2012

The Financial Crisis and the Path of Reform

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Recommended Citation

The Financial Crisis and the Path of Reform

Michael S. Barr†

In the lead-up to the financial crisis, the U.S. financial sector was over-leveraged, short-funded, risky, and opaque. "Shadow banking" permitted institutions to avoid comprehensive supervision and capital requirements. Innovation outpaced the ability or willingness of private- and public-sector guardians to rein in risks. An asset bubble fed the system, until the market imploded in the fall of 2008. When the crisis hit, our society found itself ill-equipped to deal with the failure of leading financial firms. In the wake of the crisis, the Obama Administration proposed a set of reforms that were eventually embodied, in large part, in the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. This Essay explores the Act's key reforms: the regulation of shadow banking, the creation of a consumer financial protection agency, and the development of a resolution authority to wind down failing financial firms. The Essay also analyzes the steps that must still occur domestically and internationally to lay a firm foundation for financial stability.
Introduction

In September 2008, the United States and the global economy faced the worst financial crisis since the Great Depression. The crisis was rooted in years of unconstrained excess on the part of financial institutions and prolonged complacency among their regulators. It made painfully clear what should have been apparent all along: that financial institutions cannot be left to regulate themselves, and that without clear rules, transparency, and accountability, financial markets break down, sometimes catastrophically. Although the U.S. government avoided another Great Depression through unprecedented action to save failing firms and stabilize markets, the crisis demonstrated the need for comprehensive financial reform, both in the United States and internationally.

In July 2010, President Obama signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act— the most sweeping reform of financial regulation since the New Deal. The Act provides for major firms to be supervised based on what they do, rather than on their corporate form. It also requires the largest financial firms to build up their capital and liquidity buffers, constrain their relative sizes, and restrict their riskiest financial activities. Shadow banking—through derivatives, the repurchase ("repo") funding markets, and securitization—is brought into the regulatory daylight. The Act does this by comprehensively regulating derivatives markets, with rules requiring exchange trading, central clearing, transparency, and minimum capital and margin levels. The Act includes new authorities for data collection and transparency across the financial market, to make it less likely that risk could build up unnoticed in a corner of the financial markets. It creates a mechanism for liquidating failing financial firms without putting taxpayers or the economy at risk. The Act establishes a Consumer Financial Protection Bureau, and provides for consumer and investor protections. In sum, the Act provides a strong foundation on which to build a more stable and balanced regulatory system.

This Essay explains the Dodd-Frank Act, describes the circumstances from which it grew, and examines its place among wider reform efforts. Part I discusses the causes of the financial crisis and the need for comprehensive reform.

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reform. Part II explores the Dodd-Frank Act’s central approach. Part III identifies areas for future reform, both internationally and domestically. A Conclusion then follows.

1. The Origins of the Financial Crisis

At many turns in history, financial innovations have supported economic advances; however, without carefully balanced rules governing the financial sector, these same innovations can also inflict economic damage. One modern example is securitization—the process of bundling large numbers of individual assets, such as mortgages or commercial debt, into larger securities. Securitization can help to diversify the range of capital sources available to supply credit in a wide variety of markets, increasing the supply and lowering the cost of credit. Nonetheless, securitization, without appropriate transparency and rules, can also widen the gap in incentives facing borrowers, lenders, and investors, creating the potential for low-quality lending. Similarly, derivative contracts can permit commercial firms to hedge against interest-rate or commodity-price risks, enabling them to focus on their core missions, and credit derivatives can assist financial institutions to provide more capital to businesses and families by reducing the risk of credit losses. At the same time, however, derivatives also allow market actors to take positions that magnify losses, heighten risk concentration in the financial system, and raise the vulnerability of interconnected financial firms to cascading liquidity and counterparty credit problems.

Innovations give rise to cycles of regulatory trial and error as market participants seek to balance benefits and risks appropriately. New products develop slowly while market participants are unsure of their value or their risks. As they develop, however, excitement and enthusiasm can overwhelm normal risk management systems. Participants assume too soon that they really "know how the products work”; shortly thereafter, the new products are applied widely without thought to new (and often riskier) contexts, and flood the market. The cycle turns when this excess and lack of understanding are exposed. Overall, the economy benefits from this cycle if the downsides to the broader economy are mitigated through well-designed regulatory safeguards. The strongest financial markets have regulatory structures that best balance incentives for innovation and competition, on the one hand, and protections from abuse and excessive risk taking, on the other.

For many years, the U.S. financial system successfully maintained this difficult balance. The U.S. financial industry often surpassed its competitors in

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other major developed economies in innovation and productivity growth. While housing was highly subsidized, the financial system was generally good at directing investment toward the companies and industries that offered the highest returns. Regulatory checks and balances helped create a remarkably long period of relative economic stability, which, in turn, gave rise to extraordinary national wealth. Regulation also provided investors and consumers with strong protections. The system endured crises and recessions, to be sure, including the costly bank and thrift failures of the late 1980s and early 1990s, but these shocks did not threaten the foundations of the financial system.

Over time, those great strengths were undermined: the system found itself outgrown and outmaneuvered by the institutions and markets it was responsible for regulating and constraining, and the carefully designed mix of protections eroded with the development of new products and markets for which those protections had not been designed.

The years leading up to the recent crisis saw the growth of large, short-funded, and substantially interconnected financial firms. Entities performing the same market functions as banks escaped meaningful regulation on the basis of their corporate form, and banks were able to move activities, liabilities, and assets off their balance sheet and outside the reach of more stringent regulation. The “shadow banking” system allowed financial institutions to engage in maturity transformation with too little transparency, capital, or oversight. Derivatives were traded in the shadows with insufficient capital to back the trades; transactions that were designed to disperse risk instead concentrated it. “Repo” markets became riskier as collateral shifted from Treasuries to asset-backed securities. The lack of transparency in securitization hid the growing gap in incentives facing different players in the system and muted the accountability of those who made loans, sold loans, or packaged loans into complex instruments for sale to investors. Synthetic products multiplied risks in the securitization system. These shadow banking markets allowed huge


6. See FIN. CRISIS INQUIRY COMM’N, *supra* note 5, at 146 (criticizing synthetic collateralized debt obligations, or “synthetic CDOs,” as “bets” that “magnified overall risk” and “multiplied the effects
amounts of risk to move outside the more regulated parts of the banking system to places where it was easier to increase leverage.  

The financial sector, under the guise of innovation, piled risk upon ill-considered risk. Financial innovations outpaced the capacity of managers, directors, regulators, rating agencies, and the market as a whole to understand and respond. Rapid growth in key markets hid misaligned incentives and underlying risk. Capital buffers were increasingly inadequate throughout the financial system, as both market participants and regulators failed to account for new risks appropriately. The apparent short-term rewards in new financial products and rapidly growing markets overwhelmed or blinded private-sector gatekeepers, swamping those parts of the system designed to mitigate risk. Consumer and investor protections were weakened and households took on risks that they often did not fully understand and could ill-afford.

Rising prices of homes and other assets helped to feed the financial system's rapid growth and to hide the underlying problems in the origination and securitization of loans. When home prices peaked and then began to decline in 2006, fault lines were revealed. The implosion in housing of the collapse in subprime [mortgage assets]" (internal quotation marks omitted)). See generally id. at 142-46, 144 fig.8.2 (explaining synthetic CDOs).

7. See id. at 32 & fig.2.1 (reporting that "shadow banking" sector grew from nearly zero in 1980 to over $12 trillion in 2007-2008, surpassing the size of the "traditional banking" sector).


