Capitalizing on Capitol Hill: informed trading by hedge fund managers*

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Abstract

This paper examines the hypothesis that hedge fund managers gain an informational advantage in securities trading through their connections with lobbyists. Using datasets on the long-equity holdings and lobbyist connections of hedge funds from 1999 through 2012, we show that hedge funds outperform passive benchmarks by 56 to 93 basis points per month on their political holdings when they are connected to lobbyists. Furthermore, the political outperformance of connected funds decreased significantly after the STOCK Act became effective. Our study provides evidence on the transmission of political information in financial markets and on the value of such information to financial market participants.

Keywords: Hedge funds; Lobbyists; Informed trading; Performance; Information transfer.

JEL Classification: G11, G23, G14.

*We are especially grateful to an anonymous referee for exceptionally thorough readings and constructive suggestions. We thank Vikas Agarwal, Heitor Almeida, Craig Brown, Alex Chinco, Tarun Chordia, Stephen Dimmock, Roger Edelen, Vyacheslav Fos, Andrea Frazzini, Fangjian Fu, Campbell Harvey, Andrew Karolyi, Christopher Malloy, Pedro Matos, Neil Pearson, Joshua Pollet, Jeffrey Pontiff, Clemens Sialm, Melvyn Teo, Sheridan Titman, Mitch Warachka, Scott Weisbenner, Hao Zhang, as well as conference and seminar participants at the 2010 Financial Research Association annual meeting, the 2011 SFS Finance Cavalcade, the 2012 American Finance Association annual meetings, the Fifth Singapore International Conference on Finance, Baruch College, Drexel University, Georgetown University, Georgia Institute of Technology, Michigan State University, National University of Singapore, Purdue University, Singapore Management University, University of Illinois at Urbana-Champaign, University of Massachusetts Amherst, University of Miami, University of Oregon, University of Texas at Dallas, University of Washington, and Virginia Tech for comments and helpful discussions. We also benefit from conversations with Michael Mayhew at Integrity Research Associates and the team at VogelHood Research who provided valuable insights about the political intelligence industry. We thank Yih-Ling Ang, Zhe Du, Ruidi Huang, Jing Xie, and Si'en Yu for excellent research assistance. We retain responsibility for any remaining errors.

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Electronic copy available at: http://ssrn.com/abstract=1707181

1 Introduction

Governments play an increasingly prominent role in influencing firms and stock prices. According to a Duke University/CFO Magazine Business Outlook Survey in 2013, federal government policies rank second only to consumer demand among the top three external concerns corporations face. The profound effects of political decisions on corporate performance and stock prices are evidenced by recent government policies and actions such as the bailouts of AIG and Bear Stearns, the Dodd–Frank Wall Street Reform and Consumer Protection Act, and the Affordable Care Act. As a result, information regarding political decisions is of considerable interest to financial market participants. Yet, little is known about the dissemination and incorporation of political information or its value to financial market participants. In this paper, we test the hypothesis that hedge fund managers obtain and trade on political information through their connections with lobbyists.

Lobbyists have access to political information because they routinely exchange information with legislators and many are themselves former legislators. A *Wall Street Journal* (2006) article reports that hedge funds find Washington to be a "gold mine of market-moving information." By hiring lobbyists, hedge fund managers can gain access to information about ongoing or impending government actions. As an example, consider the case of USG Corp., a building-material company facing an estimated $5.5 billion in lawsuits for asbestos-related injuries according to its 2004 annual report. On November 15, 2005, the company's stock was traded at 200% of its normal trading volume and delivered an abnormal return of almost 5% (see Figure 1), yet no company-specific news was released on that day. On the following day, the Senate Majority Leader announced a plan to create a $140 billion bailout fund to relieve companies such as USG Corp. of their asbestos liabilities. It appears that the market reacted *before* the public announcement, which led the financial press to speculate that some investors traded ahead of the news, guided by consultants on "political intelligence" (*Business Week*, 2005).

The practice of lobbyists passing on material nonpublic political information obtained from within Congress to hedge funds has raised concerns among regulators, because it can compromise the integrity of the political process. The fact that members and employees of Congress were able to use confidential information acquired as a result of holding public office for personal gain could undermine the public trust placed in them; more disturbing is the possibility that it may lead to legislative decisions that would maximize private gain to lawmakers rather than serve the public interest (e.g., by increasing the

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demand for and the value of the information that lawmakers possess). Before 2012, trading by hedge funds on private political information obtained from within Congress did not violate insider trading laws because, first, neither the tippers (members of Congress and their staffers) nor the tippees (hedge funds) owed fiduciary duties to the issuers of the securities in which the hedge funds trade, and second, it was commonly believed that the tippers did not owe a duty of trust and confidence to the source of information (e.g., Jerke, 2010). The Stop Trading on Congressional Knowledge (STOCK) Act, signed into law in April 2012, imposes a duty of trust and confidence on government officials, thus exposing hedge funds that trade on private political information to potential insider trading liability. Nevertheless, the opaque nature of the political intelligence industry and enforcement challenges associated with the law have sparked an ongoing debate about whether it is necessary to institute a new law to specifically govern the transfer of political information in financial markets.

Our research provides evidence on how hedge funds benefit from access to political information. We make use of a large dataset on long-equity holdings of hedge funds from 1999 through 2012 as well as a database of federal lobbying expenditures in the U.S. to identify potential information transfers from lobbyists to hedge funds. If hedge funds gain an informational advantage through their connections with lobbyists, connected hedge funds should trade more actively in stocks that are sensitive to political decisions than non-connected funds. Connected hedge funds should also outperform non-connected hedge funds on their politically sensitive holdings. We refer to this as the information transfer hypothesis.

We use lobbying disclosure to identify connections between hedge funds and lobbyists. We classify a hedge fund as a connected fund in a given year if the fund incurs lobbying expenses in the previous year. We identify politically sensitive stocks as those that engage heavily in corporate lobbying. Because lobbying expenses represent the most important channel through which corporations seek political influence (Bombardini and Trebbi, 2012), firms whose operations and profitability are affected to a greater extent by government policies are more likely to engage in active lobbying (Hochberg, Sapienza, and Vissing-Jørgensen, 2009; Karolyi, 2009). As a result, their stock prices should be more sensitive to political developments. For robustness, we also use the sensitivity of stock return volatility to congressional schedules to identify political stocks, based on the premise that politically sensitive stocks are likely to be more volatile during periods when Congress is in session than in recess.

We find evidence that connected funds trade more actively in politically sensitive stocks. On average, connected funds' trading volume (inferred from quarterly holdings) in political stocks accounts for 24.44%

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of their total trading volume, compared with 18.67% for non-connected funds; the difference remains after controlling for various fund characteristics. Moreover, connected funds tilt their portfolio holdings more heavily towards political stocks than non-connected funds. These findings are consistent with our information transfer hypothesis.

We then examine whether the political holdings of connected funds outperform passive benchmarks. We construct calendar-time portfolios that mimic the aggregated portfolio allocations of connected and non-connected hedge funds by assigning stocks in each hedge fund portfolio to one of the two-by-two matrix of portfolios based on whether the hedge fund is connected and whether the stock is politically sensitive. We find that connected hedge funds earn higher returns on their political holdings. A strategy of buying a mimicking portfolio of political holdings by connected funds delivers an abnormal return of 56 to 93 basis points per month, which suggests that connected funds possess an informational advantage in trading politically sensitive stocks. Furthermore, we construct a spread portfolio in the spirit of a difference-in-differences (hereafter DiD) analysis. The tests show that connected funds, compared with non-connected ones, yield a monthly abnormal return of 69 to 89 basis points higher on their political positions than on non-political ones. This evidence suggests that the outperformance of connected funds on political holdings is not driven by the generally superior stock-picking abilities of connected fund managers or by political stocks in general delivering superior returns.

We are able to explore the political investment outperformance of connected funds based on time-series variations within hedge funds, because funds can switch from being connected in one year to being non-connected in another and vice versa. We thus focus on the subsample of hedge funds that have lobbyist connections in any of the years during our sample period. We compare the performance of politically sensitive holdings by these funds during periods when they are connected with that of the same funds during periods when they are not connected. The DiD tests show that connected funds, compared with the same funds during periods when they are not connected, outperform by 76 to 99 basis points per month on political holdings as opposed to non-political ones. The evidence suggests that the outperformance is not driven by combined fund-stock specific effects such as the informational advantage of local investors.

To test the possibility that our results are driven by portfolio specialization or superior skills in processing political information per se, we use a propensity-score matching approach to construct a matched sample of non-connected funds in the same quarter based on the portfolio weight in political

stocks and the trading fraction in political stocks as well as common fund characteristics, namely fund size and portfolio concentration. The matched non-connected funds are likely to have similar specializations and possess similar skills for processing political information as connected funds to the extent that the portfolio weight in politically sensitive stocks and the trading fraction capture these traits. The DiD tests again show that connected funds significantly outperform the matched non-connected funds on political holdings than on non-political ones. The evidence indicates that access to political information, rather than portfolio specialization or superior skills in processing political information, drives the superior performance of connected funds on politically sensitive stocks.

To shed light on whether hedge funds trade on confidential political information, we examine two settings where the nature of the information is relatively clear. First, we use the asbestos litigation reform of 2005 as a case study to examine informed trading by connected hedge funds preceding the public announcements of legislative decisions. We follow the empirical approach of Acharya and Johnson (2010) and construct measures of unusual trading activity before the announcement. We find that unusual trading activity in asbestos-affected stocks prior to the announcement is positively associated with the number of connected funds. This result provides evidence suggesting that connected funds exploit their access to confidential information related to upcoming legislative decisions. We also find evidence that connected funds deliver superior returns on their quarterly trades in stocks that are affected by the legislation.

Second, we exploit the enactment of the STOCK Act as a quasi-natural experiment that provides a plausibly exogenous variation in the propensity to trade on the basis of confidential political information. Since the Act imposed a duty of confidentiality on elected officials, both elected officials and their tippees, i.e., hedge funds, could be held liable for insider trading. Therefore, hedge funds should be less likely to trade on confidential political information after the Act was signed into law. Consistent with this prediction, we find that connected funds' political outperformance becomes significantly weaker after the enactment of the Act. This result provides evidence that the legislation reduces the incentive to trade on confidential political information. This finding also mitigates the concern that our results are driven by an influence hypothesis, according to which fund managers hire lobbyists to influence legislation in their favor so that they can profit from their trading in those stocks that are affected by the legislation.

Understanding the flow of political information and the extent to which political information has value to certain financial market participants like hedge funds carries three important implications. First,

from a corporate finance perspective, while trading by connected funds in politically sensitive stocks can potentially enhance stock price informativeness and improve real corporate decisions, it may discourage uninformed investors from trading in these stocks and increase the cost of equity capital for these firms. Second, from a policy perspective, understanding the channels through which political information gets incorporated into stock prices is important for the design of the legal arrangements governing the flow of political information. Third, from a political science perspective, the flow of political information can engender rent seeking by politicians. Since political information is of significant value to stock market participants, elected officials may use such information to derive personal benefits (e.g., in the form of campaign funds and revolving doors). Also, since elected officials possess valuable information about their own actions, there is a possibility that they may have an incentive to intervene excessively in economic activities or to institute temporary policy measures that have to be revisited time and again (e.g., federal tax code provisions set to expire in a few years) in order to create a demand for the information. Our findings indicate that the flow of political information, if left unregulated, may contribute to the problem of political corruption.

Our paper contributes to the literature on information transfer in the equity market (see, e.g., Coval and Moskowitz, 2001; Teo, 2009; Cohen, Frazzini, and Malloy, 2010). These studies focus on the transfer of corporate information generated from within a firm, typically from corporate insiders to outside investors. Our paper complements this literature by examining the flow of political information, which concerns government policy and involves corporate outsiders, namely government officials and lobbyists, as the source of information.[1] Our paper is also closely related to the recent literature that examines the investment strategies and performance of hedge fund managers using their actual long-equity holdings (e.g., Brunnermeier and Nagel, 2004; Griffin and Xu, 2009; Aragon and Strahan, 2012; Ben-David, Franzoni, and Moussawi, 2012; Ben-David, Franzoni, Landier, and Moussawi, 2012).[2] Our study provides new insights to the hedge fund performance literature by offering evidence that access to information may be one of the sources of hedge funds' superior performance.[3]

The remainder of this paper is organized as follows. Section 2 describes the institutional background

[1] In a related study, Gargano, Rossi, and Wermers (2014) find evidence that hedge funds gain an informational advantage through Freedom of Information Act (FOIA) requests.

[2] Our paper also joins a large literature on the performance of hedge fund managers (see, e.g., Ackermann, McEnally, and Ravenscraft, 1999; Brown, Goetzmann, and Ibbotson, 1999; Agarwal and Naik, 2000; Liang, 2000; Aragon, 2007; Agarwal, Daniel, and Naik, 2009; Kosowski, Naik, and Teo, 2007; Titman and Tiu, 2011; Sun, Wang, and Zheng, 2012).

[3] Considering that political stocks only account for about a quarter of connected hedge funds' portfolios and there are a relatively small number of hedge funds that are connected (representing roughly one tenth of total hedge fund assets), we do not claim that the political information channel provides the majority of equity hedge funds' profits.

of the market for political information and applicable insider trading laws. Section 3 describes the data and summary statistics. Section 4 presents the main empirical results. Section 5 explores two event-based settings to shed light on the nature of political information, and Section 6 concludes.

2 Institutional background

This section outlines the institutional details that are particularly important for our empirical tests. We start with a description of some important features of the market for political information, and then describe the legal arrangements governing the flow of political information.

2.1 The market for political information

Unlike information sourced from corporate insiders, political information originates from outside the firm, i.e., government officials. Government decisions and actions can move stock prices. In fact, Manne (1966, p. 171) contends that "the federal government is the largest producer of information capable of having a substantial effect on stock-market prices." Given the increasingly prominent role the federal government plays in the economic life of firms, political information is of great interest to financial market participants.

