

Dodd–Frank: Content, purpose, implementation status, and issues

Douglas D. Evanoff and William F. Moeller

Introduction and summary

As financial regulation evolved over the past 80 years, it became common to introduce new legislation with the claim that “this is the most significant regulatory reform since the Great Depression and the Banking Act of 1933.” On July 21, 2010, following the 2008–09 financial crisis, President Barack Obama signed into law the Dodd–Frank Wall Street Reform and Consumer Protection Act (hereafter Dodd–Frank). In the view of many in the industry, Dodd–Frank became the new standard against which all future reforms would be compared.¹ The stated goals of the act were to provide for financial regulatory reform, to protect consumers and investors, to put an end to too-big-to-fail, to regulate the over-the-counter (OTC) derivatives markets, to prevent another financial crisis, and for other purposes. The act has far-reaching implications for industry stability and how financial services firms will conduct business in the future.

Implementation of Dodd–Frank requires the development of some 250 new regulatory rules and various mandated studies.² There is also the need to introduce and staff a number of new entities (bureaus, offices, and councils) with responsibility to study, evaluate, and promote consumer protection and financial stability. Additionally, there is a mandate for regulators to identify and increase regulatory scrutiny of systemically important institutions. As a result, macroprudential regulation (aimed at mitigating risk to the financial system as a whole) will play a much more important role than it has in the past (see Bernanke, 2011). Two years into the implementation of the act, much has been done, but much remains to be done.

The act continues to be debated in the political, business, and public arenas. Were the right lessons learned from the recent crisis? Were the appropriate reforms introduced in the new regulations?³ Did the act go far enough or too far? Were the regulators

given too much discretion in implementing the act? How burdensome are the new regulations and how will the intermediation process be affected? Will financial innovation be affected? Might regulatory reform induce some current financial activities to shift toward the less-regulated shadow financial sector?⁴ Are banks finding ways to effectively avoid or cushion the impact of the new rules?

In this special issue of *Economic Perspectives*, we, and the authors of the accompanying articles, discuss and evaluate the Dodd–Frank Act from a number of perspectives. In this introductory article, we summarize the major components of the act addressing prudential

Douglas D. Evanoff is a vice president and senior research advisor for banking and financial institutions and William F. Moeller is a senior associate economist in the Economic Research Department of the Federal Reserve Bank of Chicago.

© 2012 Federal Reserve Bank of Chicago

Economic Perspectives is published by the Economic Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors' and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.

Charles L. Evans, *President*; Daniel G. Sullivan, *Executive Vice President and Director of Research*; Spencer Krane, *Senior Vice President and Economic Advisor*; David Marshall, *Senior Vice President, financial markets group*; Daniel Aaronson, *Vice President, microeconomic policy research*; Jonas D. M. Fisher, *Vice President, macroeconomic policy research*; Richard Heckinger, *Vice President, markets team*; Anna L. Paulson, *Vice President, finance team*; William A. Testa, *Vice President, regional programs*; Richard D. Porter, *Vice President and Economics Editor*; Helen Koshy and Han Y. Choi, *Editors*; Rita Molloy and Julia Baker, *Production Editors*; Sheila A. Mangler, *Editorial Assistant*.

Economic Perspectives articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *Economic Perspectives* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org.

ISSN 0164-0682

regulation, particularly those aspects that are highlighted in the accompanying articles. We also discuss the economics behind many of the reforms considered. This is not an attempt to cover every aspect of the act—as with any legislation, there are certain issues amended to the legislation late in the drafting process that are well outside the realm of financial regulation.⁵ The authors of the accompanying articles in this issue are: a scholar who has been actively involved in critiquing the new regulation, regulators who are responsible for implementing some of the more important aspects of the reform, and a financial policy expert working with a banking trade association.

Matthew Richardson (2012), Charles E. Simon Professor of Applied Economics at New York University, provides a general evaluation of Dodd–Frank, highlighting many beneficial aspects of the reforms—these include efforts to measure and regulate systemic risk; expansion of the regulatory reach to nonbank, systemically important financial institutions (SIFIs); and efforts to introduce a new resolution process for SIFIs. He also addresses what he terms missed opportunities in the regulatory reform effort and the potential for adverse, unintended consequences.

Martin Gruenberg (2012), acting chairman of the Federal Deposit Insurance Corporation (FDIC), discusses the new powers given to the FDIC in Dodd–Frank to resolve select institutions deemed to be systemically important. Prior to Dodd–Frank, the FDIC's resolution powers were limited to insured depository institutions. Holding companies or nonbank financial companies could only be resolved through the bankruptcy process. Gruenberg discusses the process by which the FDIC can use its new authority to effectively resolve SIFIs.

Wayne Abernathy (2012), executive vice president at the American Bankers Association, discusses the process by which the new regulations have been developed and implemented. Many of the act's original deadlines have been missed. Abernathy questions whether the process has gone as smoothly as suggested by financial regulators. However, he acknowledges the magnitude of the task and suggests that some modifications to the act may be necessary if its original intent is to be realized. He also raises some concern about the competitive impact across classes of banks—e.g., money center versus community banks.

Mark Van Der Weide (2012), senior associate director of supervision and regulation at the Board of Governors of the Federal Reserve System, discusses the Federal Reserve's efforts to mitigate threats to financial stability. Much of the effort has been directed at identifying and quantifying SIFIs. What criteria should be considered? What weights should be applied to the

criteria? Once institutions have been categorized, the regulatory agencies must then decide how to calibrate the regulatory apparatus to best address the systemic concerns.

Finally, Scott O'Malia (2012), commissioner of the Commodity Futures Trading Commission (CFTC), discusses how the CFTC has been implementing its responsibilities under the act. He raises concerns about whether the commission is keeping the market adequately informed about developments. Additionally, he expresses concern about the commission's ability to keep up with industry developments and to leverage technology to support its enhanced regulatory role. He proposes some adjustments to the existing implementation process.

In this article, we briefly discuss aspects of the Dodd–Frank Act that are covered by the guest authors in this issue. In particular, we discuss efforts to enhance financial stability, improve the failure resolution process, and regulate the over-the-counter derivatives market. We also outline the purpose of the reforms and the tools available to regulators to achieve the desired outcomes.

Background

There had been numerous proposals for regulatory reform in recent years, but most of these proposals differed significantly from Dodd–Frank. Most recent proposed reforms were more concerned with restructuring the regulatory agencies than altering prudential regulation and allowable financial activities. For example, the U.S. Department of the Treasury (2008) proposed the phasing out of the thrift charter, the transitioning of thrifts toward a bank charter, and the elimination of the Office of Thrift Supervision (OTS).⁶ It also recommended a federal regulator for insurance companies. However, there were few proposed changes to product powers or prudential regulation.

Dodd–Frank also differed from reforms actually put in place over the previous 30 years in that it reversed the deregulatory trend that started in the early 1980s. For example, bank and bank holding company product powers had been expanded with the 1980 Monetary Control Act, the 1982 Garn–St. Germain Act, and the 1999 Gramm–Leach–Bliley Act. The 1980 and 1982 acts also eased deposit pricing restrictions on the industry. Limitations to geographic expansion were lifted with the 1994 Interstate Banking and Branching Efficiency Act (the Riegle–Neal Act) and numerous state laws aimed at increasing banks' ability to operate across state borders.

Another way in which Dodd–Frank differed from other recent regulatory reforms was in the flexibility it gave regulators. This approach contrasts significantly

with the FDIC Improvement Act of 1991, for example, which was enacted at a time when Congress was frustrated with bank regulators because of the large number of recent bank failures and resulting large losses to the bank insurance fund—see Kane (1989a, 1989b), Benston and Kaufman (1994), and Young (1993). By contrast, many parts of the Dodd–Frank Act lack specificity as to how they are to be implemented, giving regulators significant discretionary authority to develop and implement rules (Casey, 2011). However, in many cases, Dodd–Frank imposed deadlines by which reforms need to be in place or studies need to be completed. This places significant pressure on regulators to meet the deadlines and implement the reforms while considering the potential regulatory burden that might be placed on the industry, as well as any adverse impact that burden may have on the industry’s ability to carry out its role in markets.

Financial stability

Perhaps the most important objective of Dodd–Frank is to ensure a safe and stable financial system. Toward that goal, the act shifts from exclusively concentrating on microprudential regulation, which focuses on risk at individual institutions, to include macroprudential regulation, which focuses on overall market stability and systemic risk. During the financial crisis, it became obvious that the assumption that the financial system as a whole could be kept safe by regulating individual institutions was unsound. A purely microprudential approach ignores interconnections and externalities, whereby the actions of a single financial institution can induce broader spillover effects that adversely affect general market conditions, other financial institutions, and ultimately the economy as a whole. In contrast, macroprudential regulatory approaches attempt to manage overall financial system risk.⁷ Ideally, macroprudential tools can be used to induce financial institutions to internalize the costs of their actions on society, including externalities where costs are generated and shifted to others.⁸ With the increased reliance on macroprudential regulation, there was also a realization that regulators need to anticipate forthcoming industry problems.

These challenges were addressed in title I of Dodd–Frank, which created the Financial Stability Oversight Council (the Council) and the Office of Financial Research (OFR), which is housed in the U.S. Treasury Department. In addition, title I provides the Federal Reserve with additional authority to manage the systemic risk posed by SIFIs.⁹

The Council is structured as a consultative group of financial regulators. Its role is to identify risks that

pose a threat to the stability of the financial system, promote market discipline, and respond to emerging threats. To accomplish this, the Council has the authority to make recommendations about appropriate macroprudential regulation, to collect information about market activities, and, perhaps most importantly, to designate systemically important institutions or activities that will come under the oversight of the Federal Reserve as the systemic risk regulator.¹⁰ The consultative format of the Council allows the individual agencies to continue to handle the substantive supervision of their industry-specific institutions, but also to share insights and keep the other agencies aware of developments across the financial industry. By design, this consultative format avoids the creation of another regulatory bureaucracy, but brings the key regulatory agencies together in a formal way to contribute to public policy.

The Council consists of ten voting members and five nonvoting members, combining the expertise of federal and state regulators and an insurance expert appointed by the President.

