

# *Fifty Shades of Green*

High Finance, Political Money, and the  
U.S. Congress

**Report by**  
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## *Executive Summary*

Social scientists have traditionally struggled to identify clear links between political spending and congressional voting, and many journalists have embraced their skepticism. A giant stumbling block has been the challenge of measuring the labyrinthine ways money flows from investors, firms, and industries to particular candidates. Ferguson, Jorgensen, and Chen directly tackle that classic problem in this paper. Constructing new data sets that capture much larger swaths of political spending, they show direct links between political contributions to individual members of Congress and key floor votes.

Their study builds on two earlier studies published by the Roosevelt Institute. Gerald Epstein and Juan Antonio Montecino's "Overcharged: The High Cost of High Finance" assesses the staggering costs imposed on the U.S. economy by deregulated, out-of-control finance. Mark Cooper's "Overcharged and Underserved" analyzes the charges telecommunications oligopolies levy on Americans and their disastrous impacts on services and economic growth.

Ferguson, Jorgensen, and Chen analyze the role political finance has played in securing the privileged positions of both high finance and big telecom. They show that prior studies have missed important streams of political money, and, more importantly, they show in detail how past studies have underestimated the flow of political money into Congress.

The authors employ a data set that attempts to bring together all forms of campaign contributions from any source—contributions to candidate campaign committees, party committees, 527s or "independent expenditures," SuperPACs, etc., and aggregate them by final sources in a unified, systematic way.

To test the influence of money on financial regulation votes, they analyze the U.S. House of Representatives voting on measures to weaken the Dodd-Frank financial reform bill. Taking care to control as many factors as possible that could influence floor votes, they focus most of their attention on representatives who originally voted in favor of the bill and subsequently to dismantle key provisions of it. Because these are the same representatives, belonging to the same political party, in substantially the same districts, many factors normally advanced to explain vote shifts are ruled out from the start. The authors' panel analysis highlights the importance played by time-varying factors, especially political money, in moving representatives to shift their positions on amendments such as the "swaps push out" alteration, which Senator Elizabeth Warren attempted to head off.

The authors test five votes from 2013 to 2015, finding the link between campaign contributions from the financial sector and switching to a pro-bank vote to be direct and substantial. The results indicate that for every \$100,000 that Democratic representatives received from finance, the odds they would break with their party's majority support for the Dodd-Frank legislation increased by 13.9 percent. Democratic representatives who voted in favor of finance often received \$200,000–\$300,000 from that sector, which raised the odds of switching by 25–40 percent.

The authors also test whether representatives who left the House at the end of 2014 behaved differently. They find that these individuals were much more likely to break with their party and side with the banks. They also determine that members of the House Financial Services Committee were far more likely to support the banks on repealing elements of Dodd-Frank. More conservative representatives, as measured on a rating scale that ran from 0 to 100 for the 113th Congress, were also more likely to side with the banks by 9 percent for each percentage point more conservative their ideology was.

In testing the link between industry contributions and congressional votes in the telecommunications sector, the authors consider House voting on network neutrality—that is, whether telecom firms can charge clients different rates to gain



privileged access to their internet “wires” (or other conduits) to customers, thus creating a “two-speed” internet. Their analysis of the first major clash in the House over this issue, a proposal advanced by Representative Markey in 2006, again produces dramatic evidence of the importance of political money in congressional voting.

The authors consider the vote in support of the Markey amendment to protect network neutrality to be a vote against the interests of cable and phone companies. The authors statistically analyze the vote each representative cast on that issue.

Unsurprisingly, they find party affiliation played an important role. Democrats were lopsidedly more likely to support network neutrality than were Republicans. But money made a substantial difference on both sides. Recipients of money from firms in favor of network neutrality, such as Netflix or Google, whose access to users could be affected, were considerably more likely to vote in favor of Markey’s amendment: Every additional \$1,000 dollars decreased the odds of voting against by 24 percent. Similarly, contributions from firms opposed to network neutrality were also telling: every \$1,000 increased the chances of a vote against by 2.6 percent. The more conservative a representative was, the more likely he or she was to vote against network neutrality. Telecom employment in the district did not seem to matter, but district median income did: Every \$1,000 in additional income decreased the odds of a vote against network neutrality by 7.2 percent.

The message of Ferguson, Jorgensen, and Chen’s study is simple: Money influences key congressional floor votes on both finance and telecommunication issues. Americans may not have the “best Congress money can buy”—after all, as they note, their results could be even bleaker—but there is no point in pretending that what appears to be the voice of the people is really often the sound of money talking.



## *Introduction*

For months, the suspense built up. By the late spring of 1987, the initial trickle of anxious conjectures had swollen into a raging torrent of speculation and suspicion. On June 2, 1987, the worldwide guessing game came at last to an end: The White House announced that President Reagan would nominate Alan Greenspan to replace Paul Volcker as Chair of the Federal Reserve Board. Financial markets, which “had come to regard a third term for Mr. Volcker as highly probable,” reacted with shock: “Bonds finished with one of the biggest losses on record, and the dollar tumbled” (Hershey 1987).

At the time, the official story was that Volcker had indicated in a letter that “he did not wish to be reappointed after eight years in the job.” Even then, many doubted that was the whole truth: “It appeared that White House efforts to persuade Mr. Volcker to remain were minimal. It is understood that Mr. Volcker would have accepted a reappointment to the post if the President himself had urged him to do so. But no such effort was made.”

In fact this gloss was an epic understatement, linked closely to a second—and far more profound—misjudgment: “Economists and other analysts said Mr. Greenspan, in taking a job that is sometimes described as the second most influential in the nation, was unlikely to pursue a policy markedly different from Mr. Volcker's.”<sup>1</sup>

The truth, as a few insiders knew, was very different. At a crucial White House meeting of top Republicans convened to discuss Volcker’s fate, the hostility of Treasury Secretary James A. Baker and his deputy, Richard Darman, to the six-foot, seven-inch, cigar-chomping Fed Chair spilled out into the open. GOP Senate Leader Robert Dole and Senate Budget Committee Chair Pete Domenici, who suspected that Baker and Darman wanted to substitute Greenspan, pressed a case for reappointing Volcker. They questioned whether his experience and knowledge of international economic issues did not make him irreplaceable. Baker flatly rejected this, saying that he and Darman now knew enough to deal with the G7 issues.

Eventually the discussion worked around to the reasons for Baker’s opposition. The Treasury Secretary responded by naming two issues: Volcker’s skepticism about financial deregulation and, in particular, his opposition to repeal of the Glass-Steagall Act, the New Deal measure that severed investment from commercial banking. Asked why that issue was so important, Baker’s answer was startlingly direct: Possible repeal of Glass-Steagall was the signature issue used by investment bankers, led by then-Goldman Sachs executive Robert Rubin, to raise money for the Democratic Party from their cohorts on Wall Street. Getting rid of Glass-Steagall, Baker explained, would alter the balance of power between the two major parties by depriving the Democrats of a central revenue stream.<sup>2</sup>

Baker’s artless response, revealed here for the first time, is uniquely instructive for this paper. Many Americans have long suspected that large corporations rip them off. Now studies published by the Roosevelt Institute have put realistic price tags on corporate “overcharges” by two industries that would surely rank near the top of any list of suspected pirates: finance and telecommunications. Jerry Epstein and Juan Antonio Montecino (2016) conservatively suggest that, between 1990 and 2005, U.S. finance cost the American people “between \$12.9 trillion and \$22.7 trillion,” an amount that “represents between two-thirds (66 percent) and 133 percent of a year’s aggregate income in the U.S. (GDP).” Put another way, finance cost “between \$40,000 and \$70,000 for every man, woman, and child in the U.S. or between \$105,000 and \$184,000 for the typical American family” (Epstein and Montecino 2016). Mark Cooper (2016), no less conservatively, estimates that for telecom “combining the consumer pocket overcharges, we conclude that the total is

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<sup>1</sup> See Hershey (1987); the quotations in the previous paragraph also come from this article.

<sup>2</sup> This account comes direct from an eyewitness.



almost \$60 billion per year” and that “while the overcharges have mounted, the total for the past five years is in the range of \$250 billion or more.”

These are staggering numbers. But Baker’s comment highlights something else distinctive about finance and, by extension, telecom: They are among the most politically active of all U.S. industries. Take total political contributions as a yardstick. Published tabulations of aggregate campaign contributions come with large margins of error and typically underestimate total spending and the broader category of “political money.” Still, numbers compiled by the Center for Responsive Politics put finance at the top of the heap almost every year between 1998 and 2015. Telecom trails behind, but not by much: Depending on exactly how it is defined—for example, how much of the electronics industry is included—its totals are invariably high and often remarkably so.<sup>3</sup>

Both industries also rank at or near the top in another major category of political spending: recorded lobbying expenditures. These numbers, derived from reports filed with the federal government by lobbyists, are even less reliable than campaign finance numbers. Unregistered “shadow lobbying” is swelling, in part because of a change in the law and in part because in recent years former politicians angling for top jobs in future administrations seem to be trying harder to keep their noses clean by directing major lobbying efforts at one remove. Nevertheless, the message about political reach is the same.<sup>4</sup>

Another telltale indicator of political activity, counts of people shuttling through the famous “revolving door” from congressional staff jobs to industry lobbying slots, stretches back only a decade. But, again, finance and telecom dominate the listings.<sup>5</sup>

We find it difficult to believe that all this political firepower plays no role in sustaining the lopsided systems of tribute our colleagues describe. Polls suggest that most Americans agree with us:

[As of June 2015,] 84 percent of Americans think money has too much influence in political campaigns now. Criticism of the role of money cuts across party lines – large majorities of Republicans, Democrats, and independents all think money has too much influence... Most Americans see widespread problems with how election campaigns are funded in the United States. Forty-six percent think the system for funding political campaigns has so much wrong with it that it needs to be rebuilt completely, and another 39 percent think that while there are good things in the system, fundamental changes are needed. Just 13 percent of Americans think only minor changes are needed... Americans view the current system of campaign finance as favoring the wealthy... Americans see a frequent quid pro quo when it comes to contributing to an election campaign and receiving benefits once a candidate is in office. Fifty-five percent of Americans think politicians enact policies to benefit their financial contributors most of the time, while another 30 percent think this happens sometimes. Just 13 percent think this only happens rarely or never.<sup>6</sup>

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<sup>3</sup> The Center’s totals appear on their website: <https://www.opensecrets.org/lobby/top.php?indexType=i&showYear=2016>. Note that totals vary for all industries depending on the definition; thus, including real estate with the rest of finance, as is often done, produces substantially higher totals. We see no point in refining the numbers for this paper, as no reasonable way of counting will remove either finance or telecom from their high perches.

<sup>4</sup> See again the Center website: <https://www.opensecrets.org/lobby/top.php?indexType=i&showYear=2016> Most of the data is for subsectors of finance, so adding them is necessary to get more accurate totals. For cautions on shadow lobbying, we are indebted to the authors of the piece on the revolving door cited just below.

<sup>5</sup> On the revolving door, see Blanes i Vidal et al. (2012); for data, see <https://opensecrets.org/revolving/> Exactly how far this data goes back is unclear; most of it seems to post-date 2006, though some earlier data also appears.

<sup>6</sup> See the CBS News poll summary at <http://www.cbsnews.com/news/poll-americans-say-money-has-too-much-influence-in-campaigns/>



Yet, curiously, within the academy and the major media, the notion that political money could have this kind of force—that is, that it could durably cement control of crucial public policies in the hands of a relative handful of giant companies at the expense of the broad population—is not only rejected, but widely scorned.

At the broadest level, mainstream political science and economics focus overwhelmingly on the determining role of voters and elections—and specifically, in the specialized language of these disciplines, on the role of “median voters”—in controlling the state. Corruption happens sometimes, and money becomes important in certain special cases, but in this view, it does not drive the system. The astronomical sums spent on lobbying are typically waved away as securing “access” rather than real policy influence, without consideration of what the former could possibly be worth were it not linked to the latter. Perhaps even more remarkably, the tumescent campaign expenditures of recent elections are confidently dismissed:

[T]here is something of a scholarly consensus, at least for campaign spending in congressional races. However, this consensus stands in stark contrast to the popular wisdom echoed by pundits, politicians, and reform advocates that elections are essentially for sale to the highest bidder (spender). Decades of social science research consistently reveal a far more limited role for campaign spending... [T]he best efforts at identifying the treatment effect of money in congressional races yield fairly similar substantive results: candidate spending has very modest to negligible causal effects on candidate vote shares.<sup>7</sup>

Assessments of Congress run broadly parallel. A mountain of studies purport to tease out the influence of money on roll call votes in the House and Senate, and mostly profess that money doesn’t matter there, either. An influential survey of “36 empirical studies of contributions and roll call votes” concludes, for example, that “the weight of the evidence so far favors the view that contributions are unrelated to voting behavior.”<sup>8</sup> This wave of negative appraisals has a bright side: It has encouraged scrutiny of what else representatives do, besides voting on bills, for which donors might pay. But mostly this research facilitates blithe dismissal of the whole question of money and politics. Full-length studies of Congress routinely join this rush to judgement, as do the endless streams of political science textbooks that portray American political life as the working out of a radiant democratic ideal.

Institutionally oriented studies of policymaking are no different. With a few exceptions, they emphasize bureaucratic politics, sheer inertia (“path dependence”), or personalities of top decision-makers, not money. A handful of studies temper this Panglossian complacency with specialized discussions of cases in which the facts are so stark they cannot credibly be denied, including a few studies of telecommunications regulation at the state and local level.

In the ’80s, analysts working in the tradition of law and economics, which developed with substantial support from interest groups favoring the deregulatory policies Greenspan incarnated, let in a breath of fresh air.<sup>9</sup> They drew attention to the ways in which “special interests”—often rather nebulously defined—act to thwart what virtually all of these analysts presumed to be the superior workings of the invisible hand of the market. In the ’90s, as the mighty campaign to repeal Glass-Steagall swept all before it, some researchers turned their attention to issues of financial regulation. A few studies by scholars with backgrounds in economics became increasingly realistic. Some reported that money did appear to influence legislators, with a few even suggesting that Congress might be organized to facilitate such dealings. These “Chicago School” analyses of “rent-seeking” are often empirically compelling and of great interest, particularly those by Krozner and Stratmann.<sup>10</sup> There is no question they enriched economics and political studies. As the new century dawned, some papers made another major advance by directly linking political contributions and lobbies with the earlier,

<sup>7</sup> Milyo (2013); see also Ansolabehere et al. (2003), and the discussion in Ferguson (2005).

<sup>8</sup> This is de Figuerido and Edwards’s (2015) summary of Ansolabehere et al. (2003).

<sup>9</sup> See the discussion of the Bradley Foundation in Mayer (2016) and the acknowledgements in, e.g., Krozner and Stratmann (1998).

<sup>10</sup> See Krozner and Stratmann (1998), as well as their various separate pieces.



often rather formless literature that examined legislators' control of bureaucratic agencies. The result was that some of the pathways banks and other concerns use to control key regulatory agencies became clearer.<sup>11</sup> Suggestions of a deep relation between political money and party politics of the type Secretary Baker's comments imply are not really to be found in these studies, however.

The issue is not principally that Baker's remarks imply that one of globalization's most basic ingredients, financial deregulation, acquired much of its momentum in the U.S. from explicit calculations of partisan advantage; that much might be inferred from the well-funded Republican campaign to seize control of Congress in 1994, though as Brooksley Born notoriously discovered, the Clinton administration was anything but hostile to financial deregulation and provided decisive support for virtually all the later measures that paved the way to the 2008 disaster.<sup>12</sup> The flashbulb revelation is that that campaign's most iconic measure, repeal of Glass-Steagall, was integral to an effort to alter the partisan balance of the political system as a whole.

The idea that party politics and individual industries are this deeply entwined is foreign to the law and economics approach. That approach focuses on individual markets for particular outcomes in the context of formal political structures that are largely taken as given, not constrained by the kinds of broad social and economic forces and coalition-building that figure in studies of partisan political realignments and similar macro-political shifts.<sup>13</sup> Though in some studies voters almost drop out of the picture, in fact the underlying model, at least implicitly, is always a variant of "public choice" appealing ultimately to the median voter. For a long time, this tradition has been a fellow traveler with political science studies that mostly write off the influence of political money, however inconsistently.

In the Chicago tradition, deregulation also hovers in the background both as a normative ideal and a policy aspiration. If special interests promote that goal, the implicit assumption is that the rest of us should be grateful for the happy coincidence of private and public interest and celebrate the resulting renewal of democracy and free markets that deregulation brings. The notion that deregulation was really a scheme that might advance very narrow interests made but a fleeting appearance in this literature, as the sweeping campaign to abolish Glass-Steagall reached a climax in the Gramm-Leach-Bliley Act of 1999. The idea that the whole process was really part of a gigantic political-economic doom loop never surfaced even as lobbying and political contributions went up and up in the new century.

Save for a thin stream of work that always highlighted the links between political parties, money, and industrial outcomes, the beginnings of a reappraisal had to wait for the collapse of the world financial system in the fall of 2008. As the world struggled to dig out of the wreckage, a handful of economists took more critical looks at how political money and lobbying set the stage for the catastrophe. Nearly all these studies focus on the United States. Igan and Mishra (2014) examine how congressional representatives changed their minds about deregulation between 1999 and 2006 as political contributions poured in and lobbying intensified. Igan et al. (2014) also show that the financial firms that lobbied the most did the worst in the crisis.

