MORAL HAZARD DURING THE SAVINGS AND LOAN CRISIS AND THE FINANCIAL CRISIS OF 2008–09: IMPLICATIONS FOR REFORM AND THE REGULATION OF SYSTEMIC RISK THROUGH DISINCENTIVE STRUCTURES TO MANAGE FIRM SIZE AND INTERCONNECTEDNESS

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In the aftermath of the most recent financial crisis, policymakers and regulators have faced the formidable challenge of designing regulatory reforms that adequately address the problems of moral hazard and "too big to fail" in banking. While these concepts have remained persistent stumbling blocks in bank regulatory policy, the modern landscape of the financial services industry has introduced new challenges in the areas of systemic risk and the concentrations of financial power held by a few dominant firms.

This Note compares and contrasts the causes of and responses to the subprime mortgage crisis with those of the Savings and Loan Crisis of the 1980s. It concludes that the provisions under the Dodd-Frank Wall Street Reform and Consumer Protection Act intended to address "too big to fail" actually represent the same type of traditional responses to banking crises as seen before. By subjecting systemically significant firms to more stringent operating requirements and closer monitoring, current reforms merely treat complex financial conglomerates as traditional depository institutions whose incentives can be adequately managed through prudential regulation customarily used to counteract the moral hazard of deposit insurance. To deal with the moral hazard of systemic risk, however, reform efforts should place greater emphasis on anticipatory regulation in a framework of stronger disincentives to discourage growth towards "too big to fail" status.

This Note also supports the recommendation of commentators who advocate for an industry-funded emergency liquidity pool that would incorporate actuarially fair premiums to price the cost of systemic risk, to be paid by the largest and most complex institutions themselves. This represents a combination of ex ante and ex post approaches to inhibit systemic risk at its source as well as manage the consequences of a future systemic crisis, the

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costs of which would otherwise be borne again by the public and the economy as a whole.

INTRODUCTION

"Regulation is, however, an evolving art, change is a necessary concomitant of progress, and changed circumstances require a receptivity to revised approaches."[1]

In the wake of a catastrophic financial meltdown and the subsequent passage of a nearly one-thousand-page-long regulatory reform bill by Congress,[2] federal banking agencies are now tasked with implementing comprehensive rules and regulations that address both the causes and consequences of the subprime mortgage crisis—a sizeable undertaking considering the global scale and systemic impact of the latest asset bubble. "Too big to fail" ("TBTF"), moral hazard, and systemic risk are challenges at the forefront of current reform efforts, yet none are particularly novel in the context of government bailouts that leave taxpayers footing the bill. While the financial sector has undergone rapid changes, many of the same themes of past crises remain, evolving with the ingenuity and innovation of Wall Street. With technological advances in the financial markets occurring at a feverish pace while government oversight lags, fashioning effective reforms for old problems in new settings and applying them to an increasingly complex financial services industry is immensely challenging.

This Note will examine the problem of moral hazard and its manifestation during the subprime mortgage crisis ("Crisis of 2008–09") as compared to that of the Savings and Loan ("S&L") Crisis of the 1980s. It argues that, with regard to systemic risk-related reforms, the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act", or "Dodd-Frank") is an inadequately tailored response to the TBTF problems of the Crisis of 2008–09. Despite new regulatory structures and stricter prudential requirements exacted upon large and complex financial institutions ("LCFIs"), Dodd-Frank accomplishes little in the way of shifting the tremendous costs of future systemic risk events to the firms posing such risks.

1. In re Rate Redesign for Electric Corps., 15 P.U.R.4th 434, 451 (1976) (N.Y. Pub. Serv. Comm'n Aug. 10, 1976) (inquiring into the merits of revising electric rate schedules according to marginal cost).

2. Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376, 1376 (2010) [hereinafter Dodd-Frank Act] (An Act "[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 for other purposes").

While both the S&L and the subprime-mortgage crises involved regulatory lapses and costly miscalculations by public and private sector actors, critical differences between the crises underscore the need for specific reforms addressing the type of moral hazard that arises from systemically significant LCFIs given the costly aftermath of TBTF policies in a globally integrated financial marketplace. Instead of addressing this sort of moral hazard, however, the Dodd-Frank Act's provisions concerning TBTF and regulatory failures resemble the traditional responses of post-crisis regulatory reform and mirror the legislative response to the S&L Crisis. That response may have been suitable at the time for a crisis resulting from lax regulatory oversight and the moral hazard of deposit insurance, but Dodd-Frank's establishment of additional oversight mechanisms and prudential requirements for LCFIs merely papers over the type of moral hazard currently at issue. As a result, it fails to address the true sources of systemic risk: the incentives of LCFIs, both depository and non-depository, to grow TBTF without internalizing the costs of the risks they pose.

Part I of this Note provides a broad overview of the concepts of moral hazard, "too big to fail," and systemic risk. Part II examines the background and regulatory environments preceding and in reaction to both the S&L Crisis and the Crisis of 2008–09 and uses the comparison to highlight the evolution of risk-taking in the expanding financial sector. This comparison is made in the context of two contrasting forms of moral hazard: the explicit form, as demonstrated by the longstanding government guarantee of federal deposit insurance, and the implicit form, as demonstrated by the unspoken guarantee of a government safety net benefiting systemically important institutions. Part III argues that, unlike the explicit moral hazard problem posed by government-insured depository institutions, the moral hazard arising from the implicit guarantee enjoyed by both depository and non-depository TBTF institutions cannot be adequately addressed by increased prudential regulation alone. Part III then concludes that the characteristics of the moral hazard problem during the Crisis of 2008–09, as distinguished from those observed in past crises, provide further justification for stronger disincentives to curb firm growth and manage interconnectedness—methods previously suggested by other commentators, but rejected by Congress. Congress's specific responses to the TBTF problem are unlikely to have a major impact on reducing the threat to financial stability during times of systemic crisis despite the enactment of a host of wide-ranging reforms, including the elimination of a captured agency, establishment of a new systemic risk

regulator, and the reduction of gaps in oversight over non-depository financial institutions. Because these reforms will have a negligible impact on financial firms' actual costs of harboring systemic risk, such measures do little to counteract the current incentive structure that merely encourages LCFIs to grow and consolidate toward TBTF status.

I.
MORAL HAZARD, TOO BIG TO FAIL, AND SYSTEMIC RISK

A. Moral Hazard

"Moral hazard" refers to the problem that arises when a party is incentivized to engage in excessive risk-taking because it is not required to bear the full cost of its potential losses.[3] As a result of this insulation from the risk of loss, an actor will engage in riskier behavior in an effort to enhance its economic returns.[4]

Two distinct types of moral hazard have plagued bank regulatory policy. The first originates from the implementation of government-backed deposit insurance following the Great Depression.[5] Banks receive consumer deposits with the knowledge that the funds are insured by the Federal Deposit Insurance Corporation ("FDIC") up to certain levels, leading insured institutions to take on greater risks in their lending and investment activities than they would without the government guarantee.[6] This moral hazard problem is thus explicit: bankers, investors, and consumers know that deposits held at FDIC-insured institutions are guaranteed up to $250,000 per deposit account, as mandated by statute.[7] The total amount of FDIC insurance coverage is capped by a specific dollar amount in accordance with such limits, and the insurance fund is managed with such limits in mind.[8]

3. *See, e.g.*, Karl S. Okamoto, *After the Bailout: Regulating Systemic Moral Hazard*, 57 UCLA L. REV. 183, 204–05 (2009).

4. *See id.*

5. The phenomenon of moral hazard, and its reduction, has been a focal point of commentary on bank regulatory policy since the implementation of government-backed deposit insurance in 1933. *See* RICHARD SCOTT CARNELL, JONATHAN R. MACEY & GEOFFREY P. MILLER, THE LAW OF BANKING AND FINANCIAL INSTITUTIONS 17–19, 328–30 (4th ed. 2009).

6. *Id.* at 326–33.

7. 12 U.S.C. § 1821(a)(1)(E) (2010).

8. However, the government has the ability to increase deposit insurance coverage and increase its exposure to the risk of loss. In 2008, the deposit insurance limit was temporarily increased from $100,000 to $250,000 per deposit account, and the Dodd-Frank Act made the new insurance limit permanent. *See* Press Re-

Despite its explicit nature, this moral hazard is tolerated as a lesser evil as compared to the liquidity crises that would result from bank runs.[9] Moreover, it is mitigated by a comprehensive system of prudential regulation and government oversight that better aligns ownership and management interests with regulators and the insurance fund.[10] FDIC-insured institutions are subject both to increased scrutiny via frequent regulatory examinations, or "safety and soundness exams,"[11] and to a wide assortment of prudential operating requirements, including higher capital adequacy requirements than other industrial firms.[12] The susceptibility of the banking industry to widespread panics that jeopardize the overall stability of financial markets remains a key rationalization for government-backed deposit insurance and greater regulatory scrutiny.[13]

In contrast to the explicit moral hazard that arises when depository institutions are funded by government-backed deposits, the moral hazard that arises from TBTF policies is implicit. Implicit moral hazard is the result of generally unspoken but established market expectations of government intervention during a systemic financial crisis.[14] Instead of making express promises of a safety net, the government will consistently deny any policy to rescue troubled

lease, FDIC, Basic FDIC Insurance Coverage Permanently Increased to $250,000 Per Depositor (Jul. 21, 2010), http://www.fdic.gov/news/news/press/2010/pr10161.html.

9. *See, e.g.*, Richard Scott Carnell, *A Partial Antidote to Perverse Incentives: The FDIC Improvement Act of 1991*, 12 ANN. REV. BANKING L. 317, 319–21 (1993).

10. *See* Vincent P. Polizatto, *Prudential Regulation and Banking Supervision: Building an Institutional Framework for Banks* 2 n.4 (World Bank, Working Paper Series No. 340, 1990) ("Prudential regulation refers to the set of laws, rules, and regulations which is designed to minimize the risks banks assume and to ensure the safety and soundness of both individual institutions and the system as a whole. Examples include lending limits, minimum capital adequacy guidelines, liquidity ratios, etc.").

11. CARNELL ET AL., *supra* note 5, at 291–92. R

12. *See id.* at 252–53.

13. The domino effects of liquidity crises among depository institutions that result from mass deposit withdrawals by panicked consumers reflect the traditional conception of the consequences of systemic risk in banking. *See* Walker F. Todd & James B. Thompson, *An Insider's View of the Political Economy of the Too Big to Fail Doctrine* 11–13 (Federal Reserve Bank of Cleveland, Working Paper No. 9017, 1990).

14. *See* Marcelo Dabós, *Too Big to Fail in the Banking Industry: A Survey*, *in* TOO BIG TO FAIL: POLICIES AND PRACTICES IN GOVERNMENT BAILOUTS 141, 141–42 (Benton E. Gup ed., 2004); *see also* David Moss, *An Ounce of Prevention: The Power of Public Risk Management in Stabilizing the Financial System* 10 (Harvard Bus. Sch., Working Paper No. 09-087, 2009), *available at* http://www.hbs.edu/research/pdf/09-087.pdf.

firms[15] and will thus operate under a policy of "constructive ambiguity."[16] A notable characteristic of TBTF policies is the refusal by authorities to publicly confirm the existence of any de facto government guarantee that would prevent the insolvencies of systemically significant LCFIs.[17] As a result, not only is the existence of a TBTF guarantee under a veil of constructive ambiguity, but the amount of public funding that would be made available to private firms to prevent a systemic collapse also remains unknown.[18] As this Note will later argue,[19] reducing the TBTF problem and improving the regulation of systemically important institutions requires combating the implicit moral hazard at its source by making the costs of imposing systemic risk explicit.

B. "Too Big to Fail"

"Too big to fail" describes a government's policy of awarding discretionary support to a firm's uninsured creditors out of concern that allowing the firm's failure would have a disastrous impact on the financial system as a whole.[20] As such, TBTF firms are more likely to take excessive risks due to their confidence of government intervention in the event of near-insolvency.[21]

15. Benton E. Gup, *What Does Too Big to Fail Mean?*, *in* TOO BIG TO FAIL: POLICIES AND PRACTICES IN GOVERNMENT BAILOUTS, *supra* note 14, at 29, 30 (on governments' denials of the existence of TBTF policies). R

16. *See* Dabós, *supra* note 14, at 141–42. R

17. "Constructive ambiguity" refers to the "policy of using ambiguous statements to signal intent while retaining policy flexibility." James B. Thomson, *On Systemically Important Institutions and Progress Systemic Mitigation* 8–9 (Fed. Reserve Bank of Cleveland, Policy Discussion Paper No. 27, 2009). In the bank regulatory context, the phrase refers to the practice of limiting public knowledge of which firms the government considers TBTF, in order to create uncertainty over the availability of a government safety net and improve market discipline. *Id.* In contrast, a policy of supervisory transparency would involve public disclosure of the government's list of systemically important financial firms. *Id.* at 9.

18. *See* Moss, *supra* note 14, at 10 (describing implicit federal guarantees of systemically significant financial institutions as open-ended); *see also id.* at 12 (contrasting implicit guarantees with explicit guarantees that are clear, well-defined, and delimited). R

19. *See infra* Part III.C.