9. See FIN. CRISIS INQUIRY COMM'N, supra note 5, at 33 (describing how investment banks' less-stringent capital requirements allowed them to take greater risks relative to capital than deposit-taking banks). For a fuller discussion of capital requirements and leverage ratios before the crisis, see infra note 30.

10. See STAFF OF S. PERM. SUBCOMM. ON INVESTIG., supra note 8, at 267-313 (describing failures of credit rating agencies, including conflicts of interest, inaccurate models, failure to retest ratings of outstanding securities after model changes, inadequate resources, and failure to consider extent of mortgage fraud).

11. See, e.g., id. at 104-09 (describing mortgages that "[f]ew . . . fully understood" or "kn[ew] what happened to [the] loan at the end of the fixed interest rate period"); FIN. CRISIS INQUIRY COMM'N, supra note 5, at 108-09 (citing testimony of witness, describing "people who got steered or defrauded into entering option [adjustable rate mortgages] with teaser rates or pick-a-pay loans forcing them to . . . pay loans that they could never pay off").

12. See FIN. CRISIS INQUIRY COMM'N, supra note 5, at 5 (describing consumers' regular borrowing against rising home equity values to consume more, pay off other debts, and speculate).

13. See Is Treasury Using Bailout Funds To Increase Foreclosure Prevention, as Congress Intended?: Hearing Before the Subcomm. on Domestic Pol'y of the H. Comm. on Oversight & Gov't Reform, 110th Cong. 60 (2008) (statement of Michael S. Barr, Professor, University of Michigan Law School) ("The lack of transparency and oversight, coupled with rising home prices, hid the problems [caused by securitization and other factors] for some time."); EDWARD M. GRAMLICH, SUBPRIME MORTGAGES 7 (2007) (remarking before the 2008 crisis that "house prices have been rising smartly in many local markets, permitting many borrowers who may have gotten into trouble on their mortgage to sell the house, pay the prepayment penalty, and walk away from the whole deal without much loss").

14. See FIN. CRISIS INQUIRY COMM'N, supra note 5, at 87 fig.6.2.
cascaded throughout the financial system and spread from weaker firms to stronger ones. In the fall of 2008, credit markets froze. The major U.S. investment banks disappeared, merged, or fell into the arms of the Federal Reserve as bank holding companies. The major banks were bailed out by the federal government, and the Federal Deposit Insurance Corporation (FDIC) put in place guarantees for the entire banking system. Money market mutual funds faced massive runs and were backstopped as well. The Federal Reserve pumped billions into the economy and grew its balance sheet by more than one-and-a-half trillion dollars. Congress and the new Administration enacted a stimulus plan to keep the economy from cratering.

These efforts to stabilize the economy and the financial sector, however, did not address the failures that had led to the crisis. In order to restore the market’s ability to generate growth without jeopardizing stability, Congress and the Administration crafted legislation designed to put in place crucial protections, reimpose market discipline, revive consumer and investor protections, and ultimately, restore the foundation that allows beneficial cycles of financial innovation to continue. The Dodd-Frank Act was the government’s historic response to the causes of the economic crisis. In Part II, this Essay investigates how the Act addresses the major causes of the economic crisis and forms the foundation for continued innovation and growth.

15. See id. at 214-21 (describing relatively poor performance of subprime loans and loans against properties in the “sand states” of Arizona, California, Florida, and Nevada, on top of market-wide increases in mortgage delinquencies).

16. See id. at 360-63 (describing how failures at investment banks caused hedge fund managers and other investors to withdraw funds from well-capitalized investment banks such as Morgan Stanley and Goldman Sachs).


II. The Major Reforms of the Dodd-Frank Act

This Part highlights four key areas of reform found in the Dodd-Frank Act: (1) regulatory reforms aimed at improving the management of systemic risk; (2) a new federal resolution authority designed to enable the winding down of systemically important firms; (3) a framework for regulating previously under-regulated components of "shadow banking" markets, including derivatives and "repos"; and (4) a new consumer financial protection agency. Together, these reforms comprehensively address the regulatory weaknesses that allowed the unregulated expansion of shadow banking and too-big-to-fail firms, and they lay a foundation for growth, economic recovery, and a strong financial system.

A. Improved Management of Systemic Risk

1. Regulation of Systemically Important Financial Institutions

The federal financial regulatory system that existed prior to the Dodd-Frank Act developed in the context of the banking system of the 1930s and contained deep structural fissures that by 2008 had allowed systemic risk to build among less-regulated institutions and markets. Before Dodd-Frank, major financial firms were regulated according to their formal labels—as banks, thrifts, investment banks, insurance companies, and the like—rather than according to what they actually did.24 For example, an entity that called itself a “bank” faced tougher regulation, more stringent capital requirements, and more robust supervision than one that called itself an “investment bank.”25 As a result, entities such as investment banks, diversified financial institutions, and nonbank financial companies competed with banks in the mortgage, consumer credit, and business lending markets, yet escaped the capital and other requirements imposed on their bank-chartered competitors. Large financial institutions could choose to be overseen by the regulator that would offer the least restrictive supervision.

The regulatory system’s structural weaknesses led to ineffective supervision. The Office of Thrift Supervision (OTS) allowed thrifts to engage


in risky lending and, as a result of legal and organizational constraints, was prevented from effectively supervising diversified savings-and-loan holding companies, such as AIG. The SEC’s voluntary Consolidated Supervised Entity program was a core failing. Designed to allow U.S. investment banks to sidestep bank leverage limits that were regulator, had little experience and few trained examiners, and permitted participating investment banks to sidestep bank leverage limits that were designed to serve as a backstop for risk-based capital requirements.

Today, the Dodd-Frank Act authorizes the Federal Reserve to supervise and regulate any financial firm, regardless of legal form, whose failure could pose a threat to financial stability. The OTS has been abolished along with the SEC’s voluntary investment bank regulatory scheme.

26. See STAFF OF S. PERM. SUBCOMM. ON INVESTIG., supra note 8, at 208-39 (detailing failure of OTS to supervise lending practices effectively at several large thrifts that later failed).

27. The OTS’s supervisory efforts focused not on threats to savings-and-loan holding companies, but rather on the safety and soundness of the underlying thrift institutions. See TARP and Other Government Assistance for AIG: Hearing Before the Cong. Oversight Panel, 111th Cong. 62 (2010) (statement of Michael E. Finn, Northeast Regional Director, Office of Thrift Supervision). To the extent that the OTS did investigate derivative risk at AIG, it did not perceive that risk’s potential to create liquidity problems in the event of a credit rating downgrade. See American International Group: Examining What Went Wrong, Government Intervention, and Implications for Future Regulation: Hearing Before the S. Comm. on Banking, Hous., & Urban Affairs, 111th Cong. 50 (2009) (statement of Scott M. Polakoff, Acting Director, Office of Thrift Supervision) (acknowledging OTS’s “failure to recognize in time the extent of the liquidity risk to AIG of the ‘super senior’ credit default swaps in AIG’s portfolio”).

28. For a comprehensive analysis of the history and failures of the Consolidated Supervised Entity program, see SEC OFFICE OF INSPECTOR GEN., supra note 18.

29. See FIN. CRISIS INQUIRY COMM’N, supra note 5, at 151 (describing Consolidated Supervised Entity program as “the SEC’s first foray into supervising firms for safety and soundness”).

