Is Dodd-Frank the Biggest Law Ever?

Patrick A. McLaughlin, Oliver Sherouse, Mark Febrizio, and M. Scott King

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Abstract

The passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010 continued a trend toward lengthier and more complex acts of Congress. We use novel metrics of the size, scope, and complexity of acts of Congress to assess Dodd-Frank's place in this trend. Our analysis is consistent with the hypothesis that, in terms of its regulatory effects, Dodd-Frank is the biggest act of Congress in recent history and may become the biggest ever. We argue that this trend toward longer and more complex laws can cause deterioration in the quality of the regulations the laws authorize for two procedural reasons. First, a large act can create a regulatory surge that overwhelms the quality control process. Second, because a large act can precipitate the creation of many regulations by different agencies that target the same industry, the agencies create rules in relative ignorance of their potential interactions.

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1. Introduction

The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) is one of the most ambitious and complex regulatory efforts ever established for the financial services industry. Upon its passage in 2010, the Obama administration portrayed Dodd-Frank as "the most far reaching Wall Street Reform in history" (White House, n.d.). In fact, President Obama was more correct than he may have known. We use novel metrics of the legislation's regulatory progeny to show that Dodd-Frank was one of the largest and most complex pieces of legislation in American history. Furthermore, we contend that Dodd-Frank's size and complexity portend poor results, from both effectiveness and efficiency perspectives.

Large and complex laws like Dodd-Frank are less likely to deliver on their authors' promises—but more likely to deliver unintended consequences—than smaller and simpler laws, for three reasons. First, members of Congress are subject to cognitive and time constraints. Because of Dodd-Frank's length and complexity, members of Congress had little chance to thoroughly understand the law before its passage. Namesake senator Christopher Dodd remarked, "No one will know until this is actually in place how it works" (quoted in Cho, Yang, and Dennis 2010). Furthermore, bills that are voted on during times of perceived crisis may induce even more of a "ready, fire, aim" approach than typically exists in Washington (Ellig 2015). In such circumstances, both legislative and administrative bodies tend to pursue ad hoc policies that attempt to mitigate crises. As Christopher DeMuth (2016, 170) explained, it is imperative for leaders to "Do Something" under this mentality, which "applies even if there is nothing a government agency could do that would be effective or sensible." And perceived crisis

was certainly the flavor of the day when Dodd-Frank was under consideration: the Great Recession was fresh in everyone's memory, and the recovery remained tepid and uncertain.

Second, the longevity of congressional mandates suggests that any problems created by Dodd-Frank will perpetually guide regulatory agency rulemakings. For example, Dodd-Frank gave the Consumer Financial Protection Bureau (CFPB) a distinctive organizational structure with features that insulate it from congressional, executive, and judicial oversight (Zywicki 2013). Specifically, the CFPB is funded by the Federal Reserve rather than by congressional appropriations;[1] the director of the CFPB is appointed for a term of five years rather than serving at the president's discretion;[2] the agency's decisions can only be overridden by a two-thirds vote of the Financial Stability Oversight Council and only under limited conditions; and courts are directed to defer to the CFPB on the meaning of federal consumer financial law, which limits judicial review of the agency (Zywicki 2013, 872–75). Without sufficient structural checks to mitigate common regulatory problems, unintended consequences are likely. This novel design—including the CFPB's extreme independence—is intentional, but any unintended consequences are also the progeny of the process that created Dodd-Frank. Because mandates tend to last, any negative consequences that flow out of the CFPB's actions will remain for decades to come.

Third, surges in the output of regulations, such as those induced by large laws like Dodd-Frank, can overwhelm the regulatory review process, further increasing the chances that regulatory actions induced by the law display subpar quality. Dodd-Frank required much more

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[1] See Dodd-Frank Act, Pub. L. No. 111-203, tit. X, § 1017, 124 Stat. 1376, 1975 (2010), which states that the Federal Reserve's "Board of Governors shall transfer to the Bureau from the combined earnings of the Federal Reserve System, the amount determined by the Director [of the CFPB] to be reasonably necessary to carry out" the CFPB's duties.

[2] The US Court of Appeals for the DC Circuit affirmed this structure as constitutional, and the US Supreme Court declined to hear a challenge to that decision. See Kate Berry and John Heltman, "Appeals Court Affirms CFPB's Constitutionality, Leadership Structure," *American Banker*, January 31, 2018; Colin Wilhelm, "Supreme Court Declines to Hear Challenge to the Constitutionality of the CFPB," *Washington Examiner*, January 14, 2019.

output in a short period from the United States regulatory apparatus than any other single act of Congress has required. McLaughlin and Greene (2014, 1) estimated that Dodd-Frank would increase financial industry regulatory restrictions by 32 percent, "yielding more new restrictions than were created between 1997 and 2010."

In the remainder of this study, we show that Dodd-Frank was indeed singular in its size, scope, and complexity. We argue that these dynamics are part of a long-run trend, which may hurt the quality of regulations that the act creates. Specifically, the structure of the paper is as follows: Section 2 details the scope of Dodd-Frank and highlights key provisions of the legislation. Section 3 explains how the size and complexity of laws and regulations may affect economic outcomes. Section 4 covers the methodology of the paper and how the regulatory text stemming from Dodd-Frank is quantified. Section 5 conveys the results of the empirical analysis in terms of Dodd-Frank's size, scope, and complexity. Section 6 discusses the implications of the paper's findings, and section 7 concludes.

2. Dodd-Frank's Ambitious Scope

As a piece of crisis legislation, Dodd-Frank juxtaposes sections that are direct responses to the financial crisis with ancillary provisions. Consisting of 16 titles, the act sought to address perceived problems related to the Great Recession as well as to serve as a "convenient legislative vehicle" for provisions crafted before the crisis (Peirce and Broughel 2012b, 11). The act not only aims to enhance the stability of the financial system and to reform Wall Street, but also seeks to guard consumers from "abusive financial services practices" and has provisions "for other purposes" (Pub. L. No. 111-203, 124 Stat. 1376, 1376). Dodd-Frank's expansive regulatory implementation phase, which required 243 rulemakings and 67 studies, according to one early count, is a clear indication of its ambitious scope (Tahyar 2010). A July 2016 progress report on

Dodd-Frank's implementation found that 274 of the 390 total rulemaking requirements have been met by finalized rules (Davis Polk & Wardwell, n.d.).

Dodd-Frank is a broad piece of legislation that features numerous provisions with mixed results and relevance to preventing future financial crises. Many titles of Dodd-Frank address critical issues, even if the approach taken is flawed. While the following discussion is not intended to be a comprehensive analysis, we highlight some notable actions and ancillary provisions that demonstrate the law's breadth.

Dodd-Frank includes actions intended to address perceived problems in the financial system and to prevent future crises. According to David A. Skeel Jr. (2010, 5) of the University of Pennsylvania, "the Dodd-Frank Act seeks to single out the financial institutions that are most likely to cause systemwide problems if they fail, and subjects them to more intensive regulation." In other words, the law attempts to limit not only the risk of an institution or market collapsing, but also the systemic effects if failure occurs.

Title I established the new Financial Stability Oversight Council, which is a multiregulator systemic risk council, and the Office of Financial Research, which collects and analyzes financial data (Peirce 2012, 24). The council is also tasked with identifying financial institutions, including "nonbank financial companies and large bank holding companies," which will receive additional regulation from the Fed (Peirce 2012, 26–27).

Title II created the Orderly Liquidation Authority, a distinct process that serves as an alternative to bankruptcy (Peirce 2012, 34). Rather than reforming the existing bankruptcy process, Congress opted to create a new one (Peirce 2012, 35). The new resolution framework created in Title II gives the Federal Deposit Insurance Corporation broad discretion about how to handle the case (Peirce 2012, 36). Title III dissolved the Office of Thrift Supervision (OTS) and

transferred the functions of this office to other bank regulators, including the Office of the Comptroller of the Currency (Peirce 2012, 45). This title also increased deposit insurance to $250,000, further entrenching the government as the monitor of banks (Peirce 2012, 46–47).

Title VI implemented the widely discussed Volcker rule, "which prohibits banks from engaging in propriety trading and from involvement with hedge funds and private equity funds" (Peirce 2012, 66). The title also increased the Fed's authority, and in some cases the Fed will be regulating entities already regulated by the US Securities and Exchange Commission (SEC) or the Commodity Futures Trading Commission (Peirce 2012, 70). Title X, which created the CFPB and granted it responsibility for consumer financial protection, is a centerpiece of Dodd-Frank. As noted above, the bureau's "unprecedented structure" as an autonomous agency located within the Fed but without oversight from the Fed or from Congress creates an accountability problem (Peirce 2012, 110–11). Title X also separated "consumer protection from the rest of banking regulation" owing to the lack of integration of consumer protection regulations and the "safety and soundness" of financial markets, banking entities, and the economic system (Peirce 2012, 112).

Title X exhibits how a key portion of Dodd-Frank imports unrelated measures into a piece of crisis legislation. A prominent portion of the title, the Durbin Amendment, established price controls on bank fees levied on merchants for debit card transactions (Peirce 2012, 12, 115). Regardless of the reasoning for or validity of such regulation, it fell outside the scope of the financial crisis and is merely one example of ancillary provisions included in the law.

Other changes not directly related to the financial crisis were also visible. For instance, Title IX dealt with assorted topics related to the SEC, including granting new enforcement authority to the commission, revising the regulation of credit rating agencies, and forming new offices within the SEC. Many of the title's provisions did not respond to the financial crisis, such

as requirements that studies be conducted on financial literacy and other topics (Peirce 2012, 99, 106). Furthermore, the SEC and interest groups had asked for some provisions before the crisis, including actions in subtitles E and G dealing with "executive compensation and corporate governance" (Peirce 2012, 99, 104).