20. GARY H. STERN & RON J. FELDMAN, TOO BIG TO FAIL: THE HAZARDS OF BANK BAILOUTS 1 (2004).

21. *Id.* at 2.

> To the extent that creditors of TBTF banks expect government protection, they reduce their vigilance in monitoring and responding to these banks' activities. When creditors exert less of this type of market discipline, the banks may take excessive risks. TBTF banks will make loans and other bets that seem

During the recent subprime mortgage crisis, seventeen financial conglomerates accounted for at least half of the $1.1 trillion in global losses cited by the world's financial institutions.[22] In response, central banks and governments in the United States, the United Kingdom, and Europe provided nearly nine trillion dollars of support in various forms, including emergency liquidity pools, capital injections, asset purchase programs, and financial guarantees, all in an effort to save the global markets from systemic collapse.[23] The challenges presented by the insolvencies of firms such as AIG, Lehman Brothers, and Bear Stearns have underscored the need to address the risk posed by entities that are TBTF.

The risk of moral hazard increases when governments consistently intervene to support distressed financial institutions, thus solidifying expectations of such intervention in times of financial upheaval.[24] As a result of the incentive structure that these expectations establish, financial firms are encouraged to grow and combine such that they may take advantage of the lower cost of capital of firms reaching TBTF status.[25] This lower cost of capital reflects the investor expectation that the government would never allow such entities to fail in the event of near-insolvency.[26] When a sufficient number of firms receive discretionary support, the market internalizes an expectation of future government-orchestrated rescues, resulting in excessive risk-taking and economic waste.[27] This rational

quite foolish in retrospect. . . . This undesirable behavior is frequently referred to as the 'moral hazard' of TBTF protection. . . .

22. *See* Arthur E. Wilmarth, Jr., *The Dark Side of Universal Banking: Financial Conglomerates and the Origins of the Subprime Financial Crisis*, 41 CONN. L. REV. 963, 968 (2009) [hereinafter Wilmarth, *Universal Banking*].

23. *See id.*

24. Gup, *supra* note 15, at 43. R

25. *See* Arthur E. Wilmarth, Jr., *The Transformation of the U.S. Financial Services Industry, 1975–2000: Competition, Consolidation, and Increased Risks*, 2002 U. ILL. L. REV. 215, 215 (2002) [hereinafter Wilmarth, *U.S. Financial Services*].

26. The cost of funding for government-sponsored entities and mortgage giants Fannie Mae and Freddie Mac serves as an example of the lower costs of debt with an implicit government guarantee. Viral V. Acharya et al., *The Government-Sponsored Enterprises, in* REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE 429, 434–35 (Viral V. Acharya et al. eds., 2011) ("The liabilities of Fannie Mae and Freddie Mac also give some idea of the importance of this implicit government guarantee. The GSE debt is typically issued at interest rates that are somewhere between AAA-rated corporate and U.S. Treasury obligations . . . .").

27. *See* STERN & FELDMAN, *supra* note 20, at 23 ("Expectations of TBTF coverage are costly because they lead to a wasting of resources and a reduction in the welfare of the citizenry."); *see also id.* at 24 ("The costs of lost output can dwarf the transfers from financial losses. While the fiscal flows of the savings and loan

calculation by firms weakens managerial incentives to act prudently and cabin institution-specific risks, resulting in greater leverage and riskier investment activities to enhance profitability.[28]

While the term TBTF is not limited to the banking industry, the origins of the term's popularity originated in congressional hearings in 1984 following the federal government's bailout of Continental Illinois Bank,[29] when regulators feared the bank's failure would lead to a systemic financial crisis.[30] Since the Continental Illinois failure, the term "too big to fail" has been used widely throughout banking literature and is most commonly associated with the government's assistance to banks that are actually "too big to liquidate," as opposed to TBTF.[31] Indeed, size cannot be the only reason for TBTF because the concept is more directly related to the risk of contagion.[32] Thus, the phrase is somewhat misleading to the extent it also describes firms that are not necessarily big, but may still receive discretionary support due to their "interconnectedness" with the rest of the market. While interconnected institutions are often significant in terms of total asset size, a large financial institution that is relatively disconnected from the financial markets in terms of transactions with counterparties does not present the same TBTF concerns as a smaller institution with a high concentration in particular investment areas giving rise to more counterparty relationships.[33] As the recent crisis demonstrated, "too interconnected to fail" has become a functional equivalent of TBTF, widening its ap-

bailout . . . equaled $150 billion, lost output . . . largely attributed to moral hazard and poor resource allocation—was on the order of $500 billion.").

28. *See id.* at 23.

29. Gup, *supra* note 15, at 30: R

> Bank regulators feared that Continental's problems might spread to more than 1,000 other banks that had deposits and/or federal funds there and they too might fail if Continental failed. Accordingly, Comptroller of the Currency Todd Conover went before the U.S. Congress in 1984 to declare that Continental and 10 other of the nation's largest banks were 'too big to fail.'

30. *Id.* at 30–31 (quoting Congressman Stewart McKinney as saying in 1984: "Mr. Chairman, let us not bandy words. We have a new kind of bank. It is called too big to fail. TBTF, and it is a wonderful bank").

31. *Id.* at 31.

32. *See* Dabós, *supra* note 14, at 141–43. "Contagion" is demonstrated when a R "cascading series" of bank failures or liquidity events results from the failure of one institution and a sequence of interbank counterparty relationships. Jeffrey N. Gordon & Christopher Muller, *Confronting Financial Crisis: Dodd-Frank's Dangers and the Case for a Systemic Emergency Insurance Fund*, 28 YALE J. REG. 151, 160 (2011).

33. *See* Dabós, supra note 14, at 142–43; *see also* Jean Burson, *A Framework for* R *Systemically Important Institutions*, FOREFRONT, Winter 2009–2010, at 14, 16, *available at* http://www.clevelandfed.org/forefront/2009/12/pdf/ff_winter_2009-2010_00.pdf.

plicability outside the realm of traditional depository institutions and into the "shadow banking system" of nonbank financial firms. As the term TBTF is used in the remainder of this Note, it is also meant to evoke the sense of the term in its more precise form of "too interconnected to fail."[34]

C. Systemic Risk

Systemic risk—also referred to as counterparty risk—arises when one financial institution's actions have the potential to adversely impact the operations or solvency of another institution as a result of transactions the firms have entered into with each other.[35] For example, when Bank A reduces its interbank lending to Bank B, this creates problems for Bank B's ongoing operations. The fact that Bank B's risk of insolvency is adversely impacted by the activities of Bank A, even if Bank B was otherwise prudently managing the asset quality of its own portfolio, highlights the susceptibility of financial institutions involved in a wide array of counterparty transactions to systemic risk.

Economic distress magnifies the problem of systemic risk. Regulators faced with the potential insolvency of Continental Illinois Bank feared that the risk of widespread failures among the bank's counterparties could result in devastation across the financial markets.[36] At the time, John LaWare, a former governor of the Federal Reserve Board, offered the following dramatic description of systemic risk:

> [A] nightmare condition that is unfair to everybody. The only analogy that I can think of for the failure of a major international institution of great size is a meltdown of a nuclear generating plant like Chernobyl. The ramifications of that kind of failure are so broad and happen with such lightning speed that you cannot after the fact control them.[37]

34. Gordon & Muller, *supra* note 32, at 160. ("It was commonly stated that Bear Stearns was not 'too big to fail,' the general moral hazard objection to government rescues, but 'too interconnected to fail.'").

35. Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 204 (2008). Professor Schwarcz defines systemic risk as

> the risk that (i) an economic shock such as market or institutional triggers (through a panic or otherwise) either (X) the failure of a chain of markets or institutions or (Y) a chain of significant losses to financial institutions, (ii) resulting in increases in the cost of capital or decreases in its availability, often evidenced by substantial financial-market price volatility.

36. Todd & Thompson, *supra* note 13, at 5. R

37. *Economic Implications of the "Too Big to Fail" Policy: Hearing Before the Subcomm. on Econ. Stabilization of the H. Comm. on Banking, Fin. and Urban Affairs*, 102d

LaWare might as well have been discussing the systemic impact of the Lehman Brothers Chapter 11 bankruptcy filing in 2008.[38]

While systemic risk has traditionally been associated with deposit runs resulting from bank panics and cascading bank failures, a similar domino effect occurs in the context of nonbank financial firms when there is a "run" on investor confidence. Where systemic risk gives rise to uncertainty about a firm's ability to meet multiple obligations, counterparties respond by engaging in a mass exodus from existing investment relationships, and creditors respond by freezing existing lines of credit.[39] As with bank runs by consumers in the depository context, a firm's sudden inability to meet obligations leads to widespread liquidity shortages that give rise to panic among financial firms and contagion throughout the industry.[40] Such contagions arose in the 2008 cases of Bear Stearns, Lehman Brothers, and AIG, each of which acted as a major intermediary in the unregulated over-the-counter ("OTC") derivatives market.[41] Further, each firm was heavily concentrated in collateralized debt obligations and other structured finance products and had balance sheet structures largely supported by short-term liabilities.[42] Consequently, instead of bank panics leading to insufficient liquidity to fund consumer deposit withdrawals, these nonbank institutions experienced liquidity shortages when suddenly faced with the collapse of a certain investment type—e.g., assets backed by overvalued subprime mortgages. Investors reacted by pulling out, while creditors quickly cut off access to short-term funding sources by freezing credit lines.[43]

Systemic risk presents a host of regulatory challenges, particularly with respect to nonbank financial institutions. Deposit insurance, while a notable source of moral hazard in the traditional banking context, is meant to diminish the occurrence of bank pan-

Cong. 34 (1991) (statement of John LaWare, Governor, Board of Governors of the Federal Reserve System).

38. *See* ANDREW ROSS SORKIN, TOO BIG TO FAIL 351–61 (2009); *see also* Okamoto, *supra* note 3, at 196. R

39. *See* Okamoto, *supra* note 3, at 196–98 (describing Bear Stearns, Lehman Brothers, and AIG in the context of the credit default swaps market). R

40. *See id.* at 200.

41. *Id.* at 198. Over-the-counter derivatives are privately traded agreements that allow parties to negotiate contract terms according to their specific needs, in contrast to exchange-traded derivatives that have standardized terms and are traded through organized exchanges. ALAN N. RECHTSCHAFFEN, CAPITAL MARKETS, DERIVATIVES AND THE LAW 162–63 (2009).

42. *See* Okamoto, *supra* note 3, at 200–03. R

43. *See id.* at 196–98, 203.

ics and thus the risk of contagion and liquidity shortages that disrupt the stability of the banking system.[44] However, no such explicit guarantee of emergency funding exists for nonbank financial firms to prevent runs on investor or creditor confidence. Further, existing safety and soundness regulations apply only to depository institutions. Non-depository nonbank financial firms, financial holding companies, and their nonbank subsidiaries are not subject to the same stringent operating requirements, monitoring by regulators, and intrusive examination processes imposed on traditional banks. While the lines have blurred among the various types of financial firms,[45] the continued growth and consolidation of these firms has also produced larger and more complex financial conglomerates.[46] Accordingly, regulatory reforms with regard to systemic risk must be comprehensive in addressing the problems of moral hazard and TBTF in the context of both depository and nondepository financial institutions.

II.
COMPARING THE DEREGULATORY ENVIRONMENTS OF THE SAVINGS AND LOAN CRISIS AND THE SUBPRIME MORTGAGE CRISIS

While a great deal can be said about the many causes of the S&L Crisis[47] and the Crisis of 2008–09,[48] this Part focuses specifically on the deregulatory environments preceding each crisis and the manifestations of moral hazard in each case. Part A discusses the causes of the S&L Crisis and highlights the role of deposit insurance as a source of an explicit moral hazard problem. This, in combination with a deregulatory environment that expanded permissible activities for thrifts,[49] dramatically altered incentives

44. CARNELL ET AL., *supra* note 5, at 309–10. R

45. *See* Wilmarth, *Universal Banking*, *supra* note 22, at 975–981.

46. *See* Wilmarth, *U.S. Financial Services*, *supra* note 25, at 251–54.

47. *See, e.g.*, *Administration's Plan to Resolve the Savings & Loan Crisis: Hearing Before the H. Comm. on Banking, Fin. and Urban Affairs*, 101st Cong., 71 (1989) (statement of Nicholas F. Brady, Sec'y of the Dep't of the Treasury).

48. *See* Ben S. Bernanke, *Opening Remarks*, 2008 FED. RES. BANK KANSAS CITY ECON. POL'Y SYMP. 1–3 (2009) [hereinafter Bernanke, *Opening Remarks*], *available at* http://www.kc.frb.org/publicat/sympos/2008/Bernanke.03.12.09.pdf; *see also* Ben S. Bernanke, Chairman, Fed. Reserve Bd. of Governors, Address at the Council on Foreign Relations (Mar. 10, 2009) [hereinafter Bernanke, Address at the Council on Foreign Relations], *available at* http://www.federalreserve.gov/newsevents/speech/bernanke20090310a.htm.

