Voting for a Career
– The Revolving Door Moderates the Senate

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Abstract

I investigate how the revolving door affects legislative behavior in the Senate. The literature on final-term problems suggests that senators should begin shirking their responsibilities before leaving office, because they no longer are accountable to voters. Lack of electoral accountability could, however, have different effects depending on the senator's career ambitions. I show that senators, who voluntarily leave office for private sector employment, become more moderate in their voting during their final Congress. Those who are voted out, or leave the labor market entirely, are unaffected or become more extreme. Additionally, I show that a) revolving door senators vote in closer alignment with the pool of post-elective employers, b) future employers experience larger stock market returns in the days immediately after revolving door senators introduce new bills, and c) final-term revolvers exert more legislative effort. This suggests that revolving door senators change behavior to signal that they are employable.

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1 Introduction

Many academics and pundits have voiced concerns that special interests use the promise of lucrative post-elective careers to influence the behavior of legislators, while they are still in office. Despite a rapidly growing body of research concerning the so-called revolving door between business and politics (e.g. Adolph 2013; Blanes i Vidal et al. 2012; Lazarus et al. 2016; McCrain forthcoming), we still have little knowledge about whether post-elective career ambitions can shape legislative behavior. Since legislators stand to gain handsomely from walking through the revolving door (Eggers and Hainmueller 2009; Palmer and Schneer 2016, forthcoming), and elected officials are essentially unconstrained by the electorate, when they decide not to run for reelection (e.g. Barro 1973; Fouirnaies and Hall 2018), the revolving door between business and politics may offer special interests a unique window of opportunity to exert influence on policy outcomes. However, since private sector actors might not want to employ legislators, who shirked their responsibilities (Parker 2009), the revolving door could also have a disciplining effect.

To make sense of these diverging possibilities, I present a theory of the accountability of legislators to their post-elective labor market. I argue that special interest groups (SIGs) prefer to hire moderate legislators, and that Members of Congress (MCs) anticipate this by behaving more moderately, when they decide to leave office for private sector employment. First, I present difference-in-differences estimates showing that revolving door senators move towards the center of the political spectrum, before they leave office. Furthermore, I present evidence that this happens both as one part of the retiring legislator's broader effort of signaling that they are competent, and because they communicate to the pool of potential employers that they have championed their interests. These are two different ways for a revolving door legislator to signal that she is employable.

First, I collect data on the post-elective career trajectories of senators serving in the 102nd to the 113th Congress, and combine it with data on roll call voting. Based on this, I provide robust evidence that senators, who leave office to take jobs with SIGs, become substantially more moderate than they have been previously in their tenure. Importantly, however, this effect does not hold for everyone. First, those who lose their reelection bid – and, thus, are in a bad position to plan their post-Congress career – do not change behavior. Second, the senators, who leave the labor market after retiring – and no longer are accountable to anyone but themselves – become more partisan than previously.

The argument rests on the dual premise that employers prefer to hire a certain (moderate) type of legislator, and that legislators anticipate this preference by changing their behavior. Therefore, the baseline estimate will contain both the demand for moderate MCs among employers, and the reaction to this among retiring legislators. Indeed, this is a necessary condition for the theory of labor market accountability. To obtain an estimate of the effect that career ambitions have on voting behavior – separate from the fact that moderates may have a higher probability of gaining post-elective employment – I develop an instrumental variable (IV) strategy. The IV draws on variation in how lucrative it would be for senators to become lobbyists, by leveraging the size of the lobbying contracts that *other* senators, who are now employed as lobbyists, work on. This captures that senators observe how well their former colleagues are doing in the private sector and base their decision to walk through the revolving door on that. While the variation in this IV is not truly random, it is unrelated to the senator's voting pattern, and therefore serves to estimate the effect of career ambitions on voting behavior – independent of employer preferences for hiring moderates. Consistent with the argument advanced here, the instrumented effect decreases but remains sizable, indicating that the baseline estimate, indeed, does contain both the effect of employer demand and the legislator's anticipation of it.

To explore why senators moderate themselves before taking private sector employment, I provide three complementary pieces of evidence. First, I use estimates of the political preferences of future employers derived from campaign finance data. My results show that the move towards the political center can be accounted for by revolving door senators anticipating the preferences of future employers – who are more moderate than the senators are – in their voting behavior. Second, because employer ideal points are likely biased due to strategic campaign donations (Thieme 2017), I conduct a number of event studies on the stock market. I show that during the final two years of the tenure of revolving door senators, their future employers experience positive shocks to their stock market returns in the days immediately after the senator introduces a new bill. Third, I show that revolving door senators start exerting more effort by sponsoring more bills and becoming more politically connected.

This suggests that revolving door senators change legislative behavior to signal potential post-elective employers that they are employable by a) accommodating their preferences both through their voting and in the legislation, they propose during their final Congress, and b) exerting more effort.

This is the first evidence that post-elective career ambitions of MCs shape their legislative behavior. While the literature on the revolving door (cf. LaPira and Thomas 2017) is growing fast, we know little about how post-elective ambitions affect legislative behavior beyond the important foundation of descriptive work focusing on who walks through the revolving door (Lazarus et al. 2016).[2] Recent research has found that career ambitions impact the behavior of bureaucrats and judges (e.g. Adolph 2013; Black and Owens 2016; Shepherd and You 2017), which invariably raises questions about whether legislators, too, respond to their post-elective constituencies to gain lucrative employment. Additionally, I add to the literature on electoral accountability (Barro 1973; Besley 2006; Fearon 1999; Ferejohn 1986) and term limits (Alt et al. 2011; Besley and Case 1995a; Fouirnaies and Hall 2018; Olson and Rogowski forthcoming) by showing that senators not only react to the risk of electoral punishment, but to career incentives more generally. By limiting shirking, accountability to the labor market can in some ways make up for the lack of accountability to the electorate.

[2]See Dabros (2015) and Parker and Dabros (2012) for notable exceptions.

2 Post-Elective Career Ambitions and Accountability

The argument presented here concerns simultaneously which former politicians employers prefer to hire, and – knowing this – how legislators react to this preference. First, on the employer side, SIGs care about the content of the legislation that regulates their activities. This might lead them to reward legislators, who served their interests well, by presenting them with lucrative post-elective employment opportunities (Adolph 2013). But they also want to hire the most highly skilled former legislators (Parker 2009).

Second, on the legislator side, it is well-established that when MCs approach their final years in office, and know that they do so, the accountability link between them and their constituency is severed. Elections will no longer force them to heed the will of the voters (e.g. Alt et al. 2011; Barro 1973; Besley and Case 1995a; Fouirnaies and Hall 2018; Snyder and Ting 2003; Tien 2001). However, when a legislator approaches her final term, she arguably not only becomes less dependent on the voters. She shifts constituency and instead becomes dependent on the private sector actors, who now control her future career trajectory – her 'shadow principals' (Adolph 2013). Therefore, revolving door legislators may anticipate the preferences of future employers and change behavior accordingly.

Below I argue that being a moderate is a signal of employability in both of the dimensions post-elective employers are interested in – the content of legislation and the skill set of the employee. Therefore, I expect legislators to moderate themselves, when they are in search of post-elective employment.

2.1 Moderation as a Signal of Competence

Having been a relatively moderate legislator may in itself be an asset on the post-elective labor market, because it is a signal of competence. In an interview, one former senator, who now works as a lawyer, commented on how extremism relates to post-elective labor market value: "... there are these firebrand liberals or firebrand conservatives, they don't have any relationsips on the other side. They don't understand it, they don't talk the language, they burn them way too many times."[3] Because of this, moderate senators are more valuable to their post-elective employers. Underlying this statement are two sentiments.