Title XIII contains miscellaneous provisions that focus on "reining in previous government rescue efforts" such as the Troubled Asset Relief Program (Peirce 2012, 141). This title was likely included to reduce Dodd-Frank's budgetary impact rather than to address the proximate causes of the crisis. Another such miscellaneous section is Title XV, "Miscellaneous Provisions," which established requirements for nonfinancial companies that align with foreign policy objectives instead of providing resolutions to the financial crisis. This title directs companies to report usage of conflict minerals from the Democratic Republic of the Congo, and takes measures designed to ensure that minerals are conflict free. Furthermore, it assigns the SEC to regulate this area—a significant departure from its expertise (Peirce 2012, 153–55).[3]

As Skeel (2010, 7) articulated, "The core [of the law] is Dodd-Frank's treatment of derivatives, its regulation of systemically important financial institutions, and its new rules for resolving their financial distress, together with the counterweight of the Consumer Financial Protection Bureau." Nevertheless, lawmakers also included several ancillary provisions that are either only tangentially related or entirely unrelated to the financial crisis. Dodd-Frank's ambitious scope arguably makes it one of the largest and most complex laws in American history. The remainder of this study discusses empirical methods that can be used to evaluate that claim.

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[3] While these ancillary provisions expand the scope of Dodd-Frank, the scope is limited in some other ways. Dodd-Frank arguably does not address all relevant ideas for reforming financial regulation. For instance, in early 2008, then Secretary of the Treasury Henry Paulson released a blueprint for reform that recommended merging the Commodity Futures Trading Commission and the SEC (Peirce and Broughel 2012b, 16). In Title VII, Dodd-Frank failed to merge the Commodity Futures Trading Commission and the SEC and instead divided jurisdiction over the over-the-counter derivatives market between the two agencies (Peirce 2012, 82).

3. The Relationship between Size and Complexity of Laws and Economic Outcomes

The length of laws passed in the United States has been growing. Figure 1 charts the increase in the word count of laws over time. It depicts the average length of all acts passed by each Congress from the 97th Congress to the 113th Congress. At the time of the calculation of these averages, the 113th Congress had not yet finished—it is possible the average subsequently increased or decreased.

Figure 1. Average Word Count of Acts of Congress, over Time
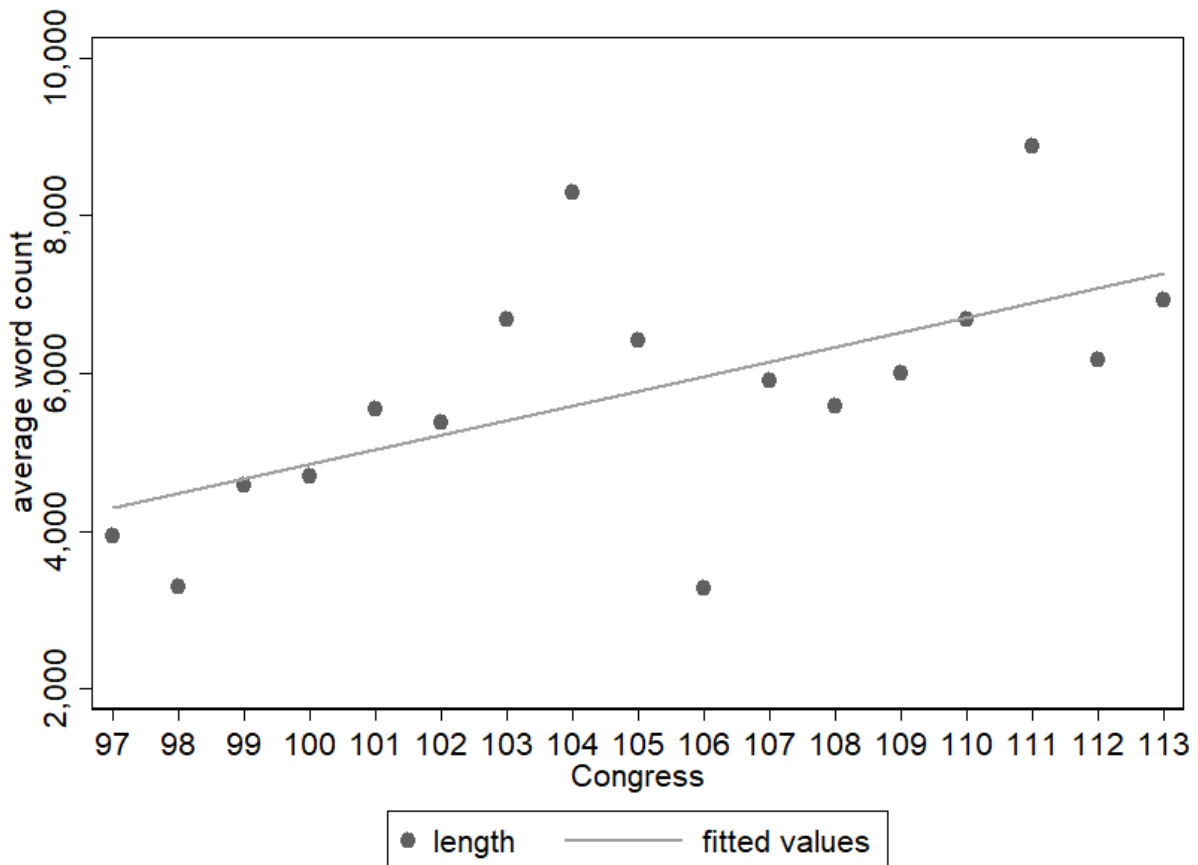
Source: Wolf von Laer, "Patterns of Crises: Legislative Voting, Urgency, and Errors—an Empirical Analysis of Law Making during the Great Recession" (paper presented at George Mason University, Fairfax, VA, February 2015).

Acts of Congress have also been increasing in complexity. Li et al. (2015) used software analysis tools to analyze the complexity of the *United States Code* (USC), the set of documents wherein acts of Congress are codified. They measured complexity by counting the number of conditional statements contained in the law (a measure of complexity that is called *cyclomatic complexity*), and found that cyclomatic complexity has "grown substantially over time" (Li et al. 2015, 332).

The increasing size and complexity of laws make it difficult to anticipate what their actual effects will be—things like the number, scope, and consequences of the various regulations required by legislation become harder to anticipate (Fichtner and McLaughlin 2015, 6). As a result, ex ante analysis of both such legislation and regulations induced by such legislation may not inform policymakers as much as analysis of shorter and less complex laws would. Of course, holding other factors like time and budget constraints constant, it is reasonable to expect that the longer a law, the less analysis per component of the law can be produced. Each of these effects would point to lower-quality regulations following longer and more complex laws. As the size and complexity of laws increase, unintended consequences can result, especially considering that policymakers have less time and resources to analyze individual components of laws.

An example of unintended regulatory consequences, perhaps wrought by low-quality execution, can be seen in the effects that Dodd-Frank has had on smaller financial institutions. Often referred to as community banks, these small and medium-sized institutions are "located in and focused on limited geographic areas," and they "engage in traditional banking activities while obtaining most of their funding from local deposits" (Marsh and Norman 2013, 8). Smaller banks are located at an important nexus between communities and small business owners

interested in obtaining credit. Small banks can play a crucial role in fomenting and encouraging entrepreneurship at a local level (Federal Deposit Insurance Corporation 2012).

Community-based financial institutions are adept at providing personalized service and developing firsthand knowledge of clients, making them generally better suited than larger banks to serve the needs of small businesses (Peirce 2013, 2–4). But small banks are poorly equipped to deal with the increased compliance costs imposed by Dodd-Frank. As resources are diverted toward regulatory compliance, the competitiveness of small banks on margins such as customer service can erode. Dodd-Frank could have a disproportionate impact on these smaller lenders, forcing them to change the financial products that they offer and to dedicate a larger portion of their budgets to ensuring that they are following the law's regulations.

Since "certain fixed costs of understanding and absorbing new regulatory mandates apply to all banks, regardless of size," small banks cannot spread regulatory costs over the large asset base that bigger banks leverage, which places small banks at a "competitive disadvantage to large financial institutions" (Peirce, Robinson, and Stratmann 2014, 13). Peirce, Robinson, and Stratmann's (2014) survey of nearly 200 banks across 41 states revealed that "approximately ninety percent of respondents reported an increase in compliance costs," with most reporting an increase of more than 5 percent. Relatedly, the Federal Reserve Bank of Minneapolis conducted an analysis to "quantify the cost of increased regulation on community banks," particularly looking at the incremental regulatory costs of hiring additional staff (Feldman, Schmidt, and Heinecke 2013, 1).[4] The costs of adding more compliance staff had a negative effect on bank profitability, particularly for smaller banks (Feldman, Schmidt, and Heinecke 2013, 8).

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[4] The authors took a group of about 5,400 banks that had been operational for five or more years and had assets under $1 billion as of the end of 2012 and segregated the banks into five asset cohorts. Under the study's representative scenario, 13 percent of the smallest cohort—banks with less than $50 million in assets—would be

Small banks, while not the ostensible target of Dodd-Frank, are nonetheless affected by its reach. Furthermore, they are merely one example of entities impacted by the legislation's complexity. Could this collateral damage have been avoided, along with other potentially unknown negative repercussions? The size and scope of Dodd-Frank make it more likely for resulting regulations to unintentionally cause disproportionate harm to groups that are not the intended target, compared to smaller, better considered, and more narrowly crafted laws.

Complexity not only inhibits effective ex ante analysis of regulations, but it also complicates the compliance efforts of regulated entities. Resources are diverted toward compliance activities as businesses seek to understand and adapt to new regulatory requirements. According to one study looking at how community banks respond to greater regulation, organizations and their employees may take measures that reduce earnings, such as hiring more staff, shifting attention toward non-revenue-generating activities, or increasing compliance training (Feldman, Schmidt, and Heinecke 2013, 2).

Additionally, complex regulatory codes induce uncertainty. When businesses have difficulty identifying all relevant regulations (or at least the rules that regulators primarily enforce), compliance may decline as organizations simply "wait to discover which rules they are expected to follow" (Williams and Adams 2012, 3). A 2016 National Federation of Independent Business survey highlighted that, along with extra paperwork and compliance costs, small businesses reported that "the difficulty in understanding what had to be done for compliance" was a major problem in dealing with regulation (Wade 2016, 8). Excessive regulation may also

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unprofitable. Furthermore, almost 60 percent of the newly unprofitable banks would be from the smallest cohort (see Feldman, Schmidt, and Heinecke 2013, 8).

prevent businesses from making investments or pursuing innovations (Williams and Adams 2012, 2–3).

