] We date each cardiac episode to the day when the event was announced by the White House.

Second, we consider shocks to Cheney's political fortunes. This generates two additional surprise events to augment the cardiac episodes described above: Cheney's appointment to head the vice-presidential search for Bush in 2000, and his subsequent self-appointment to this position. In both cases, we date the event to the first media mention of the event. In the first case, the *Washington Post* reported on April 19 that, "GOP sources said Bush ... may put [Cheney] in charge of the vice presidential selection process." The self-appointment as vice-presidential candidate was a genuine surprise to the market – the short-list of candidates did not include Cheney until the *Associated Press* revealed on Friday, July 21 that Cheney had changed his voter registration from Texas to Wyoming to make him eligible to run, and quoted a source as saying that "Bush is very, very close to settling on Cheney." Throughout the weekend, Cheney emerged as a clear front-runner, with an unofficial announcement on Monday, July 24. We use the two day returns (July 21, 24) for this event.

These nomination events, particularly Cheney's nomination for vice-president are much less clean than the heart attacks since they involve many simultaneous events that affect valuation. For example, both events may have drawn Cheney's attention away from the task of running Halliburton, and hence could result in negative returns. Further, given Cheney's close pre-existing ties to the Bush administration, it is not clear that he

[5] "CHENEY HAS A HEART ATTACK HIS 4TH SPARKS FEARS OF ABILITY TO DO VEEP JOB." Daily News (New York), November 23, 2000.

[6] "Cheney gets physicians' OK, but concerns remain." USA Today, March 7, 2001.

could lobby more effectively for the company as vice-president relative to his influence if he worked full-time as Halliburton's CEO to promote the company's interests.

We provide a timeline for each of these events, as well as interpretations of the seriousness of each heart attack in Appendix 1.[7]

An additional, and in some sense broader, test of the value of Cheney' connections is to examine the effect of the fortunes of the Bush Administration in general on the value of Cheney-connected companies. This may be a more rigorous test, since it may be expected that a company with personal ties to Cheney may have cultivated personal ties throughout the Republican administration. We use data from the political future contract for Bush victory in 2000 from the Iowa Electronic Market (IEM). In this online 'betting pool,' participants traded futures contracts on the candidates; those purchasing the Republican contract, for example, were paid $1 in the event of a Bush victory in the popular vote. Given the structure of this contract, the market price can be interpreted as the probability of a Bush victory.[8]

Finally, we consider an event that may have impacted Cheney's ability to provide favors. Specifically, there have been many allegations, including those quoted in the introduction, that companies with ties to Cheney were disproportionately awarded contracts in Iraqi reconstruction. To examine whether government contracting was expected to favor Cheney's friends, we examine the relationship between the probability of war in Iraq and the value of companies with Cheney connections in affected industries (military, oil, oil/gas services, and construction). Following Leigh, Wolfers, and Zitzewitz (2005), we proxy for the probability of war using the futures contract that paid $1 in the event that Saddam Hussein was captured by June 2003. Similar to the IEM, the price of the Saddam contract can be interpreted as the probability of capture by 2003, which would only have occurred if the U.S. invaded Iraq (see Leigh, Wolfers, and

[7] It is difficult to come up with real measures of the extent of these concerns – one possibility is the change in the Tradesports probability of Cheney receiving the Republican nomination for president in 2008. In each of our events, this probability did decline by a large percentage. However, this is a very thinly traded security, and is over very small probabilities. An additional possibility would be to look at the differential insurance premia or actuarial tables for an individual with Cheney's pre- and post-heart attack health profile. Unfortunately, someone with Cheney's health profile is not insurable. Further, while academic studies on the mortality effects of cardiac episodes do show a significant increase in short-term mortality rates (see, for example, Skinner et al, 2005), Cheney's health characteristics are too different from the subject pool to infer changes in survival probabilities based on such studies.

[8] We thank Brian Knight for providing these data. Please see Knight (2005) for details.

Zitzewitz (2005) for further details on the use of the Saddam contract to proxy for probability of war).

1.3 Company Data

Data on the daily returns for each company were extracted from the Center for Research in Security Prices (CRSP) database. We use risk-adjusted excess returns, which nets out overall market returns, and also takes into account a stock's volatility.[9] This is primarily to deal with the concern that the overall market may be affected by Cheney's well-being. Since we wish to focus on personal connections (as distinct from industry-wide effects), we also calculate returns for all firms listed in CRSP in a company's 4-digit SIC code. We additionally obtained basic firm characteristics (specifically, sales and assets) through the COMPUSTAT database, which provides balance sheet data on publicly traded companies.