49. Thrift institutions, or "thrifts," are financial institutions that "primarily accept[ ] savings account deposits and invest[ ] most of the proceeds in mortgages."

and thus elevated the risk profiles of these institutions without a corresponding increase in regulatory supervision or prudential requirements. Part A continues by contrasting the deregulatory environment of the S&L Crisis with that of the Crisis of 2008–09, drawing distinctions between the regulatory failures at issue and giving particular attention to the contrast between the regulatory forbearance that characterized the 1980s and the regulatory arbitrage preceding the recent crisis. Legal developments in the 1990s paved the way for the "shadow banking system" and the regulatory arbitrage strategies that led to the buildup of systemic risk and growing interconnectedness among major financial firms.[50] Part B describes the post-crisis responses to the explicit and implicit moral hazard problems at issue, as set against the overarching themes of financial liberalization and shortsighted regulatory design. Part B then emphasizes how a thinly veiled TBTF safety net is particularly problematic for attempts to reform the regulatory framework.

A. Mismanaging Deregulation

1. S&L Crisis: A proactive Congress and regulatory forbearance

Deregulatory measures. Discussion of the myriad causes of the S&L Crisis generally includes the deregulatory environment established by Congress during the 1980s. In hindsight, the legislative attempts to improve competition among commercial banks and thrift institutions preceding the crisis involved an expeditious series of miscalculations—a failure of public policy that emerged from a blind commitment to the principle that competition and market discipline would always prevail.[51] During the 1980s, a troubled S&L industry faced substantial interest-rate mismatches on its balance sheets and growing insolvencies resulting from a business model that suffered when thrifts making long-term, fixed rate consumer

A savings and loan association is an example of a thrift. *Definition of BHCs and Banking Terms*, FEDERAL FINANCIAL INSTITUTIONS EXAMINATION COUNCIL, http://www.ffiec.gov/nicpubweb/Content/HELP/Institution%20Type%20Description.htm (last visited Feb. 28, 2012).

50. Patricia A. McCoy, Andrey D. Pavlov & Susan M. Wachter, *Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure*, 41 CONN. L. REV. 1327, 1329 (2009).

51. *See* FEDERAL DEPOSIT INSURANCE CORPORATION, 1 HISTORY OF THE EIGHTIES—LESSONS FOR THE FUTURE 172, 187, *available at* http://www.fdic.gov/bank/historical/history/167_188.pdf (describing the government's response to the early crisis as "a patchwork of misguided policies that set the stage for massive taxpayer losses to come").

loans were funded primarily through short-term deposits.[52] Amid a rising interest-rate environment, the cost of funding—i.e., interest expenses—swiftly outpaced interest income earned on fixed-rate mortgages. Faced with regulatory restrictions governing the asset-liability structures of thrift institutions, including limitations on allowable investments and maximum ceilings on deposit rates, many S&Ls became technically insolvent.[53]

Congress also enacted two principal deregulatory initiatives in this period that would later exacerbate the severity and cost of the S&L Crisis. The Garn-St. Germain Depository Institutions Act of 1982 (Garn-St. Germain Act)[54] expanded permissible investments for S&Ls and has been blamed for promoting a policy of permitting excessive risk-taking without subjecting risk-takers to the cost of such risk, thus encouraging capital forbearance.[55] Additionally, the Depository Institutions Deregulation and Monetary Control Act of 1980 increased deposit insurance levels from $40,000 per account to $100,000, which dramatically increased the total cost of the S&L Crisis to the public.[56]

The Garn-St. Germain Act deregulated the S&L industry by eliminating deposit rate ceilings and loosening restrictions on allowable business activities for S&Ls.[57] After deposit interest rate ceilings were removed to alleviate problems of disintermediation from deposit accounts to money market mutual funds, an influx of

52. JEFFREY CARMICHAEL & MICHAEL POMERLEANO, WORLD BANK, THE DEVELOPMENT AND REGULATION OF NON-BANK FINANCIAL INSTITUTIONS 186 (2002).

53. *Id.*

54. *See* Garn-St. Germain Depository Institutions Act of 1982, Pub. L. No. 97-320, 96 Stat. 1469, 1469 (1982) ("An Act to revitalize the housing industry by strengthening the financial stability of home mortgage lending institutions and ensuring the availability of home mortgage loans.").

55. *See* Franklin E. Zimring & Gordon Hawkins, *Crime, Justice, and the Savings and Loan Crisis*, 18 CRIME & JUST. 247, 266 (1993).

56. FEDERAL DEPOSIT INSURANCE CORPORATION, *supra* note 51, at 176. The staggering increase in coverage was made after the Senate had initially approved a new limit of $50,000 per qualified deposit account. While the House first left the figure alone, a final effort to change the insurance limit to $100,000 per account gained rapid industry support as rules regarding deposit interest rates were also loosened—a combination of measures that would dramatically increase the eventual cost of the financial crisis to follow. *See* CARNELL ET. AL, *supra* note 5, at 316; *see also* Christine M. Bradley, *A Historical Perspective on Deposit Insurance Coverage*, 13 FDIC BANKING REV., no. 2, 2000, at 1, 17, *available at* http://www.fdic.gov/bank/analytical/banking/2000dec/brv13n2_1.pdf (citing congressional records indicating Congress's reasoning that "[a]n increase from $40,000 to $100,000 will not only meet inflationary needs but lend a hand in stabilizing deposit flows among depository institutions and noninsured intermediaries"). R

57. CARMICHAEL & POMERLEANO, *supra* note 52.

insured consumer deposits flowed into thrifts.[58] This influx escalated thrifts' perverse incentives to engage in excessive risk-taking and exacerbated moral hazard. As a result of Congress' effort to help thrifts to "grow out" of their problems via deregulation, S&Ls broadened their activities into areas outside their traditional realms of home mortgages and consumer lending.[59] This led to greater profitability, but it also significantly increased the overall risk profile of the S&L industry.[60] To compete with commercial banks, S&Ls engaged in riskier acquisition, development and construction loans, and other unfamiliar investment areas, even when they were technically insolvent.[61] The industry also began littering balance sheets with low-grade assets such that capital levels were not commensurate with the risk profiles of the institutions.[62] Significantly, the Garn-St. Germain Act also reduced required regulatory capital levels, thereby allowing S&Ls to shrink their equity cushions while simultaneously expanding on the risks they could take.[63]

In addition to the general undercapitalization of S&Ls and the lack of sufficient capital adequacy regulations,[64] thrifts were plagued by many other factors that would prove to be problematic. These factors included: intense competition among thrifts and banks for local deposits, coupled with rising interest rates that in-

58. *See* FEDERAL DEPOSIT INSURANCE CORPORATION, *supra* note 51, at 176. Disintermediation is the outflow of deposits from financial institutions into other investments offering higher interest rates. *Id.*

59. *See* Karen Harris, Note, *Anticipatory Regulation for the Management of Banking Crises*, 38 COLUM. J.L. & SOC. PROBS. 251, 261–62 (2005); *see also* FEDERAL DEPOSIT INSURANCE CORPORATION, *supra* note 51, at 179.

> Another major change resulting from deregulation was that, beginning in 1982, S&L investment portfolios rapidly shifted away from traditional home mortgage financing into new activities. This shift was made possible by the influx of deposits and also by sales of existing mortgage loans. By 1986, only 56 percent of total assets at savings and loan associations were in mortgage loans, compared with 78 percent in 1981 . . . .

60. *See* FEDERAL DEPOSIT INSURANCE CORPORATION, *supra* note 51, at 180. Between 1982 and 1985, total thrift assets invested in commercial mortgages and land loans increased from 7.4% to 12.1%, a total increase of $78.6 billion. *Id.* at 184.

61. *See* FEDERAL DEPOSIT INSURANCE CORPORATION, *supra* note 51, at 176, 181; *see also* Harris, *supra* note 59.

62. CARMICHAEL & POMERLEANO, *supra* note 52.

63. *See* CONG. BUDGET OFFICE, J932-41, THE COST OF FORBEARANCE DURING THE THRIFT CRISIS 2 (1991).

64. NORMAN STRUCK & FRED CASE, WHERE DEREGULATION WENT WRONG: A LOOK AT THE CAUSES BEHIND SAVINGS AND LOAN FAILURES IN THE 1980S 14–16 (1988), *reprinted in* Arthur W. Leibold, Jr., *15 Major Causes of Losses that Hurt the Savings and Loan Business in the 1980s*, *in* THE SAVINGS AND LOAN CRISIS: LESSONS FROM A REGULATORY FAILURE 58 (James R. Barth et al. eds., 2004).

creased the cost of funds; elimination of rules limiting both direct lending and loan participations with other banks in non-local markets; overall management inexperience and incompetence, exacerbated by a lack of board oversight; and, in many instances, outright fraud and insider abuse.[65] An industry once defined by the conservative thirty-year fixed home mortgage and similar garden-variety consumer loans became characterized by a culture of "high rolling" and speculative ventures.[66]

These contributing factors—the sudden expansion of permissible investments by S&Ls, a dramatic increase in the amount of government-backed liabilities, capital forbearance, and management failures—combined with significant risk-taking in new business lines by inexperienced thrift managers, undermined the S&L industry.[67] Dramatically increasing deposit insurance limits while simultaneously reducing net worth requirements worsened the moral hazard problem of funding riskier activities with insured funds without a corresponding increase in supervision or deposit insurance reforms to combat the perverse incentives.[68]

Regulatory forbearance. These initiatives by Congress were consistent with most other political, legislative, and regulatory decisions made in the spirit of deregulation during the early 1980s.[69] In fact, the government's initial reactions to the burgeoning crisis allowed the negative effects of deregulation to snowball in an environment already conducive to policies of regulatory forbearance.[70] Those charged with supervising S&Ls either failed to act, acted too slowly,

65. *Id.*

66. *See generally* MARTIN E. LOWY, HIGH ROLLERS: INSIDE THE SAVINGS AND LOAN DEBACLE (1991) (documenting the events leading up to, and the personalities behind, the 1980s S&L crisis).

67. *See* FEDERAL DEPOSIT INSURANCE CORPORATION, *supra* note 51, at 180 ("[H]igh-risk development loans and the resultant mortgages on the same properties were most likely the principal cause for thrift failures after 1982."). Unfamiliar business lines included real estate, equity securities, casinos, fast-food franchises, ski resorts, and windmill farms, while new securities investments included junk bonds, arbitrage schemes, and derivative instruments. *See id.*

68. *Id.* at 175.

69. *Id.* at 177.

70. CONG. BUDGET OFFICE, J932-41, THE COST OF FORBEARANCE DURING THE THRIFT CRISIS 2 (1991).

> Forbearance is the discretionary practice of not enforcing an existing rule. In the 1980s, thrift regulators elevated forbearance to a general policy for the entire thrift industry—they did not close institutions when they became insolvent. Regulators did not violate statutes; rather, in altering agency regulations they interpreted those statutes in the most liberal way possible, thereby allowing themselves to avoid closing insolvent institutions.

or took less-than-meaningful enforcement action when confronted with insolvent institutions.[71] While deposit insurance creates moral hazard, the problem can be mitigated by prudent government regulation.[72] When, however, regulatory forbearance is consistently exercised as a matter of policy, as in the 1980s, managers face few roadblocks to deter them from imprudent banking practices, including risky lending, speculative investing, and forays into high-risk ventures without adequate experience, monitoring, and capital levels to support such activities.

A lax regulatory environment was also conducive to widespread fraud and insider abuse, as S&L managers were incentivized to engage in imprudent, often reckless, and even criminal business practices.[73] Some commentators, noting the overall prevalence of criminal activity by insiders during the S&L crisis, have argued that purposeful fraud was one of the primary causes of the losses incurred during the crisis.[74] While its significance as a contributing factor to the collapse is debated, the fact that fraudulent activity on the part of insiders occurred in an estimated 70% of failed S&L associations[75] has led some to describe the 1980s as "a decade of commercial lawlessness,"[76] and the crisis as a "theft from the taxpayer" that resulted in "the worst public scandal in American history."[77]

In sum, deregulatory measures resulting from misguided congressional action—increased deposit insurance, elimination of deposit interest-rate controls, and permissive operating requirements—combined with policies of forbearance due to regulatory inaction, resulted in the thrift industry's collapse. The significant expansion of government guarantees through deposit insurance worsened moral hazard and increased the cost of rescuing insolvent institutions.[78] In addition, the benefits of deregula-

71. *See id.*

72. *See* CARNELL ET AL., *supra* note 5, at 329 ("The FDIC also expects those banks' regulators to impose controls stringent and pervasive enough to constrain moral hazard."); *see also* Moss, *supra* note 14, at 4. R R

73. *See* STRUNK & CASE, *supra* note 64, at 15 (suggesting that fraud and insider abuse caused approximately 20% of failures between 1985 and 1988).

74. Zimring & Hawkins, *supra* note 55, at 264.

75. Harris, *supra* note 59, at 266.

76. Zimring & Hawkins, *supra* note 55, at 265 (quoting Michael M. Thomas's description of the crisis as a "mosaic of disaster . . . complex in the extreme, mixing simple thuggery with subtle feats of financial and legal prestidigitation").

77. *Id.* at 265.

