

**Wall Street, Capitol Hill, and K Street:
Political Influence and Financial Regulation[†]**

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Abstract

This paper explores the link between the political influence of the financial industry and financial regulation in the run-up to the global financial crisis. We construct a detailed database documenting the lobbying activities, campaign contributions, and political connections of the financial industry from 1999 to 2006 in the United States. We find evidence that spending on lobbying by the financial industry and network connections between lobbyists and the legislators were positively associated with the probability of a legislator changing positions in favor of deregulation. The evidence also suggests that hiring connected lobbyists who had worked for legislators in the past enhanced this link.

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1. Introduction

Regulatory failure, often argued to be linked to the political influence of the financial industry (Acemoglu, 2009; Calomiris, 2009; Johnson, 2009), has been alleged to be one of the key contributors to the recent global financial crisis (for example, Obstfeld and Rogoff, 2010). More generally, political economy factors may interfere with the process through which specific financial regulations are designed and implemented (for example, Kroszner and Strahan, 1999; Rajan and Zingales, 2003; Benmelech and Moskowitz, 2010). While political influence can be an important factor shaping regulatory frameworks in any industry,

¹ it is particularly interesting to study the financial sector because it is one of the most heavily-regulated and the largest source of politically-targeted spending in the United States (Center for Responsive Politics, 2009).

Arguments for the link between financial regulation and political influence of the financial industry mostly rely on anecdotal evidence.² Yet the case of the United States provides an excellent opportunity to study this link in a formal framework: not only it was the epicenter of a systemic financial crisis but also there is a wealth of publicly available information on political activities of the financial industry.

This paper studies the relationship between the political influence of the finance, insurance, and real estate industry (FIRE) and financial regulation during 1999–2006 in the United States. We ask the following questions. Did politically-targeted activities by FIRE have a link to the legislative outcomes of the bills on financial regulation? Were legislators' network connections with the lobbyists and the financial industry related to their decision to support certain proposals?

For our analysis, we construct a comprehensive dataset on the politically-targeted activities of financial companies. Specifically, we gather (i) firm-level data on lobbying

expenditures targeted toward specific bills and on campaign contributions targeted to particular legislators; (ii) information on employment histories of legislators and lobbyists hired to work on these specific bills, to pin down the network connections between the legislators (Capitol Hill) and lobbyists (K Street) as well as the financial industry (Wall Street)³; (iii) detailed information on 47 bills related to financial regulation, including their provisions so that they can be grouped into broad categories based on their similarities.

Our empirical strategy is to exploit cases in which legislators “switch” positions on a given legislation proposal. In other words, we use the variation in political spending by FIRE at the bill level and the variation in the position taken by the *same* legislator on the *same* issue in its different “reincarnations”. Hence, the baseline specification looks at whether an individual legislator switches her support for a particular bill or not is linked to the lobbying expenditures by firms affected by the bill as revealed by their decision to lobby on that bill (“affected firms”), and to the network connections she shares with the lobbyists and the financial industry. The estimating equation controls for any unobserved time-varying legislator and bill characteristics. This strategy is similar to the one used in Stratmann (2002). The main findings are as follows.

First, lobbying expenditures by affected financial firms were significantly associated with whether or not the legislators switched their vote on the key bills that preceded the crisis: more intense lobbying on a bill was linked to better odds that a legislator would switch her stance in favor of deregulation in a subsequent reincarnation of a bill. This link is statistically and economically significant: a one standard deviation increase in spending on lobbying is associated with a 3.7 percentage-point increase in the probability of switching.

Second, network connections between legislators and lobbyists who worked on a specific bill have a significant positive association with switching from being against to being in

support of deregulation: whether any of the lobbyists working on a bill also worked for a legislator in the past sways the stance on that bill in favor of deregulation. Having a connected lobbyist working on a bill is associated with an increase in the probability of switching by 2.5 percentage points.

Furthermore, network connections and certain legislator characteristics affect the strength of the relationship between lobbying and the probability of switching. Spending an extra dollar matters significantly more in switching a legislator's position if the lobbyist is connected to the legislator compared to the case where the lobbyist is unconnected. Lobbying has a stronger link to moving support toward deregulation if the legislator is more conservative and if the legislator worked in Wall Street.

Our paper contributes to an emerging body of work on the political economy of the recent financial crisis. Igan, Mishra, and Tressel (2011) look at the association between lobbying activities and risk taking by financial institutions in the run-up to the crisis. They show that lobbying lenders tended to engage more in risky lending practices between 2000 and 2006 and suffered worse outcomes during the crisis. This paper, in contrast, looks directly at the association of lobbying and campaign contributions to the outcomes of the legislative process governing financial regulation. By documenting the direct link between politically-targeted activities and legislative outcomes, this study complements Igan, Mishra, and Tressel (2011), where one of the stories that could explain the link between lobbying and risk taking is that lobbying by the financial industry played a role in making the regulatory environment lax, which allowed the lenders to engage in riskier lending.

A couple of other papers look at the legislative outcomes in the context of the recent crisis. Mian, Sufi, and Trebbi (2010) focus on the congressional voting behavior on two key

pieces of legislation that shaped the regulatory response after the crisis. Mian, Sufi, and Trebbi (2013) analyze voting patterns on six bills prior to the crisis and find that constituent interests and special interests played a role in explaining voting patterns both prior to and after the crisis.

Our analysis adds to this growing literature in three important aspects. First, we ask a broader question: rather than limiting the analysis to only a small set of bills on the mortgage market alone, we look at a large set of financial regulation proposals in the run-up to the crisis with far-reaching consequences for risk-taking in the financial system. Second, our measure of politically-targeted expenditures is a more precise measure of special interests. Instead of using aggregate contributions by the financial industry, we utilize firm-level information in order to establish a direct link between firms more likely to be affected by these proposals (revealed by their active lobbying agenda on these bills) and the legislators' position on these bills. Third, we bring in a dimension not explored in other studies, namely, the network connections between the legislators, lobbyists, and the financial industry.

To the best of our knowledge, our study is the first to provide evidence that voting on key bills on financial regulation was linked to the network connections between the financial industry, legislators, and lobbyists. These network connections are commonly tagged as the "revolving door". Bertrand, Bombardini, and Trebbi (forthcoming) document the importance of these connections in determining which issues lobbyists work on. Blanes-Vidal, Draca, and Fons-Rosen (2012) show that lobbyists who worked for legislators in the past generate more revenue. One possible explanation for this result is that connected lobbyists are better at securing the desired outcome for their clients than unconnected lobbyists are. Our results support this explanation as we show that lobbying spending by the financial industry through

connected lobbyists is more strongly associated with switch in a legislator's position toward deregulation.