First, firms profit heavily from the political connections of their employees (e.g. Blanes i Vidal et al. 2012; McCrain forthcoming). Therefore, moderates, who are able to work across party lines, are likely to be valuable to employers in the private sector. Commenting on this, the former senator told me that "[a] guy like me, who was trying to be in the middle, who was trying to be a bridge-builder, I had great relations on both sides".[4] This suggests that one reason employers prefer moderates is that their willingness to work across party lines has provided them with important connections.

Second, a history of working with legislators from across the aisle indicates a willingness to set aside partisan differences to get the proverbial 'job' done. To understand why this is important for post-elective employers, we can think of tenure in the Senate as an extremely valuable form of on-the-job training (see Parker 2009). In my conversation with the former senator, he pointed to broad experience with governing the country, including writing legislation and overseeing departments with vast budgets – some dwarfing even the largest American companies – as important skills learned through Senate service, which are extremely coveted by private sector employers. Moderates are likely to have a proven record of not only engaging with these issues, but also compromising with legislators from the opposing party, setting aside their own preferences to govern the country. This goal of solving problems of governance is likely to provide extensive knowledge, which they take with them in their private sector career.

Overall, the type of legislator, who is a political moderate, may simply be better suited for a job in a company that values political connections and serious experience with governance – not just partisan warfare. This could arguably induce legislators to portray themselves as moderates, when they are on the hunt for employment opportunities. Thus, moder-

[3]Confidential interview with former senator, March 19, 2018.
[4]Confidential interview with former senator, March 19, 2018.

ating her voting pattern signals to future employers that she has some of the characteristics that are highly valued in the private sector.

Of course, if the change in legislative behavior happens because the senator signals that she has a particular set of skills, we would expect her to not only moderate her voting pattern, but more generally signal that she has the characteristics that future employers desire more broadly. Because private sector actors value particular sets of skills (Dabros 2015; Parker and Dabros 2012) the MCs, who leave office to be employed in the private sector, should exert more effort before retiring – at least in the areas we expect employers to care about. Therefore, the shirking effect, which the broader literature on final-term problems has found (e.g. Alt et al. 2011; Besley and Case 1995a; Fouirnaies and Hall 2018; Tien 2001) should only hold for legislators, who leave the labor market entirely (see e.g. Parker and Dabros 2012).

2.2 Moderation to Anticipate Preferences of Future Employers

Another way of signaling employability, would be for legislators to change their voting behavior, because future employers care about the content of new legislation. Thus, when the revolving door legislator makes the decision to resign from office, we could expect her to start communicating to potential post-elective employers, that she has been a pro-business legislator and has represented the causes of business well while in office. If this is the case, we would expect the revolving door legislator to moderate herself, because she anticipates the preferences among the pool of potential post-elective employers, by incorporating them in the her vote and the content of the legislation, she sponsors. She does this, of course, in expectation of being rewarded with a job.

There is evidence that business actors, on average, are more moderate than US legislators. This is illustrated in Figure 1, which plots the distribution of preferences among special interests and senators on a one dimensional (economic) policy space. Ideal points are calculated using the Campaign Finance Scores (cfScores) from Bonica (2014).

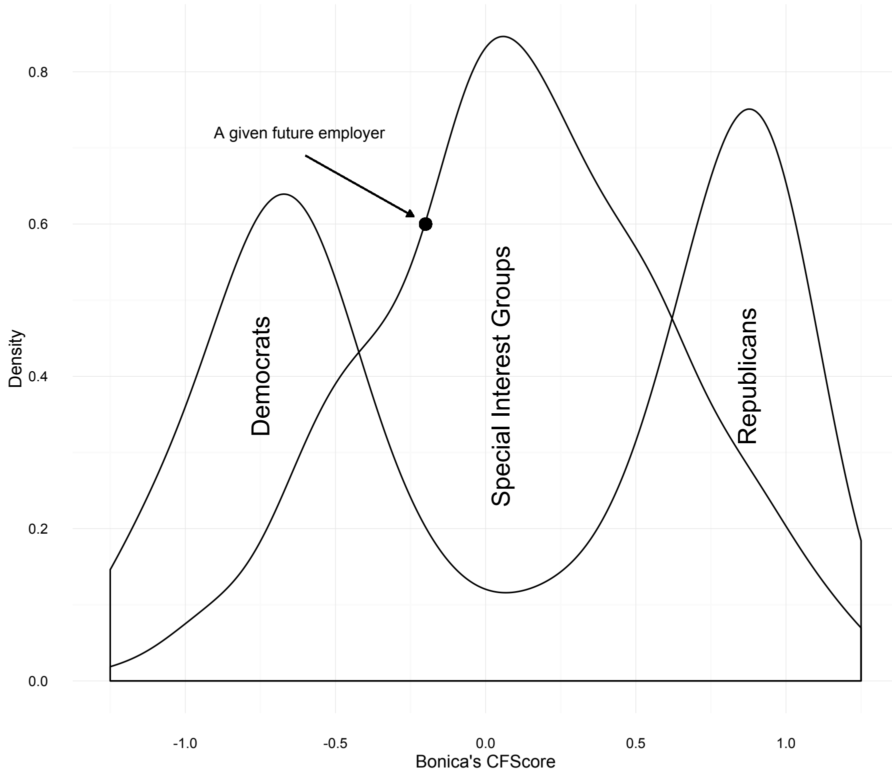

Figure 1: Distribution of preferences in the US among senators and special interest groups. *Political preferences are the Bonica (2014) cfScores, which span 1972-2011. See the methods section for more information on how they are calculated. The policy space is typically interpreted as the liberal-conservative divide on economic issues.*

The distribution of SIG preferences is single-peaked with an average close to the center of the political spectrum.[5] The distribution of senator preferences, on the other hand, is highly bimodal, with Democrats and Republicans occupying the left and the right wing, respectively. Thus, if senators try to curry favor with the pool of potential post-elective employers by converging to their political position, odds are that they will be more moderate than the senator currently is. The convergence would entail a moderation of the voting pattern.

Of course, MCs can send such a signal in a variety of high-profiled ways, and roll call vote are only one of these. The content of the bills sponsored by the career concerned

[5] Because SIGs are strategic in their giving, many are likely to appear more moderate than they actually are. While recent research that deals with this does find that the moderateness of business is overestimated, SIGs are still estimated to be more moderate than MCs (see Thieme 2017).

legislator might be an additional credible medium. Because benefits to employers from policies enacted by Congress are highly concentrated, while they are much more diffuse for voters, SIGs are faced with a strong incentive to not only monitor the legislator's voting, but also her bill sponsoring behavior (Olson 1965), and disseminate this information to their members. Indeed, the way MCs vote is heavily monitored by SIGs, and made public through so-called 'scorecards', that track how individual legislators vote on the issues that are important to the specific group.[6] This provides the potential for punishing or rewarding elected officials by, for instance, providing them with a post-elective job. The knowledge that potential employers monitor her behavior provides strong incentives for the legislator to write legislation – and vote in ways – that is in accordance with their preferences, when she approaches the end of her tenure.

The pool of employers, however, are placed in a classic commitment problem – once pro-business policy has been implemented, private sector employers no longer has an incentive to follow through and actually hire the legislator. In other words, why would an employer care about how the legislator used to vote, once she has left office? An answer can be found by thinking in terms of repeated games (Adolph 2013; Fudenberg et al. 1990). If SIGs, who benefit from a legislator behaving in a pro-business manner, want to profit from subsequent legislators doing the same, they can incentivize future potential revolvers by rewarding the first one with lucrative employment. In this way, an unspoken agreement is forged between career-minded legislators and the special interests – if MCs champion pro-business policy, they get hired. If no one were to hire them, the flow of private goods through the revolving door would dry up.