Lobbyists are uniquely positioned to act as conduits of political information in the financial markets.[4] This arises because an important part of a legislator's job is to exchange information with lobbyists, which enables the latter to gain access to political information. Moreover, many lobbyists are themselves former legislators and thus are closely connected to powerful politicians and well informed about the political process. For example, according to the Center for Responsive Politics, from 1995 through 2012, 63.0% (75.7%) of former U.S. Senators (Representatives) became lobbyists after retiring from Congress. The close relationship and interactions with politicians enable lobbyists to access and produce political information. Some information may be sensitive and confidential in nature, e.g., private information about the likely outcome of legislative issues affecting the private sector and that on impending congressional

[4] When politicians directly communicate confidential political information to professional traders in exchange for, or in expectation of, private gain, knowing that the latter are likely to use it to inform trading decisions, this is a clear indication of quid pro quo exchanges. Since politicians do not want to create such a perception because of public scrutiny and career or reputation concerns (e.g., Fellowes and Wolf, 2004; Issacharof, 2010), direct information flows from politicians to hedge fund managers are less likely to be a dominant channel. We discuss and evaluate this possibility in Section IA.I.E of the Internet Appendix.

investigations. Other information may be opinions formed through interactions with politicians and an analysis of publicly available political information, e.g., historical voting patterns in Congress, past legislative activities, and overall political climate. It is reported that some of the biggest lobbying firms, e.g., Patton Boggs, Akin Gump Strauss Hauer & Feld, and Cassidy & Associates, were active players in the market for political information (*The Hill*, 2012). According to Integrity Research Associates, a firm specializing in the investment research industry, the political information trade grew to an industry that generates over $400 million in revenue in 2009 (*Wall Street Journal*, 2013).[5]

Hedge funds are widely considered to be the primary participants in the market for political information, actively seeking and trading on political information (e.g., *Wall Street Journal,* 2006, 2013). Compared with other types of institutions, hedge funds have greater incentives and ability to exploit their access to political information. Specifically, hedge funds typically charge performance fees (Ackermann, McEnally, and Ravenscraft, 1999; Agarwal, Daniel, and Naik, 2009), which provides fund managers a strong incentive to maximize investment returns through informed trading. Also, hedge funds can employ more flexible investment strategies, such as leverage, short selling, and derivatives, to maximize the value of political information and are subject to less stringent regulation. For instance, unlike mutual funds, which must report their holdings at both the company and individual fund levels, hedge funds are required to disclose their holdings only at the company level (i.e., 13F filings). The lesser disclosure requirement is likely to increase potential profits from informed trading (Huddart, Hughes, and Levine, 2001) and encourage hedge fund managers to actively seek information in the first place.

Given that the potential benefits of informed trading based on political information can be substantial, a natural question is why not all hedge funds participate in the market for political information. We argue that this may be explained by a trade-off between expected benefits and costs of informed trading based on political information. A large literature in finance and accounting has established that information production is costly, e.g., Grossman and Stiglitz (1976, 1980), Diamond and Verrecchia (1981), Verrecchia (1982), Admati and Pfleiderer (1986), and Bhushan (1989). Since hedge funds face different marginal benefits and marginal costs of acquiring political information, a fund would enter the market only when the expected marginal benefits outweigh the expected marginal costs of doing so.

The costs of acquiring political information may be high because of two reasons. First, a key barrier

[5]It is worth pointing out that lobbyists are not required to disclose their political intelligence activities, although they are required to disclose their lobbying activities. According to lobbying disclosure reports filed during the period from 1998 through 2011, hedge funds spent a total of $94.2 million on lobbying the federal government.

to entry in the lobbying industry is political connections. Recent studies show that political connections are a scarce resource and lobbyists who are connected to politicians in power can consistently command a monetary premium (Bertrand, Bombardini, and Trebbi, 2014; Blanes-i-Vidal, Draca, and Fons-Rosen, 2010). To obtain political information from a politician, a lobbyist needs to build a relationship of trust and credibility with that politician, which requires repeated close interactions at the personal level. Given that there are a limited number of powerful politicians and the time of these politicians is constrained so that they cannot interact with too many lobbyists, it seems reasonable that only a relatively small number of lobbyists have built such a relationship with the politicians and have access to political information. Consistent with this conjecture, we find that the top 10% of the lobbying firms on average account for 72.2% of the total lobbying revenue, suggesting a highly concentrated market structure for lobbying. Also, from politicians' perspective, it is likely that because of reputational concerns, politicians would restrict the number of lobbyists who have access to private political information. Since the passing of private political information for securities trading purposes is highly controversial and politicians are concerned about the appearance of quid pro quo relationship with lobbyists, politicians are likely to provide information only to a relatively small number of lobbyists with whom they have built a trusting relationship. These considerations suggest that the number of informed lobbyists is likely limited, which can enable them to charge a premium price for political information. Therefore, ceteris paribus, the high costs may reduce hedge funds' incentives to acquire political information.

Second, the exclusive relationship between lobbyists and their incumbent hedge fund clients can present a barrier to entry for potential hedge fund entrants. Our conversations with industry practitioners indicate that hedge funds typically prefer exclusive relationships with information sellers such as lobbyists, which can enable the former to maximize expected trading profits by trading in large quantities (García and Sangiorgi, 2011). In particular, hedge funds seeking research providers commonly inquire about the number of other hedge fund clients the providers work with and screen out those for whom the number of clients exceeds a certain threshold. Also, in the case of custom studies on specific topics, hedge funds often request that the providers do not conduct similar research for other clients for a specified period of time. Therefore, the exclusive relationship, together with the limited supply of informed lobbyists, can increase entry costs and limit the number of hedge funds participating in the market for political information.

2.2 Insider trading laws pertaining to hedge funds' trading on political information

While insider trading based upon material nonpublic information can potentially lead to more informative stock prices, it also undermines public confidence in the stock market and may discourage uninformed investors from participating in the market (e.g., Carlton and Fischel, 1983; Guiso, Sapienza, and Zingales, 2008). There are two principal theories of insider trading liability under Section 10(b) of the Securities Exchange Act of 1934, namely the classical theory and the misappropriation theory. Under the classical theory, a trader violates Section 10(b) and Rule 10b-5 by trading on the basis of material nonpublic information if she owes fiduciary duty to the issuer of the security. The classical theory covers the situations where a corporate insider trades in the company's securities based on material nonpublic information about the company. Under the misappropriation theory, even if a trader does not owe a fiduciary duty to the issuer of the security in which she trades, she may still be liable for insider trading if material nonpublic information is misappropriated in breach of a duty of trust or confidence. Under both theories, a tippee can be held liable for trading on a tip of material nonpublic information if the information is disclosed in breach of a fiduciary duty or similar relationship of trust and confidence and the tippee knows or should know that there has been a breach. It is worth noting that tippee liability can arise even when the tippee is several steps removed from the source of the information, i.e., when there is a chain of tipping.[6]

In the case of hedge funds' trading on material nonpublic information obtained from within Congress, the classical theory is not applicable because such information originates from outside a company and typically does not involve corporate insiders. The misappropriation theory presents a more viable application (Jerke, 2010). Before 2012, however, it was commonly believed that members and employees of Congress did not have a duty of confidentiality to Congress with respect to material nonpublic information derived from their official duties. Therefore, hedge funds that traded on the basis of material nonpublic information obtained from within Congress did not violate insider trading laws.

The STOCK Act of 2012 expressly imposes a duty of trust and confidence on congressional insiders. Specifically, Section 4 of the Act provides that "[m]embers of Congress and employees of Congress are not exempt from the insider trading prohibitions arising under the securities laws, including Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder." The Act amends Section 21A of the

[6] The Second Circuit's recent decision in *United States v. Newman* makes it less likely that those further on the tipping chain will be prosecuted. See, e.g., Bainbridge (2001) for a detailed discussion of U.S. insider trading laws.

Securities Exchange Act to provide that "[m]embers and employees of Congress owe a duty of trust and confidence to the Congress, the United States Government, and the citizens of the United States with respect to material, nonpublic information derived from their position or gained from the performance of their official responsibilities." The amended Section 21A thus subjects congressional insiders to liability for "communicating [material nonpublic] information in connection with a transaction." Because the Act imposes a duty of trust and confidence on congressional insiders, hedge funds could be held liable for trading on confidential information obtained from congressional sources under Rule 10b5-1, which defines illegal insider trading as "the purchase or sale of a security [...] on the basis of material nonpublic information [...], in breach of a duty of trust or confidence that is owed directly, indirectly, or derivatively, [...] to any other person who is the source of the material nonpublic information." In other words, if a congressional insider improperly discloses confidential political information directly or indirectly to a hedge fund manager in breach of a duty of confidentiality, and that fund manager trades on the information, then both the congressional insider and the hedge fund manager could be held liable for insider trading violations (e.g., U.S. Government Accountability Office, 2013; Burke, Kelner, and Parks, 2013). According to an SEC enforcement officer, the SEC will "apply the STOCK Act to tippees just as it has applied traditional insider trading laws to tippees, scrutinizing a recipient of insider information even if that recipient is two or three times removed from the original source" (Nathan, 2013).

Anecdotal accounts suggest that, because of concerns about insider trading liability under the STOCK Act, many hedge funds have reduced their use of political information. A *Wall Street Journal* (2014a) article quotes a lobbyist as saying that "[the Act] has really put a chill on the political-intelligence industry." According to Integrity Research Associates, many hedge funds "either eliminated or dramatically reduced their use of Washington policy research, lobbying firms, or other sources of potentially risky 'political intelligence' information." The SEC has made considerable efforts to pursue claims under the STOCK Act. A widely publicized investigation concerns the tipping of confidential information about a change in Medicare reimbursement rates and the associated trading by hedge funds (e.g., *Wall Street Journal*, 2014b). An enforcement challenge facing the SEC is to distinguish between tipping of information for securities trading purposes and communications for legislative purposes, the latter of which is protected by the Speech or Debate privilege in the U.S. Constitution.[7]

[7] As part of the investigation of the Medicare information leakage case, the SEC filed a federal lawsuit in June 2014 seeking to enforce the subpoenas it issued to Congress and a staffer, which request information on the staffer's communications with a lobbyist who tipped the investment community. The SEC contended that the communications would help determine whether any conduct related to the transmittal of the information constituted insider trading. Congress argued that such communications were protected by the Speech or Debate Clause. The lawsuit is still pending in the federal court.

It is worth noting that the STOCK Act was intended primarily to regulate trading based on confidential information obtained from within Congress, which is why the term "congressional knowledge" appears in the title of the Act. Trading on the basis of confidential information obtained from within the executive branch of the federal government, on the other hand, was covered by insider trading laws even before the Act, because it has been well established by court precedents that employees of the executive branch owe a duty of trust and confidence to their employers (see, e.g., *United States v. Royer*, *United States v. Peltz*, *United States v. Keane*, and *United States v. Cheng Yi Liang*). For instance, in *United States v. Royer*, an FBI agent and his tippees were convicted of insider trading for misappropriating confidential law enforcement information concerning publicly traded companies.

3 Data

3.1 Hedge fund holdings data

We construct a dataset on hedge fund holdings by identifying hedge fund managers from the Thomson Reuters CDA/Spectrum Institutional (13F) Holdings Database. As Griffin and Xu (2009) point out, using hedge funds' required 13F equity filings instead of hedge fund returns such as the Lipper/TASS database can avoid various problems associated with the latter: including misreporting, return manipulation, and "informationless" strategies.[8] As in other studies that use 13F holdings data for hedge funds (e.g., Brunnermeier and Nagel, 2004; Griffin and Xu, 2009), we focus on large hedge funds, because information on these funds is more readily available and because they can maximize the value of information by trading in large quantities. We first identify candidate hedge fund managers from 2002 through 2012 issues of *Institutional Investor* magazine's annual Hedge Fund 100 list and match each candidate hedge fund manager by name in the 13F database. This list is then supplemented by a list of large fund managers from 13F. Because hedge fund managers are likely to be classified into two types, independent investment advisors (type 4) and all others (type 5), we pick fund managers in the two categories with the dollar value of equity portfolios exceeding $1 billion (in 2012 dollars) in any of the years from 1990 through 2012. This procedure produces a list of $4,936$ fund managers.

[8] The 13F data are not perfect, however, because some holdings are not reported and the disclosed quarter-end holdings do not reflect intra-quarter trades. These limitations are likely to impart a downward bias to our performance estimates as well as the estimated trading and holdings of political stocks by connected funds. In particular, since informed funds are likely to use confidential filings to conceal their information (Agarwal, Jiang, Tang, and Yang, 2013) and implement profitable intra-quarter round-trip trades (Puckett and Yan, 2011), the estimated DiD alphas and trading and holdings of political stocks by connected funds may understate the true values.

Following Brunnermeier and Nagel (2004), we identify a manager as a hedge fund manager if either of the following two conditions is satisfied. First, the fund manager is not registered as an investment advisor with the SEC, and the company website or web-based searches suggest that it is a hedge fund. Second, if the manager is registered, we require that Form ADV show that at least 50% of the fund's clients are "other pooled investment vehicles (e.g., hedge funds)" or "high net worth individuals," and that it charges performance-based fees. Because institutions report their holdings at the firm level, holdings by hedge funds that are affiliated with investment banks (such as Goldman Sachs and J.P. Morgan) are lumped together with their other lines of business, such as mutual funds and prime brokerage. We therefore exclude hedge funds that are affiliated with investment banks. There are 494 distinct hedge fund managers in the sample. As of December 2010, our sample hedge funds in aggregate hold 5.1% of U.S. common equity, and their aggregate long-equity portfolios represent 33.9% of the assets under management by the sample of all hedge funds, including those that do not report to commercial databases, in Edelman, Fung, and Hsieh (2013). The hedge fund holdings database employed in this paper is similar to that used in Griffin and Xu (2009).

3.2 Hedge fund-lobbyist connections

We use lobbying disclosure to identify the connection between hedge funds and lobbyists. The Lobbying Disclosure Act of 1995 requires lobbyists who seek to affect U.S. government policies to publicly disclose the clients they lobby on behalf of, which enables us to determine whether a hedge fund is a client of a lobbying firm in a given year. Specifically, we identify connected hedge funds as those that incur lobbying expenses in a given year. A hedge fund can engage a lobbyist for two purposes: to influence the government (i.e., by lobbying) and to acquire political information. While the information on lobbying activity is made available because of the Lobbying Disclosure Act, the information on the gathering of political information is not subject to public disclosure. We thus use lobbying activity as a proxy to identify the network for political information by assuming that hedge funds that hire lobbyists for lobbying also acquire political information from them. This proxy, however, is imperfect insofar as it may give rise to two types of misclassifications: (1) a hedge fund may hire a lobbyist solely for the purpose of lobbying and not for information gathering and thus may be incorrectly categorized as connected in our approach, and (2) a fund that acquires political information may not hire a lobbyist for lobbying activities and thus may be incorrectly identified as non-connected. It is worth noting that these misclassifications

introduce noise into our tests and bias against finding evidence of informed trading.