While the documented correlation between lobbying, network connections, and voting patterns is robust to a variety of checks, it does not translate directly to any particular causation story. It is empirically extremely difficult to pin down the most likely motivation for the financial industry's lobbying (or any other industry or special interest group's lobbying). Ultimately, we do not know the exact activities on which lobbying expenditures are spent and, therefore, the estimated coefficients easily lend themselves to several interpretations. First, consistent with information-based theories, lobbying firms may have better information than the policymakers and they partly reveal their information by endogenously choosing their lobbying effort (Potters and van Winden, 1992; Lohmann, 1995; Grossman and Helpman, 2001). Second, lobbying may simply be a reflection of the political negotiation process and good-faith compromise. Legislation evolves endogenously in response to various interest groups lobbying to garner support. The negotiations start with an extreme position, and then slowly move toward compromise. Lobbying efforts on the earlier, more extreme versions of the bill would be small focusing on the marginal legislator. As the bill evolves through incarnations, more compromises would be made and lobbying may pick to reach to a broader set of legislators as the bill gravitates toward the center and becomes more appealing to them, increasing the odds of a position switch. Hence, more lobbying in a given round may coincide with more compromises made and more votes being switched from the preceding round as a result of the negotiation process. Finally, a less benign story is that financial institutions lobby to buy off legislators, and in this case their motive for lobbying seems to fit better with theories of rent seeking, where

lobbying firms compete for influence over a policy by strategically choosing their contribution to politicians (Bernheim and Whinston, 1986; Grossman and Helpman, 1994).

While the evidence falls short of firmly distinguishing among these stories, two observations deserve to be noted. First, the probability of switches does not increase systematically over successive reincarnations, raising some doubt about—though definitely not ruling out—the compromise story. Second, the result that legislators’ experience in Wall Street and hiring connected lobbyists enhances the link between lobbying expenditures and voting patterns may suggest room for rent-seeking motives—although the same evidence can be interpreted as a sign of “expertise,” giving some support to the information story.

Overall, our findings establish a robust association between voting patterns on financial regulation proposals and lobbying and network connections between legislators and the financial industry, either directly or through hiring of lobbyists. But, it is hard to distinguish whether it was information revealing, good-faith compromise, or rent seeking that drove lobbying by the financial industry.

The rest of the paper is organized as follows. Section II describes the data and the methodology.⁴ Section III presents the results of the empirical analysis. Section IV concludes.

2. Data and Methodology

2.1. Data

2.1.1. Politically-Targeted Activities

Under the Lobbying Disclosure Act of 1995 (LDA), all lobbyists have to file semi-annual reports with the Secretary of the Senate’s Office of Public Records (SOPR), if they satisfy the conditions specified in the LDA. These reports, available from the SOPR and the Center for Responsive Politics (CRP), list the name of the firm and the total dollar amount it spends on lobbying

activities. The legislation requires the disclosure not only of the dollar amounts actually received/spent, but also of the issues for which lobbying is carried out. Thus, unlike PAC contributions, lobbying expenditures can be associated with targeted policy areas. The reports must also state the names of the lobbyists that worked on the specific issues reported.

We extract the lobbying reports filed by financial institutions that engaged in mortgage-market-related activities either directly (for example, originating loans) or indirectly (for example, securitizing loans originated by others).⁵ Our analysis distinguishes between lobbying activities that are related to financial-market-specific issues from other lobbying activities and matches the annual amounts to the year the issue of interest was discussed in Congress. We focus on five general issues of interest (accounting, banking, bankruptcy, housing, and financial institutions) and the related specific issues, which are typically acts proposed at the House or the Senate, that were listed by the lobbyists as the main issue for the lobbying activity.⁶ We go through these specific issues one by one and determine whether an issue is directly linked to the mortgage market regulation. For example, H.R. 1663 of 2003 (Predatory Mortgage Lending Practices Reduction Act), regulating high-cost mortgages, is a bill that we deem to be relevant to the mortgage market. Conversely, H.R. 2201 of 2005 (Consumer Debt Prevention and Education Act), although in general related to financial services, does not include any provisions directly related to mortgage lending and is not classified as a mortgage-market-specific issue. The final set of 47 bills we use in the analysis is the comprehensive set of financial-market-related issues mentioned by the institutions engaged in mortgage-market-related activities in the run-up to the crisis.

After classifying all listed issues, we calculate lobbying expenditures on specific issues by splitting the total amount spent evenly across issues. To illustrate, suppose firm A spends

\$300, and lobbies on 3 general issues (banking and housing, a general issue of interest, and trade, not a general issue of interest); it lists 2 specific issues under banking and housing (H.R. 1663, which is a relevant specific issue, and H.R. 2201, which is not relevant). In this example, the final lobbying expenditure variable is calculated as $((300/3)*2)/2*1=\$100$.⁷

2.1.2. Network Connections

Our primary measure of network connections captures the association between the legislator and the lobbyists working on a particular bill. The variable is measured at the legislator-bill level and uses information on the professional background of the lobbyists hired to work on a particular bill. The lobbyists' names are extracted from the lobbying reports whereas the information on their background is compiled from *Washington Representatives*, a directory published by Columbia Books in its suite of www.lobbyists.info products, and www.opencongress.org. We call this bill-legislator level variable, '*Connection between lobbyist and legislator*'. It is defined as a dummy that equals 1 if at least one of the lobbyists working on a specific bill is connected to a particular legislator. This connection is defined either by the lobbyist having worked in that legislator's office or by the lobbyist having worked in a committee in which that legislator had a seat.⁸

We also use a legislator-level variable to capture the connectedness of the legislators with Wall Street. This is a dummy that equals 1 if the legislator ever worked in FIRE (capturing the networks directly linking Wall Street to Capitol Hill). Labeled as '*Worked in Wall Street*', the variable is similar in spirit to the definition of connections used in Faccio (2006), Faccio, Masulis, and McConnell (2006), and Braun and Raddatz (2010). We further distinguish this measure chronologically in an alternative construction so that it reflects whether the legislator worked in the financial industry after her time in public office.

Note that, while ‘*Connection between lobbyist and legislator*’ varies across bills as well as across legislators, ‘*Worked in Wall Street*’ variable is constant across bills. Hence, our estimates of the direct link of connectedness on voting behavior come from the specifications where we use the ‘*Connection between lobbyist and legislator*’ variable.

