Delegation and the Regulation of Finance in the United States Since 1950*

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Abstract

This paper explores the determinants of financial market regulation in the United States since 1950. Using a formal model of the policy making process, we find that domestic political factors do afect the degree of financial regu- lation. Congress delegates regulatory agencies more discretionary authority: 1) as the policy preferences between Congress and the executive become more similar; 2) as firm investments become riskier; and 3) as Congress becomes more uncertain of the level of systemic risk. As a result, financial markets are more heavily regulated when firm-specific and systemic risks are high. But when inter-branch preferences difer, Congress may allow risky investments to be made that, ex post, it wished it had regulated. To test these predictions, we code each financial law enacted in the last 60 years for the amount of discre- tionary authority delegated to executive branch actors and the administrative procedures constraining this delegated authority. The analysis sheds light on variation in financial regulation over time, explaining why the financial inno- vations of the 1960s were met with new regulations, while those of the past two decades were not. Such an understanding is important at a time when the United States regulatory rulebook undergoes its most significant rewrites since the 1930s.

1   Introduction

The recent financial crisis has been called a "perfect storm" of failures. Wall Street, hedge funds, traditional banks, mortgage lenders, ratings agencies, and the media all played their roles, but regulatory failure on the part of the executive branch should perhaps head the list, as a host of agencies did not carry out their mandates to oversee the financial institutions that brought down the economy.

Even so, debate about the nature of this failure persists. Some claim the problem was that in the past, regulators had too little authority, especially when it came to overseeing newer forms of financial organization such as hedge funds, private equity firms, and other elements of the "shadow banking system." Despite grave worries about the financial stability of Lehman Brothers, for instance, the Federal Reserve lacked the necessary resolution authority to liquidate the firm in an orderly manner. As a result, Lehman's sudden collapse marked the beginning of the most turbulent period of the crisis. Under this view, reforms need to concentrate on giving executive branch ofcials more power, bringing more institutions under regulatory scrutiny, and making sure that regulators have the resources and authority to assure the safety and soundness of our banking system.

Others claim that executive ofcials *did* have the authority to regulate exotic new firms and financial instruments, but that they failed to fully use the policy tools at their disposal due to intensive lobbying eforts by the regulated sector. Regulators of Haven Trust Bank, for example, knew that its real estate holdings were four to six times over the recommended limit, yet they never took steps to curb the bank's lending practices until it was too late. "Hindsight is a wonderful thing," said the chief bank examiner for the OCC. "At the height of the economic boom, to take an

aggressive supervisory approach and tell people to stop lending is hard to do."[1]

If this is true, then reforms will mean little unless they are coupled with strong incentives for regulators to use the power delegated to them and resist being influenced by the industry they are supposed to be overseeing. Otherwise, giving more power to bureaucrats will just hasten their capture and make regulatory outcomes even more inefcient.

To know what will work in the future, it would be helpful to know what has been tried in the past, and to what efect. This paper thus seeks to understand the deter- minants of financial market regulation in the United States since 1950. Toward this end, we first build a formal model of the policy-making process in which government regulates financial risk at both the firm and systemic levels.

We find that Congress delegates more discretionary authority: 1) as the policy preferences between Congress and the executive become more similar; 2) as firm investments become riskier; and 3) as Congress becomes more uncertain of the level of systemic risk. As a result, financial markets are more heavily regulated when firm-specific and systemic risks are high. But when inter-branch preferences difer, Congress may allow risky investments to be made that, *ex post*, it wished it had regulated.

To test these predictions, we assemble a comprehensive data set on all financial regulatory laws passed by Congress since 1950. Following Epstein and O'Halloran (1999), we code each financial law for the amount of discretionary authority dele- gated to executive branch actors and the administrative procedures constraining this delegated authority. We combine these data with data sets on the performance of financial markets, agency rule making, agency budgets and workload, and congres- sional voting.

[1]See "Post-Mortems Reveal Obvious Risk at Banks," *New York Times*, Nov. 19, 2009.

We first survey the relevant literature, then present the formal model, detail the data collection enterprise, and provide some preliminary results. The final section concludes.

2 Literature Review

When discussing government regulation of financial markets, a threshold question is the necessity of regulation in the first place. Efcient market theory (Fama 1965; 1970) suggests that regulation is not only unnecessary but is necessarily harmful. The strong form of the efcient market hypothesis (EMH) states that asset prices reflect all public and private information concerning the asset; hence, price changes

reflect changes in information, and asset bubbles do not exist.[2] If this is an accurate description of reality, then large-scale government intervention can only skew prices away from the efcient benchmark.

However, there are good reasons for regulating financial intermediaries, on two levels. At the firm level, it has been long known that since banks and bank-like institutions borrow short-term and lend long-term, they may encounter liquidity crises leading to bank runs and panics. Since the Great Depression, the antidote to this phenomenon has been to regulate individual institutions for safety and soundness by establishing capital reserve requirements, enforcing prudential lending practices, and instituting direct oversight by regulators, as well as providing insurance funds to

repay investors in the case of bank failure.[3]

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[2]Weaker   versions of EMH assert merely that future prices cannot be determined from past prices, so future earnings conform to a random walk. But asymmetric information and herd behavior can lead to deviations between an asset's current price and its long-term underlying value. And even EMH advocates agree on the need for regulation to prevent fraudulent practices and insider trading. See Harris (2003, 240) for an overview, and Fox (2009) more generally for a discussion of EMH.

[3]The standard theory of financial regulation to prevent bank runs and panics is detailed in Goodhart, et. al. (1998).

At a system level, the case for regulation has been made stronger by the spectacu-
lar failure of the efcient market hypothesis over the past decade and more. Beginning with the
failure of Long Term Capital Management, extending through the Asian and Argentinean
financial crises, and on through the great mortgage-fueled global melt- down of 2008, there
is abundant evidence that asset prices are far more volatile than EMH would predict, leading
to bubbles whose collapse can afect national and global

economic activity.[4] Even if individual institutions are properly regulated for safety
and soundness, then, the cumulative risk present in the system as a whole may lead
to large-scale failure.[5]

Given the potential benefits of regulation, how can we understand the supply of
regulation by government actors? Two classic theories have addressed government's role in
the regulation of markets. The *public interest* approach assumes: 1) the existence of monopoly
power, externalities, and informational asymmetries create a potential constructive role for
government interventions; 2) ofcial supervisors have the capacity to ameliorate those market
failures (e.g. via a Pigouvian tax, where a firm's negative externalities are internalized); and
3) these ofcials have incentives to

efciently regulate markets and foster national economic prosperity.[6]

Second is the *private interest* view, which asserts that, although in theory govern- ment
regulation may be able to correct market imperfections, actual regulation may do more harm
than good. Administrative agencies may be designed to protect the

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[4]A   recent article reviewing evidence against the strong form of the EMH can be found in
"Efciency and Beyond," *The Economist*, July 16, 2009, online at http://www.economist.com/
displaystory.cfm?story_id=14030296.