Mian et al. (2010) compare how contributions from financial firms and constituency interests influenced congressional votes on key legislation as the financial system collapsed. Their argument is polyvalent: They claim that constituency interests—the demand for mortgage relief in districts with high percentages of defaulting homeowners—inspired congressional support for the Foreclosure Prevention Act of July 2008, while financial sector contributions propelled the vote in favor of the famous TARP bank bailout program. In another paper, they show that after 2002 the mortgage finance industry mounted a concerted effort to target political contributions to legislative districts with high rates of

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<sup>11</sup> For a review of that literature, though covering more industries than finance, see, e.g., de Figuerido and Edwards (2015).

<sup>12</sup> Ferguson (2014) places the 1994 effort in precisely this context; more broadly on the Clinton administration, deregulation, and political money, see Ferguson and Johnson (2009a; 2009b).

<sup>13</sup> The literature on the latter is gigantic, but see Ferguson and Chen (2005).





subprime borrowers, once again underscoring “the important role of both constituent and special interests in housing and housing finance public policy during the subprime mortgage credit expansion from 2002 to 2007” (Mian et al. 2013).

These latest studies, we think, mark a real advance over earlier work. The care and imagination that have gone into them is obvious. Though they deal only with finance, they greatly further our understanding of how political money protects the “overcharges” documented by our colleagues. We hope, though we have doubts, that champions of the traditional approach to money and politics will take some of their lessons to heart.

But these works scarcely exhaust the subject of Congress and money, and they contain errors of their own. For one thing, all these papers mismeasure political contributions fairly severely, in some cases, as we will show, by almost 50 percent. They also leave out important factors that help explain what Congress actually did. A new paper by Tahoun and Lent (2016), for example, shows that the personal finances of congressional representatives and their spouses played a significant role in the 2008 vote to bail out the banks. Congressional families that preyed together stayed together: Representatives who themselves or with their spouses were heavily down in the market were much more likely to support the bailout, even controlling for campaign contributions. In a finding that raises fundamental questions about the real dynamics of Congress and regulated industries, Tahoun and Lent also show that banks in which powerful members of the banking committees held stock received proportionally bigger allocations of TARP funds than other banks and got the funds on average more than a month and a half earlier and on better terms. This is truly Gilded Age politics.

Many of the latest literature’s weaknesses arise from the fact that, save for Tahoun and Lent, the authors have not really shaken off the influence of the older “median voter” approach to analyzing elections. Nor do they take sufficient account of how big money has reshaped the organization of Congress itself in the period they analyze. In particular, Mian et al. mix elements of the neoclassical law and economics tradition with some of the weakest aspects of the mainstream Congress literature. They misunderstand how financial interests work through party leaders and misinterpret the role of constituency interests in the legislative battles over mortgage relief. The measure they hail as a triumph of constituency interests was in fact the first in a long line of successful battles waged by financial interests to block mortgage relief for ordinary Americans. They also slide past some important questions about what “constituency” interests actually are.

The results of the 2016 elections suggest that there is an urgent need to attain greater clarity about the way money and politics actually work in the American system. The new political leadership in Washington appears quite casual about conflicts of interest and it is moving rapidly to roll back and weaken regulation of both finance and telecommunications. The shortcomings of conventional views of the roots of policy may soon become far more visible.

Though for data reasons this paper concentrates on financial regulation and can look only selectively at telecom issues, we think our results speak volumes about how political money functions in the U.S. Congress and government generally. We are confident that they show that an “investment” approach to understanding Congress—an approach that takes the spirit of Baker’s comments on Glass-Steagall seriously—provides a more accurate view of how giant tributary systems like finance and telecommunications grow and reproduce themselves (Ferguson 1995). We hope to make this point not through lengthy theoretical discussions, but through concrete empirical analysis.

We, of course, accept the traditional caution that Congress is not the only arena that is crucial for finance and telecom. Obviously, presidents and bureaucracies also wield political power, and court decisions also count heavily. But a full assessment of how all of these forces combined to advance the deregulation of finance and telecommunications would be a task well beyond the scope of a single paper. Still, along with claims about the irrelevance of campaign finance to the outcome of elections, roll call voting in Congress has traditionally been the *pons asinorum* of American politics, buttressing claims that money doesn’t really matter. Sustaining an argument that money is telling in the hard case of floor votes would put the entire discussion on a different footing—rather like the recent demonstration, of which this paper



accepts, that congressional election outcomes are in fact closely related to election spending (Ferguson, Jorgensen, Chen 2016). Carrying the argument on floor votes would complement that finding and show that claims that industry money does not matter are as hollow as Fourth of July speeches.

Our discussion begins with a critical review of existing work on Congress, money, and the political economy of deregulation in these industries. We try to pinpoint the most common misunderstandings that cloud mainstream discussions. In our view, the key issues do not turn on questions of theory, or only theory: Most are quite baldly empirical, though nuances vary depending on whether the subject is finance or telecommunications. Because just about everyone has some idea of what banks, insurance companies, and mutual funds are—if not shadow banks, hedge funds, private equity, or the complex relations between all of them and various regulatory authorities—there is a floor below which studies of finance cannot sink in at least identifying the major players.

Telecom is a different story. The politically relevant industrial structure is very complex and much less intuitive when looking past the giant firms that control the wires leading into our homes. To understand what happens in that arena, it is essential to distinguish the phone companies from the cable firms, and both of these from the vast array of companies dependent on the internet or TV to reach their audiences. These latter have always included some major players, but their ranks are now bolstered by a bloc of huge “edge” firms building and operating giant internet platforms, such as Google, Facebook, and Amazon. All these firms, of course, are linked to networks of enterprises providing them with equipment or services, including some that are giants in their own right, such as Cisco. A certain number also straddle these classifications and provide not only content, but sometimes internet or phone service. Political science discussions are mostly insensitive to industrial structure, while many economists fail to grasp the nuances of politics, so good analyses of the politics of telecommunications are few and far between. Studies by Hart (2011) and de Figuerido and Edwards (2015) discussed later in the paper qualify as conspicuous exceptions.

But complications of industrial structures are not what principally lead most studies of money and politics hopelessly astray. The literature’s main problem is a failure to take sufficient account of the complexities of political money. This complexity occurs at two levels.

Firstly, political money has a dizzyingly protean character, which most studies slide past. Campaign contributions and lobbying are not necessarily decisive. Only recently, for example, have analysts realized that banks can not only provide campaign contributions to members of Congress, but also make direct personal loans to them at concessionary rates (Tahoun and Vasvari 2016). Such personal loans show up in no campaign finance tabulation. Neither do other aspects of the personal finances of congressional representatives that receive even less attention, such as the role their own portfolios play in their voting decisions (Tahoun and Lent 2016).

The second and larger research problem, however, is as mundane as it is debilitating, and derives from the byzantine ways in which political money is reported by the Federal Election Commission (FEC) and the Internal Revenue Service (IRS), the latter of which chronicles so-called “527” funding of often towering sums. Most of the apparent empirical support for claims that money doesn’t matter arise from omissions at this level. As we will show, even in papers that do find that money matters, standard research practices in this field fail to account for enormous amounts of money hidden in plain sight in existing data sources.

After sorting out these issues, we sketch a broad-brush picture of how finance and the telecom oligopoly use the political system and, especially, the party system to their advantage. We begin by documenting how, as national party competition evolved into a struggle in which national party leaders focus on amassing gigantic sums of money to compete across the country, components of both industries became major players in the industrial coalitions that define each party. As a consequence, conflicts over finance and telecommunications typically assume sharply partisan forms. Each party



develops a strong “elective affinity” (in the famous phrase that Max Weber lifted from Goethe to describe ideology) with major segments of each industry, just like the now-discarded split between investment and commercial banks that Baker decried. These alignments are normally reflected in congressional voting patterns on major legislation affecting these sectors. Many are near-perfect party-line votes.

This “sedimentation” of parties and industry segments poses an obvious empirical challenge: Is it possible to tie variations in overall political money directly to changes in the partisan balance of Congress? Standard analysis in both economics and political science mocks the very idea as hopeless. Building on earlier published work, however, we have shown that this is not true: Party balances within both the House and the Senate in elections since 1980 closely follow the proportionate breakdown of overall money in the races (Ferguson et al. 2016). This “linear model” of congressional elections explains the most fundamental feature of the congressional landscape, the partisan breakdown of both chambers, and highlights precisely what Baker’s comment did: the macro-flows of money that are critical to the functioning of the party system itself.

Once one acknowledges this pecuniary influence on the partisan balance, the obvious next question becomes how these alignments translate into individual pieces of legislation. Our approach is a straightforward extension of our general investment approach: Given the centrality of partisan conflicts and stalemates to legislative outcomes in recent decades, explaining successful legislation involves accounting for how enough votes break off from their usual (partisan) alignments to pass a bill. In our view, this is one place where political money really shows up as important. Not surprisingly, many of the papers that find that money does matter test whether enough of it can change legislators’ earlier stances, with broader alignments taken as a given.

In our own tests in this paper, we focus primarily on the influence of finance. The scale of the disaster that engulfed both the world and the American financial system in 2008 was so overwhelming that efforts to fix the financial system had to tackle far more issues than major bills in Congress normally do. The result was the now-famous Dodd-Frank reform bill, an unusually broad “omnibus” measure containing a swath of relatively mild reforms that passed narrowly along near-perfect party lines when the Democrats controlled both houses of Congress. Mild or not, the bill aroused the ire of virtually the whole financial sector, from the big banks and Wall Street to payday lenders, less a handful of investors (nearly all in hedge funds, not banks) who feared the potentially apocalyptic consequences of another financial collapse.

In making our own empirical case for the importance of political money, we use the financial industry’s long campaign to weaken, slow down, or repeal Dodd-Frank as a kind of natural experiment. Throughout this effort, Republican unity on proposals to water down or eliminate the legislation has been virtually iron-clad. But the GOP’s ability to move legislation through the House, even after winning control of the chamber in 2010, has often depended on convincing some Democrats to break ranks. The U.S. Senate, by contrast, is a small chamber where limited numbers make reliable statistical analysis problematic. In addition, the Democrats have maintained a strong position there since Dodd-Frank passed, even after losing control in 2014; as a result, because of the way the Senate functions, efforts to modify Dodd-Frank there have led to a long stalemate. We therefore focus on the much larger House to build our case.

Since 2010, House Republicans have repeatedly brought forward measures to alter Dodd-Frank. Some of these never got out of committee, but others did and reached the floor. Some actually passed the House, with the help of breakaway Democrats, though most were stopped in the Senate and never became law. A conspicuous exception is what became known as the “swaps pushout” amendment, which decisively altered basic provisions of Dodd-Frank applying to derivatives. Passage of that measure attracted national attention, as Massachusetts Senator Elizabeth Warren made a close-to-unprecedented appearance on the House floor and JPMorgan Chase Chair Jamie Dimon personally telephoned representatives to urge passage.



Like several papers that have found money to be a factor in congressional voting, we tackle the question of whether money can explain the Democratic defections by using a statistical design that eliminates many of the most common objections to inferences about money's influence on floor votes. This same stratagem allows us to bypass problems in taking account of hard-to-test variables that might otherwise complicate assessments, such as the influence of think tanks and cultural factors that we cannot reasonably assign specific monetary values or apportion to specific congressional districts.

The core idea is to build a panel of legislators who took multiple votes on watering down the Dodd-Frank legislation over time. (The technical details of our models are all in the Appendices to this paper, and we hope our exposition makes clear what these term means to readers without a background in econometrics or statistics.) By focusing on Democrats who initially voted for the legislation and then changed their minds, it is possible to turn these legislators—whose districts basically don't change in a short period of time, either—into their own statistical controls.<sup>14</sup> They are the same people, with the same basic ideology, the same cultural and think tank influences, etc., that previously voted to support the legislation. We combine this “fixed effects” design with very careful measurements of time-varying factors, such as political money, while also considering other variables normally neglected, such as personal loans to representatives from financial houses, to resolve doubts about whether money or something else changed the legislators' behavior. Our results show that financial sector money played a substantial role in weakening Dodd-Frank among once-friendly Democrats. A more conventional mixed logistic panel regression on both Republicans and Democrats buttresses this conclusion.

With telecom votes, we cannot, unfortunately, proceed this way. We agree with analysts who insist that the so-called “network neutrality” issue—whether companies like Time Warner or Verizon can use their control of the pathways into homes and businesses to create a “two-speed” internet that would allow them to charge more for faster and higher quality transmission of content—is make-or-break for the future of communications. Unfortunately, a lot of the action on this issue takes place in congressional committees, where small numbers create problems for statistical analysis. Floor votes are much less common. These resemble World War I on the Western Front, mighty assaults that punctuate long intervals of trench warfare in which nothing appears to be happening. In theory one could perhaps build a roster of repeat voters extending over many Congresses, as we do in our tests of Dodd-Frank waverers, but that approach is prohibitively expensive given the requirements we describe below for compiling and sifting data for political contributions. We thus analyze in detail only one vote, the pivotal House vote on the proposed Markey Network Neutrality bill of 2006. That shows a strong relationship of congressional voting to campaign contributions. We think this result should be treated cautiously, but it is also fair to note that it required no complicated specification, merely a serious effort to assemble firms' total spending.

## *Money in Politics: The Need for a Full-Spectrum Analysis*

Let us proceed straight to what conventional discussions of money and politics miss about political money. These omissions, we have already suggested, occur at two different levels. The first involves a foreshortened view of the subject. Political money resembles the electromagnetic spectrum: The portions that you see represent but a fraction of the whole phenomenon (Ferguson 2014). In the case of both finance and telecom, parts of the spectrum that do not normally register with most observers represent major flows of resources.

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<sup>14</sup> Some districts were altered by redistricting after the 2010 election, but 2010 cleaned out enormous numbers of Democratic legislators and nearly all of them disappeared forever. They therefore can't disrupt continuity. Whatever influence redistricting had after that must be small indeed. Our spatial regression takes account of the new districts; that, along with the specific control for ideology in our equations, should catch any tiny influences.



Consider Figure 1, for example. Let us read from left to right, starting with the first panel. Business from banks is the bread and butter of many law firms; historically, a large proportion of the best-known law firms have had major banks as principal clients. Political contributions from members of these firms mostly track the interests of their clients, because protection of their clients implies protection of themselves. In addition, as Stigler noted long ago, lawyers have a huge advantage over most professionals in that they can be legally and easily paid for services that would raise eyebrows if invoiced by anyone else – a point impressed on one of us when the House Speaker of the state legislature represented the bank providing his family’s mortgage at the closing on a home.<sup>15</sup>

**Figure 1:  
The Spectrum of Political Money**

1. Payments to Lawyers for Services (After Stigler, see text)	2. Payments to Political Figures	3. Foundations and Charitable Grants	4. Lobbying	5. Think Tanks	6. Formal Campaign Spending	7. Value of Stock Tips, IPOs to Political Figures	8. Public Relations Spending
Substantial, but exact number unknown.	Many hundreds of millions of dollars. Includes certain director’s fees, speaking fees, book contracts; some “research” and philanthropic “advice” from consultants.	Many not political; some go through think tanks. \$296 billion in total giving in 2006; perhaps 3–5 percent count as broadly political.	Legal definition is very narrow; 2010 on-record totals approx. \$3.5 billion in Washington, D.C. Lobbying in states and cities also large.	Rapid growth, especially since 1970s. In 2005, major D.C.-based think tanks spent approx \$411 million. Many more now outside Washington, D.C., not included in estimate.	Total expenditures on federal campaigns only \$5.2 billion in 2008; state and local spending also heavy.	“Event analysis” studies suggest very large in certain periods. See text.	Some certainly affects politics.

The first segment of this spectrum means that significant sums are not properly attributed to finance in inventories of campaign contributions, while the second would not normally be recognized as “political” money at all. It is remuneration for a perfectly legal service that the bank happens to bestow on the Speaker of the House or whomever. The position of banks and telecoms with respect to these prerogatives is not symmetrical: Banks likely enjoy a unique position, but the market for legal services among telecom firms is also enormous and just as invisible. The result is not only that total contributions from the financial community are mismeasured but that some teams have many more players on the field than those wearing uniforms.<sup>16</sup>

<sup>15</sup> See the discussion in Ferguson (1992); Stigler (1975).

<sup>16</sup> This ease of camouflage affects quantitative studies like ours. Other things equal, when you see the lawyers in a large bank’s main law firm flocking to a candidate, one can be virtually certain that the bank is also benefitting. But certainty is hard come by in this world. In our own tabulations of money from finance, we do not include contributions from lawyers unless they work directly for

Though enormously important, the second segment of the spectrum is not easily quantified. It affects both finance and telecom, influencing their dealings with the Executive Branch and myriad other institutions as their emissaries move between public and private spheres (including the mass media, which essentially never requires interviewees to disclose business ties). Some cases would be funny were the consequences not so weighty; for example, before taking a top slot in Obama's White House, one aide collected almost \$900,000 from Goldman Sachs for advice on "philanthropy" (Cassidy 2011). News stories also reveal that some top private-sector executives have clauses in their contracts awarding them substantial bonuses if they leave for "public service," such as the contract former Treasury Secretary Jack Lew had with Citigroup (Ferguson et al. 2016). In recent decades, essentially all senior staff in the White House appear to enjoy ties of this sort, with finance in some form probably the most common source, reflecting its privileged position in the economy as globalization and financial deregulation drove up its share of total U.S. business profits.