1.4 The Vice-Presidency and the scope for influence

Before proceeding to our analysis, we briefly discuss the issue of whether, allegations notwithstanding, it may be possible for Cheney to influence the fortunes of favored companies. Vice-President Cheney has often been called the most influential vice-president in U.S. history, and he has had an active hand in formulating policy in many domains, both foreign and domestic.[10] Further, Cheney's reputation for involvement in ground-level decisions has made it possible for him to take actions that have influenced the fortunes of individual firms (as distinct from broad policies that affect entire industries).[11] More specifically, in the case of the awarding of contracts for work in Iraq, the potential for Cheney to intervene on behalf of his connected firms was arguably high – especially because the contracts were awarded by a political appointee, rather than a civil servant.[12]

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[9] This risk-adjustment is standard in asset pricing. See Brealey and Myers (1999) for details.

[10] Gilbert, Craig. "Cheney reinvents job: D.C. veteran wields unprecedented clout as vice president." Milwaukee Journal Sentinel, June 3, 2001.

[11] For example, it is alleged that Cheney interceded personally with the Indian government on behalf of Enron, to rescue the company's natural gas operation from generating losses. See "White House Aided Enron In Dispute; Cheney, Others Intervened Over Indian Power Plant." The Washington Post, January 19, 2002.

[12] Miller, T. Christian. "The Conflict in Iraq: Appointee's Role in Halliburton Pact Told." Los Angeles Times, June 14, 2004.

2. Results

In each set of results reported below, we provide estimates for the full sample of connected companies, as well as separate results for Halliburton specifically.

2.1 Effect of Cheney's Cardiac Episodes

As outlined in the preceding section, Richard Cheney has a history of heart trouble that may be the source of plausible exogenous shocks to the value of Cheney connections. This parallels the analysis of Fisman (2001), Roberts (1990), and Faccio and Parsley (2005). We report the risk-adjusted excess returns of connected firms on each of the two trading days on which Cheney had heart attacks after taking office. Table 2 lists both the basic risk-adjusted returns, as well as the returns relative to median industry returns. For the full sample, in all cases the point estimates are actually positive, but very close to zero and the standard error is very small. Longer event horizons only increase the standard deviations of returns. Using risk-adjusted excess returns and pooling the two events, and allowing for the non-independence of returns by company, we may reject the hypothesis that connected companies had negative returns at the five percent level using a one-sided test. For returns relative to median industry returns, we may reject the hypothesis that connected companies had returns below 0.15 percent (i.e., fifteen basis points) at the five percent level. Thus, we obtain a precisely measured zero effect of Cheney's health status on companies with ties to him. We also list the returns of Halliburton on the days that Cheney suffered his heart attacks, which were small but positive.

2.2 Cheney's Political Fortunes: Vice-presidential appointment and Bush election

Also in Table 2, we provide returns on the two key events leading up to Cheney's nomination as vice-presidential candidate: His appointment to head the search for Bush's running mate, and his surprise self-nomination. In this case, under the hypothesis that Cheney was expected to create value for connected companies if he took office (or influenced the choice of office-holder), we expect positive returns for connected companies in response to these announcements. As with the first two events, we find no significant effects, and may reject the hypothesis of 'large' positive effects owing to the small standard deviation, though as noted above, the interpretation of market response to these events is clouded by the many effects of Cheney's nomination on the affected companies.

Turning now to the election-based evidence, under the hypothesis that companies with Cheney connections are affected by the political fortunes of the Bush administration more broadly, returns of connected companies should be correlated with the probability of Bush's electoral victory. We follow the approach of Knight (2005), who studies the correlation of the returns of firms favored by Bush or Gore policies with the Iowa Electronics Market (IEM) probability of Bush victory. In our case, we consider regressions of the following form:

$$(1) \qquad R_{it} = \alpha_i + \beta^* \Delta Bush_t + \varepsilon_{it}$$

where $\Delta Bush_t$ is the change in the IEM probability of Bush victory on date t and R_{it} is the excess returns of company i on date t. Paralleling the presentation in Knight (2005), we report results based on daily as well as weekly returns. In columns (1) and (2) of Table 3, we present results based on daily returns, both risk-adjusted and relative to industry median. We include company fixed-effects and clustering at the company level. While the point estimates are positive, they imply a very small sensitivity and in neither case are significant at conventional levels. For example, a ten percentage point increase in the probability of Bush victory implies a return of less than 0.2 percent for connected companies. Further, when we limit our analyses to Halliburton (column (3)), where one might expect a greater effect of connections, we obtain a similarly small magnitude. The weekly returns (columns (4) – (6)) generate similarly insignificant effects.

