Almost eight years after the passage of Dodd-Frank, financial institutions remain large, complex, and interconnected. Academics and policymakers across the ideological spectrum largely agree that Dodd-Frank has imposed substantial compliance costs on systematically important financial institutions (SIFIs) without solving the problem that they are too big to fail. This Note argues that Dodd-Frank’s compliance costs have actually served an important regulatory purpose. By analyzing the spinoffs and divestitures that have occurred at eleven SIFIs since Dodd-Frank went into effect in 2010, this Note documents the extent to which the Act’s compliance costs have led SIFIs to shed business lines of their own accord. The data reveal that regulators can adjust Dodd-Frank’s costs in response to the perceived riskiness of specific business units, and that SIFIs can respond to these adjustments by divesting the business lines that caused their compliance costs to increase— that is, SIFIs’ riskiest lines of business. In this way, Dodd-Frank has had an effect analogous to that of a Pigouvian tax—what we call a “Pigouvian regulation.” Furthermore, because Dodd-Frank grants regulators discretion to ramp up (or down) these compliance costs over time, it provides them with powerful tools to incentivize SIFIs to become less systemically important. We therefore conclude that Dodd-Frank’s compliance costs are not a mere ancillary effect of the law, but rather support the Act’s core purpose by empowering regulators to force SIFIs to divest themselves of their riskiest assets. In doing so, regulators can—and have—made financial institutions safer.

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INTRODUCTION

On April 13, 2016, the Federal Deposit Insurance Corporation (FDIC) — the agency tasked with overseeing the liquidation of systemically important financial institutions (SIFIs) during a financial crisis — convened a meeting to discuss Dodd-Frank Wall Street Reform and Consumer Protection Act’s (Dodd-Frank) bankruptcy regime. During the meeting, Vice Chair Thomas Hoenig noted that Dodd-Frank had failed to achieve its primary goal of ending the problem of “too big to fail” — the idea that some financial institutions are so important to the broader financial system that the government could never allow them to go bankrupt. Observing that banks are “larger, more complicated, and more interconnected” than they were before the financial crisis of 2007-2008, Hoenig concluded that not a single SIFI had shown that it could “address all phases of a successful bankruptcy if its failure were imminent.” On the same day, he issued a statement lamenting that “[t]he goal to end too big to fail and protect the American taxpayer by ending bailouts remains just that: only a goal.”

Hoenig’s statements reflect the academic and political consensus: scholars and politicians from both sides of the aisle agree that Dodd-Frank has in many


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ways entrenched—not ended—too big to fail. Although commentators recognize that Dodd-Frank has reduced systemic risk in the financial system, many fear that another financial crisis would still force Congress to choose between bailing out a SIFI or allowing a recession. What is more, some scholars have suggested that Dodd-Frank’s regulatory costs have actually compounded the too big to fail problem. Professor Roberta Romano, for example, has argued that


5. See infra Section III.C.3.

6. See infra Section II.C; Kwon-Yong Jin, Note, How To Eat an Elephant: Corporate Group Structure of Systemically Important Financial Institutions, Orderly Liquidation Authority, and Single Point of Entry Resolution, 124 YALE L.J. 1746, 1765-77 (2015); Arthur E. Wilmarth, Jr. & Stephen J. Lubben, Too Big and Unable To Fail, Fla. L. REV. (forthcoming) (manuscript at 1-9); see also Nizan Geslevich Packin, The Case Against the Dodd-Frank Act’s Living Wills: Contingency Planning Following the Financial Crisis, 9 BERKELEY BUS. L.J. 29, 34-35, 84-85 (2012) (defining living wills and arguing that their costs might outweigh their benefits); Hoenig, supra note 2 (“Too easily one [SIFI] failure could become a systemic crisis.”).
Dodd-Frank mandates the adoption of “costly and burdensome regulations, many totally unrelated to the financial crisis, while failing to address key factors widely acknowledged to have contributed to the financial crisis.” As a result, she believes that “[Dodd-Frank] has not resolved the ‘too-big-to-fail’ syndrome. In fact, it could well exacerbate it.”

Much of this pessimism rests on the assumption that Dodd-Frank could only solve too big to fail via the measures explicitly included in the text of the statute: namely, through “command-and-control” regulations. In fact, even scholars and policymakers who favor market-based solutions — that is, policy instruments such as taxes that force individuals and firms to account for the social costs of their activities— assume that Dodd-Frank does not currently utilize them. One commentator, for instance, has bemoaned the Act’s failure to adopt typical market-based incentives and has urged Congress to improve financial regulation by implementing a tax on bank borrowing. Others recognize that the Act imposes significant costs on bank size, but mistakenly assume that these costs serve no regulatory purpose. Indeed, some commentators even critique these costs


8. Id.


11. Masur & Posner, supra note 9, at 100.


13. Romano, supra note 7.
as allowing savvy banks to arbitrage away from highly regulated activities and toward tax avoidance strategies that may be just as risky.\textsuperscript{14} And other scholars see Dodd-Frank as benefiting certain firms over others, which might exacerbate the too big to fail problem.\textsuperscript{15}

This mistake is understandable. The plain text of Dodd-Frank appears either to bar SIFIs from engaging in certain behaviors or to direct SIFIs to follow certain rules and procedures when contemplating specified transactions.\textsuperscript{16} As a result, most scholars who have examined Dodd-Frank through a Pigouvian lens

\begin{footnotesize}

\textsuperscript{15} See Dodd-Frank Act’s Effects on Financial Services Competition: Hearing before the Subcomm. on Intellectual Prop., Competition, and the Internet of the H. Comm. on the Judiciary, 112th Cong. 4 (2012) (statement of Rep. Melvin L. Watt, Member, Subcomm. on Intellectual Prop., Competition & the Internet), http://www.gpo.gov/fdsys/pkg/CHRG-112hhrg74976/pdf/CHRG-112hhrg74976.pdf [http://perma.cc/V6ET-6LW7] ("In my view, Dodd-Frank significantly leveled the playing field between larger and smaller banks, and it seems to me that a major part of the dissatisfaction with Dodd-Frank is that we could never absolutely level the playing field."). Others in Congress disagreed. Id. at 2 (statement of Rep. Bob Goodlatte, Chairman, Subcomm. on Intellectual Prop., Competition & the Internet) ("The Dodd-Frank Act could also harm competition by designating certain banks and nonbank financial institutions as systemically important and creating special liquidation procedures for them outside of bankruptcy. These special liquidation procedures treat systemically important companies’ creditors better than the bankruptcy law. As a result, systemically important institutions, already among the biggest companies in America, may receive favorable treatment in the credit markets. This could lead to even more concentration."). But see id. at 14-15 (statement of Adam Levitin, Professor, Georgetown Univ. Law Ctr.) (noting that the SIFI regulations should have the “collateral effect of leveling the competitive playing field between ‘too big to fail’ firms and smaller financial institutions”).

\textsuperscript{16} See infra Section II.B.
\end{footnotesize}
DODD-FRANK IS A PIGOUVIAN REGULATION

tend to assume that, because Dodd-Frank adopts this command-and-control approach, it necessarily rejects market-based incentives, and therefore cannot have a Pigouvian effect.\textsuperscript{17}

However, two former members of the Board of Governors of the Federal Reserve have argued that Dodd-Frank’s compliance costs—the very costs that are purportedly “unrelated to the financial crisis”\textsuperscript{18}—can actually be understood as an economic tool.\textsuperscript{19} In two short speeches, former Federal Reserve Chair Ben Bernanke and former Federal Reserve Governor Jeremy Stein observed that Dodd-Frank functions like a Pigouvian tax—that is, a tax that corrects market imperfections by forcing individual actors to bear the costs of the externalities

\begin{flushright}
\textsuperscript{17} See, e.g., Masur & Posner, supra note 9, at 129–31; Dale B. Thompson, Beyond Dodd-Frank: Pinning Down the Octozilla of Too-Big-To-Fail with Multiple Market Instruments, 35 BANKING & FIN. SERVICES POL’Y REP. 1, 1 (2016) (“[W]e need to go beyond the command-and-control approach of the Dodd-Frank Act, and adopt economic instruments to correct these market failures [of Dodd-Frank].”).

\textsuperscript{18} Romano, supra note 7.

\textsuperscript{19} Ben S. Bernanke, Ending “Too Big To Fail”: What’s the Right Approach?, BROOKINGS INSTITUTION (May 13, 2016), http://www.brookings.edu/blog/ben-bernanke/2016/05/13/ending-too-big-to-fail-whats-the-right-approach [http://perma.cc/BV7T-JZ69]; Jeremy C. Stein, Regulating Large Financial Institutions, BOARD GOVERNORS FED. RES. SYS. (Apr. 17, 2013), http://www.federalreserve.gov/newsevents/speech/stein20130417a.htm [http://perma.cc/42ZD-D9US]; see also Steven Davidoff Solomon, Despite Its Problems, Dodd-Frank Is Better than the Alternatives, N.Y. TIMES (Oct. 16, 2012 6:56 PM), http://dealbook.nytimes.com/2012/10/16/despite-its-problems-dodd-frank-is-better-than-the-alternatives [http://perma.cc/9PrR-VCL9] (“Dodd-Frank tries to figure out who [“too big to fail” institutions] are and charge them for being too big. This is done by raising their regulatory costs through more oversight and supervision . . . . [O]ne purpose of this increased regulation is to impose a regulatory tax on big banks to push them to be smaller.”). Solomon, like Bernanke and Stein, envisions Dodd-Frank’s compliance costs as akin to a general tax on financial institutions that are too big to fail. Banks themselves have also noted that Dodd-Frank’s compliance costs act like a tax. See Glob. Mkt. Inst., Who Pays for Bank Regulations?, GOLDMAN SACHS 2 (June 9, 2014), http://www.goldmansachs.com/our-thinking/public-policy/regulatory-reform/who-pays-for-bank-regulation-pdf.pdf [http://perma.cc/6S3P-SCA6] (“While many of these [regulations] are designed to strengthen the safety and soundness of the banking system, they also act as a tax on banks: by changing relative prices, regulation makes some activities more expensive and others cheaper.”). All of these commenters, however, simply remark that the regulations charge banks for being systemically important. They do not show that regulators have been using those costs to push banks away from risky activities. Of course, not all compliance costs serve a regulatory purpose. It is hard, for instance, to justify inconsistencies between rules promulgated by financial regulators. See Joshua C. Macey, Note, Playing Nicely: How Judges Can Improve Dodd-Frank and Foster Interagency Collaboration, 126 YALE L.J. 806, 812-32 (2017) (criticizing the Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) for failing to coordinate swap regulations).
resulting from their actions. Stein, for example, commends Dodd-Frank’s “price-based approach” for “creat[ing] some incentive . . . to shrink” while also “let[ting] [banks] balance this incentive against the scale benefits that they realize by staying big.” In other words, even though large financial institutions do not naturally bear the social costs of being systemically important, Bernanke and Stein contend that Dodd-Frank forces banks to internalize some of these costs by making them pay additional compliance costs for being systemically important.

This Note both substantiates and extends Bernanke’s and Stein’s claims that Dodd-Frank works like a Pigouvian tax. We substantiate their argument by analyzing the SIFI divestitures that have occurred since Congress passed Dodd-Frank in 2010 and by identifying which divestures were motivated—or at least heavily influenced—by compliance costs associated with Dodd-Frank. In this way, we document how Dodd-Frank incentivizes SIFIs to internalize the costs of being systemically important. In addition, we show that these costs have induced SIFIs to shed risky assets and thereby fundamentally change the nature of their operations. Put another way, while Bernanke and Stein have argued that compliance costs serve an economic purpose by allowing regulators to fix market imperfections, this Note argues that those compliance costs can also serve an important regulatory purpose by incentivizing SIFIs to shed the business units that generate financial risk in the first place. Because of these regulatory effects, we call Dodd-Frank a “Pigouvian regulation.”

Viewing Dodd-Frank as a Pigouvian regulation has several important consequences. First, it reveals Dodd-Frank’s novel and effective regulatory model. Scholars may be correct that firms remain too big to fail, but by creating incen-


21. Stein, supra note 19.

22. Professors Daniel Schwarcz and David Zaring recently made a related argument in Regulation by Threat: Dodd-Frank and the Nonbank Problem, 84 U. CHI. L. REV 1813, 1813 (2017). Schwarcz and Zaring argue that an effective part of Dodd-Frank is that firms have an incentive to avoid taking excessive risks because they thereby reduce the likelihood that they will be designated a SIFI. Id. at 1817. They refer to this phenomenon as “regulation by threat.” Id. In other words, the threat of the SIFI designation—and the enhanced regulatory costs that accompany the designation—has prompted firms to avoid risky activities in order to evade oversight by the Federal Reserve. This argument differs from our own because we consider how the SIFI designation influences the behavior of firms that have already been designated SIFIs—not firms that could receive the designation. However, insofar as our analysis shows that nonbank SIFIs have adjusted behavior in order to shed their SIFI designation, our argument provides support for their thesis: if firms divest themselves of risky activities in order to shed their SIFI designation, then it stands to reason that they will avoid risky activities in order to avoid being designated a SIFI in the first place.
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Incentives for SIFIs to shed risky assets, Dodd-Frank provides a blueprint for addressing systemic risk without requiring regulators to formally break up large financial institutions or to establish a viable bankruptcy regime. Instead, Dodd-Frank gives SIFIs a simple choice: either pay the hefty SIFI compliance costs or shed risky business lines and, in doing so, reduce the chance that their failure will trigger an economic crisis.

Furthermore, because regulators can tailor Dodd-Frank’s compliance costs to the perceived riskiness of certain financial activities, they can target the most systemically destabilizing business units and can adjust those costs as market conditions change. This flexibility has three informational advantages over alternative regulatory frameworks. First, regulators can tailor the costs to the unique risks posed by different financial institutions. Second, regulators can adjust costs over time as they acquire additional information and as market conditions change. And third, Pigouvian regulations take advantage of relative institutional expertise. Traditional command-and-control regulations require regulators to calculate both the costs and benefits when determining the socially optimal level of a risky activity. By contrast, under Dodd-Frank, regulators simply determine the social costs of being systematically important and allow financial institutions—which better understand the value of being large and engaging in certain transactions—to determine the benefits.

This Note proceeds in five Parts. Part I presents two current regulatory paradigms—command-and-control regulations and market-based incentives—as context before situating Pigouvian regulations between these two theories. Part II briefly explains how Dodd-Frank sought to end too big to fail and describes the current view of Dodd-Frank as a command-and-control response to the problem of too big to fail and the criticisms of the command-and-control approach. Part III presents our theory of Dodd-Frank as a Pigouvian regulation and our empirical findings that document how the Act has prompted firms to divest risky assets. Part IV considers the benefits of the Pigouvian approach and explains why regulating too big to fail in this way is preferable to other options generally discussed by scholars and politicians. Part V concludes with a discussion of potential downsides and prescriptive recommendations for how to make Dodd-Frank a more effective Pigouvian regulation.

I. TWO THEORIES OF REGULATION

This Part describes the two primary regulatory approaches—command-and-control regulations and market-based incentives—before explaining in the remainder of the Note how Dodd-Frank fits between these two approaches.
A. Command-and-Control Regulations

In a command-and-control regulatory scheme, the regulator—which can be an administrative agency, a judicial body, an executive, or a legislature—either prohibits or requires a certain action. Prohibitions—often called bans— pervade the American regulatory system and address a variety of problems, such as drug use and speeding. Mandates are also prevalent and cover diverse regulatory areas, such as minimum wage and seatbelt requirements. Dodd-Frank is replete with both prohibitions and commands.

The most obvious benefit of command-and-control regulations is that they are a direct way for the government to prohibit or mandate behavior. Some regulatory goals are better served when the government does not need to engage in a complicated cost-benefit analysis to determine how much of a behavior should be permitted. Instead, a blanket prohibition or requirement is preferable. For instance, when implementing Dodd-Frank, Congress decided that most swaps should be traded on exchanges and that companies should report certain information about swap deals. Rather than charging financial institutions for refusing to report swaps or trade on an exchange, Dodd-Frank simply requires

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23. We recognize that a regulation could enact a ban, and that a tax could function effectively as a ban by making an activity prohibitively expensive. We regard bans as a separate category to highlight the difference between incentivizing or disincentivizing behavior and blocking it altogether.


25. Of course, a speed limit should be understood not as a ban on driving, but as a ban on driving a certain speed. See, e.g., California Driver Handbook—Laws and Rules of the Road, CAL. DEPT. MOTOR VEHICLES, http://www.dmv.ca.gov/portal/dmv/detail/pubs/hdbk/speed_limits [http://perma.cc/QA4T-T4R2].


28. See infra Sections II.B and II.C.

29. Swap exchanges are generally run by swap execution facilities (SEFs). Dodd-Frank defines a SEF as "a trading system or platform in which multiple participants have the ability to execute or trade swaps by accepting bids and offers made by multiple participants in the facility or system . . ." 7 U.S.C. § 1a(50) (2012). SEFs operate either (a) under the regulatory oversight of the CFTC, pursuant to Section 5h of the Commodity Exchange Act, see 7 U.S.C. § 7b-3 (2012), or (b) under the regulatory oversight of the SEC, see Registration and Regulation of Security-Based Swap Execution Facilities, 76 Fed. Reg. 10,948 (Mar. 1, 2011) (to be codified at 17 C.F.R. pts. 240, 242, 249).

banks to abide by these rules.\textsuperscript{31} There was no need for the government to give parties the option not to report swaps since its aim was to force companies to report information on swap deals in every situation in order to promote pre-trade price transparency.\textsuperscript{32} In situations like this, when the government is certain that an action should be required or prohibited, it need not waste resources implementing a complicated market-based scheme in order to accomplish its regulatory goal.