To sum up, there are two reasons why becoming more moderate can be a way for legislators to send a signal to post-elective employers that they are employable. First, we could expect revolving door senators to moderate their voting as a way of signaling that they are competent. If that is so, we would further expect them not only to moderate their

[6] For instance, the US Chamber of Commerce and the AFL-CIO annually publish scorecards tracking how MCs vote on a number of bills important to business and labor, respectively.

voting, but to exert more effort across the board. Second, moderation could be a way to curry favor with the pool of potential post-elective employers. If that is so, we would expect a) the senator's voting pattern to converge to the preferences of private sector employers, and b) the content of the bills she sponsors to favor those actors.

3 Empirical Strategy & Identification

To identify the effect of leaving office for a private sector career, I exploit variation in the timing of voluntary retirement in a series of difference-in-differences estimated using fixed effects regressions (see Goodman-Bacon 2018). Thus, I compare changes in final-Congress behavior of revolving door senators to the changes in behavior among other senators, who are not about to leave office for a private sector job. Hence, results are identified under the assumption that senator behavior would have followed a similar trend had the revolving door senator not been about to leave office for private sector employment. The fixed effects difference out all potential confounders, that are unit specific but time-invariant (e.g. senator 'type' and many characteristics of the constituency) as well as shocks with common effects across senators.

To capture the variation I am interested in, my main explanatory variable (*SIG Career*) is binary and coded 1 for all senators during their last Congress (that is, the final two years) before they leave for a job with an SIG. I define revolving door senators as those who leave office for a job with either contract lobbying firms, private companies (as employees or board members) or for civil society jobs. I counted jobs with NGOs, universities[7], public interest groups and think tanks as civil society jobs. I record the first employment after the politician has left the Senate. Since 1998 the Senate Office of Public Records has registered, when former MCs file reports under the Lobbying Disclosure Act (LDA). These registrations are collected by the Center for Responsive Politics (CRP), which I use to capture employment

[7]Lazarus and McKay (2012) show that universities that hire revolvers gain more federal funding. This bolsters the claim that they hire them – partly, at least – as lobbyists. However, the results are robust to no treating senators, who leave for jobs at universities, as revolvers.

as a lobbyist. However, for private sector employment that does not require registration as a lobbyist, the CRP registry is incomplete. To make up for the blind spots in the CRP data among non-lobbyists I draw on the following sources. Many companies put out press releases, when they hire former MCs. Even if they do not do this themselves, the press often covers post-elective employments. Bloomberg tracks the career trajectories of a range of high-profile CEOs and government officials. When it came to board memberships, I used SEC filings. Finally, I combed through the LinkedIn profiles of former senators. When none of these sources gave a picture of post-elective careers, I read their biographies on Encyclopedia Britannica and Wikipedia.

I include an array of controls, which I describe as they are included and in Appendix A. In total, the dataset tracks the 259 senators who served throughout the period 1992-2015, which gives 1244 Senator-Congress observations.

3.1 Lucrativeness of Employment as an IV

For the theory of labor market accountability to hold, estimates of the change in behavior among revolvers must necessarily include both the demand effect of employers preferring moderates, and the behavioral effect of legislators anticipating this. To distinguish the latter from the former, I use the dollar size of lobbying contracts that former senators work on to instrument for the career choices of those, who currently serve. The intuition is that, when currently serving senators observe how well their former colleagues, who now work as lobbyists, perform in the private sector, this informs them about how well, they would do themselves. When their career prospects are good enough, it will induce them to walk through the revolving door.

Additionally, because the size of the lobbying contracts of former senators is decided without regard to the specific voting patterns, wealth, and reputation of the ones, who currently serve, this measure of career prospects is likely to evolve exogenously to the individual characteristics of currently serving senators. While it obviously is not truly random, it is likely to be orthogonal to a range of salient threats to identification at the individual level. I further substantiate this in Appendix C by conducting balance tests.

Instead of looking at average contract sizes, senators can get a better estimate of how lucrative it would be for them to walk through the revolving door after examining former legislators with characteristics that are similar to their own. Numerous factors can be used to make such a comparison. However, recent research suggests that MCs choose to walk through the revolving door by examining the earnings of former colleagues, who followed similar pre-Congressional career trajectories or were assigned to a similar mix of committees during their tenure (Egerod 2018). Using hierarchical cluster analysis, I group senators together based on these two factors, and use these affinity groups to predict the dollar size of the lobbying contracts that former senators work on. This gives me two measures of how lucrative revolving door employment would be for senators with similar characteristics. To get the best prediction, I average them and use this to instrument for the choice of leaving Congress for SIG employment.

I provide details on the measurement in Appendix C. I collect data on pre-Senate careers from the Congressional Biographical Database. The data on committee assignment is from Stewart III and Woon (2017). The data on the dollar sizes of lobbying contracts are made available by the CRP.

3.2 Measuring Voting Patterns in the Senate

To measure the voting patterns of senators, I rely on a version of the Martin and Quinn (2002) Bayesian dynamic item response theory (D-IRT) model. This provides me with estimates of the left-right pattern in senator roll call votes that are comparable across time. I collected roll call data from the Voteview website (Poole and Rosenthal 2015). In Appendix A1, I provide more detail on how I estimate the D-IRT scores.

To score the moderateness of the legislators, I use the absolute value of the D-IRT scores. Ideal points are distributed bimodally and centered around zero, and using the absolute of the D-IRT score places moderate senators close to zero, while more partisan ones receive high values. This is similar to the approach taken by Canes-Wrone et al. (2002).

4 The Revolving Door Moderates Voting

Recall that if employers prefer to hire moderates, and the revolving door senator's reliance on voters is replaced with a new dependence on potential employers, we would expect her to become more moderate during her final years in Congress.

Figure 2 plots senator voting patterns as a function of remaining Congresses with a LOWESS smoother. Fully colored points represent senators who at some point leave for SIG jobs, faded points depict those who leave the labor market after retirement.

There are two important points of notice in the plot. First, the solid fitted line shows that, looking across senators, those who leave for SIG careers vote more moderately during their final two years in Congress. The change sets in abruptly during the final Congress. Senators, who leave the labor market, on the other hand, vote in a more partisan fashion in the term before they leave. Thus, in their final Congress, revolving door senators become approximately .35 points more moderate than in their second to last Congress. This amounts to 30 percent of the within-senator standard deviation.

4.1 Fixed Effects Results

Figure 3 presents the results from a number of regression models. The inclusion of senator and time fixed effects enures that the estimate shows how large the final-Congress change in voting behavior is among revolvers, compared to other senators, who do not take private sector employment at the same time. I present results in tables in Appendix B. Panel A presents the effect of leaving office for a job with an SIG. Panel B introduces an interaction between SIG Career and an indicator of voluntary retirement. The panel shows the conditional effect of taking an SIG job for those who voluntarily choose to resign from office.