Both banks and telecoms (either directly or through foundations they control) also make substantial charitable grants, as noted in the third segment of the spectrum. These have rarely attracted attention, though a giant grant from JPMorgan Chase to the New York City Police Foundation at the height of Occupy Wall Street raised eyebrows, as have some recent interventions against net neutrality by civil rights groups that received grants from telecom companies.<sup>17</sup> What is on the record is not reassuring: A substantial proportion of America's largest firms make grants to spouses of congressional representatives or related political networks in districts where the firms have obvious interests. Again, the total amounts are unknown, but the most detailed study, an unpublished thesis, indicates substantial numbers.<sup>18</sup>

Lobbying, the fourth segment, has already been mentioned. The huge scale of these expenditures attracts intermittent comment, but, again, reported numbers seriously underestimate the true size of spending. The principal problem is that the technical definition of lobbying is *much* narrower than common usage; many contacts with Executive Branch personnel, the White House, and other parts of the government escape the narrow legal definition, while many organizations that any reasonable person would count as lobbying never register (Ferguson 1992). A second giant omission arises from so-called "shadow lobbying" by former congressional leaders. These legislators retire to Washington law firms, do not register as lobbyists, but then bring in huge fees, sometimes while directing former associates who do register. Research by Mirko Draca and Christian Fons-Rosen supported by the Institute for New Economic Thinking demonstrates that such arrangements have become very significant.<sup>19</sup>

The fifth segment, think tanks, has clearly been important in advancing the political agendas of both finance and telecom. In the case of finance, the scale of the spending over the last generation is enormous, but, as usual, defies any single summary statistic. Large and diverse coalitions of think tanks promoted essentially every major step of deregulation, from the earliest measures under Jimmy Carter to more recent successful efforts to permit higher leverage ratios for investment houses. Heritage, the American Enterprise Institute, Cato, and the Brookings Institution all joined in the cheerleading. So did many smaller organizations at both the national and the state level (which was often important, since state blue sky laws and other obstacles to the untrammelled promotion of mortgages and other forms of bonds had to be revised).<sup>20</sup>

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financial firms. Our overriding aim is to achieve high levels of accuracy and reliability in our measures of interest group and firm spending.

<sup>17</sup> On the JPMorgan Chase grant, see Yves Smith, <http://www.nakedcapitalism.com/2011/10/is-jp-morgan-getting-a-good-return-on-4-6-million-gift-to-nyc-police-like-special-protection-from-occupywallstreet.html>; see Fang (2017) for the telecom case.

<sup>18</sup> See the references and discussion in Ferguson (2014).

<sup>19</sup> The paper is forthcoming.

<sup>20</sup> The literature is now large, but see, e.g., Saloma (1984) or Ferguson and Rogers (1986). A particularly detailed study of the early stages of deregulation is Dixon and Noble (1981). For finance, see also Commission (2011).



In addition, finance enjoyed a peculiar advantage of “creative federalism” as a long campaign by right-wing foundations, businesses, and billionaires pushed first the burgeoning field of finance and then economics generally to embrace models of the economy that favored deregulation; indeed, to make them almost the only thinkable thoughts in many departments and schools. This elaborately funded process, which occurred all over the United States, in turn set off deeper institutional changes in the way journals are ranked and faculty evaluated. Putting a price tag on such efforts is difficult; the Institute for New Economic Thinking has several studies in process. But there is no question that the total spending was astronomical, when one considers investments across the United States in business schools and departments of finance and economics. These efforts spilled dramatically over into the major media, which right up to the moment world finance collapsed swallowed nostrums about “reputation” as a substitute for regulation, “rational expectations,” the omnipotence of monetary policy and uselessness of fiscal policy, and the advent of a new era of “great moderation.”

Because finance had a symbiotic relationship with these luxuriantly funded campaigns on behalf of “free market” economics, the depth of its cultural reinforcement was unique. But telecommunications deregulation breathed some of the same subsidized air. It also became part of the message of virtually all major and many minor think tanks, both at the federal level and, through vehicles such as the American Legislative Exchange Council, in many states.<sup>21</sup> Works sponsored by Brookings and other research centers promised telecommunications deregulation would drive down the costs of cable TV. Institutional links between telecom companies and congressional leaders were also obtrusive: Newt Gingrich, a major player in the critical Telecommunications Act of 1996, had a history of ties to organizations in this arena from his earliest days as a politician. He also profited from book contracts proffered by vertically integrated concerns anchored in the industry (Ferguson 2014).

The sixth segment of the spectrum, formal political spending, is sufficiently complicated to require a section in its own right. Accordingly, we skip past it for now to finish surveying the other categories.

Turning to the next segment, the research indicating that both senators and representatives benefit from stock tips and other forms of inside information is suggestive with respect to both sectors.<sup>22</sup> In the long stock market super-cycle leading up to the 2008 crash, stocks in both finance and telecommunications often did extraordinarily well. One can conjecture that both sectors were likely involved heavily, but without going through the mountains of evidence that Congress for a long time made very difficult to access, it is impossible to say for sure. The task is comparable to trying to sort out how much general spending on public relations—the final segment of the spectrum, and a truly giant industry—rubs off on political figures, causes, and aims. All one can say is that for both sectors, which both make heavy use of advertising, the sums involved are likely very large. Other facts are much clearer: There is no question, for example, that top congressional leaders were heavily involved in lucrative initial public offerings by Wall Street firms, with some cut into literally dozens of deals. These are essentially revivals of the “Morgan preferred” lists brought to light by the famous Pecora Commission of the early New Deal.<sup>23</sup>

All these forms of political money are significant omissions from the literature, but they pale in comparison to the maladroit treatment of formal campaign contributions. In the starkest terms, the problem is this: From the earliest days of the FEC, exceptions, additions, and loopholes have proliferated around the rules governing legal contributions and expenditures. Congress has many times enacted rules that appeared to close off gushing torrents of money while in fact opening new ones. After more than a generation, the result is worthy of Gogol: a maze of bureaucratic spending and

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<sup>21</sup> For ALEC, see, e.g., Mayer (2016).

<sup>22</sup> See Ziobrowski et al. (2004; 2011). Some later work has suggested that the size of the returns has dropped; see the discussion in Ferguson et al. (2016).

<sup>23</sup> See, e.g., Johnson (2011).



expenditure categories that failed to put many effective limits on money long before *Citizens United* allegedly opened the floodgates.

Classifications of spending have evolved over time: “Soft money” rose and fell, while spending from 527s rose and rose, long before anyone had ever heard of Super PACs. Many loopholes exploited, as did the Supreme Court in *Citizens United*, the obvious fiction that contributions that did not go directly to candidates’ own political campaign committees were somehow on a higher plane and would not be appreciated by candidates in the same way as direct gifts. Indeed, some analysts claimed with straight faces that such contributions should not really be accounted “political” contributions at all, and were free of any taint of corruption.

Of course, this argument is silly; “independent” contributions ebb and flow over the course of campaign cycles like other forms of political money, and the FEC and court decisions have so eviscerated the meaning of “independence” that the term is now little more than a joke. Candidates can, under some circumstances, remain in the room while personnel known to be close to them make pitches to donors. In our own work, we have always taken the approach that a contributed dollar is a dollar and summed all relevant categories of money.

But virtually no other researchers consistently proceed this way. Different agencies have responsibilities for recording these streams of money. The FEC reports most, but the IRS, as mentioned, tabulates contributions to 527 organizations. These 527s have long had the right to spend as much money as they like, though for a while their expenditures were subject to nearly meaningless prohibitions, such as “magic words” that supposedly signaled endorsement of the candidates they were trying to boost. The IRS and FEC reporting systems are also completely different and incompatible, so that combining them in one file requires arduous recoding and transformations. However, as Ferguson et al. (2013) note:

[T]he greatest hurdle of all is perhaps the mish mash of non-standard names of both individuals and firms jumbled all together in these databases. Partly for understandable reasons, neither agency makes any serious effort to standardize names or addresses of people on their rosters. For less comprehensible reasons, though, both agencies routinely accept seriously incomplete reports and obviously inaccurate or misleading entries. For example, they let many business executives who are still active on the boards of large firms get away with claiming to be “retired”... Perhaps the greatest data stumbling block, though, is the complexity of the contribution rosters. Investors who make multiple contributions rarely use exactly the same form of their name. Many maintain several different offices and residences in different parts of the country. When reporting contributions, they list first one and then the other in no consistent fashion. “Mr.” and “Mrs.” and “Senior” and “Jr.” also flit back and forth like the Cheshire cat. Hyphenated names can place people in entirely different parts of the alphabet, depending on whether they use the hyphen or not. And so on. The toxic combination of wild diversity and incompleteness also characterizes the reported names of corporations, regardless of whether they are referenced merely to indicate the affiliations of individual contributors or record direct expenditures out of their treasuries to Super PACs, 527s, and similar vehicles. Large concerns, especially big banks, have vast numbers of subsidiaries and subunits; often those names, rather than the parent’s, are reported.

The chaotic reports make summing all the files and sorting through all the variant names and companies hugely labor intensive. The inevitable consequence is that nearly all researchers take shortcuts. In many cases, these shortcuts lead to disastrous omissions and hopeless underestimates. Probably most academic studies that purport to assess the influence of money, for example, rely on a single narrow category of total spending that the FEC has for years made relatively easy to obtain: contributions from political action committees (PACs).





PACs, however, typically represent less than half of all contributions to congressional campaigns. For example, in 2008, PAC contributions to House candidates were only 29 percent of all money spent in House races, and PAC contributions only swell to 35 percent of all money if outside spending is not included.<sup>24</sup> (These percentages include PAC giving to all federal committees organized by the politician.) In presidential campaigns, PACS amount to far, far less—indeed, the total is so negligible that many presidential candidates, particularly Democrats, make the grand but meaningless gesture of announcing that they will not accept contributions from them. They can do this with complete confidence that individual contributions and outside spending will safely tide them over. 527s and Super PACs also represent enormous piles of mostly separate money. Some PACs occasionally donate to 527s, which spend lavishly, but the number is minuscule: We estimate that only 1.7 percent of all 527 donations from 2001 to the end of 2015 come from PACs, with the rest originating from individuals, businesses, or unions.

## *Analyzing Money-Driven Systems of Party Competition*

By far the most important point revealed over time by more accurate tabulations of total election money is the critical role aggregate spending plays in congressional candidate success. We have seen how conventional assessments denigrate the importance of money in elections. The point is constantly reinforced during elections by the media trumpeting one or another race in which a heavily financed candidate flops embarrassingly. But in fact, this phenomenon is far less common than usually imagined. Presidential elections are essentially one-offs and heavily influenced by outside media coverage, but if one looks at Senate and House elections, where there are many more cases, the pattern that emerges is precisely the reverse: In major party elections, the proportional division of campaign finances predicts the final vote between the major party candidates extremely well. Figures 2, 3, and 4 are taken from an earlier paper of ours; they plot proportional spending and the vote shares of the major parties. Figure 2 shows the pattern in the 2012 House elections. Figures 3 and 4 display the entire pattern of elections for both House and Senate since 1980. The straight-line character of the association is obvious, though two generations of scholars somehow failed to notice it (Ferguson et al. 2016).<sup>25</sup>

We believe that these findings are important in their own right: Skeptics must now admit that the “optics” of money in politics no longer work in their favor. A generation and a half of straight lines stretches credulity rather far. But doubters still have one avenue open: They can object that this uncanny coincidence occurs year after year thanks to shifts in public opinion mostly imperceptible to the general public, though known to contributors by one means or another (such as unpublished polls). That is to say, another unmeasured variable, candidate popularity, really drives the money.

We happily concede that “reciprocal causation” between money and prospective votes happens, but a detailed investigation shows that the effect of money is direct and powerful in its own right. One problem with the retort is that no actual institutional mechanism for coordinating money and politics likely works with the unearthly regularity our linear model suggests. More important, however, are two more basic considerations: In some cases, one can rule out the possibility that polls drove money that, after it did flood in, produced unforeseen surges of the dimensions our model predicts. No less importantly, state-of-the-art techniques for estimating unobserved variables do not produce results consistent with strong claims for popularity. They produce, in fact, the reverse: It appears that the millions of Americans who think they live in a money-driven political system are right (Ferguson et al. 2016).

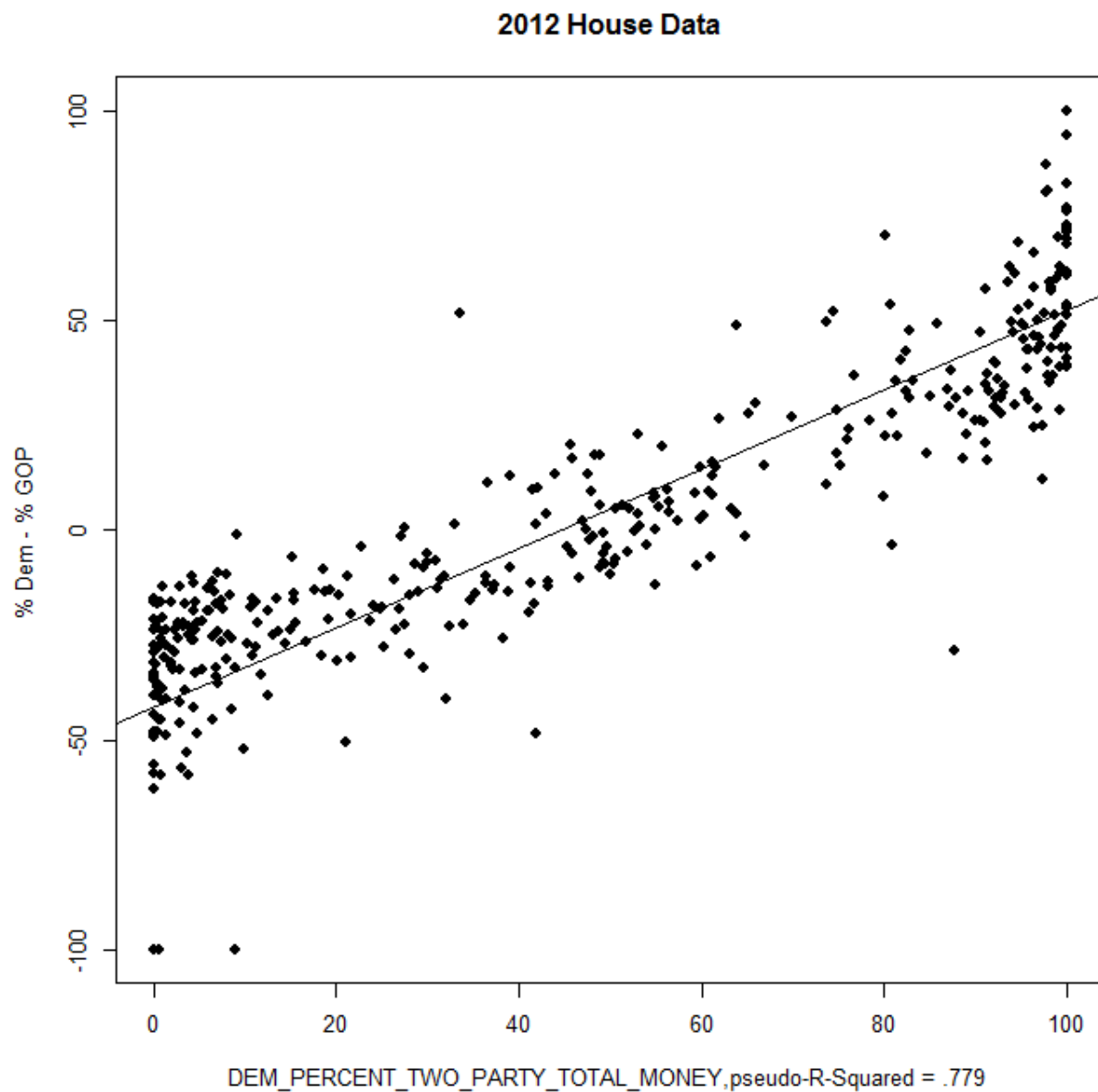
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<sup>24</sup> These figures reflect our own calculations from the data.

<sup>25</sup> Data for House and Senate elections in 2016 display the usual patterns and will be discussed in future publications.