4. Quantifying Dodd-Frank's Regulatory Progeny

Beyond the impact of individual rules, the regulatory surge associated with Dodd-Frank will create its own set of problems. The RegData project facilitates the quantification of this surge and empirical analysis of the cumulative and interactive effects of regulations. The study of the role of government in a market economy is a staple of economic analysis. As the regulatory state expands, analyzing the myriad ways in which it affects the economy becomes more difficult without diminishing in importance. Since the use of regulation as a policy instrument shows no indication of declining in popularity, having an accurate and robust measure of the scale and scope of government regulations will become increasingly important as a means to facilitate economic analysis.

RegData—which was initially developed by Al-Ubaydli and McLaughlin (2017, originally published as a working paper in 2012) and then updated by McLaughlin and Sherouse (2017a; 2019)—is both a methodology and a database that provides policy analysts and economists with a quantification of federal regulation by industry, by agency, and over time (McLaughlin et al. 2017, 1). The latest iteration of RegData (version 3.0) uses the regulatory text found in the *Code of Federal Regulations* (CFR)[5] to link regulations to their authoring agencies and authorizing statutes (McLaughlin et al. 2017, 2). RegData 3.0 enables the quantification of regulatory progeny associated with specific acts of Congress, such as Dodd-Frank, and administered by particular agencies.

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[5] The CFR refers to the volumes that contain all federal regulations that are in effect each year.

The RegData database offers two primary metrics of regulation: restrictions and industry relevance. Restrictions are a cardinal proxy for restrictive language contained in the CFR, and are measured by counting words and phrases used in legal language to either obligate or prohibit an action. Specifically, RegData searches for a subset of all restrictive terms, consisting of the terms "shall," "must," "may not," "prohibited," and "required" (McLaughlin et al. 2017, 4). While these terms are not a comprehensive measure of all ways in which legal language can create restrictions, they indicate specific mandated or prohibited activities that are representative of the restrictiveness of regulatory text. Total word counts are also included as an alternative measure of the volume of regulation (McLaughlin et al. 2017, 2).

Industry relevance is an estimate of the pertinence of a CFR part to specific industries as defined in the North American Industry Classification System (NAICS). NAICS classifies businesses and other economic agents by their method of production. The system defines a set of codes at increasingly specific levels of differentiation that are intended to be mutually exclusive and collectively exhaustive. To map federal regulations to affected sectors, such as the financial sector, "RegData 3.0 uses machine-learning algorithms to assess the probability that a unit of regulatory text targets a specific NAICS industry" (McLaughlin et al. 2017, 2).[6]

The algorithm was trained to identify the relevance of regulatory text to specific industries using selected documents from the *Federal Register*, a daily publication of the federal government that includes rules, proposed rules, presidential documents, and a variety of notices of current or planned government activity. Some of these documents are specifically labeled with relevant NAICS codes, and the language they employ is like that of the CFR. Training

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[6] Readers who want to learn more about the machine-learning approach to classifying regulations by NAICS-defined industry should consult the "RegData 3.0 User's Guide" (McLaughlin et al. 2017) and "RegData 2.2: A Panel Dataset on US Federal Regulations" (McLaughlin and Sherouse 2019).

documents for each three-digit NAICS industry were obtained by searching the *Federal Register* for indicators that a document concerned a specific NAICS industry.[7]

Our candidate algorithms included logistic regression (logit) with a lasso penalty and random forests (Breiman 2001). The logit model was selected by comparing the models' performance in cross-validation. Following its selection, the logit model was trained on the full dataset. All models were trained and evaluated using the scikit-learn toolkit (Pedregosa et al. 2011).

This classification methodology yields a set of probability scores ranging from zero to one for each CFR part. (A *part* is a legal division of text that typically contains a regulatory program.) Since the CFR is published annually, RegData offers probability scores for each CFR part in each year, from 1970 to 2016. A probability score reflects the probability that a given part is relevant to a given industry: zero indicates that there is 0 percent probability that a given part contains language relevant to a given industry, and one indicates 100 percent certainty that the part contains relevant language.

RegData's statistics about regulations can be connected to the acts of Congress that authorized the regulations. This is executed with the Public Law Database (PLDB), a component of the QuantGov platform.[8] In brief, the PLDB associates each CFR part with the specific statute (or statutes) of the *United States Code* that the CFR part cites as its statutory authority. The PLDB then connects those statutes back to the popular names of the acts of Congress—that is, the names by which most people know them. Thus, researchers can create a set of regulatory statistics for each act of Congress, allowing for comparisons of their size and scope in terms of

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[7] Some exclusion rules were also applied to avoid false positives (see McLaughlin and Sherouse 2017a).
[8] See the datasets produced using the QuantGov platform (McLaughlin and Sherouse 2017b).

regulatory output. Using the PLDB, we attribute RegData's statistics to major financial acts, including Dodd-Frank.

5. Results

When viewed through the lens of RegData, Dodd-Frank is an outlier even if it is considered as part of a general trend toward longer and more complex law. In this section, we use several figures and tables created with RegData to examine Dodd-Frank's size, scope, and complexity.

5.1. Size

We show Dodd-Frank's size by measuring the new regulatory restrictions associated with it. When Dodd-Frank is compared to other laws passed during the Obama administration, the number of new regulatory restrictions associated with Dodd-Frank dwarfs that of any other law by a wide margin. Figure 2 shows that Dodd-Frank is associated with 27,278 new regulatory restrictions so far. To put that number in context, the law associated with the next highest number of new regulatory restrictions had fewer than 5,000.

Figure 2. Regulatory Size of Dodd-Frank Relative to Other Acts of Congress Passed under the Obama Administration, 2009–2016
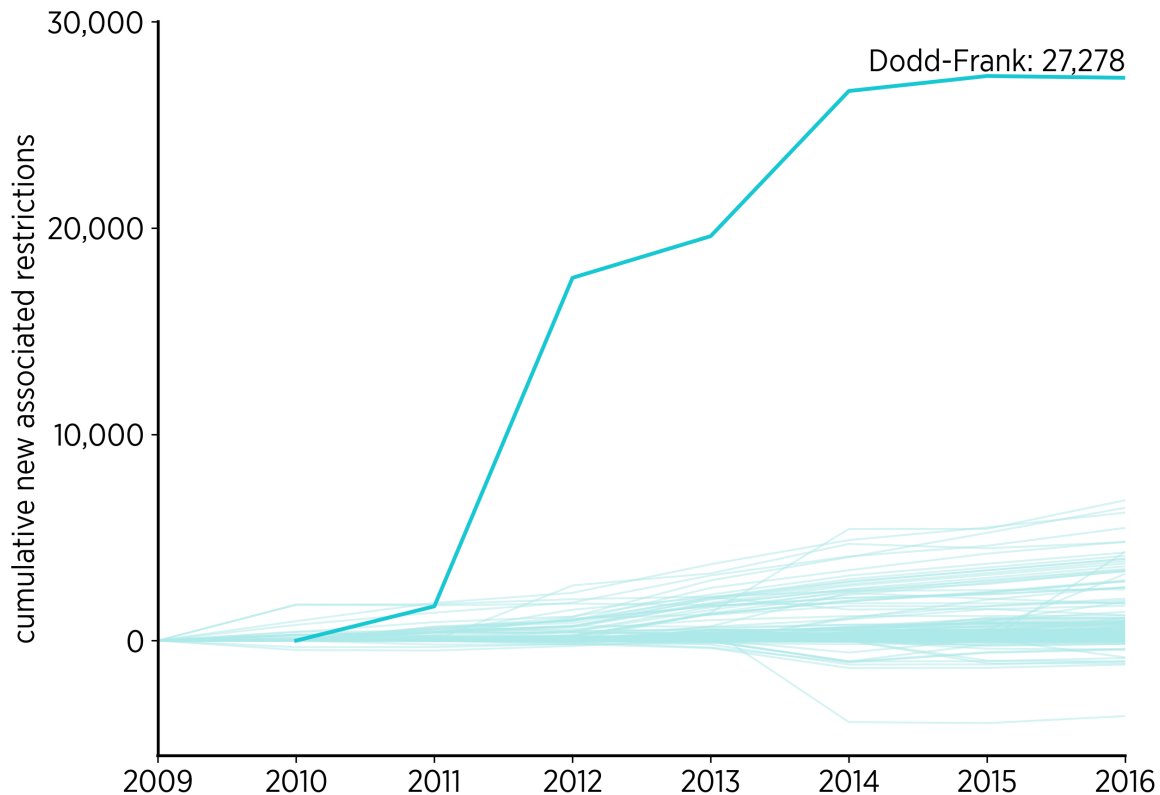
Note: Dodd-Frank = the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.

Source: Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0 Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/; Patrick A. McLaughlin and Oliver Sherouse, Public Law Database (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/.

5.2. Scope

We consider the scope of Dodd-Frank in two ways.

First, we can look at the number of different agencies that have produced rules that cite Dodd-Frank as their statutory authority. We assume that a broad and numerous list of agencies indicates a wide scope to the law. For perspective, we compare Dodd-Frank to three other major financial acts: the Financial Institutions Reform, Recovery, and Enforcement Act of 1989

(FIRREA), the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), and the Sarbanes-Oxley Act of 2002.

FIRREA, passed in response to the savings and loan crisis, created the Office of Thrift Supervision with authority to regulate savings institutions, along with a host of other reforms. FDICIA, also a reaction to the savings and loan crisis, strengthened the role of the Federal Deposit Insurance Corporation in preventing and responding to bank failures. Sarbanes-Oxley, among other provisions, established the Public Company Accounting Oversight Board and instructed the SEC to write rules related, among other things, to auditing firms, corporate governance, and public company reporting. Figure 3 shows cumulative new restrictions associated with each of these laws since its passage. (Note that a new restriction may be associated with more than one law.)

A typical act of Congress will instruct one, two, or perhaps a handful of regulatory agencies to engage in some rulemaking activity. Conversely, Dodd-Frank has so far precipitated regulatory actions by at least 31 different agencies. Column 1 of table 1 lists the agencies that had promulgated final rules included in the 2016 CFR that cited Dodd-Frank as their statutory authority. For the sake of comparison, the other columns list the agencies that had added restrictions citing FIRREA, FDICIA, and Sarbanes-Oxley in the six years after those laws were enacted.