The voting members are as follows:

- Secretary of the Treasury, who serves as the chairman of the Council;
- Chairman of the Board of Governors of the Federal Reserve System;
- Comptroller, Office of the Comptroller of the Currency;
- Director of the Bureau of Consumer Financial Protection;
- Chairman of the Securities and Exchange Commission;
- Chairman of the Federal Deposit Insurance Corporation;
- Chairman of the Commodity Futures Trading Commission;
- Director of the Federal Housing Finance Agency;
- Chairman of the National Credit Union Administration Board; and
- An independent member with insurance expertise, appointed by the President and confirmed by the Senate for a six-year term.

The nonvoting members, who serve in an advisory capacity, are:

- Director of the Office of Financial Research;
- Director of the Federal Insurance Office;
- A state insurance commissioner designated by the state insurance commissioners;

- A state banking supervisor designated by the state banking supervisors; and
- A state securities commissioner (or officer) designated by the state securities commissioners.

The Council's success will hinge on its ability to maintain a comprehensive view of the financial system. Given the vast and complex nature of the financial system, this is a monumental task. The Council has the authority to request data and information from a number of sources, including the member agencies, financial institutions (if the information is not readily available from primary regulators), and the new OFR. The breadth and quality of this information will be critical in helping the Council to meet its objective of anticipating threats to financial stability, such as emerging asset bubbles. The OFR could play an integral role in this process as it collects, organizes, and analyzes financial data in its role of supporting the Council and its member agencies. In addition, the Council's member agencies could also conduct more targeted analysis aimed at their particular industry sectors.

Perhaps most importantly, the Council can also designate a nonbank institution as systemically important if the material distress or failure of the institution would pose a risk to financial stability. In making these decisions, the Council will consider the nonbank SIFI's size, leverage, liquidity profile, interconnectedness, mix of activities, and importance as a source of credit and liquidity to the financial system. To facilitate the designation process, the Council can request data and information from the firm in question, the firm's primary regulator, and the OFR. The Council may also ask the Federal Reserve to conduct examinations of the financial institution to facilitate the designation process. If, after the evaluation processes, the company is designated as systemically important, it will be subject to supervision by the Federal Reserve and enhanced prudential standards. The Council can also make recommendations to the Federal Reserve regarding the form that the enhanced prudential standards should take. These standards must be more stringent than those applicable to other nonbank financial companies with consolidated assets less than \$50 billion. In addition, the standards and requirements are likely to increase in stringency with the size of the company's systemic footprint. The enhanced prudential standards might apply to any or all of the following:

- Risk-based capital requirements,
- Leverage limits,
- Liquidity requirements,
- Resolution plan and credit exposure reports,

- Concentration and credit exposure limits,
- Contingent capital requirements,
- Enhanced public disclosures,
- Short-term debt limits, or
- Overall risk-management requirements.

In addition to recommendations concerning nonbank SIFIs, the Council may also recommend that the Federal Reserve apply enhanced prudential standards to institutions designated by the Council as financial market utilities (FMUs)—that is, institutions primarily involved in payment, clearing, or settlement activities that facilitate the completion of financial transactions. Again, the concern is that problems at these institutions could have systemic implications for the effectiveness of the broader financial system. Title VIII of the act requires the Federal Reserve to develop risk-management standards, incorporating relevant international standards, for the operations of these systemically important FMUs with respect to credit, liquidity, settlement, operational, and legal risk. In fact, the designation of these systemically important FMUs has proceeded more quickly than has the designation of nonbank SIFIs. In July, the Council designated eight FMUs as systemically important and subject to Federal Reserve oversight.¹¹

The Council may issue similar recommendations for nonbank SIFIs and bank holding companies that are not designated as FMUs if the institutions take part in payment, clearing, and settlement activities. For example, the Council could make recommendations to impose restrictions on banks that act as agents in the tri-party repo market. Furthermore, the Council may provide recommendations to primary regulators to apply new or more stringent regulation to the *activities and practices* undertaken by financial institutions, even if these financial institutions have not been designated as SIFIs. Such recommendations can also be applied to specific financial instruments that are used or sold by these institutions. These recommendations may be made if a specific practice, activity, or financial instrument could create or increase the risk of significant liquidity, credit, or other problems in the financial markets.

Finally, if the Federal Reserve determines that a nonbank SIFI or a bank holding company with consolidated assets greater than \$50 billion poses a threat to the financial stability of the U.S., upon an affirmative vote from the Council, it can impose restrictions on the activities of these institutions. The tools available to the Federal Reserve to mitigate such risks include:

- Limiting the ability of the company to merge with, acquire, consolidate with, or otherwise become affiliated with another company;

- Restricting the ability of the company to offer a financial product or products;
- Requiring the company to terminate one or more activities;
- Imposing conditions on the manner in which the company conducts activities; and
- Requiring the company to sell or otherwise transfer assets or off-balance-sheet items to unaffiliated entities.

Arguably, many institutions and specific areas of the financial system were not subject to adequate supervision and regulation prior to the financial crisis. Possible examples include operating units of insurance giant AIG and global investment bank Lehman Brothers, the OTC derivatives markets, and consumer mortgage lending. The new oversight structure and systemic designation processes mandated under Dodd–Frank are an effort to better capture and regulate institutions and activities that can threaten the stability of the financial system.

Orderly liquidation authority

Since the failure, and subsequent rescue, of Continental Illinois National Bank in 1984, there has been a general outcry against the use of a too-big-to-fail policy and the resulting means by which large, complex financial institutions were resolved—typically with government support.¹² The general argument against such policies—which result in an implicit government guarantee—is that they reduce market discipline and result in moral hazard, allowing systemically important firms to take on excessive risk. In addition, these firms obtain a comparative advantage in the marketplace as a result of their perceived too-big-to fail status, which lowers the risk premiums on their debt instruments (deposits, senior debt, and subordinated debt).¹³ From a political perspective, the practice of preferential treatment for any company goes against the philosophical underpinnings of a capitalist society. Moreover, in times of financial crisis, the financial industry appears to be favored by the government. It might seem reasonable, therefore, to argue that financial firms, like other firms, should be resolved through the standard bankruptcy process. However, when Lehman Brothers failed, was not bailed out, and filed for bankruptcy in 2008, the consequences for the financial markets were severe, putting further strain on an already stressed system. For policymakers, this experience underscored the need to develop a more efficient resolution process for financial institutions that would reduce the risk of market disruption without making taxpayers accountable for the resolution costs.

U.S. law, like that in most other major jurisdictions, provides for alternative liquidation (Chapter 7) and rehabilitation (Chapter 11) procedures upon bankruptcy. However, the interconnected nature of the financial system gives rise to the need for an alternative failure resolution process for financial firms. For example, the existing bankruptcy process provides special treatment for “qualified financial contracts.” These contracts—particularly repurchase agreements and derivatives—are insulated from typical bankruptcy provisions that would prevent creditors from terminating their contracts or seizing and selling collateral. Therefore, particular creditors of the failing financial firm are able to terminate, accelerate, or net contracts, as well as acquire and sell collateral associated with these contracts to close out their positions. These creditors avoid the bankruptcy process while other creditors are prevented from closing out their positions and must enter the process as a general or senior creditor, depending on their contractual priority.

These “safe harbor provisions” for qualified financial contracts have created concerns about potential adverse spillover effects, overutilization of qualified contracts, and inconsistent or inequitable treatment of creditors. The safe harbor provisions, and the resulting rush to close out positions or obtain access to collateral, could lead to significant disruption in financial markets as parties move quickly to replace the contracts or sell collateral into what may be very illiquid markets. It has been argued that this could lead to runs on short-term instruments, which systemically important financial firms would be holding in sufficient quantities, and fire sales into unstable markets.¹⁴ That is, it is argued that there could be adverse systemic effects.

The orderly liquidation authority in Dodd–Frank is intended for troubled institutions that are considered systemically important. When firms enter the bankruptcy process, the objective is to maximize the value for creditors and create an orderly process for distributing that value in order of priority. However, with a systemically important firm, an optimal resolution process also needs to account for the potential impact on parties other than the creditors of the firm—that is, the spillover effects on other financial sector participants and the overall economy. These are the externalities discussed earlier.

To avoid potential disruptions resulting from resolving a systemically important firm through the bankruptcy courts, title II of Dodd–Frank spells out the role of the FDIC, in certain limited cases, as the orderly liquidation authority for institutions deemed to be systemically important.¹⁵ In that process, the safe harbor provisions are eliminated and the FDIC

manages the resolution process. The use of such authority, however, is expected to be extraordinary and only when the stability of the whole U.S. financial system is in jeopardy. In most cases, the standard bankruptcy process will continue to apply.

To initiate the orderly liquidation process, the Secretary of the Treasury will decide if the financial company is in default or in danger of default, the company is systemically important, and it would be in the interest of the stakeholders of the financial company to enter into the orderly resolution process. The Secretary may initiate the process and recommend that the FDIC be made receiver of the troubled company. Depending on the type of financial institution, others on the Council may make a similar recommendation.

Dodd–Frank, however, imposes significant restrictions on the resolution process. First, the management and board of directors that were responsible for the failure of the firms must be removed from the organization. Second, the priority of claims in the resolution process should be adhered to in allocating firm losses—that is, equity holders will not receive anything until all the other creditors, including the FDIC, have been repaid according to their priority. Third, the FDIC will not take an equity position with the failing firm. Finally, no taxpayer funds are to be used to prevent the firm from being liquidated. Instead, the industry, perhaps through special assessments, will incur any losses from the resolution process.

An important element of the new resolution process is the requirement that SIFIs provide supervisors with a document indicating how they could most efficiently be resolved should they encounter financial problems—the so-called *living will* (see Avgouleas, Goodhart, and Schoenmaker, 2010; Bernanke, 2010).¹⁶ One of the major problems with resolving a large financial institution is the complex interconnectedness of the various elements of the organization. Affiliates and subsidiaries may be legally structured in a manner to achieve certain corporate objectives such as tax avoidance or regulatory arbitrage that may make the resolution process more difficult. With a living will in place, regulators can work with the SIFIs to restructure the organization and avoid these difficulties should resolution become necessary.¹⁷ Generally, the living wills are intended to provide the resolution authority with critical information on the firm's organizational structure to aid in the resolution process. The first submission of living wills for banks with assets greater than \$125 billion was in July 2012.