We obtain lobbying data from the Center for Responsive Politics (CRP) and merge it with our hedge fund holdings database by name to extract information on hedge funds' lobbying activities.[9] Appendix A provides a description of the data and the name-matching procedure. Since our holdings data are at the fund company level, we treat each fund company as an entity in the CRP lobbying dataset. We classify a fund-year as connected if the fund hires a lobbyist in the previous year.[10] Since the CRP lobbying data start from 1998 and we use lagged one-year information to identify connected funds, our hedge fund sample covers the period from 1999 through 2012. We identify 58 distinct connected fund companies (out of 494 fund companies) during the sample period. All of the connections are identified at the fund company level. In fact, we find no cases in which an individual fund in a hedge fund complex hires a lobbyist.

Panel A of Table 1 reports the distribution of connected hedge funds by year during the sample period. Hedge funds were increasingly active in hiring lobbyists during the sample period. The number of connected funds increased from 6 in 1999 to 23 in 2012.[11] While the number of connected funds is relatively small, they represent a significant fraction of the total value of long-equity holdings by hedge funds because connected funds are larger in size (see Table 1, Panel B). For example, connected funds collectively account for 10.97% of the total dollar value of equity holdings by all sample hedge funds during the sample period.

Panel B of Table 1 compares the mean and median of several characteristics of connected and non-connected funds. To gauge the extent to which our proxy for connected funds captures hedge funds' political investments, we look at political contributions. We obtain data on political campaign contributions from the Center for Responsive Politics and merge the CRP data with our hedge fund sample. We focus on political contributions to candidates for federal office and committees supporting those candidates made by individuals employed by hedge funds. The average annual political contribution by connected funds is about 10 times that of non-connected funds ($159.5 thousand versus $15.9 thousand),

[9] To focus on lobbyist connections of individual fund companies, we exclude lobbying activities by hedge fund industry associations.

[10] Hedge funds' connections to lobbyists are quite persistent. The probability that a fund stays connected in a year conditional on it being connected in the previous year is 79%.

[11] Part of the reason for the increase in the number of hedge funds that employ lobbyists in 2010 is the Dodd-Frank Act's many provisions that seek to increase transparency to regulators on hedge fund activity. As discussed above, this can give rise to misclassification and introduce noise into our tests to the extent that these funds engage only in lobbying and not in acquiring political information.

suggesting that the lobbying connections have broader implications for hedge funds' investments in the political process and are just a way of identifying the network. The same panel also shows that connected funds have significantly larger portfolios. The average portfolio size for connected funds is about $4.0 billion, whereas that for non-connected funds is $1.7 billion. Connected and non-connected funds do not differ significantly in their portfolio turnover rates. To compare the difference in the stock characteristics of their holdings, we follow Hong and Kostovetsky (2012) and calculate the weighted-average logarithm of the market capitalization (*Mean component log size*) and the weighted-average logarithm of the book-to-market ratio (*Mean component log B/M*) of the stocks in a hedge fund's portfolio. We also compute the weighted-average past return, return volatility, return skewness, CAPM beta, and turnover of the component stocks in the same way. Connected fund managers seem to tilt their holdings more towards small stocks and value stocks, but the two groups of funds do not differ in other holdings characteristics. Connected hedge funds also hold more concentrated positions and have a higher probability of survival, as measured by whether the fund continues to file 13F reports until the last quarter of 2012.

We also match our hedge fund holdings data to the Lipper/TASS database to retrieve other fund characteristics such as incentive structure and restrictions on investor withdrawals. We are able to match 198 (out of 494) hedge fund managers to TASS. Because the TASS database reports information on the individual fund level, we take the average across all funds under the same hedge fund company. Panel B of Table 1 shows that connected funds require a higher minimum investment, which is partly due to their larger size. Connected funds also appear to impose longer redemption notice periods and charge lower incentive fees than non-connected ones.[12]

[Insert Table 1 about here]

3.3 Measuring politically sensitive stocks

Some stocks are more sensitive to government policies and actions than others. For example, industries that are deemed socially irresponsible, such as tobacco, alcohol, and gaming, and industries that depend heavily on government contracts, such as defense, can be subject to significant political influence. Companies in different industries can also be affected by the same political issue. For instance, companies

[12] Agarwal, Daniel, and Naik (2009) find that the incentive fee percentage rate by itself does not explain hedge fund performance. Consistent with this, we do not find significant differences in performance between funds with an above-median incentive fee percentage rate and those below median in our sample of hedge funds.

in chemical, mining, shipbuilding, construction, and other industries can be exposed to asbestos-related litigation and therefore can be affected by the passage of an asbestos bailout bill in Congress. We use lobbying expenditures of companies to identify politically sensitive stocks. Lobbying expenses represent the most important channel through which corporations seek political influence (Bombardini and Trebbi, 2012).[13] This suggests that firms whose operations and profitability are affected to a greater extent by government policies and actions are more likely to engage in active lobbying (Hochberg, Sapienza, and Vissing-Jørgensen, 2009; Karolyi, 2009; Yu and Yu, 2011). As such, their stock prices are more sensitive to government decisions.

We merge the CRP lobbying data with CRSP manually by name to extract lobbying expenses by public firms from 1998 through 2011. Our sample of stocks includes all common stocks traded on the three major exchanges (NYSE, AMEX, and NASDAQ) in the CRSP-Compustat merged database. Panel A of Table 2 shows summary statistics of lobbying expenses incurred by public firms by year and by Fama-French 12-industry grouping. Both the number of public firms that lobby and the total amount of lobbying expenses have increased over the sample period. There is also substantial variation across industries in terms of lobbying intensity. For example, the industry with the highest proportion of firms that lobby are utilities (49.6%) and the industry with the lowest proportion is shops (10.1%). In terms of total lobbying expenditures, the top industry is finance (over $1.5 billion) and the bottom industry is consumer durables (about $275 million). The panel also shows that among public firms that incur lobbying expenses, the average firm hires three distinct lobbying firms in a year.

Since lobbying intensity varies across industries and likely also with firm characteristics, we run cross-sectional regressions to control for these factors. Specifically, for each year and each of the 12 Fama-French industries, we run cross-sectional Tobit regressions of the logarithm of one plus lobbying expenses on common firm characteristics including firm size, book-to-market ratio, leverage, profitability, and past 12-month returns. The Tobit regressions are left-censored at zero.[14] We sort the residuals from the regressions into deciles and classify a stock-year as politically sensitive if the stock is in the top decile in the previous year.[15] It is worth noting that we rely solely on ex ante information to identify political

[13] Another way in which a corporation can affect legislation is through campaign contributions. However, as Ansolabehere, de Figueiredo, and Snyder (2003) point out, the amount of lobbying expenses far exceeds (about 10 times in 1997-1998) that of campaign contributions.

[14] Our results are qualitatively unchanged if we use OLS regressions with industry fixed effects. We use Tobit regressions to ensure that the residuals for firms that do not incur lobbying expenses are zero and these firms are not classified as politically sensitive.

[15] The reason for using the residual lobbying expenditure deciles rather than a dummy for whether a firm lobbies or not is that the lobbying expenses of some firms are relatively trivial. For example, among public corporations that incur

stocks; we classify stocks in year t into political and non-political categories based on their lobbying and accounting information in year $t-1$. This lessens the possibility that ex post factors contaminate our inferences. Political sensitiveness of stocks is quite persistent: the probability that a stock stays politically sensitive in a year conditional on it being politically sensitive in the previous year is 73%.

We next run multivariate regressions to examine which firm characteristics are associated with politically sensitive stocks. We consider the following explanatory variables: congressional sensitivity, geographic distance between the firm and Washington D.C., and sin stocks (including alcohol, tobacco, and gaming stocks, as defined in Hong and Kacperczyk, 2009). We calculate congressional sensitivity for each stock-year as the ratio of idiosyncratic volatility on days when Congress is in session to idiosyncratic volatility on days when Congress is in recess. If a stock becomes more volatile when Congress is in session than in recess, it is reasonable to believe that the stock is more sensitive to government policies and actions. We expect that the likelihood of being a politically sensitive stock increases with congressional sensitivity, since both are designed to capture the sensitiveness of stock returns to political decisions. Firms that are affected to a greater extent by political decisions may choose to locate closer to Washington D.C., suggesting a negative relation between political sensitiveness and geographic distance. We also expect sin stocks to be associated with a greater probability of being politically sensitive, because regulations on these industries have become increasingly restrictive. We control for firm and industry characteristics suggested by the literature (e.g., Cooper, Gulen, and Ovtchinnikov, 2010; Masters and Keim, 1985) that are related to a firm's political activities, including firm size, number of employees, number of business segments, number of geographical segments, sales concentration, and market share.

Panel B of Table 2 presents the regression results. The first two columns are Tobit regressions with the logarithm of one plus lobbying expenses as the dependent variable, and the last two columns are Probit regressions with an indicator variable for politically sensitive stocks as the dependent variable.[16] It should be noted that the results are not intended to imply causation, i.e., that some firm characteristics cause the stock price to be sensitive to political decisions, but instead they indicate correlation between firm characteristics and political sensitiveness. Consistent with our conjecture, the coefficients on congressional sensitivity and sin stocks are positive and generally significant. Firms that are head-

lobbying expenses, the top 10% (20%) spenders account for 63.4% (79.8%) of the total lobbying expenditures by public firms. Considering that, other things equal, the stock prices of firms that spend more on lobbying are likely to be more sensitive to political information, we focus on firms whose lobbying intensity is large relative to its fundamental determinants.

[16] In the Probit regressions, we do not include firm characteristics that are used to obtain the residual lobbying expenses. Our inferences, however, remain unchanged whether these firm characteristics are included, which is expected given that the political stock indicator is constructed using the residual of these characteristics.

quartered closer to Washington D.C. are associated with an increased probability of being politically sensitive. We also find that larger firms, firms with more business segments, firms with less cash flows, and firms from more concentrated industries are associated with increased political sensitiveness. These results are broadly consistent with those reported in Cooper, Gulen, and Ovtchinnikov (2010) and Masters and Keim (1985). While we do not include government contracts as an explanatory variable in the regressions, government contractor stocks are likely subsumed in the congressional sensitivity measure and the geographical distance measure.

Last, we construct calendar-time value-weighted portfolios of political and non-political stocks and compare their performance. On average, there are 390 (4,043) stocks in the calendar-time portfolio of political (non-political) stocks. Panel C of Table 2 reports the raw returns and risk-adjusted returns of these two portfolios. Over the sample period from 1999 through 2012, neither politically sensitive stocks nor non-politically sensitive stocks exhibit significant abnormal returns. Furthermore, there is no significant performance difference between the two groups of stocks.

[Insert Table 2 about here]

4 Empirical results

4.1 Hedge fund trading and holdings in politically sensitive stocks

The information transfer hypothesis predicts that connected hedge fund managers should trade disproportionately in politically sensitive stocks due to their informational advantages. To test this prediction, we compare the trading activity of connected hedge funds in political stocks with that of non-connected hedge funds. We measure hedge fund trading volume at a quarterly frequency using disclosed long-equity holdings by assuming that hedge funds do not trade intra-quarterly between two consecutive quarterly reports and the changes in holdings during a quarter occur only at the end of the quarter. For each fund-quarter, we compute the fraction of trading volume in politically sensitive stocks as the dollar trading volume of the fund in politically sensitive stocks divided by the total dollar trading volume of the fund in the quarter.

Connected fund managers may also overweight politically sensitive stocks in their portfolios due to their informational advantages in a way that is similar to mutual fund managers' overweighting their

local investments (Coval and Moskowitz, 1999) or investments in their social network (Cohen, Frazzini, and Malloy, 2008). To test this, we calculate, for each fund-quarter, the portfolio weight in politically sensitive stocks as the dollar holdings of these stocks divided by the total dollar holdings of the fund at the end of the quarter. To control for the style effects of hedge fund holdings (as indicated by Table 1) and the time-series variation in the trading and holdings of political stocks, we follow Hong and Kostovetsky (2012) to adjust the trading fraction and the portfolio weight by running cross-sectional regressions of the raw measures on *Mean component log size* and *Mean component log B/M* and assigning each observation the residual from these regressions.

Panel A of Table 3 presents the summary statistics for the fraction of trading volume done by hedge funds in political stocks and the portfolio weight of the funds in political stocks based on disclosed long-equity positions for the sample of all fund-quarters from 1999 through 2012. For each measure, we compute the cross-sectional mean for connected and non-connected fund-quarters separately and report their time-series averages. We also report the time-series averages (and associated t-statistics) of the differences in cross-sectional means between the two groups of funds. This procedure is equivalent to estimating univariate Fama-MacBeth regressions with the connected indicator as the only independent variable. Connected funds trade more heavily in politically sensitive stocks than non-connected funds. The fraction of trading volume done by the average connected fund in political stocks is 5.77 percentage points higher or 30.9% than that for the average non-connected fund (24.44% versus 18.67%). The difference is significant at the 1% level. Turning to the results using the residual trading fraction, we find that the average connected fund overweights its residual trading fraction given fund characteristics in politically sensitive stocks by 5.71 percentage points, but the average non-connected fund underweights its residual trading fraction by 0.08 percentage points. The difference of 5.79 percentage points is significant at the 1% level. Connected hedge funds also tilt their portfolios more heavily towards politically sensitive stocks. For example, the average connected fund manager allocates 24.47% of her portfolio to political stocks, compared with 17.95% for the average non-connected fund. The difference of 6.53 percentage points or 36.4% is significant at the 5% level.