[5]For a recent discussion of systemic, as opposed to firm-level, risk in the financial industry, see
Epstein and O'Halloran (2009).

[6]The public interest theory of regulation is often cited but rarely advanced as a realistic de- scription of
government actions and motivations. In reality, it is more of a restatement of welfare economics and the
possibility of efcient government intervention. See Hantke-Domas (2003) for a review of the intellectual history
of public interest theory and Shleifer (2005) for an excellent review of the regulatory literature.

very industries that they regulate—this is the "original sin" hypothesis, advanced by Stigler (1971). Similarly, "iron triangles" or subgovernments may form, in which congressional committees, interest groups, and bureaucrats combine in an unholy trinity to deliver benefits to the interest group's members at public expense. This line of reasoning, then, dovetails with Lowi's (1979) attack on delegation as an abdication of legislative responsibility.

Private interest fears are especially prevalent in discussions of banking regulation for a number of reasons. First, banking policy delivers concentrated benefits to a well- organized and affluent industry, while the costs of ill-advised or badly administered regulation are spread throughout society. Second, governments often need to borrow from banks, especially in developing economies. They thus may be reluctant to impose efcient levels of discipline for fear that a source of much-needed funds may disappear. Third, to the degree that banking regulations ensure depositors against adverse events, they create a moral hazard problem: bank managers may take actions

that are too risky, knowing that if they fail, the government will step in.[7]

Despite these difculties, it is clear that the financial sector is indeed regulated, often quite extensively, and that in many cases these regulations contribute to the smooth functioning of financial markets. Without insider trading statutes and anti- fraud protections, for example, stock exchanges and the mutual fund industry that they support could not have such broad participation. The question, then, becomes not whether governments are capable of regulating financial markets, but under which circumstances they will have the incentive and ability to do so efectively. That is, one needs a theory relating the structure of political and economic institutions to regulatory outcomes and, further, to market development and performance.

One line of research examines these issues from a comparative, cross-national

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[7]Freixas and Rochet (1997) summarize the issues surrounding bank regulation.

perspective. In a foundational essay, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) assert that the extent of a country's financial development can be explained by their inheritance of the English common law system as opposed to the French civil law system. The authors argue that common law systems aford greater protection to minority shareholders and better protect creditor rights, thus fostering broader financial market development. These findings are supported in Beck, et. al. (2001), who argue that legal origin ofers a stronger explanation of financial development than do theories based on the extent of political checks and balances.

In a recent study Keefer (2008) asserts, to the contrary, that legal origin has less explanatory power than a country's governmental institutions. In particular, Keefer shows that separation of powers and competitive elections are correlated with strong investor protection and lending to the private sector. Competitive govern- mental structures, in this view, are linked with competitive markets. Barth, Caprio, and Levine (2006) collect a comprehensive data set on banking regulation in over 150 countries. Their analysis shows that those developing countries that regulate by encouraging private enforcement of banking laws (e.g., through litigation) rather than direct control or no regulation at all, saw the highest rates of financial sector development.

Kroszner and Strahan (1999) engage in a diferent sort of cross-sectional exercise, examining the timing of branching deregulation across states in the U.S. Their results support what they term an "interest group" theory: the relative strength of winners from deregulation (large banks and smaller, bank-dependent firms) and the losers (small banks and insurance firms) explains patterns in the data better than does public interest theory. Similarly, Rajan and Zingales (2003) argue that financial sector development across countries is impeded when incumbent banking firms lobby government actors in an attempt to restrain competition.

Historical studies of financial development in the United States tell similar stories. Haber (2008), for instance, argues that governments free from outside political competition will do little to implement regulations in the banking sector. He uses the examples of Mexico and the United States to argue that institutionalized competition through electoral sufrage, political parties, separation of powers, and/or federalism is a necessary precursor to broad financial development. And Wallis (2008) reviews the history of early banking in the U.S., showing that the system of state-chartered banks that predominated throughout most of the nineteenth century was by and large a failure: states acted like traditional despotic regimes, using banks as sources of revenue and limiting competition.

The overall lesson from this literature is that efective financial regulation evolves in two stages: first, states need to develop strong enough political institutions so that executive branch actors face competition and are actively monitored; and second, legislatures must resist capture by the financial industry and delegate authority to regulatory agencies. As the United States in the postwar era has cleared the first of these hurdles, efective banking regulation should be correlated with authority delegated to executive branch actors.

3   Model

Our model of delegation of financial regulation thus emphasizes the tradeof of executive branch expertise against the principal-agent problems of imperfect control. This tradeof is the subject of some of our earlier work (Epstein and O'Halloran 1994; 1996; 1999), and has since been elaborated in a series of interesting studies examining the politics of delegation with an executive veto (Volden, 2002), civil service protec- tions for bureaucrats (Gailmard and Patty, 2006), and executive review of proposed

regulations (Wiseman, 2009), among others.[8] The application of these models to the financial sector would seem to be well-motivated. Banking is certainly a complex area where bureaucratic expertise would be valuable; Morgan (2002), for instance, shows that rating agencies disagree significantly more over banks and insurance companies than over other types of firms. Furthermore, continual innovation in the financial sector means that older regulations become less efective, or "decay," over time. If it did not delegate authority in this area, Congress would have to continually pass new legislation to deal with the new forms of financial firms and products, which it has shown neither the ability nor inclination to do.

Our work also overlaps with economic literature on the location of policy making, as in Maskin and Tirole (2004) and Alesina and Tabellini (2007), both of which emphasize the benefits of delegation to bureaucrats or other non-accountable ofcials (like courts) when presented with technical policy issues about which the public would have pay high costs to become informed. We also draw parallels with Hiriart and Martimort (2009), who study the regulation of risky markets and show that when firms cannot be held individually responsible for the consequences of their actions *ex post*, regulators will be faced with an *ex ante* moral hazard problem of firms' engaging in overly risky behavior. Finally, we draw inspiration from agency-based models of corporate finance, as summarized in Tirole (2006).

Our model examines strategic interactions among two firms, Congress, and the President. The firms can each make an investment requiring an up-front payment of $1, which will return $$r$ with probability p and $0 otherwise. These returns may be correlated; in particular, with *ex ante* probability θ the correlation ρ between investments is 1, and with probability $(1 - \theta)$ they are uncorrelated, so that $\rho = 0$.