Based on Dodd–Frank, the FDIC has put in place plans to accomplish the twin goals of eliminating too-big-to-fail and taxpayer-funded bailouts. In the orderly

resolution process, the FDIC will act as receiver and the failing firm will be removed from the bankruptcy process.¹⁸

Over-the-counter derivative markets

Title VII of Dodd–Frank establishes a framework for the regulation of previously unregulated OTC derivatives. Even before the financial crisis, there were concerns that the OTC derivatives market represented a risk to the financial system, because it lacked the oversight and risk management tools typically associated with clearinghouse and exchange arrangements (see Born, 1998). The legislation brings the swap market under a joint SEC–CFTC regulatory regime to improve transparency, governance, and regulatory oversight. Broadly speaking, the legislation imposes new requirements for the instruments (swaps and security-based swaps¹⁹), the market participants (swap dealers and major swap participants), and the facilities on which the trades will be executed and cleared (designated contract markets, swap execution facilities, and derivatives clearing organizations). The regulatory responsibilities are split between the SEC and the CFTC (the joint regulators). The SEC will regulate security-based swaps, and the CFTC will regulate other swaps (i.e., all other transactions defined as swaps that are not security based). Forward contracts on commodities that are guaranteed for physical delivery are exempt from the definition of a swap. Foreign exchange swaps and foreign exchange forwards have also been exempted from the definition of a swap.²⁰

OTC swaps are typically customized bilateral contracts negotiated between counterparties that sometimes can be traded directly to other market participants. A swap is an agreement between counterparties to exchange the cash flows of two distinct reference items. Often, one of the reference items is fixed and one is floating. Swaps can be based on various interest rates, exchange rates, currencies, commodities, securities, indexes, and other reference items. Buyers of OTC swaps are exposed to liquidity risk—the inability to sell an asset when necessary—and counterparty risk—the possibility that the seller will default on the contract's obligations. Interest rate swaps make up the largest segment of the swaps market by notional value of contracts outstanding, approximately \$400 trillion as of December 2011.²¹

Another type of swap, a credit default swap (CDS), was a significant factor in the financial crisis of 2008.²² These instruments were originally designed to provide lenders and market participants with a method to hedge (insure) against the credit risk of a particular company, institution, or industry. The buyer of a CDS pays a

prenegotiated fixed premium (a percentage of the notional value) to the seller for the life of the contract in return for a guarantee that the seller will make a payment (the difference between notional and market value) if a prespecified credit event occurs on the reference security. If the buyer of the CDS owned the reference security, the CDS would be a hedge against losses on that security. If the buyer of the CDS did not own the reference security, the CDS would be a speculative short in the form of a *naked CDS* contract.²³ In either case, the seller takes a long position on the reference security, collecting premiums in exchange for providing credit protection to the buyer. The market for CDS (and the synthetic securities derived from pools of CDS) was initially concentrated in corporate credit, meaning that the underlying reference securities were typically corporate loans or bonds. However, the market expanded into consumer and commercial credit as CDS contracts were written on residential/commercial mortgage-backed securities and consumer/commercial asset-backed securities, or tranches of these securities.

When asset prices deteriorated leading into the financial crisis, problems in the OTC derivatives market became apparent. Information on prices, quantities, and firm-specific exposures was limited. In addition, the lack of central counterparty clearing house (CCP) arrangements increased the complexity and uncertainty around counterparty risks. This lack of transparency intensified the withdrawal of liquidity during the crisis, because financial institutions were reluctant to enter into lending or OTC derivative contracts without the ability to properly assess their counterparty's risk profile. In addition, many financial institutions owned CDS and other credit derivatives as hedges against their exposure to structured assets or to other financial institutions. Given the pre-Dodd–Frank regulatory regime, certain institutions (such as AIG) sold large amounts of credit protection in the form of CDS and other types of credit derivatives. As margin calls and payments were triggered, the insuring institutions were unable to fulfill their obligations and there was no CCP to cover payments to the owners of the credit protection. In contrast, approximately 50 percent of the global OTC interest rate swap market is cleared by an independent CCP, the SwapClear service of LCH.Clearnet. This market functioned relatively well during the crisis, even when Lehman Brothers failed with a \$9 trillion portfolio. The risk-management procedures performed as planned and the collateral that Lehman held covered all defaults, and the portfolio was successfully unwound and auctioned off by the CCP (see LCH.Clearnet, 2008).

As a result of Dodd–Frank, the joint regulators will have the power to determine which types of

swaps will have to be cleared through a CCP and which swaps will be exempt from such clearing requirements. The joint regulators will also determine the appropriate margin and collateral requirements for swap transactions cleared on CCPs, taking into account systemic risk considerations. These requirements are powerful tools to control risk levels in the system. If one of the entities involved in a nonexempt swap transaction is a nonfinancial commercial end-user, then the trade is exempt from any clearing requirement. CCPs that clear any non-security-based swaps (for example, interest rate swaps) must register with the CFTC as a derivatives clearing organization (DCO) and will be subject to reporting, recordkeeping, and operational guidelines.²⁴ In addition, many DCOs will also register as swap data repositories and perform the functions prescribed in Dodd–Frank, which include making data and information on market participants' open swap positions readily available to regulators.²⁵ The goal is for all swaps that are mandated to be cleared centrally to be executed as standardized products on a designated contract market (e.g., CME Group) or a newly created swap-execution facility, both of which will be required to follow reporting, recordkeeping, and operational guidelines set by the joint regulators. These execution requirements are intended to provide market participants and regulators with more transparent price and volume data.

Any entity that is substantially involved in making a market for swaps will be designated as a swap dealer (SD) and any nondealer substantially involved in trading swaps will be designated as a major swap participant (MSP). In general, if an entity is a commercial enterprise using swaps to hedge its activities, it will be exempt from these definitions. Both SDs and MSPs must register as such and will be subject to reporting, recordkeeping, and operational guidelines of the joint regulators, even if the entity is a bank or bank holding company. If the SD or MSP does not have a prudential regulator, the joint regulators can impose capital requirements and will impose margin requirements for noncleared swap transactions. Otherwise, the prudential regulators will impose these requirements. However, the joint regulators can prescribe rules that limit the activities of nonbank SDs and MSPs, even if these entities have prudential regulators. These rules may include position limits and limitations on the involvement with certain types of swaps.

The goal of title VII is to enable the CFTC and the SEC to regulate their markets comprehensively. The legislation imposes new restrictions and requirements on the instruments, market participants, and trading platforms. The implementation process is very difficult but of critical importance, especially given the enormous

size and importance of the OTC derivatives market to the financial system as a whole.

Conclusion

On July 21, 2010, the Dodd–Frank Wall Street Reform and Consumer Protection Act became law. The purpose of this article has been to set the stage for this special issue of *Economic Perspectives*, which provides a variety of perspectives on the challenges related to

implementing the act. The treatment is not comprehensive. We have chosen to focus on specific aspects of the reform and their likely impact. We have not addressed two controversial aspects of Dodd–Frank—the introduction of the Consumer Financial Protection Bureau (see Cadwalader, Wickersham & Taft LLP, 2012) and the proposed limits on banks, and their affiliates, engaging in proprietary trading for their own account (the so-called Volcker rule; see Duffie, 2012).

NOTES

¹More details and the full text of the act are available at <http://thomas.loc.gov/cgi-bin/bdquery/z?d111:H.R.4173>.

²A number of law firms and consulting firms provide periodic updates as to the status of Dodd–Frank implementation. See, for example, Davis Polk & Wardwell LLP (2012).

³See, for example, Financial Crisis Inquiry Commission (2011), which is accompanied by dissents, including that of Peter J. Wallison (available at http://fcic-static.law.stanford.edu/cdn_media/fcic-reports/fcic_final_report_wallison_dissent.pdf).

⁴See Duffie (2012).

⁵In the case of Dodd–Frank, this includes issues such as “disclosures relating to conflict minerals originating in the Democratic Republic of the Congo,” and “reporting requirements regarding coal or other mine safety.”

⁶Under Dodd–Frank, chartered thrifts will be supervised by the national bank regulators and the OTS has been eliminated.

⁷One of the first to stress this need was Borio (2003). For a more thorough discussion of macroprudential regulation, see Hanson, Kashyap, and Stein (2011).

⁸Pollution is the classic example of a negative externality, where the polluting firm imposes costs on others that are not accounted for in the production process and in determining prices and quantities of outputs. Regulation should induce the polluters to internalize the cost they are imposing on others. Systemic risk is the externality addressed in Dodd–Frank.

⁹The other regulators will also be involved in the regulation of SIFIs through their role in the Council and the continuation of their previous regulatory authorities.

¹⁰Bank holding companies with assets greater than \$50 billion are defined as SIFIs in the act.

¹¹The list of designated FMUs is included in FSOC (2012), Appendix A, available at www.treasury.gov/initiatives/fsoc/Documents/2012%20Appendix%20A%20Designation%20of%20Systemically%20Important%20Market%20Utilities.pdf.

¹²For more on Continental Illinois and means to address the too-big-to-fail issue, see Wall and Peterson (1990), Evanoff and Wall (2001), Evanoff, Jagtiani, and Nakata (2011), Bliss and Kaufman (2011), and Brewer and Jagtiani (2012).

¹³The literature on this topic is quite extensive. See, for example, Flannery and Sorescu (1996), Evanoff and Wall (2002), DeYoung et al. (2001), and Kwast et al. (1999).

¹⁴Some argue that instead of the new orderly liquidation authority, the existing bankruptcy code should be utilized for financial firm failures (Skeel, 2012) or that the code should be modified to better handle systemic financial firm failures (Scott, 2012). For a discussion of the advantages and disadvantages of using the bankruptcy code to resolve systemically important firms, see Bliss and Kaufman (2011) and Board of Governors (2012). For a discussion of the problems associated with safe harbor provisions, see Skeel and Jackson (2012).

¹⁵The decision to use the orderly liquidation authority would be made on a case-by-case basis. Bank holding company and nonbank SIFIs would qualify for consideration by the authorities to enter the orderly resolution process. The status of designated FMUs is currently unclear.

¹⁶It has been suggested that FMUs also be required to develop living wills, but this has yet to be decided.

¹⁷Indeed, one of the recommendations in the 2012 FSOC annual report was to use information from the living wills to simplify financial firms’ organizational structure. See FSOC (2012).