78. *Id.* at 267; FEDERAL DEPOSIT INSURANCE CORPORATION, *supra* note 51, at 176; *see also Administration's Plan to Resolve the Savings and & Loan Crisis: Hearing Before the H. Comm. on Banking, Fin. and Urban Affairs*, 101st Cong., 55 (1989) (state-

tion—healthy competition, improved profitability, and economic growth—were overshadowed by the costs of excessive risk-taking and the resulting insolvencies.[79] By ignoring the complexities of the dynamics among competing financial institutions, a pertinent factor in regulatory design, Congress failed to implement a proportionate increase in regulatory scrutiny to manage additional risks as they materialized. Where no corresponding expansion of prudential regulation was implemented to counteract the moral hazard effects of an expanded government safety net, such as more stringent regulatory capital or asset quality requirements, financial liberalization and unrestrained risk-taking paved the way for financial crisis. Regulatory forbearance and worsening moral hazard problems further distorted the marketplace such that the celebrated benefits of free markets were lost almost as soon as they were sought.[80] Unsurprisingly, moral hazard was quickly identified as a key cause of the excessive risk-taking by thrift management during the S&L Crisis.[81]

2. Crisis of 2008–09: Congressional inaction and regulatory arbitrage

The legislative actions associated with the expansion of the thrift industry in the 1980s exhibited a free market fervor that ultimately increased societal costs, and a similar philosophy reappeared in the years preceding the Crisis of 2008–09. The 1990s saw a combination of legislative responses to the S&L Crisis and the expansion of permissible activities of financial institutions and their holding companies, representing a deregulatory environment of a markedly different nature. Opportunities for regulatory arbitrage emerged from the formation of regulatory gaps and the elimination

ment of Nicholas F. Brady, Sec'y of the Dep't of the Treasury) ("So the main problem here, you put your finger on, but it is worth repeating: it is idiocy to allow institutions to go out and get Federally insured deposits and let them do whatever they want once they have got that insurance. That's what we are trying to stop.").

79. Arthur E. Wilmarth, Jr., *Does Financial Liberalization Increase the Likelihood of a Systemic Banking Crisis? Evidence from the Past Three Decades and the Great Depression*, *in* TOO BIG TO FAIL: POLICIES AND PRACTICES IN GOVERNMENT BAILOUTS, *supra* note 14, at 77, 80–82 [hereinafter Wilmarth, *Financial Liberalization*]. R

80. *See* FEDERAL DEPOSIT INSURANCE CORPORATION, *supra* note 51, at 181 ("Although in a free-market economy competition is normally considered healthy, regulatory forbearance in the thrift industry and moral hazard created marketplace distortions that penalized well-run financial institutions.").

81. John C. Coffee, Jr., *What Caused Enron? A Capsule Social and Economic History of the 1990s*, 89 CORNELL L. REV. 269, 278 (2004) ("After the S&L crisis, investigators quickly identified a classic 'moral hazard' problem. Because the government guaranteed banks' financial obligations to depositors, these depositors had little reason to monitor management, and accordingly bank promoters were able to leverage their firms excessively.").

of barriers between banking and nonbanking activities, leaving mounting levels of systemic risk largely unmonitored and wholly unregulated.

Legal developments through the 1990s. Following the S&L Crisis, a series of legislative enactments changed the operating environment of the banking industry. Congress passed the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 ("FIRREA")[82] and provided $50 billion to close the banks that had failed and to prevent additional losses in hopes of restoring public confidence in the thrift industry.[83] Congress also abolished the Federal Savings & Loan Insurance Corporation ("FSLIC") and the deposit insurance fund for thrift institutions, and handed the responsibility of insuring S&L deposits to the FDIC.[84] In addition, FIRREA created two new agencies—the Federal Housing Finance Board and the Office of Thrift Supervision—to replace the Federal Home Loan Bank Board.[85]

In 1991, Congress passed the Federal Deposit Insurance Corporation Improvement Act of 1991 ("FDICIA"),[86] which greatly expanded the FDIC's powers and allowed it to borrow from the Treasury, mandated risk-based deposit insurance assessments for banks, and established new capital requirements and regulatory standards.[87] Under FDICIA's Prompt Corrective Action ("PCA") system, safety and soundness examiners assess each bank's capital adequacy using guidelines that mandate specific restrictions as a bank's regulatory capital ratios dip below certain thresholds: "well-capitalized," "adequately capitalized," "deficient," and "critically deficient."[88] The goal of the PCA regime is to provide a mandatory system for the resolution of failed banks in order to avoid the regulatory forbearance problems that plagued the thrift crisis.[89]

82. Financial Institutions Reform, Recovery, and Enforcement Act of 1989, Pub. L. No. 101-73, 103 Stat. 183 [hereinafter FIRREA].

83. *See* Timothy Curry & Lynn Shibut, *The Cost of the Savings and Loan Crisis: Truth and Consequences*, 13 FDIC BANKING REV., no. 2, 2000, at 26, 28, *available at* http://www.fdic.gov/bank/analytical/banking/2000dec/brv13n2_2.pdf.

84. 12 U.S.C. § 1821a(a)(1) to (2) (2006).

85. FIRREA §§ 307, 308, 401 ("FSLIC and Federal Home Loan Bank Board Abolished").

86. Federal Deposit Insurance Corporation Improvement Act of 1991, Pub. L. No. 102-242, 105 Stat. 2236 [hereinafter FDICIA].

87. *See* CARNELL ET AL., *supra* note 5, at 30; *see also* Christopher J. Pike & James B. Thompson, *FDICIA's Prompt Corrective Action Provisions*, FED. RES. BANK CLEV. 1 (Sept. 1, 1992), www.clevelandfed.org/research/Commentary/1992/0901.pdf. R

88. 12 U.S.C. § 1831o(b)(1) (2006).

89. *See* CARNELL ET AL., *supra* note 5, at 30; *see also* Pike & Thompson, *supra* note 87, at 3 (suggesting that mandating prompt intervention by regulators R

In addition, the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 ended the prohibition of interstate banking, allowing bank holding companies with adequate capital levels to acquire banks across state lines.[90] Most notably, the last major banking law enacted in the 1990s, the Gramm-Leach-Bliley Act of 1999 ("GLB Act"), eliminated the strict separation among investment banks, commercial banks, securities firms, and insurance companies that had existed since the Glass-Steagall Act of 1933 ("Glass-Steagall").[91] The GLB Act established "financial holding companies," or bank holding companies meeting certain criteria that are allowed to engage in a wide variety of business activities.[92] The Act thus permitted the consolidation of different types of financial firms that would otherwise have been precluded by Glass-Steagall, and a new kind of nontraditional financial conglomerate was born.[93] For example, Citicorp, a bank holding company, merged with Travelers, a financial firm that owned insurance subsidiaries, and Salomon Smith Barney, a major securities firm, to form Citigroup—the first "universal bank" in the United States since 1933.[94] In sum, legal developments throughout the 1990s included using billions of government dollars to prevent further losses from the S&L Crisis, restructuring the regulatory framework and creating new banking agencies, reducing regulatory discretion in an effort to prevent regulatory forbearance, and expanding bank powers such that a new era of "nonbank" banking could be born.

Regulatory arbitrage. If the regulatory environment of the S&L industry in the 1980s was characterized by regulatory forbearance, the 1990s and early 2000s were marked by regulatory arbitrage. Such arbitrage occurs when firms take advantage of gaps in regulatory oversight by exploiting business areas not subject to government supervision, taking excessive risks, and becoming highly

reduces the political pressures that otherwise give regulatory agencies perverse incentives to engage in regulatory forbearance).

90. *See* Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, Pub. L. No. 103-328, 108 Stat. 2338.

91. Gramm-Leach-Bliley Act, Pub. L. No. 106-102, § 101(a), 113 Stat. 1338, 1341 (1999) (repealing Section 20 of the Banking Act of 1933 (12 U.S.C. § 377)).

92. *See* CARNELL ET AL. *supra* note 5, at 465. R

93. *See id.*; *see also* Wilmarth, *Universal Banking*, *supra* note 22, at 972–73.

94. The Federal Reserve Board approved the merger in 1998 via an exemption in the Bank Holding Company Act and allowed Citigroup to provide universal banking services for a period of up to five years. The approval eventually led Congress to repeal Glass-Steagall and amend the Bank Holding Company Act such that the financial conglomerate could exist on a permanent basis; in November of 1999, Congress enacted the Gramm-Leach-Bliley Act. *Id.*

concentrated unregulated products.[95] These "legal or supervisory gaps through which organizations or individuals can act contrary to the purposes of the regulation"[96] can lead to the failure to regulate an area entirely—an arguably worse outcome than the mere laxity in government oversight observed in the 1980s.

Regulatory arbitrage is particularly dangerous for several reasons. First, as the term "shadow banking" might suggest, such strategies occur "in the dark" and fall outside of government scrutiny. Thus, the problems arising from such strategies, or the strategies themselves, are not readily apparent as a source of potential distress until it is too late.[97] Difficulties in monitoring an area of investing also lead to difficulties in measurement—a problem that bore out painfully during the crisis. Second, as Congress's response to the regulatory forbearance of the 1980s demonstrated, government laxity and regulatory capture can be dealt with in a fairly direct manner: by eliminating and rebuilding, or by abolishing ineffective agencies and redistributing responsibilities to new agencies and regulators.[98] In addition, the implementation of PCA guidelines under FDICIA reflects Congress's ability to simply curb the discretion given to regulators in fulfilling their duties.[99] The "prompt res-

95. Bernanke, Address at the Council on Foreign Relations, *supra* note 48.

96. Harris, *supra* note 59, at 254 n.15.

97. *See* Viral V. Acharya et al., *The Dodd-Frank Wall Street Reform and Consumer Protection Act*, *in* REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE, *supra* note 26, at 2–3 (describing the development of a "parallel (shadow) banking system" that reflected regulatory arbitrage opportunities left unmonitored as a result of "regulatory naïveté . . . , the ideology of the times, and a cognitive failure by everyone to appreciate fully the unintended consequences of existing regulation and to develop the tools to deal with them").

98. In passing FIRREA in 1989, Congress eradicated the FSLIC and redistributed responsibilities of insuring and regulating the thrift industry to the FDIC and to two new agencies, respectively. *See* FIRREA, §§ 307, 308. Twenty years later, one of those agencies—the Office of Thrift Supervision—eventually met a similar fate and was dismantled via the Dodd-Frank Act after criticisms of regulatory capture. *See* Dodd-Frank Act, § 313, 124 Stat. at 1523; *see also* Office of Thrift Supervision Integration, Dodd-Frank Act Implementation, 76 Fed. Reg. 43549 (July 21, 2011) (to be codified at 12 C.F.R. pt. 4, 5, 7, 8, 28, & 34) (rule transferring authority from the OTS to the Office of the Comptroller of Currency); Shriram Harid, *Report on Financial Crisis Singles Out the Office of Thrift Supervision*, REGBLOG (Apr. 27, 2011), http://www.law.upenn.edu/blogs/regblog/2011/04/senate-subcommittee-report-on-financial-crisis-singles-out-the-office-of-thrift-supervision.html.

99. Pike & Thompson, *supra* note 87, at 3 ("FDICIA strips regulators of much of their supervisory discretion over significantly undercapitalized . . . depositories . . . ."). As described by Senator Donald W. Riegle, Jr., Chairman of the Senate Committee on Banking, Housing, and Urban Affairs:

> The prompt corrective action provisions . . . . say, in effect: "Regulators, you should act earlier and more aggressively when a bank or thrift begins to get

olution" demanded by Congress through the PCA regime represented a simple and direct mandate to banking agencies to close down insolvent institutions. In contrast, reforms to repair the damage from regulatory arbitrage are relatively more complicated than simply responding to agency shortcomings by reducing discretion or shutting down weak regulators. The challenge of closing regulatory gaps involves more complex issues, not the least of which is identifying the sources of arbitrage opportunities, which are as numerous and dynamic as Wall Street is innovative, and which are difficult to manage as a result of lack of monitoring and measurement.[100] In fact, most systemically significant firms that effectively failed during the crisis had largely escaped capital requirements by employing regulatory arbitrage strategies involving funding loans through off-balance sheet vehicles and purchasing AAA-rated securities of dubious quality.[101] Despite leveraging bets on risky loan portfolios, LCFIs were not required to have any "skin in the game."[102] Regulatory gaps foster opportunism among financial innovators by allowing for areas of investment activity evading government supervision and, perhaps, comprehension.

The "shadow banking" industry. The shadow banking system exists under what many perceive to be a type of regulatory arbitrage.[103] "Shadow banks" are non-depository financial institutions that are not overseen by state or federal agencies or subject to the

into trouble. Get in there, correct the problems, and turn the place around, if you can. And if you cannot, sell the place, or close it down, before it becomes a loss to the deposit insurance system and a liability to the American people." 138 Cong. Rec. 19,533 (1992).

100. During the recent crisis, regulatory arbitrage arose in more ways than one, including the use of off-balance sheet investment vehicles, which allowed LCFIs to exploit regulatory loopholes under the Basel Accords. Viral V. Acharya et al., *Capital, Contingent Capital, and Liquidity Requirements*, *in* REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE, *supra* note 26, at 143, 148 [hereinafter Acharya et al., *Capital*].