Command-and-control regulations can also be optimal even when the government is not entirely sure that the relevant activity is worthy of indiscriminate prohibition or promotion. If the government lacks information about the private value a company places on an activity, but knows that the social costs of that activity are exorbitant, it may be advantageous to ban the activity entirely rather than to embrace an incentive-based regime that risks under-deterrence. Some have found SIFI regulations flawed for just this reason. For instance, the President of the Federal Reserve Bank of Minneapolis, Neel Kashkari, announced a

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\textsuperscript{31} Of course, in a certain sense, all regulations could be considered command-and-control regulations because failure to abide by a command-and-control requirement could result in a penalty, and so command-and-control regulations arguably only gain their force through the costs imposed by noncompliance. Still, despite these functional similarities, we distinguish between the two on the ground that the goal of command-and-control requirements is to require the regulated party to do (or not do) something, whereas market-based regulation aims to adjust incentives associated with an action.

plan to raise capital requirements dramatically in large part to force SIFIs to reduce dramatically the scope and scale of their operations. The idea is that capital requirements are currently not sufficiently onerous to incentivize banks to downsize. Recognizing that too big to fail firms remain a problem, Kashkari proposed increasing SIFI capital requirements to 23.5% in order to reduce the risks posed by these kinds of financial institutions. Although Kashkari grounds this position in the desire to ensure that banks have sufficient capital to withstand an economic downturn without resorting to bail outs, he acknowledges that his proposal would have the side benefit of forcing banks to restructure themselves. The compliance costs would be so onerous that they would effectively amount to a hard cap on bank size because banks would be forced to take immediate corrective actions and shrink dramatically. According to Kashkari, current capital rules do not provide a strong enough incentive for banks to downsize and simplify of their own accord, but more onerous capital requirements would.

B. Market-Based Incentives

In contrast with command-and-control regulations, market-based solutions neither prohibit nor require activities; instead, they influence behavior by changing the costs associated with certain actions. The government uses market-based incentives to regulate all sorts of behavior. Section 163(h) of the Tax Code, for example, provides a tax deduction for interest paid on home mortgages. The purpose of this provision is to incentivize people to buy homes—to give them “a stake in society and induce[] them to care about their neighborhoods and towns”


34. The Minneapolis Plan To End Too Big To Fail, supra note 33, at 3.

35. Id.

36. Id.

37. This example shows how something that might look like a market-based regulation—in this case, a capital requirement—can amount to a ban if the costs become truly prohibitive.

38. Kashkari, supra note 33, at 3.

by providing them a financial bonus when they do so. In this vein, the Tax Code has also been used to incentivize, among other things, the use of green energy, employer-provided health insurance, and charitable donations.

As discussed in greater detail in Parts II and III, one of Dodd-Frank’s more onerous market-based regulations is the SIFI designation. Although the purpose of the SIFI designation is ostensibly to force banks to take steps toward becoming more resilient to economic downturns, the regulations also effectively charge financial institutions for being large. Banks are automatically subject to SIFI regulations if they have assets exceeding $50 billion. As soon as a bank crosses that threshold, it must pay a capital surcharge, conduct annual stress tests, and abide by certain liquidity requirements. And SIFI requirements get more onerous as banks get bigger. In short, these costs deter banks from growing larger.

There are significant advantages to market-based solutions. In fact, most economists regard “Pigouvian taxes” — a classic form of market-based incentives in which the government imposes a tax on a private activity equal to the social costs created by that private activity — as generally preferable to other forms of

44. As discussed in Part II, most scholars and policymakers regard the SIFI rules as command-and-control regulations. See infra Sections II.B and II.C.
45. See Lael Brainard, Bd. of Governors, Fed. Reserve Sys., Dodd-Frank at Five, Speech at the Bipartisan Policy Center and Managed Funds Association (July 9, 2015), http://www.federalreserve.gov/newsevents/speech/brainard20150709a.htm [http://perma.cc/CYF4-BG57] (“The capital surcharge is designed to build additional resilience and lessen the chances of an institution’s failure in proportion to the risks posed by the institution to the financial system and broader economy.”).
48. Id.
49. See Cass R. Sunstein, Risk and Reason 270–71 (2002) (noting that Pigouvian taxes have dramatically increased government revenues around the world); Steven Shavell, Corrective Taxation Versus Liability as a Solution to the Problem of Harmful Externalities, 54 J.L. & Econ. S249, S249 (2011) (“The corrective tax has long been viewed by most economists as a, or the, theoretically preferred remedy for the problem of harmful externalities.”).
regulation in most market conditions.\textsuperscript{50} One scholar framed the tension between the academic exuberance for Pigouvian taxes and the reluctance of policymakers to implement them in the following terms: “To many economists, the basic argument for increased use of Pigouvian taxes is so straightforward as to be obvious. But as George Orwell once put it, ‘We have now sunk to a depth where the restatement of the obvious is the first duty of intelligent men.’”\textsuperscript{51}

One of the most significant advantages of Pigouvian taxes is that they permit the best-suited parties to determine the costs and benefits of an activity to do so.\textsuperscript{52} Writing about Pigouvian taxes in the context of environmental regulations, one scholar has observed that regulatory goals are often “frustrated by a lack of information” when regulators adopt a command-and-control approach.\textsuperscript{53} By contrast, market-based solutions “create a system of incentives in which those who have the best knowledge about control opportunities, the environmental managers for the industries, are encouraged to use that knowledge to achieve environmental objectives at minimum cost.”\textsuperscript{54}

In other words, market-based solutions—and especially Pigouvian taxes—\textsuperscript{55}—have informational advantages because command-and-control regulations require regulators to estimate both the costs and the benefits of a behavior.\textsuperscript{56} For example, if the government pursued the nonmarket-based solution of capping

\textsuperscript{50} See Louis Kaplow & Steven Shavell, On the Superiority of Corrective Taxes to Quantity Regulation, 4 AM. L. & ECON. REV. 1, 2 (2002) (“[T]he traditional notion of the superiority of corrective taxes should continue to be a benchmark for economists’ thinking about the control of externalities.”); Martin L. Weitzman, Prices vs. Quantities, 41 REV. ECON. STUD. 477, 477 (1974) (“[I]t is a fair generalization to say that the average economist in the Western marginalist tradition has at least a vague preference towards indirect control by prices . . . .”).


\textsuperscript{52} See Brief of Economists Thomas C. Schelling, Vernon L. Smith & Robert W. Hahn as Amici Curiae Supporting Petitioners at 15, Chamber of Commerce v. EPA, 134 S. Ct. 1051 (2014) (No. 12-1272), 2013 WL 6673703, at *14-15 [hereinafter Brief of Economists] (noting that the difficulties in assessing both the costs and the benefits to determine the efficient level of behavior favor moving away from command-and-control regulations).

\textsuperscript{53} Thomas H. Tietenberg, Economic Instruments for Environmental Regulation, 6 OXFORD REV. ECON. POL’Y, Spring 1990, at 21.

\textsuperscript{54} Id. at 21-22.

\textsuperscript{55} All market-based solutions permit regulated parties to play a greater role in making decisions about how to comply with regulations than do command-and-control regulations, but some forms of market-based solutions limit that discretion to a certain degree. For instance, although cap-and-trade proposals permit parties some flexibility in how to meet regulatory standards, they would still ultimately cap total carbon emissions. See Brief of Economists, supra note 52, at 3-7, 12-14.

\textsuperscript{56} Id. at 15 (“Uncertainty – as to costs and benefits – increases the difficulty for regulators seeking to judge whether a policy gives rise to net benefits to society.”).
the size of banks, then the government would need to determine both the costs and the benefits associated with exceeding particular size thresholds. In order to determine the optimal level of regulation, the regulator would need to know not only the negative externalities created by every large financial institution, but also the benefits of scale that each firm enjoys from being large. Under a market-based approach, by contrast, the government would only need to know the social costs of the activity. By imposing those costs on the firms, the firms themselves would be responsible for determining whether the scale benefits derived from achieving a particular size outweigh those costs.

Unlike command-and-control regulations, a tax on bank size does not require that the government determine whether the costs of bank size outweigh the benefits. It may be the case that, although bank size introduces a systemic risk, large banks enjoy scale benefits that allow them to, for example, charge lower interest rates, and that those scale benefits actually outweigh the social costs. If the market continues to prefer large banks after they have been forced to internalize the social costs of being large, then it seems that the scale benefits of being large provide a net benefit that outweighs the social costs. Significantly, it may be the case that a tax prompts only some firms to downsize. This information is also useful for regulators because it suggests that some firms—those that did not downsize—realized scale benefits that outweighed the costs generated by bank size. By contrast, the scale benefits realized by the firms that shrunk in response to the tax were not sufficient to justify remaining large once they were forced to bear those costs. For this reason, scholars have concluded that market-based regulations have the additional benefit of being more precise than command-and-control alternatives.57

Incentive-based regulations therefore allow the market to determine the optimal level of production. As regulators attempt to correct the market distortion that results when firms do not bear certain costs of producing a particular good, there is no reason why a firm should not realize the benefit of that good in the form of consumers’ willingness to pay for it. Thus, in market-based approaches, the government only runs the risk that it will miscalculate the cost of the good. Command-and-control regulations, by contrast, also run the risk that the government will miscalculate the benefits of the good.

Finally, market-based incentives are typically less invasive than command-and-control regulations because market-based approaches leave the regulated parties free to decide whether and how to comply.58 For example, under Dodd-Frank, the government not only permits financial institutions to remain large

57. See Masur & Posner, supra note 9, at 101.
58. See Brief of Economists, supra note 52, at 12-14.
and to engage in risky activities, but also gives banks an opportunity to restructure those activities in a manner that would be less systemically risky. This flexibility ultimately fosters innovation by promoting technological development and creative problem-solving.

II. ENDING TOO BIG TO FAIL

This Part introduces the problem of too big to fail and examines some of the ways in which Congress tried to address the problem when enacting Dodd-Frank. Until now, almost everyone has treated Dodd-Frank as a purely command-and-control regulation, and commentators agree that those command-and-control measures have failed to solve too big to fail. Although these criticisms have some merit, they overlook a critical way in which Dodd-Frank has ameliorated the problem of systemic risk through the imposition of compliance costs—an argument that we will take up in greater detail in Part III.

A. The Too Big To Fail Problem

“Too big to fail” describes firms that pose a systemic risk to the overall financial system because of their size, complexity, or interconnectedness. Because the failure of one of these firms could jeopardize the entire financial system, policymakers cannot let them fail without risking an even greater harm or cost to government and society.

Bernanke has pointed out that too big to fail firms impose three costs on the broader economy. First, too big to fail institutions create a moral hazard problem. Because firms and their creditors assume that the government will bail out...
a failing SIFI, such firms engage in excessive risk-taking. Second, the too big to fail reality puts small firms at a competitive disadvantage. Because the prospect of a government bailout lowers the cost of funding for bigger institutions, big institutions can offer cheaper credit than smaller ones, which in turn allows them to increase their market share. Since Dodd-Frank went into effect

63. Bernanke, supra note 61, at 21.
64. Id.
65. Id.
in 2010, rating agencies, financial regulators, and academics have shown that the market still assumes that the government will save failing SIFIs. Thus, the largest banks enjoy a competitive advantage not only because their size creates economies of scope and scale, but also because the market’s perception that the government will bail them out creates an implicit subsidy that enables those banks to borrow at lower interest rates. Finally, as financial institutions become

66. Standard & Poor’s (S&P) publicized in 2011 that repeated government assistance would be a permanent factor in forming banks’ credit, as “[b]anking crises will likely happen again” and the government’s likelihood of support to systemic banks is “moderately high.” Banks: Rating Methodology and Assumptions, STANDARD & POOR’S, tbls. 20 & 22 (Nov. 9, 2011), http://www.taiwanratings.com/portal/front/showCustomArticle/2c9c31d474c79810401497f710008 [http://perma.cc/CS5S-CNMI]; see also Tom Braithwaite, S&P Warns Top U.S. Banks Are Still “Too Big To Fail,” FIN. TIMES (June 11, 2013) http://www.ft.com/content/fb63e7ce-da26-11e2-88ed-00144a6e2bde [http://perma.cc/C62C-YJUZ] (indicating that Standard & Poor’s believes the government could still bail out big banks, despite some contrary statements from the FDIC and Treasury Department).

67. See, e.g., Who Is Too Big To Fail: Does Title II of the Dodd-Frank Act Enshrine Taxpayer-Funded Bailouts?: Hearing Before the Subcomm. on Oversight & Investigations of the H. Comm. on Fin. Servs., 113th Cong. 69 (2013) (statement of David A. Skeel, Jr.), http://financialservices.house.gov/uploadedfiles/i13-19.pdf [http://perma.cc/26S9-FNGK] (“The largest financial institutions . . . are able to borrow money much more cheaply than other financial institutions, because their cost of credit is artificially reduced by the Too Big to Fail subsidy.”); João Santos, Evidence from the Bond Market on Banks’ “Too-Big-to-Fail” Subsidy, 20 ECON. POL’Y REV. 29, 34-38 (2014) (describing the advantages and benefits the biggest banks received because they were too big to fail and the competitive advantage those benefits have given them over smaller banks and concluding that the largest U.S. banks are perceived by investors as enjoying an implicit guarantee from the government allowing them to enjoy a lower cost of borrowing than both smaller banks and comparably sized nonbanks); Bryan Kelly et al., Too-Systemic-To-Fail: What Option Markets Imply About Sector-Wide Government Guarantees 1–6 (Chi. Booth Research Paper, Working Paper No. 11-12, 2015), http://ssrn.com/abstract=1762312 [http://perma.cc/6HB8-TTB8] (supporting the idea that there is a too big to fail subsidy); see also Gara Afonso et al., Do “Too-Big-To-Fail” Banks Take on More Risk?, 20 ECON. POL’Y REV. 41 (2014) (finding that the biggest banks are more likely to take more risks, relying on the government to save them if needed); Kenichi Ueda & Beatrice Weder di Mauro, Quantifying Structural Subsidy Values for Systemically Important Financial Institutions 118 (Int’l Monetary Fund, Working Paper WP/12/128, 2012), http://www.imf.org/external/pubs/ft/wp/2012/wp12128.pdf [http://perma.cc/GS32-4A3H] (calculating the subsidy at $83 billion a year for the ten biggest banks, based on a 0.8 percentage point discount that big banks receive, which lowers the borrowing costs on all liabilities, including bonds and customer deposits); IMF Survey: Big Banks Benefit from Government Subsidies, INT’L MONETARY FUND (Mar. 31, 2014), http://www.imf.org/external/pubs/ft/survey/so/2014/pol033114a.htm [http://perma.cc/YD8M-486V] (reinforcing the New York Federal Reserve’s findings as detailed in Afonso, supra).

68. See generally Kelly et al., supra note 67 (suggesting that there is an expectation of a government bailout).

69. See Coffee, supra note 4, at 800; see also Viral V. Acharya et al., The End of Market Discipline? Investor Expectations of Implicit State Guarantees 13 (June 1, 2014) (unpublished...
bigger, riskier, and more interconnected— as a result of the first two problems—the potential costs of these institutions failing become even greater. In other words, the too big to fail problem has become a self-reinforcing cycle in which large firms become even more indispensable even as they impose significant costs on society.

B. Dodd-Frank’s Command-and-Control Response to Too Big To Fail

Dodd-Frank explicitly adopts a “command-and-control” approach to the problem of financial institutions being too big to fail. Although the Act does not outright prohibit banks from being a certain size, it enacts a number of command-and-control provisions to reduce the risk that large financial institutions will fail or that their failure will harm the broader economy. First, Dodd-Frank mandates regulations to curb excessive risk-taking and to require systemically important banks to hold significant capital, increasing the likelihood that the firms can weather turbulent financial times. And second, the Act creates a resolution mechanism to minimize the effect of a firm’s failure on the overall financial system.
First and most prominently, the Act bans specific activities perceived as particularly risky. The Volcker Rule, for example, restricts banks’ ability to engage in certain proprietary trading activities. In addition to direct bans, Dodd-Frank also imposes requirements designed to increase transparency in financial markets. For instance, Title VII requires banks to report specific information on swaps, establishes margin requirements for certain swap transactions, and mandates that parties follow certain procedures such as trading on an exchange when executing swap deals. Failure to comply with these affirmative regulations can result in hefty fines.

Another powerful command-and-control provision for deterring risk-taking is the SIFI designation. Under Dodd-Frank, there are two methods by which a firm can be designated as a SIFI. First, any bank with more than $50 billion in assets is automatically designated as a SIFI. Second, Dodd-Frank empowers the Financial Stability Oversight Council (FSOC) to designate certain “nonbank financial institutions” as systemically important if they meet certain requirements. Once regulators have designated a firm as a SIFI, they can dramatically increase the firm’s compliance costs. For example, regulators have imposed capital surcharges on SIFIs – that is, SIFIs are required to retain additional capital—
based on the regulators’ perception of the firm’s risk of failure.\textsuperscript{76} In addition, SI-FIs are required to undergo an annual “stress test,” which forces the firms to convince regulators of their resiliency in the face of market turbulence.\textsuperscript{77} If a bank fails a stress test, regulators may increase their supervision of the failing firm, prevent it from paying shareholder dividends, or even force it to divest entire business units.\textsuperscript{80}

These approaches may reduce the likelihood that a SIFI will fail, but ultimately, the only certain way to make sure that a SIFI will not fail is to make sure that there are no SIFIs in the first place, an approach Dodd-Frank rejected when Congress decided not to break up the banks.\textsuperscript{81} Although the risk of a bank failing may be mitigated ex ante by measures that regulate its balance sheet and risk portfolio, it is impossible to prevent bank failures altogether while large, complex financial institutions remain. However, a certain degree of risk-taking is essential for banks to fulfill their mission of connecting lenders with borrowers. That risk-taking, however critical to the financial system, creates some potential for failure.