30. Rules promulgated by federal banking regulators capped leverage ratios for most banks at four percent, or 25:1. See 12 C.F.R. § 3.6(e) (2011) (requirement for nationally chartered banks); id. pt. 208 app. B (requirement for state-chartered banks that are members of Federal Reserve System); id. pt. 225 app. D (requirement for bank holding companies); id. § 325.3 (requirement for FDIC-supervised banks); id. §§ 567.2(a)(2), 567.8 (requirement for thrifts). Banks suffering from “supervisory, financial, operational, or managerial weaknesses” or “anticipating or experiencing significant growth” were expected to “maintain capital levels well above the minimum levels,” id. pt. 208, app. B sec. II.a, and from 2000 to 2007, most large banks and thrifts had leverage ratios between 16:1 and 22:1, see FIN. CRISIS INQUIRY COMM’N, supra note 5, at 65. However, in 2004, the SEC created an exemption from its broker-dealer net capital rule for “very highly capitalized firms that have developed robust internal risk management practices.” Alternative Net Capital Requirements for Broker-Dealers That Are Part of Consolidated Supervised Entities, 69 Fed. Reg. 34,428, 34,428 (June 21, 2004) (codified at 17 C.F.R. pts. 200, 240). By 2007-2008, major investment banks maintained leverage ratios well above those of large banks: Bear Stearns, Lehman Brothers, and Morgan Stanley each had a ratio greater than 30:1.


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precrisis role regulating bank holding companies, the Federal Reserve will oversee savings-and-loan holding companies in place of the OTS and will also supervise nonbank financial institutions identified by the Financial Stability Oversight Council as posing a risk to financial stability.

The Dodd-Frank Act’s response to the failure of the prior regulatory regime to account for the systemic importance of certain large institutions goes beyond the Federal Reserve’s new oversight role. The new legislation requires large banks and systemically important nonbank firms to meet stricter capital and liquidity requirements than their smaller peers. The Fed is charged with putting these requirements into place and with conducting annual stress tests to determine whether these firms retain enough capital to withstand adverse economic conditions. The Act specifically instructs the Fed to use macroprudential supervision, which takes into account not only risks within the institution but also the risks that the institution poses to the financial system as a whole. Major firms (including bank holding companies, savings-and-loan holding companies, insured depository institutions, and systemically important nonbank firms) will be subject to new concentration limits, which will prohibit mergers or acquisitions that would result in one firm’s liabilities exceeding 10 percent of the liabilities of financial companies as a whole. Moreover, all firms will be subject to lending limits and to enhanced rules on affiliate transactions and counterparty credit exposures. These enhanced prudential measures for major financial firms are likely to reduce risk in the financial system and reduce any “too-big-to-fail” distortions.

2. Systemic Risk Monitoring

U.S. financial markets have suffered for the lack of an effective system for monitoring and responding to systemic threats to financial stability as they arise. Before Dodd-Frank, no regulator or supervisor had the authority to look across the full sweep of the financial system—including less-regulated

34. Id. §§ 5412(b)(1), 5413 (Supp. IV 2010).
35. Id. § 5323; see infra Subsection I.A.2.
37. Id. § 5365(i).
38. Id. §§ 5323(a)- (b), 5370(b).
39. Id. § 1852. These limits include wholesale funding and off-balance sheet exposures. Id.
43. While the credit rating agencies continue to provide an “uptick” for perceived government support to major financial firms, at least one of the agencies has indicated that it is likely to revisit this question once the Act’s reforms and Basel capital rules are fully in place. See Press Release, Moody’s Investor Serv., Moody’s Reviews BoA, Citi, Wells Fargo Supported Ratings for Downgrade (June 2, 2011), available at http://www.moodys.com/printresearchdoctopdf.aspx?docid=PR_219798.
segments—and take action when it perceived a threat. In fact, regulators and market participants did not even have enough data to understand how interconnected the market was, or how heavily it relied on short-term funding.

While the Dodd-Frank Act was unable to consolidate the panoply of regulators in the United States into a single body, it did establish a Financial Stability Oversight Council, which has the authority to identify and address threats to financial stability. The Council will have access to information from across the financial services marketplace, including information collected by the new Office of Financial Research under standards the Office will develop and enforce.

B. Orderly Liquidation Authority

The Dodd-Frank Act’s second key innovation is the establishment of authority for liquidating large, interconnected nonbank financial institutions similar to the ones whose collapse fueled the last economic crisis. This authority will prove transformative not only during future crises, but also during quieter times, by reducing the perception that large firms are “too big to fail.” The perception that some firms were “too big to fail” distorted the market in the years before the crisis by reducing market discipline, encouraging excessive risk taking, artificially sustaining the growth of larger firms, and creating an “unlevel playing field with smaller firms.” The resolution authority should help to reduce these distortions by giving the government a credible tool to wind down large, highly leveraged, and substantially interconnected financial firms. Moreover, resolution authority should prove useful in helping the government manage a financial crisis itself.

44. U.S. Gov’t Accountability Office, supra note 24, at 22-30.
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During the 2007-2008 crisis, federal regulators, including the FDIC, used Depression-era bank resolution laws to manage several significant bank and thrift failures while minimizing macroeconomic disruption.49 When nonbank firms such as Bear Stearns, Lehman Brothers, and AIG faced similar problems, though, the government was forced to choose between launching extraordinary bailouts and leaving the firms to seek protection in bankruptcy.50 The Bankruptcy Code, however, is not intended to handle systemic risk; rather, its narrower purpose is to ensure the “equitable distribution of [a] bankrupt’s estate among [its] creditors.”51 This narrower focus, court decision-making processes, and the lack of a pre-positioned funding mechanism for liquidity, make bankruptcy a poor choice for resolving major financial firms—as became abundantly clear with the bankruptcy of Lehman.

To remedy this situation, the Dodd-Frank Act empowers the government to use the same approach it has long taken for bank failures to resolve the largest and most interconnected financial companies outside of the traditional bankruptcy regime. Receivership under this new orderly liquidation authority will hold three essential advantages over the tools that were available in the fall of 2008. First, the FDIC will be required to ensure that shareholders do not receive payment from a failed firm’s liquidation until all other claims are paid52 and that culpable board members and managers are replaced.53 Forcing managers, shareholders, and other parties to absorb losses in this way will reduce the moral hazard associated with the “too-big-to-fail” problem. Second, the FDIC will be permitted to relieve liquidity stress and to avoid the cascades of defaults that lead to system-wide collapse by temporarily staying counterparty termination and netting rights54 and by borrowing funds from the Treasury to fund qualified financial contracts and other short-term debt. Any such Treasury loan would be automatically repaid from the assets of the failed firm,55 or, if these are insufficient, from an ex post assessment on the largest...

50. See Too Big To Fail: The Role for Bankruptcy and Antitrust Law in Financial Regulation Reform (Part I): Hearing Before the Subcomm. on Commercial & Admin. Law of the H. Comm. on the Judiciary, 111th Cong. 23 (2009) [hereinafter Too Big To Fail Hearing] (statement of Michael S. Barr, Assistant Secretary for Financial Institutions, United States Department of the Treasury). See generally FIN. CRISIS INQUIRY COMM’N, supra note 5, at 280-91 (describing Bear Stearns sale); id. at 324-43 (describing Lehman Brothers bankruptcy filing); id. at 344-52 (describing AIG bailout).
53. Id. § 5386(4)-(5).
54. Id. § 5390(c)(10)(B).
55. Id. § 5390(n).
financial firms\textsuperscript{56}—not by taxpayers. Third, the FDIC will be empowered to create a bridge company to satisfy the distressed firm’s liquidity and capital needs until the firm’s liquidation, recapitalization, or sale.\textsuperscript{57} Such an arrangement would allow the FDIC receivers to fund derivative and repo contracts, handle counterparty claims, mitigate any “knock-on” effects of multiple firm failures, and preserve the distressed company’s stronger subsidiaries. In this way, shareholders and creditors will bear losses without exposing the system to a sudden, disorderly failure that would put the entire system at risk.\textsuperscript{58}