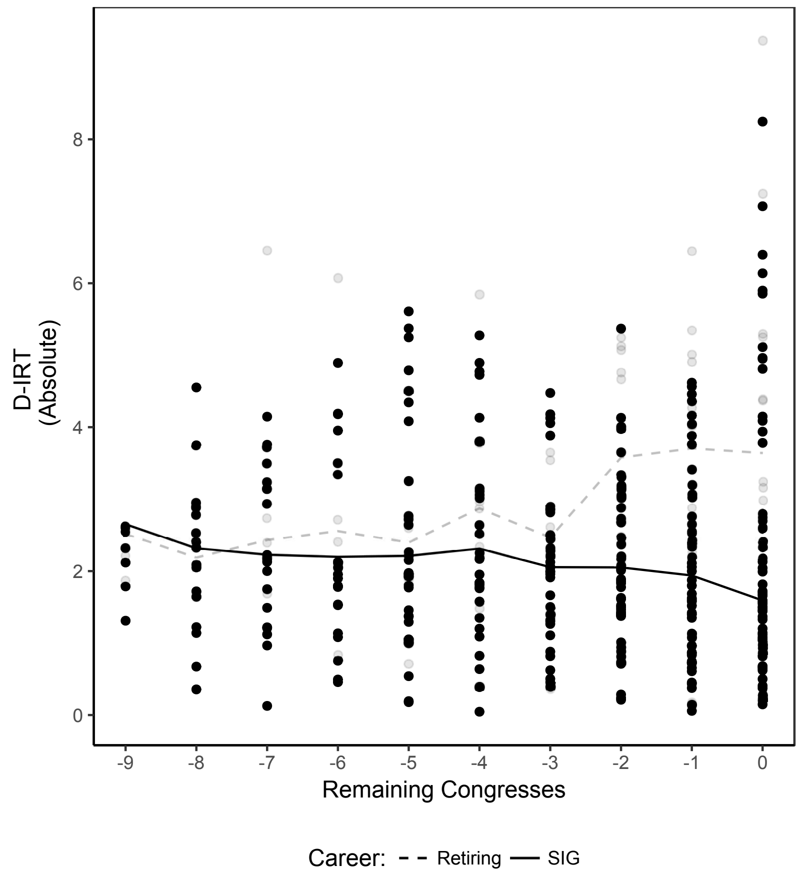

Figure 2: LOWESS Estimates of Senator Voting Across Remaining Terms in the Senate. *Points for senators who eventually leave for an SIG career are fully colored, while points for senators, who leave the labor market after Congress, are faded. The solid line represents LOWESS estimates of partisanship for Senators leaving for SIG careers. Faded, dashed line is LOWESS estimates for the ones, who leave the labor market.*

Panel C presents the coefficient on *leaving the labor market*-dummy while, finally, Panel D summarizes the results from a number of placebo models. The baseline model in the first row includes controls for years spent in the Senate at time t with a first and second order polynomial, a dummy capturing whether the senator was up for reelection (i.e. the end of a senator's six-year term), and dummies for other post-Congress careers (most importantly political careers such as ambassadorships). Because of the time dummies, seniority here will also capture the senator's age. A table with bivariate results and models adding controls incrementally is in Appendix B.

In the baseline model, I estimate that senators, who leave office for a job with an SIG, become approximately .35 points more moderate on the D-IRT scale. This corresponds roughly to 30 percent of the within-senator standard deviation. Under a causal interpretation, this would have meant that Joe Biden (D-DE) would have become as moderate during his final two years as Max Baucus (D-MT), if he had left to join an SIG instead of becoming vice president.

It is worth noting that this average effect is clearly driven by senators, who retire voluntarily, and are able to plan their future career. The conditional effect in this group is 1.2 D-IRT points (Panel B). Importantly, I cannot reject the null of no moderation among senators, who take a private sector job, because they lose their reelection bid.

A serious concern is that retiring senators no longer have to compete in primary elections, which have been found to force candidates to take more extreme positions **cite!!**. Additionally, senators depend not only on voters to advance their political careers, but also their fellow party members, and their party's leadership (Snyder and Groseclose 2000). However, if revolvers become moderate, because they no longer rely on these more extreme groups, we would expect senators, who leave the labor market entirely, to moderate themselves as well. They do not have to compete in primaries or rely on the party leadership either. If anything, they become more extreme (Panel C) – the exact opposite of the pattern of the one we observe among revolving door senators. This difference in effects is statistically significant in all specifications.

In Panel D, I present the results from a number of placebo models. The dependent variable in these models is the lag of the absolute D-IRT score – that is, during the senator's second to last Congress. If SIG Career were correlated with changes in moderateness already before the final Congress, it would indicate that the parallel trends assumption was violated and important factors were omitted. The coefficients on SIG Career in all of the placebo specifications are statistically insignificant and much smaller than the baseline estimates. This is consistent with the D-IRT score following parallel trends until the final Congress.

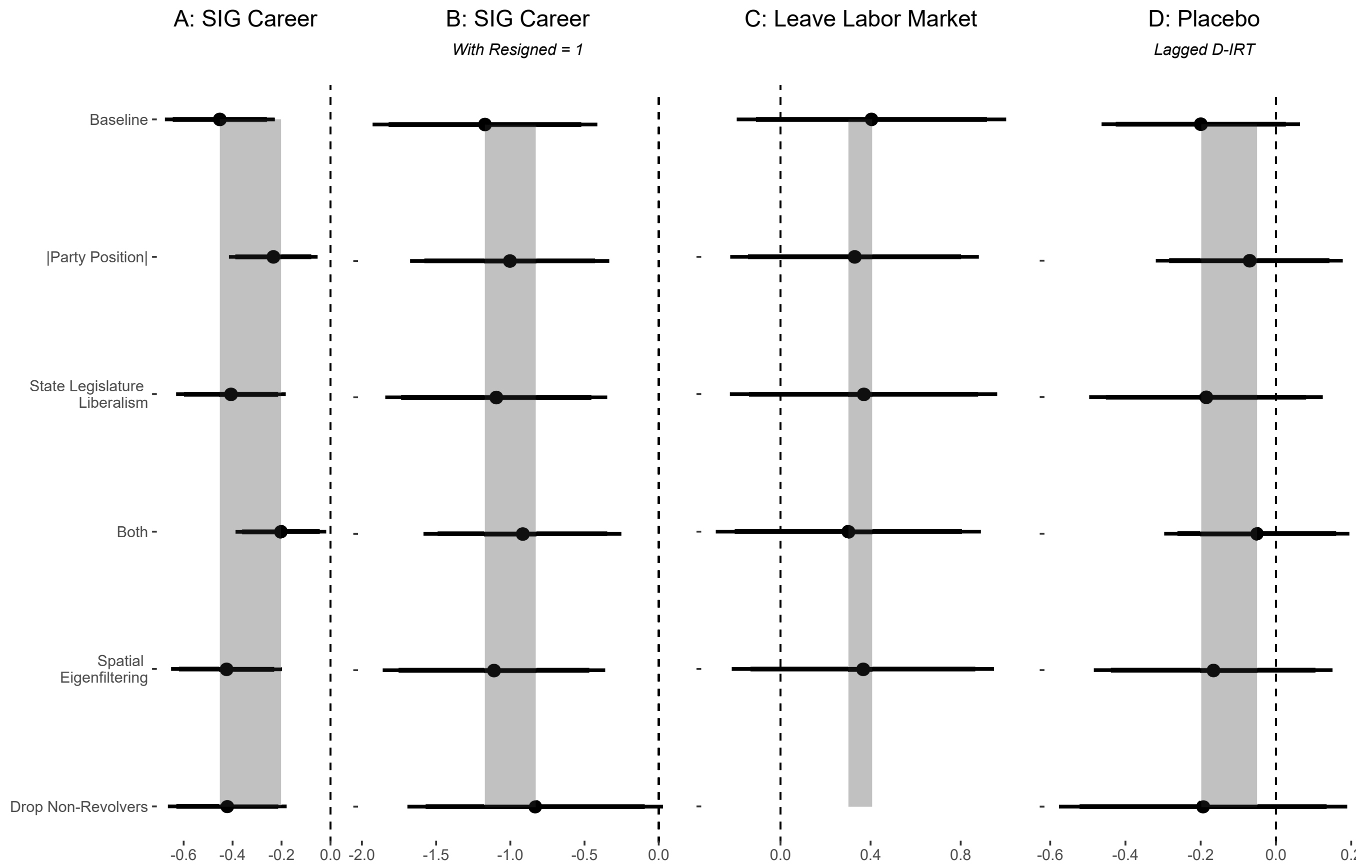

Figure 3: Fixed Effects Results. *Panel A shows average effect of taking revolving door job. Panel B shows the effect of taking a revolving door job, if the senator voluntarily resigned from office. Panel C shows the effect of leaving office to retire from the labor market. Panel D shows placebo models. Baseline includes all covariates mentioned in the text. Grey-shaded area shows total variation in coefficients. The label on each row describes which additional variable is added as control. Thick and thin lines are 90 percent and 95 percent confidence intervals (CIs), respectively, calculated using robust standard errors clustered at the senator-level. All results are from OLS regressions with senator and Congress fixed effects. First five PCs included in the model with eigenfiltering.*