For this reason, Dodd-Frank’s second approach to reducing systemic risk is to mitigate the financial turmoil that would ensue in the event that a SIFI actually failed. Acknowledging that bank failures can never be eliminated altogether, Dodd-Frank creates a resolution mechanism to oversee the orderly liquidation


\textsuperscript{81} Dodd-Frank did not, for example, revive the Glass-Steagall requirement that commercial banks be separated from investment banks, which was first repealed in 1999 by the Gramm-Leach-Bliley Act. See Gramm-Leach-Bliley Act, 12 U.S.C. § 1811 (1999).
There are two components to this resolution mechanism. First, under Title I, SIFIs are obliged to prepare resolution plans—often referred to as “living wills”—that explain how they could be resolved under the Bankruptcy Code. Living wills are essentially prepackaged bankruptcy plans. If a company’s plan does not demonstrate that the company can be resolved in bankruptcy, the regulations may jointly impose more stringent capital, leverage, or liquidity requirements. Second, Dodd-Frank authorizes financial regulators to resolve a SIFI if the insolvency of that institution would place the economy at risk—a power known as the Orderly Liquidation Authority (OLA). In theory at least, the OLA improves upon traditional bankruptcy because it would allow the FDIC to

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82. Note that the Act itself assumes that bank failures cannot be eliminated altogether. The premise of prohibiting “taxpayer funds” from “being used to prevent the liquidation of any financial company,” 12 U.S.C. § 5394 (2012), and instead requiring firms to create a viable plan to liquidate themselves, 12 U.S.C § 5384 (2012), is that SIFI failures cannot be wholly prevented.


86. In an FDIC receivership, the FDIC takes over the powers of the institution’s officers, directors, and shareholders, including collecting obligations due to the institution, liquidating assets, and paying off creditors. 12 U.S.C. § 1821(c) (2012). Before Dodd-Frank, the FDIC only had authority to wind down insured commercial banks. Its authority did not extend to nondepository financial institutions, such as independent investment banks. Id. Therefore, before the orderly liquidation authority (OLA), policymakers had only two options for faltering investment banks: bankruptcy—which regulators used to resolve Lehman Brothers—or bailout—which was used with Bear Stearns and AIG. FIN. CRISIS INQUIRY COMM’N, THE FINANCIAL CRISIS INQUIRY REPORT 343 (2011), http://fcic-static.law.stanford.edu/cdn_media/fcic-reports/fcic_final_report_full.pdf [http://perma.cc/N24L-LEZW]. Neither was attractive. Lehman’s bankruptcy caused massive economic damage, and taxpayer bailouts led to widespread protest against the government’s willingness to pay the bankers whose allegedly risky and greedy behavior caused the financial crisis.

87. Dodd-Frank §§ 201-17, 12 U.S.C. §§ 5381-5394 (2012). Under the OLA, once the FDIC becomes the receiver of a failing financial institution, it can operate and liquidate the firm with near-complete freedom. The FDIC can “take over the assets and operate the covered financial company with all the powers of the members or shareholders, the directors, and the officers of the covered financial company.” Id. § 210(a)(1)(B)(i). It can also appoint itself as the receiver of a failing subsidiary. Id. § 210(a)(1)(E)(i). As the receiver of the seized financial institution, the FDIC would have huge latitude to manage the company, including the power to merge it with another institution, id. § 210(a)(1)(G)(i)(I); transfer the institution’s assets (without any consent or approval), id. § 210(a)(1)(G)(i)(II); suspend legal actions pending against the company, id. § 210(a)(8); avoid certain transfers, id. § 210(a)(11); and disallow claims that are not proven to its satisfaction, id. § 210(a)(3)(D), all with limited judicial review, id. § 210(a)(9)(D).
resolve a SIFI without requiring a taxpayer bailout or triggering an economic crisis. At least on the surface, these rules seem to follow a command-and-control framework. Rather than pushing SIFIs away from certain activities by making those activities more expensive, they instead force SIFIs to take certain actions to reduce their financial risk. The critical point for our command-and-control analysis is that it is the requirements themselves—not the incentives they create—that are intended to reduce systemic risk. As Federal Reserve Governor Lael Brainard said of a capital requirement levied on SIFIs, “the capital surcharge is designed to build additional resilience and lessen the chances of an institution's failure.” Federal Reserve Chair Janet Yellen has echoed this view by arguing, for instance, that swap reporting and clearing rules have reduced the risks posed by trading derivatives.

The scholarly consensus bears out the observation that Dodd-Frank institutes a command-and-control regime. Jonathan Masur and Eric Posner, for example, have argued that no section of Dodd-Frank—not even the Act's capital requirements—functions like a market-based incentive, much less a Pigouvian tax. Masur and Posner take this view because they regard the substantive provisions of Dodd-Frank, which they refer to as “command-and-control” regulations, to be the primary mechanism through which the law seeks to reduce systemic risk and end too big to fail. On their view, the purpose of the provisions of Dodd-Frank that we regard as Pigouvian regulations is not to increase the

91. See supra note 9 and accompanying text.
92. Masur & Posner, supra note 9, at 129-30 claiming that a Pigouvian tax could replace capital requirements and arguing that vague language in Dodd-Frank’s statutory text authorizes regulators to implement a Pigouvian tax.
93. Id.
costs associated with risky behavior, but simply to command firms to adopt certain risk-mitigating strategies: capital requirements, for instance, are not designed to push banks away from risky activities, but rather to provide a cushion to help firms absorb losses. Others, including Kashkari and President Obama, have revealed that they believe Dodd-Frank to be a command-and-control regulation when proposing new market-based incentives, such as a tax on bank size, to complement the Act’s existing provisions.94

C. Critiques of Dodd-Frank’s Response to Too Big To Fail

Dodd-Frank seeks to reduce systemic risk in the financial system, to increase the transparency of financial instruments, and to end the problem of too big to fail.95 The Act was thus calibrated to respond to a specific set of problems that too big to fail institutions generate.

However, these measures have been met with significant criticism from scholars and policymakers. Specifically, scholars and policymakers are concerned that a large bank failure could still place the economy at risk,96 and that banks’ own resolution plans would not be sufficient in an actual crisis.97 Although Dodd-Frank has succeeded in making the financial system safer,98 the largest banks remain enormous and inextricably intertwined, and, therefore, continue

94. See supra note 9 and accompanying text.
95. See Dodd-Frank pmbl., 12 U.S.C. § 1301 (2012) (noting that the Act seeks “[t]o promote the financial stability of the United States by improving accountability and transparency in the financial system, to end ‘too big to fail,’ to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and [to serve] other purposes”).
98. See infra Section III.C.3.
DODD-FRANK IS A PIGOUVIAN REGULATION to pose a serious risk to the economy.39 Indeed, even the policymakers who designed the Act’s resolution authority concede that it has probably not ended too big to fail.100 For example, Kashkari recently noted in a speech that he “believe[s] the biggest banks are still too big to fail and continue to pose a significant, ongoing risk to our economy.”101 The general thrust of these arguments is that the failure of even a single SIFI would likely require the FDIC or the Federal Reserve to use taxpayer money to conduct a bailout.

Moreover, scholars and commentators have also shown that the SIFI bankruptcy process would not work as planned, which implies that an actual SIFI failure may well trigger a financial crisis. The problem with the bankruptcy plans is that SIFIs remain too complex to be liquidated in the orderly manner envisioned by Dodd-Frank.102 Kwon-Yong Jin, for example, critiques the OLA for

99. See Emilios Avgouleas & Charles Goodhart, Critical Reflections on Bank Bail-ins, 1 J. Fin. Reg. 3, 3 (2015) (“[B]ail-in regimes will not eradicate the need for injection of public funds where there is a threat of systemic collapse, because a number of banks have simultaneously entered into difficulties, or in the event of the failure of a large complex cross-border bank, unless the failure was clearly idiosyncratic.”).


101. Kashkari, supra note 100.

102. Jin, supra note 6; see also Wilmarth & Lubben, supra note 6, at 1 (arguing that “[SPOE] is unlikely to work as intended” because “[t]he Federal Reserve’s ‘total loss-absorbing capacity’ (TALC) proposal . . . will create a new, more opaque way to impose the costs of financial distress in SIFIs on ordinary citizens”); Simon Johnson, The Myth of a Perfect Orderly Liquidation Authority for Big Banks, N.Y. TIMES: ECONOMIX (May 16, 2013, 12:01 AM), http://economix.blogs.nytimes.com/2013/05/16/the-myth-of-a-perfect-orderly-liquidation-authority-for-big-banks [http://perma.cc/WY3R-W7HY] (noting that banks do not hold enough equity
“assum[ing] an optimal corporate group structure,”\textsuperscript{103} in which there are clear divisions between corporate groups, and creditors can supervise the risk-taking activities of subsidiaries as easily as those of a parent company. But in reality, large financial institutions rarely have this clear corporate structure.\textsuperscript{104} Ultimately, as both legal\textsuperscript{105} and economics\textsuperscript{106} scholars have argued, these structural imperfections may lead to cracks in the implementation of the OLA.\textsuperscript{107} In practice, it may therefore end up being very difficult to sell off subsidiaries or determine which subsidiaries hold what debt. That, in turn, makes it difficult to wind down a SIFI by isolating its subsidiaries in this manner.

The living will requirement has similar problems.\textsuperscript{108} Although the Federal Reserve has noted that SIFIs have made progress in reducing the likelihood that failure would trigger a recession, it recently rejected the 2016 living wills provided by five of the eight American megabanks considered “global SIFIs” (G-SIFIs)\textsuperscript{109} — including the wills of JPMorgan, Bank of America, and Wells
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Fargo.110 The remaining three G-SIFIs did not fare much better. The FDIC and Federal Reserve found that Goldman Sachs’s and Morgan Stanley’s plans were “not credible,” and that Citigroup’s had “shortcomings.”111 As a result, in the event of a widespread market failure, the federal government will likely have to provide public funds to prevent a “systemic collapse.”112 If anything, this bailout problem is even greater now than before the financial crisis since SIFIs have grown and would now require even more money to save.113

In short, according to scholars and policymakers, Dodd-Frank’s command-and-control solution to the problem of banks being too big to fail has not worked. As the next Part will show, however, this account overlooks an alternative way in which Dodd-Frank addresses too big to fail: as a market-based or Pigouvian regulation.

III. DODD-FRANK IS A PIGOUVIAN REGULATION

This Note breaks from the traditional narrative on Dodd-Frank by asserting that the Act does not simply follow the conventional command-and-control regulatory approach. Instead, the Act’s compliance costs have had a subtle but powerful effect in counteracting the problem of too big to fail in some startling ways. In short, Dodd-Frank acts as a Pigouvian regulation—and an effective one at that.

This Part first explains why elements of Dodd-Frank can be understood as Pigouvian regulations. It then analyzes how Dodd-Frank’s compliance costs have affected SIFIs’ commodities holdings and how the SIFI designation has affected nonbank SIFIs. In both of these cases, the costs of complying with Dodd-Frank have driven some SIFIs out of what were highly profitable business lines. Furthermore, in each case, regulators have been able to target activities that they perceive as risky and calibrate compliance costs to those risks. In doing so, regulators not only forced SIFIs to bear the costs of being too big to fail—as Bernanke and Stein argue—but also prompted SIFIs to divest themselves of


111. Id.

112. Id.

business units that pose a risk to the broader economy. These divestitures made SIFIs (and thus the economy) safer overall.

A. A Pigouvian Theory of Dodd-Frank

In contrast to the prevailing view that Dodd-Frank is just a command-and-control regulation, Bernanke and Stein have argued that higher capital surcharges and other onerous regulations on systemically important firms could have the effect of a Pigouvian tax insofar as these regulations force banks to internalize the costs of being too big to fail. Their point is that, because SIFIs receive advantageous credit terms based on the market’s perception that the government will bail them out should they fail, the government should correct that market distortion by imposing costs that counteract this implicit subsidy.

However, as discussed below, our research shows that these compliance costs serve a regulatory purpose by incentivizing banks to divest themselves of risky business assets. In fact, financial regulators have been using Dodd-Frank—which ostensibly rejected a market-based approach in favor of a command-and-control regulatory approach—to nudge SIFIs out of risky activities. This observation shows that Dodd-Frank is effectively functioning as a market-based solution that is reducing the too big to fail problem.

Moreover, Dodd-Frank is acting like a market-based regulatory solution without requiring the actual use of public funds. In other words, Dodd-Frank shows that the government can use market-based solutions without formally taxing or subsidizing private entities. Indeed, under Dodd-Frank, the government can adjust the compliance costs borne by SIFIs in a number of creative ways.

Compliance costs are the expenditures that businesses incur adhering to government or industry requirements. In the case of Dodd-Frank, SIFIs face a wide variety of compliance costs; indeed, one study estimated that the economy-wide costs of complying with Dodd-Frank between 2010 and 2016 were as much as $36 billion. These costs range from the comprehensive stress tests to the

114. See supra notes 19–21 and accompanying text.
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onerous reporting standards associated with swap transactions to the capital requirements that limit banks’ ability to extend credit. Although a few commentators and affected institutions have mentioned that the costs of Dodd-Frank amount to a tax on bank size, these commentators have generally viewed these costs negatively and have largely ignored the ways in which they are being used to serve a regulatory purpose.

Commentators have likely overlooked this regulatory purpose because compliance costs are widely considered an ancillary and undesirable feature of regulations. For example, in 2002, Congress passed the Regulatory Right-to-Know Act in response to the concern that compliance costs were too great. The Regulatory Right-to-Know Act directs the Office of Management and Budget (OMB) to submit a report to Congress each year detailing the costs and benefits of major rules as a way of controlling the growth of compliance costs. Likewise, commentators have often treated the compliance costs created by Dodd-Frank as simply an unwanted side effect of the regulatory scheme.

Our research shows, however, that compliance costs can be the essential feature of certain regulatory approaches. In the case of Dodd-Frank, it is precisely the costs that OMB seeks to reduce that end up making the regulation effective. Thus, the costs of complying with Dodd-Frank should not be viewed as an un-

117. See, e.g., Solomon, supra note 19 (“Dodd-Frank tries to figure out who [too big to fail institutions] are and charge them for being too big. This is done by raising their regulatory costs through more oversight and supervision . . . [O]ne purpose of this increased regulation is to impose a regulatory tax on big banks to push them to be smaller.”).


wanted byproduct, but rather as a mechanism for shaping the behavior of financial institutions and for incentivizing them to move away from financially risky activities.

At the outset, we concede that Dodd-Frank has not yet solved the too big to fail problem. As noted above, the largest banks remain enormous and the threatened failure of a single SIFI would likely require a taxpayer bailout. Furthermore, if a SIFI did fail, its failure could still have a devastating effect on the economy because SIFIs are larger today than they were before the financial crisis. In fact, over the past thirty-five years, the number of American banks has declined from about 14,500 to 5,600. Bank consolidation accelerated during the crisis in part because bank failures led to crisis-era mergers and acquisitions. The fact that banks are larger today arguably suggests that Bernanke and Stein are incorrect and that SIFI regulations are not in fact prompting banks to downsize.

Our research, however, shows that the story is more complicated and that the costs associated with being designated a SIFI have a significant effect on firm activities. As the remainder of this Part shows, SIFIs are shedding business lines in response to heightened regulatory costs. Some of this is evident in the sheer size of assets that SIFIs have dropped: Citigroup, for example, has shed over $700 billion in assets since the crisis. Equally important, however, is the nature of that reduction. In 2007, only thirty-seven percent of Citi’s liabilities were customer deposits, which are generally considered among the most stable sources of bank funding; by 2014, that number had ballooned to fifty-seven percent.

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122. See Satyajit Das, Banks Are Getting Bigger, Not Smaller. Clearly They Learnt Nothing From the 2008 Financial Crisis, INDEPENDENT (Mar. 12, 2017, 11:08 AM), http://www.independent.co.uk/voices/banks-still-haven-t-learnt-their-lessons-from-the-financial-crash-a7625311.html [http://perma.cc/KV6B-PKHL]. A SIFI failure, however, would likely not have an effect of similar magnitude as a large bank failure in 2007-08 since, as discussed throughout this Note, Dodd-Frank regulations regarding capital requirements and living wills, among others, have made such firms safer than they were ten years ago.


124. Id.


127. Id. This means that sixty-seven percent of Citi’s funding came from other revenue sources, including $394 billion in riskier short-term securities. Id.
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percent. 128 “In other words,” according to one commentator, “not only is Citigroup smaller than it was seven years ago, but it also finances itself through more stable sources that are less prone to runs.” 129 This story has played out across the large banks. In short, while the aggregate size of SIFI assets has grown, banks have shed many of their risky assets in response to Dodd-Frank.

Consequently, critics who argue that Dodd-Frank has failed to solve the too big to fail problem miss an important point: the Act grants financial regulators the power to ratchet up the cost of remaining too big to fail and engaging in certain high-risk financial activities. Indeed, regulators have already begun to use this power to incentivize banks to simplify and shed risky assets, which in turn has rendered the market safer. In summary, Dodd-Frank’s compliance costs have allowed regulators to craft a regulatory regime much more effective than its critics let on.