Figure 3. Cumulative New Associated Restrictions for Financial Laws
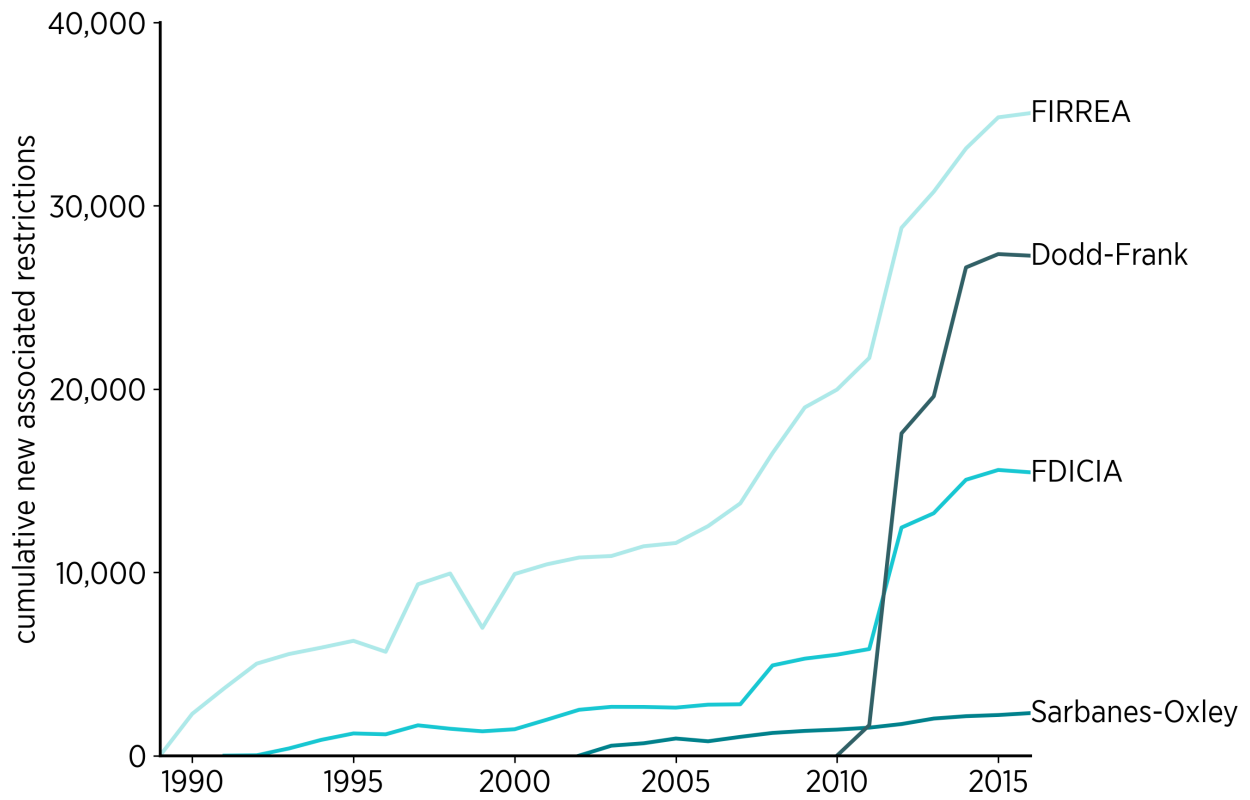
Note: FIRREA = the Financial Institutions Reform, Recovery, and Enforcement Act of 1989; Dodd-Frank = the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010; FDICIA = the Federal Deposit Insurance Corporation Improvement Act of 1991; Sarbanes-Oxley = the Sarbanes-Oxley Act of 2002.

Source: Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0 Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/; Patrick A. McLaughlin and Oliver Sherouse, Public Law Database (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/.

Table 1. Agencies Citing Financial Laws and Number of Citing Parts Six Years after Each Law's Passage

Dodd-Frank	FIRREA	FDICIA	Sarbanes-Oxley
Office of the Comptroller of the Currency, Department of the Treasury (75)	Federal Housing Finance Agency (50)	Office of the Comptroller of the Currency, Department of the Treasury (114)	Securities and Exchange Commission (13)
Commodity Futures Trading Commission (55)	National Credit Union Administration (31)	Federal Deposit Insurance Corporation (50)	Employee Benefits Security Administration, Department of Labor (5)
Office of Thrift Supervision, Department of the Treasury (45)*	Office of the Secretary of the Treasury (21)	Federal Reserve System (37)	Office of the Comptroller of the Currency, Department of the Treasury (1)
Federal Reserve System (42)	Office of Government Ethics (18)	Federal Trade Commission (16)	
Federal Deposit Insurance Corporation (42)	Bureau of the Fiscal Service, Department of the Treasury (17)	National Credit Union Administration (9)	
Federal Election Commission (39)	Resolution Trust Corporation (12)	Securities and Exchange Commission (3)	
Office of Foreign Assets Control, Department of the Treasury (34)	Office of the Secretary of Defense (8)	Farm Credit Administration (3)	
Consumer Financial Protection Bureau (28)	Overseas Private Investment Corporation (7)	Office of Personnel Management (2)	
National Credit Union Administration (25)	Thrift Depositor Protection Oversight Board (6)	United States Postal Service (1)	
Securities and Exchange Commission (16)	Office of the Secretary of Agriculture (4)	Small Business Administration (1)	
Food and Nutrition Service, Department of Agriculture (16)	Monetary Offices, Department of the Treasury (4)	Office of the Secretary of Defense (1)	
Office of the Secretary of the Treasury (15)	Office of Inspector General, Department of Housing and Urban Development (3)	Federal Financial Institutions Examination Council (1)	
Bureau of the Fiscal Service, Department of the Treasury (15)	Federal Financial Institutions Examination Council (3)		
Federal Housing Finance Agency (13)	Environmental Protection Agency (3)		
Financial Crimes Enforcement Network, Department of the Treasury (12)	Bureau of Land Management, Department of the Interior (3)		

Dodd-Frank	FIRREA	FDICIA	Sarbanes-Oxley
Office of the Assistant Secretary for Housing—Federal Housing Commissioner, Department of Housing and Urban Development (8)	Internal Revenue Service, Department of the Treasury (2)		
Office of the Secretary of Labor (7)	Federal Maritime Commission (2)		
Environmental Protection Agency (3)	Federal Emergency Management Agency (2)		
Office of the Secretary of Agriculture (3)	United States Postal Service (2)		
Financial Stability Oversight Council (3)	Office of the Secretary, Department of Housing and Urban Development (2)		
Monetary Offices, Department of the Treasury (3)	Forest Service, Department of Agriculture (1)		
Office of the Secretary, Department of Housing and Urban Development (3)	Occupational Safety and Health Administration, Department of Labor (1)		
Department of Justice (3)	Federal Mediation and Conciliation Service (1)		
Community Development Financial Institutions Fund, Department of the Treasury (2)	Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (1)		
Wage and Hour Division, Department of Labor (2)	Secret Service, Department of the Treasury (1)		
United States Postal Service (2)	Small Business Administration (1)		
Office of the Assistant Secretary for Public and Indian Housing, Department of Housing and Urban Development (2)	Soil Conservation Service, Department of Agriculture (1)		
Federal Energy Regulatory Commission (1)	Department of the Navy (1)		
Occupational Safety and Health Administration, Department of Labor (1)	Commission of Fine Arts (1)		
Office of Financial Research (1)	Nuclear Regulatory Commission (1)		
General Services Administration (1)			

* The Office of Thrift Supervision was dissolved with the passage of Dodd-Frank, but a significant portion of its regulations remained on the books in the *Code of Federal Regulations* until they were finally removed entirely in 2019.
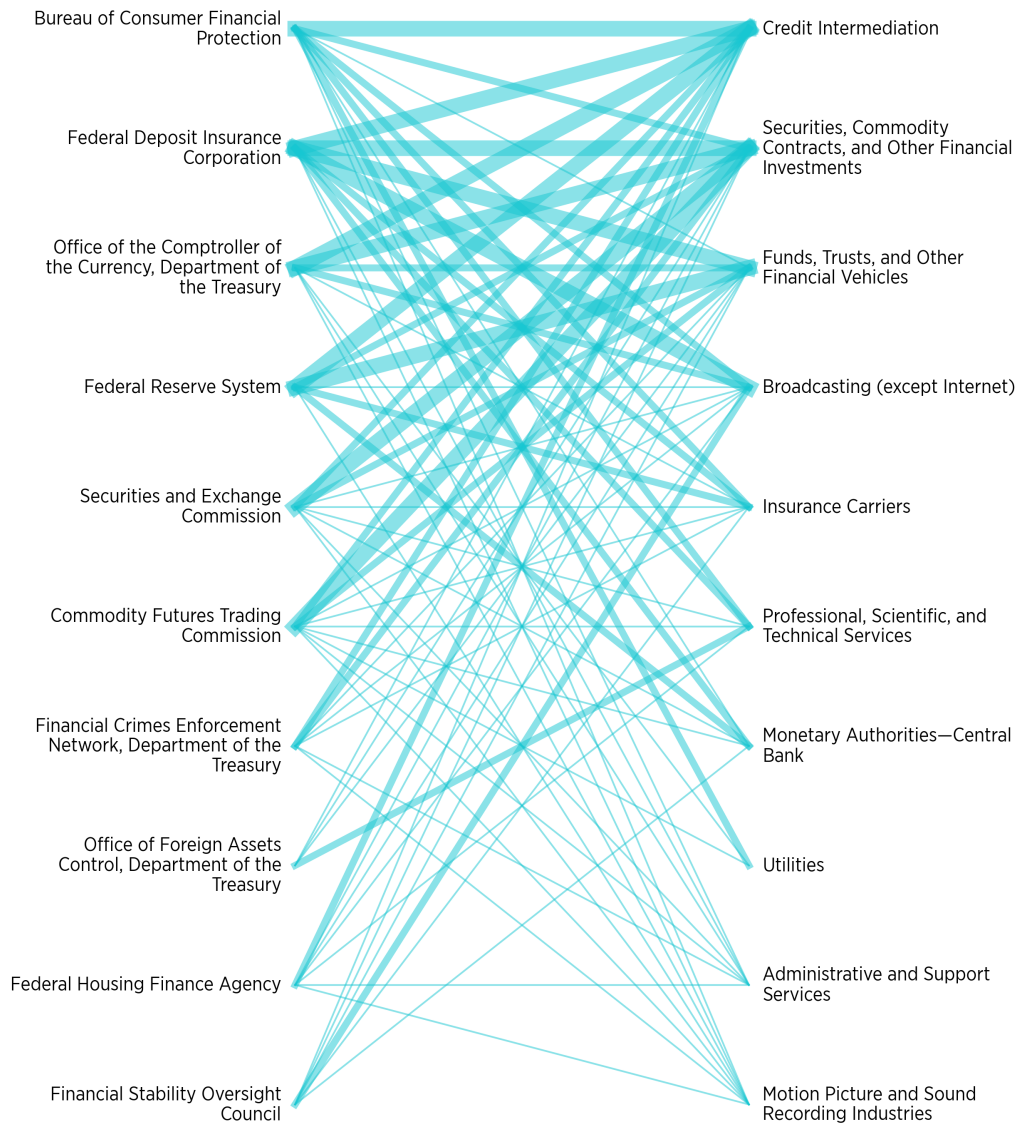
Note: Dodd-Frank = the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010; FIRREA = the Financial Institutions Reform, Recovery, and Enforcement Act of 1989; FDICIA = the Federal Deposit Insurance Corporation Improvement Act of 1991; Sarbanes-Oxley = the Sarbanes-Oxley Act of 2002.