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[8]See   also Bendor and Meirowitz (2004) for contributions to the spatial model of delegation and Volden and Wiseman (2009) for an overview of the development of this literature.

Should either or both ventures succeed, then there is no social cost to the investments. If, however, both fail then there is a social cost $2c$ to bailing out the banking system.[9] Congress then has utility:

$$EU \ C_{\rho=0} \equiv p^2 * 2r + 2p(1-p)r - (1-p)^2 \alpha(2c)$$

if the correlation between the firms' returns is zero, and

$$EU \ C_{\rho=1} \equiv p * 2r - (1-p)\alpha(2c)$$

if the correlation is one, where $\alpha > 0$ is the weight Congress places on bailout costs relative to industry profits. The executive's utility is the same as Congress's but the multiplier on the bailout costs is $\beta > \alpha$. The assumption that the president is more sensitive to bailout costs than Congress comes from the president's national constituency. When the financial system experiences a shock, that is, voters are more

likely to blame the president than any one member of Congress.[10]

The government can allow the investment r to be made or disallow it through, for instance, capital reserve requirements that would make the investment too expensive for the firms to undertake. All parameters of the model are common knowledge, but Congress knows only the value of θ, whereas the executive knows the exact value of ρ. Congress can either make policy itself ($\Delta = 0$) or delegate ($\Delta = 1$) to the executive to take advantage of that branch's superior expertise.

Congress's expected utility from making policy itself is 0 if it disallows the invest-

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[9]For instance, a central depository institution may have reserves $R = 2-2c$, where $c < 1/2$. Banks can costlessly borrow from the central bank if needed, up to the total reserves in the bank. Then a double failure will necessitate costly borrowing of $2c$ to insure the depositors at both institutions.

[10]Similar arguments are made in trade policy, where presidents are assumed to be more free-trade oriented than legislators because they are held more responsible for the overall state of the economy. See O'Halloran (1994) for a discussion.

ment and

$$EU\,C_{(\Delta=0)} = \theta EU\,C_{\rho=1} + (1-\theta)EU\,C_{\rho=0}$$

$$= 2(-c\alpha + p(r + c\alpha(p(\theta-1) - \theta + 2)) - 1)$$

if it allows the investment. Solving the above, Congress will allow a particular invest-
ment with return r if

$$r \geq \tilde{r} \equiv 1 + c\alpha(1-p)(1-(1-\theta)p)\frac{}{p} \qquad (1)$$

Note that firms, if left to their own devices, would make the investment as long
as $r \geq 1/p$. But this ignores the possible social cost of a financial crisis if both firms' investments turn out
badly. Hence Congress would rationally set higher requirements than the market alone
would: from the numerator in Equation 1, Congress requires an extra return of $c\alpha\delta$, where $\delta =$
$1-p$ if $\theta = 1$ (and hence returns are correlated)
and $\delta = (1-p)^2$ if $\theta = 0$. Put another way, this result illustrates a common pool
problem: all firms might agree that lower overall risk is preferable, but individually each
firm has incentives to add to the common risk pool, until an adverse event is likely to strike.

Define $\underline{r}^C \equiv \dfrac{1 + c\alpha(1-p)^2}{p}$, define $\bar{r}^C \equiv r\,\dfrac{1 + c\alpha(1-p)}{p}$, and similarly define $\underline{r}^P$ and $\bar{r}^P$ for r
the president, substituting β for α in the definitions. Then Congress would prefer to
disallow all investments with returns $r < \underline{r}^C$ and allow those with $r > \bar{r}^C$. For return r
levels $r \in \underline{r}^C, \bar{r}^C$, legislators would allow the investment if $\rho = 0$ but not if $\rho = 1$. r

Similarly, the executive would base its decision on the value of ρ for $r \in \underline{r}^P, \bar{r}^P$. r
Congress can gain this expertise by delegating to the executive, and will do so for those
values of r in which these two ranges overlap. Given that $\alpha \leq \beta$, the ranges

overlap when:

$$\underline{r}^P \leq {}^{\overline{C}}r$$

$$1 + \frac{\beta(1-p)^2}{p} \leq 1 + \alpha(1-p) \frac{}{p}$$

$$(1-p)\beta \leq \alpha$$

Equilibrium actions and outcomes are thus given by:

Proposition 1. *For the delegation game in financial regulation,*

1. *Congress delegates if* $(1-p)\beta \leq \alpha \leq \beta$ *and* $r \in \underline{r}^P, {}^{\overline{C}}.r$

2. *Otherwise, Congress makes policy itself and allows the investment if and only*
   if $r \geq \tilde{}.r$

The equilibrium is illustrated in Figure 1. The horizontal axis shows the return on investment r, while the vertical is the preference diference between the branches, ex- pressed as the ratio β/α. The shaded area indicates the situations in which Congress prefers to delegate to the executive, while outside this area Congress will either Disal- low the investment or Allow it, either by direct legislation or, possibly, making it clear that the executive may not regulate the type of financial instrument under scrutiny.

Note that the largest delegation region occurs when $\beta/\alpha = 1$, and the region of delegation shrinks as the two parameters diverge. Thus Congress delegates more as the preferences of the two branches align. Furthermore, Figure 1 shows that Congress's decision to regulate the finance industry or not depends on the value of $\tilde{}, r$ which as Equation 1 depends on the value of α.

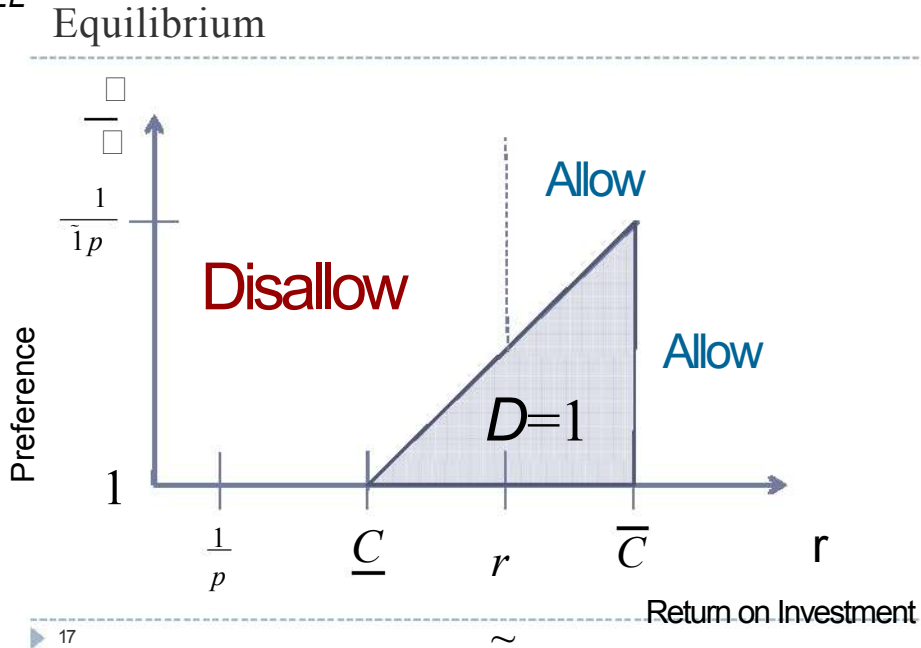Delegation also becomes more likely as the riskiness of the venture increases; that