As an alternative way of dealing with the potentially confounding effect of other final-term factors, I include further controls. In the second row, I include the absolute value of the median of the party's D-IRT score. If reliance on the party position is what is driving my results, this should be controlled away in this fashion. Tthe average effect of taking an SIG job decreases, and the effect of voluntarily retiring to take a job remains sizable and statistically significant. In the third row I include State Policy Liberalism (Caughey and Warshaw 2015) to control away the decreased reliance on home-state politics. Both the average and conditional effects remain robust to this inclusion. The model presented in the fourth row includes both controls. This does not change the results substantively.

Party position is likely to be subject to reverse causality, which would bias the results from the rest of the model. The dependence on peers to further one's career could, however, be conceptualized as a form of spatial dependence. As an alternative way of purging my results of this confounder, I apply spatial eigenfiltering (Tiefelsdorf and Griffith 2007) in the fifth row. I start by specifying a matrix of spatial weights, using the ideological distance between each pair of senators. I then extract the first five principal components from the spatial weights matrix and include them in the model as controls alongside State Policy Liberalism. In this specification, both the average effect and the impact of leaving Congress of one's own free will remain sizable and statistically significant.

Finally, I reestimate the baseline models, but drop all senators, who do not at some point walk through the revolving door. Thereby I only identify the effect based on the timing of retirement. Once again, the results maintain. It is not random, which senators become revolvers, but this strategy deals with concerns that my results are driven by particular types of legislators behaving in a certain way.

Throughout all of these tests, the results remain remarkably robust. At the lowest, I estimate that voluntary revolvers move approximately .83 D-IRT points towards the center, which corresponds to more than a half standard deviation. This effect is not driven by other final-term factors (e.g. decreased reliance on party politics), the 'type' of senator, who chooses to become a revolver, or pre-treatment trends.

In Appendix D, I run a number of sensitivity checks by excluding influential and moderate observations, first-differencing the dependent variable and estimating various forms of dynamic models. The results are robust to this.

4.2 IV Results

If the argument presented here is true, the baseline difference-in-differences estimates will include a mix of the employer's preference for hiring moderates, and how the legislator anticipates this by moderating herself. Additionally, a number of unobservable individual-level factors remain that could bias my results. For example, changes in a senator's reelection chances, reputation, and wealth could drive both voting and voluntary retirement. I now use my IV strategy, leveraging variation in how lucrative it is to walk through the revolving door, to separate out the effect of career ambitions on moderate voting. Table 1 presents the results.

Panel B shows the first stage regression of SIG Career on my measure of Contract Size. Panel A presents the second stage results, where the predicted probability of taking SIG employment is used to explain the absolute D-IRT score. Since the conditional F statistic is relatively small, I follow Young (2017) and use the non-parametric bootstrap with resampling at the senator-level to get the correct measures of uncertainty in the second stage.

Column 1 presents the bivariate IV fixed effects results. As we can see from Panel B, Contract Size affects SIG Career strongly. Looking at the corresponding column in Panel A, we find the second stage results, where the probability of taking a revolving door job is used to predict voting patterns. The instrumented coefficient is approximately three D-IRT points, with an associated 90 percent bootstrapped confidence interval (CI) ranging from -8.6 to -0.25.

Table 1: Size of Lobbying Contracts as IV

	Bivariate	Election Year	State Liberalism	LIML	Adams et al (2009) Three-Step IV
	(1)	(2)	(3)	(4)	(5)
Panel A: 2nd stage regression	Dependent variable is Absolute D-IRT				
P(SIG Career|Contract Size)	-3.043^{*}	-3.314^{*}	-3.188^{*}	-3.434^{*}	-3.688^{**}
	$(-8.610, -0.250)$	$(-8.570, -0.350)$	$(-8.140, -0.360)$	$(-8.880, -0.540)$	$(-14.950, -1.140)$
Panel B: 1st stage regression	Dependent variable is SIG Career				
Contract Size	0.059^{**}	0.056^{**}	0.052^{**}		
	(0.023)	(0.022)	(0.022)		
P(SIG Career|Contract Size)					0.007^{***}
					(0.002)
Conditional F Stat	6.31	6.36	5.32		6.31
Senator FEs?	Yes	Yes	Yes	Yes	Yes
Congress FEs?	Yes	Yes	Yes	Yes	Yes
Election X Congress?	No	Yes	Yes	Yes	No
State Lib. X Congress	No	No	Yes	Yes	No
Observations	773	773	771	771	773

Note: Panel A shows second stage results: the effect of leaving for an SIG Career on the absolute D-IRT score. 90 percent CIs are in parenthesis, computed using the relevant percentiles of a bootstrapped distribution of estimates from 1,000 resamples. Panel B shows first stage results: the impact of contract sizes in the lobbying industry on the probability of leaving the Senate for an SIG Career. Senator-clustered robust standard errors in parentheses. First stage results not defined for LIML. Column 5 uses the predicted probabilities from a conditional logit as an instrument in the first stage. Note that the number of observations is smaller than in the baseline model, because the IV is not available before the LDA.

While this seems like an extraordinarily large effect, it captures the expected change in the absolute D-IRT score, when the probability of taking a revolving door job changes from 0 to 1. However, standardizing the instrumented coefficient suggests that a one standard deviation change in the predicted probability of walking through the revolving door yields a .068 standard deviation change in the absolute D-IRT score. This is approximately 3 percentage points smaller than the standardized difference-in-difference estimate, which is about .1. This has two important implications. First, it suggests that there is an effect of post-elective career ambitions on senator behavior, independent of the employer demand for moderates. Second, the fact that the instrumented effect is smaller than the ordinary difference-in-differences indirectly suggests that employers, indeed, do prefer to hire moderates, and that the effect of this preference increased the association between SIG Career and moderateness.

Contract Size is orthogonal to individual characteristics of senators, and – conditional on the time fixed effects – cleansed of the confounding effect of homogeneous shocks to the system. Heterogeneous shocks, however, remain a serious threat to identification. To deal with this, I introduce controls that do not rely on the legislator's choice in interactions with the year dummies. In columns two and three, I allow shocks to have varying effects depending on whether the senator is up for reelection and the policy liberalism of her home-state. The changes to the second stage results across specifications are very small. In column three, to make sure that weak instrument bias is not driving my results, I use limited information maximum likelihood (LIML) to estimate the IV model in the fourth column. The results maintain.