101. Matthew Richardson et al., *Securitization Reform*, *in* REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE, *supra* note 26, at 469, 473, 476. For more on the role of issuers, securitization, and the credit ratings agencies in the crisis, see Edward I. Altman et al., *Regulation of Rating Agencies*, *in* REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE, *supra* note 26, at 443.

102. Many LCFIs purchased AAA-rated tranches along with underpriced credit protection on those products through insurers, such as AIG, that allowed firms to take on additional risks without having to augment capital reserves. Acharya et al., *Capital*, *supra* note 100, at 147–50 (describing the several steps of regulatory arbitrage employed by LCFIs to get around Basel regulatory capital rules).

103. Bernanke, Address at the Council on Foreign Relations, *supra* note 48.

same rigorous safety and soundness examinations as depository institutions.[104] They include institutional investors such as hedge funds and pension funds, investment banks, and nonbank subsidiaries of depository institutions.[105] Such institutions can take advantage of gaps in the regulatory framework by exploiting profitable business lines that are under the radar of regulatory scrutiny and can subsequently engage in concentrated risk-taking in those areas to maximize profitability.[106]

While shadow banks do not have access to deposit insurance and are thus not subject to the same explicit moral hazard as traditional banks, such nonbank firms are still subject to implicit moral hazard to the extent an institution believes it is TBTF. Moral hazard is fueled when firms become highly concentrated in unregulated financial products through transactions with a multitude of counterparties spread throughout the financial sector, thus becoming "too interconnected to fail." While forbearance policies of the 1980s expose inaction on the part of the regulators in complying with their mandate, regulatory arbitrage reflects the decisions of the firms themselves to concentrate activities in areas in which regulators stand by, wholly without a mandate.

Due to the rapid pace of financial innovation and the limitations of regulatory agencies in keeping up with changes in complex derivatives markets and associated trading strategies, regulatory arbitrage presents an even greater cause for concern than policies of regulatory forbearance. This is particularly true in the context of privately traded OTC contracts not subject to standardization, where counterparty risks are not reduced via exchange trading.[107] Such contracts had damaging consequences during the Crisis of 2008–09 insofar as credit default swaps and other derivative instruments increased the risks posed by interconnectedness by linking the survival of major financial firms to the performance of unregulated contractual obligations among many firms.[108] Where firms availed themselves of regulatory arbitrage strategies to take on excessive risk, the result during the crisis included the virtual death

104. Mike Konczal, *Shadow Banking: What It Is, How it Broke, and How to Fix It*, THE ATLANTIC (Jul. 13, 2009, 1:08 PM), http://www.theatlantic.com/business/archive/2009/07/shadow-banking-what-it-is-how-it-broke-and-how-to-fix-it/21038/.

105. *Id.*

106. *Id.*

107. RECHTSCHAFFEN, *supra* note 41, at 163. ("Exchange-traded derivatives are designed to virtually eliminate counterparty risk. An organized exchange addresses the counterparty credit risk inherent in bilateral contracting by standardizing derivatives contracts to create a liquid market in the contracts themselves.").

108. McCoy, *supra* note 50, at 1358.

knell of financial markets—uncertainty. Investors' pronounced distaste for risk left unmeasured (or poorly measured by the institutions themselves through quantitative models), and therefore unaccounted for, is generally reflected by dramatic, stomach-turning reactions of the markets themselves.[109]

In contrast to the inexperienced and sometimes fraudulent thrift managers jumping into the waters of a newly deregulated environment,[110] the past two decades have been characterized more by the innovation of savvy financial engineers and a complex derivatives market that, with the blessing of Congress, escaped the grasp of regulators.[111] Instead of the proactive Congress of the 1980s seeking the fruits of healthy competition via deregulation, the years preceding the Crisis of 2008–09 were marked not only by an embrace of free markets by policymakers, but also by a failure to regulate entire areas of financial activity, despite warning.[112] Warnings were dismissed as alarmist and unfaithful to the market-discipline approach advocated by leading economic policymakers, including Federal Reserve Chairman Alan Greenspan, thus giving rise to regulatory gaps.[113]

Whereas simple regulatory forbearance and banker incompetence were critical factors leading to the S&L Crisis, sophistication and the skillful, but ultimately disastrous layering of risk played a much greater role in the subprime mortgage crisis.[114] As such, inventive financiers had no need to rely on insider abuse and outright fraud when greater profitability could be achieved through per-

109. *See* Jenny Anderson & Ben White, *Wall Street's Fears on Lehman Bros. Batter Markets*, N.Y. TIMES, Sept. 10, 2008, at A1, *available at* http://www.nytimes.com/2008/09/10/business/10place.html.

110. *See* Harris, *supra* note 59, at 266.

111. For a detailed look into the unsuccessful attempt to regulate OTC derivatives in the late 1990s by Brooksley Born, former CFTC Chairman and current member of the Financial Crisis Inquiry Commission, in the face of strong opposition from Congress and economy policymakers (including Alan Greenspan, Chris Cox, Robert Rubin, and Larry Summers), see *Frontline: The Warning* (PBS television broadcast Oct. 20, 2009), *available at* http://www.pbs.org/wgbh/pages/frontline/warning/view/; *see also The Financial Derivatives Supervisory Improvement Act of 1998 and the Financial Contract Netting Improvement Act: Hearing on H.R. 4062 and H.R. 4239 Before the H. Comm. on Banking and Fin. Servs.*, 105th Cong. 83–86 (1998) (statement of Brooksley Born, Chairperson, Commodity Futures Trading Commission).

112. *See Frontline: The Warning*, *supra* note 111; *see also* Manuel Roig-Franzia, *Credit Crisis Cassandra: Brooksley Born's Unheeded Warning Is a Rueful Echo 10 Years On*, WASH. POST, May 26, 2009, *available at* http://www.washingtonpost.com/wp-dyn/content/story/2009/05/25/ST2009052502127.html?sid=ST2009052502127.

113. *See* Roig-Franzia, *supra* note 112.

114. *See* Okamoto, *supra* note 3, at 200–03. R

fectly legitimate and legal means of avoiding regulatory oversight in an increasingly opaque financial marketplace.

B. Post-Crisis Responses to the Moral Hazard at Issue

Each crisis presents unique challenges, and therefore each reform effort must provide tailored responses. As noted by Federal Reserve Board Governor Kevin Warsh, "If you've seen one financial crisis, you've seen one financial crisis."[115] As a result, effective reform is particularly difficult. The S&L Crisis and the Crisis of 2008–09 both reveal a similar pattern of financial liberalization without consideration of long-term consequences. Beyond this, the distinctions that can be drawn between the two crises should inform the response to the Crisis of 2008–09.

1. Managing the explicit guarantee of government-backed deposit insurance versus the implicit promise of government bailouts

The post-crisis response to the shortcomings of regulators during the S&L Crisis, while difficult, did not require the structural revisions necessary to correct for the regulatory deficiencies that led to the Crisis of 2008–09. As discussed in Part II, regulatory forbearance was revealed as a lack of enforcement of existing regulations and as a failure to meet the public's expectation that insolvent institutions would be closed.[116] As such, problems with the execution of supervisory objectives could be properly addressed by simply cabining the discretion given to the banking agencies. For example, by enacting mandatory PCA guidelines that demand increasingly severe enforcement actions based on regulatory capital levels.[117]

Excessive risk-taking due to the moral hazard of deposit insurance is generally managed by placing more stringent requirements on institutions' managers via prudential regulation.[118] Thus, such reforms are more easily carried out when the regulatory framework already in place is consistent with the goals of reform: improving regulator accountability and ensuring that those regulators enforce more stringent prudential requirements as part of their existing monitoring and supervision functions, all in an effort to reduce excessive risk-taking by individual firms.

115. Janice Revell, *6 Signs of an Economic Rebound*, CNN MONEY (May 13, 2008), http://money.cnn.com/2008/05/09/pf/rebound_predictors.moneymag/index.htm.

116. *See supra* Part II.A.1.

117. *See* 12 U.S.C. § 1831o(a)(2) (2006); *see also* CARNELL ET AL., *supra* note 5, at 279–92. R

118. *See* CARNELL ET AL., *supra* note 5, at 252–53. R

In contrast, the moral hazard problem created by being TBTF cannot be managed by merely increasing the stringency of operating requirements. Despite the fact that liabilities of nonbank financial firms were not backed by deposit insurance, the size and complexity of several institutions resulted in a belief that some firms were too interconnected to fail—the product of an implicit guarantee.

In realizing the advantages of the government's implicit TBTF safety net, systemically significant LCFIs impose negative externalities on society.[119] Because such guarantees are paid via an ad hoc "bailout" mechanism with no planned source of funding, the public bears the burden while bailed-out institutions enjoy the benefits. Thus, the financial firms imposing enough systemic risk on the financial system to take advantage of publicly funded emergency liquidity are not forced to internalize the costs of that risk.[120] This problem has less to do with regulator discretion or the management inexperience observed during the S&L Crisis and instead stems primarily from design failures within the existing regulatory infrastructure. While some structural shortcomings can be partially remedied by closing gaps in oversight and enhancing supervisory responsibilities,[121] merely adding traditional prudential reforms to the current regulatory framework does little to cure the dangers arising from systemic importance, the relationships among financial institutions, and the unmitigated build-up of counterparty risk.

Elimination of supervisory gaps and increased supervision are necessary first steps in regulatory reform and have recently been addressed by provisions to improve transparency in the derivatives markets under Title VII of the Dodd-Frank Act, which includes

119. Viral V. Acharya et al., *Taxing Systemic Risk*, *in* REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE, *supra* note 26, at 121, 122 [hereinafter Acharya et al., *Taxing Systemic Risk*] ("That some financial institutions contribute more than others to the overall capital shortfall in a crisis is a prototypical example of the negative externality of systemic risk in the financial sector. Markets do not price negative externalities, so if unchecked, they get produced in excess.").

120. *See* Viral V. Acharya et al., *Systemic Risk and Deposit Insurance Premiums*, FED. RES. BANK N.Y. ECON. POL'Y REV., Aug. 2010, at 89, 91–92 [hereinafter Acharya et al., *Deposit Insurance*].

121. U.S. DEP'T OF THE TREASURY, FINANCIAL REGULATORY REFORM—A NEW FOUNDATION: REBUILDING FINANCIAL SUPERVISION AND REGULATION 6–7 (2009) (on establishing "comprehensive regulation of financial markets" by bringing the OTC derivatives and asset-backed securities markets into a coordinated regulatory framework).

clearing and margin requirements.[122] However, as Part III will discuss in further detail, while the Dodd-Frank Act closes some loopholes, it does not necessarily relieve the difficulties of marketplace opacity, nor does it adequately address the perverse incentives that encourage financial firms to grow too interconnected to fail.

2. Financial liberalization, financial crisis, and shortsighted regulatory design

The deregulatory environment preceding each crisis resulted from a free-market approach embraced by both Republican and Democratic administrations, which has long rested on principles of laissez-faire capitalism.[123] While deregulation has led to observable benefits,[124] some commentators have suggested that a link exists between deregulation efforts and banking crises, indicating that the most troubling part of financial liberalization may be the resulting tendency to create financial systems more susceptible to systemic risk.[125] Such a system would thus be more vulnerable to systemic crises and, as a result, manifest more TBTF dilemmas faced by the government, similar to the decisions on whether or not to rescue failing firms during the Crisis of 2008–09.

By "amplifying" the stages of the business cycle, financial liberalization creates a difficult tradeoff between the benefits of deregulation, particularly economic growth and expansion, and minimizing the dangers of relying on market discipline alone—i.e., the risk of economic downturns as a result of bursting asset bubbles.[126] Deregulation efforts by Congress, which follow a theme of broadening lending powers and permissible investments in response to a particular industry's aspirations of improved competitiveness, in turn place greater pressure on banks to expand into more risk-laden areas.[127]

Despite the many differences between the causes of the S&L Crisis and the Crisis of 2008–09, the regulatory environments pre-

122. Dodd-Frank Act, Title VII, 124 Stat. at 1641 ("Wall Street Transparency and Accountability Act").

123. *See* Charles G. Leathers and J. Patrick Raines, *Some Historical Perspectives of "Too Big to Fail" Policies*, *in* TOO BIG TO FAIL: POLICIES AND PRACTICES IN GOVERNMENT BAILOUTS, *supra* note 14, at 3. R

124. Key benefits of deregulation include the efficient distribution of resources, economic development, and trade growth. Wilmarth, *Financial Liberalization*, *supra* note 79, at 77.

125. *Id.*

126. *Id.* at 77–78 (on the seven general stages of banking crises associated with deregulation).

127. *See id.*

ceding both crises underscore the dangers of shortsighted deregulatory initiatives that do not adequately account for long-term implications. Deregulation in and of itself is not the sole cause of financial crisis, but deficiencies in regulatory design often go undetected until times of crisis, when the costs are at their highest.[128] Thus, each case highlights the importance of pursuing viable long-term objectives when crafting both deregulatory initiatives and regulatory reforms. As observed with regard to the regulatory changes preceding the S&L Crisis, for such measures to be successful in the long run, they must give adequate consideration to the impact on the competitive dynamic among financial institutions and the role moral hazard plays in the decision-making of both depository and non-depository institutions.