Source: Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0 Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/; Patrick A. McLaughlin and Oliver Sherouse, Public Law Database (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/.

Second, we can gauge scope by examining the range of the content of rules citing Dodd-Frank. With RegData statistics, we can judge the range of content of rules induced by an act of Congress by examining the number of industries that are targeted by regulatory restrictions authorized by the act. However, instead of simply examining the number of industries targeted by regulations associated with an act, we can simultaneously consider the multiplicity of agencies that have created rules targeting the same industry. This approach is designed to highlight the distinct possibility of overlap and interference between different agencies' rules, or, at the very least, the need for complex processes and careful design to avoid such overlap.

Figure 4 shows two columns. On the left are the top 10 Dodd-Frank agencies, as ranked by the number of restrictions citing Dodd-Frank produced by 2016. On the right are the top 10 industries targeted by those Dodd-Frank-citing agency restrictions. The lines between the two columns connect the agencies writing the regulations with the industries their regulations target. When several lines originating at different agencies end at a single industry, this indicates that the industry has been faced with new rules from multiple agencies. Furthermore, the thickness of the lines represents the number of restrictions that a specific agency has created that target a specific industry. For visualization purposes, we have used three different line thicknesses to indicate the relative size of the agency-industry relationships: thin, medium, and large. A thin line indicates that the agency has produced between 10 and 100 industry-relevant restrictions; medium indicates between 101 and 1,000; and thick indicates more than 1,000.

Figure 4. Scope of Dodd-Frank, as Indicated by the Multiplicity and Size of Agency-Industry Relationships Six Years after the Act's Passage

Note: Line thickness represents number of restrictions. Thin lines indicate fewer than 100 restrictions, medium lines between 101 and 1,000 restrictions, and thick lines more than 1,000 restrictions. Dodd-Frank = the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.

Source: Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0 Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/; Patrick A. McLaughlin and Oliver Sherouse, Public Law Database (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/.

By way of contrast, we depict the agency-industry relationships caused by Sarbanes-Oxley in figure 5. The picture is much simpler. There could be several different explanations for this relatively smaller scope: For one, Sarbanes-Oxley was 66 pages long, while Dodd-Frank was 848 pages. Furthermore, Sarbanes-Oxley was more general and may not have deliberately targeted industries in the same way as Dodd-Frank.

FIRREA—one of the other major financial acts of Congress mentioned earlier—offers another point for comparison. FIRREA's set of agency-industry relationships is more complex than Sarbanes-Oxley's, but it still pales in comparison to that of Dodd-Frank, as shown in figure 6. One difference is that only 30 agencies promulgated rules citing FIRREA, whereas Dodd-Frank has been cited by 31 agencies (although only the top 10 agencies are shown in each of these figures). But it's also evident that FIRREA does not come close to replicating the complex web of lines created by Dodd-Frank.

Finally, we compare the previous financial acts with FDICIA. Figure 7 shows that FDICIA's set of agency-industry relationships is significantly less complex than Dodd-Frank's. Note that only 12 agencies promulgated rules that cited FDICIA and affect the top 10 industries facing FDICIA-related regulation.

Figure 5. Scope of Sarbanes-Oxley, as Indicated by the Multiplicity and Size of Agency-Industry Relationships Six Years after the Act's Passage
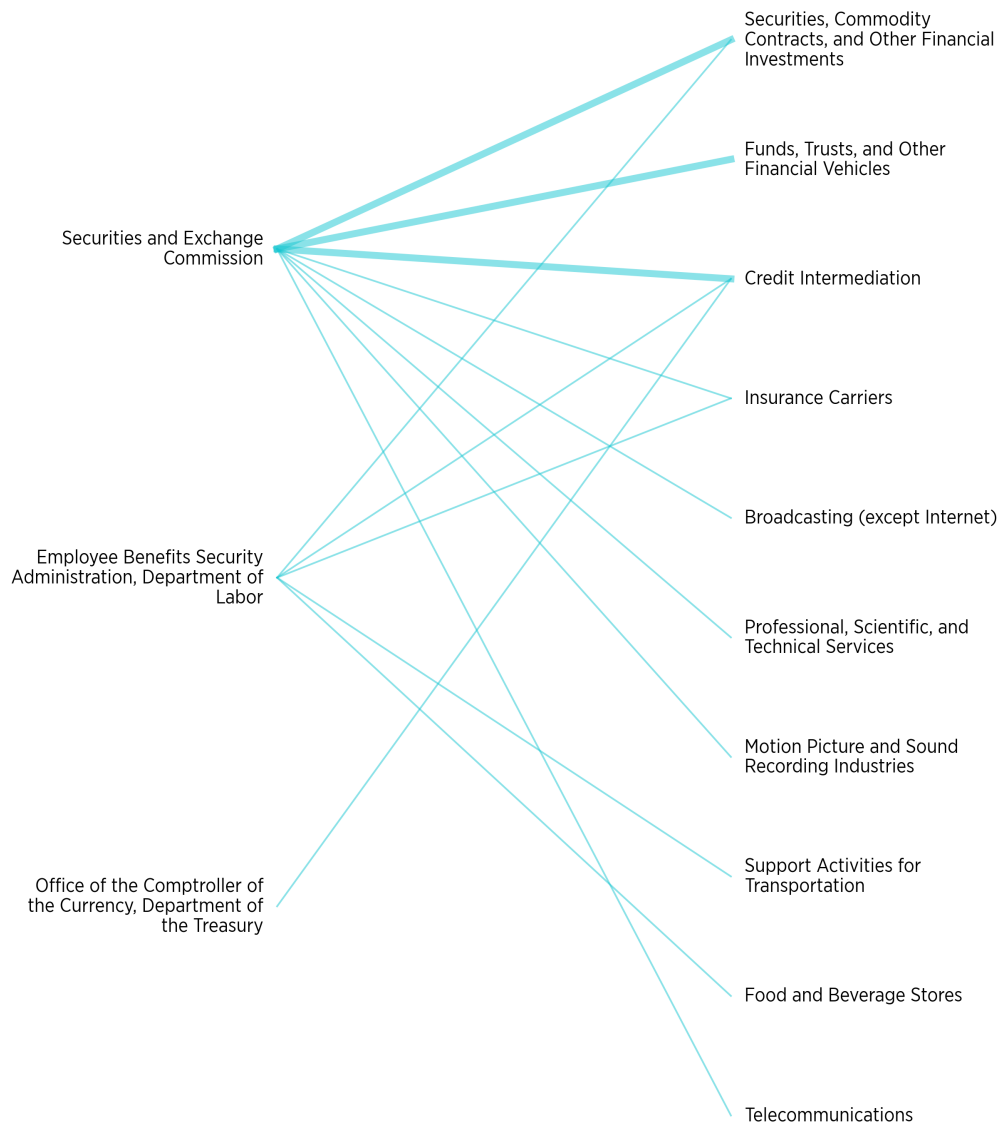
Note: Line thickness represents number of restrictions. Thin lines indicate fewer than 100 restrictions, medium lines between 101 and 1,000 restrictions, and thick lines more than 1,000 restrictions. Sarbanes-Oxley = the Sarbanes-Oxley Act of 2002.

Source: Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/; Patrick A. McLaughlin and Oliver Sherouse, Public Law Database (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/.