¹⁸Some remain skeptical of whether the law will succeed in making too-big-to-fail a thing of the past and getting taxpayers off the hook—for example, see Wilmarth (2011).

¹⁹Security-based swaps are broadly defined as swaps based on a single security, or a loan, or a narrow-based group, or an index of securities, or events relating to a single issuer or issuers of securities in a narrow-based security index.

²⁰This was decided by the Secretary of the Treasury, by authority granted in Dodd–Frank. See www.treasury.gov/initiatives/wsr/Documents/FX%20Swaps%20and%20Forwards%20NPD.pdf.

²¹See table 19 in www.bis.org/statistics/otceder/dt1920a.pdf.

²²Such contracts are typically associated with AIG, leading up to their rescue during the crisis. However the issue with the AIG contracts may have had more to do with the collateralization “hair trigger” and the sudden need to meet these calls.

²³In the case of naked CDS, the notional amount of the contracts can become greater than the notional amount of the assets on which the contracts are written.

²⁴CCPs that only clear security-based swaps are not subject to the same requirements.

²⁵See www.cftc.gov/ucm/groups/public/@newsroom/documents/file/sdr_qa.pdf.

REFERENCES

- Abernathy, Wayne A.**, 2012, "Dodd–Frank Act implementation: Well into it and no further ahead," *Economic Perspectives*, Federal Reserve Bank of Chicago, Vol. 36, Third Quarter, pp. 103–107, available at www.chicagofed.org/digital_assets/publications/economic_perspectives/2012/3Q2012_part4_abernathy.pdf.
- Avgouleas, Emilos, Charles Goodhart, and Dirk Schoenmaker**, 2010, "Living wills as a catalyst for action," Duisenberg School of Finance, DSF policy paper, No. 4, May.
- Benston, George, and George Kaufman**, 1994, "Improving the FDIC Improvement Act," in *Reforming Financial Institutions and Markets in the United States*, George Kaufman (ed.), Boston: Kluwer Academic Publishers.
- Bernanke, Ben**, 2011, "Implementing a macroprudential approach to supervision and regulation," in *Implementing Dodd–Frank: Progress to Date and Recommendations for the Future*, proceedings of the 47th Annual Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, pp. 1–8.
- _____, 2010 "The Squam Lake report: Fixing the financial system," speech delivered at the Squam Lake Conference, New York, June 16.
- Bliss, Robert, and George Kaufman**, 2011, "Resolving insolvent large complex financial institutions: A better way," *Banking Law Journal*, Vol. 128, No. 4, April, pp. 339–363.
- Board of Governors of the Federal Reserve System**, 2012, "Study on the resolution of financial companies under the bankruptcy code," report, Washington, DC: Board of Governors of the Federal Reserve System, available at www.federalreserve.gov/publications/other-reports/bankruptcy-financial-study-201107.htm.
- Borio, Claudio**, 2003, "Towards a macroprudential framework for financial supervision and regulation?," *CESifo Economic Studies*, Vol. 49, No. 2, pp. 181–216. Reprinted in Douglas Evanoff, George Kaufman, and A.G. Malliaris (eds.), 2012, *New Perspectives on Asset Price Bubbles: Theory, Evidence, and Policy*, New York: Oxford University Press, pp. 243–270.
- Born, Brooksley**, 1998, testimony before the U.S. House of Representatives, Committee on Banking and Financial Services, Washington, DC, July 24, available at www.cftc.gov/opa/speeches/opaborn-33.htm.
- Brewer, Elijah, and Julapa Jagtiani**, 2012, "How much did banks pay to become too-big-to-fail and to become systemically important?," *Journal of Financial Services Research*, forthcoming.
- Cadwalader, Wickersham & Taft LLP**, 2012, "The Consumer Financial Protection Bureau: The new, powerful regulator of financial products and services," memo, March 6, available at www.cadwalader.com/assets/client_friend/030612ConsumerFinancialProtectionBureau.pdf.
- Casey, Kathleen L.**, 2011, "The regulatory implementation and implications of Dodd–Frank," speech at the Corporate Directors Forum conference, Directors, Management & Shareholders in Dialogue, University of San Diego, Joan B. Kroc Institute for Peace & Justice, San Diego, January 23.
- Davis Polk & Wardwell LLP**, 2012, *Dodd–Frank Progress Report*, various issues, available at www.davispolk.com/publications/list.aspx.
- De Young, Robert, Mark Flannery, William Lang, and Sorin Sorescu**, 2001, "The information content of bank exam ratings and subordinated debt prices," *Journal of Money, Credit and Banking*, Vol. 33, No. 4, November, pp. 900–925.
- Duffie, Darrell**, 2012, "Market making under the proposed Volcker rule," Stanford University, Graduate School of Business, report to the Securities Industry and Financial Markets Association and submission to the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Securities and Exchange Commission, January 16, available at www.darrelduffie.com/uploads/policy/DuffieVolckerRule.pdf.
- Evanoff, Douglas, Julapa Jagtiani, and Taisuke Nakata**, 2011, "Enhancing market discipline in banking: The role of subordinated debt in financial regulatory reform," *Journal of Economics & Business*, Vol. 63, No. 1, January–February, pp. 1–22.
- Evanoff, Douglas, and Larry Wall**, 2002, "Measures of the riskiness of banking organizations: Subordinated debt yields, risk-based capital, and examination ratings," *Journal of Banking & Finance*, Vol. 26, No. 5, May, pp. 989–1009.
- _____, 2001, "Sub-debt yield spreads as bank risk measures," *Journal of Financial Services Research*, Vol. 20, Nos. 2–3, October, pp. 121–145.

- Financial Crisis Inquiry Commission**, 2011, *The Financial Crisis Inquiry Report: The Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, Washington, DC: U.S. Government Printing Office, January, available (with dissents) at <http://fcic.law.stanford.edu/report>.
- Financial Stability Oversight Council (FSOC)**, 2012, *2012 Annual Report*, Washington, DC: U.S. Government Printing Office, available at www.treasury.gov/initiatives/fsoc/Pages/annual-report.aspx.
- Flannery, Mark, and Sorin Sorescu**, 1996, "Evidence of bank market discipline in subordinated debenture yields: 1983–1991," *Journal of Finance*, Vol. 51, No. 4, September, pp. 1347–1377.
- Gruenberg, Martin J.**, 2012, "Implementing Dodd–Frank: Orderly resolution," *Economic Perspectives*, Federal Reserve Bank of Chicago, Vol. 36, Third Quarter, pp. 98–102, available at www.chicagofed.org/digital_assets/publications/economic_perspectives/2012/3Q2012_part3_gruenberg.pdf.
- Hanson, Samuel G., Anil K. Kashyap, and Jeremy C. Stein**, 2011, "A macroprudential approach to financial regulation," *Journal of Economic Perspectives*, Vol. 25, No. 1, Winter, pp. 3–28.
- Kane, Edward**, 1989a, "Changing incentives facing financial-services regulators," *Journal of Financial Services Research*, Vol. 2, No. 3, September, pp. 265–274.
- _____, 1989b, *The S&L Insurance Mess: How Did it Happen?*, Washington, DC: The Urban Institute Press.
- Kwast, M., D. Covitz, D. Hancock, J. Houpt, D. Adkins, N. Barger, B. Bouchard, J. Connolly, T. Brady, W. English, D. Evanoff, and L. Wall**, 1999, "Using subordinated debt as an instrument of market discipline," Board of Governors of the Federal Reserve System, staff study, No. 172, December.
- LCH.Clearnet**, 2008, "\$9 trillion Lehman OTC interest rate swap default successfully resolved," press release, London, October 8, available at www.lchclearnet.com/images/2008-10-08%20swapclear%20default_tcm6-46506.pdf.
- O'Malia, Scott D.**, 2012, "Implementing Dodd–Frank: Progress to date and recommendations for the future," *Economic Perspectives*, Federal Reserve Bank of Chicago, Vol. 36, Third Quarter, pp. 113–116, available at www.chicagofed.org/digital_assets/publications/economic_perspectives/2012/3Q2012_part6_omalia.pdf.
- Richardson, Matthew**, 2012, "Regulating Wall Street: The Dodd–Frank Act," *Economic Perspectives*, Federal Reserve Bank of Chicago, Vol. 36, Third Quarter, pp. 85–97, available at www.chicagofed.org/digital_assets/publications/economic_perspectives/2012/3Q2012_part2_richardson.pdf.
- Scott, Kenneth**, 2012, "A guide to the resolution of failed financial institutions: Dodd–Frank title II and proposed Chapter 14," Resolution Project, Stanford University, Hoover Institute, paper, February 29, available at www.hoover.org/taskforces/economic-policy/resolution-project/publications.
- Skeel, David A., Jr.**, 2012, "Real and imaginary resolution options for large financial institutions," in *The Role of Central Banks in Financial Stability: How Has It Changed?*, Douglas Evanoff, Cornelia Holthausen, George Kaufman, and Manfred Kremer (eds.), Singapore: World Scientific, forthcoming.
- Skeel, David A., Jr., and Thomas Jackson**, 2012, "Transaction consistency and the new finance in bankruptcy," *Columbia Law Review*, Vol. 112, No. 1, January, pp. 152–202.
- U.S. Department of the Treasury**, 2008, *Blueprint for a Modernized Financial Regulatory Structure*, report, Washington, DC: Government Printing Office, March.
- Van Der Weide, Mark**, 2012, "Implementing Dodd–Frank: Identifying and mitigating systemic risk," *Economic Perspectives*, Federal Reserve Bank of Chicago, Vol. 36, Third Quarter, pp. 108–112, available at www.chicagofed.org/digital_assets/publications/economic_perspectives/2012/3Q2012_part5_van_der_weide.pdf.
- Wall, Larry, and David Peterson**, 1990, "The effect of Continental Illinois' failure on the financial performance of other banks," *Journal of Monetary Economics*, Vol. 26, No. 1, August, pp. 77–99.
- Wilmarth, Arthur E., Jr.**, 2011, "The Dodd–Frank Act: A flawed and inadequate response to the too-big-to-fail problem," *Oregon Law Review*, Vol. 89, No. 3, pp. 951–1057.
- Young, Harrison**, 1993, "The meaning of FDICIA," in *FDICIA: An Appraisal—Renaissance, Requiem or Just Another Acronym?*, proceedings of the 29th Annual Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, pp. 520–533.