III.
GREATER ANTICIPATORY REGULATION TO MANAGE SYSTEMIC RISK

This Part focuses on structural changes needed to combat the challenges of TBTF and moral hazard following the Crisis of 2008–09. While preventing the consequences of systemic risk has been a centerpiece of the regulatory framework, the regime has proven inadequate in managing the particular type of contagion associated with the systemic risk exhibited during the subprime mortgage crisis. As the separation between commercial and investment banking has blurred and distinctions among financial services have eroded, the concentration of business housed in large "money center" banks has grown.[129] Since the S&L Crisis and the repeal of Glass-Steagall, the landscape of the financial services industry has changed dramatically. Moreover, the expanding presence of non-depository financial institutions has shifted the significance of systemic risk arising from contagions of panic among depositors to that arising from contagions of panic across the firms themselves. Because this risk arises from the relationships among transactional counterparties, as opposed to the overall health of an institution in isolation, traditional prudential regulation methods that impose stricter operating requirements on single institutions cannot suffi-

128. *See* Arthur E. Wilmarth, Jr., *Does Financial Liberalization Increase the Likelihood of a Systemic Banking Crisis? Evidence from the Past Three Decades and the Great Depression*, *in* TOO BIG TO FAIL: POLICIES AND PRACTICES IN GOVERNMENT BAILOUTS, *supra* note 14, at 77, 77–78, 96 (on the boom and bust cycles of deregulation and banking crises, recommending that regulators consider the "long-term economic risks of financial liberalization programs"). R

129. *See* Wilmarth, *Universal Banking*, *supra* note 22, at 975–80.

ciently address the implicit moral hazard that arises from expectations of TBTF protection.

A. Systemic Risk: Contagion and Concentration

The lack of a proper regulatory infrastructure to address systemic risk from both an ex ante and an ex post perspective increases the ultimate cost of financial crises borne by the public.[130] Regulation of systemic risk has historically focused on the prevention of bank failures rather than on the systemic risk itself. Deposit insurance has traditionally been viewed as the optimal way to prevent depositor runs and mitigate contagions of bank panics caused by commercial bank failures.[131] As discussed in Part II, although the explicit guarantee of federal deposit insurance creates moral hazard, its purpose in protecting depositors has ostensibly served a generally accepted and legitimate policy aim.[132] However, this objective of protection does not transfer as well to the risk-taking beneficiaries of an implicit TBTF guarantee.

Furthermore, the recent crisis calls attention to the concentrations of financial power in a few dominant mega-firms—a problem distinct from, and in addition to, contagion, the primary concern of previous crises.[133] Thus, while contagion speaks to the classic case of Continental Illinois Bank in 1984 and its correspondent banking relationships, or the more recent case of Bear Stearns and the potential domino effect through the credit default swaps market,[134] systemic risk arising through concentrations of financial power results from the pure dominance of a firm whose failure has the potential to disrupt the market well beyond its counterparty relationships.[135] When the country's largest and most complex institutions, including Washington Mutual, Wachovia, Lehman Brothers, AIG, Merrill Lynch, and Citigroup approached failure in 2008, their status as financial giants and their potential failures posed great risk to the economy, and as a result, the government applied

130. Harris, *supra* note 59, at 254–55.

131. Schwarcz, *Systemic Risk*, *supra* note 35, at 210–11; MILTON FRIEDMAN & ANNA JACOBSON SCHWARTZ, NAT'L BUREAU OF ECON. RESEARCH, A MONETARY HISTORY OF THE UNITED STATES, 1867–1960 440 (1963).

132. *See* CARNELL ET AL., *supra* note 5, at 309–11. R

133. *See* Todd & Thompson, *supra* note 13, at 12. R

134. Thompson, *supra* note 17, at 3. R

135. *Id.* at 4–5 (describing how a systemically significant institution's failure may have "spillover effects that impede the functioning of broader financial markets and/or the real economy" as a result of the firm's dominance in volume over certain financial services).

resources, virtually limitless in nature, in its efforts to avoid systemic collapse.[136]

Because the dangers of the implicit guarantee are particularly hazardous, the costs of systemic risk should be internalized by the guarantee's beneficiaries so as to avoid economically inefficient cost shifting to taxpayers during a systemic event. Furthermore, a framework to combat TBTF should attempt to counteract an obvious collective action problem: because market participants incur the costs of systemic failures, but do not themselves bear those costs, it is unlikely that institutions will voluntarily curb activities resulting in greater systemic risk, given that they stand to gain from such transactions.[137] Without providing a new systemic risk regulator with a mandate of prevention (in addition to traditional monitoring and supervision), LCFIs will be incentivized to continue increasing concentrations of financial power, wholly without charge for the implicit guarantee of public funding that they enjoy during times of crisis.

While commercial banks have been subject to the most rigorous regulatory requirements and supervision in the financial services industry, financial modernization has all but eliminated the distinctions between banks and other types of financial firms.[138] As a result, the number of financial service providers capable of posing systemic risk has increased.[139] An institution, regardless of its status as depository or non-depository, can now be well-capitalized, have excess liquidity, and practice sound risk management, while at the same time grow in size and complexity, form counterparty relationships, and concentrate its assets in high-risk areas. Thus, systemic risk regulation must cast a wide net and be comprehensive in its reform by addressing all financial firms, regardless of type.

B. Prudential Regulation Alone is Insufficient

More stringent regulation, greater limitations on allowable investments, and closer supervision of operations is a natural response to a banking crisis. The traditional bank regulatory framework of prudential regulation imposed on individual banks

136. *See* Okamoto, *supra* note 3, at 200, 203; *see also* Acharya et al., *Taxing Systemic Risk*, *supra* note 119, at 123; Moss, *supra* note 14, at 5, 8. R R

137. *See* Schwarcz, *supra* note 35, at 206.

138. *See* Wilmarth, *Universal Banking*, *supra* note 22, at 975–81.

139. Rose Marie Kushmeider, *The U.S. Federal Financial Regulatory System: Restructuring Federal Bank Regulation*, 17 FDIC BANKING REV., no. 4, 2005, at 1, 17, *available at* http://www.fdic.gov/bank/analytical/banking/2006jan/article1/article1.pdf.

has rested on the assumption that the moral hazard problem at issue is one of an explicit nature—i.e., the moral hazard of deposit insurance that is alleviated to the extent that comprehensive operating requirements imposed on individual institutions will deter the excessive risk-taking that puts the insurance fund at risk. Up to a point, however, increased prudential regulation is of little marginal benefit in the context of systemic risk because such methods affect only the risk-taking of individual firms and do little to regulate an institution's counterparty risks, or the risk it poses to the economy as a whole.[140] Thus, comprehensive reform must include both anticipatory and mitigating measures to, first, discourage the rapid build-up of systemic risk by changing the incentive structure of TBTF and, second, minimize the systemic impact when a systemically important institution faces insolvency. The latter point operates on the assumption that despite preventive efforts, systemic events will still occur in the future. Without combating systemic risk both ex ante and ex post, neither the consequences nor the causes of the Crisis of 2008–09 will be fully addressed.

The effectiveness of reform lies principally in combating the source of implicit moral hazard. Unfortunately, the incentive to grow TBTF is now stronger as a result of bailouts during the recent crisis,[141] while the systemic impact of the government's refusal to rescue firms such as Lehman Brothers may have only reinforced the notion that systemic effects are severe, thus merely emphasizing the importance of avoiding those effects through bailout or otherwise.[142] Because an implicit guarantee has no set dollar amount, and because its funding source is determined ad hoc only at the time of crisis, nothing in the regulatory system forces a TBTF firm to internalize the cost of the systemic risk it poses prior to a systemic collapse. Therefore, anticipatory regulation is better suited to deal with such implicit guarantees where mere stringency of operating requirements falls short.

The reform effort must also concede that the rate at which the government is able to adapt regulatory processes, even with a vigilant systemic risk regulator in place, is unlikely to keep up with the swift pace of financial innovation. Prudential requirements can only be made so stringent and, in a rapidly changing marketplace, cannot realistically address the supervisory needs of every new risk-shift-

140. *See generally*, Moss, *supra* note 14, at 9 ("[S]ystematically significant institutions should face enhanced prudential regulation . . . .") R

141. *See* Bernanke, *Opening Remarks*, *supra* note 48, at 3.

142. *See* Anderson & White, *supra* note 109; *see also* Okamoto, *supra* note 3, at 200. R

ing financial instrument to hit Wall Street. The limitations of prudential regulation suggest that a broader and more prophylactic approach to managing systemic risk would be more effective to slow the race toward unnecessary interconnectedness and concentrations of financial power. A preventive strategy, in addition to being better suited to dealing with implicit moral hazard, is more likely to strike the right balance between freely thriving innovation and a parade of complex instruments flooding the marketplace before their risks are understood by the parties.[143] Lack of such a balance can result in opacity in the financial system, leading to greater uncertainty during economic downturns—i.e., the panic and contagion that originates from a systemic event.

C. Combating TBTF and Implicit Moral Hazard Through Anticipatory and Mitigating Measures

Reform of the banking system has been remarkably hard to come by for almost a century, despite the fact that the debate over how the highly decentralized system should be restructured has been going on for just as long.[144] This section argues that the reforms intended to address TBTF fall short of resolving the underlying structural problems that incentivize risk-taking and externalizing behaviors among LCFIs, and they thus fail to reduce implicit moral hazard among systemically significant institutions. Instead, effective regulation of systemic risk requires a revision to the regulatory structure that incorporates both preventive and mitigating measures. Previous commentators have noted that ex ante mechanisms for managing systemic risk are needed to improve the regulatory framework.[145] A successful approach must, first, embrace the traditional role of prudential operating requirements by imposing on the largest financial institutions stricter capital adequacy and risk management standards (such as those recently enacted under the Dodd-Frank Act) and, second, incorporate greater anticipatory regulation of systemic risk. Such a strategy would reflect a dual purpose in managing systemic risk by combating the incentives to be-

143. *See Wall Street to Main Street: Is the Credit Crisis Over and What Can the Federal Government Do to Prevent Unnecessary Systemic Risk in the Future?: Hearing Before the Joint Econ. Comm.*, 110th Cong. 11 (2008) (statement of Paul A. Volcker, Former Chairman of the Fed. Reserve Board of Governors) ("[T]he executives of these companies, I think, to put it mildly, have great difficulty in really understanding the amount of risk and complexity involved in their organizations.").

144. *See generally*, Howard A. Hackley, *Our Baffling Banking System*, 52 VA. L. REV. 565 (1966).

145. *See, e.g.*, Acharya et al., *Deposit Insurance*, *supra* note 120, at 97; Moss, *supra* note 14, at 12; Thompson, *supra* note 17, at 1. R

come TBTF and by preserving financial stability when systemic crises do (as they inevitably will) arise.

In addition to greater prudential regulation and filling in regulatory gaps, a set of economic disincentives should be established to deter firms from becoming "too interconnected to fail," carefully balanced against the danger of overdeterrence of economically productive financial innovation. Greater market discipline should be imposed through these disincentive structures to make it less attractive and more costly to become systemically significant. Because lack of liquidity among LCFIs during a systemic crisis threatens economic instability, such reforms should also focus on nonpublic emergency funding sources that might be used to reduce market volatility as an alternative to publicly funded bailouts.[146]

1. Ex ante: disincentives to manage firm size and interconnectedness

Regardless of whether government intervention was justified in 2008, the market is likely to have taken note of the expanded government safety net, thus compounding moral hazard and exacerbating the cycle of excessive risk-taking and costly government assistance.[147] To counteract these perverse incentives created by bailouts, regulatory tools should impose greater market discipline than the existing framework demands.

As discussed above,[148] the systemic risk regulator should pursue the objective of anticipatory regulation to discourage the buildup of systemic risk. In doing so, the regulator must attempt to strike a balance between an overly restrictive environment where financial innovation is stifled, and a regulatory framework that effectively curbs systemic risk that threatens the overall economy.[149] By establishing economic disincentives, such as taxes, insurance premiums, or other types of regularly charged assessments based on levels of systemic risk, regulators can impose greater regulatory burdens on only those institutions for which the benefits of "systemically important" status outweigh the costs and force such institutions to internalize the costs of that status.[150] An explicit set of supervisory policies to guide decision-making by potentially systemically important firms would dramatically reduce the benefits received and the externalities imposed by TBTF institutions by sub-

146. *See infra* Part III.C.2.

147. *See* Bernanke, *Opening Remarks*, *supra* note 48, at 3.

148. *See supra* Part III.C.

149. *See* Burson, *supra* note 33, at 15.