Figure 6. Scope of FIRREA, as Indicated by the Multiplicity and Size of Agency-Industry Relationships Six Years after the Act's Passage
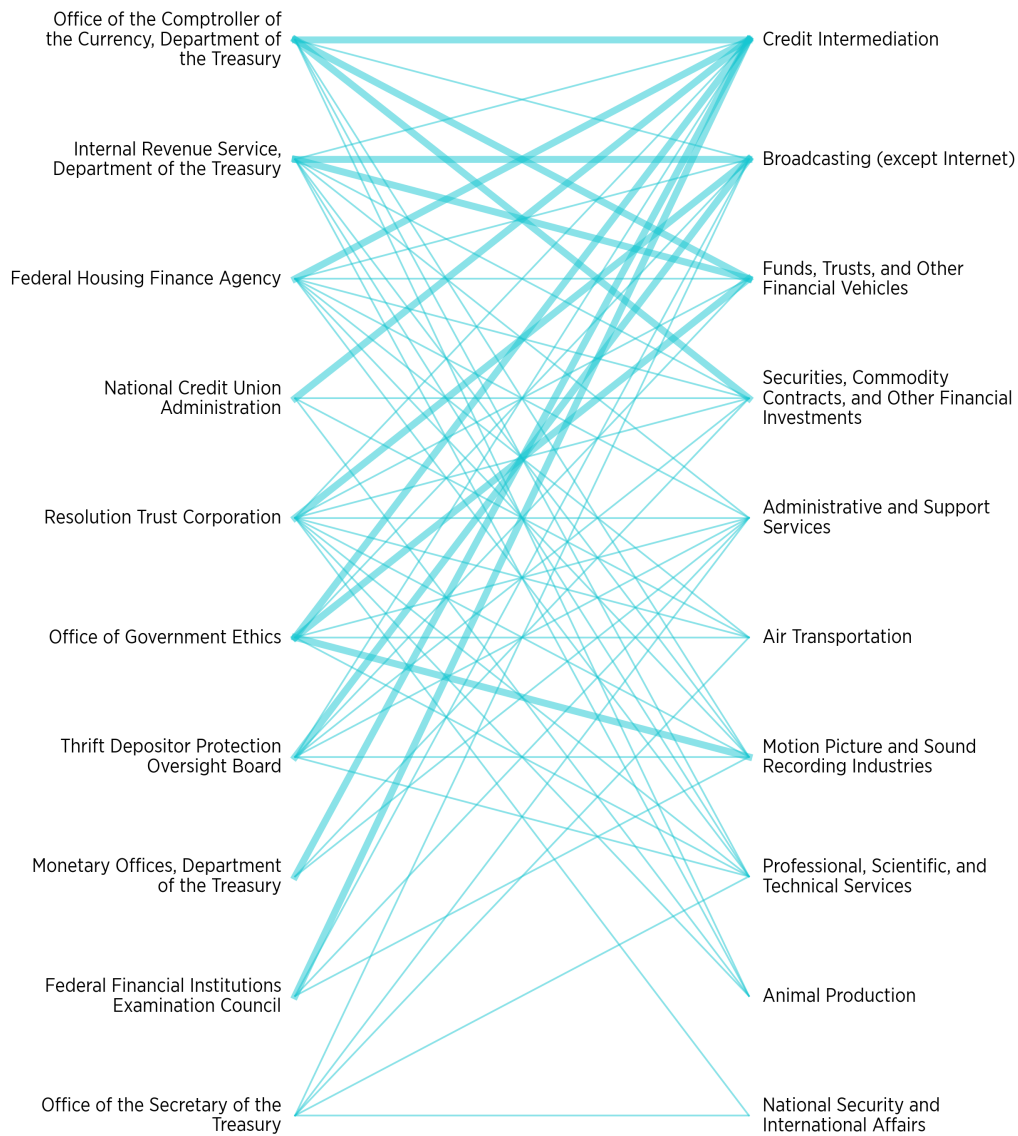
Note: Line thickness represents number of restrictions. Thin lines indicate fewer than 100 restrictions, medium lines between 101 and 1,000 restrictions, and thick lines more than 1,000 restrictions. FIRREA = the Financial Institutions Reform, Recovery, and Enforcement Act of 1989.

Source: Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0 Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/; Patrick A. McLaughlin and Oliver Sherouse, Public Law Database (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/.

Figure 7. Scope of FDICIA, as Indicated by the Multiplicity and Size of Agency-Industry Relationships Six Years after the Act's Passage
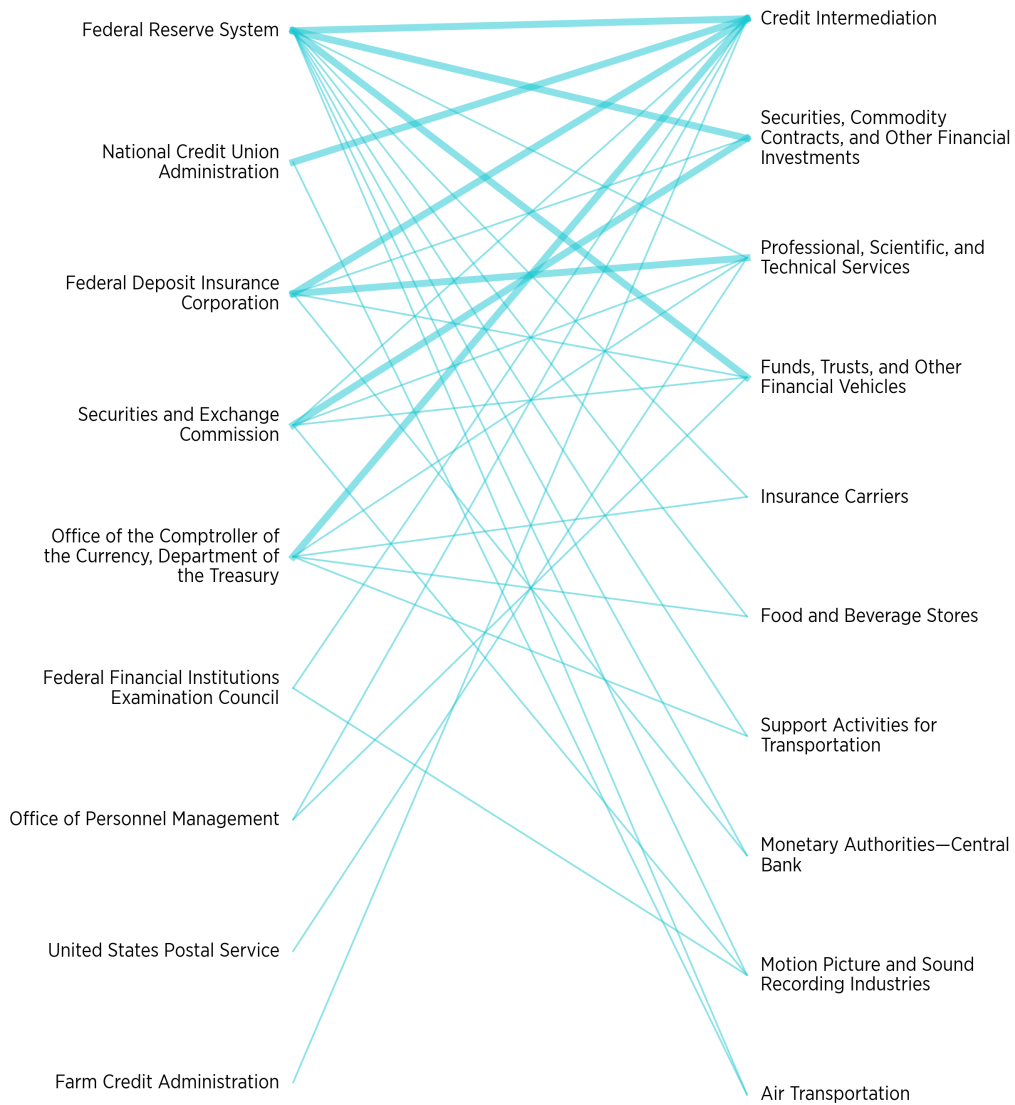
Note: Line thickness represents number of restrictions. Thin lines indicate fewer than 100 restrictions, medium lines between 101 and 1,000 restrictions, and thick lines more than 1,000 restrictions. FDICIA = the Federal Deposit Insurance Corporation Improvement Act of 1991.

Source: Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/; Patrick A. McLaughlin and Oliver Sherouse, Public Law Database (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/.

5.3. Complexity

While restriction counts convey valuable information about the scope of a regulation and its impacts, finding alternative ways to measure scope and provide information about the relative stringency and complexity of regulation is valuable. Relatedly, as legislation becomes longer and more complex, isolating more-descriptive methods of conveying a law's relative complexity is also important. We further explore the legal complexity of the four laws—Dodd-Frank, Sarbanes-Oxley, FDICIA, and FIRREA—by calculating the "Shannon entropy" of each law for each year of its existence.

Shannon entropy is a concept within information theory that stems from Claude E. Shannon's "A Mathematical Theory of Communication," a 1948 paper originally published in the *Bell System Technical Journal*. Shannon (1948, 6) presented the scenario where a "discrete source" was "generating a message, symbol by symbol" and choosing "successive symbols according to certain probabilities depending, in general, on preceding choices as well as the particular symbols in question." By calculating the entropy of the signal, he provided a method by which to quantify "how much information is 'produced' by such a process" (Shannon 1948, 11).

As a measure, Shannon entropy communicates the information that is contained within a signal, which can come in various forms, including graphical, textual, linguistic, and so on. The higher the entropy of a signal, which is usually measured in bits, the more uncertainty there is in predicting and interpreting the signal. Measuring entropy is closely connected to probability theory, particularly as it depends on the predictability of the next symbol produced and the ability of the receiving party to interpret the message. For a reference point, the outcome of a fair coin toss conveys 1 bit of information.[9]

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[9] A fair coin toss would have an entropy of 1 because $\log_2 2 = 1$.

As another analogy, consider a game like Wheel of Fortune, where contestants must guess the message with a limited number of letters revealed. The entropy of the message, as well as each letter, conveys how much signal is coming through and how much work you must do to understand the next letter. The longer the text string, the more difficult it is to interpret the signal; conversely, a shorter message is easier to understand and has a lower entropy (i.e., conveys fewer bits of information). Similarly, as the number of known letters increases, the entropy of the following letters decreases because it becomes easier to predict the next one and to determine the entire message. Figure 8 depicts the entropy spectrum, which illustrates the relationship between signals and their relative entropy and uncertainty.

Figure 8. Entropy Spectrum
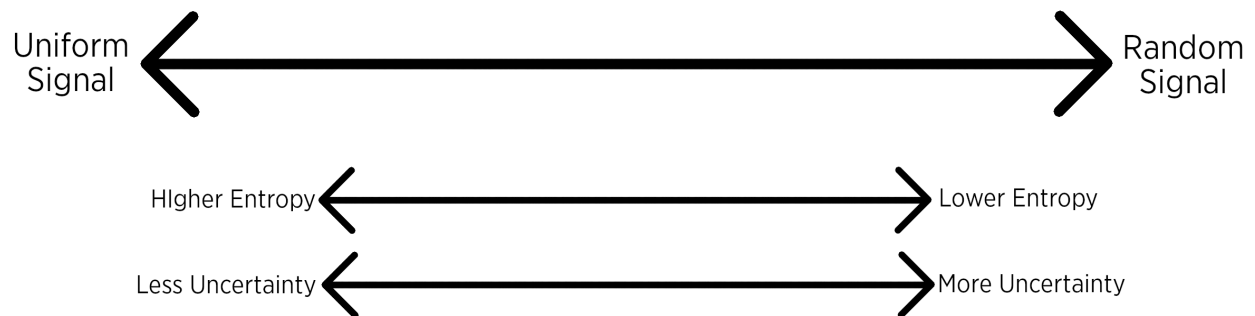
Source: Daniel Martin Katz and M. J. Bommarito II, "Measuring the Complexity of the Law: The *United States Code*," *Artificial Intelligence and Law* 22, no. 4 (2014): 358.