The estimates are generally noisy. This may because using the linear probability model in the first stage is inefficient. In column five I use a variant of the Adams et al. (2009) three-step IV, where I use the predicted probabilities from a conditional logit with fixed effects as the instrument. This yields a significantly stronger instrument and a smaller p-value.[8]

[8]The conditional logit yields a Wald statistic of 10.16, a likelihood ratio of 19.65, and an exponentiated coefficient on Contract Size of 4.31 with a corresponding z statistic amounting to 3.19.

5 The Mechanism: Labor Market Accountability

As I have now established that leaving office to take private sector employment exerts a strong moderating influence on senator voting, I now turn to ascertain why that is. First, I present the additional data sources that I use to explore the mechanisms.

5.1 Measuring 'Anticipation of Employer Preferences'

I measure whether revolving door senators behave in a more pro-business fashion in two ways. First, I use estimates of the political preferences of future employers and explore whether the revolvers converge to those preferences. Second, I use data on daily stock market returns to investigate whether the firms that are about to hire a senator experience increased returns in the days after the senator introduces new legislation.

Measuring Future Employer Preferences

To measure policy positions of future employers, I rely on the cfScores from Bonica (2014). Using all registered campaign contributions in the period 1972-2011, Bonica (2014) uses multiple correspondence analysis to estimate the latent policy preferences that shape political contributions. I use this to measure the political ideal points of specific future employers, and the average ideal points of the industries (CRP's classification) that hire senators.

I compute the absolute difference between the senator's D-IRT score and the cfScores on the employer and the industry level, respectively. The D-IRTs and cfScores do not refer to the same underlying ideological scale, however. To deal with this, I use a slightly different version of the D-IRT score, which I estimate using each senator's cfScore as a prior with an inverted gamma distributed precision parameter. This will place the D-IRT scores on the same scale as the cfScores of their future employers.

The most salient concern when using cfScores is that SIGs donate campaign funds strategically (Gordon and Hafer 2005; Grossman and Helpman 2001). This would induce non-random measurement error into to the cfScores (Thieme 2017), biasing the results. In Appendix E, I explore the consequences of this measurement error by using the framework proposed by Gallop and Weschle (2017). I show that my results are highly robust measurement error induced by strategic donations.

Measuring Bill Content

To measure whether senators sponsor bills that are favorable to their future employers, I have collected data on the daily stock prices of the publicly listed firms that hire senators. These data are from Datastream. I match this to data on the bills sponsored by senators, who eventually are hired by these publicly listed firms, from the Congressional Bills Project (Adler and Wilkerson 2018). Specifically, I extract data on the bills, they sponsor during their final two years. Additionally, I extract bills they have introduced in a window of one year surrounding their median year of sponsorship. The latter acts as a test of whether the senator's final-Congress behavior constitutes a change. To minimize concerns that markets anticipate bill passage, I only use the date a particular bill was introduced – not when and if it was passed into public law. In total, I investigate the stock market effects of 652 final-Congress bills, and 410 median-Congress bills. When using a 10-day window around the time the bills were introduced, I rely on stock prices from 13,761 and 8,870 firm-days, respectively.

The strength of this measurement strategy lies in the way the market reaction condenses information about the newly introduced bill. It both includes information about the intent of the bill, which may leak out from the legislative branch, and the investor understanding of how the bill will affect the economy. The strategy condences information from a very large group of knowledgable individuals betting money on how the introduced bill will affect the firm's bottom line.

5.2 Measuring Senator Effort

If senators moderate themselves as part of a general signal of their competence, we would expect them to exert more effort in the areas of legislative politics, which potential future employers care about. These, however, are numerous. Below, I briefly discuss some relevant dimensions.

Legislative Effort

Employers do not only care about whom senators know, but also what they know (Bertrand et al. 2014; LaPira and Thomas 2017). Therefore, a track record of having produced much legislation is an asset for a revolving door senator, because it signals legislative expertise.

To measure legislative effort, I use the number of bills sponsored by the MC and the proportion of floor votes, where the MC has been absent. This follows previous work on legislative effort (e.g. Fouirnaies and Hall 2018).

Political Connections

Political connections strongly affect a revolver's value as an employee (Blanes i Vidal et al. 2012; Do et al. 2015; Goldman et al. 2009; McCrain forthcoming). Thus, we would expect revolving door senators to put more effort into forming social ties immediately before they take a private sector job.

To measure a senator's connectedness I follow Fowler (2006) and capture social ties between MCs by constructing cosponsor networks for all Congresses in the time period. The networks are directed in that cosponsors offer support for the sponsor's bill. This gets at the connectedness in two ways. First, it captures that senators use their established relationships with others to garner cosponsor support for their bills. Second, it captures the inherent social act of relationship building it takes, when senators garner support among Members, they do not have a strong connection to as of yet. I weight all ties by the total number of cosponsors on each bill to capture the fact that ties often are stronger, when there are fewer cosponsors

(Fowler 2006). In what follows, I use eigenvector centrality, because it will not be conflated with the sheer number of cosponsors.

This network measure not only captures connectedness, but also how hard a senator works to see her bills passed by drumming up support among cosponsors (see Carnes 2013). While it is difficult to distinguish between these two dimensions of the network measure, both are highly important indicators of effort.

Willingness to Compromise

Former legislators, who have shown willingness to compromise, are likely to be an asset to future employers. Both because it signals experience with serious governance, and since those senators generally will have more connections across parties. To measure this, I use the proportion of cosponsors from the opposing party each senator has had for the bills she has sponsored. This captures the senator's willingness and ability to drum up support for her bills across pary lines, and, therefore, a willingness to accommodate the preferences of those she disagrees with.

It goes for all variables described above that data on bill (co-)sponsorship is collected from GovTrack (2017). Data on absence from floor votes is from Poole and Rosenthal (2015).

5.3 Do Senators Curry Favor with Future Employers?

One of the explanations that I have advanced is that senators moderate themselves, because special interests prefer moderate policies. If that is so, we would expect the moderation to come about, because the senator converges to the preferences of private sector actors. We would also expect her to more generally introduce bills that are favorable to her future employer.

Anticipating Employer Preferences

First, I use both measures of convergence to the preferences of future employers that were introduced previously. Results are presented in Figure 4. Panel A shows estimated convergence to specific future employers, while Panel B shows convergence to the average sector-level preference. In both cases, I estimate that revolving door senators move approximately 27 percent closer to the preferences of their future employer. These estimates are statistically significant at the five percent level.

It is only when estimating convergence at the sector level that the change in behavior is driven by voluntarily retiring senators. Note, however, that this estimate (shown in gray) is very noisy. When looking at convergence to the specific position of a future employer, there is no difference between legislators, who leave of their own volition, and those that are voted out.

There is an important alternative explanation for this convergence: Future employers care about how well connected the senator is, and moderate senators are often better connected. This could cause legislators to moderate themselves, because they want to signal that they can speak the language of both parties, making their behavior a signal of connectedness – not of how well they champion industry preferences. In the second row, I add my network measure of political connectedness as a control. This does not change the results.

Finally, I add the remaining baseline controls. The results maintain. Importantly, in Appendix E, I show that the results are robust to systematic measurement error in the positions of future employers induced by strategic giving.