2.1.3. Legislator Actions

There are various points in the legislative process at which a legislator makes her stance on the proposed bill known to the others. Obviously, recorded votes on passage constitute one such point but not all bills get to this final stage. For those that do (10 out of a total of 47 bills), we obtain the roll call records for all senators and representatives from www.voteview.com, a website maintained by Keith Poole. For bills that never make it to the final voting stage (or do but do not have recorded votes), it is important to analyze the information hidden in the earlier stages of the legislative process. For this purpose, we gather data on the sponsorships and co-sponsorships, which indicate support for a bill. The source in this case is www.govtrack.us. (Co-)sponsorship on a bill often translates into voting in favor of that bill; Mian, Sufi, and Trebbi (2010) also use co-sponsorship information in addition to actual votes in their analysis of legislative actions related to the expansion of subprime mortgages.

We go over the details of each of the bills and categorize them into two types: (1) those promoting deregulation (‘lax bills’) and (2) those advocating tighter regulation of the activities of the lenders (‘tight bills’). Not all filers necessarily report their stance on a given issue, for example, whether they support the passage of a bill or not. Hence, we cannot make the distinction between lax and tight bills based on the positions taken by FIRE. The approach we take instead is to use the content of the bills themselves. The provisions of bills make such a lax-tight classification reasonably unambiguous: we define lax bills as those offering more options to

the lenders in conducting their activities while tight bills impose restrictions on lending activities. For example, the American Dream Downpayment Act opens the door to lower downpayments, enhancing mortgage lending opportunities, whereas the Predatory Lending Consumer Protection Act introduces additional disclosure requirements and increases penalties for creditor violations.

The bills are further grouped into six categories based on their similarities to reflect the fact that the bills that end up in the same ‘category’ actually are a ‘reincarnation’ of each other (see Table 2 for the individual bill and category names). Each category and reincarnation pair defines an individual bill. Creating broad bill categories is important for our empirical strategy as it allows us to exploit the variation in legislators’ stance across different reincarnations of the same bill category. Note that an ideal experiment would be to have two votes on the same bill, and compare the same type of action (ideally, a recorded vote); unfortunately, we do not have two roll calls for any of the bills in our sample. Categorizing the bills and combining the information on sponsorships allows us to conduct an experiment in a similar spirit.

We translate the actions on bills with opposite implications for the financial industry to derive a common measure capturing the concept of favoring deregulation, which entails expressing support in favor of lax bills and against tight bills. To put it more precisely, we create a binary variable, “stance in favor of deregulation”, that takes the value 1 if, on the particular lax bill in question, the legislator signed up as a (co-)sponsor or her vote was “aye” and 0 if she did not (co-)sponsor the bill or voted “nay”. For a tight bill, this dummy takes a value of 1 if the legislator neither signed up as a (co-)sponsor nor her vote was “aye”.

Our primary dependent variable in the empirical analysis measures the probability of a legislator *switching* her stance from being against to being in favor of deregulation. It is a dummy with value 1 if the legislator changed her vote from 'nay' ('aye') to 'aye' ('nay') on

successive reincarnations of a lax (tight) bill if the bill was ultimately voted on. If the bill did not have a roll call, then we set the dummy to 1 if the legislator switched from not (co-)sponsoring a bill to (co-)sponsoring. Note that if a legislator does not (co-)sponsor a lax bill and ends up voting for it in a successive reincarnation, we treat it as a switch in stance. However, such cases are limited (only 8 percent of observations with lax bills).

2.2. Empirical Specification

The empirical approach we employ aims to exploit the variation across legislators and bills in terms of legislative outcomes and lobbying by FIRE. Our baseline regression equation is

$$S_{iBR} = \beta L_{BR} + s_i * t_c + v_B * t_c + \mu_R * t_c + \varepsilon_{iBR} \quad (1)$$

where S_{iBR} is the switch in the stance of the legislator i from being against to being in favor of deregulation across successive reincarnations R of the same bill category B . Note that each pair of B and R uniquely identifies an individual bill. L_{BR} is the log of the total amount of lobbying expenditures spent on the bill by the firms that were “affected” by the bill, as revealed by their decision to engage in politically-targeted activities regarding this bill. Note also that L_{BR} varies at the bill category-reincarnation level but does not vary at the legislator level, because the lobbying reports do not provide information on which individual legislators were contacted. Notice that, since lobbying expenditures are aggregated, any association we find with switching could be interpreted as either the direct link of lobbying to legislator i or the indirect link of lobbying to legislator $j \neq i$ through strategic interaction among legislators such as bargaining on other bills or modification to the bill in question. Separately, we estimate a regression where we replace L_{BR} with the ‘*Connection between lobbyist and legislator*’, N_{iBR} , which aims to capture the network connections between the legislator and the lobbyists working on a particular bill.⁹

In all specifications, we employ the interaction between legislator and congress fixed effects, $s_i * t_c$. The legislator fixed effects, s_i , account for time-invariant legislator characteristics. The congress fixed effects, t_c , take into account the particular political environment (for example, the balance between Republicans and Democrats) in a given political cycle, and indirectly the circumstances in the financial markets and the broader economy, which may generate anti- or pro-regulation waves. For example, if there is any new economic or financial information that affects both the probability of switching and lobbying efforts, it would be captured by the congress fixed effects.

Importantly, the interaction terms $s_i * t_c$ control for any legislator characteristics that could vary across different congresses; for example, whether the legislator belongs to the same party as the chairman of Senate Banking and House Financial Services committees, whether the legislator belongs to the majority party. These would also capture the constituent interests, to the extent that these interests are invariant *within* a congress. For example, there could be changes in legislative priorities across congresses due to a shift in voter preferences. These changes could also affect lobbying efforts. Such effects would be controlled for by the interaction term. In addition, potential changes in a legislator's general propensity to switch stances across time (for example, because the legislator gains more experience) would also be captured by $s_i * t_c$.

We also employ the interaction between bill category and congress fixed effects, $v_B * t_c$. The bill category fixed effects, v_B , control for any unobserved characteristics of a certain regulation proposal. The inclusion of this set of fixed effects is crucial to our empirical strategy as it allows us to compare the change in a legislator's stance across different incarnations of the same issue. The interaction terms $v_B * t_c$ would then capture any factor that would affect the stance on a given regulation proposal over time. For instance, a Democrat-

controlled congress may be more in support of a particular proposal than a Republican-controlled one, and observing the general stance on a bill may affect an individual legislator's position.