Regulating Wall Street: The Dodd–Frank Act

Matthew Richardson

In this article, I review some of the main findings described in *Regulating Wall Street: The Dodd–Frank Act and the New Architecture of Global Finance*, which I co-edited.¹ As such, this article is based on the work of 40 or so faculty members and PhD students at New York University's Stern School of Business (NYU Stern); I especially draw on the work in the volume of my co-editors, Viral V. Acharya, Thomas Cooley, and Ingo Walter. Moreover, in this article, where appropriate, I also mention and describe some of the updates to the implementation of the Dodd–Frank Wall Street Reform and Consumer Protection Act being performed by the various government agencies since passage of the act.

Because the financial crisis of 2007–09 started with a “bubble” in housing prices and was global in nature, the first narrative from analysts and academics focused on the low interest rate policy of the Federal Reserve in the years preceding the crisis and the global imbalance of payments due to the growth of emerging economies (see, for example, Taylor, 2009; Caballero and Krishnamurthy, 2009; and Portes, 2009). While these factors may have played a role in the formation of the crisis, it is generally understood that these factors were not the entire story. Rather, when analysts and academics peeled back the financial architecture of the United States and that of the global system, especially in Europe, they found gaping holes and noted that considerable parts of the architecture were broken (see, for example, Acharya and Richardson, 2009).

So, with the financial architecture in need of much improvement, the Dodd–Frank Act attempts to make the appropriate updates and repairs. Indeed, the Dodd–Frank Act reaches far and wide: In particular, the act consists of 849 pages, 16 titles, and 225 new rules across 11 agencies.² No one can accuse the act of not being all-encompassing. The fact the act is written this way, however, is not without some justification.

That said, one can also argue it is not well thought out in this regard. In a now infamous exchange between Federal Reserve Chairman Ben Bernanke and JPMorgan Chase CEO Jamie Dimon on June 7, 2011, the latter described a litany of changes to the financial system and asked whether any policymakers or regulators had studied the accumulated costs of such a buildup in financial regulations. Bernanke replied that there were many things wrong with the financial system, so many of these changes were needed; however, he did admit that no such analysis of the aggregate costs had been performed.³

Matthew Richardson is the Charles E. Simon Professor of Applied Economics in the Finance Department at the Leonard N. Stern School of Business at New York University. The views expressed are the author's and do not necessarily reflect the views of the Leonard N. Stern School of Business at New York University.

© 2012 Federal Reserve Bank of Chicago

Economic Perspectives is published by the Economic Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors' and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.

Charles L. Evans, *President*; Daniel G. Sullivan, *Executive Vice President and Director of Research*; Spencer Krane, *Senior Vice President and Economic Advisor*; David Marshall, *Senior Vice President, financial markets group*; Daniel Aaronson, *Vice President, microeconomic policy research*; Jonas D. M. Fisher, *Vice President, macroeconomic policy research*; Richard Heckinger, *Vice President, markets team*; Anna L. Paulson, *Vice President, finance team*; William A. Testa, *Vice President, regional programs*; Richard D. Porter, *Vice President and Economics Editor*; Helen Koshy and Han Y. Choi, *Editors*; Rita Molloy and Julia Baker, *Production Editors*; Sheila A. Mangler, *Editorial Assistant*.

Economic Perspectives articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *Economic Perspectives* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org.

ISSN 0164-0682

Let me consider just one example of many to illustrate this point. One of the widely accepted fault lines of the financial crisis of 2007–09 was the poor quality of loans, especially nonprime residential mortgages. How does the Dodd–Frank Act deal with this issue? Here lies the problem.

First, the act sets up the Consumer Finance Protection Bureau in title X to deal with misleading products and, more generally, predatory lending practices (see also title XIV, subtitles A and C). Second, in title XIV, subtitle B and title IX, subtitle D, the act imposes particular underwriting standards for residential mortgages and focuses on the residential mortgage market, creating preferential treatment for a new brand of mortgages, notably qualified residential mortgages. Third, in title IX, subtitle D, the act requires firms performing securitization to retain at least 5 percent of the credit risk, the motivation being that these firms had no “skin in the game.” Fourth, in title IX, subtitle C, the act increases regulation of the rating agencies—with a focus on their underlying conflicts of interests with issuers of asset-backed securities, as well as on the reduction of regulatory reliance on their ratings—in an attempt to increase the transparency of the credit risk of the underlying pool of loans. Yet, with all of these new provisions, the act does not even address what we at NYU Stern consider to be a primary fault for the poor quality of loans—namely, the mispriced government guarantees in the system that led to price distortions and an excessive buildup of leverage and risky credit.

Of course, all of these provisions are aimed at improving the underlying quality of the loans. While one can make the argument that the underlying benefits overlap and the act’s provisions are therefore substitutable (albeit with varying degrees of success), one cannot make the same argument with respect to the unintended costs of these provisions. These costs add up across all these enacted provisions, possibly drowning out the main benefit of improving loan quality. I think this is the point that JPMorgan Chase CEO Dimon was making to Fed Chairman Bernanke.

For example, consider some of the unintended consequences of the aforementioned provisions. First, the act abolishes the use of negative amortization loans, prepayment penalties for residential mortgages, and steering incentives for mortgage brokers (that is, payments to brokers for selling specific types of loans), among other items. The implied reason for these prohibitions is that these are standard tools and strategies used by predatory lenders. In some respects, this reasoning is justifiable. Yet, young urban professionals with substantial incomes in the future (such as lawyers, doctors, etc.) might find a negative amortization loan

the most efficient way to buy a significant house; prepayment penalties are quite common elsewhere in the system, such as with commercial mortgages, and allow lenders to share in some of the upside of the underlying properties; and mortgage brokers who know the neighborhood well might be able to put together the best packages for borrowers. There are clear costs to imposing such restrictions.

Second, title XIV of the Dodd–Frank Act applies minimum underwriting standards for mortgages. One of its more important clauses is that “in accordance with regulations prescribed by the Board [of Governors of the Federal Reserve System], no creditor may make a residential mortgage loan unless the creditor makes a reasonable and good faith determination based on verified and documented information that, at the time the loan is consummated, the consumer has a reasonable ability to repay the loan, according to its terms, and all applicable taxes, insurance (including mortgage guarantee insurance), and assessments.” While most would agree that higher lending standards would improve the securitization process, it is not clear that a presumption of loan repayment is realistic. Surely, some loans, even mortgages, may be economically viable, even if there is a significant chance of default. Of course, the interest rate underlying the loan should reflect the probability of default. Indeed, this is the basis for the market’s pricing of credit risk. Loan originators might be straitjacketed by the direct stipulation of underwriting standards—that is, those precluding the origination of loans that could be made inherently less risky through innovative contractual and monitoring mechanisms or simply different credit terms, such as requiring a higher down payment. In other words, such a provision may restrict worthwhile mortgage credit from being provided to the marketplace.

Third, the guiding principle behind title IX, subtitle D—namely, that securitizers should have skin in the game—appears to be reasonable and is a natural outcome of aligning incentives between investors and the securitizers. That said, to my knowledge, there has been no empirical study of the extent to which securitizers had skin in the game before the crisis. The legislation therefore may be based on a generally false premise, though it may have been true in some specific cases. Forcing all securitizers to have skin in the game for the majority of pooled assets clearly pushes securitization to the larger firms that have better access to funding. Given the problems that emerged in the recent financial crisis, is this a good thing? Moreover, one would suspect that many innovative, custom-made securitizations that would have normally taken place will now fall by the wayside.

And even if a lack of skin in the game was a source for the failure of securitization markets, there needs to be a well-constructed argument for why the private sector cannot solve the issue. I would argue that the best line of reasoning in this respect is the existence of mispriced government guarantees in the financial system, such as deposit insurance, too-big-to-fail subsidies, and government-sponsored enterprise (GSE) debt subsidies. Of course, a more direct attack of the problem would call for either the dismantling or appropriate pricing of government guarantees. This issue is further discussed in the next section of the article.

Fourth, title IX, subtitle C of the Dodd–Frank Act introduces some much-needed reform of the rating agencies. These reforms include the removal of regulatory reliance on ratings; some possible mechanisms to explicitly deal with the conflict of interest between raters and issuers of asset-backed securities; the increased likelihood of litigation damages; and a much-heavier-handed approach to the supervision of rating agencies. The purpose of such reforms is to improve the quality of the ratings for loans and asset-backed securities, which regulators and investors consult. This, in theory, would then lead to higher-quality loan standards overall. In other words, the goal is the same as the other parts of the Dodd–Frank Act. Of course, there are consequences to the act’s provisions for rating agencies. For example, with the removal of regulatory reliance on the ratings, the act comes squarely up against capital regulation being put forth in the new international banking supervision accord Basel III.⁴ Moreover, this point aside, the Securities Exchange Commission (SEC) suggested new rules on April 11, 2011, to deal with the new provision to remove regulatory reliance on ratings—namely, to put more of an onus on the financial institutions to demonstrate their creditworthiness. But hasn’t this been argued as one of the leading problems with Basel II and its application in the recent financial crisis? That is, it has been argued that self-regulation does not work well given the misaligned incentives of the financial sector.

I hope the point comes across that the accumulation of the Dodd–Frank Act’s provisions might be overkill in a respective cost–benefit analysis. The question we need to ask is, which of the provisions best improves underwriting standards at the lowest cost to the system?

The rest of this article will focus on three major aspects of the Dodd–Frank Act, which my colleagues and I argue in our *Regulating Wall Street* book are positives. These parts of the act are 1) the measurement and regulation of systemic risk; 2) the resolution of failing large, complex financial institutions (LCFIs);

and 3) the regulation of some major and very systemically important markets, in particular over-the-counter (OTC) derivatives markets. That said, after briefly describing the positives, I will focus the majority of my analysis on some missed opportunities for the Dodd–Frank Act to have addressed these important issues, as well as on some of the unintended consequences stemming from the legislation.

Systemic risk

The economic theory of regulation is very clear. Regulate where there is a market failure. It is apparent that a major market failure in this crisis was the emergence of systemic risk. More specifically, systemic risk emerged when aggregate capitalization of the financial sector became low. The intuition for why this is a problem is straightforward. When a financial firm’s capital is low, it is difficult for that firm to perform financial services; and when capital is low in the aggregate, it is not possible for other financial firms to step in and address the breach. This breakdown in financial intermediation is the reason that severe consequences occurred in the broader economy. When financial firms therefore ran aground during the crisis period, they contributed to the aggregate shortfall, leading to consequences beyond the individual firms. Individual firms had no incentive to manage the systemic risk.