B. Methodology

To test our hypothesis that Dodd-Frank has a Pigouvian effect on large financial institutions, we used the Thomson ONE database to compile data for ten SIFIs. 130 Thomson ONE houses a comprehensive catalogue of mergers and acquisitions transactions. This includes not only deals in which one company

128. Id.
129. Id.
130. THOMSON ONE, http://www.thomsonone.com/Workspace/Main.aspx?View=Action%3dOpen&BrandName [http://perma.cc/9GRE-462V]. We chose to analyze the following eleven firms: JP Morgan, Goldman Sachs, Prudential, Citigroup, Wells Fargo, General Electric (GE), AIG, MetLife, Bank of America, Bank of New York Mellon, and Morgan Stanley. Four of these—AIG, GE, Prudential, and MetLife—constitute the four nonbank firms that the FSOC has designated systemically important. Fin. Stability Oversight Council, Designations, U.S. DEP’T TREASURY, http://www.treasury.gov/initiatives/fsoc/designations/Pages/default.aspx [http://perma.cc/7YLM-WJ2K]. These four firms are subject to slightly different requirements than bank SIFIs, making their inclusion important. As of 2016, thirty banks were designated as systemically important. FIN. STABILITY BD., 2016 LIST OF GLOBAL SYSTEMICALLY IMPORTANT BANKS (G-SIBS) 3 (2016), http://www.fsb.org/wp-content/uploads/2016-list-of-global-systemically-important-banks-G-SIBs.pdf [http://perma.cc/KCE4-GHUH]. We chose these seven bank SIFIs because they offer a comprehensive representation of the largest and systemically important American financial institutions. Many of the other bank SIFIs are primarily regulated by European and Chinese financial regulators. Focusing on those would have increased the difficulty in determining which asset sales were motivated by Dodd-Frank.
acquires or merges with another, but also spinoffs,\textsuperscript{131} divestitures,\textsuperscript{132} recapitalizations,\textsuperscript{133} share buybacks,\textsuperscript{134} and other transactions in which a company sheds or acquires a certain type of asset.

For each SIFI examined, we considered all announced spinoffs, divestitures, and other transactions in which the SIFI reported that it had shed assets between July 21, 2010—the date Dodd-Frank was signed—and December 31, 2016. We surveyed only transactions in which the SIFI or one of its subsidiaries was the target company. We further narrowed the set to deals that were designated as “financial.” We did this to exclude, for example, certain real estate deals,\textsuperscript{135} share repurchases,\textsuperscript{136} and other deals clearly unrelated to the costs of financial regulation.\textsuperscript{137}

We then manually analyzed all the remaining deals to determine which transactions were likely caused by efforts to reduce the costs of complying with Dodd-Frank. We based these determinations on contemporaneous news reports, company press releases and regulatory filings, and government regulatory reports. Where Dodd-Frank’s compliance costs played a role in a divestiture, we

\begin{itemize}
  \item See Latham & Watkins LLP, The Book of Jargon: Global Mergers & Acquisitions 204 (1st ed. 2013), http://www.lw.com/admin/Upload/Documents/BoJ_Global_MandA-locked-March-2015.pdf [http://perma.cc/2BJ3-S8PA] (defining a spinoff to be “a distribution by a company of one or more of its businesses to its shareholders in the form of a dividend of the Stock of a newly created entity in which the business resides. Also used to describe a part of a business which has been split from the rest of the business and sold”).
  \item See Divestiture, Investopedia, http://www.investopedia.com/terms/d/divestiture.asp [http://perma.cc/ZZ86-X3EY] (“A divestiture is the partial or full disposal of a business unit through sale, exchange, closure or bankruptcy.”).
  \item See Recapitalization, Investopedia, http://www.investopedia.com/terms/r/recapitalization.asp [http://perma.cc/WKCT4-6F9S] (“Recapitalization is restructuring a company’s debt and equity mixture, often with the aim of making a company’s capital structure more stable or optimal.”).
  \item See Latham & Watkins, supra note 131, at 104 (defining share buybacks as “a company’s repurchase of its own Shares”).
  \item In June 2015, for example, the board of Prudential authorized a $1 billion buyback. Angela Chen, Prudential To Buy Back Additional $1 Billion in Stock, Wall St. J. (June 9, 2015), http://www.wsj.com/articles/prudential-to-buy-back-additional-1-billion-in-stock-1433882530 [http://perma.cc/RAT8-5TW8].
\end{itemize}
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determined which elements of Dodd-Frank were responsible, and we tried to explain why. This involved determining whether each spinoff was caused by one of Dodd-Frank’s “command-and-control” regulations, such as the Volcker Rule’s ban on proprietary trading, or whether it was caused by a firm’s desire to reduce its compliance costs. We were thereby able to pinpoint which divestitures were mandated by the command-and-control features of Dodd-Frank and which resulted from a SIFI’s desire to lessen compliance costs.

The results presented in this Part represent the subset of our findings that evidence the clearest links to Dodd-Frank regulatory pressures. We acknowledge that there are difficulties inherent in the compilation of data sets like ours and especially in the structured, yet admittedly subjective, coding scheme that we applied. In order to avoid having such methodological issues cast doubt on our findings, we focus on (and further substantiate) those transactions for which the nexus to Dodd-Frank’s compliance costs are clearest.

Because it is not certain that the data set contained all divestitures (some small or private transactions may not have been included, for example), and because many transactions fall in a grey zone and were likely motivated by a combination of market conditions, compliance costs, and command-and-control regulations, we cannot calculate the total number of divestitures that resulted from Dodd-Frank’s Pigouvian effects. We do, however, demonstrate that the effect has been dramatic. Our analysis shows that SIFIs have divested themselves of the many business lines regulators regarded as being excessively risky, and they did so in direct response to regulatory decisions to increase the costs of continuing to engage in risky transactions.

C. The Pigouvian Findings

Dodd-Frank has forced SIFIs to internalize the costs of engaging in certain risky business practices, and those costs, in turn, have incentivized SIFIs to divest risky assets. Regulators have thus used Dodd-Frank’s compliance costs to support the Act’s general goal of reducing systemic risk. These costs have not merely forced SIFIs to bear the burden of being systemically important; they have also fundamentally altered SIFI business activities by driving SIFIs out of the business practices that regulators regard as unacceptably risky.

As noted above, commentators have observed that while SIFIs have grown in size, SIFIs have nonetheless shed many assets, and SIFIs now engage in less risky financial activities. These observations provide initial evidence that Dodd-Frank operates as a Pigouvian regulation. If SIFIs had simply grown without becoming safer, then compliance costs would not have had the desired effect of
pushing SIFIs away from risky activities. SIFI growth, however, has been coupled with a shift towards less exotic financial activities. As we show in this Section, SIFI compliance costs have played a significant role in this process.

In particular, this Section will focus on the compliance costs of (1) holding commodities and (2) being designated as a nonbank SIFI. In addition, it will show how these compliance costs have led large financial institutions to divest their commodities holdings and have encouraged nonbank firms to change their business activities so as to shed their SIFI designation. Finally, the Section will discuss how these business changes have reduced overall systemic risk.

1. Divesting Commodities Holdings

Since Dodd-Frank's passage, SIFIs have divested themselves of sizeable commodities holdings, and they have done so because Dodd-Frank raised the costs of holding physical commodities. This section first explains why financial regulators worry about allowing banks to participate in commodity markets. It then explains how two parts of Dodd-Frank—the limits it imposes on derivatives trading and its capital requirements—have increased the costs of holding commodities. Finally, it identifies a number of large spin-offs and divestitures that have occurred because banks wanted to reduce the costs associated with complying with these regulations.

For two reasons, commodities holdings can pose outsized risks for financial institutions. First, physical commodities are themselves vulnerable to extreme losses. A single catastrophic event could subject a financial institution to multi-billion-dollar losses. This is, for example, what happened to BP because of the Deep Water Horizon oil spill. Because these losses are unpredictable and can be triggered by natural disasters, it is difficult and costly for banks to

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138. STAFF OF S. PERMANENT SUBCOMM. ON INVESTIGATIONS, 113TH CONG., WALL STREET BANK INVOLVEMENT WITH PHYSICAL COMMODITIES 3 (Comm. Print 2014) ("[F]inancial holding companies . . . engage[d] in commodity-related businesses that carried potential catastrophic event risks.").


140. See STAFF OF S. PERMANENT SUBCOMM. ON INVESTIGATIONS, 113TH CONG., WALL STREET BANK INVOLVEMENT WITH PHYSICAL COMMODITIES 4-5 (Comm. Print 2014).

take steps to protect against such losses.\textsuperscript{142} The Federal Reserve observed in a 2012 notice of proposed rulemaking that “catastrophes involving environmentally sensitive commodities may cause fatalities and economic damages well in excess of the market value of the commodities involved or the committed capital and insurance policies of market participants.”\textsuperscript{143} According the Fed’s analysis, if a financial institution suffered a loss similar to that incurred by BP because of the oil spill, it would not have been able to cover its losses.\textsuperscript{144} The Fed went on to conclude that Morgan Stanley, Goldman Sachs, and JPMorgan would each have to allocate between $1 billion and $15 billion in capital or insurance to cover potential losses from commodities trading.\textsuperscript{145}

A second reason commodities introduce risk into financial markets is that commodity markets are cyclical, which means that the value of commodities rises during times of economic growth and decreases when the market as a whole declines.\textsuperscript{146} As a result, while commodities pad bank profits when markets are healthy, they exacerbate losses at the worst possible moment: when an economic crisis has begun and a bank needs a steady stream of income.

Conscious that such holdings can expose the financial system to widespread shocks, both the Federal Reserve and the CFTC have used Dodd-Frank to push SIFIs out of certain commodities businesses. Critically, though, regulators did not bar commodities trading altogether—in fact, the rules explicitly allow SIFIs to use commodities for hedging purposes.\textsuperscript{147} Instead, regulators limited the number and amount of speculative trades companies could make on physical commodities, and they imposed significant reporting and capital requirements that increased the cost of trading commodities.\textsuperscript{148} Although the stated purpose

\textsuperscript{142} See id.

\textsuperscript{143} See Complementary Activities, supra note 139, at 3331.

\textsuperscript{144} STAFF OF S. PERMANENT SUBCOMM. ON INVESTIGATIONS, 113TH CONG., WALL STREET BANK IN VolV-EMENT WITH PHYSICAL COMMODITIES 4-5 (Comm. Print 2014).

\textsuperscript{145} Id.


\textsuperscript{148} See Dodd–Frank, Pub. L. No. 111-203, §§ 701-774 124 Stat. 1376, 1641-1802 (2010). Dodd-Frank allows the CFTC to regulate position limits in three ways: (1) by setting the size of position limits, (2) by exempting certain activities, such as bona fide hedging, from these limits, and (3) by setting an aggregation policy with regard to the overall position limits. 7
of these rules is to implement safeguards that will increase transparency and make banks more resilient to movements in commodities prices,\(^\text{149}\) they have also increased compliance costs so significantly that they have pushed many banks out of physical commodities businesses altogether.

At least two parts of Dodd-Frank have played a significant role in prompting SIFIs to divest themselves of their commodities holdings. Specifically, provisions limiting the number of futures contracts an investor is allowed to hold on an underlying security—commonly referred to as a position limit\(^\text{150}\)—made it less profitable for banks to remain active in commodities markets.\(^\text{151}\) In plain English, position limits cap the amount of speculative trades a financial institution can make on contracts for the future delivery of commodities. In addition, stricter capital and liquidity requirements mean that banks must hold additional liquid assets in order to mitigate risks posed by commodities.\(^\text{152}\)

\(^\text{149}\) See id., at 48,307 (noting that "[t]he legislation was enacted, among other reasons, to reduce risk, increase transparency, and promote market integrity within the financial system").


\(^\text{151}\) See 17 C.F.R. § 150.1-2 (2016). By reducing banks’ ability to use derivatives to bet on commodities prices, Dodd-Frank increased the costs banks face in holding physical commodities. Consider the following examples. If a bank owns an oil refinery, it will learn information relevant to oil prices, such as shipping delays or technical difficulties, before the market does. If the company obtains information that indicates that the price of the commodity will decline, it will be able to use that information to make a profit by shorting the commodity it owns. In that way, it can use its informational advantage to offset losses due to price declines. According to the Federal Reserve, Morgan Stanley and Goldman Sachs have used this tactic to great effect. STAFF OF S. PERMANENT SUBCOMM. ON INVESTIGATIONS, 113TH CONG., WALL STREET BANK INVOLVEMENT WITH PHYSICAL COMMODITIES 36 (Comm. Print 2014).

\(^\text{152}\) The source of regulators’ authority to issue capital requirements originally came from section 4(k) of the Bank Holding Company Act. However, section 171 of Dodd-Frank—commonly known as the “Collins Amendment”—sets a capital requirement floor and gives regulators authority to adjust capital requirements. See Dodd-Frank § 171, codified at 12 U.S.C. § 5371 (2012). Moreover, that section imposes further burdens on financial institutions by limiting the kinds of assets that can be counted as Tier I capital. For instance, section 171 instructs regulators to apply the same capital and risk standards to SIFIs that apply to banks insured
By tracking how banks responded to changes in the CFTC's commodities regulations, one can identify the Pigouvian effect of position limit regulations. As we discuss in more detail after our analysis of capital requirements, what we observe is that banks reduced or eliminated their commodities positions following the imposition of these compliance costs, and they often explicitly said that they did so in order to reduce these costs. Although some firms sold off substantial commodities units just months after the passage of Dodd-Frank in 2010, substantial divestitures did not occur until a few years later, after it became clear that the regulations on position limits would actually go into effect. Specifically, commodities divestitures picked up once the CFTC voted to approve a new rule regarding position limits in 2013. The 2013 rules imposed greater compliance costs on holding commodities. And capital rules have further raised the costs by the FDIC. Id. One important consequence of this requirement is that hybrid capital instruments, such as trust preferred securities, are no longer included in the definition of tier 1 capital. Id.


154. We believe that this delay is partly due to initial skepticism by the industry that the position rules would be adopted or would survive legal challenge. For instance, although the CFTC published a final rule on position limits in November 2011, see Position Limits for Futures and Swaps, 76 Fed. Reg. 71,626 (Nov. 18, 2011), the rule was initially met by numerous successful lawsuits; see, e.g., Int'l Swaps & Derivatives Ass'n v. CFTC, 887 F. Supp. 2d 259, 284 (D.D.C. 2012) (noting that factors rule in favor of vacating the Position Limits Rule on remand); Court Vacates Position Limit Rules, SULLIVAN & CROMWELL LLP 1 (Oct. 1, 2012), http://www.sullcrom.com/siteFiles/Publications/SC-Publication-Court-Vacates-Position-Limit-Rules.pdf [http://perma.cc/AD3Y-DRSA]. It was only in 2013, after the CFTC's rules survived numerous legal challenges and officially went into effect that firms began to divest their commodities holdings at a significant pace.


156. Position Limits for Derivatives, 78 Fed. Reg. at 75,735 (amending § 150.3, requiring banks to maintain complete records and books relating to all details of their swap transactions, and specifying that these records can be demanded by the CFTC upon request); CFTC Proposes New Position Limits, SULLIVAN & CROMWELL LLP 2, 8 (Nov. 18, 2013), http://www.sullcrom.com/siteFiles/Publications/SC_Publication_CFTC_Proposes_New_Position

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costs of holding commodities. Capital requirements and position limits thus hit banks in quick succession between 2012 and 2014. The result was a flurry of divestitures.

A second feature of Dodd-Frank that has led SIFIs to divest commodities holdings is its increase in capital requirements. Since the financial crisis—even before Dodd-Frank went into effect—financial regulators have made it much more capital-intensive for banks to remain in the commodities business. For example, banks were technically required to hold capital on physical assets before Dodd-Frank went into effect.157 There were, however, several difficulties with the pre-Dodd-Frank capital requirements. Most significantly, banks could reduce the amount of capital they had to hold in connection with their physical commodities by engineering complex financial products that moved their commodities exposures off-balance sheet without actually reducing the risks they faced because of their commodities trades.158 A series of recent regulations has

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158. See generally Viral V. Acharya, Philipp Schnabl, & Gustabo Suarez, Securitization Without Risk Transfer, 107 J. Fin. Econ. 519 (Oct. 2012) (showing how asset-backed commercial paper conduits allowed banks to reduce their capital holdings without actually moving risk off their balance sheet).
made it more difficult for banks to do this;\textsuperscript{159} the Fed has simultaneously increased—or announced that it will increase—the amount of capital banks have to hold in connection with physical commodities.

In January 2014, the Federal Reserve issued an advance notice of proposed rulemaking and sought comments on whether there should be further restrictions on physical commodities activities among financial holding companies.\textsuperscript{160} The notice sought comments on, among other things, whether the regulators should impose “enhanced capital requirements” in relation to certain commodities holdings.\textsuperscript{161} The proposed rule was issued on September 23, 2016,\textsuperscript{162} and would—according to one source—“impose extraordinary capital and other prudential requirements and limitations with respect to physical commodity activities of financial holding companies.”\textsuperscript{163} Of particular importance is

\textsuperscript{159} As discussed below, Dodd-Frank is not the only source of authority for capital requirements. These regulations are promulgated both in accordance with Basel III’s and the Collins Amendment. For purposes of our thesis, however, it is unimportant that Dodd-Frank is not the only reason for the recent changes in capital requirements. What matters is that capital requirements are generally treated as important for increasing bank resiliency. We show, however, that the costs they impose on firms have also had a regulatory effect.


\textsuperscript{161} Id. at 3,333.

\textsuperscript{162} Regulations Q and Y; Risk-Based Capital and Other Regulatory Requirements for Activities of Financial Holding Companies Related to Physical Commodities and Risk-Based Capital Requirements for Merchant Banking Investments, 81 Fed. Reg. 67,220 (Sept. 30, 2016) (to be codified at 12 C.F.R. pts. 217 & 225) [hereinafter Regulations Q and Y].


the fact that the Federal Reserve’s proposed rule would mandate “massive capital increases for the [commodities’ trading] activities”164 for all firms. The regulations would result in a massive increase in risk-based capital requirements for certain physical commodities activities, ranging from a 300% risk weight to a 1,250% risk weight.165 That means that banks would have to hold between 3 and 12.5 times more capital in connection with those commodities than they did before the crisis. The regulators had made the capital requirements more onerous in relation to commodities before these proposed rules.166 The October 11, 2013 final rule from the Fed and the OCC, which the proposed rule would modify,167

perma.cc/XV6G-GJ9Q] (“[B]oth the extent and the timing of the surcharge are left to the discretion of the national regulators, as well as the manner in which the credit/GDP ratio is to be interpreted.”).