Equilibrium

Figure 1: Equilibrium delegation and outcomes.

is, as the likelihood of success p falls. The delegation region has length:

$$\overline{C}_r - \underline{r}^P = \overline{1 + \alpha(p-p) - 1 + \beta((1-p)(1}$$

$$= \frac{c(1-p)(\alpha-(1-p)\beta)}{p}p$$

$$\frac{\partial(\overline{C}-\underline{r}^P)}{\partial p} = \frac{-c(\alpha+(1-p^2)\beta) < 0, r}{p^2}$$

so more policies are delegated as p gets smaller. Finally, note that the value of executive expertise increases the closer θ is to 1/2, so Congress delegates more as it becomes less certain about the level of systemic risk. Overall, then, we have the following hypotheses.

1. Congress delegates more discretion when:

    (a) The preferences of President and Congress are more similar;

    (b) Investments are riskier; and

    (c) Uncertainty over market is higher.

2. The more Congress cares about bailout costs, the higher are overall levels of market regulation.

3. Higher levels of discretion and regulation lead to lower probabilities of market disruptions.

4 Data and Results

Although many excellent histories of financial regulation are available,[11] and despite the popular argument that deregulation of the financial sector played a key role in the recent economic crisis, there is as yet no consistent measure of banking regulatory policy over time. Indeed, Philippon (2009), in a recent study of wages in the financial sector over time, was forced to invent his own index of financial deregulation, built around summary measures of bank branching restrictions, separation of commercial and investment banks, interest rate ceilings, and the separation of banks and insurance companies.

We therefore create a new dataset on financial regulation since 1950.[12] The unit of analysis is laws enacted governing financial markets. We define the universe of finance and financial institutions as including state- and federally-chartered banks, bank hold- ing companies, thrifts/savings and loan associations, credit unions, investment banks, financial holding companies, securities, commodities, and mortgage lending institu- tions.

Following Epstein and O'Halloran (1999), and consistent with the findings of the literature reviewed above, for each law we code the amount of authority delegated to executive agencies and the procedural constraints circumscribing the executive's use

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[11]See for example, Macey, Miller and Carnell (2001).

[12]The analysis begins in 1950 because in that year *Congressional Quarterly* began providing consistent reviews of the key provisions of enacted legislation.

of delegated authority. In addition, we list the agencies receiving delegated author-ity (e.g., Securities Exchange Commission, Commodities Future Trade Commission, Treasury) and the location of the agency within the administrative hierarchy (Execu- tive Ofce of the President, cabinet, independent agency, or government corporation).

4.1   Selecting the relevant laws

We identify relevant legislation in a three-sweep process. First, we included all laws mentioned in *Congressional Quarterly's* policy trackers for the categories of Banking, Savings and Loan Industry, Federal Reserve, Stock Market and Financial Services, Insurance, and Mortgages. In the second sweep, we reviewed a comprehensive survey of banking law (Macey, Miller and Carnell, 2001) as well as the websites of the federal banking regulators and added any laws not already included in the first sweep. The third sweep included recent laws not yet available in *CQ*. Here Thomas' "Legislation

in Current Congress" provides summaries of post-2005 financial laws.[13]

In total, we identified 112 federal laws that meet these criteria. For each law we recorded the year in which it was passed, the Congress number, the public law number, the subject area it pertained to, the agencies receiving delegated authority and their position in the executive branch hierarchy, whether the law as a whole regulated or deregulated the industry, and all recorded votes taken on the law in the House and Senate. The distribution of laws by Congress is illustrated in Figure 2, with unified and divided governments shown in diferent colors. At first blush, the figure does not indicate the influence of partisan factors in passing financial legislation; the average number of laws per Congress is almost identical under periods of unified and divided government.

[13]The   Thomas database is available at:http://thomas.loc.gov/.
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Financial Bills Passed per Congress, 1950-2009

Average Laws per Congress = 3.58
Average Under Unified = 3.54
Average Under Divided = 3.61
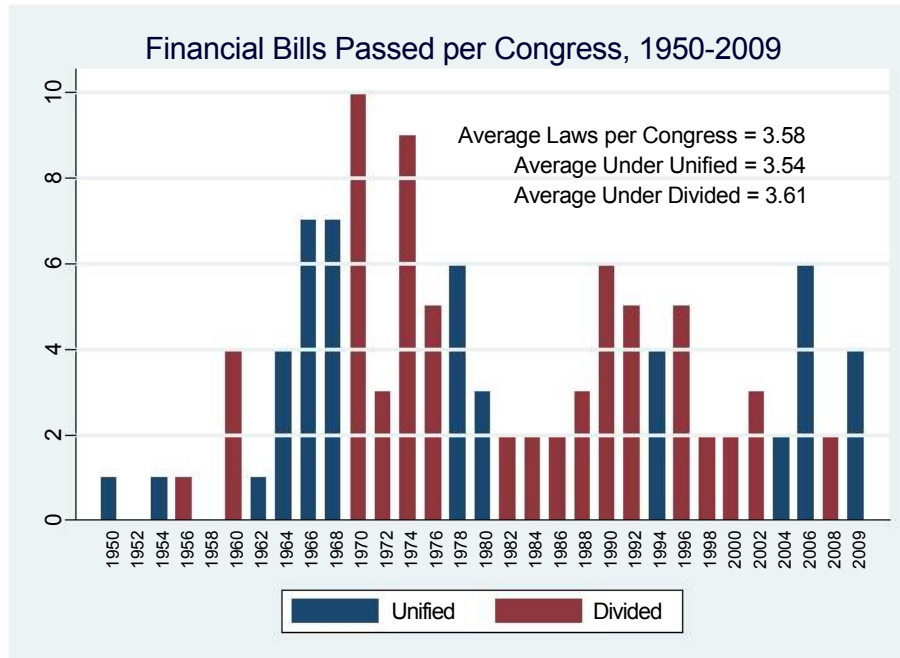
Unified   Divided