The Act’s liquidation authority also contains important creditor protections, including opportunities for judicial review at two different stages: first, when the Secretary of the Treasury invokes the government’s orderly liquidation authority,\textsuperscript{59} and second, in the course of the resolution process.\textsuperscript{60} The latter form of judicial review is modeled on the system of judicial review that has policed the FDIC’s receivership and conservatorship authorities for more than seventy-five years.\textsuperscript{61} The Act also allows a claimant to challenge a decision by the regulator disallowing its claim.\textsuperscript{62} Finally, like the Bankruptcy Code, the new authority is based on fundamental principles of fairness and equity among similarly situated stakeholders and requires that any deviation from these principles leave all stakeholders in no worse a position than they would have been in a Chapter 7 liquidation.\textsuperscript{63}

While liquidations under the Dodd-Frank Act’s authority are designed to be orderly, they are also intended to be rare.\textsuperscript{64} As explained above, the Act requires major financial firms to meet heightened prudential standards, including higher capital requirements, which will reduce the likelihood of failure and provide a bigger capital buffer to cushion losses.\textsuperscript{65} Firms will also be required to develop detailed plans, colloquially referred to as “living wills,” for their orderly resolution;\textsuperscript{66} these plans will simplify organizational forms, improve supervision, and help firms prepare for financial crises. The Act also encourages firms to reduce their size, complexity, leverage, and interconnections, and subjects those firms that remain systemically important to

\begin{itemize}
\item \textsuperscript{56} Id. § 5390(o).
\item \textsuperscript{57} See id. § 5390(h).
\item \textsuperscript{58} Too Big To Fail Hearing, supra note 50, at 21-22.
\item \textsuperscript{59} 12 U.S.C. § 5382(a) (Supp. IV 2010).
\item \textsuperscript{60} Too Big To Fail Hearing, supra note 50, at 24.
\item \textsuperscript{61} Id.
\item \textsuperscript{62} 12 U.S.C. § 5390(a)(4).
\item \textsuperscript{63} See id. § 5390(a)(7)(B).
\item \textsuperscript{64} See S. REP. NO. 111-176, at 4 (2010) (“There is a strong presumption that the bankruptcy process will continue to be used to close and unwind failing financial companies, including large, complex ones.”).
\item \textsuperscript{65} See supra notes 36-39 and accompanying text.
\end{itemize}
increased comprehensive oversight, larger capital buffers, and stringent conditions on the use of short-term debt or “hot” money funding. But it is important to be humble about the efficacy of any regulatory plan and about our ability to predict every systemic failure of a major financial firm. In a severe crisis, major firms may fail, and prudential measures and capital buffers may prove insufficient for bankruptcy to be an option. In that case, the Dodd-Frank Act’s orderly liquidation authority, and the concomitant liquidity funding it provides, will reduce the risk that any single firm’s failure will endanger the nation’s broader financial stability.

Still, the creation of this domestic resolution authority is only a starting point. Large financial institutions operate globally, and resolving a major firm will require international cooperation and coordination. Addressing this dimension of the systemic risk problem will require other nations to develop and implement resolution authorities and the United States to build on the international “college” model used to supervise the largest financial firms.

C. Oversight of Under-Regulated Financial Markets

As discussed above, the rise of the shadow banking system allowed financial firms to take on additional risk without adequate safeguards. When this system failed, regulators and market participants lacked reliable data on the extent of the liquidity and solvency risks faced by these financial firms, which made it difficult for regulators to craft appropriate responses. All of these factors contributed to a market-wide panic. The Dodd-Frank Act addresses these problems by introducing transparency requirements and effective, consolidated supervision over the most important shadow banking instruments—over-the-counter derivatives, repurchase (“repo”) agreements, and securitized assets.

1. Over-the-Counter Derivatives

Over-the-counter (OTC) derivatives are derivative contracts that are bought and sold outside of regulated exchanges such as the Chicago Board of Trade. In the years before the economic crisis, the market in these financial products reached a notional amount of nearly $700 trillion. In hindsight, we know that this market was responsible for a significant increase in both risk and uncertainty in the broader financial market. Credit derivatives, which were designed to diffuse risk, instead concentrated it among large banks, investment

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68. Id. § 5365(g).
69. For a discussion of priorities for international collaboration, see infra Section III.B.
70. See FIN. CRISIS INQUIRY COMM’N, supra note 5, at 45-46.
71. Id. at 299.
banks, and other institutions, such as AIG. Derivatives increased firms' counterparty credit exposures and aggravated the effect of any particular firm's failure on the financial system as a whole. Synthetic securitization (with embedded derivatives) magnified failures in the real securitization market.

Prior to the crisis, these risks were concealed by the lack of regulatory or public disclosure in the OTC derivatives market. Information on the prices and volume of trades was opaque to external parties. Moreover, traders were backed by insufficient margin, and major participants in the system lacked sufficient capital in the event that these trades lost value or went bad. In addition, many of the trades were funded with short-term money that quickly disappeared when the crisis hit. The lack of information on derivative exposures led firms to withdraw from counterparties and broad market sectors as the crisis unfolded. Firms demanded more margin protection from their remaining counterparties, which put further downward pressure on underlying asset prices. While individual firms had hoped that their use of derivatives would help them to manage risk, the system as a whole became riskier. In the crisis, the implosion in asset prices led to cascading losses in derivatives contracts and then to contagion across the system.

Today, regulators are putting in place the tools to regulate the OTC derivatives market. The Dodd-Frank Act reduces risk concentration and market opacity by promoting central clearing and exchange trading, and by strengthening supervision of market participants. Central clearing is encouraged by a combination of requirements and incentives. Standardized derivatives must be centrally cleared and traded either on designated exchanges or through swap execution facilities. All other derivatives are subjected to new reporting requirements and higher capital and margin requirements, which will encourage greater standardization and use of central clearing. These measures are also expected to reduce costs by improving price transparency and competition and to reduce risks by preventing the unnoticed buildup of counterparty risks. At the same time, supervision will be increased through prudential regulation of and capital requirements on dealers and other major players in the OTC derivatives markets. Derivative clearing

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72. See id. at 50.
73. See id. at 299-301.
74. See id. at 146.
77. Id. § 729, 124 Stat. at 1701-02 (codified at 7 U.S.C. § 6r).
78. Id. § 731, 124 Stat. at 1703-12 (codified at 7 U.S.C. § 6s) (imposing registration, capital, and margin requirements).
organizations, which will assume counterparty risk for centrally cleared trades, will be regulated for capital, margin, conflicts, ownership, and other matters.\textsuperscript{81}

2. “Repo” and Other Markets

As it reforms derivatives markets, the Dodd-Frank Act also provides a new framework for regulating other financial market instruments, including the repurchase agreements, or “repos,” that are critical to the shadow banking system. In the lead-up to the financial crisis, major financial firms increasingly looked to the repo markets for short-term funding.\textsuperscript{82} At the same time, these markets were growing riskier, due to market concentration in the two major clearing banks\textsuperscript{83} and a shift away from low-risk Treasury bonds to higher-risk collateral, ranging from equities and corporate debt to asset-backed securities.\textsuperscript{84} Market participants misjudged the quality and liquidity of these newer forms of collateral, in part because of credit rating agencies’ increasing willingness to label as “safe” assets backed by lower-quality loans—particularly poorly underwritten subprime and Alt-A mortgages.\textsuperscript{85} When the financial crisis hit, the repo markets froze, causing a massive contraction in available credit.\textsuperscript{86} This contraction was stemmed only by a massive Fed intervention.\textsuperscript{87}

The Dodd-Frank Act will fundamentally reform the short-term wholesale funding markets by forcing firms to internalize more of the costs of this funding system. The Act empowers the Federal Reserve to regulate financial market utilities (FMUs) identified by the Financial Stability Oversight Council as systemically important,\textsuperscript{88} to set new rules for capital, collateral, and margin requirements,\textsuperscript{89} and to establish uniform risk-management standards to be used across the market.\textsuperscript{90} Regulation of FMUs will formalize and strengthen the

\textsuperscript{81} See id. § 725(c), 124 Stat. at 1687-92 (amending 7 U.S.C. § 7a-1(c)).