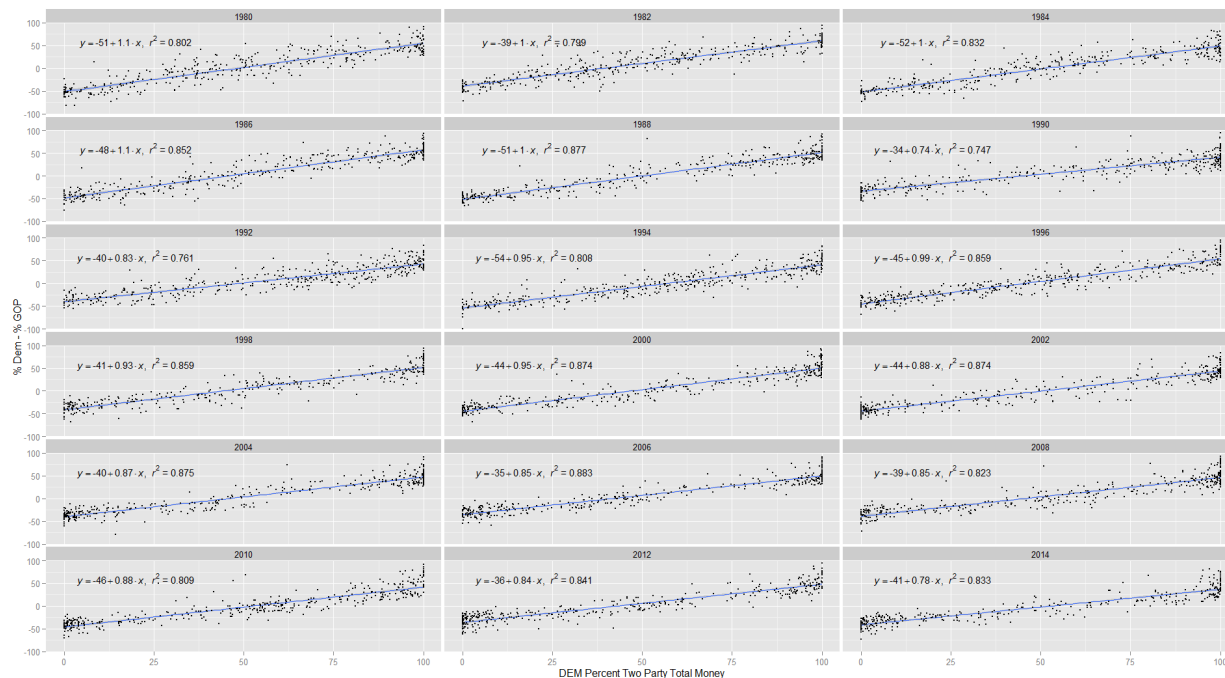
Figure 2:  
Campaign Expenditures and Vote Shares are Strongly Associated



Source: Ferguson, Jorgensen, and Chen, 2016

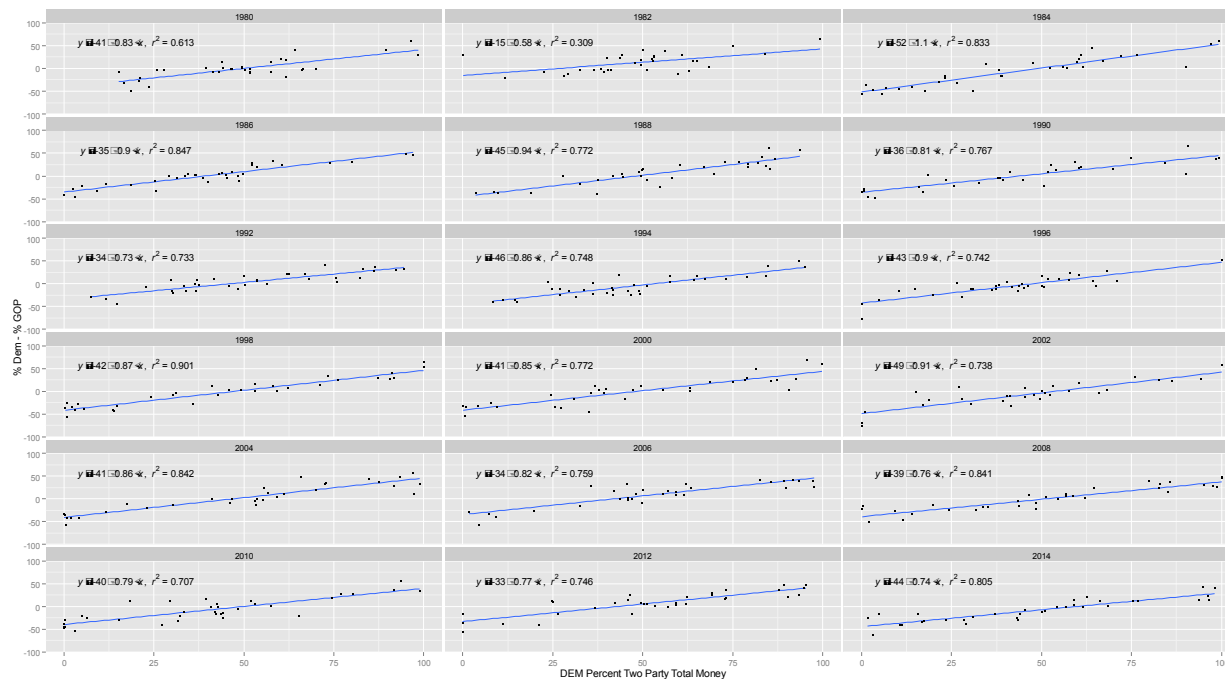


**Figure 3:**  
**Campaign Expenditures and Vote Shares, House Elections 1980-2014**



Source: Ferguson, Jorgensen, and Chen, 2016

**Figure 4:**  
**Campaign Expenditures and Vote Shares, Senate Elections, 1980-2014**



Source: Ferguson, Jorgensen, and Chen, 2016



Acknowledging the importance of aggregate money flows to the partisan split in Congress transports us right into the world implied by Baker's comments. It is also a crucial step in explaining how finance and telecom (and, likely, a handful of other outsized interests, such as energy) cement themselves into the core of a political system that is formally controlled by voters. Space does not permit detailed discussions of the evolution of U.S. party systems in this paper; all we can do here is outline an "investment approach" to understanding party competition that provides the foundation for the empirical tests in this essay.

In a system like the U.S.'s, where costs of information and political action for most voters are relatively high, political parties are first of all bank accounts. This means that power passes by default to blocs of investors who provide the finance on which the system runs. Appeals that cannot be financed cannot reach voters, no matter how many of them might be attracted. This is the fatal defect in the median voter approach (Ferguson 1995).

From the early 1970s on, globalization weakened labor and greatly advantaged business, but especially internationally oriented business that could easily move factories, techniques, and people. Since then, impatience with the old political formulas of the New Deal that constrained American businesses—the social welfare state, activist fiscal policies for full employment, state protection of labor organizations, progressive taxation, etc.—has driven increasing numbers of major investors and business firms into ever more active forms of opposition. Like a giant storm front spawning new tornadoes as it sweeps onward, the tempest blows first of all through the Republican Party, generating increasingly radical demands from various blocs of businesses. The Democrats have been torn between their mass base and the pull of big money, resisting the long drift to the right while also being pulled along by and at times seeking to run ahead of it.<sup>26</sup>

These straightforward claims are easy to test, and they have been tested. Until the '90s, empirical analysis of Democratic money always revealed a handful of industries overrepresented: Exactly as Baker recognized, investment bankers seeking to preserve Glass-Steagall were front and center. Other industries included major parts of telecommunications, energy, and defense. These alignments were about principal, not principles, but a common thread that ran through most was an emphasis on tempering laissez-faire economics using the state as a catalyst, along with the expansion of free trade—a principle shared by many but not all Republicans, depending on the era (Ferguson 1995).

In the '70s, the seniority system in Congress collapsed. This is usually ascribed to liberal Democratic dislike of Southern dominance, but in fact pressure for more campaign funds also provided impetus (Wright 2000). Senators and House members seeking to advance within the chambers responded by embracing what was sometimes referred to as the "California" system. Representatives seeking support from their colleagues for committee chairs and other leadership positions spread political contributions around. This led to a rapid proliferation of new institutional devices for getting and spending political money, including the explosion of so-called "Leadership PACs." Gingrich, Tom Delay, and other Republican leaders then moved to centralize as much of the money as possible, keeping computer tabulations on how much individual representatives who sought plum committee assignments contributed to national congressional committees controlled by the leadership. The Democrats copied this system, actually moving at times to a formal posted price system for committee and party assignments (Ferguson 2014).

Over time, the changes in Congress and the broader economy led to a nationalization of party competition, in which top political leaders worked with blocs of investors and their allies in the press to standardize appeals, buzzwords, and much else, as they sought to enlist more and more investors. Party "ideology" in this sense reflected appeals the investors and political leaders confected to enhance the mass appeal of these money-driven aggregates; it only very imperfectly represented any demand from the base (Ferguson 2014).

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<sup>26</sup> The literature is now large, but see, e.g., Ferguson and Rogers (1986) for the early stages; for later, Ferguson (1995) and especially Ferguson (2014).



In this increasingly top-down political system, the keys to power were money and media, so that major segments of giant sectors like finance and telecom emerged as “vested” interests in their party factions by dint of the enormous streams of steady cash they could provide. Quantitative analyses of these blocs suggest a striking persistence of many alignments down through the years. As we will see in more detail below, in telecom, the old Bell operating companies were strongly aligned with the Republicans; with occasional exceptions, so were most big cable companies. By contrast, content providers—including much of Hollywood, but eventually also many of the “edge” companies and producers whose access to audiences was vulnerable to toll-taking and agenda-setting by the companies that controlled access to their customers—often aligned with Democrats on telecom regulatory issues. (Copyright issues created additional complications, not considered here.)<sup>27</sup>

Obviously, finance changed fundamentally with deregulation. In a short account, the partisan consequences of the development can be summed up as follows. With Greenspan playing a key role, pressure to deregulate grew exponentially, as economists, finance scholars, think tanks, the media, and endless streams of financiers grew ever more enthusiastic.

[B]eginning in 1987, the Federal Reserve accommodated a series of requests from the banks to undertake activities forbidden under Glass-Steagall and its modifications. The new rules permitted nonbank subsidiaries of bank holding companies to engage in “bank-ineligible” activities, including selling or holding certain kinds of securities that were not permissible for national banks to invest in or underwrite. At first, the Fed strictly limited these bank-ineligible securities activities to no more than 5% of the assets or revenue of any subsidiary. Over time, however, the Fed relaxed these restrictions. By 1997, bank-ineligible securities could represent up to 25% of assets or revenues of a securities subsidiary, and the Fed also weakened or eliminated other firewalls between traditional banking subsidiaries and the new securities subsidiaries of bank holding companies. Meanwhile, the OCC [Office of the Comptroller of the Currency], the regulator of banks with national charters, was expanding the permissible activities of national banks to include those that were “functionally equivalent to, or a logical outgrowth of a recognized bank power” (Commission 2011).

The comptroller, it should be noted, is appointed by the president. Both George H.W. Bush and Bill Clinton chose men who strongly favored deregulation, as had every president since at least John F. Kennedy.

Initially, these moves to deregulate finance continued to draw sharp opposition from investment houses. Over time, their opposition tailed off and the tides of money shifted. With Robert Rubin often chairing national Democratic Party fundraising efforts, especially in presidential election years, academic work that mostly focused on political action committee donations missed most of the action. Eventually, however, reality began to assert itself. In a paper that stood out for its common sense, Strattman (2002) studied representatives who had earlier voted against legislation repealing Glass-Steagall. Limiting the comparison clarified matters: Even though Strattman relied on PAC donations alone as his measure of money, he succeeded in showing that money was changing minds. Krozner and Strattmann (1998) also proposed and tested a suggestive model that argued that Congress organizes itself to facilitate deals between industry groups and representatives. Their theory was that reputations for reliability would be advantageous for representatives appealing to interest groups for funds and thus that longer-serving representatives would tend to specialize in one or the other side of warring industrial blocs, and the researchers produced data that supported that. This was a reputational model that implied radically different conclusions from the bromides about reputation substituting for regulation championed by Alan Greenspan.

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<sup>27</sup> Compare the discussion of the Telecommunications Act of 1996 in Ferguson (2001) with our regression results below.



By the mid-'90s, the siren song of deregulation began to captivate even the investment banks and insurers. As markets boomed at home and overseas, and privatization caught fire around the world, investment houses turned into gold mines. Operating in a global environment brought in big foreign competitors in major markets, while the scale of operations generally increased. With many famous Wall Street partnerships turning themselves into public companies, financial super-markets began to look attractive even to investment bankers. In 1996, the Securities Industries Association changed position on Glass-Steagall to support its repeal.

With visions of sugarplums dancing in everyone's heads, the different parts of the industry began looking to make a deal. The CEO of the American Bankers Association summarized what happened next:

Because we had knocked so many holes in the walls separating commercial and investment banking and insurance, we were able to aggressively enter their businesses—in some cases more aggressively than they could enter ours. So first the securities industry, then the insurance companies, and finally the agents came over and said let's negotiate a deal and let's work together (Commission 2011).

The final act in this drama became a lesson in the adroit use of political money. Citigroup sought Federal Reserve approval to buy Travelers, a huge insurance company. The Fed approved, citing a loophole, but set conditions that would force major divestments if the law were not changed within five years. With President Clinton publicly asserting that Glass-Steagall was obsolete, major bankers, led by Citigroup co-chairs Sanford Weill and John Reed, began mass assaults on Congress in favor of repeal, while banks and other financial institutions spent almost \$400 million on political contributions and lobbying in a single election cycle. At a critical moment when it looked like the deal might still come apart, Robert Rubin, who had recently stepped down as Secretary of the Treasury, jumped back into the negotiations. As one account notes:

Rubin was at the time negotiating the terms of his next job as an executive without portfolio at Citigroup. But this was not public knowledge at the time. Deploying the credibility built up as part of what the media had labeled "The Committee to Save the World" [Rubin, Fed Chair Alan Greenspan and then-Deputy Treasury Secretary Lawrence Summers, so named for their interventions in addressing the Asian financial crisis in 1997], Rubin helped broker the final deal (Weissman 2009).

Repeal of Glass-Steagall led to further orgies of deregulation. Investment houses pushed to lift older limits on leverage, which involved putting pressure on the Securities and Exchange Commission, in part through Congress (Ferguson and Johnson 2009a).

More broadly, financial institutions and real estate interests seeking to expand mortgage lending mounted extensive campaigns to loosen restrictions on mortgages even further. Igan and Mishra (2014) show how this worked. They developed an innovative database of lobbying by firms in finance and real estate and attempted to connect the lobbying with congressional representatives' changes of position in favor of deregulation on individual bills. They concluded that the lobbying blizzard substantially influenced legislators' voting, though they claimed to be agnostic about whether the lobbying primarily reflected the provision of information or crude rent-seeking. We admire their ingenuity in squeezing as much information as possible out of the sketchy official lobbying reports to estimate amounts spent by individual firms; as they realize, their method delivers only approximate results, but these more than suffice to nail down their general case.

We are less persuaded by some of their specific assertions about the weight of network connections (the "revolving door"). Lobbying records do not link lobbyist efforts to individual representatives, and Igan and Mishra are therefore forced to resort to indirect methods to estimate these effects. We are quite persuaded of the importance of personal



connections and the revolving door from Capitol Hill to K Street (the eponymous center of lobbying in D.C.); Jack Abramoff, DeLay's infamous ally, once remarked that staffers who were promised jobs did more for his firm when they were on the inside than when they left Congress.<sup>28</sup> But we are not confident that Igan and Mishra's indirect way of tackling this question actually measures what they believe it does. Their decision to count a lobbyist as "connected" to a legislator if the lobbyist previously worked for that legislator is obviously unassailable, but they also count lobbyists as connected if they worked in the past for another representative who served on the same committee.

We do not believe this is uniformly realistic. First of all, it takes no account of the varying size of committees. In the much smaller Senate, where their principals are often spread thin, staff often conduct major negotiations and the claim might be defensible. But House committees are often gigantic: The Financial Services Committee that approved Dodd-Frank had more than 70 members, including very junior members put there by House leaders to help them attract donations for their reelection. In addition, as many studies of Congress emphasize, in the much larger House, representatives normally sit on fewer committees and thus do not need to delegate so much negotiating to the staff.

Accordingly, we suspect Igan and Mishra's broad definition of connectedness produces an inflated estimate that reflects other influences besides the revolving door. Most seriously, however, it ignores the importance of partisanship in constraining personal connections. We are prepared to believe that in committees congressional staffers develop amicable relations with most representatives on their side of the aisle, but we are skeptical that this readily extends to staffers and representatives from the other party. In our experience, this sometimes happens, but in recent decades it is much less common given the hardening of partisan divisions on the Hill. Igan and Mishra's analysis covers precisely the moment when the notorious "K Street Project" of DeLay, Abramoff, Rick Santorum, and other Republican hardliners stirred unprecedented acrimony by attempting to make former Democratic representatives and staffers unemployable as lobbyists; we doubt very much that acquaintance with members of the other party helped many staffers in that period (Continetti 2006).

In another paper, Igan et al. (2014) show that firms lobbying heavily before the crisis took bigger risks and then suffered larger losses in the crisis. Once government bailout programs began, however, these firms were more likely to be bailed out than firms that were not lobbying so heavily.