Entropy has been used as a complexity measure in various contexts. Dehmer and Mowshowitz (2011, 57) used Shannon entropy to interpret the structural information content of graphs. While earlier applications of Shannon entropy were in "linguistics and electrical engineering," it has been more recently "used to determine the structural information content of a network," such as the graphs of biological and chemical systems (Dehmer and Mowshowitz

2011, 61). We use Shannon entropy as a quantitative measure of the uncertainty generated by a signal, which in the context of Dodd-Frank is the written text of the law. Our approach is not entirely novel. Previous research has interpreted written language in terms of Shannon entropy. Lawnik (2012) analyzed translations of Shakespeare and Goethe into German and English, respectively, to assess the quality of the translation as compared to the original, predicting that more similar Shannon entropy measures indicate more accuracy. Calculating the Shannon entropy by "frequency of individual words' occurrence in a given literary text," Lawnik (2012, 3) concluded that "German has a higher entropy than English," which is consistent with German's three grammatical genders and generally more complex sentence structures.

Katz and Bommarito (2014, 337) used Shannon entropy to measure the complexity of the *United States Code*, moving beyond "simple measures of size, such as the number of pages in a bill." To estimate and rank the relative complexity of titles in the USC, Katz and Bommarito (2014, 340) identified the "primary qualitative features of the Code that contribute to its complexity"—structure, language, and interdependence. As a subset of the "language" feature, Katz and Bommarito (2014, 354) suggested employing the concept of entropy to differentiate between opaque texts with a "high concept variance" and uncomplicated language composed of "largely homogeneous material." They derived the corresponding measures of Shannon entropy for each title and incorporated them with measures of structure and interdependence to construct a composite ranking of the complexity of the titles in the USC.

To calculate the Shannon entropy of Dodd-Frank and its regulatory companions, we employ the formula

$$H(D) = - \sum_{w \in W_D} p_w log_2(p|w),$$

where D is a document, $H(D)$ is the Shannon entropy of document D, W_D is the set of unique words occurring in document D, and p_w is the probability of encountering one of these words at a random point in the text—that is, the frequency of that word as a percentage of the total word count.

We use RegData to search the parts of the CFR citing Dodd-Frank or another major financial act as their statutory authority. We use the words contained in the CFR and the corresponding probabilities of their occurrence to calculate the entropy of each major financial law for every year of its existence. Figure 9 reports the results. Note that the chart's baseline is not set at zero, but rather the vertical axis highlights a segment of approximately 1.4 bits of entropy in order to focus in detail on the relative entropies for each law.

Despite Dodd-Frank's limited existence compared to the other financial acts that we analyzed, the law is currently more complex than the others. Figure 9 shows that Dodd-Frank's entropy was 10.67 bits as of 2016, compared to 10.39 for FDICIA, 10.55 for FIRREA, and 10.26 for Sarbanes-Oxley. In other words, the four laws are relatively close in terms of complexity, and Dodd-Frank is the most complex. However, because only six years of data are available for Dodd-Frank, significantly less than for the other regulations, the long-term trend remains ambiguous.

When they were initially passed, FDICIA and FIRREA were more complex than Dodd-Frank is now—each law reached nearly 11 bits of entropy before declining between 1996 and 1997. While the data do not specify the reasons for this decline, regulatory reforms could have precipitated the decrease in complexity. For instance, the implementation of the Paperwork Reduction Act of 1995 (Pub. L. No. 104-13, 109 Stat. 163), which sought to minimize paperwork burdens for entities affected by federal information collection requirements, may have contributed to the decline in entropy between 1996 and 1997. As of 2016, Dodd-Frank remains

the most complex of the financial laws considered. The trajectory and legacy of Dodd-Frank will become clearer as more time elapses.

Figure 9. Shannon Entropy of Major Financial Acts for Each Year after Their Passage
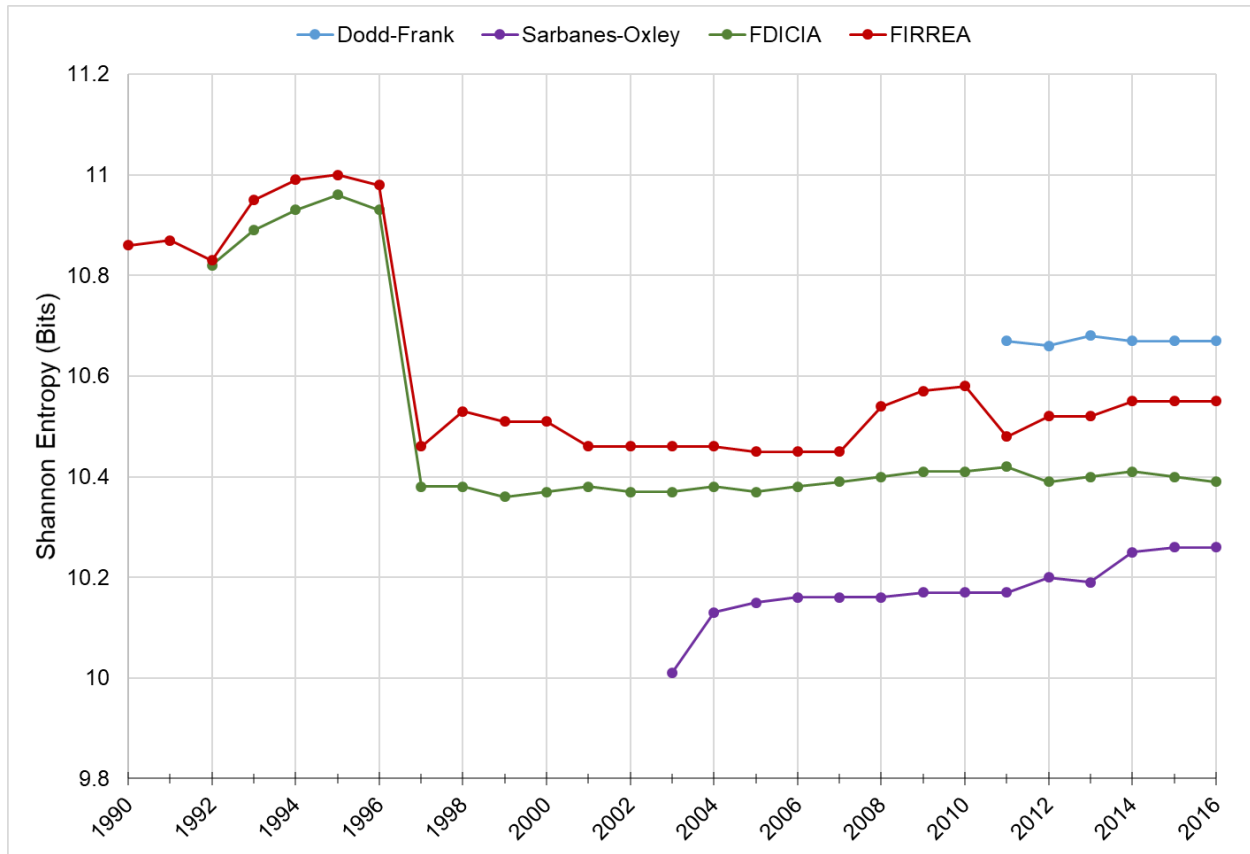
Note: Dodd-Frank = the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010; Sarbanes-Oxley = the Sarbanes-Oxley Act of 2002; FDICIA = the Federal Deposit Insurance Corporation Improvement Act of 1991; FIRREA = the Financial Institutions Reform, Recovery, and Enforcement Act of 1989.

Source: Authors' calculations based on data from Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0 Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/.

How do these results compare to previous research on the complexity of language and text? Katz and Bommarito (2014, 359) found that the word entropy of the titles of the USC ranges from 8.24 at the low end of the spectrum to 10.80 at the high end. In other words, Dodd-

Frank's entropy is almost as great as that of the most complex part of the USC—Commerce and Trade (Title 15).

The calculations by Lawnik (2012) for Shakespeare and Goethe texts also provide a useful reference point for our analysis. The original English texts of Shakespeare have entropies spanning from 9.01 (*Julius Caesar*) to 9.42 (*King Lear*); the translated works of Goethe have entropies that range between 9.02 (*Wilhelm Meister's Apprenticeship and Travels*, book 6) and 9.42 (*Iphigenia in Tauris*). Thus, these literary works—which have been scrutinized over hundreds of years, often feature archaic terminology and grammar, and have spawned thousands of literary analyses—are less complex than Dodd-Frank and other financial acts. While requiring financial-sector businesses to comply with a Shakespearean text makes little practical sense, our measures of Shannon entropy suggest that it would be relatively easier for compliance personnel to interpret the text of *Hamlet* than to discern the meaning of the complicated regulatory network created by Dodd-Frank.

Lawnik (2012) provides another useful tool comparing relative complexities and assessing the potential growth of complexity in written texts. The maximal word entropy of a text is determined by taking the logarithm (base 2) of the total number of words in the passage.

Figure 10 depicts the Shannon entropies and maximal entropies, as of 2016, of the financial laws we have been considering and of two selected Shakespearean texts. Unsurprisingly, Dodd-Frank has substantially greater maximal entropy than any of the literary works of Shakespeare, since maximal entropy is directly related to the number of words. These results reinforce the strong connection between size and complexity. The relationship of maximal entropy to word counts is indicative of a positive correlation between longer laws and greater regulatory complexity. While the differential in entropy between the literary works and

Dodd-Frank may not appear to be very wide, the works of Shakespeare and Goethe are complex

pieces of literature that help contextualize the uncertainty created by financial acts.