Furthermore, the Federal Reserve’s stress testing and Comprehensive Capital Analysis Review (CCAR) – the process by which the Federal Reserve determines whether a bank’s capital meets acceptable standards – includes both quantitative and qualitative components. The Federal Reserve can, and does, adjust both from year to year based on subjective market conditions, and changing methods of calculating the risk and liquidity of capital. Note that the Fed recently finalized a rule adjusting its capital plan and stress testing rules, effective for the 2017 cycle. The final rule removes large and noncomplex firms from the qualitative assessment of the CCAR, reducing significant burden on these firms and focusing the qualitative review in CCAR on the largest, most complex financial institutions. See Amendments to the Capital Plan and Stress Test Rules; Regulations Y and YY, 82 Fed. Reg. 9,308 (Feb. 3, 2017) (to be codified in 12 C.F.R. pts. 225 & 252); Federal Reserve Board Announces Finalized Stress Testing Rules Removing Noncomplex Firms from Qualitative Aspect of CCAR Effective for 2017, BOARD GOVERNORS FED. RES. SYS. (Jan. 30, 2017), http://www.federalreserve.gov/newsevents/pressreleases/bcreg2017013oa.htm [http://perma.cc/H2SP-LB7C].


166. Despite its broad scope, the Federal Reserve’s rule would especially burden Goldman Sachs and Morgan Stanley because they had been “grandfathered in” under section 4(0) of the Bank Holding Company Act, which allowed those institutions to engage in commodities trading. Regulations Q and Y, supra note 162, at 67,223.

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had already imposed a higher capital requirement than the pre-Dodd-Frank regu-
lations. 168

Along with the other proposed restrictions, analysts have estimated that banks
would have to put up an additional $4 billion in capital reserves before they
could engage in commodities trading. 169—funds that could not be used to
generate profits through activities such as lending or trading. 170 As a result, the
Federal Reserve’s capital requirements force banks to choose between commod-
ities trading and more traditional lending activities.

In the months after the CFTC’s new position limit rules and the Federal Re-
serve’s capital requirement proposed rulemaking, JPMorgan, Goldman Sachs,
and Morgan Stanley began to divest commodities units at an increased pace. For
example, in early 2014 JPMorgan offloaded its entire physical commodities unit
for $3.5 billion, its most significant commodities divestiture. 171 Citing regulatory
pressure to exit the commodities business, increased compliance costs, and the
new capital requirements, JPMorgan decided to get out of the vast majority of
its commodities business. 172 During the same period, Morgan Stanley sold its

168. Regulatory Capital Rules, 78 Fed. Reg. at 62,018 (“The final rule implements a revised defi-
nition of regulatory capital, a new common equity tier 1 minimum capital requirement, a
higher minimum tier 1 capital requirement, and, for banking organizations subject to the ad-
vanced approaches risk-based capital rules, a supplementary leverage ratio that incorporates
a broader set of exposures in the denominator.”).

169. Hamilton, supra note 164.

170. See Capital Guidelines and Adequacy, BOARD GOVERNORS FED. RES. SYS. http://www
.federalreserve.gov/supervisionreg/topics/capital.htm [http://perma.cc/7UXS-JLZW]
(“The primary function of capital is to support the bank’s operations, act as a cushion to ab-
sorb unanticipated losses and declines in asset values that could otherwise cause a bank to fail,
and provide protection to uninsured depositors and debt holders in the event of liquidation.”).

171. J.P. Morgan To Sell Commodities Business for $3.5 Billion, WALL ST. J. (Mar. 19, 2014, 1:25
-1395214861 [http://perma.cc/SMX6-qBZE]; Dmitry Zhdannikov & Silvia Antonioli, J P
Morgan Sells Commodity Arm to Mercuria for $800 Million: Sources, REUTERS (Oct. 6,
-commodity-arm-to-mercuria-for-800-million-sources-idUSKCN0HVoTJ20141006
[http://perma.cc/TzZ2-VWU4].

172. Andy Hoffman & Hugh Son, JPMorgan Agrees To Sell Commodities Unit for $3.5 Billion, BLOOM-
/jpmorgan-said-to-agree-on-sale-of-commodities-unit-to-mercuria [http://perma.cc
/9HQH-CRMD]
oil storage business, TransMontaigne,\textsuperscript{174} and its related marketing division\textsuperscript{174} in order to avoid strict regulatory scrutiny of its trading and storage of commodities and the increased capital requirements. Within a year, Morgan Stanley sold its compressed natural gas unit,\textsuperscript{175} its physical oil business,\textsuperscript{176} and its European natural gas and power trading portfolio\textsuperscript{177}—each time citing the CFTC’s reporting rules, the Federal Reserve’s pending capital requirements and disclosure rules, or some combination of both regulations. Finally, in early 2014 Goldman Sachs also divested or wound down its aluminum warehousing unit,\textsuperscript{178} a Columbia-


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based coal mine operation,179 and a uranium trading business,180 all to reduce its exposure to commodities in light of increasing compliance costs.

Ultimately, although it is clear that Dodd–Frank regulations caused these divestitures, they did not operate in a typical command-and-control manner. Instead, Dodd–Frank put regulatory pressure on firms to choose which commodities activities to retain and which to abandon—and the firms chose in different ways. Morgan Stanley, for instance, sold its physical oil business, and reportedly has plans to sell its stake in an oil tanker group.181 However, the firm has held onto its client-facilitation oil-trading desk.182 In contrast, while Goldman Sachs divested itself of various commodities holdings,183 it has been building out other aspects of its commodities business to a much greater extent than its peers.184


183. See supra notes 177-179 and accompanying text.

184. Dakin Campbell et al., Goldman Sachs Seeks Stars To Revive Commodities Unit, BLOOMBERG (Aug. 21, 2017, 5:00 AM), http://www.bloomberg.com/news/articles/2017-08-21/goldman-sachs-is-said-to-seek-stars-to-revive-commodities-unit [http://perma.cc/63TP-FTUH]; Lauren Tara LaCapra, Goldman Sachs Touts Commodities Muscle as Rivals Shrink,
Whether these choices have reduced systemic risk enough to satisfy regulators will only be revealed in future regulatory actions.

In summary, these two sets of regulations—from the CFTC and the Federal Reserve—have massively increased the cost of complying with commodities rules: the CFTC’s rules prevent banks from limiting exposure by reducing their ability to make speculative bets, and the Federal Reserve’s rules impose heightened capital requirements and more extensive reporting responsibilities. SIFIs have responded to these regulations by leaving—or at least substantially reducing their presence in—commodities markets. Furthermore, these divestitures have occurred in highly lucrative businesses. The units divested by JPMorgan, Goldman Sachs, and Morgan Stanley listed above were worth billions of dollars. The simplest explanation is that the costs of complying with Dodd-Frank’s heightened reporting and capital requirements make it too expensive for banks to continue operations that once were highly profitable.

Finally, these results are distinctively Pigouvian in nature. Unlike traditional command-and-control regulations, Dodd-Frank did not bar SIFIs from remaining active in these markets: there is no prohibition on commodities trading. Instead, the Act has simply made it more expensive for banks to be active in these spaces by requiring that they hold more capital and abide by expensive position limits. The critical point is not simply that divestitures occurred. Indeed, every regulation is costly, and it is unsurprising that such costs would affect a bank’s business structure. Instead, what is unique to Dodd-Frank, and in particular its reporting and capital requirements, is that its compliance costs are not mere ancillary effects. They are the direct mechanism by which financial regulators incentivize firms to divest business units that regulators regard as risky. In doing so, regulators have used the costs of complying with Dodd-Frank to serve the law’s core regulatory purpose.


185. E.g., Quarterly Report (Form 10-Q) 39-40, MORGAN STANLEY (Feb. 28, 2006), http://www.morganstanley.com/about-us-ir/shareholder/10q0206/10q0206.pdf [http://perma.cc/64RW-3AK9] (“Fixed income sales and trading revenues were a record $2,724 million, up 36% from the first quarter of fiscal 2005. The increase was driven by strong performances in commodities and credit products. Commodity revenues increased to a record level, primarily due to record revenues from electricity and natural gas products and oil liquids.”).
2. Shedding of SIFI Designation by Nonbank Firms

The experience of nonbank SIFIs offers additional evidence that regulators have used Dodd-Frank’s costs to push SIFIs away from risky activities. Many bank SIFIs have virtually no ability to shed their SIFI designation. So long as a bank has more than $50 billion in assets—and most bank SIFIs are many times that size—financial regulators are statutorily required to designate the bank as a SIFI.\(^{186}\) This bright-line cut-off does not, however, apply to nonbank SIFIs. As a result, while bank SIFIs are only able to reduce the costs of complying with Dodd-Frank’s SIFI designation, nonbank SIFIs can choose to eliminate those costs entirely. Specifically, by convincing financial regulators that they no longer pose a risk to American financial stability, nonbank SIFIs can shed their SIFI designation and jettison the SIFI compliance costs altogether. Indeed, as of November 2017, two of the four designated nonbank SIFIs—GE Capital (GECC) and American Insurance Group (AIG)—have successfully had their designation rescinded by the Financial Stability Oversight Council (FSOC).

A nonbank SIFI is created when the FSOC designates a firm as systemically important based on FSOC’s determination that material financial distress at the firm would pose a threat to U.S. financial stability.\(^{187}\) Because these determinations are discretionary, they can be made and revoked as firm activities and size

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change.\textsuperscript{188} Thus far, FSOC has designated four nonbank firms as systemically important: GECC,\textsuperscript{189} AIG,\textsuperscript{190} Prudential Financial,\textsuperscript{191} and MetLife.\textsuperscript{192}

\begin{flushleft}
\textsuperscript{188} Dodd-Frank requires FSOC to consider 10 factors: (1) the extent of the leverage of the company; (2) the extent and nature of the off-balance-sheet exposures of the company; (3) the extent and nature of the transactions and relationships of the company with other significant nonbank financial companies and significant bank holding companies; (4) the importance of the company as a source of credit for households, businesses, and State and local governments and as a source of liquidity for the U.S. financial system; (5) the importance of the company as a source of credit for low-income, minority, or underserved communities, and the impact that the failure of such company would have on the availability of credit in such communities; (6) the extent to which assets are managed rather than owned by the company, and the extent to which ownership of assets under management is diffuse; (7) the nature, scope, size, scale, concentration, interconnectedness, and mix of the activities of the company; (8) the degree to which the company is already regulated by one or more primary financial regulatory agencies; (9) the amount and nature of the financial assets of the company; and (10) the amount and types of the liabilities of the company, including the degree of reliance on short-term funding. Dodd-Frank § 113(a)(2), 12 U.S.C. § 5323(a)(2) (2012). However, the Council may also consider any other risk-related factors that it deems appropriate, id., demonstrating the subjective nature of this determination. FSOC promulgated rules indicating how it would apply these factors, 12 C.F.R. § 1310, and released supplemental guidelines for the designation of nonbank SIFIs. These guidelines indicate that FSOC considers both “quantitative and qualitative analyses” in making its determinations. Supplemental Procedures Relating to Nonbank Financial Company Determinations, FIN. STABILITY OVERSIGHT COUNCIL (Feb. 4, 2015), http://www.treasury.gov/initiatives/fsoc/designations/Documents/Supplemental%20Procedures%20Related%20to%20Nonbank%20Financial%20Company%20Determination%20-%20February%202015.pdf [http://perma.cc/SB2R-R3F4].


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These firms have responded differently to their SIFI designations. GECC sought to be de-designated as a SIFI and successfully achieved its goal by aggressively shedding risky assets. AIG, too, has successfully shed its SIFI designation. By contrast, MetLife has successfully taken to the courts and Prudential seems likely to follow.

a. GECC’s Response

GECC represents the paradigmatic example of a nonbank SIFI responding to the compliance costs created by the SIFI designation. GECC began shedding certain assets shortly after being designed a SIFI in 2013. GECC made its intentions public on April 10, 2015, when General Electric—GECC’s parent company—announced that, in an effort to “create a simpler, more valuable company,” it intended to “reduce[ ] the size of its financial businesses through the sale of most GECC assets.” GECC explicitly noted that it was adopting this approach based on its plan to “work closely with [regulators] to take the actions necessary to de-designate GE Capital as a [SIFI].” From 2012 to its 2016 rescission request, GECC had sold 52% of its total assets.

The following chart, taken from the summary of GECC’s rescission request, demonstrates the extent of GECC’s divestitures:

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194. Id.

### TABLE 1.
GE CAPITAL DIVESTITURES SINCE DECEMBER 31, 2012

<table>
<thead>
<tr>
<th>Type of Disposition</th>
<th>Details</th>
<th>Amount of Assets or Deposits Divested</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Banks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispositions of Banks and Bank Assets and Deposits</td>
<td>Exit of U.S. banking through the separation from Synchrony Financial and its subsidiary, Synchrony Bank, and the pending sale of GE Capital Bank's U.S. online deposit platform and all of its deposits, including online savings accounts, online CDs, and brokered CDs</td>
<td>Assets: $87 billion (Synchrony) Deposits: $58 billion (collectively)</td>
</tr>
<tr>
<td></td>
<td>Reduction in foreign banking entities through the sale of banks in Switzerland, Sweden, the Netherlands, Hungary, Russia, and Latvia</td>
<td>Assets: $14 billion</td>
</tr>
<tr>
<td><strong>Dispositions of Consumer Financing Businesses and Assets</strong></td>
<td>Exit of consumer mortgage business in the United Kingdom through sales of assets</td>
<td>Assets: $15 billion</td>
</tr>
<tr>
<td></td>
<td>Exit of consumer financing businesses in South Korea, Australia, and New Zealand through sales of assets</td>
<td>Assets: $9 billion</td>
</tr>
<tr>
<td><strong>Disposition of Global Commercial Lending and Leasing Businesses and Assets</strong></td>
<td>Exit of U.S. and European Sponsor Finance businesses through sales of assets</td>
<td>Assets: $17 billion</td>
</tr>
<tr>
<td></td>
<td>Exit of certain lending and leasing lines of business in the United States, Japan, Mexico, Canada, South Korea, Australia, and New Zealand through sales of equipment, healthcare, vendor finance, fleet, rail, corporate aircraft, and other lending and leasing assets</td>
<td>Assets: $66 billion</td>
</tr>
<tr>
<td><strong>Non-Banks</strong></td>
<td>Reduction in inventory financing assets through sales of assets in the United States and Canada</td>
<td>Assets: $11 billion</td>
</tr>
<tr>
<td></td>
<td>Reduction of joint ventures and other equity investments related to commercial lending and leasing</td>
<td>Assets: $5 billion</td>
</tr>
<tr>
<td></td>
<td>Sale of substantially all commercial real estate loans and investments globally</td>
<td>Assets: $50 billion</td>
</tr>
</tbody>
</table>

**Total Assets Divested**: $272 billion

As a result of these spinoffs and divestitures, GECC submitted its rescission request to FSOC on March 31, 2016, requesting de-designation as a SIFI.197 On

196. GE Capital produced this table as part of its rescission request submitted to the FSOC. Id. 197. Id.
June 28, 2016, FSOC granted GECC’s request.\textsuperscript{198} In its decision, FSOC noted that GECC had “fundamentally changed its business . . . through a series of divestitures, a transformation of its funding model, and a corporate reorganization,” that had made the company “a much less significant participant in financial markets and the economy.”\textsuperscript{199} FSOC also emphasized that GECC had “decreased its total assets by over 50 percent, shifted away from short-term funding, and reduced its interconnectedness with large financial institutions.”\textsuperscript{200} In short, thanks to its strategic response to the SIFI designation, GECC was officially freed from the compliance costs of being designated a SIFI.\textsuperscript{201}

GECC’s designation and rescission process highlights three potential benefits of Pigouvian taxes or regulations: (1) the flexibility granted to the enforcing regulators, (2) the possibility of a dynamic relationship between the regulated entity and its regulator, and (3) the ability of the regulated party, rather than the regulator, to determine how the company should adapt to regulatory pressures.

Government regulators made their first move on July 8, 2013, when FSOC designated GECC as systemically important. In its designation decision, FSOC noted that “material financial distress at [GECC] could pose a threat to U.S. financial stability” and further “that GECC should be subject to supervision by the Federal Reserve and enhanced prudential standards.”\textsuperscript{202} Then, on July 24, 2015, in accordance with Section 165 of Dodd-Frank - which requires the Federal Reserve to enforce enhanced prudential standards (EPS) on nonbank SIFIs that regulate risk-based capital requirements and leverage limits (or, in the alternative, liquidity requirements, overall risk management requirements, reso-


\textsuperscript{199} Id.

\textsuperscript{200} Id.

\textsuperscript{201} Shaking off the yoke of enhanced Federal Reserve oversight proved to be a boon to GECC’s parent company, General Electric. Between April 10, 2015 — when General Electric announced it would unload most of its GECC Asset — and June 28, 2016 — the date FSOC granted GECC’s rescission request — General Electric added $50 billion in market capitalization, or about $5.25 per share. GE's stock increased about 20%, while the broader market stayed flat. See Rob Cox, Shedding “Too Big To Fail” Label Was Worth $50 Billion to G.E., N.Y. TIMES (June 29, 2016), http://www.nytimes.com/2016/06/30/business/dealbook/shedding-too-big-to-fail-label-was-worth-50-billion-to-ge.html [http://perma.cc/2M9F-FF78].

\textsuperscript{202} Basis of the Financial Stability Oversight Council’s Final Determination Regarding General Electric Capital Corp., Inc., supra note 189.

olution plan and credit exposure report requirements, and concentration limits), the Federal Reserve promulgated its final rule announcing the EPS that would apply to GECC. The Federal Reserve observed that “[i]n light of the substantial similarity of GECC’s activities and risk profile to that of a similarly sized bank holding company, the enhanced prudential standards adopted by the Board are similar to those that apply to large bank holding companies . . . .” More significantly, however, the Federal Reserve also announced that it had taken note of GECC’s announced plans to divest certain assets and had structured its regulations in two phases with that in mind. The main body of standards became effective on January 1, 2016. But just six months later, before the second body of standards came into effect, the Federal Reserve announced the rescission of GECC’s SIFI designation, noting that its failure no longer posed a systemic threat.