150. *See* Acharya et al., *Taxing Systemic Risk*, *supra* note 119, at 124–26; Moss, *supra* note 14, at 9–10; Acharya et al., *Deposit Insurance*, *supra* note 120, at 92. R

jecting firms that pose greater levels of systemic risk to greater regulatory interference and supervisory attention.[151] Altering the incentive structure that encourages firms to become TBTF is the most efficient and effective way to correct excessive risk-taking behavior by TBTF firms or those seeking TBTF status.[152]

The Dodd-Frank provisions intended to combat TBTF include prudential regulations,[153] but more stringent prudential standards may not be sufficiently costly to a LCFI to discourage firms from growing TBTF. Even if such requirements make being large more expensive in the short-term, existing TBTF firms already benefit from the lower cost of capital resulting from the implicit government safety net.[154] Thus, such requirements are of limited effectiveness in combating the moral hazard of TBTF because they do little to regulate the interconnectedness among firms or the incentives to grow.[155]

Stricter prudential regulations, such as higher capital and liquidity requirements, are included within a broader category of

151. *See* Thompson, *supra* note 17, at 6 (arguing for a system of "progressive systemic mitigation," or an explicit set of regulations and supervisory policies based on categorizing institutions and designed to reduce the advantages of being systemically important). R

152. *See* CARNELL ET AL., *supra* note 5, at 283 ("To control the undesirable behavior resulting from perverse incentives, one can regulate the behavior or change the incentives. . . . The most efficient and effective way to correct undesirable behavior is by mitigating the incentives giving rise to that behavior."). R

153. The Financial Stability Oversight Council

> may make recommendations to the Board of Governors concerning the establishment and refinement of prudential standards and reporting and disclosure requirements applicable to nonbank financial companies supervised by the Board of Governors and large, interconnected bank holding companies, that—
>
> (A) are more stringent than those applicable to other nonbank financial companies and bank holding companies that do not present similar risks to the financial stability of the United States; and
>
> (B) increase in stringency, based on the considerations in subsection (b)(3).

Dodd-Frank Act, § 115, 124 Stat. at 1403. Stricter standards should include "(A) risk-based capital requirements; (B) leverage limit; (C) liquidity requirements; (D) a contingent capital requirement; (E) resolution plan and credit exposure report requirements; (F) enhanced public disclosures; (G) concentration limits; (H) short-terms debt limits; and (I) overall risk management requirements." *Id.*

154. Acharya et al., *Taxing Systemic Risk*, *supra* note 119, at 133–34.

155. The primary tools to combat systemic risk include instituting a new regulatory body in the form of the Financial Stability Oversight Council and, under the Collins amendment, increasing capital adequacy standards for those institutions found to pose significant systemic risk. Dodd-Frank Act, Title II, 124 Stat. at 1442 ("Orderly Liquidation Authority"); *id.*, Title I, 124 Stat. at 1391 ("Financial Stability"); *id.* § 171, 124 Stat. at 1435 (on leverage and risk-based capital requirements).

regulatory measures discouraging the growth and interconnectedness that increase systemic risk.[156] More stringent operating requirements can also be swiftly imposed and easily measured, making it immediately more expensive for firms to incur unnecessary growth in the short-term. However, these provisions merely represent a continuation of standard methods of banking regulation seen time and again—greater government intervention by increasing the number of regulatory bodies, relatively more intrusive oversight and monitoring, and stricter operating requirements under conventional measures of bank safety and soundness. A disincentives framework should go further still to fully address the long-term consequences of implicit moral hazard.

While stronger disincentives represent a foundational shift in regulatory policy, solutions that fail to consider structural impediments to optimal regulation can exacerbate the costs of financial crises by providing perverse incentives during the crises. The establishment of a systemic risk regulator and subsequent identification of TBTF institutions that will receive increased scrutiny and be subject to requirements distinct from those imposed on non-systemically significant firms may actually exacerbate the moral hazard of TBTF. The market will likely take note of such institutions and continue to treat them as TBTF based on their transparent and observable systemically important status. Thus, if such reforms under the Dodd-Frank Act are not also combined with a corresponding revision to the incentives to seek TBTF status, LCFIs are unlikely to alter their behaviors. As observed with regard to the S&L Crisis, failure to adjust regulatory policies when reforms can otherwise worsen moral hazard can lead to unintended consequences much further down the line.[157]

This approach is also superior to other alternatives for preventing firms from becoming TBTF, such as a providing regulators with

156. *Establishing a Framework for Systemic Risk Regulation: Hearing Before the S. Comm. on Banking, Hous., and Urban Affairs*, 111th Cong. 63 (2009) (statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation).

> Financial firms that pose systemic risks should be subject to regulatory and economic incentives that require these institutions to hold larger capital and liquidity buffers to mirror the heightened risk they pose to the financial system. In addition, restrictions on leverage and the imposition of risk-based premiums on institutions and their activities would act as disincentives to growth and complexity that raise systemic concerns.

157. *See supra* Part II.A.1 (discussing a failure in regulatory design where Congress neglected to implement a corresponding prudential regulation to manage additional risks and counteract the moral hazard effects of various deregulatory initiatives).

a "break-up authority" to dismantle LCFIs into smaller institutions.[158] In contrast to placing responsibility in the hands of the regulators to make judgment calls on when LCFIs have outgrown their utility, economic disincentives force the firms themselves to make the ultimate decision of when growing in size and complexity has become too costly to make economic sense. Furthermore, because such determinations will concern the largest and most high profile financial firms, the decisions also risk becoming highly politicized if made by government actors.

Firms are also better suited and better positioned than government actors to determine whether the costs of systemic risk (to the firms themselves) are justified—as opposed to the government's determination that the costs of systemic risk (to the financial system) are not justified. FDIC Chairman Sheila Bair, a proponent of a disincentives approach, has noted that requiring firms to be proactive through self-monitoring should be included as a mechanism to con-

158. A more drastic approach to fighting TBTF is the delegation of "break-up" authority, empowering regulators to identify institutions posing excessive systemic risk and order those firms to downsize. Peter Boone & Simon Johnson, *How Big is Too Big?*, N.Y. TIMES ECONOMIX BLOG (Nov. 26, 2009, 7:18 AM), http://economix.blogs.nytimes.com/2009/11/26/how-big-is-too-big/?pagemode=print. In 2009, Rep. Paul Kanjorski sought to give regulators preemptive authority to break up the largest 50 financial firms. He also proposed a number of criteria to be used by a Financial Services Oversight Council to determine when financial firms should be broken apart, such as if their "size . . . , scope, nature, scale, concentration, interconnectedness, or mix of activities . . . poses a grave threat to the financial stability" of the country. *See* STAFF OF H. FIN. SERV. COMM., 111TH CONG. FINANCIAL STABILITY IMPROVEMENT ACT OF 2009 amend. 39 (Comm. Print 2009) (amendment of Rep. Paul Kanjorski, Member, H. Fin. Serv. Comm.), available at http://www.house.gov/apps/list/speech/financialsvcs_dem/amdt_in_nature_of_substitute_to_hr_2609_10_16_09.pdf; *see also* Press Release, House Fin. Serv. Comm., Kanjorski Releases Amendment to Address Companies That Are "Too Big to Fail" and Prevent Future Bailouts (Nov. 18, 2009), http://democrats.financialservices.house.gov/press/PRArticle.aspx?NewsID=557.

While efforts to establish any type of break-up authority in the U.S. have been unsuccessful thus far, the strategy has gained more traction in Europe. European Commission officials were swift in adopting break-up authority under Competition Law in 2009 after determining that several TBTF firms had adversely impacted the competitiveness of the banking sector. Edward Greene & Katia Kirova, *"Too Big to Fail"—Should Breaking Up Large Financial Institutions Be an Answer?: U.S. and European Approaches*, 16 COLUM. J. EUR. L. ONLINE 19, 20 (2009). As a result, the Commissioner for Competition, Neelie Krose, broke up ING Group NV as a first step in October 2009. *Id.* The Commission also pressured the United Kingdom to downsize its largest banks, resulting in the forced sale of parts of the Royal Bank of Scotland, Lloyds Banking Group, and Northern Rock. *Id.* at 21.

trol risk-taking within a robust and complex financial system.[159] Placing this responsibility on firms themselves forces those best situated to understand the levels and nature of their risk exposure as well as the additional costs to be incurred as a systemically important institution. Through managerial discretion and improved market discipline, the true costs of a firm's activities will be borne not by the public, but by the firm's shareholders.[160] As with all strategic decisions, financial institutions can "organically" determine the appropriate pace and amount of growth to achieve, as regulatory policy will push such firms to reconsider existing business models and to evaluate the tradeoffs.[161] Placing greater reliance on market discipline, but only after the costs of systemic risk are internalized by LCFIs, is also more desirable than depending solely on the regulatory body. That is to say, in establishing the Financial Stability Oversight Council to monitor systemic risk to the financial system, policymakers should not also award regulators too much discretion with which to determine what is "too big to succeed." Unlike the regulator discretion that Congress attempted to curb through the PCA regime following the S&L Crisis, objective guidelines, such as capital ratios, cannot be implemented in the realm of systemic risk regulation reform as a practical matter, given that TBTF is a question of not only size, but of interconnectedness, complexity, and business model. Furthermore, a body composed entirely of agency heads is still subject to risks of regulatory capture.[162] These potential issues offer a reprise of two familiar themes of regulatory failures: regulatory capture and the misuse of discretion by supervisory authorities.

159. *See Establishing a Framework for Systemic Risk Regulation: Hearing Before the S. Comm. on Banking, Hous., and Urban Affairs*, 111th Cong. 62 (2009) (statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation).

160. Acharya et al., *Taxing Systemic Risk*, *supra* note 119, at 126.

161. *Id.* ("These firms will therefore be encouraged to rethink their business models. In particular, they will have to consider reducing their scope, scale, risk exposures, and interconnectedness, thus trading off the returns from such activities against the insurance premiums attached to them.").

162. Under Title I of the Dodd-Frank Act, membership of the Financial Stability Oversight Council includes ten voting members: Secretary of the Treasury (Chair of the Council), Chairman of the Federal Reserve, Comptroller of the Currency, Director of the Consumer Financial Protection Bureau, Chair of the Securities and Exchange Commission, Chair of the Federal Deposit Insurance Corporation, Chair of the Commodity Futures Trading Commission, Director of the Federal Housing Finance Agency, Chair of the National Credit Union Administration Board, and an independent member with insurance expertise, appointed by the President with advice and consent of the Senate. *See* Dodd-Frank Act, Title I, § 111, 124 Stat. at 1392–93.

Where sufficient disincentives are in place to diminish the implicit moral hazard of TBTF policies, regulators can place greater reliance on firms forced to incur the costs of imposing systemic risk to engage in a certain level of self-policing. This achieves a better balance between intrusive regulatory intervention in firm-specific decisions regarding growth and strategy, and complete dependence on free markets alone to produce optimal economic outcomes, even where markets are distorted by problems of moral hazard. With a new oversight mechanism over systemic risk and TBTF firms, regulatory policies should still permit managers to make strategic institutional decisions, so long as those firms bear the costs of imposing additional risk to the overall financial stability of the system.

While some of the Dodd-Frank provisions designed to address systemic risk mirror the responses to the S&L Crisis, the prominent role of implicit moral hazard in the Crisis of 2008–09 warrants more than just stricter operating requirements and enhanced supervision of LCFIs. An ex ante approach that explicitly prices the costs of imposing systemic risk places that burden squarely on the firms themselves. Moreover, it places some faith in a type of market discipline approach to shape business strategy and in the ability of private-sector actors to make appropriate cost-benefit calculations for individual financial institutions. Furthermore, an ex ante approach to inhibiting systemic risk at its source is a more efficient way to address the regulatory lag that results from the government's inability to keep up with changes in the financial markets. A framework of anticipatory regulation channels the ultimate decision regarding a firm's appetite for risk to those who can most efficiently weigh the costs and benefits.

2. Ex post: an industry-funded emergency liquidity pool

Economic disincentives in the form of systemic risk-rated assessments paid by LCFIs should be used to fund an industry-specific liquidity pool for exclusive use during systemic events. Some commentators have previously suggested instituting deposit insurance reforms that link a portion of the cost of FDIC insurance premiums to the level of systemic risk posed by an individual depository institution.[163] However, a uniform risk-based system for all financial firms, regardless of legal status, should be established. While the

163. *See* Acharya et al., *Deposit Insurance*, *supra* note 120, at 92 (arguing that the extent of systemic risk in the financial sector is a key determinant of efficient deposit insurance premiums, and proposing a model for measuring actuarially fair deposit premiums).

calculations may be complex,[164] the concept is simple and can be applied equally well to nonbank financial firms: an actuarially fair assessment levied on systemically significant firms, both depository and non-depository, covering the expected cost to an emergency liquidity provider during times of systemic crisis, should increase in relation to both the risk of the individual firm's failure and the related risk of joint insolvencies. These assessments should be aggregated into an emergency source of liquidity, the use of which would be contingent upon a determination by an independent regulator tasked with monitoring systemic risk, such as the Financial Stability Oversight Council, that a firm's failure would qualify as a systemic event. The funds should be used during such an event and should preclude the use of taxpayer dollars to cover the costs of mitigating the effects of a systemic crisis.[165]

In order to avoid the pool becoming a "bailout fund," and thus merely an additional source of comfort to TBTF firms, a liquidity backstop must also be the means through which the costs of systemic risk are imposed on those who pose such risk. Thus, the pool must be funded solely through the risk-rated contributions, in whatever form they may take, from systemically significant firms. The assessments, in combination with the liquidity pool, would act as both (1) a disincentive, in that firms can evade being levied assessments by avoiding unnecessary growth and high concentrations of investment activity resulting in "over-interconnectedness" insofar as the costs outweigh the benefits for individual firm, and (2) the source of emergency liquidity if an institution threatens to bring down the rest of the economy.