Currying Favor Through Bill Sponsorship

Anticipating the preferences of business with her vote, is not the only way a senator can curry favor with employers. When she writes new legislative proposals, she can make sure that private sector employers benefit, and signal that she was a champion of business in that way. If this happens, we would expect to see a market reaction in a narrow window of days

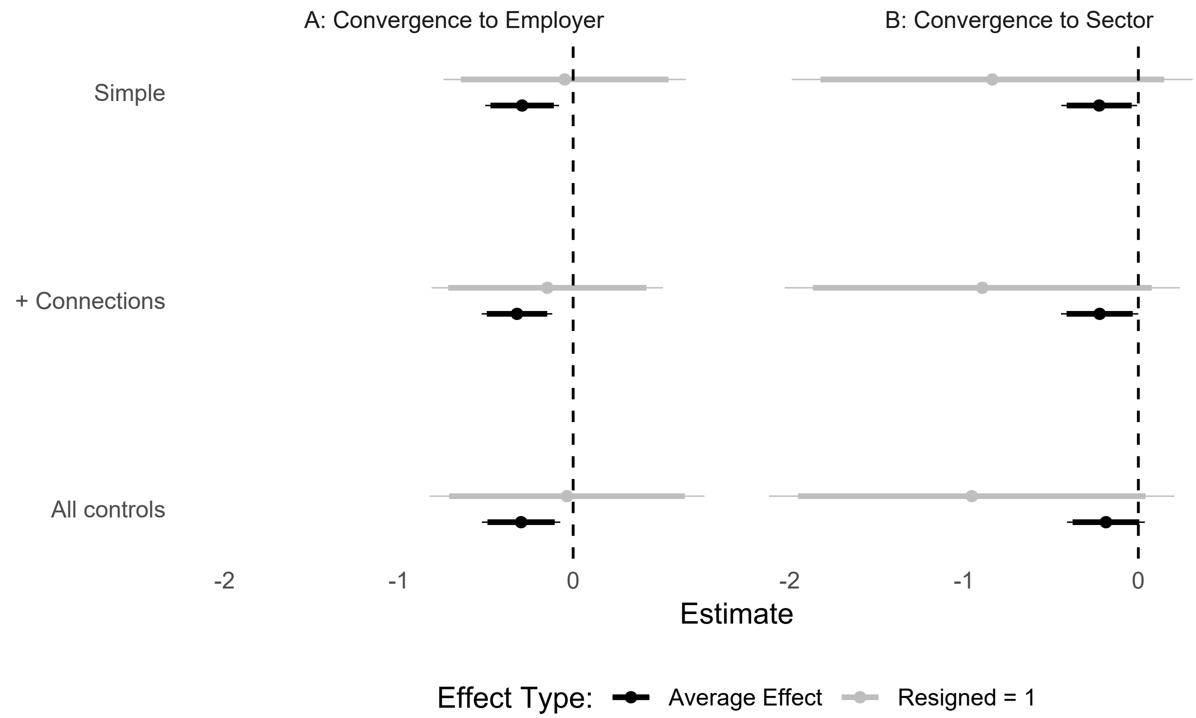

Figure 4: Resigning Senators Converge to Positions of Future Employers. *Panel A shows models with convergence to a specific future employer as the dependent variable. The dependent variable in Panel B is convergence to a future sector of employment. Included controls are seniority, election year, state legislative liberalism and political career. Political careers not included in interaction model in Panel B, because the number of observations that would have been dropped, would have made it impossible to estimate the interaction terms. CIs are 95 percent (thin) and 90 percent (thick) calculated from senator-clustered robust standard errors.*

around the time, when revolving door senators propose new bills.

Figure 5 illustrates how the stock market reacts to new bills proposed by revolving door senators. Specifically, I model daily stock prices (logged) of the future employer in narrow windows around the day when the senator, whom the firm will employ soon, introduces a new bill in the Senate. I use the bills introduced during the final two years of the senator's tenure, and include their employers during the first two years after she leaves office. I estimate models with varying time windows, from two through ten days around the date of introduction, and include fixed effects for firm and day in all models.

Depending on the time window, I estimate that firms, who are poised to hire a senator, experience an increase in their daily stock market returns of between one and two percent, when that senator introduces new bills. With bandwidths below four days, the estimates are statistically insignificant, but as more days are included the coefficient increases, and the positive shock to returns becomes more precisely estimated. This suggests that it takes some time for the market to price in the signal located in the newly introduced bill.

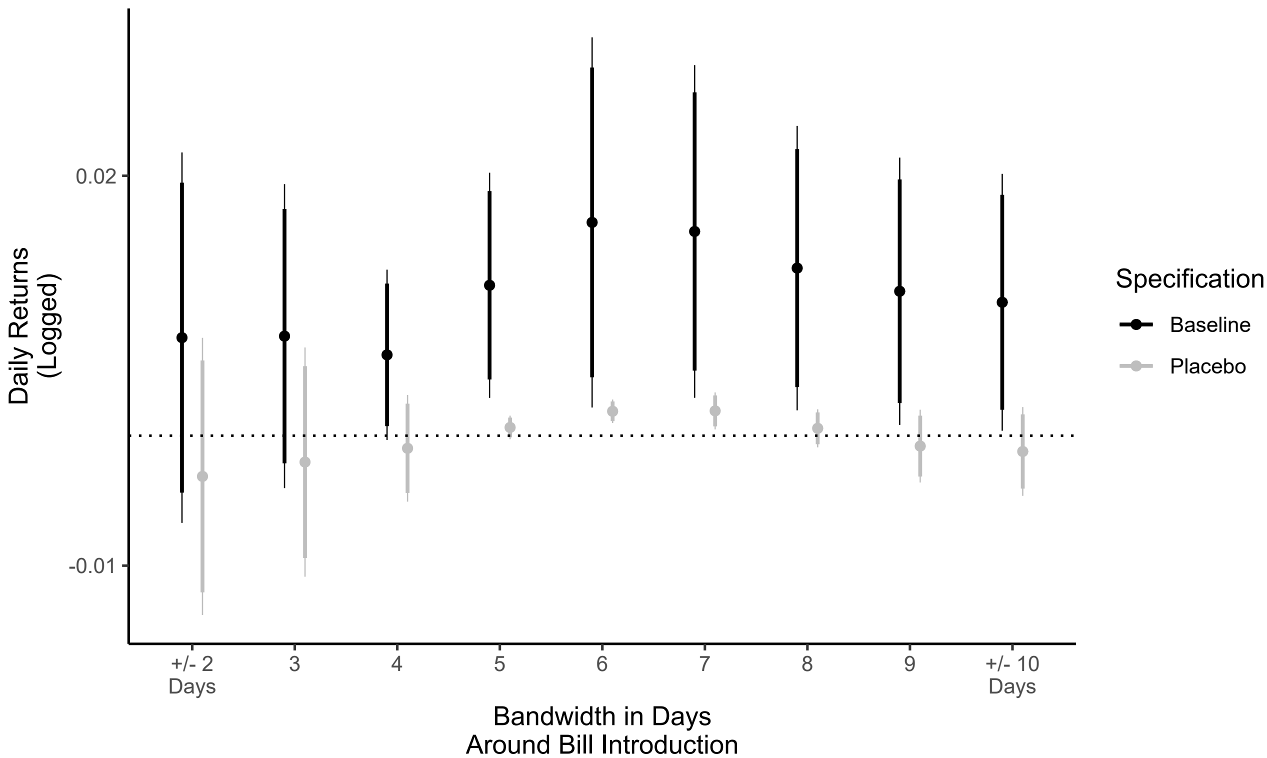

Figure 5: Revolving Door Bill Sponsorship and Stock Market Returns. *Note: Each estimate is from an OLS regression with firm and day fixed effects. Daily stock prices are regressed on a dummy capturing the day a revolving door senator introduces a new bill. The baseline models investigate the effects of bills introduced during the senator's final Congress, while the placebo is the senator's median Congress. Publicly listed firms employing a senator two years after she left Congress are included. CIs are 90 percent (tick) and 95 percent (thin), computed using robust standard errors with firm-year clustering.*

To investigate whether this constitutes a change in the senator's behavior, I investigate stock market reactions to bills introduced one year before and after the senator's median year of sponsorship. All estimates in these models are very close to zero – at the most, I estimate an effect 1/5 of a percent. When the bandwidth is above four days, this estimate is extremely precise and diminutive in size.