Figure 2: Number of laws regulating finance passed per Congress.
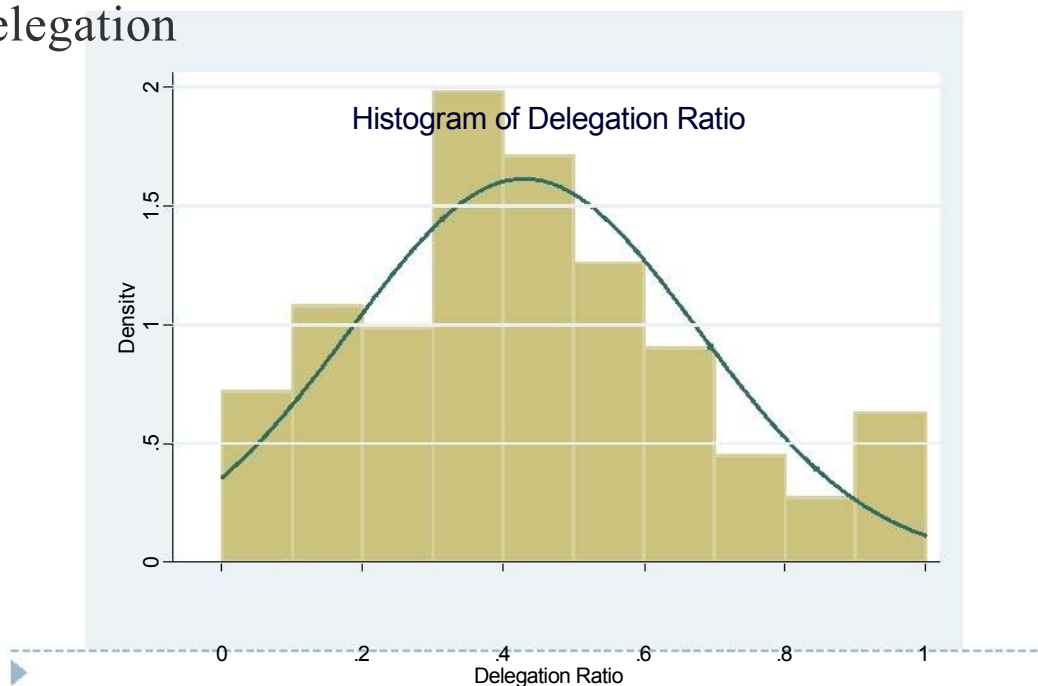
4.2   Coding Discretion

As in Epstein and O'Halloran (1999), the primary source for coding each bill's contents
was *Congressional Quarterly Almanac's* year-end summary of major legislation (80 laws). Where
data was not available from the *CQ Almanac*, we referred to the Library of Congress's *Thomas*
database (27 laws). Where neither source contained detailed data on a specific law, we
referred to the U.S. Statutes (4 laws) and the Federal Deposit Insurance Corporation website
(1 law). Each law was classified as belonging to one or more categories: depository
institutions; securities; commodities; insurance; interest rate controls; consumer protection;
mortgage lending/government sponsored enterprises; and state-federal issues.

Each law was read independently, its provisions numbered, and all provisions that
delegated substantive authority to the executive were identified.[14] Delegation was

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[14]In omnibus legislation, when there was a financial subpart, we code only the relevant provisions.
This occurred in 10 cases.

Delegation

Figure 3: Histogram of Delegation Ratios.

defined as giving discretionary authority to an executive entity to move policy away from the status quo. The executive includes the president, cabinet, independent agencies and commissions, government corporations, and federally-mandated private corporations.

For each law in our database, we defined the delegation ratio as the ratio of the number of provisions that delegate to the executive over the total number of provisions. The histogram of delegation ratios is shown in Figure 3. As indicated, the distribution follows a more or less normal pattern, with a slight spike for those laws with 100% delegation (these usually had a relatively small number of provisions).

Executive discretion depends not only on the amount of authority delegated but also on the administrative procedures that constrain executive actions.[15] Accordingly, we identified fourteen possible types of procedural constraints associated with the delegation of authority. These constraints on discretion, along with their definition,

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[15]See McCubbins, Noll and Weingast (1987).

Defining Constraints

Number of Constraint Categories per Law
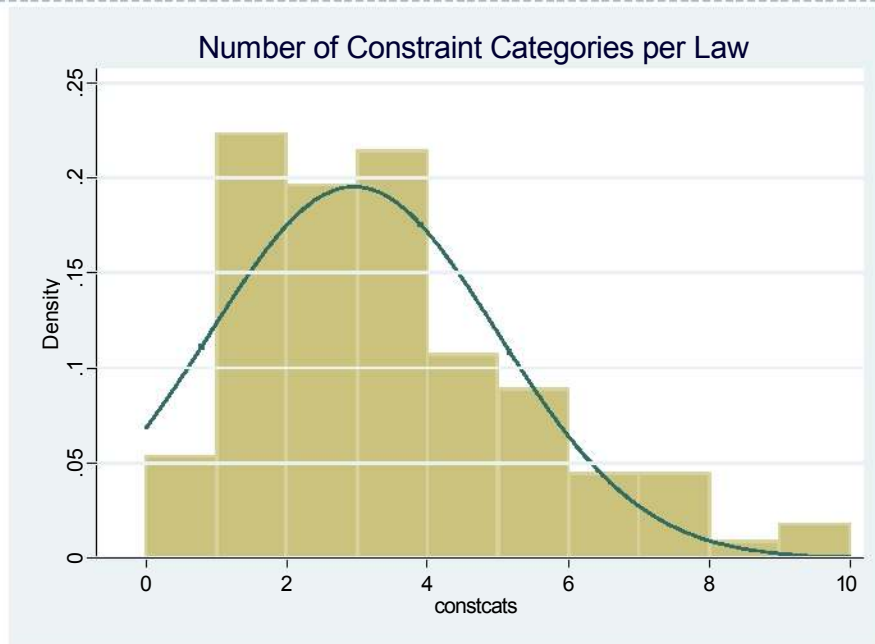
Figure 4: Histogram of Constraint Ratios.

are given in Table 1.

We counted the number of times that each category of constraint appeared in the summary of each law. Including each of the fourteen categories in our analysis would be unwieldy, so we investigated the feasibility of using factor analysis to analyze the correlation matrix of constraint categories.