\textsuperscript{82} See Brunnermeier, supra note 17, at 80 (noting that investment banks nearly doubled repo funding, measured as percentage of total assets, between 2000 and 2007).

\textsuperscript{83} See FIN. CRISIS INQUIRY COMM’N, supra note 5, at 283-84 (describing the concentration of tri-party repo market).

\textsuperscript{84} See id. at 114.

\textsuperscript{85} See STAFF OF S. PERM. SUBCOMM. ON INVESTIG., supra note 8, at 243-46 (describing “inaccurate credit ratings issued by Moody’s and S&P”).

\textsuperscript{86} See Gorton & Metrick, supra note 5 (manuscript at 4-5 & fig.4) (describing “run on repo” as an increase in haircuts on collateral, and showing that the average haircut increased dramatically over 2007-2008).

\textsuperscript{87} See CONG. OVERSIGHT PANEL, supra note 20, at 16-17 (describing the Fed’s programs to improve liquidity in asset-backed-securities markets).

\textsuperscript{88} See 12 U.S.C. §§ 5461-5472 (Supp. IV 2010) (empowering the Financial Stability Oversight Council to designate systemically important “financial market utilities” and “payment, clearing, or settlement activities,” and authorizing the Federal Reserve Board to prescribe standards governing these utilities and activities).

\textsuperscript{89} Id. § 5464(c).

\textsuperscript{90} See id. § 5461(b); H.R. REP. NO. 111-517, at 869-70 (2010) (Conf. Rep.), reprinted in 2010 U.S.C.C.A.N. 722, 726-27. Other federal financial regulators must consult the Federal Reserve Board when reviewing operational changes proposed by financial market utilities, see 12 U.S.C. § 5465(e); during examinations, see id. §§ 5466, 5467; and during the rule-making process, see id. §§
Fed’s oversight of key clearing and settlement functions, including oversight of the two clearing banks for the tri-party repo market. The Fed is already moving to strengthen the tri-party repo system by shortening (or eliminating) the “unwind” period during which these firms provide intraday credit. Other reforms are also integral to reforming these markets. For example, major financial firms will face stringent liquidity requirements under Basel III. In addition, these firms will face limitations under the Dodd-Frank Act on short-term debt and on counterparty credit exposures. Moreover, reforms to deposit insurance assessments will encompass all liabilities, not simply deposits. Money market funds, which are important buyers of short-term commercial debt, will maintain stronger liquidity positions through improved SEC regulations on portfolio quality, average portfolio maturity, and convertibility to cash. These reforms will have the effect of taxing or regulating short-term borrowing and thus encouraging firms to move to a more sustainable funding structure.

3. Securitization

Finally, the Dodd-Frank Act fundamentally transforms regulation of the last major element of the shadow banking system: securitization. The Act requires investment banks and other issuers to provide comprehensive disclosure of securitization structures, including information about assets and originators. Sponsors will also be required under most circumstances to retain a portion of the risk in the securitizations they sponsor, so that incentives are better aligned among participants in the system. Capital rules will better
account for actual risk,\footnote{See Risk-Based Capital Guidelines and Other Related Issues, 75 Fed. Reg. 4636 (Jan. 28, 2010) (codified in scattered sections of 12 C.F.R. pts. 3, 208, 225, 325, 567).} while parallel changes in accounting rules will bring the most common forms of securitizations onto the balance sheet.\footnote{See FIN. ACCOUNTING STANDARDS BD., FIN. ACCOUNTING SER. NO. 310, STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 166 (2009); FIN. ACCOUNTING STANDARDS BD., FIN. ACCOUNTING SER. NO. 311, STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 167 (2009).} Credit rating agencies, whose ratings for securitizations contributed significantly to market distortions,\footnote{See STAFF OF S. PERM. SUBCOMM. ON INVESTIG., supra note 8, at 243-46; S. REP. NO. 111-176, at 36 (2010).} will be subject to comprehensive oversight by the SEC, including policing of ratings shopping and conflicts of interest.\footnote{See id.; see also id. at 60-63; S. REP. NO. 111-176, at 168 (“The result [of divided regulatory authority] has been that banks could choose the least restrictive consumer compliance supervisor.”); U.S. GOV’T ACCOUNTABILITY OFFICE, supra note 24, at 55.} Ratings will also be more transparent, thanks to mandatory disclosure of information on rating methodologies, underlying data, and results of third-party due diligence.\footnote{See FIN. CRISIS INQUIRY COMM’N, supra note 5, at 111-13.}

\section*{D. \textit{A Market-Wide Regulator for Consumer Protection}}

Before Dodd-Frank, federal financial consumer protection regulation was fragmented over seven different agencies, which complicated rule-writing, supervision, and enforcement efforts.\footnote{See Creating a Consumer Financial Protection Agency: A Cornerstone of America’s New Economic Foundation: Hearing Before the S. Comm. on Banking, Hous., & Urban Affairs, 111th Cong. 6-7 (2009) [hereinafter Consumer Financial Protection Hearing] (statement of Michael S. Barr, Assistant Secretary for Financial Institutions, United States Department of the Treasury).} This fragmentation also allowed banks to choose the least restrictive consumer protection rules available\footnote{See S. REP. NO. 111-176, at 10 (describing competing demands of consumer protection and safety-and-soundness supervision).} and nonbank financial institutions to avoid federal supervision altogether.\footnote{See FIN. CRISIS INQUIRY COMM’N, supra note 5, at 111-13.} Federal agencies, concerned mostly with the safety and soundness of the institutions within their purview, did not focus on protecting consumers\footnote{See Dodd-Frank Act § 932, 124 Stat. at 1872-83 (amending 15 U.S.C. § 78o-7).} and preempted state consumer protection laws without adequately replacing these important safeguards.\footnote{See id.; see also id. at 60-63; S. REP. NO. 111-176, at 168 (“The result [of divided regulatory authority] has been that banks could choose the least restrictive consumer compliance supervisor.”); U.S. GOV’T ACCOUNTABILITY OFFICE, supra note 24, at 55.}

The Dodd-Frank Act replaces this fragmented, inefficient system with a single, dedicated regulatory agency. Armed with expanded authority to prohibit unfair, deceptive, and abusive practices,\footnote{Id. § 932(a)(8), 124 Stat. at 1877-78.} and with a congressional mission “to ensure that . . . consumer protection laws and regulations are
comprehensive, fair, and vigorously enforced, the newly established Consumer Financial Protection Bureau will end regulatory shopping and increase government accountability. The consolidation of enforcement and rule-making authorities in the Bureau will also improve feedback in the rule-making process, as well as general regulatory quality. The Bureau will be charged with balancing consumer protection, financial access, and innovation, and with collaborating more closely with state attorneys general. Finally, the Bureau will be expected to serve as an innovator in its own right, introducing more efficient supervisory methods for nonbank firms, such as risk-based examinations, and incorporating into its rule-making approach insights on consumer decision-making derived from behavioral economics. This new generation of consumer protection regulation will not only promote competition among banks and nonbank institutions on the basis of price and quality, but also will empower consumers to make their own choices and find the most suitable financial products, even when providers have incentives to hide true costs.