Therefore, it is a big positive that the Dodd–Frank Act focuses on the market failure of systemic risk. The negative externality associated with such risks implies that private markets cannot efficiently solve the problem, so government intervention is required. Prior to the financial crisis, the U.S. financial system and the regulatory apparatus of the Basel Accords were focused too much on individual institutional risk and not enough on system-wide risk. In other words, regulators now need to focus *not just* on the losses of individual financial institutions, but also on the cost that their failure would impose on the system.

The Dodd–Frank Act now emphasizes macroprudential regulation as an important component of the financial regulatory system. For the first time in U.S. financial regulatory history, the act requires such regulation—that is, 1) to measure and provide tools for measuring systemic risk, 2) to then designate firms and even sectors as those that pose systemic risk, and 3) to provide enhanced regulation of such firms and sectors. While arguably this type of regulation was always in the purview of the central bank and regulators, the recent crisis has shown the importance of writing it into law.

Specifically, the Dodd–Frank Act creates a supporting research organization within the U.S. Department of the Treasury—namely, the Office of Financial Research (OFR)—to measure and provide tools for measuring systemic risk. The Dodd–Frank Act assigns new responsibilities to a new body, the Financial Stability Oversight Council (FSOC), which will use the data provided by the OFR to identify systemically important financial institutions (SIFIs). FSOC and the other relevant agencies are then given the power to provide enhanced regulation of these SIFIs—such as levels of capital and liquidity necessary to withstand major shocks to asset markets. In addition, the act also gives the power for prompt corrective action of SIFIs through the orderly liquidation authority (OLA), which is to be run and modeled by the Federal Deposit Insurance Corporation (FDIC). This is the focus of the next section of the article.

Of course, the devil is in the details, and there are plenty of things in the Dodd–Frank Act that do not coincide with my thinking on macroprudential regulation (or with that of many of my colleagues at NYU Stern). In the Dodd–Frank Act, large banks (that is, those with over \$50 billion in assets) are designated as SIFIs. Subsequent to the passage of the Dodd–Frank Act, FSOC published its final rule (and interpretative guidance), detailing the potential criteria for nonbank financial companies to also be SIFIs.⁵ These criteria involve a three-stage process. The final FSOC rule states that “the first stage of the process (‘Stage 1’) is designed to narrow the universe of nonbank financial companies to a smaller set of nonbank financial companies,” which is completed “by applying uniform quantitative thresholds that are broadly applicable across the financial sector to a large group of nonbank financial companies.” Next, according to the rule, “in the second stage of the process (‘Stage 2’), the Council [FSOC] will conduct a comprehensive analysis … of the potential for the nonbank financial companies identified in Stage 1 to pose a threat to U.S. financial stability.” And finally, the rule explains that “the Council will send a notice of consideration to each nonbank financial company that will be reviewed in Stage 3,” which “will build on the Stage 2 analysis using quantitative and qualitative information collected directly from the nonbank financial company.” In addition, the rule states that “based on the analysis performed in Stages 2 and 3, the Council may consider whether to vote to subject a nonbank financial company to a proposed determination [of SIFI status].”⁶

The FSOC rule narrowed the Dodd–Frank Act’s criteria to six factors: size, interconnectedness, substitutability, leverage, liquidity risk and maturity mismatch,

and existing regulatory scrutiny.⁷ Each of these factors would then be applied to the process described previously to come up with a possible SIFI designation. As title I of the Dodd–Frank Act states, once SIFIs have been determined, then FSOC will provide “the establishment and refinement of prudential standards” for them that “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.” Moreover, these stricter standards may include “(A) risk-based capital requirements; (B) leverage limits; (C) liquidity requirements; (D) resolution plan and credit exposure report requirements; (E) concentration limits; (F) a contingent capital requirement; (G) enhanced public disclosures; (H) short-term debt limits; and (I) overall risk management requirements.”

Rather than provide a long list of criticisms of the Dodd–Frank Act’s approach to systemic risk, I will mention just a few important ones. The six factors mentioned in the FSOC rule are reasonable descriptions of the failure risk of financial institutions. However, these factors may not be adequate for addressing this point: It is not the individual institution’s risk per se, but its contribution to system-wide risk that matters. What we care about is whether a financial firm will falter when other firms are struggling. In other words, systemic risk is about codependence—that is, how much leverage a firm has and how correlated its assets are with those of other institutions in the bad state of nature, as well as whether its failure increases the likelihood of other firms failing. There is no mention in the Dodd–Frank Act or subsequent revisions about the co-movement of a financial firm’s asset returns with aggregate factors and tail risk. Of course, this does not preclude FSOC from making codependence an important component of systemic risk measurements in the future, but at present FSOC does not require this.

For example, it is looking increasingly likely that capital regulation will be the blunt instrument to deal with SIFIs. Analysis by a number of us at NYU Stern makes clear that higher capital requirements resulting from systemic risk do not have to coincide with larger financial institutions (see <http://vlab.stern.nyu.edu/welcome/risk/>). For a variety of reasons, it may well be the case that large financial institutions deserve heightened prudential regulation. But if the criterion is that they need sufficient capital to withstand a crisis, it does not follow that size necessarily is the key factor unless it adversely affects a firm’s marginal expected shortfall, that is, a firm’s expected losses in a financial crisis.

The fact that this simple point about codependence is missed by both the Dodd–Frank Act and subsequent FSOC rulings is worrying. This problem is exacerbated by the added concern that a collection of small firms, such as money market funds, can have a systemic impact on the financial system and the overall economy, yet may not be detected by FSOC’s three-stage evaluation of the six identified factors. This issue is discussed in more detail later.

That said, the financial crisis was primarily caused by the existence of incentives of large, complex financial institutions to take excess risk and leverage. The primary source of this misalignment of incentives was twofold: 1) the fact that systemic-risk costs do not get internalized by individual institutions and 2) the existence of a conflict of interest between firms’ shareholders and the taxpayers via mispriced government guarantees of debt (for example, deposit insurance and too-big-to-fail subsidies).

With respect to individual institutions not internalizing systemic risk, the Dodd–Frank Act creates incorrect incentives by charging *ex post* rather than *ex ante* for systemic risk (an issue discussed in greater detail in the next section). The act misses the opportunity to fix the negative externality of systemic risk by imposing the standard economic solution of taxing such an externality. In other words, there should be an additional fee or premium that is tied specifically to the systemic risk of LCFIs as their failures impose costs on the rest of the financial sector and the real economy (for example, Acharya, Pedersen, et al., 2010). The issues underlying the development and implementation of such a systemic fee structure are, however, nontrivial. This point aside, in order to avoid these fees, LCFIs would organically become less systemic by choosing less leverage and holding assets that have less aggregate tail risk. It is interesting to note that in the House of Representatives’ version of the precursor bill to the Dodd–Frank Act, such a provision was included.

But this is not the approach taken by the Dodd–Frank Act. As mentioned previously, it is looking increasingly likely that the result will be to follow Basel III’s lead. With respect to Basel III, there are certainly improvements to Basel II, most notably the addition of a liquidity requirement for financial firms, a simple leverage ratio as a supplementary measure to risk-based capital, and higher capital requirements overall for SIFIs. All of these are included in the Dodd–Frank Act.

Unfortunately, however, Basel III continues the risk weights that are tied to credit ratings both within and across asset classes, as well as the internal ratings approach that many have forcefully argued against as

a result of the crisis. Remarkably, the Basel III approach and, therefore, Dodd–Frank’s are still focused on the risk of individual banks as opposed to system-wide risks. Indeed, Basel III continues the focus of the previous Basel Accords on risk-weighted capital measures of individual firms as the main indicator.

This approach is a core problem of the new financial regulation. Basel’s approach to systemic risk weights seem arbitrary and is not based on objective criteria. Thus, across-the-board higher capital requirements, as are being proposed for SIFIs, may actually exacerbate the problem. Regulation should not be about more capital *per se* but about more capital for systemically riskier financial firms. One of the problems that emerged in the financial crisis was the preferred capital treatment provided to certain asset-backed securities, such as AAA-rated mortgage-backed securities (MBS). With simply higher capital requirements for SIFIs, it cannot be ruled out that the preference for AAA-rated MBS or other similarly rated securities will be even greater, causing an even bigger buildup in aggregate systemic risk. Granted, the Dodd–Frank Act does provide some mitigating solutions, such as the Volcker rule,⁸ that still need to be played out.

Moreover, whatever is being proposed for the banking sector in terms of capital requirements should have comparable regulation for the “shadow” banking system,⁹ lest the activities simply be shifted from one part of financial markets to another. The result of such a shift could actually lead to an increase in systemic risk. This issue is not directly covered in the Dodd–Frank Act. But I discuss it in greater detail later in this article.

Finally, the problem of mispriced government guarantees (and resulting moral hazard) gets little coverage in the Dodd–Frank Act other than in the orderly liquidation authority in title II. There is little analysis of what it means for the ability to regulate the financial sector when many financial institutions can finance their activities at below-market rates, which we know can lead to excessive risk. These distortions occurred not only at banks with access to FDIC insurance, but also at Fannie Mae and Freddie Mac (the two major GSEs) and the too-big-to-fail LCFIs. And such distortions remain a big issue. With regard to this point, there is a 2002 study by economists at the Federal Reserve Bank of Richmond that found about 45 percent of all financial liabilities in 1999 fell under the U.S. safety net (Walter and Weinberg, 2002); a similar study performed more recently by the Richmond Fed found that a decade later almost 60 percent of all financial liabilities were covered by the safety net (see Malysheva and Walter, 2010).

It is hard to imagine how systemic risk can be addressed without simultaneously dealing with the mispriced safety net of the U.S. financial sector. Thus, it seems necessary that financial firms be charged fees commensurate with the explicit or implicit government insurance they enjoy on a continuous basis. If one looks at the act itself, it does make some changes to FDIC insurance premiums in title III. For example, FDIC premiums are expanded beyond the insured deposit base to most liabilities, and the upper limit for the ratio of the FDIC-insured fund to total deposits is removed. That said, the GSEs are ignored in the act. For the insurance sector, there's a national office to look into these issues, but the sector is, for the most part, ignored and thus left to rely on small state guarantee funds. Most problematic is the fact that no significant changes to risk-based pricing have been made since the Federal Deposit Insurance Corporation Improvement Act of 1991. Some 20 years later, both the nature of the risks and our understanding of those risks have changed greatly.