GECC demonstrates the flexibility given to regulators under Dodd-Frank to adjust costs depending on a firm’s changing circumstances. In GECC’s case, there were at least four different levels of regulation it could have faced: (1) its initial designation, (2) the first set of standards, (3) the second set of standards, and (4) no regulation. Under Dodd-Frank, regulators could move between these different levels of regulations in response to GECC’s actions. In this way, the Pigouvian scheme allowed regulators to work closely with GECC to “right size” the firm in a matter of months.

Although most of the discussions between GECC and FSOC were confidential, publicly available information provides strong evidence of the centrality of the dynamic relationship between GECC and FSOC in the lead-up to the rescission decision:


206. Id.

207. GE To Create Simpler, supra note 193.

208. Id.

### TABLE 2.
**TIMELINE OF RELATIONSHIP BETWEEN GECC AND FSOC**

<table>
<thead>
<tr>
<th>Early 2015:</th>
<th>GECC began meeting with financial regulators about how to reduce the potential risks GECC could pose to financial stability.210</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 15, 2015:</td>
<td>GECC sells its New Zealand and Australian consumer finance arms for $6.3 billion.211</td>
</tr>
<tr>
<td>April 10, 2015:</td>
<td>GECC announces plans to significantly reduce assets to shed its SIFI label.212 GE reiterated that it intended to “work closely with these bodies to take the actions necessary to de-designate GECC as a [SIFI].”213</td>
</tr>
<tr>
<td>June 30, 2015:</td>
<td>GECC announces plans to sell its European private equity financing business to Sumitomo Mitsui Banking Corp.214</td>
</tr>
<tr>
<td>August 13, 2015:</td>
<td>GE sells its online bank to Goldman Sachs.215</td>
</tr>
<tr>
<td>October 13, 2015:</td>
<td>GE announced plans to sell $30 billion of its commercial lending and leasing businesses to Wells Fargo.216</td>
</tr>
<tr>
<td>November 17, 2015:</td>
<td>GECC completes its IPO of Synchrony Financial, which, along with its 15% offering in March 2014, totals approximately $87 billion in assets spun off.217</td>
</tr>
</tbody>
</table>

210. Id. at 3.
212. GE To Create Simpler, *supra* note 193.
213. Id. (“We have a constructive relationship with our regulators and will continue to work with them as we go through this process,’ Immelt said.”).
December 15, 2015: GECC sells its commercial lending and leasing business in Japan.  

March 2, 2016: GE sells its Indian commercial lending and leasing.  

March 18, 2016: “[T]he Council notified GE Capital that the Council was conducting its third annual reevaluation of its final determination regarding the company. The Council invited the company to meet with staff and to submit materials for consideration by the Council.”  

March 29, 2016: GECC announces the sale of its U.S. hotel franchise loan unit.  

March 31, 2016: “GE Capital made a written submission to the Council, requesting that the Council rescind its final determination.”  

April 2016: “[S]taff of Council members and member agencies met with the company.”  

May to June 2016: “[I]n response to questions from staff of Council members and member agencies, GE Capital submitted supplemental information to the Council in May and June 2016.”  

June 28, 2016: FSOC announces the rescission of GECC’s SIFI status.  

This timeline, while only a sampling, makes clear the working relationship between GECC and FSOC. Public statements from both entities reveal that meetings in early 2015 were crucial in GECC’s decision-making process. The quantity and speed of divestments following GECC’s announcement in April 2015 seem to indicate that GECC was confident that such changes would satisfy FSOC during its 2016 review.

Given both the timeline of divestitures and GECC’s close working relationship with FSOC, GECC presents a quintessential example of the benefits that
Pigouvian regulations afford by leaving business decisions in the hands of the regulated businesses. Ultimately, the Federal Reserve achieved the same result it would have obtained through more traditional command-and-control regulations—i.e., the divestiture of risky assets and the de-designation of GECC. But, by vesting discretion in GECC instead of unilaterally deciding which assets to shed, the Federal Reserve allowed GE to determine the timing and scope of divestitures. In this way, GE could determine for itself which business lines to shed and which to keep. This is, of course, not the case with a command-and-control regulation where it is the lawmakers or regulators who decide whether a certain activity is permissible.226

The regulated entity can decide which business opportunities to pursue, and in effect, what level of regulation it is willing to tolerate. GECC is again a case in point.227 In April 2015, when GECC announced its plans to shed its SIFI label, it also announced plans to retain certain bank-like activities. In its press release announcing the new strategy, GECC noted its intent to keep its “vertical financing” businesses including GE Capital Aviation Services, Energy Financial Services and Healthcare Equipment Finance, since these “directly relate to [GECC’s] core industrial businesses.”228 Consequently, one newspaper compared GECC postdivestment as “essentially a captive finance arm,” which exists to support the core business lines of the firm.229 FSOC noted the positive features of this change in its rescission notice: “GE Capital now focuses on the healthcare, energy, and aviation leasing markets, among others, in which other large financial institutions are generally less concentrated.”230

Ultimately, by June 28, 2016, GECC and FSOC had both achieved their goals. GECC had shed its SIFI designation while following its own business plan and increasing shareholder value.231 FSOC had satisfied itself that material financial stress at GECC would not pose a systemic threat to the U.S. financial

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226. This is not always a bad thing. For example, most probably favor a ban on fraud in the sale or purchase of securities, see 17 C.F.R. § 240.10b–5 (2018), even if there is significant disagreement over the meaning or reach of the SEC’s antifraud provisions.

227. Recall that if the regulators were not satisfied with GECC’s actions with respect to its de-designation actions, the regulators could have denied its de-designation request.

228. GE To Create Simpler, supra note 193.


markets, and in the process, reduced the number of firms that could be considered too big to fail.

b. AIG’s Response

AIG provides another example of how compliance costs emanating from Dodd-Frank shape the behavior of nonbank financial institutions. FSOC designated AIG as a SIFI on July 8, 2013.232 AIG’s designation should not come as a surprise, as the firm was at the center of the financial crisis.233 In the designation decision, FSOC noted that even though “[AIG]’s strategy, funding profile, and global footprint have changed greatly since the financial crisis,” it remained large, complex, and deeply interconnected with other financial institutions.234 Yet, by September 29, 2017, FSOC had rescinded AIG’s designation, noting that “based on [FSOC]’s analysis of AIG and changes since July 2013,” material financial distress at AIG would no longer cause a systemic threat to financial stability in the United States.235

In some important ways, AIG’s story diverges from that of GECC. AIG remains a central, albeit smaller, player in the broader financial markets in a way


233. The Financial Crisis Inquiry Report, FIN. CRISIS INQUIRY COMMISSION 352 (2011), http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf (http://perma.cc/KAoK-MQ99) (“AIG was so interconnected with many large commercial banks, investment banks, and other financial institutions through counterparty credit relationships on credit default swaps and other activities such as securities lending that its potential failure created systemic risk. The government concluded AIG was too big to fail and committed more than $180 billion to its rescue. Without the bailout, AIG’s default and collapse could have brought down its counterparties, causing cascading losses and collapses throughout the financial system.”).


that GECC does not.\(^{236}\) AIG has over 90 million clients in the commercial, institutional, and individual insurance markets,\(^ {237}\) while GECC has almost completely exited the business of consumer loans.\(^ {238}\) In other ways, however, AIG has followed a path similar to GECC's. AIG's total assets have decreased about 52% since 2007, and 9% since the end of 2012, resembling the decrease in assets seen at GECC.\(^ {239}\) Furthermore, central to the rescission of AIG's SIFI designation was its divestiture of substantial business assets. In particular, FSOC attributes the decrease in the firm's risk to three transactions\(^ {240}\): the sale of International Lease Finance Corporation in December 2013,\(^ {241}\) the sale of AIG Advisory

\(^{236}\) As of July 2013, AIG was the third largest insurer in the United States; before the financial crisis, it was the largest. *Basis of the Financial Stability Oversight Council's Final Determination Regarding American International Group, Inc.*, supra note 190, at 2.


\(^{238}\) Summary of GE Capital's SIFI Rescission Request, supra note 195, at 6.

\(^{239}\) Notice and Explanation of the Basis for the Financial Stability Oversight Council's Recission of Its Determination Regarding American International Group, Inc. (AIG), supra note 235, at 11. AIG's centrality to the financial crisis somewhat complicates the analysis of the effect of SIFI designation on AIG's strategy, since a number of large changes at AIG are the result of the government's crisis intervention, which occurred years before Dodd-Frank. However, the rescission notice makes clear that changes since designation were central to the rescission determination:

"Initiatives conducted by the Board of Governors, the Federal Reserve Bank of New York, and the Treasury Department, which began in September 2008, ultimately stabilized AIG. After these government interventions, AIG began to substantially reduce its size and complexity by selling off numerous subsidiaries and exiting non-traditional businesses (such as AIGFP [AIG Financial Products]). The AIG Submission states that since the Council's final determination in 2013, AIG has continued to reduce its size and risk by selling non-core operations and businesses, simplifying its operations, and focusing on its more traditional insurance businesses (i.e., its property and casualty and life and retirement businesses)."

*Id.*

\(^{240}\) Note that these transactions only include those divestitures specifically noted in FSOC's rescission letter. There are a number of other divestitures which arguably were also executed due to SIFI designation compliance costs. See, e.g., "AIG Agrees To Sell Japan Life Insurance Business to FWD Group," *BusinessWire* (Nov. 14, 2016), http://www.businesswire.com/news/home/20161114006617/en/AIG-Agrees-Sell-Japan-Life-Insurance-Business [http://perma.cc/7ZCE-HGA7].

Group in January 2016, and the sale of United Guaranty Corporation in August 2016. These “key actions” allowed AIG to “significantly reduce[] its size and certain risks,” which (along with simplifying its corporate structure and reducing its interconnectedness with other financial institutions) precipitated the rescission of AIG’s SIFI designation.

Like GECC, AIG’s designation and rescission highlights key benefits of a Pigouvian regulatory scheme. For one, AIG clearly executed these divestitures and other reorganization moves because of the costs associated with the SIFI designation, as evidenced by its rescission letter, which specifically referenced FSOC’s designation as motivating the divestitures. Bank analysts estimate that the SIFI rescission will save AIG between $100 and $150 million each year in compliance costs. Admittedly, the company and analysts both state that these savings are “modest.” However, there are noticeable benefits outside of direct spending on internal compliance programs: for instance, AIG will not be subject to future Federal Reserve regulations, including more stringent capital requirements for SIFIs.

Further, the rescission has made future acquisitions more plausible because of the reduced regulatory burden. This benefit speaks to the ways in which
Pigouvian regulations leverage the internal expertise of the regulated entity. For at least those divestitures noted above, they were business decisions made by AIG, rather than requirements imposed by regulators.\textsuperscript{249} And even before the official rescission, AIG has been able to make new acquisitions, such as its purchase of Hamilton USA in May 2017, which AIG intends to use to pursue technological innovations in insurance underwriting.\textsuperscript{250} The transaction is relatively small ($110 million), but more importantly, it complements AIG’s core insurance business. This decision reflects what FSOC described as AIG’s strategy to refocus on its core insurance business products.\textsuperscript{251}

Together, GECC and AIG demonstrate how readily nonbank SIFIs can respond to the compliance costs imposed by Dodd-Frank. Both firms shed significant assets, simplified their corporate structures, and refocused on core activities. In return for reducing their riskiness, they were rewarded with reduced compliance costs and less regulatory oversight.

c. MetLife’s Response

Nonbank SIFIs’ varied responses to their designation suggests that Dodd-Frank’s Pigouvian features allow both market participants and regulators to home in on risky practices, while affording institutions needed flexibility. MetLife offers an intriguing example of how nonbank SIFIs could tailor their responses even outside of an iterative process with FSOC. Unlike GECC, MetLife did not (at least not as available in the public record) coordinate with FSOC to move toward rescission, nor did it lay out (at least publicly) a comprehensive divestiture strategy aimed at eventual rescission. Instead of petitioning FSOC to rescind its designation, MetLife took FSOC to court, arguing that its SIFI designation was arbitrary and capricious.\textsuperscript{252} On March 30, 2016, Judge Collyer of

\textsuperscript{249}. This might be compared to the immediate post-crisis situation in which the Fed injected $185 billion to rescue AIG and had extensive authority over the firm.


\textsuperscript{251}. \textit{Notice and Explanation of the Basis for the Financial Stability Oversight Council’s Rescission of Its Determination Regarding American International Group, Inc. (AIG)}, supra note 235, at 12.

the D.C. District Court ruled in MetLife’s favor and rescinded its SIFI designation.\textsuperscript{253} Though the government initially appealed to the D.C. Circuit, it dropped its appeal in January 2018.\textsuperscript{254}

Even as MetLife challenged FSOC in court, however, it took some significant steps to reduce its size in a fashion similar to GECC and AIG. Indeed, it appears that MetLife had a two-track plan to address its SIFI designation. The company filed its case against FSOC in January 13, 2015.\textsuperscript{255} On January 12, 2016, several months before the D.C. District Court handed down its ruling, MetLife announced its plan to spin off a significant portion of its U.S. retail insurance unit into an independent company that would be known as Brighthouse Financial.\textsuperscript{256} The spun off company would have about $240 billion in assets, accounting for about 20\% of MetLife’s operating earnings.\textsuperscript{257} At the time of its designation, MetLife had about $909 billion in total assets, meaning that the spin-off involved a quarter of the company.\textsuperscript{258}

Steven Kandarian, CEO and Chairman of MetLife, explicitly noted that compliance costs associated with its SIFI designation—specifically, the higher capital requirements—had led to the spin-off because these costs would put the company “at a significant competitive disadvantage.”\textsuperscript{259} Although Kandarian mentioned that the company was challenging its SIFI designation in court and “d[id] not believe any part of MetLife is systemically important,” he still emphasized

\begin{footnotes}
\item[253] Id.
\item[257] Id.
\item[258] \textit{Basis of the Financial Stability Oversight Council’s Final Determination Regarding MetLife, Inc.}, \textit{supra} note 192, at 31.
\end{footnotes}
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that “this risk of increased capital requirements contributed to [the firm’s] decision to pursue the separation of the business” and that the company “would benefit from greater focus, more flexibility in products and operations, and a reduced capital and compliance burden.”260 Kandarian finally observed that the spin-off was in accord with MetLife’s broader “strategy to focus on businesses that have lower capital requirements and greater cash generation potential.”261

MetLife completed the spinoff on August 7, 2017,262 even though it was no longer designated as a SIFI and the government’s appeal was still working its way through the D.C. Circuit. There are two ways to view MetLife’s decision to divest its retail insurance unit even after prevailing at the district court. On one view, MetLife could have been concerned that the D.C. Circuit would overturn the district court’s decision, leading to MetLife’s continued designation as a SIFI. In that case, it seems likely that MetLife would have followed a path similar to GECC and AIG in working within the FSOC process toward rescission. Alternatively, MetLife could have believed that it would have won on appeal, but that the divestiture was nonetheless a sound business decision. In either case, the benefits of Pigouvian regulation are evident, as even the threat of increased compliance costs incentivized MetLife to become less risky.

d. Prudential’s Response

As of September 2017, Prudential is the only remaining nonbank SIFI.263 However, Prudential is currently considering different strategies that could lead to the rescission of its SIFI designation.264 News reports indicate that Prudential

260. Id.
261. Id.
263. See Basis of the Financial Stability Oversight Council’s Final Determination Regarding Prudential Financial, Inc., supra note 191; see also Richard Teitelbaum, Prudential Has No Plans To Shed Businesses: CEO, WALL St. J.: CFO J. (Feb. 12, 2016, 11:10 AM), http://blogs.wsj.com/cfo/2016/02/12/prudential-has-no-plans-to-shed-businesses-ceo [http://perma.cc/7N77-FPX7] (noting that, so far, Prudential is the only one of the four nonbank SIFIs that has not pursued a divestiture strategy).
sees potential promise both in a legal challenge, like MetLife’s, and in following a path similar to AIG or GECC in working within the FSOC process.265

Unlike its peer nonbank SIFIs, Prudential has not yet pursued a large-scale divestiture strategy, which would likely be necessary to have its SIFI designation rescinded.266 However, even Prudential’s divergent strategy highlights the benefits of Pigouvian regulations. Here, the regulated entity had apparently decided (at least before the change in administration opened even more opportunities for financial institutions to lobby FSOC267) that the compliance costs associated with being a SIFI were outweighed by the benefits of its current mix of businesses. In a different regulatory context (i.e., command and control), the SIFI designation could have led to mandatory divestitures. Here, however, as exemplified by Prudential, the optimal structure for a large financial institution might be to remain a regulated SIFI. Pigouvian regulations allow firms to do so.

Ultimately, the divergent paths of the four nonbank SIFIs highlight the benefits of Pigouvian regulations. The SIFI designation process allows for coordination and cooperation among the regulators and regulated entities. Further, the process keeps business decisions in the hands of the entities with the most information about the effective allocation of resources—the regulated business themselves. And most importantly, the Pigouvian compliance costs associated with SIFI designations allow for varied results. In the cases of AIG and GECC, compliance costs resulted in firms significantly reducing their size and potential for systemic risk. In return, they received a reduced regulatory burden. In the case

265. Hamilton, supra note 264 (“Prudential is preparing to push a federal watchdog—the Financial Stability Oversight Council—to remove it from a list of nonbanks that regulators concluded would threaten the financial system if they collapsed . . . . Another factor helping Prudential is rival MetLife Inc.’s legal victory last year overturning its label as a systemically important financial institution, or SIFI.”).