In both papers, Igan and her colleagues allude to political contributions, indicating that the measure they have in mind is PAC contributions. But their cases rest almost entirely on their novel lobbying data, so no real damage is done. The same, alas, is not true of perhaps the best-known paper to emerge from the debris of 2008, the 2010 study of "The Political Economy of the US Mortgage Default Crisis" by Mian et al. While we very much admire this paper's incisiveness and the alacrity with which it tackles large questions with novel datasets, we think it is seriously mistaken at several different levels.

Mian et al. believe that by sharpening issues and perceptions the crisis created an unusual opportunity to analyze empirically a classic problem of political theory: the relative weight of "constituent and special interest pressure" versus "ideological preferences" in legislators' voting. They look closely at two key legislative measures passed during the 2008 crisis. The first is the American Housing Rescue and Foreclosure Prevention Act, passed in July. This provided "up to \$300 billion in Federal Housing Administration insurance for renegotiated mortgages and unlimited support for Freddie Mac and Fannie Mae, the two giant "government-sponsored enterprises" (GSEs) that played crucial roles in supporting mortgage lending. The second is the Emergency Economic Stabilization Act, passed in October, which created the famous TARP bailout program for banks.

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<sup>28</sup> On a radio program with one of the authors.



The researchers see the July 2008 housing bill fundamentally as an effort to provide benefits to Americans in trouble on servicing their mortgages. As they describe it, its essence was “an expected net transfer to households that are in (or near) default on their mortgages.” Their touchstone for understanding why it passed in the form it did thus becomes constituency interest, measured by the rate of mortgage defaults in various congressional districts.

Noticing that only three Democrats voted against the final bill in late July, they conclude that this “shows the importance of ideology and political party affiliation” since “85 of the 233 Democrats” voting in favor of the bill “have mortgage default rates below the median default rate among Republican districts... In other words, despite low mortgage default rates among their constituencies, many Democrats vote in favor of the bill” (Mian et al. 2010).

Here arise our first qualms about their argument. We think they skip too lightly past an important empirical point that cloaks a potentially serious theoretical pitfall. Their argument postulates that constituency interests in districts with relatively high rates of mortgage default are clear cut, though that interest is treated as varying with the local representative’s party identification—that is, according to whether the defaults are hitting predominantly Republican or Democratic areas within districts.

We are quite prepared to entertain this, or the simpler hypothesis that high rates of mortgage defaults *tout court* will push representatives to vote for the bill, but we have a major reservation. Firstly, both at the time (see, e.g., the discussion by Swagel (2009), then in the Treasury) and later, popular opinion in districts was sharply divided. Indeed, only months later, with much help from Fox News, the mortgage debt relief question set off the Tea Party firestorm. In this instance, we think, Mian et al.’s confidence that reality was simplifying perceptions and issues is misplaced. Especially in 2008, default rates were still not that high in most districts; it is quite possible that average voters (the “median voter”) may not have shared the view that their interests lay in bailing out over-extended homeowners. We do think there is a compelling case that many *should* have believed this, considering the point made by some critics of the Tea Party’s agitation that widespread foreclosure of homes drags down the value of housing in entire districts. But this argument needs to be made, not assumed, and requires fairly subtle framing, since it makes important assumptions about local microeconomic situations, as well as voters’ knowledge and, possibly, ideologies. Mian et al. just assume its truth.

But their argument has far bigger problems. Rather clearly appealing to the popular perception of the Democrats as less committed to *laissez-faire* economics and more solicitous of lower-income voters (the formula they use to identify which parts of districts lean toward each party), Mian et al. do not inquire further into the roots of the Democrats’ favorable view of the bill. In particular, they do not analyze whether contributions from the financial service industry and real estate had any influence on the party’s representatives or leadership. They treat the party’s response as purely ideological and partisan in a commonsense way and turn to analyzing the Republicans.

Here they assert that their statistical study shows that Republicans who broke with their party were driven principally by constituent pressures. GOP representatives from districts in which rates of default increased sharply over that of 2005, they argue, were those most likely to break from the rest of the party and vote in favor of the bill. They specifically deny that campaign contributions from finance and real estate were at all related to these decisions, and they argue that the more conservative a representative’s ideology was, the greater their tendency to stick with the party’s majority position against the bill.

Their picture of how the parties clashed is a high-tech reaffirmation of common views about each party’s mass base and the usual confidence that democratic political structures force parties to respond seriously to popular will. They would have done better to consider a full-throated investment approach and look much more closely at the key pieces of evidence they cite.





Their bedrock claim that the bill involves “an expected net transfer to households that are in (or near) default on their mortgages,” for example, is not really the heart of the matter, in two distinct senses. Firstly, as some congressional representatives complained at the time, what the bill centrally provided for were net transfers to financial institutions, not homeowners. That is, the bill’s main beneficiaries were plainly not Americans in trouble with their mortgages but financial institutions, including many that may have had little or no interest in mortgages per se, but which had huge interests in preventing a collapse of the world financial system.

As the bill came up for consideration, the prospect of such a collapse was becoming all too real. Earlier in the spring, the famous old investment house of Bear Stearns had been rescued from collapse in the nick of time by an unprecedented effort, organized by the Treasury and the Federal Reserve System, involving a Fed-subsidized shotgun merger with JPMorgan Chase. But that deal only slowed deterioration in financial markets; it did not stop it. As mortgage markets seized up, investors began fleeing the bonds of the GSEs. The shadow bailout that Treasury Secretary Hank Paulson, Federal Reserve Chair Ben Bernanke, and the Bush administration were counting on to get them past the election before key decisions inescapably became public threatened to break down, taking the entire world financial system with it.<sup>29</sup> With the Chinese and foreign sovereign wealth funds warning that they would dump their GSE securities if nothing was done, Secretary Paulson was forced to reach for his “big bazooka.” Senator Chris Dodd later publicly stated that he believed Paulson’s assurances that if Congress gave him the authority to rescue Fannie and Freddie, he would never have to exercise it, but that did nothing to change the fact that, absent a massive new round of federal support, the end of July threatened to be the end of everything.

For the Republicans, including the party’s then-presumptive nominee, John McCain, another giant federal bailout coming so soon on the heels of the Bear Stearns debacle was pure poison. Realizing that it would need Democratic votes to pass any legislation, the White House dropped its veto threat and started negotiating with the Democrats in control of both houses.

With the exception of Congressman Barney Frank, then Chair of the House Financial Services Committee, and a handful of other Democrats, aid for Americans in trouble on their mortgages was in fact almost no one’s priority in the legislative bargaining. Frank and his supporters advocated allowing judges to alter the terms of mortgages as part of the process of renegotiating them. By “cramming down” new terms, judges could force banks and mortgage servicers to offer relief. The financial industry, however, was totally opposed. Then and all through the next administration, every time debt relief for Americans in mortgage difficulties came up as an issue, banks, mortgage companies, and servicers sent up howls of protest.

As a *Business Week* story later recounted:

The industry strategy all along has been to buy time and thwart regulation, financial-services lobbyists tell BusinessWeek. “We were like the Dutch boy with his finger in the dike,” says one business advocate who, like several colleagues, insists on anonymity, fearing career damage... In public, financial institutions insist they’ve done their best to prevent foreclosures. Most argue that giving bankruptcy courts increased clout, known as cram down authority, would reward irresponsible borrowers and result in higher borrowing costs (Grow et al. 2009).

Mian et al. do not examine the battle over the mortgage cram-down option in their paper. They do, though, acknowledge Barney Frank’s exasperated public statement as the bill passed that he “would be very disappointed” in financial institutions if “having helped us formulate this, they don’t take advantage of it.” But instead of querying the terms of the financial industry’s “help,” Mian et al. allude to “implicit pressure to write down principal in order to initiate

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<sup>29</sup> Ferguson and Johnson (2009a; 2009b). The account of the 2008 crisis relies on these extensively documented essays.



renegotiations,” and then dismiss the issue: “While it is possible that the legislation could have been written to be even more favorable to defaulting homeowners by making renegotiation mandatory, as evidenced by the press coverage, the legislation was perceived at the time of voting as being a substantial intervention by the government in favor of delinquent mortgage debtors.”

It is true that the *Wall Street Journal* and the *New York Times* hailed the legislation as epochal, but no serious assessment of the bill should rest there. Plenty of evidence, including earlier pieces in the *Times*, provide an altogether different key to the puzzle. Mian et al. should not have ignored Frank’s outburst, nor the mountain of evidence about what insiders knew that became public long before their article appeared. More than a year before the final vote, the battle lines were clear. Early in 2007, a worried Senator Christopher Dodd, Chair of the Senate Banking Committee, had convened a Homeownership Preservation Summit.

A who’s who of banking executives gathered on Apr. 18, 2007, behind closed doors in an ornate hearing room in the marble-faced Dirksen Senate Office Building. Dodd told them they needed to get out in front of the foreclosure fiasco by adjusting loan terms so borrowers would continue to make some payments, rather than stopping altogether...

Some from the industry denied a foreclosure problem existed, including Sandor E. Samuels, at the time chief legal officer of subprime giant Countrywide Financial. They vowed to continue selling loans with enticing introductory rates as well as those requiring minimal evidence of borrowers’ income....

On May 2, 2007, Dodd’s office issued a “Statement of Principles” stemming from the summit... The principles had no effect, some summit participants now concede.

Much of Dodd’s attention shifted to his campaign for the Democratic Presidential nomination... The lawmaker accepted \$5.9 million in contributions from the financial-services industry in 2007 and 2008... (Grow et al. 2009)

The stonewalling continued right through 2008. Mian et al. point to the “Hope for Homeowners” provisions of the bill that finally passed as making their case. This is a mistake. The banks and servicers had too much at stake: If they wrote down any loans, normal accounting principles would force them to write down all similar loans on their books. This they could not afford if they wanted to remain solvent.<sup>30</sup>

By early 2008 it was obvious that Hope Now wasn’t halting a significant percentage of foreclosures. Democrats in Congress began gathering ideas for a government-sponsored remedy. Many of those ideas came from the industry. Lobbyists and congressional aides referred to one concept as “the Credit Suisse plan.” Another, “the Bank of America plan,” would allow borrowers to refinance mortgages with loans guaranteed by the Federal Housing Administration. Representative Barney Frank (D-Mass.), the chairman of the House Financial Services Committee, had solicited BofA’s advice via an old Boston acquaintance, Anne Finucane, the bank’s chief marketing executive and a politically active Democrat....

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<sup>30</sup> The point was clear from the beginning. As Grow et al. (2009) reported: “A major reason financial institutions and investors are so determined to avoid modifying loan terms more aggressively has to do with accounting nuances, say industry lobbyists. If, for example, a bank lowered the balance of a certain mortgage, there would be a strong argument that it would have to reduce the value on its balance sheet of all similar mortgages in the same geographic area to reflect the danger that the region had hit an economic slump... A desire to postpone this devastating situation helps explain lenders’ intransigence, says Rick Sharga, vice-president of marketing at RealtyTrac, an Irvine (Calif.) firm that analyzes foreclosure patterns.” See also below, on Treasury Secretary Geithner.



Before long, the anti-foreclosure provisions were being altered in ways the industry favored. Shelby, the ranking Republican on the Senate Banking Committee, along with other Republicans insisted on the pro-industry language in exchange for their support, aides say.

In the end, the program included stiff up-front and annual fees and a requirement that homeowners pay the government 50% of any future appreciation in the property's value—all of which made it much less attractive to borrowers. Moreover, the banks' participation was made entirely voluntary; there was no way to pressure them to cooperate...

Those familiar with Hope for Homeowners anticipated that its fine print would discourage all but a few borrowers. "We knew it was likely to have limited appeal," says Preston, the former secretary of HUD, which oversees the FHA. George Miller, executive director of the American Securitization Forum, a Wall Street trade group, calls the program and its 25 refinanced loans "useless" because of the onerous details.<sup>31</sup>

In fact, despite a veritable symphony of resonant promises and widely trumpeted programs, widespread debt relief never happened. The power of the banks and mortgage servicers was simply too great—not only in 2008, but throughout the Obama administration, whose first Secretary of the Treasury strongly opposed it on the grounds that it would damage the banks.<sup>32</sup>

Mian et al.'s claims about constituency influence driving that bill miss the institutional reality: Passage of the mortgage provisions reflected the triumph of banks and mortgage servicers. But why, then, do the researchers fail to detect any influence of contributions from finance and real estate in the vote? Part of the answer, of course, is straightforward: They never looked closely at the Democrats. They do consider whether Democrats might have other reasons to vote for the bill besides ideology and mortgage defaults in their districts, but without realizing it, they underexposed their x-rays.

In sharp contrast to most analysts, Mian et al. made a serious attempt to go beyond PAC contributions, contracting with a respected public research organization to compile individual contributions from executives. That organization is careful and does good work, but it does not run the type of checks that we do when aggregating data. This is easy to see because Mian et al. made their dataset public; it shows slightly more than \$50 million in total contributions from finance and real estate. This inspired us to compile our own dataset for the 2007–08 election cycle in the House. It is almost twice as large, showing contributions of over \$90 million. Per representative, this difference is huge. Strikingly, total contributions for the 2007–08 cycle made to congressional Democrats from finance and real estate substantially exceeded those made to Republicans. It seems clear that Mian et al.'s finding that political money drove the Republicans on the mortgage relief vote, along with their claim that ideology and constituency propelled the Democrats, should not be accepted. They didn't follow the money closely enough.

For now, we certainly believe it is plausible, as they conclude, that campaign contributions from finance were a massive force in pushing TARP through, especially on the fateful second vote, in the wake of the market collapse occasioned by Congress's rejection of the first version of the legislation. But the bailout was an exceptional event. There is strong evidence that another set of factors also played a role: In an imaginative and careful study, Tahoun and Lent (2016) have shown that besides industry contributions, the personal portfolio situations of congressional representatives and their

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<sup>31</sup> Grow et al. (2009); note that in the year before the *American Economic Review* published Mian et al.'s account, Ferguson and Johnson (2009b) published their criticism of an earlier version of the paper that highlighted the empirical problems and the fact that banks wrote the key provisions.

<sup>32</sup> See the devastating account of Geithner's views by the Special Inspector General for the TARP Program in Barofsky (2012). The twists and turns of the housing relief issue are well-documented by Yves Smith's website, Naked Capitalism. In the end, even lawsuits that were said to have been won yielded little. But the topic is too big to tackle here.



spouses were an important factor. Regardless of party, representatives who were down heavily in the market were much more likely to support the bailout, though extremely conservative legislators were less likely to take this step.

Tahoun and Lent’s paper also relies on PAC contributions as the measure of political money, so the exact weight of the personal considerations will need further assessment. But their controls are otherwise very complete, and we believe their conclusion is likely to hold up. Our only reservation is that their paper, like Mian et al.’s, is not able to take account of the myriad “sweeteners” added to the final version of the legislation to attract enough support to pass. As Ferguson and Johnson (2009a) observed, the final amended text was “loaded with more pork than an Oscar Mayer refrigeration car”—a farrago of tailored tax breaks, special projects, and other goodies designed to win the hearts and minds of wavering representatives.<sup>33</sup> There is no straightforward way to insert these into a regression equation, absent more information than is ever likely to emerge. Probably the best one can do is to rerun a combination of the various models with more accurate data for contributions—a task for another paper.

## *Better Estimates of Congressional Voting and Political Money*

Sometimes the weight of inherited tradition is overwhelming, no matter how stark the empirical evidence. Thus, for example, as Igan and her colleagues pile up evidence that lobbying affects congressional voting, they repeatedly pause to offer increasingly far-fetched hypotheses that might explain away their findings. In the midst of showing how financial houses dispatched wave after wave of lobbyists promoting ever-weaker mortgage regulations, for example, they wonder whether all this activity and related campaign contributions were intended merely to give valuable information to lawmakers (Igan and Mishra 2014; Igan et al. 2014).

Up to a point, we are sympathetic to these pains: There is no need to improve a powerful case by overstatement, and care in dealing with alternative hypotheses is a cardinal virtue. But the idea that lobbying and contributions on this scale could possibly be directed simply to informing members of Congress is outlandish. Never mind that the papers underestimate political money; if mere information were the issue, then campaign contributions would not really be necessary at all, save perhaps at some low level sufficient to gain basic “access.” Purely intellectual processes of information transmission would far more closely resemble the “Aha Erlebnis” patterns emphasized by the old Gestalt psychologists: At the start, subjects might thrash around, but then once they grasped the point, they would hold on to the insight. Hordes of lobbyists and \$100 million or more of reinforcement every election would be superfluous.

In fact, of course, what these papers really show is that Gestalt psychology or, indeed, any excessively intellectual approach is of little help in understanding how Congress changed its “mind” on deregulation. These little piggies went to market—and any diminishing returns that may have set in with regard to expenditures had little to do with insights of any kind. With issues of the magnitude of financial regulation (or telecom policy), contests for congressional allegiance more closely follow the logic of arms races, if not direct auctions. Arms races, though, are typically expensive, complex, and messy. We are, accordingly, not surprised that studies of congressional voting on issues like financial deregulation frequently turn into the statistical equivalent of the perfect storm. Incentives to hide avenues of influence are strong; some are little recognized or perhaps even still unknown, and many we discuss in this paper, such as the differential extent of free market propaganda in the preceding generation, defy useful measurement. The list of potential factors influencing legislative behavior embraces not only political money, but also many cultural and institutional forces.