Resolving large, complex financial institutions

There is almost universal agreement that there needs to be a solvency regime to deal with LCFIs. One might prefer the receivership approach of the Dodd–Frank Act; changes to the U.S. bankruptcy code, in the form of Chapter 11F for financial institutions (see, for example, Jackson, 2010); or “bail-in” alternatives, which I explain more later (see, for example, Acharya, Adler, et al., 2010). But nearly all agree that the regulatory system must be powerful enough to be able to take prompt corrective action—in other words, it must have enough authority to deal with troubled institutions prior to default. The financial crisis of 2007–09 illustrated the problems that can arise when an LCFI, such as Lehman Brothers, fails without adequate planning and safeguards. At least from 30,000 feet above, the fact that title II of the Dodd–Frank Act puts such liquidation authority in place appears to be a positive. The case I make here, however, is that there remain several important questions about the implementation of this authority, as well as concerns about the systemic risk that can emerge from it.

The Dodd–Frank Act describes the following process. FSOC would have previously made a determination that a financial company (that is, a bank holding company, insured depository institution, nonbank financial company, or insurance company) is systemically risky—that is, it is a SIFI. The FDIC and the Fed (or, for insurance companies, the Federal Insurance Office) must report to the Treasury Secretary that the

SIFI is in danger of default and then explain how this default would affect overall financial stability, why normal bankruptcy proceedings are not appropriate, and why a private sector solution is not available. Under these circumstances, the Treasury Secretary seeks appointment of the FDIC as receiver. If the company does not consent to be placed into receivership, then a petition by the Treasury Secretary must be filed at the U.S. District Court for the District of Columbia. The court's only determination is whether the decision was “arbitrary and capricious.” This determination must be made within 24 hours of the receipt of petition.

If the Treasury Secretary's petition succeeds in court, the FDIC assumes complete control over the company and its liquidation process. Most important, the FDIC has unilateral authority to review and pay claims. The principle of priority should be followed; however, in contrast to normal bankruptcy proceedings, the FDIC has latitude to deviate from this principle under the Dodd–Frank Act's orderly liquidation authority process. Some examples of the FDIC tools are: 1) advanced planning enhanced by living wills of SIFIs, 2) prompt distribution of proceeds upon the sales of assets, 3) the authorization to provide “going concern” support via a bridge financial company, 4) the authorization to borrow from the Treasury to provide such funding (eliminating the uncertainty of debtor-in-possession funding), and 5) the ability to transfer qualified financial contracts (for example, swaps, repurchase agreements, and other types of securities contracts) to the bridge company via a brief automatic stay.

The last tool highlights the benefits and costs of providing safe harbors for qualified financial contracts. On the one hand, safe harbors allow counterparties to terminate, liquidate, or net out their contracts immediately, potentially causing fire sales, which might propagate systemic risk. On the other hand, automatic stays tie up the contracts and reduce liquidity, making runs on the financial system more likely. The Dodd–Frank Act provides a compromise between these two unfortunate outcomes.

The main problem with the Dodd–Frank Act's approach to the failure of a financial institution, however, mirrors its problems with respect to managing systemic risk described earlier. The orderly liquidation authority of title II provides the regulator legal power to act in the case of a failure of a SIFI, but it does not set up the appropriate regime to deal specifically with banking crises—that is, with multiple SIFI failures occurring simultaneously.

The problem is that the Dodd–Frank Act really puts a heavy reliance on the creation of the OLA to

solve financial crises. Resolution by its nature is a balancing act between two forces that (potentially) work against each other. The first force is that ideally the act should mitigate moral hazard and therefore bring back market discipline. The countervailing force is that the act should also help manage systemic risk when it emerges. So, how well does the Dodd–Frank Act do this? Not that well, from my perspective.

It seems to me that the act is, for the most part, focused on the orderly liquidation of an individual institution and not on the system as a whole. What is unique about a financial firm’s failure, however, is its impact on the rest of the financial sector and the broader economy. In other words, losses to SIFI creditors can wipe out the capital of other SIFIs, which in turn can cause the economy to falter. This suggests that we need an ex ante orderly liquidation fund.

To put this into perspective, consider Federal Reserve Chairman Ben Bernanke’s oft-cited analogy for why bailouts, however distasteful, are sometimes necessary.¹⁰ Bernanke has described a hypothetical neighbor who smokes in bed and, through his carelessness, starts a fire and begins to burn down his house. You could teach him a lesson by refusing to call the fire department and letting the house burn to the ground. However, you would risk the fire spreading to your home and other homes. So first, the fire has to be put out. Only later should you deal with reform and retribution. This is how I would describe legislation prior to the Dodd–Frank Act.

In terms of Bernanke’s analogy, the Dodd–Frank Act’s approach would be to not call the fire department and to let the neighbor’s house burn down. The act would forbid the fire department from initially coming to the scene. Given the costs of such a policy, the Dodd–Frank Act would police the neighborhood to try and make sure no one smokes, and if a fire results, it would charge the neighbors eventually for costs associated with a fire. I suppose the hope is that these neighbors would therefore also police each other.

Instead, I would argue that (again, in terms of the Chairman’s analogy) you should call the fire department, but instead of saving the neighbor’s house, the fire-fighters should stand in protection of your house and those of your other neighbors. If the fire spreads, they are ready to put it out. This is what the role of the orderly liquidation fund should be. And by the way, because a fire department is expensive to keep, I would charge all the smokers in the neighborhood the cost. And over time, the neighborhood would have fewer smokers. This is what I mean by balancing moral hazard mitigation and systemic risk management.

The Dodd–Frank Act clearly does not do this. Here is one example. As mentioned before, the act creates incorrect incentives by charging ex post rather than ex ante for systemic risk. In particular, if firms fail during a crisis and monies cannot be fully recovered from creditors, the surviving SIFIs must make up the difference ex post. This actually increases moral hazard because there is a free-rider problem—prudent firms are asked to pay for the sins of others. It also increases systemic risk in two important ways. First, firms will tend to herd together, so a race to the bottom could ensue. Second, it requires the surviving firms to provide capital at the worst possible time.

Another important issue is the question of how to deal with liquidity. As Tirole (2010) points out, the approach for the prudential regulation of liquidity can be very similar to that for the prudential regulation of capital; that is, this approach can be micro-based, by protecting taxpayers, and macro-based, by managing systemic risk. The Dodd–Frank Act does not apply a macro-based approach to the prudential regulation of liquidity, and it arguably hinders a solution—namely, the Fed’s role as a credible lender of last resort (LOLR).

As past crises have shown, in particular during the Panic of 1907, liquidity crises can quickly turn into solvency crises. In fact, in the wake of the Panic of 1907, Congress passed the Aldrich–Vreeland Act, resulting in a final report on the crisis some three years later. This report in turn led Congress to pass the Federal Reserve Act on December 22, 1913, creating the Federal Reserve System. While the Federal Reserve has clearly evolved over time, it still serves its original purpose as a credible lender of last resort, as it did in the most recent financial crisis. The underlying principle of the LOLR is based on Walter Bagehot’s (1873) famous work *Lombard Street: A Description of the Money Market*, which suggested that in order to prevent the failure of solvent but illiquid banks, the central bank should lend freely on good collateral at a penalty rate.

While there is substantial disagreement among policymakers, analysts, and academics as to whether the Fed stretched this principle to insolvent firms, there is little disagreement that the LOLR was used widely throughout the crisis. At the very least, as the recent financial crisis has shown, solvency crises can be greatly amplified by liquidity funding problems. From my perspective, it is clear that the architecture of the financial system should be built around this point.

Title XI of the Dodd–Frank Act now changes the Fed’s role in dealing with a liquidity crisis. Specifically, title XI restricts the Fed’s LOLR ability—established under section 13(3) of the Federal Reserve Act—to deal with nonbanks unless a system-wide crisis emerges.

In particular, emergency lending can no longer be applied to any “individual, partnership, or corporation,” but only to “participants in any program or facility with broad-based eligibility.” Moreover, according to title XI of the Dodd–Frank Act, “any emergency lending program or facility is for the purpose of providing liquidity to the financial system, and not to aid a failing financial company.” Further, these actions have been politicized to the extent that any Fed programs that allow for the efficient distribution of liquidity in a crisis to solvent financial institutions with acceptable collateral would now require approval of the Treasury Secretary.

The most recent financial crisis illustrates the importance of the Fed’s role as the LOLR, whether it be for nonbanks—like Bear Stearns, AIG (American International Group), or Lehman Brothers (which was not supported)—or the money market fund sector. The Panic of 1907 taught us something, namely, that the financial system can collapse without a corresponding large aggregate economic shock, like other crises. It is indeed troubling that when the financial system is weak, temporary liquidity problems at a particular firm can now trigger a full-blown crisis because the Fed’s LOLR ability has been restricted.

Specifically, the problem is that without an LOLR for “shadow banks” and other nonbank institutions, systemically important institutions will be put through the OLA process, even if it is just for a liquidity event. But of course once this happens, similar institutions will also suffer runs as lenders try to avoid the OLA process, paradoxically triggering regulators to place them into the OLA process. From a relatively minor crisis, such as the Panic of 1907, the system could now face a severe financial crisis and systemic event. This is precisely why the LOLR was created following the Panic of 1907. In the modern world, there may be no functional difference between a bank and some other financial institution, so why restrict the Fed’s ability to act?

As a final comment on resolving LCFIs, it is reasonable to question the Dodd–Frank Act’s choice of the FDIC receivership approach. To the FDIC’s credit, subsequent to the Dodd–Frank Act being passed, the FDIC produced a white paper outlining how it would have used its authority under Dodd–Frank to deal with Lehman Brothers.¹¹ It is an interesting document because it highlights the tools now available to the FDIC as a result of title II of the Dodd–Frank Act.