III. Beyond Dodd-Frank: Future Areas for Reform

The Dodd-Frank Act is a historic step toward correcting the weaknesses of the U.S. financial regulatory system, and its passage will help make financial markets fairer and more stable. Many significant steps still need to be taken, however. In the United States, immediate priorities include further consolidating the nation’s financial regulators, shoring up money market funds, and reforming the troubled government-sponsored entities Fannie Mae and Freddie Mac. At the same time, on the international stage, central bankers and regulators around the world must work together to regulate the world’s largest financial institutions.

110. See Consumer Financial Protection Hearing, supra note 102, at 64.
112. See id. §§ 5495, 5552.
113. Consumer Financial Protection Hearing, supra note 102, at 64.
114. See, e.g., 12 U.S.C. § 5532(b)(3), (c), (e) (mandating use of consumer testing in developing effective consumer disclosure, including consideration of “available evidence about consumer awareness, understanding of, and responses to disclosures or communications”). See generally Michael S. Barr et al., The Case for Behaviorally Informed Regulation, in NEW PERSPECTIVES ON REGULATION 25 (David A. Moss & John A. Cisternino eds., 2009), available at http://www.tobinproject.org/twobooks/pdf/New_Perspectives_Full_Text.pdf (describing how insights from behavioral economics may be incorporated into the design of regulation).

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A. Further Areas of Domestic Reform

The Dodd-Frank Act is a comprehensive response to the regulatory gaps and weaknesses that led to the 2007-2008 financial crisis. But the Act is not perfect. Going forward, reform efforts should focus on addressing the organizational fragmentation of federal regulators, the risks facing money market mutual funds, and the troubled state of government-sponsored housing finance entities.

1. Consolidation of Financial Regulators

The Dodd-Frank Act took several key steps toward reorganizing the U.S. federal regulatory system and reducing regulatory arbitrage by creating the Consumer Financial Protection Bureau, the Office of Financial Research (OFR), and the Financial Stability Oversight Council (FSOC); abolishing the OTS;\(^{115}\) consolidating holding company oversight authority in the Fed;\(^{116}\) requiring the Securities and Exchange Commission (SEC) and the Commodities Future Trading Commission (CFTC) to cooperate in rule-making on derivatives;\(^{117}\) and eliminating a number of spurious distinctions between bank and thrift charters.\(^{118}\) Yet bureaucratic and congressional turf disputes made further consolidation unattainable. Conceptually, much more could have been done to close gaps and relieve tensions arising from fragmentation. While the Dodd-Frank Act requires extensive joint rule-making on derivatives, the split between the SEC and the CFTC has created "gaps and inconsistencies" in futures, derivatives, and securities regulations in the past.\(^{119}\) Consolidating these two commissions into a single business conduct regulator would promote further harmonization of regulatory policy and enforcement. Similarly, while the Dodd-Frank Act abolished the OTS,\(^{120}\) it maintains the thrift charter and continues the split among the Fed, the Office of the Comptroller of the Currency (OCC), and the FDIC for federal supervision of banks and thrifts\(^{121}\) — a relic of the ad hoc evolution of the U.S. financial regulatory system. Further consolidation of banking safety-and-soundness regulators would do more to end regulator shopping and achieve more efficient and consistent regulation. As


regulators and Congress become used to the patterns of cooperative regulation and supervision required by the Dodd-Frank Act, fostered by participation in the FSOC and engagement with the Office of Financial Research, it is possible that further regulatory consolidation may become more politically plausible.\textsuperscript{122}

2. Money Market Funds

Further regulation of the shadow banking system must include regulation designed to lower the susceptibility of money market funds (MMFs) to runs by investors. MMFs' redemption-on-demand rules and stable net asset values (NAVs) led many individual and institutional investors to view them as cash-like, near-substitutes for bank deposits.\textsuperscript{123} But repo funding from MMFs dried up quickly in the crisis,\textsuperscript{124} and after the failure of Lehman Brothers, large losses at some MMFs led to massive redemptions. One large MMF "broke the buck" by failing to maintain its ability to redeem shares at full value, and a massive run on MMFs ensued.\textsuperscript{125} This crisis-within-the-crisis led the government to guarantee MMFs.\textsuperscript{126}

Since the crisis, the SEC, which regulates MMFs,\textsuperscript{127} has promulgated rule changes intended to make MMFs more resilient to short-term market risks.\textsuperscript{128} These changes alone, however, are unlikely to prevent a run on MMFs like the one that took place after the Lehman bankruptcy.\textsuperscript{129} A more comprehensive reform package might include some of the following elements: a switch to floating net asset values for some or all investors to increase risk transparency;\textsuperscript{130} more stringent regulations and capital requirements for stable NAV funds or their sponsors;\textsuperscript{131} triggers for delivery of redemptions-in-kind to relieve liquidity pressure during market disruptions;\textsuperscript{132} an explicit insurance


\textsuperscript{123} PRESIDENT'S WORKING GRP. ON FIN. MKTS., supra note 94, at 8.

\textsuperscript{124} See FIN. CRISIS INQUIRY COMM’N, supra note 5, at 358 (describing MMFs’ abandonment of commercial paper markets).

\textsuperscript{125} See id. at 357-59.

\textsuperscript{126} See Press Release, U.S. Dep’t of the Treasury, supra note 21.

\textsuperscript{127} See 17 C.F.R. § 270.2a-7 (2011) (prescribing standards for maturity, quality, and diversification of MMF portfolios, and for share valuation).


\textsuperscript{129} DEP’T OF THE TREASURY, supra note 119, at 38.

\textsuperscript{130} See PRESIDENT’S WORKING GRP. ON FIN. MKTS., supra note 94, at 19-23, 29-32.

\textsuperscript{131} See id. at 32-35.

\textsuperscript{132} See id. at 25-26.
scheme;\textsuperscript{133} and a private-sector liquidity backstop.\textsuperscript{134} Recently, the SEC has focused on establishing capital rules for stable NAV funds or moving to a floating NAV system.\textsuperscript{135} Unless further reforms are adopted, money market funds will continue to be a potential source of run risk and instability in the system.\textsuperscript{136}

3. Government-Sponsored Entities

For decades, the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac")—nominally private institutions, but perceived to carry U.S. government guarantees against default\textsuperscript{137}—helped facilitate housing finance by purchasing or guaranteeing qualifying loans.\textsuperscript{138} These shareholder-owned entities enjoyed an implicit government backstop for which they did not pay, along with weak oversight and excessively low capital requirements. Over time, moreover, these government-sponsored entities (GSEs) strayed from their core mission. To stem the loss of their market share to the private securitization market, they took on excessive risk, purchased or guaranteed subprime and Alt-A mortgage loans, and made investments in the ostensibly AAA-rated tranches of subprime and Alt-A mortgage-backed securities. Critically, by the onset of the financial crisis, Fannie and Freddie had reached dangerously high leverage levels, which were permitted under preferential capital requirements.\textsuperscript{139} Furthermore, excessive risk-taking was masked by questionable accounting practices.\textsuperscript{140}

After the housing market started to collapse, the GSEs came under extreme market pressure,\textsuperscript{141} and, in 2008, Congress passed legislation to authorize the Federal Housing Finance Agency (FHFA) to place the firms under conservatorship or receivership.\textsuperscript{142} Although the nation must still deal with the poor decisions made by these entities prior to conservatorship, the FHFA has acted vigorously to improve the quality of their new assets and bolster their profitability. Losses from new loans have fallen off

\textsuperscript{133} See id. at 26-28.
\textsuperscript{134} See id. at 23-25.
\textsuperscript{137} FIN. CRISIS INQUIRY COMM’N, supra note 5, at xxvi.
\textsuperscript{138} See generally id. at 38-42 (tracing precrisis history of Fannie Mae and Freddie Mac).
\textsuperscript{139} Id. at 39; see also id. at xx ("The kings of leverage were Fannie Mae and Freddie Mac . . . . [B]y the end of 2007, Fannie’s and Freddie’s combined leverage ratio, including loans they owned and guaranteed, stood at 75 to 1.").
\textsuperscript{140} Id. at 314.
\textsuperscript{141} Id. at 316.
precipitously,

while guarantee fees have increased, average credit scores have improved, and high-risk Alt-A loans have been excised from the GSEs' new book of business. The GSEs' performance in conservatorship has helped prevent more severe problems in the housing market by providing credit at a time when private capital has been scarce. These entities continue to enable millions to take out a mortgage or refinance a home.