266. See Teitelbaum, supra note 263 (“More broadly, Mr. Strangfeld also said he was comfortable with Prudential’s current mix of businesses, signaling that the firm has no plans for major asset sales. ‘We’re just focused on three things—retirement, protection and asset management,’ he said. ‘What we have today is very conscious, very deliberate. It’s by design. It’s not by default.’”). Prudential has executed some asset divestitures, however, and could point to those if it ever petitioned FSOC to rescind its designation. For example, in November 2016, Prudential sold its Korean life insurance subsidiary to Mirae Asset Life Insurance for $148 million. Kirsten Hastings, Prudential Sells Korean Life Insurance Business to Mirae, INT’L ADVISER (Nov. 10, 2016), http://www.international-adviser.com/news/1032537/prudential-sells-korean-life-insurance-business-mirae [http://perma.cc/4NAG-467K]; see also Jon Menon, Prudential Agrees To Sell Unit in Japan to SBI for $85 Million, BLOOMBERG (July 16, 2013, 8:03 AM), http://www.bloomberg.com/news/articles/2013-07-16/prudential-agrees-to-sell-unit-in-japan-to-sbi-for-85-million [http://perma.cc/X6US-JMLM] (discussing Prudential’s July 2013 sale of its Japanese life insurance unit for $85 million).

267. Hamilton, supra note 264. (“Prudential quietly began its exit campaign as soon as Trump’s Treasury secretary, Steven Mnuchin, arrived on the job in February, sending him a welcome letter contending that its status as a SIFI wasn’t appropriate . . . .”).
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of MetLife, compliance costs prompted both resistance and experimentation, leading to delayed divestitures and a refinement of FSOC’s administrative process. And in the case of Prudential, the firm decided that maintaining its size and interconnectedness is a price that it is willing to pay. In exchange, FSOC can apply enhanced regulatory standards to minimize the systemic risks that Prudential poses to the economy. Finally, each of these cases also demonstrates the benefits of allowing regulators to impose compliance costs that are tailor-made to a firm’s unique structure and risks—allowing firms to respond as they deem fit, in accordance with their own financial strategies and risk-tolerance.

3. Reducing Systemic Risk

To be sure, one might object that these divestitures are of little significance if firms simply replaced the business units they spun off with other risky activities. In other words, Dodd-Frank’s compliance costs would have little effect at reducing systemic risk if banks simply replaced one risky investment with another. The evidence, however, suggests that banks and other institutions regulated by Dodd-Frank have, in fact, become safer over time. Of particular significance is that many banks have downsized and simplified in ways not explicitly required by Dodd-Frank, and that annual stress tests identify these divestitures as reasons for reducing firms’ compliance costs.

A number of academics and policymakers have argued that, although Dodd-Frank has not ended too big to fail, it has reduced the systemic risks posed by SIFIs. Larry Summers, Director of the National Economic Council under President Obama, for example, noted that “[p]olicymakers and political commentators alike have heralded Dodd-Frank as ushering in a new era of financial security.”268 During a Senate Banking Committee Hearing in 2014 regarding systemic risk in the financial sector, Federal Reserve Chair Janet Yellen likewise stated that the Fed “ha[s] put in place numerous steps and ha[s] more in the works that will strengthen these [financial] institutions, force them to hold a great deal of additional capital and reduce odds of failure.”269 International experts agree. Mark Carney, Governor of the Bank of England, has observed that SIFIs have increased their Tier 1 capital ratios, which are used to measure a SIFI’s resilience

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268. Sarin & Summers, supra note 96.

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to market turbulence and ability to absorb losses, more than twofold since 2009. These comments suggest that even though banks have grown since the financial crisis, they have done so by concentrating in safer business lines—not by investing in exotic and potentially destabilizing financial instruments.

Dodd-Frank regulators evince similar confidence in the stabilization of the SIFI regime. As noted above, Dodd-Frank requires covered institutions to create resolution plans detailing how the institution could be wound down without taxpayer support. The Federal Reserve and the FDIC jointly determine each year whether the plans are sufficient or have deficiencies that must be corrected. Identifying the changes in a firm’s resolution plan each year is thus a good indicator of the firm’s overall change in risk profile. Collectively, these living wills suggest that SIFIs have grown less risky since the passage of Dodd-Frank.

Morgan Stanley’s 2016 resolution planning process provides a useful example. On April 13th, 2016, the Fed and the FDIC announced that they had identified “weaknesses” in Morgan Stanley’s 2015 plan, stating that it “was not credible or would not facilitate an orderly resolution under the U.S. Bankruptcy Code” and declaring that the firm would have to remedy these shortcomings in its re-submission. After receiving this verdict, Morgan Stanley noted that resolution


272. Dodd-Frank § 165(d); see also Living Wills (or Resolution Plans), FED. RESERVE, http://www.federalreserve.gov/supervisionreg/resolution-plans.htm [http://perma.cc/BFZ2-PA84] (explaining that a “living will, must describe the company’s strategy for rapid and orderly resolution in the event of material financial distress or failure of the company”).


planning was among “the highest priorities of [the] firm” and committed itself to continue “work[ing] with [its] regulators to improve [its resolution plan].”\textsuperscript{275}

In their following April 14th, 2016, letter, the two regulators provided more detail to Morgan Stanley on where it had improved and where further progress was needed in order for its resolution plan to be considered adequate.\textsuperscript{276} The regulators found that Morgan Stanley had “improved its funding structure and increased the level of firm-wide high-quality liquid assets, . . . developed a legal entity rationalization framework,” and “ha[d] reduced the overall number of legal entities in its organizational structure,” among a number of other changes that made the firm simpler and safer.\textsuperscript{277} However, the regulators also noted shortcomings related to liquidity, derivatives and trading activities, and governance mechanisms.\textsuperscript{278}

Less than six months later, Morgan Stanley responded to each of the concerns in the regulators’ April 14th letter and provided information on additional actions Morgan Stanley intended to take in connection with its submission of its 2017 resolution plan.\textsuperscript{279} Finally, in December of 2017, the Federal Reserve and the FDIC noted that Morgan Stanley’s 2017 living will noticeably improved upon its previous submission and, crucially, that the 2017 submission satisfactorily responded to the regulators’ concerns.\textsuperscript{280}
The story is the same at other SIFIs. In 2016, for example, agency feedback to Goldman Sachs noted similar improvements in its resolution plan compared to previous years’ submissions. The agencies noted that Goldman had “improved [its] funding structure and increased [its] loss-absorbing capacity by increasing [its] balance of high-quality liquid assets.” Such an improvement could not have been made if Goldman had acquired additional risky assets. Instead, it seems that Goldman has actually been pushing into plain vanilla retail banking with an online banking platform, which is among the least risky financial activities. Indeed, Goldman’s CEO, Lloyd Blankfein, explicitly stated that the firm was expanding into this area because of new regulations. He confessed that “[Goldman Sachs is] dissuaded from growing into certain activities that are capital-intensive, and it’s easier to grow into other areas that are more favored

regulators also noted other substantial steps taken by Morgan Stanley to improve its resolution capabilities. Id. (“MS has taken other significant steps. These include (i) improving its capital and liquidity capabilities by developing approaches to estimate stand-alone financial resource needs for each material entity; (ii) linking measures of estimated financial resource needs to available resources to inform the timely filing of the parent company’s bankruptcy; (iii) developing a framework for the pre-positioning of capital and liquidity at material entities; (iv) entering into a contractually binding mechanism designed to provide capital and liquidity support to material entities; (v) creating a framework to govern escalation of information in support of timely decision-making; (vi) modifying its service contracts with key vendors to include provisions intended to ensure the continuation of services; (vii) identifying options for the sale of discrete businesses and assets under different market conditions and taking actions to make those options actionable; (viii) prepositioning working capital in service-providing entities; (ix) developing playbooks to support continued access to payment, clearing, and settlement activities; (x) rationalizing its material service entity provider network to employ certain hub entities to enable the provision of shared services; and (xi) enhancing its separability analysis to support sales strategies for its wealth management and investment management businesses during resolution.”).
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by the regulators and capital rules." It thus appears that in shedding its commodities, private equity, and hedge fund units, Goldman has been replacing them not with similarly-risky businesses, but rather with safer ones that are favored by Dodd-Frank and the regulators who enforce the law.

In sum, Dodd-Frank’s living wills requirement demonstrates the success and potency of Pigouvian regulations. As one commentator put it in describing the results of the 2017 stress tests: “Not only are banks safer, but they finally understand what regulators want.”

IV. THE BENEFITS OF PIGOUVIAN REGULATIONS

The previous Parts show that Dodd-Frank is functioning like a Pigouvian regulation and that Pigouvian incentives are working to prompt both bank and nonbank SIFIs to shed some of their riskiest assets. This Part builds upon that observation to argue not only that Dodd-Frank has Pigouvian characteristics, but also that its Pigouvian functions are in many ways superior to more traditional forms of regulation. Specifically, compared to traditional command-and-control regulations, Pigouvian regulations are more flexible and are better able to incorporate firm expertise into the regulatory scheme. Likewise, compared to traditional market-based approaches, Pigouvian regulations may be a more precise and adaptable method of addressing negative externalities. They are also likely to be more politically feasible, rendering them a preferred regulatory model when more onerous command-and-control methods might be impossible to pass.


285. A similar trend is also exhibited with Bank of America. In its last stress test, the Federal Reserve approvingly noted that Bank of America had eliminated sixty percent of its legal entities, including 400 units that had been active until just that year. Bank of America Corporation 2016 Resolution Plan Submission, BANK OF AMERICA 2, http://www.federalreserve.gov/bankinf/ resolution-plans/boa-1g-20161001.pdf [http://perma.cc/MN9T-X9SL]. The Fed’s willingness to reduce Bank of America’s capital requirements in response to such actions reflects the Fed’s view that Bank of America’s moves contributed to a net reduction in risk.

A. Regulatory Flexibility

A notable benefit of Dodd-Frank’s Pigouvian regulations is that they are more flexible than alternative regulatory approaches because they allow regulators to tailor compliance costs to the risks generated by individual SIFIs. To be clear: this benefit does not inhere in all market-based regulations, but stems from the fact that Dodd-Frank grants regulators authority to tailor costs to the risks posed by specific firms in the manner described above. An ordinary Pigouvian tax would likely apply equally with equal force to different financial institutions. Dodd-Frank’s flexibility stems from the fact that capital requirements and stress tests allow regulators to account for idiosyncrasies of individual firm business models and adjust costs according to the risks posed by each particular firm.

There are two different reasons why it is desirable for regulators to be able to adjust the costs Dodd-Frank imposes on individual SIFIs. First, regulators can reward SIFIs for reducing risk and penalize them for failing to do so. Second, regulators can respond if they determine that certain activities are riskier than they thought, or if market conditions change. In this way, Dodd-Frank has shown itself preferable to traditional command-and-control prohibitions insofar as it allows for “right-sizing” — a process by which banks calibrate to their socially optimal size, structure, and organization. This Section describes the benefits of right-sizing, providing examples of where it has occurred within the Dodd-Frank scheme while also pointing out its limitations.

At the most fundamental level, right-sizing is important because large firms create benefits, both for themselves and the financial sector writ large. For example, large firms can better exploit economies of scale, diversify risks, spread overhead costs, offer combinations of complementary products, and expand their global reach than smaller firms. As Bernanke has argued, “In the long...
DODD-FRANK IS A PIGOUVIAN REGULATIONun, a U.S. financial industry without large firms would be less efficient, providing fewer services at higher cost.” Furtherm\textsuperscript{e}, a strategy that simply resulted in breaking up SIFIs could involve ceding primacy in the financial services industry to countries governed by other regulatory regimes. For these reasons, the focus should not be on downsizing, but on right-sizing, as it best maintains firms that will be optimal in terms of their benefits and risks.

Of course, this proposition raises the question of whether it is possible for regulators to know the socially optimal size of a specific bank ex ante. First, it is worth noting that this problem would also exist if the government took a more direct approach and broke up banks through regulatory fiat. Moreover, the mechanism adopted by Dodd-Frank has the advantage of allowing regulators to recalibrate costs over time. Thus, while it is unlikely that the bank regulators will initially know if a bank has reached its optimal size, Dodd-Frank adopted a flexible regime that empowers regulators to see how the market reacts to certain developments and then adjust accordingly.

-EU38] (“[S]cale economies are a plausible (but not necessarily only) reason for the growth in average bank size.”).

289. Bernanke, supra note 19.

290. Id.

291. In his speech given as a governor of the Federal Reserve, Stein used a compelling example to illustrate this point:

There are three banks: A, B, and C. Banks A and B both have $1 trillion in assets, while C is smaller, with only $400 billion in assets. Bank A actually generates significant economies of scale, so that it is socially optimal for it to remain at its current size. Banks B and C, by contrast, have very modest economies of scale, not enough to outweigh the costs that their size and complexity impose on society. From the perspective of an omniscient social planner, it would be better if both B and C were half their current size.

Now let’s ask what happens if we impose a size cap of say $500 billion. This size cap does the right thing with respect to Bank B, by shrinking it to a socially optimal size. But it mishandles both Banks A and C, for different reasons. In the case of A, the cap forces it to shrink when it shouldn’t, because given the specifics of its business model it actually creates a substantial amount of value by being big. And in the case of C, the cap makes the opposite mistake. It would actually be beneficial to put pressure on C to shrink at the margin—that is, to move it in the direction of being a $200 billion bank instead of a $400 billion one—but since it lies below the cap, it is completely untouched by the regulation.

As demonstrated by GECC\textsuperscript{292} and the discussion of commodities regulations more broadly,\textsuperscript{293} a targeted increase in firms' capital requirement (or the threat of one),\textsuperscript{294} can prompt SIFIs to divest themselves of billions of dollars in financially lucrative business lines. The power behind this incentive structure depends on regulatory flexibility. If the Federal Reserve did not have the authority to adjust capital requirements quickly, then the carrot and stick method would be far less effective.\textsuperscript{295}

Moreover, the ability of Dodd-Frank to tailor costs to each individual firm with respect to certain regulations has an important benefit over Pigouvian taxes as well—it allows regulators to account for the fact that the risks associated with different activities will vary by firm.\textsuperscript{296} Imagine that a particular kind of commodities trading would introduce significant financial risk if owned by Bank A but have no negative effects if owned by Bank B. In this case, neither a Pigouvian tax nor a command-and-control regulation would achieve the optimal outcome of preventing only Bank A from trading the commodity because they would be either over- or under-inclusive. On the one hand, the regulators might deter both firms from owning the commodities unit by pricing the firms out of the unit (with a Pigouvian tax), or prohibiting them from trading the commodity (through a command-and-control regulation). On the other hand, regulators might allow both firms to own the unit. With a Pigouvian regulation, by contrast, regulators can increase Bank A’s regulatory burden for engaging in such activities without affecting Bank B—deterring Bank A from the activity while allowing Bank B to continue undisturbed. In this way, regulators can achieve the optimal outcome for both firms.

Finally, unlike command-and-control regulations and Pigouvian taxes, Dodd-Frank’s Pigouvian regulations allow regulators to adjust costs over time, so that banks can authorize activities previously deemed too dangerous if market conditions change. This is what happens every time the relevant bank regulators

\textsuperscript{292} See supra Section III.C (documenting how the SIFI designation for nonbank firms leads to heightened capital requirements).

\textsuperscript{293} See supra Section III.C.1.

\textsuperscript{294} To be clear, as discussed in Section III.C, generally the Fed has not increased capital requirements. It has instead found that certain assets, such as commodities, should be considered riskier for purposes of calculating Tier 1 equity. The effect, however, is to increase the amount of assets for purposes of calculating capital requirements, which increases the amount of capital that banks have to hold against those assets.

\textsuperscript{295} We define “quickly” as the ability to change capital requirements on a yearly basis.

\textsuperscript{296} See Victor Fleischer, Curb Your Enthusiasm for Pigouvian Taxes, 68 VAND. L. REV. 1673, 1676–77 (2015) (asserting that Pigouvian taxes are likely to be more effective when marginal cost is close to average cost).
change a capital requirement or revoke the SIFI designation for a nonbank firm. For example, while the costs of commodities trading may not currently outweigh their returns for Bank A, it is possible that future circumstances might change, in which case it might make sense for banks to reenter the commodities market. Such recalibration is possible under a Pigouvian regime, but—given the political process\textsuperscript{297}—it becomes much more difficult if there is a direct ban or established tax. Thus, for the sake of both expertise and fine-tuning, Pigouvian regulations are invaluable.

\textit{B. Informational Advantages}

In addition to enabling right-sizing, Pigouvian regulations empower the party most knowledgeable about the costs and benefits of an activity to determine the best way to comply with regulations. This approach is both more efficient and more effective than command-and-control regulation. While a command-and-control regulator should hypothetically be able to determine the socially optimal amount of an externality-producing action (and limit it accordingly), in the real world of administrative costs and imperfect information, regulators cannot possibly know both the costs and benefits of each activity as well as those closer to the activity itself.\textsuperscript{298} Therefore, it is possible that regulators will impose absolute prohibitions on activities where the benefits of the activity actually outweigh the risk. Pigouvian regulations help mitigate this informational asymmetry because a regulator need only know the spillover costs and benefits associated with an activity—leaving firms themselves to undergo the private cost-benefit analysis and determine market demand as the firms themselves will ultimately decide whether they should bear costs imposed by regulation and continue the activity.

This approach has two benefits related to expertise. First, this characteristic of Pigouvian regulations incorporates firm knowledge and expertise into the regulatory scheme. When using compliance costs rather than bans, regulators have an opportunity to see how much of a certain activity is desirable from firms’ perspective, which incorporates the market demand for a good as measured by what

\textsuperscript{297} See infra Section IV.D.

level of an activity firms think will be profitable. To the extent that market demand reflects the social benefits of the good or service, Pigouvian regulations place decisional power in the hands of the entity most equipped to assess the costs and benefits of an activity. In this way, Pigouvian regulations allow for the possibility that even risky activities can sometimes be desirable.