As only one factor was significant, first dimension factor scores for each law were calculated and termed the constraint index. Third, total discretion was defined as delegation minus constraints — that is, the amount of unconstrained authority del- egated to executive actors. Fourth, the average number of regulators per law was determined; this shows the degree to which authority is being divided across execu- tive branch actors. And fifth, the degree of autonomy of regulators is measured by the relative mix of independent regulatory actors receiving authority, as opposed to actors and executive agencies under more direct presidential control.

Each law was also coded for whether it increased, decreased or left unchanged

Category	Description
Appointment Power Limits	Are there any constraints on appointment powers that go beyond the advice and consent of the Senate?
Time Limits	Are there sunset limits? That is, does the delegated authority expire after a certain fixed time period? Spending Limits Does the act define a maximum amount that the agency can allocate to any activity or set of activities, either stated explicitly or in a formula?
Legislative Action Required	Do agency determinations require the action of Congress to take efect?
Executive Action Required	Do agency determinations require the action of another agency or the President to take efect?
Legislative Veto	Does Congress retain an ex post veto (of some kind) over the enactment of agency regulation?
Reporting Requirements	What specific reporting requirements are imposed on agency rulemaking? Studies are included in this cate- gory as is making information publicly available through a website/ free phone line etc.
Consultation Requirements	Are consultations with any non-agency actor required prior to final agency actions?
Public Hearings	Are public hearings explicitly required?
Appeals Procedures	Is there a procedure explicitly stated in the act for a party adversely afected by agency actions to appeal?
Rulemaking Requirements	Do explicit mandates require rulemaking or adjudicatory processes to be carried out in a certain manner (beyond the requirements of the Administrative Procedure Act?
Direct Oversight	Is there a procedure defined in the implementing legislation by which a non-agency actor reviews agency's activities-i.e. a GAO audit of the agency, or congressional hearings?
Exemptions	Is any particular group, product, or afected interest exempt from any aspect of regulation for a given period of time?
Compensations	Are any groups, industries, or states given a specific compensation? In particular, does the act mention any group as receiving either additional time to adjust to the new regulations or some concession because of the costs that may be imposed?

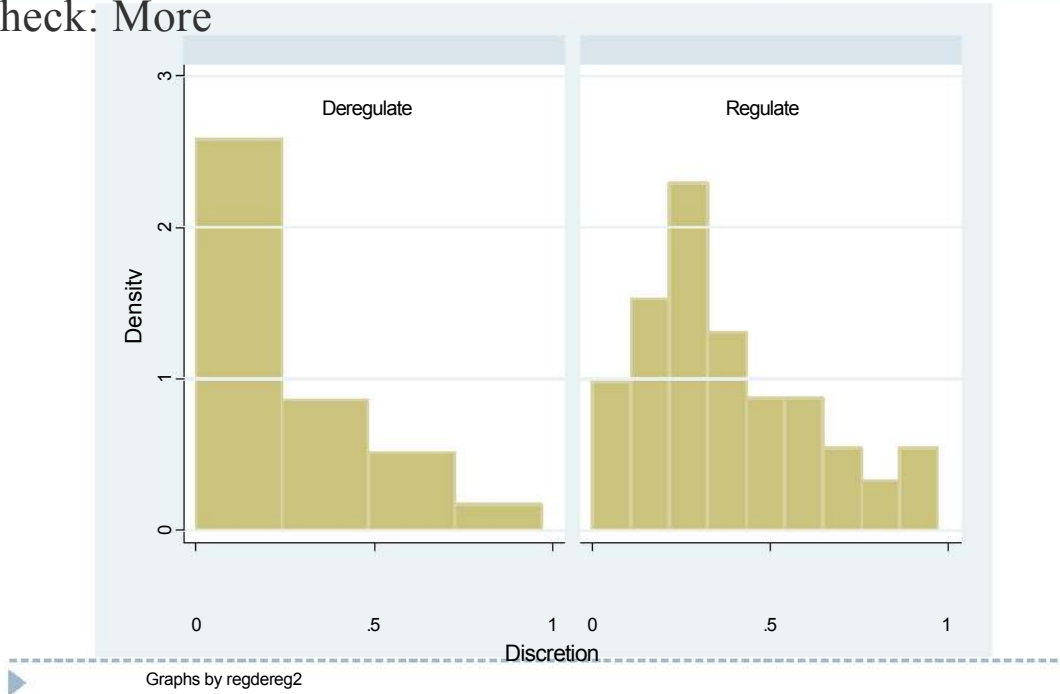Table 1: Categories of Constraints on Executive Discretion

Figure 5: Distribution of discretion index for laws that regulate and laws that deregulate. [36]

the regulatory stringency on financial market participants. This was done by noting

disclosure rules, capital requirements, and/or increased oversight of products and firms.

This enables us to construct a regulation-deregulation index, beginning in 1950 and running

to the present day.

4.3 Discretion Analysis

As a basic check on our codings of delegation and regulation, we compare the distri-

bution of the discretion index for laws that regulated the financial industry overall, and laws

that deregulated. We would expect that laws regulating the industry would delegate more

discretionary authority, and Figure 5 shows that this is indeed the case. The average

discretion index for the 24 laws that deregulate is 0.24, as opposed to 0.35 for the 85 laws

that regulate.

　Do diferences in executive discretion, in turn, afect the financial industry? It is in

general difcult to determine a measure of the degree to which regulation is

succeeding, but Philippon's (2009) measure of excess wages in the financial industry serves as a useful proxy; the greater the degree of regulation, the lower excess wages should be.

Accordingly, Figure 6 overlays total discretion delegated each year with Phillipon's excess wage measure. The trends seem to be in the correct direction: excess wages began to increase in the 1960's, then a spate of regulation drove them down. They increased again the late 1980's, and again were lowered by a spike in regulation. Finally wages started rising precipitously during the 1990's and on to the first decade of the 2000's, but there was no corresponding rise in regulation to meet them, so they just kept increasing to the levels we see today. The trends in Figure 6 thus accord with the notion that delegating discretionary authority to executive branch

ofcials does constrain the level of excess wages in the financial industry. [16] They also pose a puzzle: why was the spate of financial innovation in the 1960's — this decade saw the explosion of credit in the economy, including the widespread use of credit cards and the creation of credit unions — met with a regulatory response, while the most recent innovations — derivatives, non-bank lenders and the rise of the shadow banking system — were not? We postpone our suggested answer until the concluding section of this paper.