Finally, we also include the interaction between reincarnation and congress fixed effects, $\mu_R * t_C$. These control for unobserved reincarnation-specific effects, for example, increasing probability of a switch on later reincarnations due to more aggressive lobbying or longer negotiation and bargaining or learning about others' positions by observing the votes in the earlier reincarnations. In other words, if there is a tendency toward increased lobbying and, at the same time, a tendency toward increasing support for a bill across successive reincarnations, the reincarnation fixed effects would capture such common trends. However, as we discuss below, we do not necessarily observe increasing lobbying expenditures across successive reincarnations.

Given that our empirical strategy is based on utilizing variation in a legislator's stance across successive reincarnations within a bill-category, we cannot introduce individual bill ($v_B * \mu_R$) fixed effects. In order to account for certain bill characteristics, we include in all the specifications, a proxy for the complexity of the bill. Arguably, more complex bills are likely to be associated with more intense lobbying and discussions. At the same time, the complexity of a bill may also be linked to the likelihood of a legislator switching her stance because, for example, the legislator may take more time to absorb the content of all the provisions and make a decision. We construct a measure of complexity by calculating the total number of pages that describe and contain the full text of a bill. In addition, all regressions include a dummy for tight bills.

The standard errors in all the regressions are clustered at the bill category-reincarnation level to account for the correlation in a legislator's stance across different issues.¹⁰

3. Results

3.1. First Look

Table 1 shows that, between 1999 and 2006, interest groups have spent on average about \$4.2 billion per political cycle on targeted political activity, which includes PAC campaign contributions and lobbying expenditures. The latter represents by far the bulk of all interest groups' money spent on targeted political activity (close to 90 percent). Expenditures by FIRE companies constitute roughly 15 percent of all lobbying expenditures in any election cycle. Approximately 10 percent of all firms that lobbied during this time period were in FIRE. Notably, overall lobbying expenditures as well as expenditures by FIRE have increased by roughly two-thirds between 1999 and 2006.¹¹

All these indicate that, during our sample period, FIRE was one of the most politically-active industries. The focus was on a small set of regulation proposals: when bills with the same/similar name are consolidated together in one broad concept category, there were only six proposals that lobbying activities of the financial industry targeted. These were introduced in various reincarnations, sometimes as frequently as 15 times. As summarized in Table 2, lobbying efforts on different reincarnations within a bill category are somewhat evenly distributed across time. Hence, lobbying on a particular issue is not necessarily front- or back-loaded and seems to be quite persistent through the attempts to turn a proposal into law.

As a first pass in looking into the relationship between the financial industry's politically-targeted efforts and financial regulation during 1999–2006, we calculate the probability that a bill ultimately gets signed into law. Table 3 presents these results. On the individual bills, no tight bill passed both chambers of Congress and ultimately got signed into law while 16 percent of the lax bills did. This difference is even more striking when individual bills are grouped into

common concept categories. Actually, the majority of lax regulation proposals (three out of five) were ultimately signed into law whereas none of the tight regulation proposals succeeded.

In what follows, we analyze whether the pattern shown in Table 3 survives formal econometric analysis. Summary statistics on the variables used in the empirical analysis are shown in Table 4a. In the four congresses covered, there were 790 legislators that voted on at least one of the 47 bills identified. FIRE companies hired 575 lobbyists to lobby on these bills. On average, roughly \$4 million were spent on a bill.¹² The bill with highest lobbying spending by FIRE was H.R. 833 Responsible Lending Act introduced in the 108th Congress as the 9th reincarnation of Predatory Lending Consumer Protection Act. In comparison, campaign contributions by the affected firms to the legislators were minuscule standing approximately at an average of \$2,000. Lobbying expenditure by the “others” such as consumer organizations, housing industry firms (home builders and realtors), and government-sponsored enterprises, was also very small (averaging at most \$20,000) compared to the amount spent by the financial firms. Of all the legislators in the data set, 14 percent are connected to Wall Street. Among the bill-legislator observations, 32 percent indicate a connection between the legislator and the lobbyists working on the bill. Overall, connections between Wall Street and Capitol Hill (as illustrated by the ‘*Worked in Wall Street*’ and the ‘*Connection between lobbyist and legislator*’ variables) are not rare occurrences and there is enough variation in these measures for regression analysis.

Table 4b shows cross-tabulations on how many switches occurred and how much lobbying varied from one reincarnation to another. Overall, 6 percent of the observations are characterized by switches toward deregulation.¹³ Importantly, these switches are not confined to a particular group of legislators or a particular bill category. In fact, the switch cases are spread across all bill categories and 564 legislators (71 percent of total) have switched at least once. A

first look at the data suggests that lobbying spending is positively associated with switches toward deregulation. Switches are associated with three times higher lobbying expenditures than non-switches. Further, there is no indication that the probability of switching increases systematically across successive reincarnations (Table 4c). This may cast doubt over a good-faith compromise story to explain the correlation between lobbying and switches—that more lobbying in a given round may simply indicate more compromises being made, and thus more votes being switched from the preceding round.

3.2. Regression Analysis

3.2.1. Main Findings

Before going on to estimating the baseline regression as outlined in Equation (1), we estimate a simple specification where we collapse the data at the bill category-reincarnation level. This regression, shown in Table 5, Column I, has 41 observations. The estimates suggest that lobbying is associated with a higher probability of switch in favor of deregulation and that a one percent increase in lobbying expenditures, *ceteris paribus*, is associated with a 0.08 percent higher probability of switch.

The results from estimating our baseline specification, Equation (1), are presented in Table 5, Columns II–V. We find a statistically significant, positive association between money spent on lobbying for a particular bill and legislators switching their stance in favor of deregulation (Table 5, Column II).¹⁴

This association is also significant in economic terms. A one percent increase in lobbying expenditures (everything else remaining unchanged) would increase the probability of switch by 0.37 percentage points. In order to interpret the coefficient further, we look at the standard deviation in “purged” lobbying expenditures. These purged lobbying expenditures are

calculated by regressing lobbying expenditures on all the fixed effects and additional controls in Table 5, and using the residual from this regression. A one standard deviation increase in purged lobbying expenditures (or a 10 percent increase in lobbying, in reference to the summary statistics in Table 4a) would increase probability of switch by 3.7 percentage points, based on the estimates in Table 5, Column II.

Although the magnitude of the estimated coefficient in Column II is larger than that in Column I, in the economic significance of the estimated effects are comparable. This is because the variability of lobbying expenditure is much larger in the collapsed data. A one standard deviation increase in purged lobbying expenditures (or a 66 percent increase in lobbying; see summary statistics in Table 4a) would increase probability of switch by 5.1 percentage points, based on estimates in Table 5, Column I.