While the GSEs and the FHFA are playing essential roles in keeping mortgage finance flowing following the massive disruption to the financial system, this outsized government role needs to be reduced over time. Policymakers must decide whether, and to what extent, the government should continue to issue housing guarantees, beyond those mortgages that are insured by the Federal Housing Administration (FHA). History suggests that in the event of another sufficiently large crisis in the housing market, the government will intervene once again, in order to protect the larger financial sector and the wealth of individual households. Any housing finance system must acknowledge that fact and provide a realistic mechanism for responding without excessive risk to taxpayers.

These considerations point in the direction of up-front fees for government guarantees. If guarantees are to be provided, they must be explicit and appropriately priced, so that private sector gains do not come at the expense of public sector losses. In the ideal world, private shareholder-

143. See The Future of Housing Finance: A Progress Update on the GSEs: Hearing Before the Subcomm. on Capital Mkts., Ins., & Gov't Sponsored Enters. of the H. Comm. on Fin. Servs., 111th Cong. 12 (2010) [hereinafter Future of Housing Finance Hearing] (statement of Michael S. Barr, Assistant Secretary for Financial Institutions, United States Department of the Treasury) (noting that as of September 2010, only one percent of Fannie's and Freddie's credit losses came from loans originated in 2009-2010).

144. Id. at 50.

145. See id. (stating that, as of September 2010, GSEs and Government National Mortgage Association collectively financed roughly ninety-five percent of originated mortgages); cf. Housing Finance: What Should the New System Be Able To Do?: Part I: Government and Stakeholder Perspectives: Hearing Before the H. Comm. on Fin. Servs., 111th Cong. 136 (2010) [hereinafter Government and Stakeholder Perspectives Hearing] (statement of Timothy F. Geithner, Secretary, United States Department of the Treasury) (stating that GSE conservatorship prevented "a much more wrenching decline in housing prices, a more severe foreclosure crisis and a deeper economic downturn").

146. See Future of Housing Finance Hearing, supra note 143, at 50.


148. See id. at 8, 10; see also U.S. DEP'T OF THE TREASURY & U.S. DEP'T OF HOUS. & URBAN DEV., REFORMING AMERICA'S HOUSING FINANCE MARKET: A REPORT TO CONGRESS 24-30 (2011), available at http://www.treasury.gov/initiatives/Documents/Reforming%20America%27s%20Housing%20Finance%20Market.pdf (describing policy considerations surrounding continuing government role in housing finance and presenting to Congress three long-term options, ranging from "[a] government insurance role limited to... assistance for narrowly targeted groups of borrowers" to "[federal] assistance for low-and moderate-income borrowers and catastrophic reinsurance behind significant private capital").

149. See Future of Housing Finance Hearing, supra note 143, at 53.
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owned entities would not issue mortgages or securities with government guarantees because the inherent conflict between shareholder interests and the public interest is too strong. Alternative ownership structures, such as cooperatives or a government corporation, would work better at reducing that conflict. Moreover, any guarantee should run to the mortgage product, not the institution, and should be explicit and paid for in advance. A government guarantee appears to be required to maintain the availability of the thirty-year fixed-rate mortgage—a singular product of the post-Depression reforms that relieves households of the need to self-insure against interest-rate risk—as an option for most middle-income borrowers. A housing finance system without such a product available for most borrowers would be a radical departure from our current system. Moreover, in the event of a housing crisis, the presence of a prepaid guarantee would permit the government to serve as a lender of last resort and to insure against catastrophic loss and instability. Lastly, without a government guarantee, the housing finance system will tend to be concentrated in the banking sector and, given economies of scale, in the largest financial institutions.

Regardless of the form that any future government guarantees may take, the government must also prepare Fannie and Freddie for an orderly reorganization that will not disrupt the housing market. The GSEs and the federal government play a greater role in the housing market now than at any time since the Great Depression, and a sudden market exit would undermine stability and prevent homeowners from obtaining credit. Freddie and Fannie should reduce their portfolio holdings gradually, and the FHFA must retain the necessary human capital and infrastructure to ensure a smooth transition. Conforming loan limits should be allowed to gradually fall as private capital becomes available to meet demand. Eventually, guarantee fees should be increased, the FHFA should experiment with bringing in private capital to absorb first losses on agency mortgage-backed securities, and the government should foster a diversity of funding sources to reduce the current outsized reliance on GSEs.

B. Progress Toward International Reform

While the United States is implementing the Dodd-Frank Act, global reforms must proceed as well. In particular, the United States should

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150. Government and Stakeholder Perspectives Hearing, supra note 146, at 141.
151. Future of Housing Finance Hearing, supra note 143, at 54.
153. See Future of Housing Finance Hearing, supra note 143, at 54-55.
154. See generally INT’L BAR ASSOC. TASK FORCE ON THE FIN. CRISIS, A SURVEY OF CURRENT REGULATORY TRENDS (2010), available at http://www.ibanet.org/Article/Detail.aspx?ArticleUid=2c72f588-7222-47c9-83e4-7db0a0a8bf1c
continue to press for governments to improve the quality and quantity of required capital; reduce the moral hazard created by systemically important financial institutions (SIFIs); and improve transparency and oversight in the OTC derivatives market.

1. Capital and Liquidity Requirements

The Basel Committee on Banking Supervision has made much progress in developing more robust global capital standards. Under the Committee’s most recent proposal, known as Basel III, minimum capital ratios are set at a level that will require a significant increase in firms’ reserves. Other changes to quantitative capital requirements include new capital conservation buffers above the minimum levels and a “SIFI surcharge” for the largest firms, ranging from 1.0-to-2.5% above the levels required for less systemically important firms. The Basel Committee is also productively considering a role for contingent capital instruments—debt that transforms into equity under specified circumstances—in forcing firms to internalize the costs of their own failure, and thus reducing the likelihood of government intervention.

The Basel III standards not only increase the amount of regulatory capital, but also improve its quality, or loss absorbency. The new capital requirements will focus on common equity, excluding other assets that did little to absorb (describing regulatory responses to the economic crisis in the United States, the United Kingdom, Germany, Switzerland, France, Spain, Japan, and Russia).


158. See BASEL III CAPITAL STANDARDS, supra note 156, ¶ 122-35, at 54-57. The new rules encourage firms whose capital levels have fallen below the buffer limit to reduce shareholder dividends and staff bonuses until the capital levels are restored. See id. ¶ 124, 126, at 54-55.


161. BASEL III CAPITAL STANDARDS, supra note 156, ¶ 9, at 2 (“[T]he predominant form of Tier 1 capital must be common shares and retained earnings.”). The new Basel standards require banks to maintain Common Equity Tier 1 of at least 4.5% of the sum of all risk-weighted assets. Id. ¶ 50, at 12.
losses in the crisis, and imposing strict limits on the mileage that regulated institutions can get from minority interests, investments in other financial institutions, mortgage servicing rights, and deferred tax assets.