Figure 6 also indicates that the trend in recent decades has been for Congress to give executive branch actors less discretion in financial regulation. Since the Great Society era of the 1960's, and on into the early 1970's, the total amount of new executive branch authority to regulate the financial sector has generally declined. The exceptions are a few upticks in discretion which coincide with the aftermaths of

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[16]Further, the patterns also seem consistent with the notion that regulations "decay" over time as new financial instruments appear to replace the old one. If one estimates a Koyck distributed lag model $y_t = \alpha + \beta x_t + \beta \phi x_{t-1} + \beta \phi^2 x_{t-2} + \ldots + _t$ via the usual instrumental variables technique, then $\beta = -0.025$ and $\phi = 0.49$, indicating that regulations lose roughly half their efectiveness each year. See Wooldridge (2006), pp. 635-637 for details of the estimation technique.
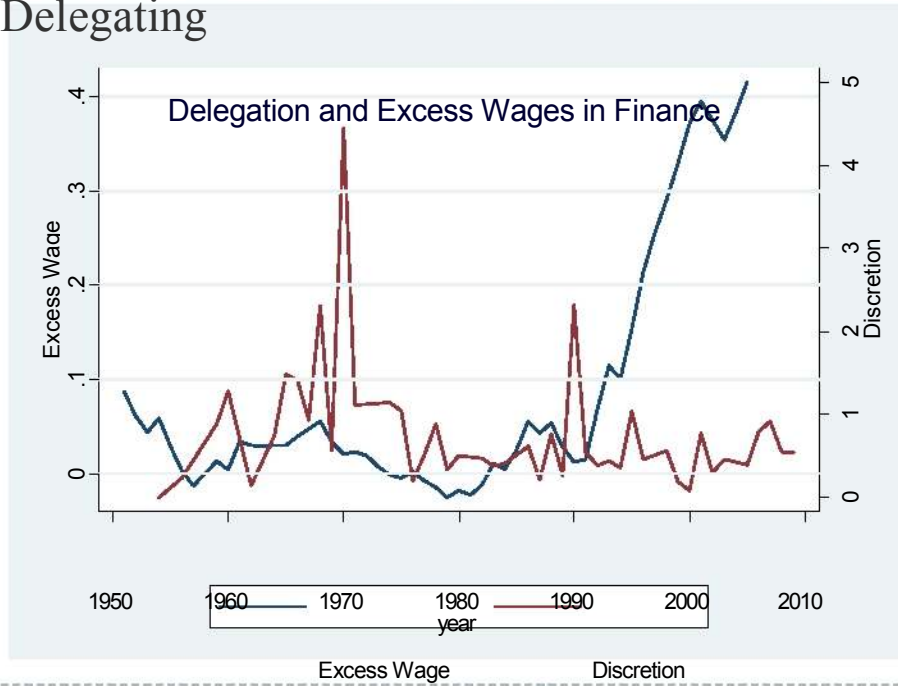
Figure 6: Discretion and excess wages in the financial sector.

well-publicized financial crises and scandals, including the Savings and Loan crisis, the Asian crisis, and the Enron scandal. Otherwise, the government has been given steadily less authority over time to regulate financial firms, even as innovations in that sector have made the need for regulation greater than ever, and even as the

importance of the financial sector in the national economy has greatly increased.[17]

What is the source of this decrease in discretion? As shown in Figure 7, the amount of authority delegated to oversee the financial sector has remained fairly constant over time, perhaps decreasing slightly in the past decade. The trends in Figure 6, then, are due mainly to a large and significant increase in the number of constraints placed on the regulators' use of this authority. In addition, we find that the number of actors receiving authority has risen significantly over the time period studied, as also shown in Figure 7. And the location of these agencies in the executive hierarchy has changed as well, away from more independent

agencies to those more

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[17]The size of the financial services sector as a percentage of GDP has risen from 3% in 1950 to over 8% in 2008.
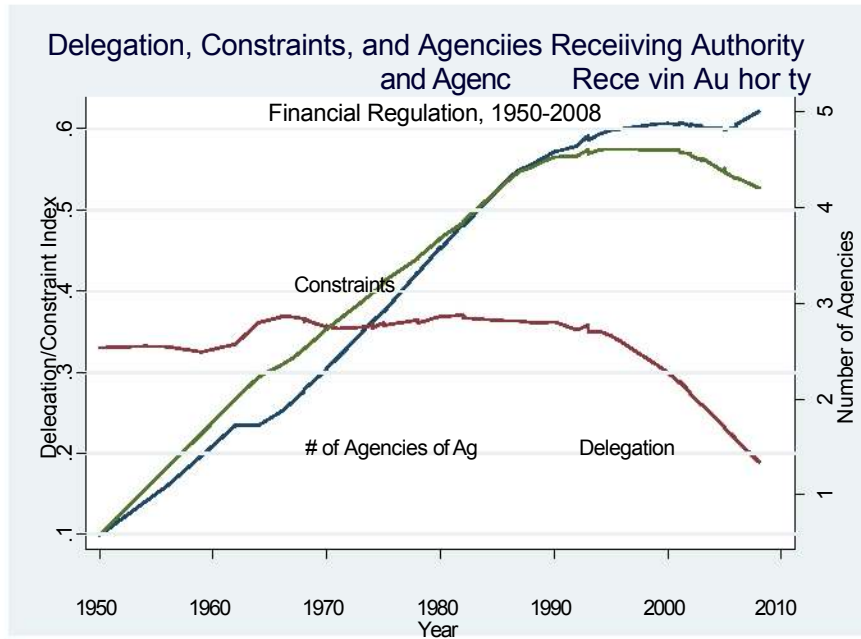
Figure 7: Delegation, constraints, and the number of agencies receiving authority.

directly under the president's control.

Overall, then, our preliminary analysis suggests that the current rules defining financial regulation may create a web of interlocking and conflicting mandates, making it difcult for regulators to innovate the rules and standards governing the financial industry, while at the same time opening regulatory agencies to industry capture. The problem is not lack of regulation, then, but that regulators have little discretion. Modern laws delegate less, constrain more and split authority across more agencies than their predecessors. This has created a situation where many areas of financial activity are heavily regulated by the Federal government, but those charged with oversight are hamstrung by overlapping jurisdictions, the need for other actors to sign of on their policies, or outright prohibitions on regulatory actions by Congress.

Testing Hypothesis 1a generated from our theoretical model above, we would expect Congress to delegate greater levels of authority to executive branch actors with preferences closer to their own. As Barth, Caprio, and Levine (2006) report,

policymaking in this area tends to be uni-dimensional, separating actors with more pro-industry preferences from those placing more emphasis on consumer protection. In the United States over the period studied, Republicans have represented the former viewpoint and Democrats, the latter.[18] We also posit that presidents will tend to be less pro-industry than legislators, as their national constituency would lead them to weigh more heavily consumer interests and the stability of the banking system at large.