Network connections between the legislators and the lobbyists also have a link to securing a switch in favor of deregulation. Specifically, if the lobbyist hired to contact the legislator on a bill has an employment history connecting the lobbyist to that legislator, the higher the likelihood that the legislator switches her stance (Table 5, Column III). On average, connections between the lobbyist and the legislator are associated with an increase in the probability of switching in favor of deregulation by 2.5 percentage points.

In Columns IV and V, we investigate whether this association between lobbying and switching is stronger when it occurs through connected rather than unconnected lobbyists. The coefficient on lobbying increases by 75 percent when the lobbying money is spent through connected lobbyists. The difference between the estimated coefficients in Columns IV and V is statistically significant at the 10 percent level. This finding is consistent with others in the literature emphasizing the importance of the value of connections.

Next, we explore how legislator characteristics affect the relationship between lobbying, hiring connected lobbyists and the probability of changing a legislator's stance. We estimate a specification where we introduce the interaction between the lobbying and connection variables, and a measure of legislators' conservative tendencies. We borrow the *DW-nominate* variable calculated by Poole and Rosenthal (2007). These ideology scores are higher for more conservative legislators.¹⁵ The interaction of the legislator's conservatism and lobbying has a positive and significant coefficient (Table 6, Column I). Hence, higher lobbying expenditures may be more effective in persuading more conservative legislators. For the most conservative legislator (whose ideology score equals one), a 10 percent increase in lobbying expenditures is associated with a 3.97 percentage-point increase in the probability of taking a stance in favor of deregulation ($=3.81+0.16*1$; Table 6, Column I). For a legislator with an average ideology score ($=0.08$), a 10 percent increase in lobbying is associated with a 3.82 percentage point increase in the probability of switch ($=3.81+0.16*0.08$).¹⁶

Then, we look into how a legislator's work experience comes into play with the relationship we have established between lobbying and switching in favor of deregulation. The link between lobbying expenditures to voting patterns is enhanced by the legislators' experience in Wall Street (Table 6, Column II). In particular, lobbying is more likely to be associated with a positive probability of moving votes toward deregulation if the legislator ever worked in the financial industry. A 10 percent increase in lobbying is linked to a 3.88 percentage-point higher probability of taking a stance in favor of deregulation for legislators that are "Wall Street insiders", but only to 0.367 percentage point increase in the probability of switch for a non-insider. The results remain broadly the same when interaction terms with both ideology and past experience in Wall Street are included (Table 6, Column III) and appear to be driven by

experience prior to taking office: we do not find any evidence suggesting that the promise of a job in Wall Street affects stance on regulation (not shown).¹⁷

PAC contributions have been commonly used in the literature to measure politically-targeted activities. Although the magnitude of PAC contributions is small relative to lobbying expenditures and PAC contributions cannot be linked to particular issues, the distinctive feature of these contributions is that they are linked to particular legislators, and thus, may influence individual voting patterns directly. Therefore, we repeat the analysis in Table 5 using PAC contributions by affected firms instead of lobbying expenditures.¹⁸ The estimated coefficient (Table 6, Column IV) is smaller in magnitude: a one percent increase in PAC contributions is associated with a 0.009 percentage point increase in probability of switch. But this is economically significant: a one standard deviation increase in “purged” PAC contributions is estimated to be associated with a 6.7 percentage point increase in the probability of switch (higher than that for lobbying expenditures) because a one standard deviation implies a large increase in PAC contributions—7.5 times (Table 4a).

In a nutshell, the analysis points to strong evidence that the likelihood of a legislator changing her stance on financial regulation proposals introduced in the run-up to the crisis was linked to the lobbying efforts and network connections. In addition, the evidence suggests that spending more by hiring connected lobbyists rather than unconnected ones gets the financial industry more bang for their buck.¹⁹

3.2.2. Discussion of Findings

Do our results imply that the lobbying efforts of the financial industry were “successful”? Recall that the lobbying reports do not always explicitly state the stance of the filer on a given issue, for example, whether it supports the passage of a bill or not. There could be financial institutions

that are *against* deregulation; for example, lenders with more prudent standards may prefer tighter rules to suppress competition by less prudent lenders. However, if we make the plausible assumption that the financial institutions were on average in favor of deregulation, our empirical results suggest that the lobbying efforts were successful in obtaining this outcome. Such an assumption indeed seems plausible since some financial institutions explicitly state their position on certain bills: for example, Bear Stearns in lobbying on the Mortgage Reform and Anti-Predatory Lending Act expressed that “advocated the concepts in the proposal but not the proposal”.

Although our specification exploits variation in voting patterns for a given legislator on the same issue, can we interpret the findings as evidence of a causal relationship? One might argue that lobbying efforts are allocated toward legislators that already have an inherent tendency to switch their stance in favor deregulation, and hence we may be overestimating the effect of lobbying. Several considerations ameliorate but do not fully eradicate such reverse-causality concerns. First, such tendencies would be captured by the legislator and congress fixed effects and their interactions in our empirical specification. Second, lobbying expenditures are not measured at the legislator level. The information we obtain from the lobbying reports does not include any reference to particular legislators.²⁰ Hence, lobbying expenditure on a bill as a whole is unlikely to be directly influenced by voting patterns of any specific legislator.

Similar endogeneity concerns may apply to network connections. One can argue that a lobbyist’s decision to work for a particular legislator may be influenced by the legislator’s tendency to switch. However, connections are determined based on *past* employment histories and are not likely to be affected by voting patterns on particular, *future* regulation proposals.

One can also argue that firms may be likely to hire lobbyists who are connected to legislators with a higher inclination to switch. Several factors alleviate such endogeneity concerns. First, such tendencies would be captured by the legislator and congress fixed effects and their interactions in our empirical specification. Second, when we look at the choice of hiring lobbyists, we see a reasonable degree of persistence. Specifically, the percent of lobbyists who worked on successive reincarnations (that is, worked on n^{th} and $(n-1)^{\text{th}}$ reincarnations) within the same bill category is very high. For example, at least 90 percent of the lobbyists working on a reincarnation of the American Dream Downpayment Act had also worked on the previous reincarnation. Given this persistence, it would be hard to argue that firms systematically change their lobbyist-hiring patterns based on legislators' stance.