A significant challenge of the reform effort involves improving the government's credibility with regard to pledges against future

164. While outside the scope of this Note, a significant part of this proposal depends upon the accurate measurement of systemic risk, both in determining which firms would be subject to the systemic risk premiums, and in calculating the actual dollar amount of the premiums, whether it exists in the form of an assessment, tax, or fee. For more on the challenges of, and proposed solutions to, measuring systemic risk, see Acharya et al., *Measuring Systemic Risk*, *in* REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE, *supra* note 26, at 87.

165. As part of a mitigation function, the framework for systemic risk regulation should include a mechanism that acts as a government backstop to provide necessary liquidity to "soften the blow" of a systemic event. This would ensure that the least harm is imposed on the public as a consequence of a firm's systemic importance and subsequent insolvency. *See* Schwarcz, *supra* note 35, at 241–42 (concluding that "[a] regulation establishing a liquidity-provider of last resort . . . is the approach to minimizing systemic risk that would have the best chance of success . . . ").

bailouts,[166] while also preparing for the inevitable reality of future systemic events. Thus, any liquidity backstop must be accompanied by detailed guidance that narrows the definition of a systemic event such that use of the liquidity pool is limited to only the most extreme circumstances. This ensures that a guarantee provided by a liquidity provider of last resort would only function when the stability of the financial system is threatened. Furthermore, it allows the government to maintain at least some discretion and a certain element of "constructive ambiguity"[167] over the use of emergency liquidity when faced with a potential systemic event. These measures would require what would then be an explicit guarantee to be transparent in its process (and thus preferable to the government's ad hoc actions during the recent crisis), while its use would necessarily remain discretionary, so as to not exacerbate the moral hazard of TBTF.

This framework concedes that even a robust disincentives framework cannot eliminate all systemic risk, nor deter all firms from becoming TBTF. Future systemic crises are inevitable, though their frequency can be minimized if strong anticipatory regulation is combined with prudential regulation to encourage greater market discipline. TBTF cannot be eliminated altogether, nor should large financial mega-firms be banned from existence. Such firms fulfill an important role in the global economy, a fact Federal Reserve Chairman Ben Bernanke has recognized, saying that a "technologically sophisticated and globalized economy" needs "large, complex, and internationally active financial firms."[168] Proper mechanisms for reducing the adverse impact of systemic events are therefore as important as reducing systemic risk itself.

Systemic risk can be viewed as a negative externality that can be internalized by imposing the costs of systemic events on those firms

166. In response to government intervention during both the S&L Crisis and the Crisis of 2008–09, "no-bailout" pledges unsurprisingly followed. *See Wall Street to Main Street: Is the Credit Crisis Over and What Can the Federal Government Do to Prevent Unnecessary Systemic Risk in the Future?: Hearing Before the Joint Econ. Comm.*, 110th Cong. 39 (2008) (statement of Alex J. Pollock, Resident Fellow, American Enterprise Institute) ("[F]ollowing the 1980s bust, the Secretary of the Treasury said about the reforms of 1989 and the early 1990s, they have the motto of 'Never again.' And those are the mottos of every reform. 'Never again.' Yet, Mr. Chairman, here we are again.").

167. *See infra* Part I.A.1.

168. *See* Kristina Cooke, *Bernanke: Too Big to Fail a "Pernicious" Problem*, REUTERS (Mar. 20, 2010, 10:17 AM), http://www.reuters.com/article/idUSTRE62J0SM20100320.

posing the risk.[169] This Note argues that what is missing from the regulatory framework is a method of transforming the unknown costs of an implicit guarantee of unknown funding during an ad hoc rescue into an explicit guarantee funded by those posing the most risk during times of severe market distress. A liquidity provider of last resort allows the process of handling distressed, systemically significant institutions to be transparent and orderly, instead of opaque, chaotic, and vulnerable to politicization.[170] In addition, it offers a mechanism through which the regulatory structure can be altered to address the need for both ex ante and ex post solutions to the TBTF problem.

D. Addressing Criticisms

Critics would be correct to note that an emergency liquidity pool would be dangerous in its potential to exacerbate moral hazard to the extent that institutions are aware of the available "bailout fund" for exclusive use by TBTF firms. Thus, a crucial part of this proposal is designed to ensure that the parties bearing the risk are the ones that fund such a pool and that there are appropriate avenues of government support that do not risk another taxpayer-funded bailout. If the firms themselves do not fund the liquidity backstop, then it serves no purpose but to encourage TBTF. In addition, the liquidity pool should be used to fund the expenses of resolution of failed nonbank financial firms under Title II of the Dodd-Frank Act ("Orderly Liquidation Authority").

The circumstances in which the fund is used must be narrowly defined such that a threat of mere insolvency of a LCFI does not trigger the fund's use. Instead, a "systemic event" must be defined to preclude use of the liquidity pool when a firm's potential failure does not rise to the level of a systemic threat. Further, the costs associated with being systemically significant must be so high that they simply do not make economic sense for most firms. The vast majority of firms are not large and complex, nor TBTF, and will remain unaffected by the proposed systemic risk regulation regime. Substantially increasing the costs associated with being systemically significant will only deter firms from becoming large and complex

169. *See* Acharya et al., *Deposit Insurance*, *supra* note 120, at 97.

170. *See* Arthur E. Wilmarth, Jr., *The Dodd-Frank Act: A Flawed and Inadequate Response to the Too-Big-to-Fail Problem*, 89 OR. L. REV. 951, 1005–06, 1022 (2011) ("Dodd-Frank's post-funded [Orderly Liquidation Fund] creates a strong incentive for regulators to grant forbearance in order to avoid or postpone the politically unpopular step or borrowing from the Treasury to financing a failed [systemically important financial institution]'s liquidation.").

beyond the point where it makes sense strategically, as opposed to the current system, which imposes no corresponding tradeoff in costs.

Critics may also argue that such a system does nothing to alter the perverse incentives of TBTF policies and merely institutionalizes a bailout regime. Opponents of disincentive structures and emergency liquidity funds include Treasury Secretary Tim Geithner, who instead advocates taxing financial firms only after bailouts occur, due to his concern is that any type of "bailout reserve" system would only worsen moral hazard and provide greater industry confidence in future bailouts.[171] However, this argument is misguided in assuming that the market cannot already determine which firms are TBTF and therefore pose significant systemic risk. In all likelihood, it already has.[172]

Furthermore, regardless of the public's knowledge of an institution's status as systemically important, the systemic risk regulator would retain discretion over (1) whether an institution poses sufficient risk to warrant use of the emergency liquidity pool, and (2) whether the funds will be used to replace short-term credit lines or to fund the institution's orderly wind-down (i.e., failure) under the newly established resolution authority.[173] The liquidity provider of last resort can thus maintain "constructive ambiguity" over such decisions, even if the status of systemically significant institutions remains somewhat clear to an observant market. The government's credibility is also improved to the extent there is appropriate resolution authority over failing financial firms under Title II of the Dodd-Frank Act.

Under this proposal, excessive risk-taking will be curbed in precisely the situations in which it is most important: where an institu-

171. Craig Torres & Alison Vekshin, *Bair, Bernanke Want Tougher Curbs on Biggest Banks (Update 1)*, BLOOMBERG (Jul. 15, 2009), http://www.bloomberg.com/apps/news?pid=20601087&sid=aB4OVrCHNQmE.

172. *See* David Cho, *Banks "Too Big to Fail" Have Grown Even Bigger*, WASH. POST, Aug. 28, 2009, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2009/08/27/AR2009082704193.html (observing that federal bailouts only reinforced the idea that the government will save big banks, and banks have responded in kind by continuing growth and risk taking); *see also* Stevenson Jacobs, *Risk-Taking is Back for Banks 1 Year After Crisis*, ASSOCIATED PRESS, Sept. 13, 2009 (noting that the lack of systematic changes to the industry has been followed by large banks regaining their appetites for risk while investors have taken notice of implicit government backing, resulting in profitable rebounds a year after the crisis for Bank of America, Citigroup, Goldman Sachs, JPMorgan Chase, and Wells Fargo).

173. *See* Dodd-Frank Act, Title II, 124 Stat. at 1442 ("Orderly Liquidation Authority").

tion is on the borderline between "too big" and "small enough" to fail. Under the current system, a firm that believes it might be TBTF has little reason to avoid throwing itself over the top by seeking a greater concentration of financial power. In contrast, under the proposed system, a firm that is uncertain of whether it would receive emergency support from the government should be discouraged from walking this line, and must make a strategic decision to either pay the increased costs of systemic significance or to scale back certain activities that elevate such risks. As long as the costs of TBTF status clearly outweigh the benefits for most firms, those firms will be discouraged from gambling for such status. The costs of such status would not outweigh the benefits for most firms since most firms are neither systemically significant nor TBTF.

Others may argue that such disincentives will stifle the benefits of technology and innovation in the financial markets by curbing the activities of sophisticated financial firms. However, the continued dominance of TBTF institutions actually inhibits competition such that success and innovation are reduced among smaller and less interconnected firms.[174] Past a certain point, the growth of LCFIs into money center mega-banks does little to improve efficiencies, profitability, or service.[175] Furthermore, the cost of TBTF policies results in the kind of inefficient risk-bearing by the public that outweighs the benefits of innovation, particularly to the extent that increased risk-taking occurs before new financial instruments are completely understood.[176] Where new products do not serve the traditional and socially productive function of risk-spreading and instead create greater opacity in the market, the flood into the mar-

174. *See* Carter H. Golembe, *Consolidation and Competition in the Financial Services Industry*, 9 ANN. REV. BANKING L. 451, 454 (1990).

175. *See* Arthur E. Wilmarth, Jr., *Too Good to be True? The Unfulfilled Promises Behind Big Bank Mergers*, 2 STAN. J.L. BUS. & FIN. 1, 87 (1995) ("Big bank mergers have not improved the relative efficiency of profitability of large banks, and they have adversely affected competition as well as the quality and cost of service to consumers and small businesses. Perhaps the most alarming aspect of the consolidation trend is the continued predilection of our largest banks to pursue high-risk business strategies that threaten their solvency and the stability of our financial system.").

176. *See* David Nickerson & Ronnie J. Phillips, *The Federal Home Loan Bank System and the Farm Credit System: Historic Parallels and Implications for Systemic Risk*, *in* TOO BIG TO FAIL: POLICIES AND PRACTICES IN GOVERNMENT BAILOUTS, *supra* note 14, at 107, 107 ("Inefficient public risk bearing can occur whenever directed lending by public credit institutions is guaranteed by the federal government, without risk-adjusted pricing of the put option implicit in such a guarantee or the implementation of equivalent capital requirements."). R

ketplace of such instruments is to the detriment of investors and the marketplace as a whole.[177]

CONCLUSION

A good crisis should never go to waste.[178] The tension created by a patchwork system of supervisory authorities and agency turf wars led commentators to observe early on that reform of the bank regulatory structure is highly unlikely, given that an arcane and illogical framework of regulation has remained generally unchanged since the 1930s.[179] Others have remarked that true regulatory reform is unlikely to occur without an extraordinary event to propel it forward.[180] The Crisis of 2008–09 should qualify as such an event, to spur wholesale change and address the way that moral hazard has persisted and evolved since the thrift crisis before it. When even the most prudent and rigorous supervision cannot keep up with the rapid pace of financial innovation, regulatory mechanisms should be in place to inhibit the interconnectedness recently used to justify taxpayer-funded bailouts of "too big to fail" institutions and to battle the "new" old problem of moral hazard in its systemic incarnation.

177. *See* RECHTSCHAFFEN, *supra* note 41, at 164.

178. "A crisis is a terrible thing to waste" is attributed to Stanford economist Paul Romer in his comments at a November, 2004 meeting of venture capitalists. Jack Rosenthal, *A Terrible Thing to Waste*, N.Y. TIMES, Aug. 2, 2009, at MM12, *available at* http://www.nytimes.com/2009/08/02/magazine/02FOB-onlanguage-t.html. The sentiment was later shared by then-Chief of Staff Rahm Emanuel during a conference with corporate executives in 2008 following the election of President Barack Obama. Gerald F. Seib, *In Crisis, Opportunity for Barack Obama*, WALL ST. J., Nov. 21, 2008, *available at* http://online.wsj.com/article/SB122721278056345271.html.

179. *See generally*, Hackley, *supra* note 144, at 579, 580; Kenneth E. Scott, *The Dual Banking System: A Model of Competition in Regulation*, 30 STAN. L. REV. 1, 40–48 (1977)*; see also* Geoffrey P. Miller, *The Future of the Dual Banking System*, 53 BROOK. L. REV. 1, 1 (1987) (describing how the dual banking system has been a "sacred cow" of American political tradition, but is problematic due to fundamental changes in the banking industry).

180. *See* Kushmeider, *supra* note 139, at 20.