Figure 10. Shannon Entropy vs. Maximal Entropy of Financial Acts in 2016 and Two Shakespeare Classics
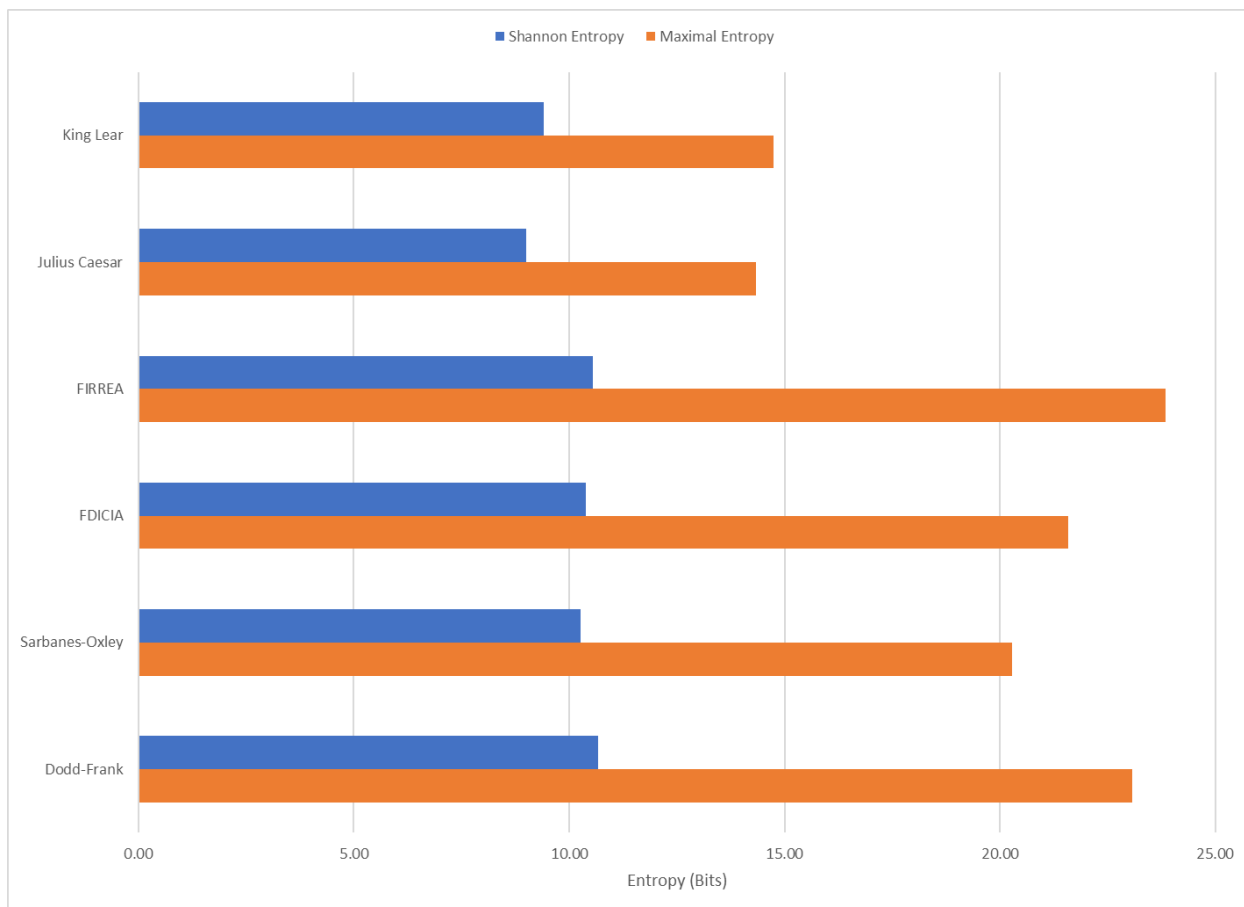
Note: FIRREA = the Financial Institutions Reform, Recovery, and Enforcement Act of 1989; FDICIA = the Federal Deposit Insurance Corporation Improvement Act of 1991; Sarbanes-Oxley = the Sarbanes-Oxley Act of 2002; Dodd-Frank = the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.

Sources: Marcin Lawnik, "Shannon's Entropy in Literary Works and Their Translations," *Journal of Computer Science* 1, no. 3 (2012); Patrick A. McLaughlin and Oliver Sherouse, RegData US 3.0 Annual (dataset), QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2017, https://quantgov.org/regdata-us/.

The complexity of Dodd-Frank and other financial laws is concerning, especially because it

increases uncertainty for those who must interpret laws. As Katz and Bommarito (2014, 357)

suggest, laws with higher entropy are "likely less cohesive." End users, such as small business

owners and compliance personnel, have a greater chance of encountering "new language or new concepts" (Katz and Bommarito 2014, 357). More complex language is also more prone to result in redundant or contradictory regulations that create confusion among businesses and lawmakers, especially when complexity conceals what activities are covered by current regulations. Discussing the interaction between rules and regulatory compliance, Katz and Bommarito (2014, 345–46) highlight "rule search" (the complexity of determining which rules are applicable to an action) and "rule assimilation" (the complexity of the process of integrating the information contained in a body of rules) as essential aspects of the decision-making process of a regulated entity.

While previous researchers have distinguished between uncertainty and complexity, arguing that they are not "conceptually equivalent" (Katz and Bommarito 2014, 345), the association between complexity and uncertainty is most likely positive. Regulations with high entropies may have relatively more ambiguous language, exhibit less predictable word choice, and use more obscure vocabulary than laws with low entropies. All these factors contribute to the challenges of interpretation and reduce the likelihood that rulemakings can be reliably and predictably followed by those affected. The compliance costs of regulations will most likely rise as businesses invest more resources to interpret what activities are affected. Businesses may also forgo opportunities because they are uncertain about what activities are subject to regulation.

6. Discussion

Dodd-Frank's size, scope, and complexity increase the likelihood that regulatory efforts pursuant to the act's statutory mandate will not accomplish their ostensible goals. Poorly considered laws have a secondary effect on regulation induced by the legislation. In other words, Dodd-Frank's status as the "biggest" law ever could make it more difficult for its provisions to achieve their stated outcomes, both from a legislative perspective and in relation to its statutorily authorized

regulatory actions. The effect will likely be long-lived, since Congress does not regularly modify statutes that cause poor regulation, nor do members usually possess the context-specific knowledge to evaluate which pieces of legislation are the sources of substandard rules.[10] Instead, agencies are often expected to produce positive outcomes even when they are limited by poor statutory language.

The increase in the length of laws seems unlikely to stop anytime soon. This leads to an important question: What effect does the growing size and scope of law have on the quality, effectiveness, and efficiency of regulations that the laws authorize? Setting aside the actual content and whether it forces good or poor design of regulations, large laws like Dodd-Frank may lead to a deterioration in the quality, effectiveness, and efficiency of regulations for at least two procedural reasons.

First, regulatory surges, such as the one induced by Dodd-Frank, may overwhelm quality control mechanisms built into the regulatory process simply because of the large volume of rules going through a capacity-constrained quality control system. McLaughlin (2010) demonstrated that the length of review of rules performed by the Office of Information and Regulatory Affairs—the office within the Office of Management and Budget responsible for the review of new rules—decreases significantly during periods of regulatory surges. If review increases rule quality, regulatory surges that overwhelm the review process are likely to lead to lower-quality rules. Furthermore, many of the federal financial regulatory agencies that have promulgated rules related to Dodd-Frank are considered "independent regulatory agencies," which means their

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[10] Despite these tendencies of Congress, there has been some talk of reforming Dodd-Frank. For example, the US House of Representatives passed a bill to erase certain financial regulations, although its odds of becoming law are minimal (see Rappeport 2017). Furthermore, the Trump administration has made minimal efforts to improve the quality of regulations and to address counterproductive rules through executive orders such as Exec. Order No. 13772, 82 Fed. Reg. 9965, February 8, 2017.

economic analyses are not subject to executive order requirements and are exempt from review by the Office of Information and Regulatory Affairs (McLaughlin and Greene 2014, 3). The requirements for producing economic analyses are significant because "there is a positive and statistically significant correlation between" the quality of regulatory analysis and agencies using such analysis to help craft rules (Ellig and McLaughlin 2012, 867). In other words, a high-quality analysis is useful for deciding whether and how to regulate.

Second, the broad scope of long and complex laws may induce many possible interactive, duplicative, or conflicting regulations to be created simultaneously. It may be easier for a regulator to consider other relevant regulations when creating a new regulation if those other rules already exist, since the nature of the new rule's effect on the targeted industry can be considered ex ante. But when multiple agencies simultaneously develop rules affecting the same industry or industries, these rules' possible interactions are guesswork at best and completely unconsidered at worst. Indeed, public intellectuals have raised the concern that regulators have been overwhelmed by the scope of Dodd-Frank, requiring them to tack on an extensive procession of additional rules and regulations (Kaufman 2013; Wallison 2014).

Furthermore, regulatory capture may be more likely when rules are longer, broader in scope, or more complex. Privilege-granting clauses and provisions may be harder to discern; some stakeholders (e.g., industry) may be able to opportunistically influence Congress or agencies when the opposing stakeholders (e.g., unions) are capacity-stretched. This influence may not show up in specific clauses, but rather in changes on the margin—such as in a modification of the limit for a performance standard in one direction or another, when that change would have been unsuccessful if competing stakeholders had expressed their opposition.

7. Conclusion

The Dodd-Frank Wall Street Reform and Consumer Protection Act has lived up to its description as the most far-reaching and comprehensive regulatory effort passed in the history of financial regulation. We used statistics from RegData 3.0 to demonstrate that Dodd-Frank is a likely candidate for the biggest law ever. Dodd-Frank is also part of a general trend toward longer and more complex law. We argue that the trend likely causes the creation of lower-quality regulations for multiple reasons related to the regulatory process. First, large laws induce regulatory surges, which can overwhelm the quality control process. Second, when multiple agencies produce new regulations targeting the same industry simultaneously, they act with uncertainty about how their regulations may interact.

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