We then repeat these tests on the subsample of funds that have lobbyist connections at some point during the sample period. Because some hedge funds switch from being connected in one year to not being connected in another and vice versa, this sample enables us to control for unobserved time-

invariant fund-specific effects.[17] If connected funds obtain an informational advantage through their lobbyist connections, these funds should trade or invest more heavily in politically sensitive stocks during periods when they are connected than when they are not. Panel B of Table 3 shows that the fraction of trading volume done by connected funds in political stocks is 4.42 percentage points or 22.1% higher than that done by the same funds when they are not connected (24.44% compared to 20.02%). The difference is significant at the 5% level. The result is similar when we use the residual trading fraction. Connected funds also tilt their holdings more heavily towards political stocks during periods when they are connected than when the same funds are not connected; the difference is about 6 percentage points and significant at the 1% level.[18]

Since connected and non-connected funds differ not only with regard to connections but also in other observable dimensions, most noticeably fund size and portfolio concentration, we construct a matched sample of non-connected fund-quarters using propensity-score matching. Specifically, we use a one-to-one nearest-neighbor matching approach. To estimate a propensity score for each connected fund-quarter, we estimate a logistic cross-sectional regression for each quarter, where the dependent variable is an indicator variable that equals one for connected fund-quarters and zero otherwise. We use fund size (measured as the total dollar value of the long-equity portfolio) and portfolio concentration as independent variables. For each connected fund-quarter, the matching fund is the non-connected fund in the same quarter with the closest propensity score to the connected fund. Panel C of Table 3 shows that our results continue to hold in this matched sample, suggesting that the results are not driven by connected funds being larger in size and having more concentrated holdings. Note that the numbers for connected fund-quarters (in the first column in Panel C of Table 3) are slightly different from those in Panel A of Table 3. This is because some connected fund-quarters do not have a match.

[17] One reason funds switch from being connected in one year to being non-connected in another is that the costs of acquiring and processing political information may be too high to make it worthwhile. Consistent with this, we find that these switcher funds generate relatively modest gains on their political holdings (about one-third of the four-factor alpha earned by the average connected fund) in the year immediately before they switch to being not connected. It seems plausible that the relatively modest gains from trading on political information may be outweighed by the costs, prompting these funds to sever their connections with lobbyists. In addition, there may be exogenous reasons for switching, e.g., shifts in political power or changes in regulatory environment for portfolio companies. Given the opaque nature of the political intelligence industry, our data do not allow for a formal testing of these explanations.

[18] We also examine the change in holdings of political stocks in the *year* when a fund switches from being non-connected to connected. We find that these switchers increase their portfolio allocation to political stocks by 4.45 percentage points, which is significant at the 5% level. Similarly, we find that when a fund terminates its connections with lobbyists, their political holdings decrease by 2.70 percentage points with a t-statistic of 1.31, which is partly due to lower statistical power (there are only 22 such switchers). These estimates are slightly smaller than those obtained using the entire period of connected and non-connected years for switchers as reported in Panel B of Table 3. This suggests that switchers gradually reallocate their portfolios towards an optimal weight of political stocks, i.e., they make further adjustments to their portfolios after the first year post-switch.

[Insert Table 3 about here]

In Table 4, we use multivariate Fama-MacBeth regressions to control for fund characteristics that may affect hedge funds' holding and trading activities in political stocks. The dependent variables of interest are *Residual trading fraction* and *Residual portfolio weight* in political stocks, while the independent variable of interest is an indicator variable (*Connected*) that equals one if the fund is connected to a lobbyist and zero otherwise. The control variables include portfolio size, turnover, portfolio concentration, and fund age. We run the regressions on the full sample of all fund-quarters, the subsample of funds that have a connection at some point during the sample period, and the propensity-score matched sample. For each specification in each quarter, we run a separate cross-sectional regression. We report the time-series averages of the cross-sectional regression coefficients, along with associated Newey-West (1987) adjusted t-statistics. The first three columns show that the residual fraction of trading volume conducted by connected funds in politically sensitive stocks is about 4.8 to 6.8 percentage points higher than that conducted by non-connected funds, representing an increase of roughly 30% relative to the mean trading fraction for the full sample of fund-quarters. The difference is statistically significant for all specifications. There is also significant evidence that connected fund managers tilt their portfolios more heavily towards politically sensitive stocks than do non-connected managers; the difference in their residual portfolio weights of political stocks is 5.4 to 6.1 percentage points. Overall, these results are consistent with the information transfer hypothesis that connected hedge funds trade more heavily in politically sensitive stocks and tilt their portfolios more towards these stocks.

[Insert Table 4 about here]

4.2 Connected funds' performance in politically sensitive stocks

We have so far shown that connected fund managers exhibit a tilt towards political stocks in their trading and holdings. This, however, does not necessarily imply that they are informed investors in these stocks. If connected hedge funds do obtain information through their lobbyist connections, connected fund managers' political holdings should outperform passive benchmarks. In this section we explore the performance of connected hedge funds in politically sensitive stocks. We first perform calendar-time portfolio tests using hedge fund holdings, and then examine the performance of their trade portfolios.

4.2.1 Holdings-based tests

We use a standard calendar-time portfolio approach (see, e.g., Cohen, Frazzini, and Malloy, 2008) to examine the performance implications of hedge funds' connections with lobbyists. At each quarter-end from 1999 through 2012, we assign stocks in each hedge fund portfolio to one of the two-by-two matrix of portfolios based on hedge fund-lobbyist connections and the political sensitiveness of stocks, i.e., connected funds' holdings of politically sensitive stocks, connected funds' holdings of non-politically sensitive stocks, non-connected funds' holdings of politically sensitive stocks, and non-connected funds' holdings of non-politically sensitive stocks. On average, there are $1,598$ $(2,874)$ fund-stocks in the portfolio of political (non-political) stocks held by connected funds, and there are $16,235$ $(23,267)$ fund-stocks in the portfolio of political (non-political) stocks held by non-connected funds. We then track the monthly performance of these four portfolios over the following three months by assuming that hedge funds do not change their holdings intra-quarterly. We rebalance the portfolios at the end of each quarter. Stocks in each fund portfolio are weighted by the dollar value of holdings by the fund. We then calculate the monthly value-weighted portfolio returns across funds, weighting individual funds by their total dollar holdings. This approach effectively replicates the investment strategies of connected and non-connected hedge funds in political and non-political positions.

We employ two benchmarks to adjust the returns of our calendar-time portfolios. The first is the Fama-French-Carhart four-factor model. We compute a four-factor alpha by regressing monthly portfolio excess returns on the monthly returns from the risk factors. The second is the characteristics benchmark proposed by Daniel, Grinblatt, Titman, and Wermers (1997; hereafter DGTW).[19] We calculate DGTW returns by subtracting the return on a value-weighted portfolio of all CRSP firms in the same size, book-to-market, and one-year momentum quintile from each stock's raw return.

Panel A of Table 5 reports the alpha estimates for the four portfolios using the full sample of all fund-quarters. Connected hedge funds significantly outperform on their political holdings, but deliver insignificant performance on non-political holdings. In particular, connected fund managers earn a four-factor adjusted return of 93 basis points per month (significant at the 1% level) on their political

[19] We thank Russ Wermers for graciously providing the benchmark returns. The DGTW benchmarks are available at http://www.smith.umd.edu/faculty/rwermers/ftpsite/Dgtw/coverpage.htm

investments. The corresponding DGTW characteristics-adjusted return is 56 basis points per month.[20,21] To gauge economic significance, consider a connected fund manager with mean portfolio size of \$4.0 billion and mean portfolio allocation of 24.47% in politically sensitive stocks. The average dollar gain from investment in political stocks for the fund is \$5.5 to \$9.1 million per month.

To gauge the performance of political holdings by connected funds, we conduct tests in the spirit of a DiD analysis.[22] We first construct two long-short spread portfolios. The first spread portfolio goes long the portfolio of political stocks held by connected funds and short the portfolio of non-political stocks held by connected funds (i.e., $Connected, Political - Connected, Non\text{-}political$), and the second spread portfolio goes long the portfolio of political stocks held by non-connected funds and short the portfolio of non-political stocks held by non-connected stocks (i.e., $Non\text{-}connected, Political - Non\text{-}connected, Non\text{-}political$). This first difference removes time-invariant drivers of performance that are specific to the group of connected or non-connected funds (e.g., connected funds having better stock-picking skills in general, regardless of whether the stocks are politically sensitive). We then construct a spread portfolio (referred to as the DiD portfolio hereafter) that buys the first spread portfolio and shorts the second spread portfolio, thereby removing time-invariant drivers of performance that are specific to the group of political or non-political stocks (e.g., politically sensitive stocks in general exhibiting superior performance, regardless of whether they are held by connected or non-connected funds). We obtain the alpha estimates and associated t-statistics on the DiD portfolio by running calendar-time portfolio return regressions. This approach has the advantage that it corresponds to a potentially implementable

[20] To put these numbers in the context of previous studies, Ziobrowski, Cheng, Boyd, and Ziobrowski (2004) find that U.S. Senators earn an abnormal return of about 1% per month on their stock portfolios. Also, it is noteworthy that the alpha estimates we obtain do not represent the *net* gain from access to political information, because we do not observe the costs of acquiring and processing political information.

[21] Window dressing (e.g., selling past losers and buying past winners before disclosure dates) seems unlikely to explain our results because, if stock returns are independently distributed over time, portfolio distortions in response to past return characteristics should not predict future returns. The fact that we examine future returns (i.e., the holdings returns are computed based on holdings reports at the prior quarter-end) mitigates the concern that our performance results are driven by window dressing. The inclusion of the momentum factor/characteristic in our risk benchmarks further alleviates the concern that past return characteristics may affect our performance results. Nevertheless, in unreported analysis, we test whether connected funds engage in window dressing by buying past winners and selling past losers using trades inferred from quarterly holdings reports (similar to Lakonishok, Shleifer, Thaler, and Vishny, 1991). We find that, compared with non-connected funds, connected funds tend to buy political stocks that have done relatively poorly in the past three months (with a t-statistic of 1.18 for the difference between connected and non-connected funds) and sell those that have done relatively well (with a t-statistic of 1.67), suggesting that window dressing is not the main motivation for the observed trades and holdings.

[22] For robustness, we use panel regressions, pooling the time-series returns of the four portfolios, to conduct the DiD tests. In the case of four-factor alphas, we regress excess portfolio returns on the four factors, an indicator for connected funds, an indicator for political portfolios, and interaction terms for each of these variables. The coefficient on the interaction term combining the indicator for connected funds and that for political portfolios is our difference-in-differences measure. This approach allows each of the four portfolios to have separate intercepts and separate factor loadings. In unreported analysis, we find somewhat stronger results using this approach.

investment strategy that mimics the aggregate portfolio allocations of connected and non-connected funds in political and non-political stocks.

Panel A of Table 5 shows that the DiD portfolio earns an abnormal return of 69 to 89 basis points per month.[23] This evidence suggests that the superior performance of connected funds' political investments cannot be due to time-invariant drivers of performance that are specific to the group of connected funds or those specific to the group of politically sensitive stocks.

We are able to explore the political investment outperformance of connected funds from time-series variations within hedge funds, because funds can switch from being connected in one year to being non-connected in another and vice versa. We thus focus on the subsample of hedge funds that are connected at some point during the sample period. We compare the performance of politically sensitive positions of these funds during periods when they are connected with that of the same funds when they are not connected. Panel B of Table 5 shows that the once-connected funds generally do not outperform on political holdings when they are not connected with lobbyists. The DiD portfolio generates an abnormal return of 76 to 99 basis points per month.[24] This evidence suggests that the political outperformance of connected funds cannot be due to some combined fund-stock fixed effects. For instance, if connected fund managers and politically sensitive stocks are located close to each other, the fund managers can have an informational advantage in these local stocks (Coval and Moskowitz, 2001; Teo, 2009). However, since hedge funds and firms rarely change their headquarters locations, geographic proximity between hedge funds and portfolio companies cannot explain the performance difference of the same funds between connected and non-connected periods.

It is possible that connected fund managers specialize in political stocks or possess superior skills in processing political information, which enables them to earn superior returns on politically sensitive stocks regardless of whether they are connected to a lobbyist. To rule out this possibility, we construct a matched sample of non-connected funds in the same quarter based on the fraction of trading volume

[23] To test whether connected funds' portfolio allocation to political stocks is optimal, we conduct a formal test following Cohen, Frazzini, and Malloy (2008). We estimate the fraction of connected fund managers for whom it would have been optimal to invest more heavily in political stocks during our sample period. Specifically, for each connected fund, we run a time-series regression of the fund's monthly holdings return on political stocks on the fund's holdings return on overall holdings. A significant intercept in this regression indicates that a fund manager could have attained a higher in-sample Sharpe ratio by choosing some linear combination of the two portfolios (i.e., the political portfolio and the overall portfolio). The results show that 5.8% of connected funds have alpha estimates that are significant at the 5% level, suggesting that only a small fraction of the funds would have found it optimal to increase their allocations to political stocks.

[24] The construction of the non-connected portfolios here uses ex post information (i.e., whether a fund becomes connected in the future), and thus the strategy is not implementable in real time. Despite this, the analysis provides useful insights to our understanding of the sources of connected funds' political outperformance.

in political stocks and the portfolio weight in political stocks as well as common fund characteristics, namely fund size and portfolio concentration. The premise is that the trading fraction and the portfolio weight in politically sensitive stocks capture hedge funds' specialization in political stocks and their political information skills. We then compare the performance of the matched non-connected funds with that of connected funds. We again use a one-to-one nearest-neighbor matching approach. To estimate a propensity score for each connected fund-quarter, we estimate a logistic regression for each quarter, where the dependent variable is an indicator variable that equals one for funds that are connected to a lobbyist in the given quarter and zero otherwise. We use fund size, portfolio concentration, the residual trading fraction in politically sensitive stocks, and the residual portfolio weight in politically sensitive stocks as independent variables. For each connected fund-quarter, the matching fund is the non-connected fund in the same quarter with the closest propensity score to the connected fund. The results, reported in Panel C of Table 5, show that the DiD portfolio continues to generate significant positive abnormal returns.[25] The evidence indicates that access to political information, rather than portfolio specialization or political information skills as captured by holdings and trading activities in political stocks, is a necessary condition for the outperformance of connected funds in politically sensitive stocks.