Overall, this indicates that future employers of revolving door senators see increased returns, when those senators introduce new legislation during their final two years in Congress. This constitutes a change in senator behavior.

5.4 Do Revolving Door Senators Exert More Effort?

Leaving office for private sector employment moderates voting. If this is part of a general signal of comptetence, the hunt for a lucrative post-elective job should also make revolving door senators exert more effort across the board.

To investigate this, I include the measures of senator effort, which were previously introduced, in a number OLS regressions. Results are shown in Figure 6. The models include fixed effects for senator, Congress and Congress by party, which allows for heterogeneous shocks depending on partisanship. Coefficients are shown for SIG Career, and the *leaving the market*-dummy. This allows us to contrast the effect of the revolving door with final-term shirking. The non-parametric bootstrap is used to compute uncertanty, because the dependent variables are highly skewed.

First, senators increase the number of bills they sponsor in their final Congress before taking private sector employment by almost 20 percent. Second, as measured through the network of cosponsors, revolving door senators clearly become more central – increasing their eigenvector centrality by approximately five percent. Thus, senators increase the effort they put into gaining important cosponsors for the bills they sponsor in their final Congress. This could both indicate that they work harder at forming social connections and to see their bills passed. Third, contrary to expectation, it seems that revolving door senators are more absent for more floor votes. Note, however, that I cannot reject the null for this estimate. Finally, revolving door senators work more across party lines, by gaining more cosponsors from the other party during their final term.

Importantly, when it comes to bill sponsorship and cosponsor centrality, I estimate the

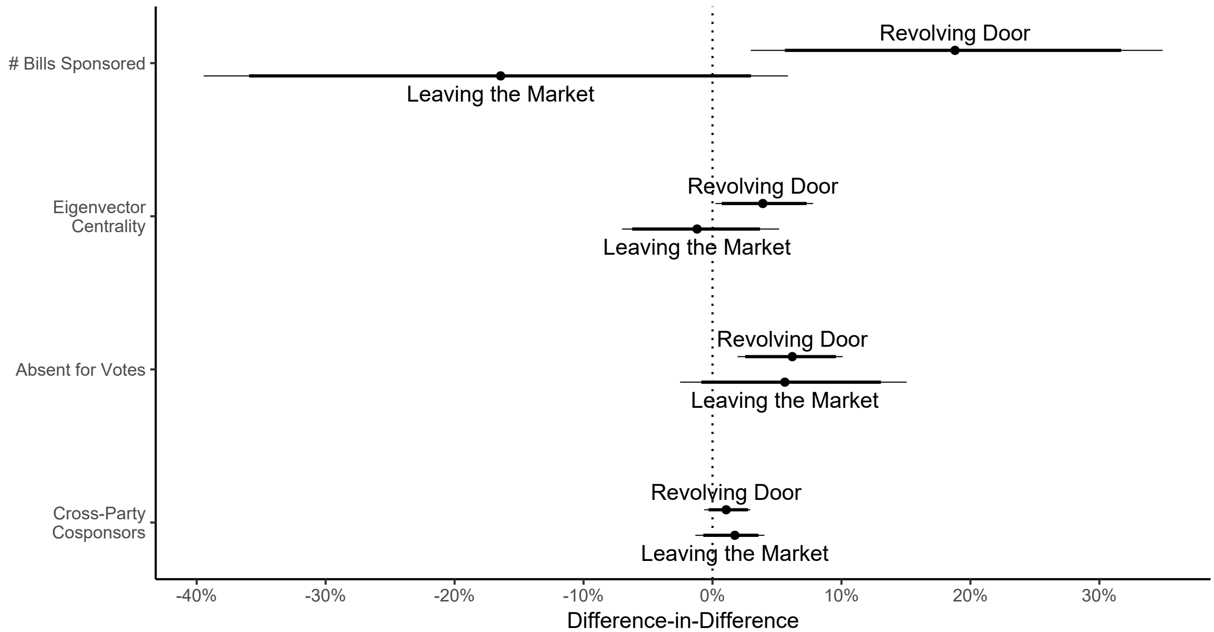

Figure 6: The Disciplining Effect of the Revolving Door. *Note: Labels on the vertical axis show the dependent variable. Sublabels above the point estimaes indicate which independent variable the coefficients refer to. Lines are 90 pct. (thick) and 95 pct. (thin) bootstrapped CIs with 500 resamples at the senator-level. All dependent variables are logged. Senator and congress-party fixed effects included.*

opposite sign for senators, who leave the labor market entirely. This suggests that for these two variables, increased effort is an effect of walking through the revolving door.

6 Concluding Remarks

In this paper, I have provided evidence from a wide range of data sources that post-elective career prospects exert a moderating effect on the legislative behavior of senators. I started by documenting that senators, who take on private sector employment, become substantially more moderate in their voting behavior immediately before they leave office. This effect was concentrated among the senators, who were in a position to plan their post-elective career trajectory, and was opposite to that of leaving the labor market, which induced more partisan behavior. The latter suggests that decreased reliance on party leadership and primaries is not what causes revolvers to become more moderate. These results were not driven by certain types of legislators choosing to become revolvers nor differential pre-treatment trends.

The theory concerned both the employer's demand for moderate legislators and the revolving door senator's career ambitions. Therefore the estimated moderation will inherently come about both because of employer demand, and because legislators anticipate it in their behavior – indeed, this is the basic assumption of the argument proposed here. To disentangle the effect of career ambitions on voting patterns from that of employer demand, I constructed an IV leveraging the lucrativeness of the lobbying contracts that *other* former senators work on.

I provided three pieces of evidence to understand why this moderation happens. First, I showed that revolving door senators vote in closer alignment with the preferred policy of their future sector of employment than previously, and by introducing new legislation, which improves the stock market performance of their future employers. Additionally, they send a signal of competence by sponsoring more bills and becoming more central in the network of cosponsors. The first two pieces of evidence are consistent with revolving door legislators voting more moderately as a way of portraying themselves as champions of particular private sector interests, because this increases their value on the labor market. However, the fact that they generally exert more effort is an indication that revolving door senators also react to post-elective career incentives by moderating themselves as one way of signaling competence. The organizations that hire former legislators may prefer to employ moderate politicians, because they often have experience with serious problem-solving governance and are well-connected. Thus, moderating their voting is not only a way to champion private sector preferences, it is also one way out of many to signal competence.

It remains difficult, however, to assess the normative consequences of this change in behavior. First and foremost, based on the data we marshal in this article – however granular – it is not possible to ascertain whether senators give gifts to future employers, or simply 'audition' for their post-elective work-lives by acting in a pro-business manner. While most can probably agree that it is normatively undesirable for legislators to reward their future employers, there is nothing inherently troubling about retiring legislators taking on a more pro-business stance than they have previously. Since special interests and the general public actually tend to agree on many issues, the net effect on representation might even be positive.

Even if some firms are able to use the revolving door to extract rents, any judgement about the desirability of the behavior are complicated by the final set of results. Post-elective career ambitions can to an extent keep legislators from shirking, and may serve to moderate a highly polarized Senate. These are positive consequences by almost any normative yardstick. A fruitful way of approaching the trade off may be through the lense of the second best theorem (Lipsey and Lancaster 1956). Viewed in isolation, the revolving door can be used for rent extraction, but stemming its flow might have adverse consequences by increasing polarization and final-term shirking.

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