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<sup>33</sup> Cf. Ferguson and Johnson (2009a), and the discussion of the Senate version of the bill in Hitt and Lueck (2008), which indicates bargaining on behalf of high-tech firms and drug companies, not the voting constituency influences suggested by Mian et al.



We nevertheless believe it is possible to build on the work just reviewed to sharpen the picture of how political money affects Congress. As it happens, certain features of the Dodd-Frank financial reform legislation actually lend themselves to surmounting many of the usual difficulties. First is the clarity of the battle lines. Most legislative struggles in the United States do not take the form imagined in progressive interpretations of American history, in which the interests of the broad public clash with business groups. On the contrary, save in exceptional times, active political conflicts principally revolve around various blocs of investors and industrial sectors, with appeals to the public at best playing marginal roles (Ferguson 1995).

Dodd-Frank, however, reverted to the progressive archetype: The struggle against it turned into a crusade waged by an almost monolithic financial sector. Especially after the shocking Republican victory in the special election to fill the seat left vacant by the death of Massachusetts Senator Edward Kennedy (only days after recently bailed out Wall Street houses announced giant bonus payments) squeezed a panicked Obama administration to support what became known as the “Volcker Rule,” virtually the entire sector mobilized against it (Ferguson and Chen 2010). The extraordinary unity only deepened after the legislation passed. For researchers, this has the happy implication that elaborate checks for intra-industry differences can be dispensed with. Virtually all money from finance can be treated the same.

Dodd-Frank also became a textbook example of our earlier point about how sectoral interests can play directly into partisan competition. The measure became law early in 2010, when the Democrats controlled both houses of Congress, and was rapidly swept up into the Republican opposition to everything the Obama administration proposed.<sup>34</sup> The original legislation passed both houses along party lines; in each chamber, exactly three Republicans voted with the Democrats in favor of the bill. Subsequent struggles to change the law unfolded within the same intensely partisan atmosphere, with the conspicuous exception of the hostile attitude of the U.S. Treasury under Tim Geithner.<sup>35</sup>

In November 2010, the Democrats lost control of the House in a historic landslide. They retained control of the Senate until 2014, but by a thin margin that essentially froze most business. Because, as mentioned earlier, the Senate is both much smaller and far more easily tied up by procedural rules, statistical analysis of that chamber is much harder. For our investigation of how political money influences Congress, we therefore concentrate on the House.

That body voted four times on proposals for significant changes while the 113th Congress (elected in November 2012) was in session, and once more immediately after the next Congress convened. The first vote came, perhaps appropriately, on the day before Halloween 2013, on the drolly titled Swaps Regulatory Improvement Act.<sup>36</sup> The second vote, taken on February 27, 2014, concerned the so-called Consumer Financial Freedom and Washington Accountability Act.<sup>37</sup> A third vote came on June 24, 2014, this time on the Consumer Protection and End User Relief Act.<sup>38</sup> The final vote in the 113th Congress came on the so-called “swaps pushout” provision weakening the Volcker Rule and regulations on derivatives in the course of a memorable lame duck session late in 2014. As noted previously, that provision passed amid scenes of high drama that attracted national attention. (Bank lobbyists had succeeded in inserting the provision into a bill appropriating funds for the budget of the United States; the bill also contained a provision, supported by leaders of both

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<sup>34</sup> The tables in Ferguson et al. (2013) outline the overarching patterns of industrial support for each major party in the 2012 presidential election.

<sup>35</sup> Several different congressional staffers have drawn our attention to the Treasury’s hostile position under Geithner, which in any case should be obvious to anyone familiar with the details of policy in that period.

<sup>36</sup> The vote is recorded here: <https://www.govtrack.us/congress/votes/113-2013/h569>

<sup>37</sup> The vote is recorded here: <https://www.govtrack.us/congress/votes/113-2014/h85>

<sup>38</sup> The vote is recorded here: <https://www.govtrack.us/congress/votes/113-2014/h349>



parties, that vastly raised the ceiling on political contributions.)<sup>39</sup> Almost immediately after the new House elected in November 2014 convened, it voted again on the Regulatory Accountability Act of 2015, the final bill we consider here.<sup>40</sup>

The party alignments on all these measures are clear, and so is the trail of political money, as our Appendix tables show: Republicans were flush with money from finance, and many Democrats, also received large contributions from that quarter, with many wavering and sometimes voting to undo parts of the legislation. Borrowing a tactic that Stratmann and others have used, we decided to exploit all those votes by Democrats who had previously voted for Dodd-Frank and survived to cast repeated votes on the later bills (including a handful who lost in 2010, but staged comebacks).

This tactic makes sorting out competing influences much more tractable. It controls automatically for many sources of possible variation, including the individual representative's own personality, values, and party affiliation. In effect, the procedure turns the representative into his or her own control. No less helpfully, in the very short run, it is not plausible that many other influences, such as variations in the strength of market propaganda in different districts, or most other institutional factors, including district and constituency characteristics, could change rapidly enough to matter. They can thus be treated as constants or "fixed effects."

By contrast, factors like political money do change, sometimes dramatically, and they can be measured fairly precisely, as we explained earlier, provided one is willing to do the work. Also varying over time are representatives' links to lobbyists via revolving doors (staffers come and go), personal loans to representatives from financial houses, service on the Financial Services Committee (whose members leverage, or personal indebtedness, is now known to triple within a year after they join the committee),<sup>41</sup> and their margin of victory in the last election. A subtler issue involves the ideologies of individual representatives; we think those require scrutiny as a possible influence, but indices based on behavior, not depth psychology, suggest that they should not be treated as a purely personal variable reflecting an essentially unchanging psyche. In practice, ideology seems clearly to drift over time. We thus do not treat it as fixed, but use an index calculated for the congressional sessions we analyze as a control.<sup>42</sup> These variables and the ensemble of time-varying measures should allow us to sort out political money's distinctive role with more accuracy.

We estimate two models for finance. Both are technically mixed logistic panel regressions. They are logistic because, like Igan and Mishra, we think it is most helpful to conceptualize votes of individual representatives as reflecting either "pro-bank" or "anti-bank" sentiments. They are mixed models because we allow the constant term in the regression to vary with each House vote, thus treating it as a random effect rather than imposing a single value for all five votes we examined.

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<sup>39</sup> For the political funding provisions, see, e.g., Gold and Hamburger (2014); for the record of votes, see <https://www.govtrack.us/congress/votes/113-2014/h563> For years, a substantial number of social scientists have promoted the idea that allowing political parties to raise more funds would somehow fix many problems of money in politics. We have consistently derided those expectations, and the U.S. has now run this experiment in real time, with results that support our position. See the discussion in Ferguson et al. (2016).

<sup>40</sup> For the voting, see <https://www.govtrack.us/congress/votes/114-2015/h28>

<sup>41</sup> Membership of House Financial Services follows the list in <http://media.cq.com/pub/committees/>; for leverage, see the discussion in Tahoun and Vasvari (2016). That paper's tests rule out the hypothesis that the high leverage precedes membership on the committee.

<sup>42</sup> Scaling congressional voting is virtually a cottage industry, and analysts differ on their favorites. For reasons too complicated to discuss here, we use the scores for conservatism compiled by That's My Congress at <http://thatsmycongress.com/house/113byalpha.html>. The source obviously has a point of view, but we think this index is perfectly satisfactory for our purposes and avoids some pitfalls of others. The site explains the method of calculation, in which higher scores indicate higher percentages of "conservative" behavior. In general, indices tend rather closely to track each other and we doubt substituting others would change anything.



The first model is the more reliable and important analysis for reasons just explained. It refers only to Democrats who both voted originally for Dodd-Frank and voted on later revisions. We also use the larger dataset, including Republicans, to estimate a more conventional (and less reliable) model for the same bills.<sup>43</sup>

Both models are specified formally in Appendix 1; our discussion here focuses on the meaning of our results. Since, as we have often emphasized, congressional districts occupy distinct areas in space, the first task is to see if this colors our results. Spatial data often fail to be “independent” in the sense many ordinary statistical analyses require; spatial “autocorrelation” can deform studies quite like the better known case of temporal autocorrelation and can therefore throw results off (Cliff and Ord 1981). Though all the papers we have discussed neglect this step, it is obvious that they should run such tests. Moran tests are the usual technique for identifying spatial autocorrelation, but our dependent variable is binary (pro- or anti-bank). We thus use the “BB joint count test” instead (Cliff and Ord 1981). That reveals that spatial autocorrelation is not a problem for the equation that only includes Democrats.<sup>44</sup> But, as usual in our experience with fuller sets of congressional district data, spatial autocorrelation is a problem in our second, more conventional model, which adds the Republicans who voted on Dodd-Frank. For panel regressions covering multiple votes in time and space, remedying this is far easier said than done, because of sometimes large differences in the number of votes cast and who cast them. Methods for dealing with such situations are just developing. We have followed models developed by Zhu et al. (2013) and Ponicki et al (2013) to produce a time varying spatial version of our panel regression.

The first equation, for the Democrats alone, analyzes the factors that drove individual Democrats to break with their party’s line and turn pro-bank, after voting originally in favor of Dodd-Frank. The votes occur at different periods, so we took care to measure the inflow of contributions from the financial sector in terms of time periods that made sense. Thus, for example, for votes cast in 2013, we combined total contributions during the 2012 election with contributions for 2013; for the later votes, including the lame duck session, we added in the additional contributions for the following year. We used the 2013–14 election cycle totals for the single vote held in January 2015. We considered the percentage of total money raised in each representative’s race along with total outside money that came from finance as well as the absolute totals. The different formulations turned out not to matter; both were statistically significant. Using absolute amounts has some interesting implications in other contexts, so we employ that in this paper. Our results indicate that for every \$100,000 that Democratic representatives received from finance, the odds they would break with their party increased by 13.9 percent. To put that into perspective, consider that, as Appendix Table A9 shows, Democratic representatives who voted in favor of finance often received \$200,000–\$300,000 from that sector—enough to tempt even saints. That table also implies that contributions to the Democrats from finance look more than a little like the U.S. income distribution, with an average (mean) much higher than the median. Or in plain terms, financial houses tend to give much more money to some members of the party than they do to others.

We considered the possibility that members of Congress might be influenced by personal loans, which would come mostly from finance.<sup>45</sup> Tahoun and Vasvari (2016) reported, however, that the loan variable didn’t seem important across the whole House. Though we have some misgivings that data for loans in 2014 might be incomplete, our results came out the same: Total loans for the House as a whole didn’t matter. But a dummy variable for membership on the Financial Services Committee was powerful: The odds of a representative breaking with the party went up by 90 percent if he or

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<sup>43</sup> Note that our dataset was designed to catch members of both parties who voted on Dodd-Frank; this means that representatives who entered Congress later are not included. Their inclusion would be desirable, but would add hugely to the data requirements, so we save that task for a later paper.

<sup>44</sup> This is less mysterious than it might seem. It may reflect the scattered quality of Democrats who survived to make it into our sample.

<sup>45</sup> The loan data are available, in a form that is extraordinarily difficult to use, from the website of the Center for Responsive Politics. We believe the data for 2014 are likely less than complete.



she sat on Financial Services. We attribute this absurd result to exactly what Tahoun and Vasvari suggest: favorable loans from financial houses.<sup>46</sup>

We also tested to see if it mattered whether a representative left the House after the 2014 session. We note that some papers, for reasons that mystify us, sometimes treat representatives exiting the House as disinterested observers. Our expectation, or fear, was exactly the reverse: that, in the midst of the epic campaign to weaken Dodd-Frank, many lawmakers were open for business, perhaps looking to impress potential future employers. (Many are lawyers, after all, and huge numbers of lawyers work for banks, as already noted; and a few were candidates for Senate, which implies an urgent need for truly vast sums of money.) Our results were not encouraging: Representatives leaving the House were almost three times more likely to break with their party and side with the banks than other Democrats.<sup>47</sup> We also found that more conservative representatives, as measured on a rating scale that ran from 0 to 100 for the 113th Congress, were 9 percent more likely to side with the banks for each percentage point more conservative their ideology was. We tested various specifications for “revolving door” influences, including various cumulative measures and recent changes. Some displayed positive coefficients but never attained statistical significance, and so are dropped from the equation. Neither did margin of victory matter. (So much for constituency influence at a real auction.)

An approach less rigorously austere than our first model is also possible. It is not difficult to estimate a straightforward mixed logistic panel regression for everyone in the sample—representatives who were in Congress at the time of the Dodd-Frank vote and who voted on the various bills we examined. Bringing in the Republicans, however, makes a model that looks at variations in views rather pointless, as not many Republicans changed. This model thus becomes much more conventional.

Such a model obviously needs party as a control; it should also consider whether total employment in finance and real estate or district median income affects the vote, along with the other variables examined above, such as revolving doors and margins of victory

In this model, however, a BB joint count test indicated that spatial autocorrelation was a problem in this much larger dataset. We thus require a regression corrected for both spatial and temporal conditional autocorrelation. This is far easier said than done; the techniques are just developing. We developed such a model by building upon work in disease mapping and estimated it using Bayesian techniques.<sup>48</sup>

This time the dependent variable—what we are trying to explain—is an anti-bank vote. We employ Bayesian techniques to allow us to take account of both spatial and temporal variation, which makes our results look a bit different. The second part of Appendix 1 discusses them out in detail. Qualitatively, though, they are straightforward and in line with our findings for the Democrats alone. An obvious difference is that here, as in the Baker example mentioned earlier, party differences matter: Democrats are much more willing to vote against the banks. But it is also true that the more money representatives garner from finance, the less likely they are to vote against them. Similarly, members of the House who left in 2014 were reluctant to break with financial interests, as were more conservative members. However, in this equation, in contrast to the earlier one, margin of victory does matter modestly. Representatives voting against financial

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<sup>46</sup> Note that, as discussed above, Tahoun and Vasvari were able to rule out notions that high leverage preceded membership on the committee. It is, perhaps, still open to someone to claim that members trying to get close to banks seek membership on the committee, but they would have to be doing that without visible reward until they got on. Once they are on, however, Tahoun and Vasvari show the rewards are tangible, over and above campaign finance. Their evidence bolsters our inclination to report our results here, as the significance level is barely weaker than usual; some analysts might question its inclusion otherwise.

<sup>47</sup> We doubt very much that anyone left the House out of fear of the banks, but if you believe somebody did, the results then look all the worse.

<sup>48</sup> We followed principally Zhu et al. (2013) and Ponicki et al. (2013), as discussed above.





houses, it seems, generally have higher margins of victory in the previous election, suggesting that members in tighter races perhaps are more careful about offending a potentially powerful interest group. District employment in finance did not matter, while median income mattered too little to be worth including in the equation.

## ***Congress and Telecommunications: Network Neutrality at Risk***

Empirical studies of the influence of political money on telecommunications policy since passage of the 1996 Telecom Act are even less common than research on finance. Some lessons from the literature on 1996's epic clash, notably how the news media selectively cover legislative initiatives threatening to their interests, surely remain very important (Gilens and Hertzman 2000; Snider and Page 2003). A number of studies also survey how oligopoly in the mass media poses challenges to democratic deliberation.<sup>49</sup> But these studies only occasionally explore the microeconomics of actual cases; a large gap has opened between the literature for the general public and applied studies of industry structures. Political money's role in securing oligopoly in telecommunications is also more often invoked than investigated, though a stimulating study of state-level political money exists.<sup>50</sup>

Even with this smaller body of literature, however, a full-scale study of political money and telecommunications would be at least as long as our discussion of money and finance. The topic embraces too many highly technical issues, and the data gathering requirements would be enormous.

Cooper (2016), however, shines a light on a major issue that we believe can be treated relatively compactly. This is the question of net neutrality. Here, of course, a wide range of experience in and out of the United States is relevant, and the term is often used in different ways by interested parties.<sup>51</sup> Lines of battle over the question have also evolved over time, with some protagonists changing sides or seeking to strike deals as their companies acquire and dispose of properties or, especially, integrate vertically with opposing parts of the industry.<sup>52</sup>

But we think that the main issue was, and remains, straightforward. As formulated by Massachusetts Representative Edward Markey when he introduced the first bill on the subject to be voted on by the whole House in 2006, it is that “[b]roadband network owners should not be able to determine who can and who cannot offer services over broadband networks or over the Internet.”<sup>53</sup> Non-discrimination and equal quality of service, in other words, for all would-be content providers; internet companies should not be able to cut deals with a few giants, leaving everyone else to struggle in a slow lane of second-rate service and strangling diversity on the internet.

Precisely because the question has been so grandly divisive, it once again usually polarizes the major political parties, rather like conflict between investment and commercial bankers over Glass-Steagall before the 1990s. As a consequence, votes of the entire House on net neutrality are few, far between, and typically painstakingly prepared. This makes trouble for our preferred strategy of investigating congressional voting by means of panels tracing how individual solons slalom through different votes with many potential determinants of their behavior remaining stable. Analysis of net neutrality

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<sup>49</sup> See, e.g., Crawford (2012) or McChesney (2013).