That said, the data and the empirical setup does not allow us to fully rule out other stories, for example, if lobbying efforts are focused on proposals that are close calls or are the subject of intense debate and, as such more likely to be re-written, because we do not observe voting *twice on the same exact bill* but only in their similar versions ("reincarnations"). Overall, it may seem to be the case that lobbying and network connections sway votes from being against to being in favor of deregulation rather than the tendency to switch positions on a bill determining lobbying expenditures and how connections are established. But the evidence is not definitive in establishing this causal link.

Importantly, the paper cannot distinguish with reasonable confidence whether lobbying is benign—good faith negotiation aimed at getting marginal legislators to support a bill or information transmission between the industry experts and the legislators—or whether lobbying is about corruption and vote buying. Ultimately, we do not know the exact activities on which

lobbying expenditures are spent. The estimated coefficients represent an interesting correlation, which can accommodate a variety of explanations.

4. Conclusion

Regulatory failure has been the subject of intense debate in the aftermath of the global financial crisis. In this paper, we take a closer look at the financial regulation proposals prior to the crisis and analyze how political influence was linked to the congressional actions on these proposals.

We use a detailed dataset on the politically-targeted activities of the financial industry from 1999 to 2006. We document that the probability of a bill advocating tighter regulations being passed was lower than that of a bill promoting deregulation.

We provide robust evidence that lobbying expenditures by the affected firms and network connections between lobbyists and legislators were associated with whether the legislators switched their stance in favor of these bills. Additionally, hiring connected lobbyists significantly enhances this association.

While pinning down precisely the motivation for lobbying is difficult, our analysis suggests that political influence of the financial industry may have played a role in shaping the regulatory landscape in the run-up to the crisis and that financial reform proposals should not be considered in isolation from these political economy factors. However, the precise policy response would depend on the true motivation for lobbying. Specialized rent-seeking would require curtailing lobbying as a socially non-optimal outcome. If, however, lenders lobbied mainly to inform the policymaker and promote innovation, or if lobbying smooths the progress of negotiations on an issue, lobbying would remain a socially beneficial channel to facilitate informed decision making and good-faith compromise.

Finally, this paper does not address the bigger question of whether switching matters in the sense of actually reversing the fate of legislation. While we confirm that switches happen

more often for proposals that did get signed into law²¹, it is difficult to provide an accurate answer since we do not know what the fate of legislation would have been otherwise. We leave this question for further research.

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Table 1. Targeted Political Activity Campaign Contributions and Lobbying Expenditures
(millions of dollars)

Election cycle	1999-2000	2001-02	2003-04	2005-06
Contributions from PACs	326	348	461	509
Overall lobbying expenditure	2,972	3,348	4,081	4,747
<i>Of which</i> expenditure by finance, insurance, and real estate industry (FIRE)	437	478	645	720
<i>Share of FIRE in overall lobbying (in percent)</i>	14.7	14.3	15.8	15.2
Total targeted political activity	3,298	3,696	4,542	5,256

Source: Center for Responsive Politics.

Table 2. Lobbying Expenditures on Reincarnations of Bills
(in percent of total spent on all attempts)

Reincarnation ↓ \ Category →	Commodity	Bankruptcy	American	FHA Multifamily	Predatory	Financial
	Futures Modernization Act	Abuse Prevention and Consumer Protection Act	Dream Downpayment Act	Housing Mortgage Loan Limit Adjustment Act	Lending Consumer Protection Act	Services Regulatory Relief Act
1	52	30	10	14	5	4
2	29	1	8	17	4	27
3	19	1	18	5	5	14
4		11	19	3	5	19
5		34	7	52	10	20
6		22	7	8	2	17
7		1	3		6	
8			14		4	
9			9		29	
10			5		6	
11					3	
12					6	
13					11	
14					1	
15					3	

Notes: The bills are grouped into six categories based on their similarities in their titles, descriptions, and provisions. Each attempt to pass a bill in a given category is labeled as a 'reincarnation'. The names of the bills brought forward in various attempts under the same broad concept are as follows: Commodity Futures Modernization Act – 1. H.R. 4541, 2. S. 2697, 3. H.R. 5660; Bankruptcy Abuse Prevention and Consumer Protection Act – 1. H.R. 975, 2. H.R. 1529, 3. H.R. 1860, 4. S. 1920, 5. S. 256, 6. H.R. 685, 7. H.R. 2060; American Dream Downpayment Act – 1. H.R. 1776, 2. H.R. 5640, 3. H.R. 3206, 4. S. 1620, 5. H.R. 1276, 6. S. 811, 7. H.R. 3755, 8. H.R. 5121, 9. S. 3535, 10. S. 2169; FHA Multifamily Housing Mortgage Loan Limit Adjustment Act – 1. H.R. 1629, 2. S. 1163, 3. H.R. 4110, 4. H.R. 176, 5. H.R. 1461, 6. H.R. 5503; Predatory Lending Consumer Protection Act – 1. H.R. 3901, 2. H.R. 4213, 3. H.R. 4250, 4. S. 2415, 5. H.R. 1051, 6. H.R. 3607, 7. S. 2438, 8. H.R. 4818, 9. H.R. 833, 10. H.R. 1663, 11. H.R. 1865, 12. H.R. 1182, 13. H.R. 1295, 14. H.R. 2201, 15. H.R. 4471; Financial Services Regulatory Relief Act – 1. H.R. 665, 2. S. 900, 3. H.R. 3951, 4. H.R. 1375, 5. H.R. 3505, 6. S. 2856.

Table 3. Passage of Bills

Tight bill?	Individual Bills			Tight bill?	Bills Categorized		
	Signed into law?		Total number of bills		Signed into law?		Total number of categories
	No	Yes			No	Yes	
No	84%	16%	32	No	40%	60%	5
Yes	100%	0%	15	Yes	100%	0%	1
Total number of bills	42	5	47	Total number of categories	3	3	6

Notes: The table shows the proportion and number of bills that were ultimately signed into law between 2000 and 2006, distinguishing between lax and tight bills. Bills are categorized as lax or tight based on the rules they would impose on the financial institutions. In the last three columns, we group the bills into six categories: Commodity Futures Modernization Act; Bankruptcy Abuse Prevention and Consumer Protection Act; American Dream Downpayment Act; FHA Multifamily Housing Mortgage Loan Limit Adjustment Act; Predatory Lending Consumer Protection Act; Financial Services Regulatory Relief Act.