As Figure 8 shows, however, two patterns of delegation are consistent with these constraints. If partisan diferences are stronger than inter-branch diferences, as in panel (a), then delegation should be higher under unified government as opposed to di- vided government; this was the pattern of delegation found in Epstein and O'Halloran (1999). If interbranch diferences predominate, as in panel (b), though, then delega- tion will actually be highest from a Democratic Congress to a Republican president, lowest from a Republican Congress to a Democratic president, and intermediate for the other two combinations. Furthermore, in this "cross-party coalition" case, del- egation should increase when Congress is controlled by Democrats as opposed to Republicans, and when the presidency is controlled by Republicans as opposed to Democrats.

We thus have the particular prediction that, when regressing discretion on partisan control of the branches, we should obtain a positive and significant coefcient on Democratic control of Congress and Republican control of the presidency. Further, Hypothesis 2 predicts that regulation will respond to partisan control of Congress, so it should increase when Democrats control Congress as opposed to Republicans, but the party controlling the presidency may or may not matter.

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[18]This   is consistent with the findings of Kroszner and Strahan (1999), who analyze rollcall votes on bank branching deregulation.
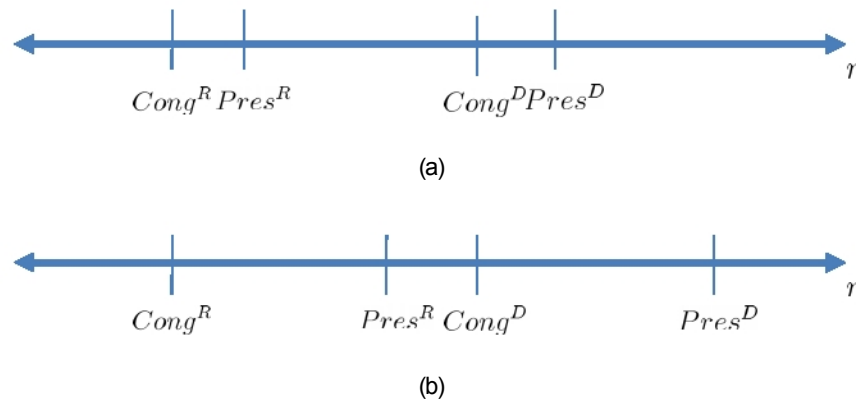
Figure 8: (a) Partisan efects captured by divided government. (b) Partisan efects captured by cross-party coalitions.

The estimation results are given in Table 2. The crossparty partisan conflict variable is constructed to equal 1 when Republicans control Congress and Democrats control the presidency, -1 when Democrats hold Congress and the president is Re- publican, and 0 otherwise. As predicted, this variable is consistently negative and significant in predicting discretion, while the usual divided government variable is not significant. The signs on Democratic control of Congress and the presidency are also as predicted, as shown in Model 3, and the crossparty efects hold constant even when a number of control variables are added to the regression in Model 4.

Models 5 and 6 indicate that when predicting whether a given law will regulate, deregulate, or leave unchanged the level of regulation of the financial industry, the coefcient on partisan control of Congress is significant in all cases, and in the pre- dicted direction. The coefcient on control of the executive is significant in Model 5 as well. Model 6 includes only those cases with a discretion index of 0.2 or under, as the regulation/deregulation relationship should hold most clearly when Congress does not delegate to the executive. Indeed, in these cases the coefcient on Congress remains positive and significant, while the coefcient on control of the presidency is no longer significant.

	Disc.	Disc.	Disc.	Disc.	Reg/Dereg	Reg/Dereg
	(1)	(2)	(3)	(4)	(5)	(6)
Cross-Party	-.084			-.080		
	(.029)***			(.037)**		
Divided		.043				
		(.039)				
Dem. President			-.066		-.573	-.637
			(.037)*		(.283)**	(.712)
Dem. Congress			.065		.764	1.546
			(.024)***		(.173)***	(.566)***
Start of Term				.041		
				(.042)		
Activist Mood				.012		
				(.048)		
Budget Deficit				.027		
				(.320)		
Δ DJIA				.077		
				(.133)		
Obs.	112	112	112	108	112	23
R^2	.071	.011	.091	.074	.169	.425

Table 2: Models 1-4 are OLS regressions with discretion as the dependent variable. Models 5 and 6 are ordered probits with regulation/deregulation as the dependent variable. In Model 6, only those laws with discretion indices under 0.2 are included in the sample.

5 Conclusion

This paper analyzed the political and economic determinants of financial regulation. We first developed a formal model where legislators can either regulate firms directly or delegate authority to executive branch actors who have greater expertise, and are therefore better able to assess the true social costs of investment activities. The analysis indicated that agencies have more discretion, and regulation is more efective, when the preferences of Congress and the executive more nearly overlap. Conversely, interbranch conflict leads to no regulation, or to regulation in which the executive is so tightly constrained that they have little latitude to respond to changing market conditions.

We tested the implications of this model with data drawn from the regulation of the financial sector in the United States since 1950. We identified every law regulating state and federally chartered banks, bank holding companies, thrifts/savings and loan associations, credit unions, investment banks, financial holding companies, securities, commodities, or mortgage lending institutions.

For each law, we coded the amount of authority delegated to executive branch actors, the location of these actors in the executive branch hierarchy, and the admin- istrative procedures that constrain agencies' use of delegated authority. This allowed us to test the proposition that domestic political factors afect the degree of financial regulation, and the patterns in the data so far are consistent with our delegation model, assuming that interbranch diferences outweigh partisan diferences in these policy areas.

As to the answer to the puzzle posed above — why were the financial innovations of the 1960's met with new regulations, while those of the past two decades were not — we can answer that the configurations of partisan control of government were

favorable in the first instance but not the second. The mid-1960's and early 1970's saw first unified government under the Democrats, and then divided government with a Democratic Congress and Republican president. Both these alignments should exhibit higher levels of regulation; Democrats are less indebted to the holders of capital as opposed to labor, and Democratic Congresses and Republican presidents are close together in the cross-party hypothesis. To the contrary, the 1990's and 2000's saw divided government with a Democratic president and Republican Congress, followed by unified Republican control of government. These should each lead to low regulation, as they are the opposite of the first two situations.

As it expands, this project will hopefully cast light on current policy debates con- cerning the revision of national structures of financial market regulation. On a larger scale, we hope to advance our understanding of the interaction between governments and markets. In particular, under which conditions will regulation interfere with the smooth operation of markets, and when is regulation market-enhancing? These questions remain for future research.

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