<sup>50</sup> de Figuerido and Edwards (2015); a good study, though we take a different view of much of the literature it surveys, which holds that individual contributions are fundamentally different in their logic than donations coming directly from companies. We think their paper benefits greatly from trying to assess how money from individual telecom executives matters and not simply funds coming formally from corporations. This, of course, is the view we have long maintained and a view rejected in much of the literature they approvingly cite. See the discussion and references in Ferguson (2005).

<sup>51</sup> See the discussion in Marsden (2012).

<sup>52</sup> The flip-flop of companies that argued in favor of open access when they were dependent on it only to switch when they were acquired by or acquired networks is documented by Cooper (2000; 2003).

<sup>53</sup> Markey's measure became a proposed amendment, as discussed below.



along these lines would call for a file spanning several years, raising the bar on data requirements for political contributions to a truly formidable height.

We thus resort to the second-best strategy we used earlier in the second of our equations analyzing voting on Dodd-Frank. We test for the influence of political money on votes by means of an equation that includes political money along with other likely determinants of a crucial House vote on net neutrality. The vote came on an amendment by Markey to HR 5252, Roll Call 239, on June 8, 2006. This failed by a vote of 152 in favor to 269 against.<sup>54</sup> In this instance, what we are trying to explain is a vote either in favor of or opposed to net neutrality—a binary dependent variable, in other words. Because the variable is binary, the appropriate test for spatial autocorrelation is the BB joint count test. Since that indicates spatial autocorrelation is present, we estimate a spatial logistic regression.

Some variables that require testing are obvious: We would expect district median income to be important chiefly because higher-income areas are likely more intense users of the internet and also more likely to be aware of what departures from net neutrality could cost them. Employment in the district related to telecommunications is another possible variable, though we are skeptical, since employment in that sector typically counts for relatively little in most areas.

The most difficult problem was identifying telecommunications firms on either side of the battle lines. The main cleavage, as in the negotiations leading up to the 1996 Act, lay between firms that controlled either the literal or metaphorical wire leading into the customers' places of residence or business and the mass of other firms wanting to use that wire to send content over it.<sup>55</sup> On one side, accordingly, were the telephone companies and cable firms who had a shared interest in controlling access to their customers and, as Cooper emphasizes, avoiding direct competition with one another. On the other stood all manner of content producers, including Hollywood firms, independent houses, and newspapers putting their toes into the business, but above all giant "edge" firms like Amazon and Google, whose business could be severely harmed if the cable and phone companies used their control of the "wires" to charge a toll. Following the logic of an investment approach, identifying the big players is not difficult. But each of the large firms also has networks of suppliers. The broad logic of finding these is clear: Firms dependent on the telephone and cable companies should be expected to support them, while firms tied to the content producers or themselves selling to customers over the internet should line up with that bloc.

In 2006, these lines of division were visibly forming up. With help from specialists, we succeeded in identifying many firms that took clear positions on the issue, including, unsurprisingly, essentially all the large firms. On these we performed our usual searches for contributions from top officers, political action committees, and related financing vehicles, including trade associations with known positions.<sup>56</sup> But when we could not find evidence of the stances of smaller individual firms, we made no assignment. Our regression thus tests the influence of "mobilized" firms as far as we could identify them. This carries the implication of potentially underestimating the total flow of money on both sides. Somewhat to our surprise, however, our results were straightforward. Party, as we would expect, was an important variable: Democrats were lopsidedly more likely to support net neutrality than were Republicans. But money made a substantial difference in both directions. Recipients of money from firms in favor of net neutrality were considerably more likely to vote in favor of Markey's amendment. Every additional \$1,000 dollars decreased the odds of voting

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<sup>54</sup> The roll call is recorded here: <http://clerk.house.gov/evs/2006/roll239.xml>

<sup>55</sup> See Ferguson (2001) for the 1996 Telecom Act and the presidential campaign of that year. Hart (2011) is a careful and reliable discussion of industry positions, enlivened by analyses of how the protagonists reached out to other groups. Evangelical groups' interest in the topic does not surprise us, given the prominence of media preachers and even networks in their "industry."

<sup>56</sup> We are grateful to Mark Cooper, who was involved in the legislative struggles, for much advice on specific firms, and to William Lazonick for making data on the top officers available to us. We also searched the press and internet for position statements and other forms of political action, incorporating these. Note that the edge companies mounted a major effort to stimulate action by grassroots groups using the internet. Many commentators often note the role of these groups, without much attention to the industry giants in the background.



against by 24 percent. Contributions from firms opposed to net neutrality were also telling: Every \$1,000 increased the chances of a vote against by 2.6 percent. Ideology also mattered; the more conservative a representative was, the more likely he or she was to vote against net neutrality. Telecom employment in the district did not seem to matter, but district median income did: Every additional \$1,000 decreased the odds of a vote against net neutrality by 7.2 percent. This seems to support the conclusion that, in regard to telecommunications as with finance, what looks like the voice of the people is often the sound of money talking.

## ***Conclusion: Time for Some Clarity***

We do not want to overstate our results. Nothing in our findings suggests that the entire Congress is for sale, at least on single votes. Nor, we emphasize, do they suggest that only money matters in the business of legislation. But the long history of skepticism toward claims that money powerfully influences legislative voting should come to an end. Analysts need to take much more care measuring the money flows to legislators than they typically have, especially with regard to contributions from individuals and outside money that does not go through official campaign committees. When those contributions are fully reckoned in, premature judgments that money doesn't matter are often overturned.

Our analysis of Democrats who first supported the Dodd-Frank reforms only to reverse themselves is particularly telling; the method allows one to dismiss virtually the entire arsenal of excuses invoked to explain away such behavior. The other statistical analyses, while less airtight, are still very compelling. Taken as a whole, the pattern they display is too obvious to need much emphasis: Substantial numbers of legislators sell out the public interest in exchange for political money. This may not be the best Congress money can buy—the coefficients in our equations could be even larger, after all—but the reality is bad enough. Especially considering our earlier analyses of the “linear model” of money in congressional elections, we think the case for understanding Congress in terms of an investment approach is compelling, even as America appears to be embarking on a parody of the Gilded Age.



# *Appendix 1 – The Campaign Against Dodd-Frank in the House of Representatives: Statistical Models*

Our main text presented the results of our statistical tests of how political money affected voting on measures to weaken the Dodd-Frank financial reform legislation in the United States House of Representatives. This appendix details our formal model of the House votes to amend the bill in 2013–15, while Appendix 2 presents the model for the House vote on the Markey network neutrality amendment of June 2006. We hope our exposition will be accessible to readers of widely differing backgrounds.

As discussed earlier, the focus of the first study is not passage of Dodd-Frank itself, but the subsequent votes to weaken the legislation between 2013 and early 2015. By focusing on representatives who originally voted in favor of the bill and later changed their votes, it is possible to bypass many potential methodological pitfalls that can shadow efforts to pinpoint political money’s role in bringing about these changes of heart. Since virtually all Republicans opposed the bill from the outset and never changed their minds, the problem turns into an analysis of why Democrats who originally voted for the bill later broke with the rest of their party to support pro-bank measures.

We consider House voting on five different bills. Four of these came in the 113th Congress, which was elected in November 2012. The fifth vote took place in January 2015, immediately after the new Congress elected in 2014 convened.

We begin by defining time,  $t = 1, 2, 3, 4,$  and  $5$  corresponding to the successive votes described in our main text: Swap2013Oct, ConFinWeakFeb2014, CustProtFinWeakJune2014, SwapsOminbusDec2014, and House185RegAcctJan2015, respectively. The total number of representatives in the House at the time Dodd-Frank went through (including a few who did not vote) and later cast ballots on the roll calls we examine are, respectively, 251, 249, 243, 251, and 211.

Of these, 120, 121, 119, 124, and 104 were Democrats who voted in favor of Dodd-Frank, of which 84, 118, 102, 92, and 101 voted “anti-bank” in line with the party majority in the later votes. Not all Democrats were so steadfast: In the successive votes, 36 (30 percent), 3 (2.48 percent), 17 (14.29 percent), 32 (25.81 percent) and 3 (2.88 percent) broke with their party and joined the Republicans in voting “pro-bank.” These we denominate via a dichotomous variable **Break Party**. This is defined as **Break Party** = 1 for DEM representatives who voted pro-bank, otherwise, **Break Party** = 0. Table A1 brings all this together in summary form.<sup>57</sup>

**Table A1: Counts and Percent Dem Representatives Breaking Party for the Five Roll Calls**

Time of vote	Breaking Party	Not Breaking	All
Swap2013Oct	36 (30.0%)	84 (70%)	120
ConFinWeakFeb2014	3 (2.5)	118 (97.5%)	121
CustProtFinWeakJune2014	17 (14.3%)	102 (85.7%)	119
SwapsOminBusDec2014	32 (25.8%)	92 (74.2)	124
House195RegAcctJan2015	3 (2.9%)	101 (97.1%)	104

<sup>57</sup> Traditionally the Speaker of the House often does not actually cast a vote, and the leader of the opposition also sometimes abstains from voting. In all of these votes, however, what the leader favored was clear, including one case in 2014 in which Representative Nancy Pelosi split from the Obama administration to preserve Dodd-Frank. So as not to lose them as cases, we have counted them in.



Let  $Y_{it} = 1$ , if breaking party holds, and  $Y_{it} = 0$ , if the representative does not break party; also let  $p_{it} = P(Y_{it} = 1)$ , for  $t = 1, 2, 3, 4$ , and  $5$ , and  $i = 1, 2, \dots, n_t$ ;  $n_t \in \{120, 121, 119, 124, 104\}$ .

Since a BB joint count test indicated that spatial autocorrelation is not a problem, we employ logistic regression with a random intercept to analyze the influences on the odds of breaking party on these votes. (Interpretation via odds ratios is a common method of explicating results of logistic regressions.)

The equation we estimate is:

$$\ln\left(\frac{p_{it}}{1-p_{it}}\right) = \beta_0 + \beta_1 T_{1i} + \beta_2 T_{2i} + \beta_3 T_{3i} + \beta_4 T_{4i} + \beta_5 \text{ConservR1314}_i + \beta_6 \text{LeftCongressAfter2014}_i + \beta_7 \text{MemberBanking1314}_i + b_i,$$

where  $b_i$  is a random effect distributed as  $N(0, \sigma_b^2)$ , and  $T_{it} = 1$ , for subject  $i$  at time  $t$ , with  $T_{it} = 0$ , otherwise.

As explained earlier, we tested a wide variety of variables, including various specifications of “revolving door” linkages, representatives’ margins of victory, and loans by financial institutions to the entire House. The variables making it into our final equation are these:

**Money** is a time-varying covariate scaled in \$1,000 units, such that for time = 1 and 2, Money = AMOUNTfinance2012 + AMOUNTfinance2013; for time = 3, 4, and 5, Money = AMOUNTfinance2014 (which includes sums for the entire electoral cycle of 2013–14).

**ConservR1314**, a measure indicating where representatives place on a conservatism scale in that particular Congress, where 0 is the lowest score and 100 is highest, as discussed in the main text.

**LEFT\_CONGRESS\_AFTER\_2014** refers to representatives who did not run for reelection to the House in 2014 and thus left the House.

**Member Banking 13-14**, indicating that the representative served on the Financial Services Committee in the 113th Congress.

These last three are fixed rather than time-varying covariates. Descriptive statistics for the independent variables are listed in Tables A2 and A3 for the five time periods comparing the representatives who broke with the party versus those who did not. Those who left the House after 2014 and who served on the Financial Services Committee (Member Banking 13-14) are more likely to break with the party. Representatives who have higher values of ConservR1314 and Total Money Fin (\$1,000) are also more likely to break with the party. See the discussion below of the output in Table A4.



**Table A2: Counts and Percentages of Members Leaving the House and Serving on House Financial Services Committee for Democrats**

Time of vote	Left House After 2014		Member Banking 13-14	
	Leaving	Not Leaving	Member	Not Member
Swap2013Oct	15 (12.5%)	105(87.5%)	17 (14.2%)	103(85.8%)
ConFinWeakFeb2014	15 (12.4%)	106 (87.6%)	17 (14.1%)	104 (85.9%)
CustProtFinWeakJune2014	16 (13.5%)	103 (86.5%)	15 (12.6%)	104(87.4)
SwapsOminBusDec2014	17 (13.7)	107 (86.3%)	15 (12.1%)	109 (97.9%)
House195RegAcctJan2015	0 (0.0%)	104 (100.0%)	13 (12.5%)	91 (87.5%)

**Table A3: Comparison of Percentages (%) of Breaking Party**

Time of vote	Left House After 2014		Member Banking 13-14	
	Leaving	Not Leaving	Member	Not Member
Swap2013Oct	33.3% (15)	29.5% (105)	58.5% (17)	25.2% (103)
ConFinWeakFeb2014	13.3% (15)	0.9% (106)	0.0% (17)	2.9% (104)
CustProtFinWeakJune2014	31.3% (16)	11.7% (103)	13.3% (15)	14.1% (105)
SwapsOminBusDec2014	58.8% (17)	20.6% (107)	53.3% (15)	22.0%(109)
House195RegAcctJan2015	NA (0)	2.9% (104)	0.0% (13)	3.3% (91)

Note that:

1. At Time 1, Swap2013Oct, there were 15 representatives who eventually left the House in 2014; of them, 33.3 percent broke with the party compared to 29.5 percent of those who did not leave. Seventeen subjects were members of the Financial Services Committee (Banking) in 2013–14; out of them, 58.5 percent broke party, while of the 103 who were not members, only 25.2 percent broke with the party.
2. At Time 2, ConFinWeakFeb2014, 15 representatives left the House after 2014; of them, 13.3 percent broke party compared to only 0.9 percent of the 106 subjects who did not leave. Of the 17 representatives who were members of the Financial Services Committee in 2013–14, none broke with the party this time, while of the 104 who were not members, 2.9 percent broke with the party.
3. At Time 3, CustProtFinWeakJune2014, 16 representatives left the House after 2014; of them 31.3 percent broke party compared to 11.7 percent of the 103 members who did not leave. Fifteen representatives were members of the Financial Services Committee in 2013–14; of them, 13.3 percent broke with the party, while of the 105 who were not members, 14.1 percent broke with the party.
4. At time 4, SwapsOminBusDec2014, 17 subjects were leaving the House after the lame duck session; of them, 58.8 percent broke with the party compared to only 20.6 percent of the 107 members who were not leaving. Of 15 representatives who were members of the Financial Services Committee in 2013–14, 53.3 percent broke with party, while of the 109 who were not members, only 22 percent broke with the party.



5. At Time 5, House195RegAcctJan2015, no one who could vote had left the House after 2014. None of the 13 subjects who were members of the Financial Services Committee broke with the party. Of the 91 subjects who were not members, 3.3 percent broke with the party.

**Table A4: Descriptive Statistics of Means and Standard Deviations of the Interval Level Variables**

Variables	Time of vote	Breaking Party	Not Breaking	All
ConServR1314	Swap2013Oct	19.0(12.5)	10.2(11.3)	12.9(12.9)
	ConFinWeakFeb2014	48.3 (13.3)	12.1(11.7)	13.0(12.9)
	CustProtFinWeakJune2014	31.2 (15.0)	10.0(10.0)	13.1(12.1)
	SwapsOminBusDec2014	21.7(15.1)	9.8(10.7)	12.9 (13.0)
	House195RegAcctJan2015	48.0 (6.9)	10.6(10.6)	11.7 (12.2)
Total Money Fin (\$1,000)	Swap2013Oct	410.0 (432.4)	131.4(152.5)	215.0(296.0)
	ConFinWeakFeb2014	269.9(81.0)	211.3(300.7)	212.7(297.2)
	CustProtFinWeakJune2014	269.9(470.7)	151.1(208.9)	168.0(262.9)
	SwapsOminBusDec2014	335.5(438.6)	116.9(149.9)	173.3(272.6)
	House195RegAcctJan2015	117.2(51.5)	157.3(220.5)	156.2(217.5)

**Table A5: Estimated Coefficients and Odds Ratios for “Breaking Party” Based on a Mixed Logistic Model**

Parameter	Estimate ( $\beta$ )	Standard Error	Odds Ratio ( $e^\beta$ )	P-Value
Swap2013Oct ( $\text{Exp}(\beta_0 + \beta_i)$ )	3.0086	0.5977	.071	<.0001
ConFinWeakFeb2014	-0.8738	0.6694	.002	0.1918
CustProtFinWeakJune2014	1.8467	0.5202	.022	0.0004
SwapsOminBusDec2014	2.7856	0.5452	.055	<.0001
House195RegAcctJan2015( $\text{Exp}(\beta_0)$ )	-5.6561	0.5263	.003	<.0001
ConServR1314	0.0858	0.0117	1.089	<.0001
Left House After 2014	1.0349	0.4986	2.815	0.0379
Member Banking1314	0.6300	0.4039	1.897	0.1188
Total Money Fin (\$1,000)	0.0013	0.0005	1.001	0.0099

The first five entries in Table A5 refer to the estimate of the intercept for the fixed effects of the five time periods. In logistic regression, coefficients are commonly interpreted by reference to odds ratios—that is, how a unit increase in the predictor changes the odds of the outcome being evaluated. In this case, the outcome is a Democrat who previously voted for Dodd-Frank breaking with the rest of the party and voting pro-bank. Thus, the estimated coefficient for representatives who serve on the Financial Services Committee, Member Banking 13-14, is .63, and the odds ratio is 1.9, indicating that the odds of breaking with the party increase by 90 percent compared to representatives who do not serve on this committee.<sup>58</sup> Note that this means that the odds have almost doubled, not that the absolute probability has, since in a logistic regression the latter changes with the value of the predictor in a non-linear way. The estimated coefficient for ConServR1314 is .08 and the odds ratio is 1.09, indicating that for every unit increase in ConServR1314—the representative's score on the index of Conservatism—the odds of “breaking party” increase by 9 percent. The estimated

<sup>58</sup> The significance level here is somewhat weak: 0.118, marginally below what some statisticians would accept. We think the level is too close to be sensibly dropped, given what else we now know about membership on the committee.



coefficient for Left House After 2014 is 1.04 and the odds ratio is 2.8, indicating that the odds of a representative breaking party are almost three times higher if he or she left the House after 2014. The estimated coefficient for Total Money Fin is .0013 and the odds ratio is 1.001, indicating that for every \$100,000 increase in Total Money from Finance, the odds of breaking party increase by 13.9 percent. For perspective, the entries in Table A4, particularly for the successful push by the banks on the “swaps pushout rule” in December 2014, show that a considerable number of the Democrats who broke with their colleagues took in several hundred thousand dollars from finance.