[Insert Table 5 about here]

Numerous robustness tests, the results of which are reported in the Internet Appendix, confirm these findings. First, the results are robust to using congressional sensitivity and the ratio of lobbying expenses to sales as alternative measures of politically sensitive stocks. Second, the results are robust to using an alternative weighting scheme in the construction of the calendar-time portfolios. Third, we show that our results are robust to various alternative risk adjustments, including industry-adjusted stock returns (following Moskowitz and Grinblatt, 1999), the Fama-French three-factor model, a liquidity-augmented Fama-French-Carhart model, and the modified four- and seven-factor models proposed by Cremers, Petajisto, and Zitzewitz (2013). Last, we construct two alternative propensity-score matched samples. The first uses the same matching criteria as in the holdings and trading tests, i.e., matching on fund size and portfolio concentration. The second matches on the portfolio weight of political stocks, portfolio

[25] Note that the abnormal returns of connected fund-quarters (in the first two columns in Panel C of Table 5) are slightly different from those in Panel A of Table 5. This is because some fund-quarters do not have a match because of lack of data for the trading fraction. For example, the trading fraction will be missing for a fund entering the 13F database for the first time.

size, and portfolio concentration.

4.2.2 Trade portfolios

As Chen, Jegadeesh, and Wermers (2000) suggest, trade-based tests provide a more powerful approach to detect fund managers' stock-picking abilities. Trade-based tests also provide indications of fund managers' use of both positive and negative information. In particular, if stocks on average experience lower abnormal returns after a fund exits its long positions, it indicates that the fund may possess valuable negative information about the stocks. While we do not observe hedge funds' short positions because of data limitations, the sell trades allow us to infer the extent to which connected fund managers trade on and profit from negative information.

We follow Chen, Jegadeesh, and Wermers (2000) and Kacperczyk, Sialm, and Zheng (2005) and calculate for each fund the average monthly returns of the stocks purchased and sold during the previous quarter. We focus on entry buys (i.e., positions held at the current quarter-end but not at the previous quarter-end) and exit sells (i.e., positions held at the previous quarter-end but not at the current quarter-end), because these trades are likely driven by informed fund managers' actively trading on information. Badrinath and Wahal (2002) show that entry and exit trades tend to be large in terms of dollar amounts relative to other trades (i.e., ongoing adjustments to existing positions), suggesting that they represent stronger manager opinions regarding value. Ongoing adjustments to existing positions, on the other hand, may be partly driven by liquidity needs (Pollet and Wilson, 2008; Khan, Kogan, and Serafeim, 2012) and tax considerations (Gibson, Safieddine, and Titman, 2000).[26] Entry buys (exit sells) account for 45.2% (43.3%) of all buys (sells) by our sample of hedge funds. We assign the trades in each hedge fund portfolio to one of the two-by-two matrix of portfolios based on whether the hedge fund has a connection with lobbyists and whether the stock is politically sensitive. We then track the monthly performance of these four trade portfolios over the following three months and rebalance thereafter. The average abnormal performance of the trades (buys minus sells) of a fund is calculated as follows:

$$\alpha_{q+1} = \frac{\sum\limits_{w_{j,q}>\tilde{w}_{j,q-1}=0} (w_{j,q} - \tilde{w}_{j,q-1})\, \alpha_{j,q+1}}{\sum\limits_{w_{j,q}>\tilde{w}_{j,q-1}=0} (w_{j,q} - \tilde{w}_{j,q-1})} - \frac{\sum\limits_{0=w_{j,q}<\tilde{w}_{j,q-1}} (w_{j,q} - \tilde{w}_{j,q-1})\, \alpha_{j,q+1}}{\sum\limits_{0=w_{j,q}<\tilde{w}_{j,q-1}} (w_{j,q} - \tilde{w}_{j,q-1})} \tag{1}$$

[26] However, we note that not all ongoing adjustments are driven by non-fundamental considerations. For instance, in the event the portfolio is not vertically realigned to meet fund flows, the fund manager has discretion as to how to rebalance. Thus, if the manager learns political information about a portfolio firm that may be useful, she may allocate disproportionately to that security.

where $w_{j,q}$ is the weight of stock j in a hedge fund at the end of quarter q; $\tilde{w}_{j,q-1}$ is the weight of stock j at the end of quarter $q-1$ after adjusting for the weight changes due to stock price changes (Kacperczyk, Sialm, and Zheng, 2005); and $\alpha_{j,q+1}$ is the abnormal return of stock j in quarter $q+1$ computed using the four-factor model as well as the DGTW characteristic benchmark adjustment. Note that the first term of Eq. (1) captures the abnormal performance of entry buys, and the second term captures that of exit sells.

Table 6 reports the average abnormal performance of the trade portfolios. Panel A shows that connected funds outperform non-connected ones by 15 to 28 basis points (the latter is significant at the 5% level) in monthly abnormal returns in their entry buys in politically sensitive stocks, relative to those in non-political stocks. Panel B shows that the DiD estimate for the abnormal performance of exit sells is between -58 and -20 basis points per month (both are significant at conventional levels). The stronger result on exit sells is likely due to the fact that regulation is rarely viewed positively by the market (e.g., Zhang, 2007). The result that political stocks underperform when connected funds exit from their long positions is noteworthy, because it indicates that connected funds are likely to possess valuable negative information and may be able to profit from it by closing out long positions and switching to short positions.

Since we are able to infer trades only from quarterly holdings and do not have information on the exact timing of the trades, it is possible that the information on which connected funds base their trades has been impounded in the stock price in the same quarter as the observed trades. For instance, trades may occur in the first half of a quarter, and the stock prices adjust to reflect the information in the second half of the same quarter. Since we measure performance in the quarter after the observed trades, this may explain the relatively weak statistical significance for the performance of individual trade portfolios and the differences in the performance. Despite this, Panel C shows that the DiD estimates for the abnormal performance of the buy minus sell portfolio is about 35 to 86 basis points per month and statistically significant at conventional levels. These results provide evidence suggesting that connected funds trade on both positive and negative information about political stocks.[27]

[Insert Table 6 about here]

[27] A limitation of the 13F data is that it does not include short positions. Since hedge funds are known for using short selling, the result that connected funds generate abnormal returns from negative information suggests that the estimated political outperformance based on long-equity positions may be downward biased.

5 Event-based tests

To shed light on whether connected fund managers trade on confidential political information, we examine two settings in which the nature of political information is relatively clear. The first is the asbestos litigation reform in 2005 in which there was alleged leakage of confidential information preceding the public announcement of the legislative reform. The second setting is the enactment of the STOCK Act, which made hedge funds that trade on confidential political information liable for insider trading.

5.1 Informed trading preceding political events: The case of asbestos litigation reform

We use the asbestos litigation reform in 2005 as a case study to investigate informed trading prior to public announcements of political decisions. On November 16, 2005, the Senate Majority Leader announced that the Fairness in Asbestos Injury Resolution Act (FAIR Act) would be brought to the Senate floor for a full Senate vote in the 2006 legislative session. The legislation would create a $140 billion public trust fund for asbestos liability claims and would be a boon to companies affected by asbestos litigation. Yet, as mentioned above, there were suspicious trading activity and price movements of asbestos-affected stocks in the days immediately preceding the senator's announcement. This episode provides a convenient setting to examine informed trading on the basis of confidential political information because of two reasons. First, the legislation has a significant effect on the stock price of a well-defined set of companies, i.e., companies affected by asbestos litigation. Second, the timing of the announcement is largely a surprise. While a similar bill was first introduced in October 2003, the legislation had been stalled in the Senate by divided interest groups and there was significant uncertainty whether it would be sent to the full Senate for consideration (e.g., Hanlon, 2007). Thus, an investor with advance knowledge of the political decision can trade profitably before the information becomes public.

Our empirical strategy is to detect unusual trading activity in asbestos-affected stocks on an individual stock basis during a short window prior to the announcement of the political decision, and then link it to the presence of connected funds. If connected funds receive and trade on private information regarding the impending asbestos legislation, there should be a positive relation between the number of informed investors (connected funds) and unusual trading activity in the period immediately before the public announcement date (see, e.g., Back, Cao, and Willard, 2000; Acharya and Johnson, 2010).

We identify companies that are affected by asbestos litigation by using a web-crawling program to

search 10-K filings for firms with asbestos liabilities and by using the CRP lobbying database to identify companies that list asbestos litigation or the FAIR Act as their lobbying issues. We are able to identify 68 asbestos-affected companies. We use the conditional variant of Acharya and Johnson (2010) to construct measures of unusual trading activity during a five-day period immediately preceding the announcement date, i.e., from day -5 to -1, with day 0 being the announcement date, in both stocks and options on an individual stock basis.[28] To construct the stock market measures, we first regress volume and returns on a constant, lagged volume and returns, day-of-week dummies, contemporaneous volume and return for market index using daily data for a three month period preceding the event. We then use the regression residuals to construct two measures to capture suspicious trading activity in the stock market. *Max*, which is intended to capture intense bursts of activity by competing informed investors, is the maximum of the daily standardized residuals from the above regressions during the five trading days before the event. *Sum*, which is intended to capture strategic trading behavior of a monopolistic informed investor, is the sum of the positive standardized residuals during the same five-day period. We apply a similar procedure to call option volume (i.e., the total number of calls traded) to construct two option market measures. We use the following regression specification to examine whether a greater number of connected funds lead to more unusual trading activity:

$$\begin{aligned} Unusual\ trading\ activity = c_0 + c_1 \cdot Log(1 + \#\ of\ connected\ funds) \\ + c_2 \cdot Log(1 + \#\ of\ non\text{-}connected\ funds) + \sum c_j X_j, \quad (2) \end{aligned}$$

where *# of connected funds* and *# of non-connected funds* are the number of connected and non-connected funds, respectively, at the most recent quarter-end, i.e., September 30, 2005. We control for firm characteristics, including firm size, market-to-book, leverage, return volatility, market beta, Amihud illiquidity ratio, and turnover.

The results, reported in Table 7, show that the coefficients of $Log(1 + \#\ of\ connected\ funds)$ are all positive and are significant in four out of six cases, suggesting that more connected funds are associated with a greater likelihood of informed trading in asbestos-affected stocks. We also conduct an F-test for the null hypothesis that the coefficient on $Log(1 + \#\ of\ connected\ funds)$ (c_1) and the coefficient on $Log(1 + \#\ of\ non\text{-}connected\ funds)$ (c_2) are equal. The test rejects the equality of the two coefficients

[28] By relieving companies of their liabilities in asbestos-related lawsuits, the legislation would benefit bondholders as well. Since our primary interest is in equity, we do not look into potential informed trading in the corporate bond market.

in three out of six cases. This lack of significance is likely due to low power, because there are only 68 (54) observations for the stock (option) market tests. These results provide some, albeit weak, evidence that connected funds exploit their access to confidential legislative information.

[Insert Table 7 about here]

If connected funds indeed trade on confidential information on the asbestos litigation reform legislation, they should deliver superior returns on their trades in stocks that are affected by the legislation. To test this, we examine the performance of trade portfolios partitioned by whether the fund has a connection with lobbyists and whether the stock is affected by asbestos legislation. The trade portfolios are constructed in a similar fashion as in Section 4.2.2. We focus on a three-year period from 2004 to 2006, during which the legislation was being formulated and debated (see, e.g., Hanlon, 2007). The results, reported in Panel A of Table 8, show that trades (buys minus sells) of asbestos-affected stocks by connected funds deliver an abnormal return of around 1 percentage point per month. In contrast, trades of unaffected stocks by these funds have insignificant abnormal returns. The DiD estimate shows that connected funds outperform non-connected ones in their trades of affected stocks, relative to trades of unaffected stocks, by 89 to 137 basis points per month.

Since some connected funds may have better access to private information about the reform than others, we further exploit heterogeneity in the performance of trade portfolios across connected funds. We hypothesize that hedge funds that are connected with lobbyists that are influential on the reform are more likely to have access to information about the reform. We identify influential lobbyists as those hired by the Asbestos Study Group, which was the largest interest group lobbying for the asbestos legislation. Representing large U.S. corporations saddled with asbestos litigation, the group spent a total of $24.7 million on lobbying the federal government during the period from 2004 to 2006.[29] The lobbyists hired by the group include a former congressman and a former counsel to the Senate Judiciary Committee. We classify connected funds that are connected with lobbyists hired by the interest group as informed funds. Connected funds that do not hire one of these informed lobbyists are classified as uninformed funds. Panel B of Table 8 reports the results. Consistent with our prior, informed funds outperform significantly on their trades of asbestos-affected stocks. The DiD estimate suggests that informed funds outperform uninformed ones in their trades of affected stocks, relative to trades of unaffected stocks, by

[29] To put this number in perspective, Business Roundtable and National Association of Manufacturers, two major interest groups representing corporations, spent a total of $23.9 and $27.8 million, respectively, on lobbying during the same period.

about 2 percentage points per month.

[Insert Table 8 about here]

5.2 The impact of the STOCK Act

We exploit the enactment of the Act as a quasi-natural experiment that provides exogenous variations in the propensity to trade on the basis of confidential political information. As discussed above, trading on material nonpublic information obtained from within Congress did not violate insider trading laws prior to 2012, because members of Congress and their staffers did not owe a fiduciary duty to the issuer of the stock nor did they owe a duty of confidentiality to the source of the information. The STOCK Act, signed into law in April 2012, imposed a duty of trust and confidence on congressional insiders and hence exposed hedge funds to potential insider trading liability if they trade on the basis of confidential political information received directly or indirectly from congressional insiders. Therefore, if connected funds traded on the basis of confidential political information, they should experience a decline in political performance after the law became effective. On the other hand, if connected funds traded predominantly on the basis of non-confidential political information, e.g., opinions formed by lobbyists based on interactions with politicians, the STOCK Act should have little effect on these funds' political performance unless access to politicians is restricted.[30]

We test this prediction by comparing the political outperformance of connected funds, relative to non-connected ones, before and after the legislation. We first replicate the prior analysis comparing connected and non-connected funds by using DiD tests to gauge the relative performance of connected funds on political holdings for the pre- and post-event periods separately. This step removes time-invariant drivers of performance that are specific to the group of connected funds and those specific to the group of politically sensitive stocks. We then compare the DiD alphas across the two periods. This approach disentangles the effect of the STOCK Act from other time-varying effects around the event (e.g., connected funds become less informed in general, regardless of whether they invest in political or

[30] It is possible that the Act inhibited lobbying activities and hence reduced lobbyists' ability to produce information due to reduced access to politicians. To test this possibility, we track lobbying expenditures from four quarters before the enactment of Act to four quarters after. As we show in the Internet Appendix, there is little evidence that general lobbying intensity decreases after the enactment of the Act. This is consistent with the guidance issued by the Senate, which states that "[the STOCK Act] is not intended [...] to chill legitimate communications made in good faith between public officials and their constituents, inhibit government transparency, or otherwise hinder the dissemination of public information about government activities." Thus, insofar as lobbying expenditures capture lobbyists' access to and interactions with politicians, the decline in connected funds' political outperformance does not seem to be driven by lobbyists' reduced access to politicians.

non-political stocks, or the returns on political stocks decrease, regardless of whether they are held by connected or non-connected funds). If the enactment of the STOCK Act reduces the incentive to trade on the basis of confidential political information, the triple-difference estimate should be significantly negative.[31]

Specifically, we focus on 12 months before and 12 months after the enactment of the STOCK Act to evaluate its impact. The choice of a relatively short window around the legislation reduces the probability that other events drive our results. The relatively short time span, however, precludes the use of a calendar-time portfolio approach because of low power. Thus, we run panel regressions to test the change in connected funds' relative performance on political holdings around the enactment of the legislation. We first calculate, for each fund in each month in the pre-event period, the monthly holdings-based abnormal returns of political and non-political positions separately. The monthly abnormal holdings returns are calculated as the weighted average abnormal returns of the stocks held at the end of the prior quarter. (We obtain the abnormal returns of stocks using the four-factor model as well as the DGTW characteristic benchmark adjustment.) We then run a regression for the pre-event period regressing the abnormal holdings returns on an indicator for connected funds, an indicator for political portfolios, and an interaction term combining the two indicators. The coefficient on the interaction term is our DiD estimate for the pre-event period. We calculate standard errors using two-dimensional clustering by fund and month to account for residual correlation within the same fund across time and that within the same month across funds (Petersen, 2009). Table 9 shows that the DiD estimate for the abnormal performance during the pre-event period ranges between 42 and 52 basis points per month and is statistically significant. We then perform the same DiD analysis for the post-event period. The DiD estimate for the abnormal performance during the post-event period is insignificant, suggesting that connected funds do not possess an informational advantage in political stocks over non-connected ones after the legislative change.