Table 4a. Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of bills	47				
Number of legislators	790				
Number of lobbyists	575				
Dummy=1 if switch to being in favor of deregulation	32390	0.06	0.24	0	1
Dummy=1 if stance in favor of deregulation	32390	0.39	0.49	0	1
Dummy=1 if roll call vote in favor of deregulation	3006	0.69	0.46	0	1
Lobbying expenditures (in US\$)	32390	3,896,924	3,788,612	262,374	14,700,000
Lobbying expenditures (in log)	32390	14.70	1.03	12.48	16.51
Purged lobbying expenditures (in US\$)	32390	1.00	0.09	0.75	1.33
Purged lobbying expenditures (in US\$) -- collapsed data	47	1.25	0.82	0.28	3.65
PAC contributions (in US\$)	32390	2,341	5,983	1	83,861
PAC contributions (in log)	32390	2.96	3.98	0.00	11.34
Purged PAC contributions (in US\$)	32390	9.80	73.23	0.00	6250.48
Lobbying expenditures by consumer organizations (in US\$)	32390	22,149	67,172	1	287,260
Lobbying expenditures by consumer organizations (in log)	32390	3.04	4.47	0.00	12.57
Lobbying expenditures by housing industry (in US\$)	32390	1,458	8,943	1	58,000
Lobbying expenditures by housing industry (in log)	32390	0.58	2.16	0.00	10.97
Lobbying expenditures by GSEs (in US\$)	32390	22,780	143,689	1	931,532
Lobbying expenditures by GSEs (in log)	32390	0.53	2.41	0.00	13.74
Ideology score	31406	0.08	-0.47	0.76	1.09
Republican	32226	0.52	0.50	0	1
Worked in Wall Street	32390	0.14	0.35	0	1
Worked in Wall Street after Congress	32390	0.05	0.21	0	1
Connection between lobbyist and legislator	32390	0.33	0.47	0	1
Connection through legislator's office	32390	0.33	0.47	0	1
Connection through committee	32390	0.07	0.25	0	1
Connected lobbyists	32390	0.90	2.09	0	24

Notes: The dummy for 'switch to being in favor of deregulation' takes on the value 1 if the legislator changed her vote from 'nay' ('aye') to 'aye' ('nay') on successive reincarnations of a lax (tight) bill, if the bill was ultimately voted on, and if the legislator switched from not (co-)sponsoring a bill to (co-)sponsoring, if the bill did not have a roll call. The dummy for 'stance in favor of deregulation' takes on the value 1 if the legislator voted 'aye' ('nay') on a lax (tight) bill, if the bill was ultimately voted on, and if the legislator sponsored or cosponsored a bill, if the bill did not have a roll call. Lobbying expenditures are the total amount spent on lobbying on a particular bill by the financial firms that list the bill in their reports ('the affected firms'). PAC contributions are the total amount given to a particular legislator's PACs by the affected firms, split across bills using the lobbying expenditure by a particular firm on that bill as weights. Purged lobbying expenditures and PAC contributions, denote the residuals after controlling for fixed effects and other controls. The 'Ideology score' is DW-nominate, calculated by Poole and Rosenthal (2007), and higher values correspond to a more conservative political line. Republican is a dummy that equals 1 for legislators in the GOP, 0 for Democrats, and is set to missing for independents. 'Worked in Wall Street (after Congress)' is a dummy that equals 1 if the legislator has ever worked for a finance, insurance, or real estate firm (after s/he left public office). 'Connection between lobbyist and legislator' is a dummy that equals 1 if a lobbyist working on a specific bill is connected to a particular legislator, either because the lobbyist worked in that legislator's office ('Connection through legislator's office') or because the lobbyist worked in a committee in which that legislator had a seat ('Connection through committee'). 'Connected lobbyists' shows the number of lobbyists working on a specific bill that is connected to a particular legislator.

Table 4b. Characteristics of Switches

	Switches	Non-switches
Number of observations	1,939	30,451
In percent	6	94
Number of legislators	564	226
In percent	71	29
Average lobbying expenditure (in \$ mn)	9.8	3.5
In log	16.0	14.6

Note: Switches are the observations where a legislator changed her vote from 'nay' ('aye') to 'aye' ('nay') on successive reincarnations of a lax (tight) bill, if the bill was ultimately voted on, and if the legislator switched from not (co-)sponsoring a bill to (co-)sponsoring, if the bill did not have a roll call.

Table 4c. Switches across Reincarnations

Reincarnation	Switches in percent of observations in each reincarnation
1	
2	1.2
3	0.1
4	9.7
5	22.1
6	0.5
7	0.1
8	14.4
9	22.9
10	0.2
11	0.1
12	0.1
13	0.1
14	0.1
15	0.1

Note: Switches are the observations where a legislator changed her vote from 'nay' ('aye') to 'aye' ('nay') on successive reincarnations of a lax (tight) bill, if the bill was ultimately voted on, and if the legislator switched from not (co-)sponsoring a bill to (co-)sponsoring, if the bill did not have a roll call.

Table 5. Lobbying, Connections, and Probability of Switch to Being in Favor of Deregulation

	Dependent variable: Dummy=1 if stance changes from against to in favor of deregulation				
	I	II	III	IV	V
	Collapsed data	Full sample	Full sample	Unconnected lobbyists	Connected lobbyists
Lobbying expenditures	0.077** [0.034]	0.370*** [0.067]		0.262*** [0.094]	0.464*** [0.028]
Connection between lobbyist and legislator			0.025** [0.010]		
Observations	41	32390	32390	21662	10728
R-squared	0.28	0.48	0.46	0.45	0.62
Legislator * Congress fixed effects	no	yes	yes	yes	yes
Category * Congress fixed effects	no	yes	yes	yes	yes
Reincarnation * Congress fixed effects	no	yes	yes	yes	yes

Notes: The dependent variable in Column I is the fraction of legislators who switch stance from against to in favor of deregulation. Column I is estimated as ordinary least squares. All other regressions are estimated as linear probability models. In Columns II and III, the regression is estimated on the full sample. In Column IV, the regression is estimated using only the observations where the legislator and the lobbyists are not connected. In Column V, the regression is estimated using only the observations where the legislator and the lobbyists are connected. All regressions include 'Bill complexity', defined as the total number of pages that describe and contain the full text of a bill, expressed in logs, and a dummy that is 1 if the bill is classified as tight. Robust standard errors clustered at the bill group-reincarnation level are in parentheses. ***, ** and * denote significance at 1, 5, and 10 percent levels, respectively.