## A SPATIAL-TEMPORAL LOGISTIC MODEL FOR BOTH DEMOCRATS AND REPUBLICANS

The second model we estimate is for both Democrats and Republicans who voted on the bills just analyzed, who also voted originally on Dodd-Frank.<sup>59</sup> As discussed, what we are trying to explain is a vote against the banks.

Let  $Z_{it} = 1$ , be the individual voter who voted against banks (anti-bank) at time  $t$ ,  $t = 1, 2, 3, 4$ , and  $5$  and  $I = 1, 2, \dots, n_t$ ;  $n_t \in \{251, 249, 243, 251, 211\}$ , and  $p_{it} = P\{Z_{it} = 1\}$  be the probability that voted anti-bank for subject  $I$  at time  $t$ .

Our Spatial-Temporal Logistic Regression model using a Bayesian approach is defined as follows:

$$\log\left(\frac{p_{it}}{1-p_{it}}\right) = \beta_0 + \beta_1 T_{1i} + \beta_2 T_{2i} + \beta_3 T_{3i} + \beta_4 T_{4i} + \beta_5 \text{ConservR1314}_i + \beta_6 \text{LeftCongressAfter2014}_i + \beta_7 \text{MarginVictory}_i + \beta_8 \text{Party}_i + \beta_9 \text{TotalMoneyFin}_{it} + \theta_{it},$$

$$\theta_{i,t} | \theta_{j \neq i,t} \sim N(\bar{\theta}_{i,t}, \sigma_{\theta_{i,t}}^2 / m_{i,t})$$

where  $\theta_{i,t}$  captures district clustering via a Conditional Autoregressive (CAR) model, in which  $\bar{\theta}_{i,t} = \frac{1}{m_{i,t}} \sum_{j \neq i} \theta_{ij,t}$ ,  $m_{i,t}$  is the number of neighbors of district  $I$ , at time  $t$ , with  $\theta_{ij,t} = 1$  if  $j$  and  $I$  are neighbors and 0 otherwise. The relationships with neighbors change with time  $t$ .

Here we again present a table showing all the variables that made it into the final equation.

**Table A6: Counts and Percent for Voting for the Five Roll Calls**

Time of vote	Anti-Bank	Pro-Bank	All
Swap2013Oct	93 (37.1%)	158 (62.9%)	251
ConFinWeakFeb2014	125 (50.6%)	123 (49.4%)	249
CustProtFinWeakJune2014	109 (44.9%)	134 (55.1%)	243
SwapsOminBusDec2014	129 (51.4%)	122 (48.6%)	251
House195RegAcctJan2015	107 (50.7%)	104 (49.3%)	211

<sup>59</sup> Thus the total number of representatives voting numbers substantially less than the entire membership of the House, though it is still quite large.





**Table A7: Counts and Percentages of Members Leaving House and Party at 2012 (Democrats and Republicans)**

Time of vote	Party 2012		Left House After 2014	
	DEM	GOP	Leaving	Not Leaving
Swap2013Oct	133 (53.0%)	118 (47.0%)	38 (15.1%)	213 (84.9%)
ConFinWeakFeb2014	133 (53.4%)	116 (46.6%)	38 (15.3%)	211 (84.7%)
CustProtFinWeakJune2014	130 (53.5%)	113 (46.5%)	33 (13.6%)	210 (86.4%)
SwapsOminBusDec2014	136 (54.2%)	115 (45.8%)	36 (14.3%)	215 (85.7%)
House195RegAcctJan2015	113 (53.6%)	98 46.4%)	0 (0.0%)	211 (100.0%)

**Table A8: Comparison of Percentages (%) for Voting Against the Banks (Anti-Bank)**

Time of vote	Party 2012		Left House After 2014	
	DEM	GOP	Leaving	Not Leaving
Swap2013Oct	68.4% (133)	1.7% (118)	28.9% (38)	38.5% (213)
ConFinWeakFeb2014	94.7% (133)	0.0% (116)	36.8% (38)	53.1% (211)
CustProtFinWeakJune2014	83.1% (130)	0.9% (113)	36.4% (33)	46.2% (210)
SwapsOminBusDec2014	73.5% (136)	25.2% (115)	27.8% (36)	55.3% (215)
House195RegAcctJan2015	94.7% (113)	0.0% (98)	NA (0)	50.7% (211)

Note that:

1. At Time 1, Swap2013Oct, there were 133 Democrats, of which 68.4 percent voted against the banks, while of 118 Republicans, 1.7 percent voted anti-bank. Of 38 subjects who left the House after 2014, 28.9 percent voted anti-bank; of 213 who did not leave the House after 2014, 38.5 percent voted anti-bank.
2. At Time 2, ConFinWeakFeb2014, of 133 Democrats, 94.7 percent voted anti-bank; of 116 Republicans, none voted anti-bank. Of 38 representatives who left the House after 2014, 36.8 percent voted anti-bank; of 211 who did not leave the House after 2014, 53.1 percent voted anti-bank.
3. At Time 3, CustProtFinWeakJune2014, of 130 Democrats, 83.1 percent voted anti-bank; of 113 Republicans, 0.9 percent voted anti-bank. Of 33 representatives who left the House after 2014, 36.4 percent voted anti-bank; while of 210 who did not leave the House after 2014, 46.2 percent voted anti-bank.
4. At time 4, SwapsOminBusDec2014, of 136 Democrats, 73.5 percent voted anti-bank; while of 115 Republicans, 25.2 percent voted anti-bank. Of 36 representatives who left the House after 2014, 27.8 percent voted anti-bank; of 215 who did not leave the House after 2014, 55.3 percent voted anti-bank.
5. At Time 5, House195RegAcctJan2015, of 113 Democrats, 94.7 percent voted anti-bank while of 98 Republicans, none voted anti-bank.



**Table A9: Descriptive Statistics of Means (SD) for the Interval Level Variables**

Variables	Time of vote	Anti-Bank	Pro Bank	All
ConServR1314	Swap2013Oct	12.1 (14.9)	54.2 (25.0)	38.6 (29.8)
	ConFinWeakFeb2014	12.3 (11.7)	65.4 (15.4)	38.6 (29.9)
	CustProtFinWeakJune2014	10.9 (12.0)	61.6 (18.8)	38.9 (29.9)
	SwapsOminBusDec2014	23.3 (27.1)	53.7 (24.4)	38.1 (29.9)
	House195RegAcctJan2015	10.7 (10.7)	65.6 (15.3)	37.8 (30.5)
Total Money Fin (\$1,000)	Swap2013Oct	127.1 (146)	414.7 (671.6)	308.1 (557.2)
	ConFinWeakFeb2014	203.6 (292.5)	413.4 (726.2)	307.3 (560.0)
	CustProtFinWeakJune2014	144.7 (203.6)	286.3 (465.9)	222.8 (377.9)
	SwapsOminBusDec2014	124.9 (176.1)	317.3 (466.9)	218.4 (361.5)
	House195RegAcctJan2015	152.5 (215.3)	290.1 (470.0)	220.3 (369.5)
Margins of Victory %	Swap2013Oct	47.0 (25.1)	37.9 (27.1)	41.3 (26.6)
	ConFinWeakFeb2014	45.4 (25.6)	36.2 (27.5)	40.9 (26.9)
	CustProtFinWeakJune2014	46.1 (26.1)	36.1 (26.8)	40.6 (26.1)
	SwapsOminBusDec2014	44.6 (26.4)	36.8 (26.0)	40.8 (26.5)
	House195RegAcctJan2015	48.8 (23.6)	38.0 (26.9)	43.5 (25.8)
Median Income (\$1,000)	Swap2013Oct	51.7 (15.2)	54.5 (15.0)	53.5 (15.1)
	ConFinWeakFeb2014	52.9 (16.9)	55.0 (12.1)	53.9 (15.6)
	CustProtFinWeakJune2014	54.2 (17.2)	53.2 (13.7)	53.6 (15.4)
	SwapsOminBusDec2014	52.9 (15.6)	54.7 (15.4)	53.8 (15.5)
	House195RegAcctJan2015	52.5 (16.2)	53.8 (13.8)	53.2 (15.0)

The variables in the final equation are these:

**Table A10: Estimated Coefficients and Odds Ratios for Voting “Anti-Bank” Based on a Spatial Temporal Logistic Model**

Parameter	2.5%	Median	97.5%	Odds Ratio ( $e^{\beta}$ )
House195RegAcctJan2015( $\text{Exp}(\beta_0)$ )	.0279	1.0420	2.3340	2.839
Swap2013Oct ( $\text{Exp}(\beta_0+\beta_t)$ )	-2.7210	-1.9360	-1.0950	.1443
ConFinWeakFeb2014	-0.3497	0.4465	1.2580	1.5628
CustProtFinWeakJune2014	-1.7980	-0.9406	-0.0301	.3904
SwapsOminBusDec2014	-0.4853	0.2334	0.9338	1.2629
Party 2012	2.3470	3.0840	4.1140	21.8456
ConServR1314	-0.0819	-0.0668	-0.0494	.9354
Left House After 2014	-2.2510	-1.5480	-0.7319	.2127
Margin of Victory (%) )	0.0013	0.0073	.0133	1.007
Total Money Fin (\$1,000)	-0.0029	-0.0021	-0.0012	.9979

This table can be read like that for the earlier model, except that this time we are testing for what makes representatives vote against finance and estimating the model using Bayesian techniques that take account of both spatial and temporal variations, which makes the output look somewhat different. This regression, just like the previous one, indicates that money matters for the outcomes of roll call votes: The more money from finance representatives receive, the less likely they are to vote anti-bank.<sup>60</sup> The estimated coefficient for Total Money Fin is -.0021 and the odds ratio is .9979, indicating that for every \$1,000 increase in money from finance, the odds of a vote against the banks decrease by 0.21 percent. (Since this time Republicans are included, note from Table A9 that average and median levels of contributions are substantially higher.) Members scoring high on Conservatism are substantially less likely to vote against the banks; in the table, the estimated coefficient for ConServR1314 is -.0668 and the odds ratio is .94, indicating that the odds of an anti-bank vote decrease by 6 percent with each percentage point rise in the Conservatism index. The estimated coefficient for Party 2012 is 3.084 and the odds ratio is 21.84, implying that Democrats are far more likely to vote against the banks than Republicans. The estimated coefficient for Left House After 2014 is -2.2510 and the odds ratio is .2127, indicating that the odds of representatives who left the House after 2014 voting anti-bank were much lower than for the rest of the body—only 21 percent as much. Finally, in this equation, in contrast to the earlier one, margin of victory does matter; the coefficient suggests that for every 1 percent increase in the margin of victory, the odds of an anti-bank vote rise by 0.7 percent. Those who dare to vote against financial houses, it appears, are those who enjoy mostly higher margins of victory in the previous election.

<sup>60</sup> In our tests, district median income showed up as borderline in terms of statistical significance, but its substantive weight (as indicated in Table A9) is so marginal we dropped it from the model.



## Appendix 2 – Statistical Model of the 2006 House Vote on Markey Network Neutrality Provision

This section presents our model of the House vote on the net neutrality amendment proposed by Democratic Representative Edward Markey during the deliberations on HR 5252 on June 8, 2006. Since a BB joint count test indicated significant spatial autocorrelation (P-value < .001), we employ a spatial logistic regression, where 1 = a vote against the amendment and 0 = a vote in favor.

Let  $p_i = P\{HR5252\_2006_i = 1\}$  be the probability of a vote against the amendment for subject  $i$ ,  $i = 1:419$ , a Spatial Logistic Regression is defined as follows:

$$\log\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 \text{TOTAL\_PRO\_RECEIPTS\_2004\_2006}_i + \beta_2 \text{TOTAL\_ANTI\_RECEIPTS\_2004\_2006}_i + \beta_3 \text{ACU\_AVE\_05\_06}_i + \beta_4 \text{INCOME}_i + \beta_5 \text{PARTY}_i + \theta_i,$$

$$\theta_i | \theta_{j \neq i} \sim N(\bar{\theta}_i, \sigma_{\theta_i}^2 / m_i)$$

where  $\theta_i$  captures district clustering via a Conditional Autoregressive (CAR) model, in which  $\bar{\theta}_i = \frac{1}{m_i} \sum_{j \neq i}^n \theta_{ij}$ ,  $m_i$  is the number of neighbors of district  $i$ , with  $\theta_{ij} = 1$  if  $j$  and  $i$  are neighbors and 0 otherwise.

The average values and standard errors of the variables in our equation are shown in Table A2.1. Republicans mostly voted against the amendment, while most Democrats supported it. Representatives who voted against it tend to have lower values of contributions from firms in favor of the amendment (TOTAL\_PRO\_RECEIPTS\_2006, measured in increments of \$1,000) and higher levels of contributions from firms opposed to the amendment (TOTAL\_ANTI\_RECEIPTS\_2006 in increments of \$1,000). Median income was higher in the districts of representatives who supported the amendment while more conservative representatives as ranked on the American Conservative Union scale for that Congress (ACU\_05\_06) tended to oppose it.<sup>61</sup> Telecom employment in the district did not matter.

The equation is for a vote against; the estimated coefficient for contributions in favor of the amendment (TOTAL\_PRO\_RECEIPTS\_2006) in \$1,000 is -.29 and the odds ratio is .863, indicating that for every \$1,000 increase in contributions from firms in favor of the bill, the odds of a negative vote decrease by 24 percent. The estimated coefficient for TOTAL\_ANTI\_RECEIPTS\_2006 in \$1,000 is .006 and the odds ratio is 1.026, indicating that for every \$1,000 increase in contributions from firms opposed to the amendment, the odds of a negative vote increase by 2.6%.

The estimated coefficient for ACU\_05\_06 is .067 and the odds ratio is 1.069, indicating that the more conservative a representative is as measured on the ACU scale, the odds of a negative vote increase by 6.9 percent.

The estimated coefficient for district median income (Income) in \$1,000 is -.158 and the odds ratio is .928, indicating that for every \$1,000 increase in district median income, the odds of a vote against the amendment decrease by 7.2 percent.

<sup>61</sup> The scale reflects the average ranking for each representative in 2005–06 and is available here: <http://acuratings.conservative.org/acu-federal-legislative-ratings/?year1=2006&chamber=13&state1=0&sortable=1>



The estimated coefficient for Party is -4.490 and the odds ratio is .090, indicating that the odds of a vote against the amendment were much lower for Democrats than for Republicans.

**Table A2.1: Comparison of the Average Values and Percentage for HR5252\_2006**

Covariates	Mean (Std.Error) Percent (counts)		All
	HR5252_2006 = 0 Against	HR5252_2006 = 1 Vote for	
	267 (63.7%)	152(36.3%)	419
TOTAL_PRO_RECEIPTS_2004_2006 in \$1,000	2.45(.35)	3.9(.70)	3.00(.34)
TOTAL_ANTI_RECEIPTS_2004_2006 in \$1,000	28.16(2.06)	21.59 (2.25)	25.78(1.55)
ACU_05_06	72.92(1.67)	15.49 (1.61)	52.09(1.82)
Income (\$1,000)	52.17(.79)	56.93 (1.30)	53.90(.70)
Party			419
Dem (N = 199)	29.1% (58)	70.95 (141)	47.5%(199)
GOP (N = 209)	95.0% (209)	5.0% (11)	52.55(220)

**Table A2.2: Estimated Coefficients and Odds Ratios for Vote on HR5252\_2006 Based on a Spatial Logistic Model**

Parameter	2.5%	Median	97.5%	Odds Ratio ( $e^{\beta}$ )
TOTAL_PRO_RECEIPTS_2006 in \$1,000	-0.290	-0.147	-0.056	.863
TOTAL_ANTI_RECEIPTS_2006 in \$1,000	0.006	0.026	0.060	1.026
ACU_AVE_05_06	0.036	0.067	0.134	1.069
Income (\$1,000)	-0.158	-0.075	-0.037	.928
Party (DEM)	-4.490	-2.411	-0.871	.090



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