Basel III will also impose increased capital requirements on banks' riskiest activities, and will affect trading positions and counterparty credit exposures. Capital calculations for trading exposures must be based on stressed market conditions, and the charges for securitization exposures will be increased substantially. In both derivatives and secured-lending transactions, firms will be subject to a capital charge for deterioration in the creditworthiness of counterparties. Basel III will introduce a new, internationally applied leverage ratio requirement that includes firms' off-balance-sheet commitments and exposures. The Committee will test a minimum leverage ratio requirement of three percent initially, and announce the final requirement at the beginning of 2017.

Furthermore, Basel III will introduce explicit quantitative liquidity requirements to ensure that financial firms are better prepared for liquidity strains. Under the new rules, firms must hold enough liquid assets to meet potential net cash outflows over a thirty-day stress scenario. The Basel standards will also require a minimum amount of stable funding, relative to a firm's assets, commitments, and obligations over a one-year period. These requirements, once fully implemented, will be a crucial way to protect firms from severe strains of the type that led to the collapse of Bear Stearns and Lehman Brothers in 2008.

Although the Basel Committee's work to strengthen capital and liquidity requirements is promising, the new requirements come with a lengthy transition period. Supervisors must still determine final requirements for liquidity and leverage ratios. Furthermore, while the private sector has made some progress in reducing counterparty credit risks in the tri-party repo markets, I believe that

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162. See id. ¶ 9, at 2 (discussing the elimination of "so-called Tier 3 capital instruments").
163. Id. ¶¶ 62-64, at 19-21.
164. See id. ¶¶ 87-88, at 26 (capping maximum adjustment to Common Equity Tier 1 from any one of these sources to ten percent and adjustments from all these sources in aggregate to fifteen percent of a bank's common equity). Under Basel II, banks could recognize the full amount of these assets against Tier 1 capital. Id. ¶ 87, at 26.
165. Id. ¶ 98, at 30.
166. See id. ¶ 90, at 27 (requiring 1250% risk weight for "certain securitisation exposures," which could have been recognized as deductions from capital under Basel II).
167. Id. ¶ 99, at 31-37.
169. Id. ¶ 153, at 61.
170. BASEL III LIQUIDITY FRAMEWORK, supra note 91, ¶¶ 15-19, at 3-4.
172. The Basel Committee plans to phase in heightened capital requirements gradually over the next eight years; all liquidity standards will take effect by January 1, 2018, and capital requirements will reach their steady-state levels at the latest on January 1, 2019. See BASEL III CAPITAL STANDARDS, supra note 156, at 69, annex 4.
supervisors need to pay particular attention to the special liquidity and counterparty credit risks that still face clearing banks in those markets. Finally, although the federal government and the Financial Accounting Standards Board have clarified how U.S. institutions are to calculate the measure of risk-weighted assets that forms the denominator of the capital ratio, there appears to be a significant disparity among countries and financial firms in how this variable is calculated. Unless supervising bodies use the Basel process to promote the agreed-upon approach for risk weighting, these disparities may weaken the Basel III framework, leading to an unlevel playing field for U.S. firms and races to the bottom in risk-taking.

2. Supervision and Resolution of SIFIs

Governments must do more to improve cross border supervision of the world’s largest financial institutions and end the perception in the international community that some firms are too big to fail. Progress towards an effective international framework for resolving SIFIs will require countries to implement the high-level reforms agreed to by Group of Twenty (G20) leaders in Toronto, as well as the more concrete recommendations of the Financial Stability Board. While some European governments are focused on using contingent capital as a means to improve resolution prospects, an approach...
that may one day prove useful, these efforts are not enough. Contingent capital will not be sufficient to allow the resolution of a major financial firm without wide-scale harm to the markets and must not be used as an excuse to avoid legislating strong resolution regimes internationally.

Much more can be done to improve cross border cooperation with respect to resolution of SIFIs. Effective precrisis planning requires home and host regulators to share information and agree to resolution plans.\textsuperscript{178} Today, such information sharing is hampered by confidentiality and other use restrictions.\textsuperscript{179} Only a handful of jurisdictions have entered into cross border agreements on financial firm resolution;\textsuperscript{180} where such agreements do exist, they are often non-binding and lack detail on crisis roles, responsibilities, and information-sharing methods.\textsuperscript{181} The Dodd-Frank Act requires the FDIC, when acting as a receiver under the Act’s orderly liquidation authority, to coordinate with foreign financial authorities “to the maximum extent possible.”\textsuperscript{182} However, few countries require regulators to cooperate internationally when winding down a firm—indeed, only Australia (and, to a limited extent, the European Union) has a similar statutory mandate.\textsuperscript{183} Governments should follow the timelines recommended by the Financial Stability Board for enacting statutes requiring cooperation with foreign regulators, and agree to institution-specific resolution plans for each SIFI.\textsuperscript{184} Resolution agreements should assign roles and responsibilities to regulators both before and during crises, establish an information-sharing framework, and commit to removing impediments to orderly liquidation.\textsuperscript{185}

3. Regulation of Derivatives

Finally, the global community must enact common standards for transparency, capital adequacy, oversight, and abuse prevention in the derivatives markets. These standards should include international standards for


\textsuperscript{180} Id. ¶ 167, at 34-35.

\textsuperscript{181} Id.


\textsuperscript{183} Cross Border Resolution Progress Report, supra note 179, ¶ 152, at 31-32.

\textsuperscript{184} Id.

\textsuperscript{185} Fin. Stability Bd., supra note 159, ¶¶ 15-16, 21-27, at 4-6.

clearing and settlement, as well as cooperative supervisory arrangements for critical OTC derivatives market infrastructure. Governments have agreed in principle on the need for reform and on the broad components of such reform, \(^{187}\) including central clearing, electronic and exchange trading, and reporting to trade repositories. \(^{188}\) The principles for financial market infrastructure developed by the International Organization of Securities Commissions \(^{189}\) cover certain much-needed reforms, including initial and variation margin requirements. \(^{190}\) However, much remains to be done to align the U.S., European, and Asian governments on specific reforms. \(^{191}\) In particular, the European Union appears to be holding back on implementing its agreement to follow the United States in imposing margin requirements and in moving standardized contracts to exchange trading and central clearing. \(^{192}\)

* * *

The modern financial system is global in scope, and the recent economic crisis similarly reached across national boundaries. Effective solutions have been and must continue to be global as well. International reforms must support domestic efforts by strengthening capital and liquidity frameworks, improving oversight of global financial markets, coordinating supervision of internationally active firms, and providing enhanced crisis management tools. The United States did not wait for the international community to act before building a new foundation in the Dodd-Frank Act, and governments cannot allow an international race to the bottom on regulatory standards to undermine country-specific reforms.

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190. See id. at 40-46.


Conclusion

The United States had an urgent obligation to fix the failures that threatened our financial system and helped trigger the worst global economic crisis since the Great Depression and a recession that has cost American families and businesses so dearly. The passage of the Dodd-Frank Act was a historic achievement. It provides the government with the tools it needs to monitor systemic risk and to supervise institutions and markets regardless of whether they are in the banking or the "shadow banking" world. It provides for comprehensive regulation of the derivatives markets. It provides the government with the tools to wind down a major financial institution in the event of distress while minimizing risks to the financial system and taxpayers. And it establishes a Consumer Financial Protection Bureau to establish a level playing field for competition that protects consumers. The Act is not perfect—no legislation is. Yet it puts in place the key reforms that were necessary to establish a firm foundation for future financial stability and economic growth in the decades ahead.