To test the significance of the difference in the two DiD alpha estimates, we pool the pre- and post-event data and regress the abnormal holdings returns on an indicator for connected funds, an indicator for political portfolios, an indicator for whether the observation is from the post-event period, and

[31] The key identifying assumption for the DiD approach is the "parallel trends" assumption. To test this assumption, we define a pseudo event as occurring two years before the actual event (i.e., in April 2010). If the parallel trends assumption holds, connected funds' informational advantages in political stocks should not change significantly after this pseudo event. In unreported analysis, we find that connected funds' relative outperformance on political holdings does not vary significantly around the pseudo event, suggesting that the results are not driven by pre-event trends.

interaction terms for each of these variables. The coefficient on the triple interaction term combining the post indicator, the connected indicator, and the political indicator provides an estimate for the difference in the DiD alpha estimates between the pre- and post-event periods. Again, standard errors are two-way clustered by fund and month. Table 9 shows that the difference is positive and statistically significant, suggesting that the effect is not driven by time-varying general skills (as opposed to skills specific to political stocks) of fund managers or by a shift in the performance of political stocks around the enactment of the Act. This finding provides evidence that the legislation reduces the incentive to trade on confidential political information.[32]

[Insert Table 9 about here]

This finding also suggests that political outperformance of connected funds are unlikely to be driven by an influence hypothesis, according to which fund managers hire lobbyists to influence legislation in their favor so that they can profit from their trading in those stocks that are affected by the legislation. In other words, connected hedge funds might accumulate positions in stocks that are likely to be affected by certain political issues and, at the same time, hire lobbyists to influence the outcome of the issues in their favor. Since the STOCK Act does not have a direct impact on lobbying activities, the influence hypothesis predicts that the political outperformance of connected funds should not change after the legislation became effective. The finding that connected funds' outperformance in political stocks decreases significantly post-STOCK is inconsistent with the influence hypothesis.[33]

Furthermore, this finding suggests that political outperformance of connected funds is unlikely to be explained by a pure specialization story in which connected funds simply specialize in investing in political stocks without access to private political information. Since there is no clear reason why the STOCK Act should change a fund's specialization other than through its impact on the flow of private political information, the pure specialization story has difficulty explaining the effect of the STOCK Act on connected funds' political outperformance. The pure specialization story also faces the hurdle of explaining the results for the subsample of once-connected funds, because for it to be the case, a fund's

[32] Since the Act imposes insider trading liability on congressional insiders for tipping confidential political information for securities trading purposes and on hedge funds for trading on such information, the decrease in the political performance of connected funds post-STOCK is likely due to two factors: 1) the amount of confidential political information available to connected hedge funds is reduced because congressional insiders are less likely to tip confidential information to outsiders, and 2) hedge funds have less incentive to seek and trade on confidential political information.

[33] In addition, we test a direct implication of the influence hypothesis, namely that connected funds should outperform more significantly on political holdings that are affected by the lobbying issues of the funds than on those that are not affected. The results, reported in the Internet Appendix, do not support this prediction.

specialization has to vary over time and coincide with the lobbyist connections we identify.

6 Conclusions

In this paper, we examine the hypothesis that hedge fund managers exploit their access to political information through connections with lobbyists. Using datasets on the long-equity holdings of hedge funds and their lobbying disclosure, we find that hedge funds with connections to lobbyists tend to tilt their trading and holdings towards politically sensitive stocks. Connected hedge funds also perform significantly better on political holdings than on non-political holdings. A portfolio of politically sensitive stocks held by connected hedge funds delivers an abnormal return of 56 to 93 basis points per month depending on the specifications. Using spread portfolios constructed in the spirit of DiD analysis, we show that the outperformance of connected hedge funds on political holdings is not driven by connected fund managers being better stock-pickers in general or by political stocks in general delivering superior returns. The results are qualitatively unchanged if we use the subsample of funds that have lobbyist connections at some point during the sample period, or if we use a propensity-score matched sample. We further show that the political outperformance of connected funds decreased significantly after the enactment of the STOCK Act of 2012, suggesting that the information connected hedge funds traded on was likely confidential information obtained from within Congress.

This paper contributes to the understanding of the value of political information and the channels through which such information is transmitted among agents and gets impounded into stock prices. Our findings have important implications for the design of the legal arrangements governing the flow of political information.

Our paper raises several interesting questions for future research. In particular, given the large alphas generated by political information, what is the equilibrium supply of lobbyists as conduits of such information? What are the expected benefits and costs from engaging the next available lobbyist? What is the equilibrium price of such information? Also, there are related questions regarding the optimal information acquisition decision by fund managers, the optimal fund trading based on the information, and whether they want others to learn of their specialized knowledge via the disclosure on the 13F filings. These questions provide possible avenues for future research.

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Appendix A: Lobbying data and the name-matching procedure

The Center for Responsive Politics compiles the lobbying data from the lobbying disclosure reports, which are made available under the Lobbying Disclosure Act of 1995. According to the Act, individuals and organizations who seek to influence federal government policies and actions must file semi-annual reports on their lobbying activities to the Secretary of the Senate and the Clerk of the House of Representatives. The CRP lobbying data contain the name of the registrant (typically a lobbying firm), the name of the client, the amount the client pays, and the general issue areas in which the lobbyist lobbies on behalf of the client. If a firm conducts in-house lobbying (as opposed to engaging outside lobbying firms), the firm will appear in the lobbying reports both as the registrant and as the client. The CRP calculates the annual lobbying expenditure for each lobbying client in each year by summing the information in the semi-annual reports (or quarterly reports after 2007). In cases where subsidiaries of a firm hire lobbyists, CRP reports the lobbying expenditure of each subsidiary individually.

We use a name-matching procedure to match the lobbying data with our hedge fund data and the Compustat data. We first remove trade associations, ideological organizations, and non-profit organizations from the lobbying dataset by eliminating lobbying clients whose names contain words such as "association," "council," "commission," "coalition," "bureau," "society," "foundation," "federation," "board," "taskforce," "union," "community," "county," "alliance," "roundtable," "voice for," "institute," "airport," "town," "city," "municipality," "university," "college," "campaign," "workers," "employee," and any variant thereof. We then remove the punctuation and entity designations, such as "Inc.," "Corp.," "Co.," "LP," "LLC," "PLC," "Ltd," and etc., from the names in all data sources. We use the SPEDIS function in SAS to generate a list of potential matches between the names in the lobbying data and those in the hedge fund data or the Compustat data. We then manually check whether the pairs of name strings are actual matches through eyeballing and web searches. We use a similar procedure to match the campaign contribution data with our hedge fund data and the Compustat data.

Appendix B: Definition of Variables

Variable	Definition
Fund-level variables	
Connected	An indicator variable that equals one if the fund has a lobbyist connection in the previous year and zero otherwise.
Campaign contributions	The annual dollar amount of political contributions to candidates and political committees made by individuals employed by the fund.
Raw trading fraction	The dollar trading volume of the fund in politically sensitive stocks divided by the total dollar trading volume of the fund in the quarter.
Raw portfolio weight	The dollar holdings of politically sensitive stocks divided by the total dollar holdings of the fund at the quarter-end.
Residual trading fraction	The residual from the cross-sectional regressions of the raw measure of the trading fraction on *Mean component log size* and *Mean component log B/M*.
Residual portfolio weight	The residual from the cross-sectional regressions of the raw measure of the portfolio weight on *Mean component log size* and *Mean component log B/M*.
Portfolio size	The total market value of long-equity holdings.
Annual turnover ratio	The sum of buys and sells divided by 0.5 times the sum of the portfolio size at the start of the quarter and that at the end of the quarter, multiplied by 2.
Mean component log size	Weighted average of the log market capitalization of stocks in the hedge fund's portfolio, weighted by their portfolio weight.
Mean component log B/M	Weighted average of the log book-to-market of stocks in the hedge fund's portfolio, weighted by their portfolio weight.
Mean component return	Weighted average of the average monthly return over the prior 12 months of stocks in the hedge fund's portfolio, weighted by their portfolio weight.
Mean component volatility	Weighted average of the volatility of monthly returns of stocks in the hedge fund's portfolio, weighted by their portfolio weight.
Mean component skewness	Weighted average of the skewness of monthly returns of stocks in the hedge fund's portfolio, weighted by their portfolio weight.
Mean component CAPM beta	Weighted average of the CAPM beta of stocks in the hedge fund's portfolio, weighted by their portfolio weight.
Mean component turnover	Weighted average of the monthly turnover rate of stocks in the hedge fund's portfolio, weighted by their portfolio weight.
Portfolio concentration	The inverse of the number of stocks held in the portfolio.
Survival	An indicator variable that equals one if the fund continues to file 13F reports until the end of the sample period, i.e., the last quarter of 2012, and equals zero otherwise.
Management fee	The percentage of the fund's net assets paid annually to fund management for administering the fund.
Incentive fee	The percentage of profits paid to fund management for positive performance.
High-water mark	An indicator variable that equals one if the fund has a high-water mark provision, and equals zero otherwise.
Minimum invest	The minimum investment, in dollars, required by the fund.
Lock-up period	The minimum time that an investor has to wait (after making her investment) before withdrawing invested money.
Redemption notice period	The time the investor has to give notice to the fund about an intention to withdraw money from the fund.
Stock-level variables	

Politically sensitive stocks	An indicator variable that equals one if the stock is ranked in the top decile of firms in terms of the residual from cross-sectional regressions of logarithm of one plus lobbying expenses on firm characteristics.
Congressional sensitivity	The ratio of idiosyncratic volatility on days when Congress is in session to idiosyncratic volatility on days when Congress is in recess.
Geographical distance	The logarithm of the geographic distance between the headquarter of the firm and Washington D.C.
Sin stocks	The union of the Fama and French (1997) industry groups 4 (alcohol) and 5 (tobacco) along with the NAICS group for gaming (following Hong and Kacperczyk 2009).
Firm size	The logarithm of total assets.
Book-to-market	The book value of common equity divided by the market value of common equity.
# of employees	The number of employees.
# of business segments	The number of business segments.
# of geographic segments	The number of geographic segments.
Cash flow/sales	The sum of income before extraordinary items and depreciation and amortization, scaled by sales.
Book leverage	The ratio of the book value of total debt to the book value of total assets.
Market share	Annual sales divided by industry sales at the three-digit SIC level.
Herfindahl index	Herfindahl sales concentration index at the three-digit SIC level.

Figure 1: Abnormal trading volume and returns of USG Corp. surrounding the public announcement of legislative news in November 2005

This figure plots the trading activity and abnormal returns of USG Corp. surrounding the public announcement of a bailout bill for companies facing asbestos litigation by the Senate Majority Leader on November 16, 2005 (Day 0). We track the abnormal trading volume and stock returns from the five days before through five days after the public announcement. The bars (left axis) plot the ratio of daily dollar volume during the event window to the median dollar volume in the one-year period before the event. The marked line (right axis) plots the cumulative market-adjusted return of the stock during the event window.