2.3 Probability of War in Iraq

One of the primary allegations against Vice-President Cheney, as alluded to in the introduction, was the preferential treatment of contractors in the wake of the invasion of Iraq. As noted above, the potential for Cheney to intervene on behalf of his connected firms in this context was particularly high since the contracts were awarded by a political appointee. As Leigh, Wolfers, and Zitzewitz (2005) carefully document, there were strong industry-level responses to the Iraq War; below, we assess whether firms experienced particularly strong returns by virtue of their personal connections to Cheney *relative* to industry returns. For this section, we limit the analysis to the relatively select set of connected firms that were in oil, oil/gas services, military, or construction. The rationale for each is relatively straightforward. While oil companies would uniformly benefit from the higher oil prices generated by risk of war, connected oil firms might have preferential access to Iraqi oil fields. Construction and services firms might be favored in provided goods and services to the reconstruction process. Finally, military firms and their suppliers might differentially benefit from access to military contracts (though Leigh et al (2005) do not find any industry-wide impact on military firms).

In column (1) of Table 4, we provide results showing the relationship between connected firms' excess returns and the change in probability of Saddam's capture in June 2003 ($\Delta \text{SaddamJ03}_t$), for the full sample of connected firms. We use the following specification that precisely parallels (1) above:

$$(2) \qquad R_{it} = \alpha_i + \beta^* \Delta \text{SaddamJ03}_t + \varepsilon_{it}$$

We find that the coefficient on ΔSaddamJ03 is positive, and significant at the 10 percent level. However, as noted previously, there were strong industry-level responses to the probability of war in Iraq, so it is crucial to net out industry effects. This emphasizes the importance of netting out industry-wide effects in trying to capture the effects of personal connections as distinct from general industry effects. In column (2), we report returns relative to the industry median, first for all connected firms, then for Halliburton separately. The coefficient drops by more than 80 percent, implying that the unadjusted returns were likely picking up an industry-wide shock. Once again, the point estimate, 0.005, is small in magnitude and insignificant. Columns (4) – (6) reports weekly returns, and generates qualitatively similar results.

3. Conclusion

In this paper, we document that the returns of firms with political ties to Richard Cheney are unaffected by events that would credibly impact the value of any such connections. This is in contrast to the public perception, reinforced by the media, that Cheney showed special favors to Halliburton and others. Interestingly, it may be exactly this type of media scrutiny that prevents highly placed public officials in the United States from favoring those with whom they have personal connections. In that vein, our study's negative finding on the effect of connections is entirely consistent with the recent scandals involving Tom Delay, Randy Cunningham and even Enron. The lesson of such scandals may in fact be that blatant corruption that is discovered by an active law enforcement regiment and widely reported in the media serves to temper politicians' willingness to engage in favor-giving Since Cheney's every decision is scrutinized by numerous watchdog organizations and media outlets that span the ideological spectrum, their frequent reports of potential conflicts may in fact be helping to prevent Cheney's personal favor-giving, rather than reveal it.

We recognize that there are potential alternative explanations for our zero result – for example, the board ties measure emphasized by the network sociology literature may not be a sufficiently strong proxy for connectedness; in addition, Cheney's heart attacks may not have sufficiently impacted his medium-term longevity. However, nearly identical critiques apply to the work of Fisman (2001), Faccio (2005), and others, who do report strong effects in other contexts. We thus interpret our results as evidence that business-politics relations are not governed by the same type of personal ties that characterize many other economies.

We feel that our case-study approach is a useful starting point, as it allows us to focus carefully on the specifics of a particular individual where allegations of favor provision were rife. Obviously, this has also allowed us to concentrate on a particular case that is of significant import in its own right. However, further research will be useful in understanding the factors that limit value extraction through personal connections in general. This is one part of the broader agenda of understanding the factors that lead firms to interface with government through personal relations versus more formal institutionalized mechanisms.

Table 1. Sales, return on assets, and Tobin's Q in year 2000 for all companies in sample. (Data from COMPUSTAT.)

(1)	(2)	(3)	(4)	(5)
Company	Sales (in millions)	Return on Assets	Tobin's Q	Industry Name
BRINKER INTL INC	2,160	0.101	6.00	EATING PLACES
ELECTRONIC DATA SYSTEMS CORP	19,227	0.090	2.71	CMP PROGRAMMING,DATA PROCESS
HALLIBURTON CO	11,856	0.019	2.14	HEAVY CONSTR-NOT BLDG CONSTR
KERR-MCGEE CORP	4,121	0.110	1.48	CRUDE PETROLEUM & NATURAL GS
MITCHELL ENERGY & DEV	1,667	0.169	2.60	CRUDE PETROLEUM & NATURAL GS
NL INDUSTRIES	922	0.139	1.78	INDL INORGANIC CHEMICALS
NOBLE ENERGY INC	1,381	0.102	1.92	CRUDE PETROLEUM & NATURAL GS
PEPSICO INC	20,438	0.119	4.51	BEVERAGES
CONOCOPHILLIPS	20,835	0.091	1.41	PETROLEUM REFINING
PROCTER & GAMBLE CO	39,951	0.104	2.83	SOAP,DETERGENT,TOILET PREPS
TIMKEN CO	2,643	0.018	0.96	BALL AND ROLLER BEARINGS
UNION PACIFIC CORP	11,878	0.028	1.13	RAILROADS,LINE-HAUL OPERATNG
READERS DIGEST ASSN	2,554	0.099	3.04	BOOKS: PUBG, PUBG & PRINTING
ULTRAMAR DIAMOND SHAMROCK	14,397	0.074	1.12	PETROLEUM REFINING
TITANIUM METALS CORP	427	-0.050	0.81	ROLLING & DRAW NONFER METAL
Median of connected companies	4,121	0.099	1.92	
Median of S&P 500 companies	5,659	0.049	1.67	