The second informational benefit of Dodd-Frank's Pigouvian approach is that it allows regulators to adjust rules as they receive more information. Once regulators observe how much the market values a particular activity, as measured by firms’ responses to compliance costs, regulators can adjust those costs accordingly. For instance, imagine that Bank C and Bank D both participate in the same commodities business, and the Federal Reserve increases the capital requirement of both institutions by the same amount because it regards this business as risky. If Bank C sells the business but Bank D holds onto it, regulators will have learned that Bank C, but not Bank D, regards the private benefit of holding this unit to justify the increase in capital requirements. This could suggest that market demand for Bank C’s product is greater than that for Bank D’s product, or else that Bank D uses this unit in a more productive manner—such as to hedge or diversify its other activities—than Bank C.299 Either way, the Federal Reserve might regard this information as important when determining whether it should further raise Bank C’s capital requirement to prompt the firm to divest itself of this unit altogether. If regulators felt that the social cost remained excessive, it could further increase Bank C’s compliance costs. If, on the other hand, the Federal Reserve believed that the current capital requirement forced Bank C to bear the true social costs of the activity, it might permit Bank C to continue trading because the market demand for that activity indicated that its social benefits outweighed its social costs.

In this way, as firms adapt to regulations, regulators not only affect firm behavior, but also acquire more information about the market value of certain activities. Over time, this additional information allows the government to regulate with more precision.

C. Allocating Responsibility

The aforementioned benefits show that Dodd-Frank reduces risk ex ante at the moment a firm or regulatory decision is made. But it is also worth noting that the SIFI designation helps reduce risk ex post by forcing firms to pay for

299. Note that the latter option would suggest not that there is greater market demand for the Bank C-produced commodity, but that the cost of the capital requirement fell less heavily on Bank C because of the hedging or diversification benefits Bank C enjoys.
their negative externalities when a risky decision goes poorly. This presents a novel benefit. Although previous scholarship has discussed the benefits of a Pigouvian approach as compared to the “command-and-control” model, the literature on Pigouvian taxes does not account for the fact that Pigouvian regulations can force the entity responsible for introducing systemic risk to itself reduce the riskiness and harmfulness of the activity. The most likely reason the literature has failed to document this benefit is that most scholars assume a Pigouvian approach must function like a tax. The premise of a tax is that the mechanism by which the government forces banks to internalize costs is by transferring funds to the government.

Under Dodd-Frank, by contrast, regulators force banks to internalize the costs of creating systemic risk not by taxing SIFIs, but by requiring them to, for example, hold more capital, draft living wills, and perform stress tests. These measures themselves reduce risk. In raising capital requirements, the Federal Reserve both increases the costs of being systemically important and makes the party responsible for the externality better equipped to bear those costs since the regulatory costs used in “right-sizing” the banks also require SIFIs to hold a capital buffer that will make them—rather than the government—the first line of defense against an economic crisis. Thus, Dodd-Frank not only incentivizes banks to divest risky assets, but also makes banks better able to withstand the risk created by the assets they continue to hold.

D. Political Feasibility

Finally, Pigouvian regulations may simply be more feasible than regulatory alternatives, either traditional command-and-control regulations or Pigouvian taxes. It is no secret that the country has become more polarized and the legislative process has ossified. Changes in legislation must go through many “veto-gates”—decisional moments in the legislative process, at which point a bill will

300. See Masur & Posner, supra note 9, at 95 (“Other forms of regulation are inferior to the Pigouvian tax.”).

301. See supra notes 17–22 and accompanying text.

either advance or die.\textsuperscript{303} Each vetogate grants interest groups an additional opportunity to contest costly provisions, and Dodd-Frank targets one of the most powerful interest groups in the country: large financial institutions.\textsuperscript{304} It would have proven difficult—if not impossible—to dismantle banks that were too big to fail through traditional command-and-control regulations. Furthermore, as history has recently borne out, it is often easier to pass a regulation—even one with a penalty—than an actual tax.\textsuperscript{305}

As a result, in politically contentious arenas with powerful interest groups, Pigouvian regulations may be a desirable way to regulate, as they look like ordinary regulations but operate like taxes. In other words, they provide an alternative mechanism for regulators to achieve their desired result without the same political roadblocks.\textsuperscript{306}

\section*{V. PIGOUVIAN REGULATIONS}

Despite these significant advantages, Pigouvian regulations have downsides. Below we tackle what we believe to be the three largest potential sources of criticism: the concern that banks will engage in regulatory arbitrage, the problem posed by “Black Swan” events, and the fear that structural constraints will limit the benefits of Pigouvian regulations. In our view, however, these costs are not unique to Pigouvian regulations and are in many cases more pronounced in command-and-control regulatory approaches.


\textsuperscript{305} This point was forcefully made in the political commentary surrounding the individual mandate in the Affordable Care Act. See, e.g., Paul Starr, The Mandate Miscalculation, New Republic (Dec. 14, 2011), http://newrepublic.com/article/98544/individual-mandate-affordable-care-act [http://perma.cc/LGS2-JICYN] (noting that “Senate Democrats chickened out from framing the [individual mandate] penalty as a tax”).

\textsuperscript{306} The legal and legitimacy challenges to SIFI regulations are beyond the scope of this Note. See, e.g., MetLife, Inc. v. Fin. Stability Oversight Council, 177 F. Supp. 3d 219 (D.D.C. 2016) (finding that MetLife was not lawfully designated a SIFI).
A. Regulatory Arbitrage

“Regulatory arbitrage” is the process by which firms exploit loopholes in a regulatory scheme to avoid unfavorable regulation. Critics argue that as regulators make it more difficult to engage in certain risky activities, banks will simply shift their focus to other risky, but less-regulated activities—thus negating the benefit of the regulation.

There are a number of related arbitrage criticisms. For example, scholars in the past have criticized capital requirements for causing banks to engage in regulatory arbitrage to avoid holding additional capital. Likewise, more recently, scholars have criticized Dodd-Frank for failing to adequately regulate “shadow banking”—the financial activities involved in facilitating the creation of credit across the global financial system, but that are not subject to regulatory oversight. Others argue that onerous regulations will push risky activities away from highly regulated banks and towards the less regulated entities.


310. See Victor Fleischer, Regulatory Arbitrage, 89 Tex. L. Rev. 227, 275 (2010) (“[W]hen new forms are chosen because they reduce regulatory costs and increase transaction costs compared to the old structure, we lose twice: efficiency is reduced by the increase in transaction costs, and the regulatory burden is shifted onto those who cannot engage in arbitrage.”); Philipp Halstrick, Tighter Bank Rules Give Fillip to Shadow Banks, Reuters (Dec. 20, 2011, 4:21 AM), http://uk.reuters.com/article/uk-regulation-shadow-banking/tighter-bank-rules-give-fillip-to-shadow-banks-idUKKNE7BJ0oT20111220 [http://perma.cc/4WKN-E7UB] (“International regulators’ efforts to strengthen the financial system by tightening bank rules may inadvertently serve to boost opportunities for unregulated or ‘shadow’ financial players.”).
But these critiques ignore a critical fact: regulators have the ability to regulate a wide swath of a SIFI’s operations simply by finding that a certain activity will make it difficult for the SIFI to unwind under OLA or lead to its living will having shortcomings or being deficient. Thus, regulators who become aware of regulatory arbitrage – like shadow banking activities – can ratchet up compliance costs to nudge the SIFI out of such activities, if they in fact post unacceptable risks. Although there may be some concern that regulators will not be able to spot SIFIs’ engagement in under-the-table risks, this concern is not unique to a Pigouvian regime. If it later turns out that SIFIs have increased their exposure to other risky markets, it simply falls to financial regulators to ensure that capital requirements lead banks to fully internalize the costs of those new risks. In other words, if banks migrate to other risky activities, financial regulators could ensure that firms pay the social costs of engaging in those activities.

Moreover, there is little reason to be concerned that less-regulated entities will simply take up risky activities where SIFIs left off. Insofar as SIFI regulations push SIFIs away from risky activities, we should applaud their success in making sure that systemically significant firms are avoiding inefficient risks. Similarly, if nonbank firms take on an unacceptable level of risk, FSOC, within its statutory strictures, can designate that firm a SIFI and thus subject it to the stringent requirements faced by other systemically significant firms. For these reasons, the critique that regulatory costs push risky activities from highly regulated banks towards less regulated financial institutions is misplaced: the SIFI regulations allow financial regulators to impose stringent requirements on bank and nonbank firms alike, so long as the firm can be so-designated.

Ironically, the prospect of regulatory arbitrage may actually counsel in favor of Pigouvian regulations as the best mechanism to prevent regulatory arbitrage. It will never be possible for regulators to anticipate every source of systemic risk. Prospective, substantive regulations will always be playing catch-up to financial innovations. By contrast, the Pigouvian approach used in Dodd-Frank allows regulators to adapt to new circumstances and information. In 2012, for example,

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32. We recognize that the FSOC’s designation authority can change. E.g., Tracy, supra note 254 (noting that the Department of Treasury recommends adopting a cost-benefit analysis to its nonbank SIFI designation process).
shortly after JPMorgan’s London Whale trading desk incurred at least a $6.2 billion loss,313 the Federal Reserve expressed concern about JPMorgan and Goldman Sachs’s forecasts for losses in a crisis.314 The London Whale trading losses highlighted flaws in the calculations of risk-weighted assets,315 which are a central feature in the calculation of capital requirements,316 and the Federal Reserve became skeptical about the hedging strategies JPMorgan had used to manipulate models, downplay risk, and thus reduce its capital burden.317 Following the scandal and the attendant regulatory scrutiny, JPMorgan released a report on its internal investigation, noting numerous areas where it intended to change its business practices in order to reduce risk.318 It also coincided with JPMorgan’s


315. See supra note 313.


317. See JPMorgan Chase Whale Trades: A Case History of Derivatives Risks and Abuses, supra note 313, at 3-4 (“JPMorgan Chase instructed the CIO to reduce its Risk Weighted Assets (RWA) to enable the bank, as a whole, to reduce its regulatory capital requirements. In response, in January 2012, rather than dispose of the high risk assets in the SCP—the most typical way to reduce RWA—the CIO launched a trading strategy that called for purchasing additional long credit derivatives to offset its short derivative positions and lower the CIO’s RWA that way. That trading strategy not only ended up increasing the portfolio’s size, risk, and RWA, but also, by taking the portfolio into a net long position, eliminated the hedging protections the SCP was originally supposed to provide.”); id. at 7 (“[R]isk evaluation models were targeted by bank personnel seeking to produce artificially lower capital requirements.”); id. at 14 (“Previously undisclosed evidence also showed that CIO personnel deliberately tried to lower the CIO’s risk results and, as a result, lower its capital requirements, not by reducing its risky assets, but by manipulating the mathematical models used to calculate its VaR, CRM, and RWA results.”).

decision to begin spinning off commodities and private equity units to reduce its Dodd-Frank-related compliance costs.319

Thus, whereas command-and-control regulations must pass through congressional vetogates or comply with the onerous rulemaking process, Dodd-Frank’s compliance costs can be adjusted fairly quickly and with great effect. The prospect of regulatory arbitrage suggests that regulators need tools to adjust to new risk factors as they emerge, and the flexibility of Pigouvian regulations makes them a superior solution to regulatory arbitrage, despite their inability to stop the practice completely.

B. Black Swan Events

Another potential cost to Dodd-Frank is what one might call the “Black Swan” problem.320 This problem posits that even if Pigouvian regulations reduce the overall risk that a bank failure would trigger a global recession, they still fail to address the scenario in which that risk actually comes to pass. In other words, the regulations are of little added help in a worst-case scenario.

Like the concerns with regulatory arbitrage, this objection plagues all forms of regulation. Furthermore, there are good reasons to believe that this concern is not as grave as it may initially appear. First, Pigouvian regulations represent an imperfect, but nonetheless superior, approach to dealing with the too big to fail problem than the ordinary command-and-control regulations enacted under Dodd-Frank. Therefore, even if this approach cannot eliminate the Black Swan problem, it fares better than traditional approaches in reducing individual SIFIs’ risk and in forcing a mass exodus from activities deemed unacceptably risky. Second, Pigouvian regulations are merely one tool among many upon which regulators can draw to manage negative externalities. Thus, while Pigouvian regulations may not eliminate the risk of an economic crisis, they do help as part of a comprehensive regulatory scheme. Third, regulators’ ability to adjust compliance costs quickly makes Pigouvian regulations better able to adapt to rapidly


changing market conditions in the event of an economic downturn. Consequently, more than command-and-control regulations, Pigouvian regulations allow regulators to adjust course as soon as they foresee a crisis—taking steps to mitigate or even reverse financial losses before they occur.

C. Structural Limitations

Finally, although compliance costs have prompted SIFIs to spin off significant business units, it is worth noting that the organizational structure of a given firm may create a ceiling beyond which that firm can no longer divest additional assets. Recall that a bank is automatically a SIFI if it has more than $50 billion in assets. Although GECC was able to shed nearly all of its financial services operations to escape the SIFI label, many other SIFIs would simply cease to exist if they undertook a similar reduction. The deposits currently held by Citigroup, Wells Fargo, Bank of America, and JPMorgan, for instance, approach $4 trillion, which is roughly twenty percent of the GDP of the United States. No matter how much regulators increase the cost of holding deposits, it would be difficult—perhaps impossible—for these companies to tell customers that they could no longer deposit checks in their generic commercial savings accounts. Customer deposits are the bread and butter of traditional banking. Without them, banks could hardly be considered depository institutions.

Similarly, other firms do not share the idiosyncrasies of GE’s business, which played a critical role in allowing the company to shed its SIFI designation so quickly and effectively. Unlike other firms, for instance, GE, the parent company of GECC, had substantial non-financial business lines. It was therefore able to continue essential business operations even after spinning off its financial activities. Imagine, however, if Goldman Sachs sought to shed all of its financial


322. Wells Fargo, for example, calls itself “America’s Community Bank.” Carrie Tolstedt, Senior Executive Vice President, Community Banking, Wells Fargo, et al., Community Banking, Presentation at 2014 Investor Day 1 (2014), http://www08.wellsfargomedia.com/assets/pdf/about/investor-relations/presentations/2014/community-banking-presentation.pdf [http://perma.cc/W3EH-MM7Q].

activities: it would be left with an empty trading floor, some prime real estate, and a (parody) twitter feed shorn of inspiration.\textsuperscript{324}

That there may be a ceiling to Pigouvian regulations’ potential, however, does not mean that they represent an ineffective regulatory scheme. Rather, it simply suggests that they ought to be used in conjunction with other measures to reduce financial risk. Given Dodd-Frank’s numerous other traditional command-and-control regulations, its Pigouvian features present an invaluable mechanism for fine-tuning policy where its broader bans and fines fail to efficiently reduce risk. For all the reasons discussed above, Pigouvian regulations are valuable tools in the regulatory toolkit—one option among many, perhaps, but a uniquely helpful option at that.

As both the regulatory arbitrage and Black Swan problems demonstrate, the ability of regulators to respond to risky SIFI activities depends in large part on their discretion to enact and modify Pigouvian regulations. Although Dodd-Frank offers regulators more discretion than traditional command-and-control regulatory schemes, further increasing regulatory discretion could amplify the benefits already recounted above.

Recall the discussion of GECC, which detailed how it divested itself of billions of assets in order to shed its SIFI designation. Although the opportunity to free itself of SIFI regulations proved a major incentive for GECC, Dodd-Frank makes it virtually impossible for large banks to ever shed their SIFI designation, given that any bank that holds $50 billion in assets is automatically a SIFI and therefore subject to onerous requirements.\textsuperscript{325} The $50 billion mandate thus acts as a hard floor that limits regulatory flexibility. But because greater regulatory flexibility would reduce systemic risk, Congress should amend Dodd-Frank to permit regulators to reduce the costs faced by SIFIs even if those SIFIs hold $50 billion in assets.

One scholar has already proposed a more flexible regime that would allow regulators to reduce requirements for nonbanks that pose real, but insignificant, risks to the financial system.\textsuperscript{326} There is no reason why this approach should be limited to the nonbanks that generate risk. As we have shown, the SIFI designation allows regulators extraordinary latitude to tailor costs to the unique risks posed by particular SIFIs. Banks that hold $50 billion in assets, however, auto-

\textsuperscript{324} See @GSElevator, TWITTER, http://twitter.com/gselevator [http://perma.cc/L68A-KUCQ].


matically face extremely high compliance costs. This fixed rule undercuts the incentives for SIFIs to downsize and impedes regulators in their quest to right-size firms.327

CONCLUSION

There are certainly reasons to question whether Dodd-Frank is working: foremost among them is that a SIFI failure could still trigger an economic crisis. Yet Dodd-Frank is effectively reducing the risks that systemically important firms will fail in the first place, though not necessarily for the reasons that academics and policymakers expected. The costs of complying with the Act—and especially with SIFI designations—can be exorbitant. Regulators have the authority to adjust those costs, and they have ramped up costs in response to concerns that SIFIs have not done enough to reduce the risks created by their operations. As we have shown, the effect in many cases was to force SIFIs to divest themselves of risky business units.

Each of these effects suggests that—despite persistent critiques—Dodd-Frank is working in a manner few anticipated. Consequently, scholars and policymakers should think long and hard before moving to reduce or eliminate Dodd-Frank’s oversight entirely, and they should consider the effects of compliance costs when debating how to reform Dodd-Frank. As a Pigouvian regulation, Dodd-Frank provides a remarkable tool for regulators to right-size what are otherwise systemically destabilizing institutions. This is a tool worth preserving. Changing the narrative about Dodd-Frank, as this Note attempts, is an important first step.

327. Questions about the democratic legitimacy of such bureaucratic discretion are beyond the scope of this Note. For a sampling of that broader discussion, see Christian Hunold & B. Guy Peters, Bureaucratic Discretion and Deliberative Democracy 15-20, http://ecpr.eu/Filestore/PaperProposal/8oddob91-ff57-4b65-ae6b-90fo6ac126f.pdf [http://perma.cc/YQ5F-Q5JQ], which documents numerous relevant sources.