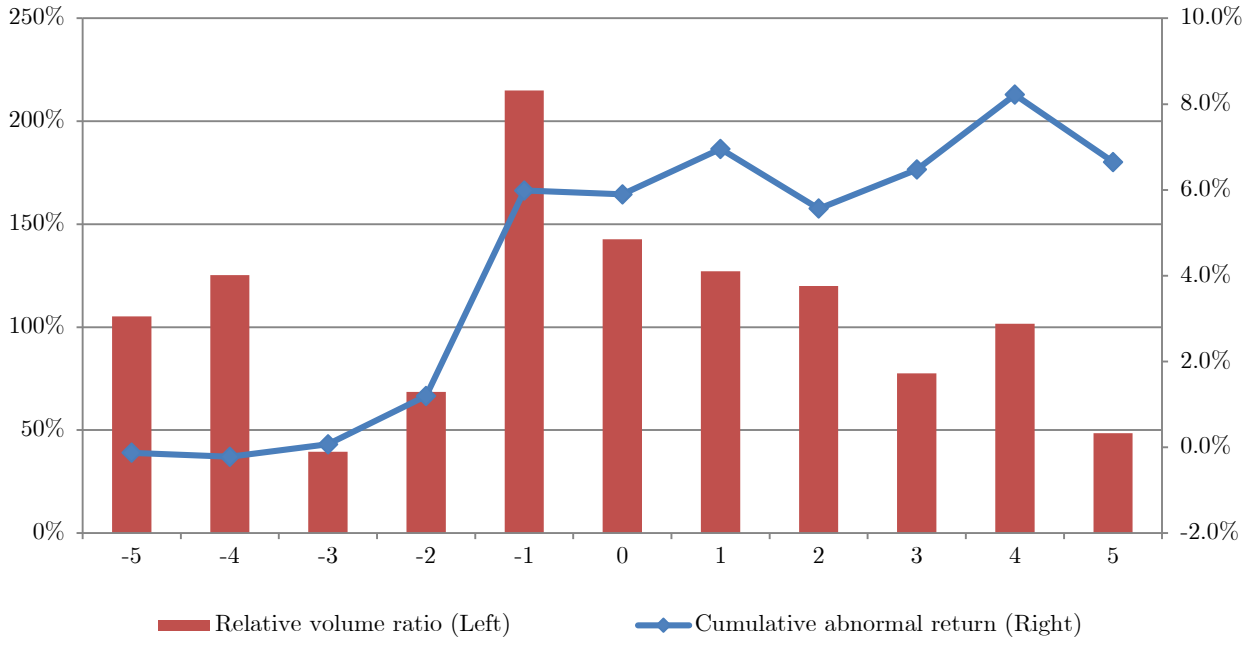

Table 1: Summary statistics for the hedge fund sample

This table reports the summary statistics for our hedge fund sample. We identify connected hedge funds as those that incur lobbying expenses in the previous year. All variables are defined in Appendix B. Panel A presents the number of connected hedge funds and the proportion of total value of sample hedge funds' long-equity holdings accounted for by connected funds by year from 1999 to 2012. Panel B reports the time-series means and medians of the cross-sectional averages of various characteristics of connected and non-connected funds. The last two columns test the significance of the differences in the means and medians between the two groups of hedge funds. Numbers in parentheses are p-values based on t-tests for the difference in means and the Wilcoxon rank-sum tests for the difference in medians. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

Panel A: Number of connected hedge funds by year: 1999-2012

	Total # of funds	# of connected funds	% of connected funds	Proportion of total value of hedge funds' holdings accounted for by connected funds
1999	183	6	3.28%	3.41%
2000	211	5	2.37%	1.79%
2001	218	8	3.67%	3.55%
2002	257	8	3.11%	6.25%
2003	288	6	2.08%	3.46%
2004	332	18	5.42%	11.31%
2005	367	18	4.90%	12.33%
2006	404	18	4.46%	9.90%
2007	426	20	4.69%	6.87%
2008	424	20	4.72%	3.85%
2009	412	24	5.83%	12.66%
2010	389	32	8.23%	17.37%
2011	376	26	6.91%	17.00%
2012	368	23	6.25%	15.20%
All Years	494	58	11.74%	10.97%

Panel B: Characteristics of connected and non-connected hedge funds

	Connected funds		Non-connected funds		Test equality	
	Mean	Median	Mean	Median	Mean	Median
Campaign contributions ($k)	159.51	96.99	15.92	14.40	(<0.001)***	(<0.001)***
Portfolio size ($m)	3,990.03	3,744.32	1,687.48	1,547.07	(<0.001)***	(<0.001)***
Annual turnover rate	1.39	1.41	1.37	1.35	(0.565)	(0.916)
Mean component log size	15.22	15.36	15.72	15.73	(<0.001)***	(<0.001)***
Mean component log B/M	-0.78	-0.84	-0.97	-0.99	(<0.001)***	(<0.001)***
Mean component return	0.02	0.02	0.02	0.02	(0.380)	(0.372)
Mean component volatility	0.12	0.12	0.12	0.10	(0.194)	(0.381)
Mean component skewness	0.24	0.24	0.19	0.15	(0.095)*	(0.132)
Mean component CAPM beta	1.19	1.24	1.19	1.20	(0.988)	(0.293)
Mean component turnover	0.21	0.23	0.23	0.21	(0.174)	(0.648)
Portfolio concentration	0.06	0.04	0.03	0.03	(0.003)***	(<0.001)***
Survival	0.85	0.94	0.75	0.71	(0.004)***	(<0.001)***
Management fee (%)	1.35	1.45	1.40	1.37	(0.602)	(0.861)
Incentive fee (%)	15.87	20.00	18.65	20.00	(0.052)**	(0.017)**
High-water mark	0.66	0.81	0.73	1.00	(0.420)	(0.300)
Minimum invest ($m)	2.88	1.00	1.38	1.00	(0.060)*	(0.015)**
Lock-up period (months)	6.25	3.00	5.66	3.00	(0.717)	(0.856)
Redemption notice (days)	51.38	47.56	40.05	31.48	(0.071)*	(0.024)**

Table 2: Lobbying expenses and characteristics of politically sensitive stocks

This table reports the summary statistics on the lobbying expenses of public firms and the characteristics of politically sensitive stocks for the period from 1998 to 2011. All variables are defined in Appendix B. Panel A presents the lobbying expenses of public firms by year and by Fama-French 12-industry grouping. The last row in the panel reports the number of distinct firms, the number of distinct firms that lobby, the mean number of lobbyists (i.e., registered lobbying firms) hired, and the mean, median, and sum of lobbying expenses using the full sample. Panel B presents regression analysis of the determinants of political sensitiveness of stocks. The first two columns estimate Tobit regressions with the logarithm of one plus lobbying expenses as the dependent variable, and the last two columns estimate Probit regressions with an indicator for politically sensitive stocks as the dependent variable. All regressions include year fixed effects. We cluster standard errors by firm. Panel C presents the raw returns and risk-adjusted returns of calendar-time value-weighted portfolios of political and non-political stocks. Numbers in parentheses are *t*-statistics. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

Panel A: Lobbying expenses of public firms by year and by industry

	Total # of firms	# of firms that lobby	% of firms that lobby	Mean # of lobbyists hired	Lobbying expenses ($)		
					Mean	Median	Sum
By year							
1998	7,464	745	9.98%	2.77	731,642	140,000	545,073,029
1999	7,182	766	10.67%	2.91	660,068	155,000	505,612,153
2000	6,973	734	10.53%	2.87	715,940	160,000	525,500,047
2001	6,295	755	11.99%	3.07	713,930	160,000	539,017,417
2002	5,657	785	13.88%	3.03	730,986	160,000	573,823,745
2003	5,230	842	16.10%	3.06	737,649	180,000	621,100,464
2004	5,106	863	16.90%	3.13	771,404	200,000	665,721,549
2005	5,050	927	18.36%	3.14	747,721	200,000	693,137,552
2006	4,951	952	19.23%	3.07	788,377	200,000	750,535,257
2007	4,905	952	19.41%	3.10	880,405	200,000	838,145,681
2008	4,652	960	20.64%	3.10	1,074,867	240,000	1,031,872,467
2009	4,382	951	21.70%	3.01	1,117,263	240,000	1,062,516,720
2010	4,208	917	21.79%	3.14	1,182,966	270,000	1,084,779,490
2011	4,052	900	22.21%	3.10	1,145,069	283,485	1,030,561,798
By Fama-French 12-industry grouping							
Consumer non-durables	3,850	625	16.23%	2.58	1,001,793	230,000	626,120,432
Consumer durables	1,732	281	16.22%	2.91	979,177	160,000	275,148,871
Manufacturing	7,272	1,316	18.10%	3.20	841,257	180,000	1,107,094,096
Energy	2,528	460	18.20%	2.96	1,496,820	267,500	688,537,290
Chemicals	1,532	427	27.87%	3.27	766,696	210,000	327,379,174
Business equipment	15,292	1,918	12.54%	2.88	710,723	180,000	1,363,166,388
Telecommunications	2,254	561	24.89%	5.18	1,480,394	215,000	830,501,293
Utilities	1,717	851	49.56%	3.39	1,174,848	520,000	999,795,244
Shops	7,444	749	10.06%	2.40	470,606	160,000	352,483,908
Healthcare	8,379	1,555	18.56%	2.90	760,119	160,000	1,181,985,012
Finance	14,895	1,561	10.48%	2.15	1,016,121	280,000	1,586,164,324
Others	9,212	1,745	18.94%	2.64	647,004	160,000	1,129,021,337
All	11,075	2,205	19.91%	3.03	868,735	200,000	10,467,397,369

Panel B: Regression analysis of the determinants of lobbying expenditures and politically sensitive stocks

Dependent variable =	Tobit Log(1+ lobbying expenses) (1)	 (2)	Probit Politically sensitive stock indicator (3)	 (4)
Congressional sensitivity	3.026 (7.19)***	2.724 (6.89)***	0.043 (9.42)***	0.024 (5.58)***
Geographical distance	−0.896 (4.32)***	−0.719 (3.49)***	−0.009 (3.78)***	−0.005 (2.47)**
Sin stocks	5.539 (3.02)***	3.857 (1.99)**	0.125 (3.09)***	0.042 (1.54)
Firm size	4.577 (42.40)***	4.553 (18.63)***		
Book-to-market	−0.054 (1.46)	−0.050 (1.53)		
Cash flow/sales		−1.234 (20.80)***		
Book leverage		−1.128 (1.51)		
# of employees		0.094 (0.39)		0.025 (18.44)***
# of business segments		0.257 (5.91)***		0.003 (5.75)***
# of geographic segments		−0.037 (0.92)		0.001 (0.33)
Market share		26.697 (3.40)***		-0.041 (0.40)
(Market share)^2		−34.476 (2.96)***		-0.164 (0.84)
Herfindahl index		8.366 (2.50)**		0.177 (6.81)***
Number of observations	60,021	58,050	60,634	59,034
Pseudo R-squared	0.100	0.112	0.008	0.105

Panel C: Performance of politically sensitive stocks and non-politically sensitive stocks

	Raw return (1)	Four-factor alpha (2)	DGTW-adjusted (3)
Politically sensitive stocks	0.52% (1.19)	0.02% (0.16)	0.09% (1.13)
Non-politically sensitive stocks	0.48% (1.32)	0.01% (0.37)	−0.01% (0.35)
Difference (P − N)	0.04% (0.07)	0.01% (0.03)	0.10% (1.18)

Table 3: Summary statistics on hedge funds' trading and portfolio holdings in politically sensitive stocks

This table reports summary statistics on the fraction of trading volume done by hedge fund managers in politically sensitive stocks and their portfolio weights in politically sensitive stocks partitioned by whether the hedge fund has a connection with lobbyists during the period from 1999 through 2012. All variables are defined in Appendix B. For each measure, we report the time-series averages of the cross-sectional means separately for connected and non-connected funds and the time-series averages of the differences in cross-sectional means between the two groups of funds. We use *t*-statistics to test the significance of the differences in cross-sectional means. Panel A uses the full sample of funds, Panel B uses the subsample of fund-quarters for funds that have a connection with lobbyists at some point during the sample period, and Panel C uses a propensity score-matched sample. Numbers in parentheses are *t*-statistics. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

Panel A: All fund/quarters

	Connected fund/qtrs	Non-connected fund/qtrs	Difference (C − NC)
Raw trading fraction	24.44%	18.67%	5.77% (3.18)***
Raw portfolio weight	24.47%	17.95%	6.53% (2.52)**
Residual trading fraction	5.71% (3.09)***	−0.08% (3.30)***	5.79% (3.11)***
Residual portfolio weight	6.53% (4.02)***	−0.13% (6.91)***	6.66% (3.60)***

Panel B: Fund/quarters for funds that are connected at some point during the sample period

	Connected fund/qtrs	Once-connected funds in non-connected qtrs	Difference (C − NC)
Raw trading fraction	24.44%	20.02%	4.42% (2.28)**
Raw portfolio weight	24.47%	18.17%	6.31% (3.88)***
Residual trading fraction	5.71% (3.09)***	1.45% (3.69)***	4.25% (2.15)**
Residual portfolio weight	6.53% (4.02)***	0.64% (1.96)*	5.89% (3.61)***

Panel C: Matched sample

	Connected fund/qtrs	Matched non-connected fund/qtrs	Difference (C − NC)
Raw trading fraction	24.62%	17.53%	7.09% (2.66)***
Raw portfolio weight	24.51%	18.16%	6.35% (2.31)**
Residual trading fraction	5.85% (3.19)***	−1.56% (1.92)*	7.41% (3.69)***
Residual portfolio weight	6.56% (4.04)***	−0.50% (0.71)	7.06% (3.99)***

Table 4: Fama-MacBeth regressions of trading and portfolio holdings in politically sensitive stocks on connectedness

This table reports Fama-MacBeth regression analysis of the fraction of trading volume done by hedge fund managers in politically sensitive stocks and their portfolio weights in politically sensitive stocks. The dependent variables are *Residual trading fraction* and *Residual portfolio weight* adjusted for size and value effects (following Hong and Kostovetsky 2012). All variables are defined in Appendix B. We run the regressions on the full sample of all fund-quarters (Columns 1 and 4), the subsample of fund-quarters for funds that have a connection with lobbyists at some point during the sample period (Columns 2 and 5), and the propensity score-matched sample (Columns 3 and 6). For each specification in each quarter, we run a separate cross-sectional regression. We report the time-series averages of the cross-sectional regression coefficients. Numbers in parentheses are Fama-MacBeth t-statistics calculated using Newey-West standard errors with the number of lags determined by the number of significant terms in the autocorrelation function of the residuals. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

Dependent Var. =	Residual trading fraction			Residual portfolio weight		
	Full sample (1)	Once-connected (2)	Matched sample (3)	Full sample (4)	Once-connected (5)	Matched sample (6)
Connected	0.052	0.048	0.068	0.058	0.054	0.061
	(2.39)**	(1.80)*	(2.33)**	(2.98)***	(2.47)**	(2.65)**
Log(portfolio size)	0.008	0.006	0.017	0.009	0.003	0.021
	(7.25)***	(0.93)	(1.82)*	(8.52)***	(0.67)	(1.53)
Portfolio turnover	0.018	0.006	0.066	0.021	0.007	0.014
	(3.55)***	(0.39)	(1.64)	(4.31)***	(0.50)	(0.41)
Portfolio concentration	0.013	0.007	0.023	0.011	0.010	0.033
	(7.35)***	(0.87)	(1.95)*	(7.75)***	(1.96)*	(2.09)**
Log(fund age)	0.002	−0.002	−0.044	−0.001	−0.004	−0.060
	(1.60)	(0.27)	(2.12)**	(1.02)	(0.55)	(2.24)**
Constant	−0.134	−0.066	−0.125	−0.140	−0.011	−0.064
	(6.96)***	(0.70)	(0.99)	(7.68)***	(0.14)	(0.37)
# of observations	16,504	1,783	1,268	16,504	1,783	1,268
Average R-squared	0.05	0.25	0.46	0.05	0.23	0.47