Return on Assets represents profits before extraordinary items divided by book value of assets;
Tobin's Q represents the sum of market value of equity and book value of liabilities, divided by book value of assets.

Table 2. Average excess returns for Cheney-connected firms over the two-day period following an event that affects Cheney's ability to provide political favors.

The sample consists of all Cheney-connected firms (columns 1 and 3) and of Halliburton only (columns 2 and 4).

	Risk-adjusted returns		Risk-adjusted returns relative to industry median	
	(1)	(2)	(3)	(4)
	All connected firms	Halliburton only	All connected firms	Halliburton only
4/19/2000: Cheney becomes head of running mate selection committee	.0058 (.0226)	-.0073 (.0000)	.0035 (.0143)	.0000 (.0000)
7/21/2000: Cheney appoints himself as running mate	-.0091 (.0286)	-.0566 (.0000)	.0079 (.0224)	-.0264 (.0000)
11/22/2000: Heart attack	.0062 (.0189)	-.0054 (.0000)	.0029 (.0135)	.0041 (.0000)
3/5/2001: Heart attack	.0043 (.0205)	.0144 (.0000)	.0006 (.0156)	.0009 (.0000)
N	13	1	13	1

Table 3. Relationship between probability of a Bush victory and excess returns, across all connected firms, over both a one-day and five-day period.

Values represent coefficients on ΔBush (change in Tradesports probability on date t of Bush victory) in a regression with dependent variable of excess returns (in column 1), excess returns net of median industry returns (in column 2), and excess returns for Halliburton only (in column 3).

In columns 1-3, returns are over a period of one day following date t; columns 4-6 repeat the same dependent variables but using a period of one business week following date t.

The sample consists of all Cheney-connected firms (columns 1-2 and 4-5) and of Halliburton only (columns 3 and 6).

Dependent variable	Returns over one-day period			Returns over five-day (weekly) period		
	Risk-adjusted returns (all connected firms)	Risk-adjusted returns relative to industry median (all connected firms)	Risk-adjusted returns relative to industry median (Halliburton only)	Risk-adjusted returns (all connected firms)	Risk-adjusted returns relative to industry median (all connected firms)	Risk-adjusted returns relative to industry median (Halliburton only)
	(1)	(2)	(3)	(4)	(5)	(6)
ΔBush	0.016 (0.026)	0.021 (0.014)	0.022 (0.099)			
ΔBush				0.060 (0.078)	0.062 (0.072)	-0.039 (0.058)
N	1729	1729	133	338	338	26
R2	0.00	0.00	0.00	0.03	0.02	0.00

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4. Relationship between probability of Saddam's capture and excess returns, across all connected firms in war-related industries, over both a one-day and five-day period.

Values represent coefficients on ΔSaddamJ03 (change in Tradesports probability on date t of Saddam Hussein being captured by June 2003) in a regression with dependent variable of excess returns (in column 1), excess returns net of median industry returns (in column 2), and excess returns net of median industry returns for Halliburton only (in column 3). In columns 1-3, returns are over a period of one day following date t; columns 4-6 repeat the same dependent variables but using a period of one business week following date t. The sample consists of all Cheney-connected firms in war-related industries (columns 1-2 and 4-5) and of Halliburton only (columns 3 and 6).

Dependent variable	Returns over one-day period			Returns over five-day (weekly) period		
	Risk-adjusted returns (all connected firms in war-related industries)	Risk-adjusted returns relative to industry median (all connected firms in war-related industries)	Risk-adjusted returns relative to industry median (Halliburton only)	Risk-adjusted Returns (all connected firms in war-related industries)	Risk-adjusted returns relative to industry median (all connected firms in war-related industries)	Risk-adjusted returns relative to industry median (Halliburton only)
	(1)	(2)	(3)	(4)	(5)	(6)
ΔSaddamJ03	0.026*	0.005	0.035			
	(0.013)	(0.015)	(0.071)			
ΔSaddamJ03				0.001	-0.000	-0.001
				(0.001)	(0.001)	(0.001)
N	392	392	92	76	76	18
R2	0.01	0.01	0.00	0.07	0.03	0.02

Robust standard errors in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

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