Table 6. Probability of Switch, Legislator Characteristics, and PAC Contributions

Dependent variable: Dummy=1 if stance changes from against to in favor of deregulation				
	I	II	III	IV
Lobbying expenditures	0.381*** [0.070]	0.367*** [0.068]	0.378*** [0.070]	
Lobbying expenditures * Ideology score	0.016^ [0.011]		0.014^ [0.011]	
Lobbying expenditures * Worked in Wall Street		0.021** [0.008]	0.016** [0.007]	
PAC contributions				0.009*** [0.003]
Observations	31406	32390	31406	31406
R-squared	0.49	0.48	0.49	0.49
Legislator * Congress fixed effects	yes	yes	yes	yes
Category * Congress fixed effects	yes	yes	yes	yes
Reincarnation * Congress fixed effects	yes	yes	yes	yes

Notes: All regressions are estimated as linear probability models. All regressions include 'Bill complexity', defined as the total number of pages that describe and contain the full text of a bill, expressed in logs, and a dummy that is 1 if the bill is classified as tight. Robust standard errors clustered at the bill group-reincarnation level are in parentheses. ***, ** and * denote significance at 1, 5, and 10 percent levels, respectively. ^ denotes statistical significance at the 15 percent level.

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digan@alumni.princeton.edu. DISCLAIMER: The views expressed in this paper are completely those of the authors and do not represent those of any institution with which the authors are otherwise affiliated.

¹ Political influence can also have an impact on economic and financial *outcomes* (for example, Fisman, 2001; Cooper, Gulen, and Ovtchinnikov, 2010).

² For instance, at the end of 2007, the Wall Street Journal reported that Ameriquest Mortgage and Countrywide Financial, two of the largest mortgage lenders in the nation, spent millions of dollars in political donations, campaign contributions, and lobbying activities from 2002 through 2006 (Simpson, 2007). The sought outcome, according to the article, was the defeat of anti-predatory lending legislation and fending off of similar laws. The Financial Times recounted a similar story based on a Center for Public Integrity study linking subprime originators to lobbying efforts to prevent tighter regulation of the mortgage market (Luce, 2009). In fact, banks continued to lobby intensively against tighter regulation and financial regulatory reform even as the industry struggled financially and suffered from negative publicity (Labaton, 2009).

³ Capitol Hill is where the U.S. Congress offices are located, K Street is where many lobbyists have offices in Washington, DC, and Wall Street is where many financial companies have offices in New York.

⁴ For a brief account of the legislative process in the United States, the role of lobbying in this process, and the key legislative landmarks regarding financial regulation prior to the crisis, see the working paper version (available at http://www.prachimishra.net/IM_lobbying%20and%20financial%20regulation_revised.pdf).

⁵ Mortgage-market-related activities are identified using Home Mortgage Disclosure Act Database and this identification procedure takes into account not only the activities by the financial institution itself but also the activities by its related companies. See Igan, Mishra, and Tressel (2011) for more details.

⁶ ‘General issue area codes’ are provided by the SOPR and listed in line 15 of the lobbying reports while the ‘specific lobbying issues’ are listed in line 16. See the Online Appendix (available at http://www.prachimishra.net/IM_lobbying%20and%20financial%20regulation_APPENDIX.pdf) for more details on what the reports look like and a full list of the specific issues included in the analysis.

⁷ For robustness, we adopt an alternative splitting approach that distributes expenditures using as weights the proportion of reports that mention the specific issues of interest. We also consider lobbying expenditures by the financial industry associations. The list of member firms for each association in the lobbying database is compiled by going on each association’s website. A portion of the associations’ lobbying expenditures is assigned to each member firm based on the share of its own spending in the total of all members.

⁸ Conceptually, this measure is close to the one used in Blanes-Vidal, Draca, and Fons-Rosen (2012). The difference is that they look at the connections from an individual lobbyist’s perspective while we construct our variable for each bill-legislator pair.

⁹ Lobbying and connections are too highly correlated to distinguish and multicollinearity is detected when both are included as regressors. Therefore, we do not include them in the same regression.

¹⁰ Our results are robust to clustering at the legislator, bill category, and legislator-bill category levels.

¹¹ Drutman (2010) argues that corporate lobbying activity is likely to continue to expand in the future, with large corporations playing an increasingly central role in the formulation of national policies.

¹² Note that this statistic is not for the aggregate amount spent by the financial firms which lobbied on the bills in our sample. Rather, it is for the part of the aggregate amount we allocate to the bills in question by these firms. The aggregate lobbying expenditure by the affected firms on *all* bills was three times as large.

¹³ This fraction goes up to 10 percent in the specifications where certain non-switch cases are dropped.

¹⁴ Our results are robust to estimation by probit. However, we prefer the linear probability model as our baseline as introducing fixed effects in a probit model may be prone to inconsistent estimates due to the incidental parameter problem (Chamberlain, 1984).

¹⁵ The results are similar when we use a dummy variable that is 1 if the legislator is a Republican.

¹⁶ The interaction between connections and ideology is statistically insignificant (not shown). This may indicate that, irrespective of their ideology, all legislators are equally likely to be influenced by a lobbyist connected to them.

¹⁷ We also looked at whether the legislator's K Street experience enhances the link between lobbying and switching: 18 percent of legislators have such experience and 92 percent of those with K Street experience acquire such experience following their public service. We did not find any significant coefficient on the interaction of K Street experience and lobbying, even for experience as a lobbyist after public office.

¹⁸ Data on PAC contributions are available from the Federal Election Commission and the Center for Responsive Politics. PAC contributions by affected firms and lobbying expenditures on a given bill are positively correlated so we prefer not to include both in the same specification. The results are unchanged when we do.

¹⁹ In a series of robustness tests (described in the working paper version available at http://www.prachimishra.net/IM_lobbying%20and%20financial%20regulation_revised.pdf), we show that the main findings are robust to (i) alternative controls—proxies for voting history of the legislator and voting along party lines, number of new amendments, momentum for deregulation as captured by a time trend, and lobbying by those other than the financial industry; (ii) alternative dependent variables—different comparison groups (those who switch and those who stay put; those where legislators stay put against deregulation); the *level* of legislator's position rather than a switch; and (iii) alternative ways to construct the lobbying variable.

²⁰ The LDA does not require a description of the specific recipients of and the specific activities funded by lobbying money. It is possible that certain legislators are contacted more often or lobbied more aggressively. However, if the lobbying activity involves “research and background work” to create arguments for or against a regulation proposal, information generated by such activities is likely to be accessible by other legislators as well.

²¹ The difference between mean values of both lobbying expenditures and the probability of switching for bills that get signed into law and those that do not is positive and statistically significant.