Table 5: Calendar-time portfolio returns of connected vs. non-connected hedge funds investing in politically sensitive vs. non-politically sensitive stocks

This table reports calendar-time portfolio returns. At each quarter-end during the 1999Q1-2012Q1 period, we assign stocks in each hedge fund portfolio to one of the two-by-two matrix of portfolios formed by hedge fund-lobbyist connections and the political sensitiveness of stocks. We then track the monthly performance of these four portfolios over the following three months and rebalance thereafter. Stocks in each fund portfolio are weighted by the dollar value of holdings by the fund. We then calculate the monthly value-weighted portfolio returns across funds, weighting individual funds by their total dollar holdings. We use the Fama-French-Carhart four-factor model and the DGTW characteristics benchmarks to adjust the returns. Long-short is a spread portfolio with the two portfolios in the same row or column on the long and short legs. Panel A uses the full sample of all fund-quarters. Panel B uses the subsample of funds that are connected at some point during the sample period. Panel C uses connected funds and a propensity-score matched sample of non-connected funds in the same quarter based on fund size, portfolio concentration, trading and holdings behavior in political stocks. Numbers in parentheses are t-statistics. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

Panel A: All fund/quarters

	Connected fund/qtrs		Non-connected fund/qtrs		Long/Short (C − NC)	
	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted
Politically sensitive stocks	0.93% (2.73)***	0.56% (2.25)**	0.14% (1.25)	0.16% (1.97)*	0.79% (2.55)**	0.40% (1.71)*
Non-politically sensitive stocks	0.06% (0.32)	−0.17% (0.92)	0.17% (2.58)**	0.13% (2.53)**	−0.11% (0.57)	−0.30% (1.55)
Long/Short (P − NP)	0.87% (2.41)**	0.73% (2.35)**	-0.03% (0.21)	0.03% (0.35)	0.89% (2.53)**	0.69% (2.29)**

Panel B: Fund/quarters for funds that are connected at some point during the sample period

	Connected fund/qtrs		Once-connected funds in non-connected qtrs		Long/Short (C − NC)	
	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted
Politically sensitive stocks	0.93% (2.73)***	0.56% (2.25)**	0.14% (0.62)	0.13% (0.74)	0.79% (2.20)**	0.43% (1.56)
Non-politically sensitive stocks	0.06% (0.32)	−0.17% (0.92)	0.26% (1.59)	0.16% (0.99)	−0.20% (0.72)	−0.33% (1.21)
Long/Short (P − NP)	0.87% (2.41)**	0.73% (2.35)**	−0.12% (0.45)	−0.03% (0.139)	0.99% (2.39)**	0.76% (2.13)**

Panel C: Propensity score-matched sample

	Connected fund/qtrs		Matched non-connected fund/qtrs		Long/Short (C − NC)	
	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted
Politically sensitive stocks	1.06% (3.19)***	0.43% (1.94)*	−0.05% (0.19)	−0.18% (0.53)	1.11% (2.89)***	0.61% (1.75)*
Non-politically sensitive stocks	0.08% (0.44)	−0.18% (0.98)	0.17% (0.88)	0.36% (1.57)	−0.09% (0.31)	−0.54% (1.60)
Long/Short (P − NP)	0.98% (3.06)***	0.61% (2.14)**	−0.22% (0.68)	−0.54% (1.04)	1.20% (2.53)**	1.15% (1.92)*

Table 6: Performance of trade portfolios

This table reports the abnormal returns of the stocks purchased and sold by hedge funds. At each quarter-end from 1999 through 2012, we assign trades by our sample of hedge funds to one of the two-by-two matrix of portfolios formed by hedge fund-lobbyist connections and the political sensitiveness of stocks. We focus on entry buys (i.e., positions held in the current quarter but not in the previous quarter) and exit sells (i.e., positions held in the previous quarter but not in the current quarter). We then track the monthly performance of these trade portfolios over the following three months and rebalance thereafter. The monthly value-weighted portfolio returns are calculated using Eq. (1). For each portfolio, we compute the Fama-French-Carhart four-factor adjusted returns and the DGTW characteristics-adjusted returns. Panels A and B report the abnormal returns for entry buys and exit sells, respectively. Panel C reports the difference in the abnormal returns between entry buys and exit sells. Numbers in parentheses are t-statistics. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

Panel A: Entry Buys

	Connected fund/qtrs		Non-connected fund/qtrs		Difference (C−NC)	
	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted
Politically sensitive stocks	0.29%	0.27%	0.16%	0.15%	0.13%	0.12%
	(1.70)*	(1.73)*	(3.56)***	(3.93)***	(1.00)	(1.16)
Non-politically sensitive stocks	−0.09%	0.13%	0.05%	0.15%	−0.15%	−0.02%
	(1.08)	(1.98)**	(1.97)**	(7.40)***	(1.97)**	(0.36)
Difference (P−NP)	0.39%	0.14%	0.11%	−0.01%	0.28%	0.15%
	(2.11)*	(0.87)	(2.27)**	(0.18)	(1.97)**	(1.25)

Panel B: Exit Sells

	Connected fund/qtrs		Non-connected fund/qtrs		Difference (C−NC)	
	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted
Politically sensitive stocks	−0.25%	−0.10%	0.16%	0.09%	−0.41%	−0.19%
	(1.57)	(0.81)	(3.40)***	(2.23)**	(3.08)***	(1.74)*
Non-politically sensitive stocks	0.18%	−0.04%	−0.01%	−0.05%	0.18%	0.01%
	(1.88)*	(0.57)	(0.05)	(2.56)**	(2.33)**	(0.16)
Difference (P−NP)	−0.41%	−0.06%	0.16%	0.14%	−0.58%	−0.20%
	(2.41)**	(0.41)	(3.19)***	(3.41)***	(4.05)***	(1.92)*

Panel C: Entry Buys − Exit Sells

	Connected fund/qtrs		Non-connected fund/qtrs		Difference (C−NC)	
	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted
Politically sensitive stocks	0.54%	0.37%	0.01%	0.06%	0.53%	0.31%
	(2.30)**	(1.87)*	(0.06)	(1.14)	(2.97)***	(2.08)**
Non-politically sensitive stocks	−0.28%	0.18%	0.05%	0.21%	−0.33%	−0.03%
	(2.38)**	(1.78)*	(1.52)	(7.52)***	(3.25)***	(0.39)
Difference (P−NP)	0.81%	0.20%	−0.05%	−0.15%	0.86%	0.35%
	(3.29)***	(0.94)	(0.72)	(2.66)***	(4.43)***	(2.14)**

Table 7: Connected funds and unusual trading activity in stocks affected by asbestos lawsuits

This table reports the regression analysis of suspicious equity trading activity in asbestos-affected companies. The dependent variables are unusual stock trading volume (in the first two columns), unusual stock returns (in the next two columns), and unusual option trading volume (in the last two columns) in a three-day window immediately preceding November 16, 2005. We use the conditional variant of Acharya and Johnson (2009) to measure unusual trading volume and stock returns. *Max* is the maximum of the daily standardized residuals from the above regressions during the three trading days before the event. *Sum* is the sum of the positive standardized residuals during the same three-day period. *Log*(1+# *of connected funds*) (*Log*(1+# *of non-connected funds*)) is the log of one plus the number of connected funds (non-connected funds) at the most recent quarter end before the event, i.e. September 31, 2005. *Firm size*, *market-to-book*, and *book leverage* are measured at the most recent quarter end. *Return volatility* is the standard deviation of monthly returns in the past 12 months ending September 30, 2005. *Market beta* is the beta with respect to the CRSP value-weighted index using daily data in the three-month period before the event (skipping the month immediately before the event). *Illiquidity* is the Amihud illiquidity ratio of the stock. *Turnover* is the annualized volume in shares divided by shares outstanding in the three-month period preceding the event. The last row reports the *F*-test statistics for the null hypothesis that the coefficient on *Log*(1+# *of connected funds*) (c_1) and the coefficient on *Log*(1+# *of non-connected funds*) (c_2) are equal. Numbers in parentheses are *t*-statistics. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

	Stock return		Stock volume		Option volume	
	Max	Sum	Max	Sum	Max	Sum
Log(1+ # of connected) (c_1)	0.380	0.530	0.335	0.274	0.586	0.819
	(2.32)**	(1.75)*	(1.38)	(0.69)	(1.98)**	(1.68)*
Log(1+ # of non-connected) (c_2)	−0.217	−0.220	−0.330	−0.348	-0.554	-0.503
	(1.15)	(0.56)	(1.17)	(0.78)	(1.63)	(1.13)
Firm size	−0.007	−0.091	0.123	0.180	0.209	0.159
	(0.08)	(0.56)	(1.17)	(0.86)	(1.36)	(0.60)
Market-to-book	0.056	0.035	0.005	0.004	0.130	0.060
	(1.34)	(0.47)	(0.10)	(0.04)	(1.37)	(0.59)
Book leverage	−0.230	−0.681	−0.607	−0.804	-2.252	-2.033
	(0.48)	(0.68)	(1.21)	(1.04)	(2.11)**	(1.21)
Return volatility	0.079	−0.033	0.084	−0.088	-0.614	-1.046
	(0.35)	(0.08)	(0.41)	(0.24)	(1.48)	(1.81)*
Market beta	0.591	3.137	4.503	10.756	3.857	1.237
	(0.19)	(0.48)	(1.38)	(1.80)*	(0.85)	(0.17)
Illiquidity	0.122	0.160	−0.051	−0.190	130.227	347.863
	(1.91)*	(1.24)	(0.66)	(1.70)*	(0.54)	(0.91)
Turnover	−0.035	−0.075	−0.053	−0.090	0.131	0.276
	(0.61)	(0.82)	(0.80)	(0.74)	(1.20)	(1.57)
Constant	1.420	3.096	0.843	1.198	2.026	3.011
	(2.17)**	(2.72)***	(1.10)	(0.83)	(1.33)	(1.15)
Number of observations	68	68	68	68	54	54
Adjusted R-squared	0.11	0.12	0.11	0.12	0.20	0.20
F-test ($c_1 = c_2$)	[0.032]**	[0.162]	[0.146]	[0.364]	[0.032]**	[0.048]**

Table 8: Performance of trade portfolios around the asbestos litigation reform

This table reports the abnormal returns of the trades (buys minus sells) around the asbestos litigation reform. At each quarter-end during 2004-2006, we assign trades by our sample of hedge funds to one of the two by two matrix of portfolios formed on the basis of whether the stock is affected by the asbestos reform and whether the fund is connected (Panel A) or informed (Panel B). Informed funds are connected funds that have a connection with lobbyists hired by the Asbestos Study Group, and uninformed funds are connected funds that do not have such connections. We focus on entry buys (i.e., positions held in the current quarter but not in the previous quarter) and exit sells (i.e., positions held in the previous quarter but not in the current quarter). We track the monthly performance of these four trade portfolios over the following three months and rebalance thereafter. We calculate the monthly value-weighted portfolio returns on the four portfolios. For each portfolio, we compute the Fama-French-Carhart four-factor adjusted returns and the DGTW characteristics-adjusted returns of their stock purchases and sells. Numbers in parentheses are *t*-statistics. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

Panel A: Connected vs. non-connected funds

	Connected fund/qtrs		Non-connected fund/qtrs		Difference (C − NC)	
	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted
Asbestos-affected stocks	1.06%	0.88%	0.03%	0.03%	1.03%	0.84%
	(2.14)**	(2.03)**	(0.15)	(0.19)	(1.93)*	(1.82)*
Unaffected stocks	−0.22%	0.03%	0.12%	0.07%	−0.34%	−0.05%
	(0.63)	(0.08)	(1.38)	(1.17)	(0.94)	(0.14)
Difference (A − U)	1.29%	0.85%	−0.09%	−0.04%	1.37%	0.89%
	(2.11)**	(1.55)	(0.40)	(0.24)	(2.12)**	(1.55)

Panel B: Informed vs. uninformed funds

	Informed fund/qtrs		Uninformed fund/qtrs		Difference (I − U)	
	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted	Four-factor alpha	DGTW-adjusted
Asbestos-affected stocks	3.41%	2.59%	0.43%	0.43%	2.98%	2.17%
	(3.96)***	(3.03)***	(0.80)	(0.93)	(2.93)***	(2.24)**
Unaffected stocks	0.44%	0.33%	−0.01%	0.10%	0.44%	0.23%
	(0.97)	(0.81)	(0.01)	(0.26)	(0.73)	(0.41)
Difference (A − U)	2.97%	2.26%	0.44%	0.32%	2.54%	1.94%
	(3.06)***	(2.39)**	(0.65)	(0.54)	(2.14)**	(1.74)*

Table 9: The impact of the STOCK Act

This table reports DiD analysis of hedge fund performance around the enactment of the STOCK Act. We focus on 12 months before and 12 months after the law to evaluate its impact. The pre-event period runs from April 2011 through March 2012, and the post-event period runs from July 2012 through June 2013. We first calculate, for each fund in each month during the pre-event period, the monthly holdings-based abnormal returns of political and non-political positions separately. We then run a regression for the pre-event period by regressing the abnormal holdings returns on an indicator for connected funds, an indicator for political portfolios, and an interaction term combining the two indicators. The coefficient on the interaction term is our DiD estimate for the pre-event period. We conduct a similar DiD analysis for the post-event period. We obtain the abnormal returns of stocks using the four-factor model as well as the DGTW characteristic benchmark adjustment. We report the DiD estimates of the abnormal performance for the pre- and post-event periods separately and the triple-difference estimate. We calculate standard errors using two-dimensional clustering by fund and month to account for residual correlation within the same fund across time and that within the same month across funds (Petersen 2009). Numbers in parentheses are t-statistics. Significance at the 10% (*), 5% (**), or 1% level (***) is indicated.

	Diff-in-diff estimate of four-factor alpha	Diff-in-diff estimate of DGTW-adjusted returns
Pre-event period	0.42% (3.78)***	0.52% (2.80)***
Post-event period	−0.15% (0.66)	−0.32% (0.90)
Difference (Post − Pre)	−0.57% (2.22)**	−0.84% (2.10)**