That said, there are reasons to question the analysis of the FDIC authors. Their argument is based on several key assumptions, such as 1) market discipline, because Lehman management and staff would no longer believe the firm was too big to fail; 2) advanced liquidation

plans, especially in light of Bear Stearns’s troubles; 3) the ability to provide sufficient liquidity to operate as a going concern; and 4) an open bidding process to sell assets and operations. A few observations are in order. First, aside from the third point, the FDIC document is arguably too optimistic on these points. For example, the authors assume Barclays could have been persuaded to buy Lehman’s derivatives business—even though its value would have been in question. Second, one of the main issues related to Lehman’s collapse was not just the rapid unwinding of derivative and swap positions not granted a stay in bankruptcy, but also how this signaled to other LCFIs, in particular the other major investment banks, that these firms would not be bailed out, triggering runs on their liabilities. Third, it would have to be the case that the unintended consequences of Lehman’s failure—such as the Reserve Primary Fund (a large money market fund with exposures to Lehman Brothers debt securities) “breaking the buck” and the resulting run on money market funds and the rehypothecation¹² and freezing of hedge fund assets at Lehman’s UK prime brokerage unit—could have been identified *a priori*. Fourth, there is a presumption that international coordination would have taken place that somewhat relies on the false premise of a uniform legal framework across different jurisdictions.

As an alternative to the OLA process, Jackson (2010) has argued for a more standard bankruptcy model with adjustments for financial institutions—the so-called Chapter 11F. The basic notion is that the bankruptcy code has been around in some form for 200 years, so given our lengthy experience with it, there is much more certainty with respect to how it would operate. Jackson concedes that adjustments would need to be developed—such as 1) a prompt corrective trigger possibly by involuntary petition; 2) an “experienced” judiciary court focused on LCFIs; 3) qualified financial contracts being divided into two types—illiquid (subject to the stay) and liquid (exempt); and 4) a role for government through debtor-in-possession financing, albeit subject to rules of strict priority. While this model alone would not solve all the issues mentioned previously, its implementation might be smoother.

In Acharya, Cooley, et al. (2010a), my colleagues and I argue that based on the academic concept of a living will from the corporate finance literature (for example, Adler, 1993), it may be possible to impose discipline on creditors without even relying on bankruptcy. This idea is typically called a “bail-in” and is close in spirit to the concept of contingent capital (which, to the Dodd–Frank Act’s credit, is discussed as a possible tool to be used by FSOC for SIFIs). The

idea is to divide a financial firm's capital structure into a hierarchy of priority tranches. In the event of a default on a debt obligation, equity would be eliminated, and the lowest-priority debt tranche would be converted to equity. If this is not sufficient, then the process is repeated until all defaults are cured or the highest tranche is converted to equity. Only at this point would senior debtholders have reason to foreclose on collateral. There are a number of issues surrounding the implementation of a bail-in that would need to be addressed; however, in the purest form of a bail-in, creditors pay for the firm's failure, but the cost of financial distress is avoided.

Shadow banks and regulation by form, not function

As of the summer of 2007, just prior to the start of the financial crisis, the short-term liabilities of the U.S. financial system were approximately \$15.3 trillion in size; however, just \$4.8 trillion of this amount was insured by the FDIC. Of the rest, \$2.7 trillion represented uninsured deposits, \$3.1 trillion money market mutual funds, \$2.5 trillion broker-dealer repo agreements, \$1.2 trillion asset-backed commercial paper (ABCP), \$0.6 trillion securities lending, and \$0.4 trillion old-fashioned financial institution commercial paper.¹³

The shadow banking system performs functions like banks but takes the form of other financial firms or entities. These financial institutions borrow short term in rollover debt markets, leverage significantly, and lend and invest in longer-term and illiquid assets. The growth of shadow banking over the past 25 years has been extraordinary relative to the growth in traditional bank deposits. The SEC aside, the shadow banking system is, for the most part, unregulated. It is also unprotected from bank-like runs (that is, there are no explicit guarantees provided by the government). Of course, the financial crisis of 2007–09 showed that much of the shadow banking system—investment banks through repos, money market funds, and asset-backed commercial paper conduits in particular—ended up being run on and eventually bailed out. This part of the financial system, considered in whole, was too big to fail.

Does history tell us anything about how to regulate the shadow banking system? Early in the twentieth century, for example, during the aforementioned Panic of 1907 and the various banking panics that occurred in 1930–32 in the Great Depression, uncertainty and lack of information about which financial institutions were insolvent led to system-wide bank runs. In response to these systemic runs, the government created the Federal Reserve with its lender of last resort facility, the FDIC and deposit insurance, and a number of

banking and investment acts. Arguably, the most important part of the legislation was that depositors no longer had to run on banks because the government guaranteed the funds. Of course, it is well understood that this safety net creates a moral hazard, that is, an incentive for banks to undertake greater risk than they would without this insurance. Over time, regulators and policymakers therefore set up a number of countervailing barriers: 1) banks would have to pay to be a part of the deposit insurance system, so, at least, on an ex ante basis, regulators took into account the cost of the insurance; 2) the risk-taking activities of banks were ring-fenced to the extent that there was a separation of the commercial and the riskier investment banking activities; and 3) enhanced supervision (generally in the form of capital requirements and prompt corrective action) and winding-down provisions of individual banks were established.

So how does the Dodd–Frank Act address the regulation of the shadow banking system? For the most part, the act is silent on the shadow banking system. This is unfortunate, since the size and nature of the shadow banking system produced obvious systemic risk effects and, at a minimum, amplified the severity of the crisis. Hence, broadly speaking, the Dodd–Frank Act falls into the trap of regulating by form, not function.

This is a problem for two major reasons. First, the experience of the most recent financial crisis showed the importance of capital requirements being consistently set across markets and institutions. In other words, if the risk of the underlying loans is the same, it should not matter how those loans are sliced and diced through securitization in terms of determining the required capital buffer of banking institutions. Second, institutions performing similar tasks (for example, depository institutions *and* money market funds) should be regulated similarly. Without such treatment, regulatory arbitrage is likely to occur at the cost of creating systemic risk. Next, I provide a few examples from the most recent crisis illustrating these points.

First, the exploitation of the capital regulatory rules of the Basel Accords and the U.S. regulatory structure was a major problem contributing to the financial crisis of 2007–09 (for example, Acharya, Cooley, et al., 2010b). While the Dodd–Frank Act plugs some of the loopholes, the overall general approach is unchanged. One striking illustration relates to Fannie Mae and Freddie Mac, the two major GSEs. Starting in the mid-1980s, they held about 7 percent of the market share of the mortgage market. By the time of the crisis, the number had become almost 50 percent, representing \$5 trillion of credit risk. How did the

two GSEs become so dominant? If a bank made a portfolio of mortgage loans, the bank was required to hold 4 percent capital. If the same bank took that portfolio of mortgage loans, sold it to Fannie Mae or Freddie Mac, and bought it back as mortgage-backed securities, the bank only had to hold 1.6 percent capital; since Fannie and Freddie were only required to hold 0.45 percent capital on their mortgage guarantees, the financial system as a whole only needed 2.05 percent capital. So for the exact same risks and exact same loans, the financial system could have about twice the leverage (see, for example, Acharya, Richardson, et al., 2011). All that was required was that the GSEs had to be involved and the banks held the securities. Not surprisingly, a significant fraction of the mortgage risk—approximately 40 percent—never left the systemically riskier parts of the financial system. These problems still persist under the Dodd–Frank Act.

Second, the development of a parallel banking sector that used wholesale funding and OTC derivatives to conduct identical banking activities as commercial banks—even though that sector’s activities were not subject to the same rules and regulations—is perfectly illustrated by the behavior of the Reserve Primary Fund, the large money market fund that “broke the buck” when Lehman Brothers failed. Kacperczyk and Schnabl (2010), NYU Stern professors, analyze the risk-taking behavior and incentives of money market funds during the crisis. The Reserve Primary Fund was one of the oldest money market funds, and historically, it had been operated as a very safe fund. Going into the summer of 2007, its \$15 billion fund yielded spreads of around 7–8 basis points above Treasury securities. Then, all of a sudden, in mid-August 2007, the fund started offering spreads of 20 basis points and its assets more than doubled in value. Before the financial crisis went pandemic with Lehman’s collapse in September 2008, the fund’s assets had accumulated to over \$60 billion and the fund had been offering spreads of 40 basis points. So what was the Reserve Primary Fund doing? It had loaded up on asset-backed commercial paper, raising the share of its holdings in ABCP from essentially zero percent to over 50 percent; it did this by reducing the U.S. government securities and repo exposures of its holdings from 40 percent to 10 percent. Of course, the fund did this by taking a big bet on ABCP. The first major run in the shadow banking system was on ABCP, with yield spreads widening from 10 basis points to 100 basis points after August 7, 2007.¹⁴

Why is this relevant? The answer lies in the following question: What is the likelihood, either before or after the passage of the Dodd–Frank Act, that if a bank was behaving in this manner, regulators would

not intervene? The problem is that shadow banks by definition operate in the “shadows” and are thus not subject to the regulation or capital requirements that traditional banks are. Granted, these shadow banking firms may not have access to the safety net, but the fact they may need it confirms the systemic level of their activities.

That said, proponents of the Dodd–Frank Act will argue that a number of titles in the act are relevant for shadow banking. Title I of the act allows nonbanks—possibly shadow banks—to be designated as SIFIs and therefore fall under the regulatory umbrella. Title VIII (which can be cited as the Payment, Clearing, and Settlement Supervision Act of 2010) can also be interpreted as dealing with some issues related to shadow banking. Title IV calls for registration of hedge funds; title V, for a study of insurance companies; and title IX, subtitle D, for greater transparency of the securitization process (a main vehicle for shadow banks). That said, of the 16 titles in the Dodd–Frank Act, there is no specific title on shadow banking. Analysis of shadow banking and corresponding regulation of these entities, therefore, are left to working groups and task forces at the various regulatory agencies. Without the full support of the Dodd–Frank Act, it remains to be seen what these new rules will look like.

Of course, title VII of the Dodd–Frank Act did bring one of the major and very systemically important markets, OTC derivatives, operating in the “shadows” back into the regulatory fold. From my perspective, we can quibble about whether we like every aspect of how the act treats OTC derivatives markets, but I think the fact that it is now part of the regulatory environment is a net positive.

OTC derivatives account for a significant proportion of overall banking and intermediation activity—for example, notional amounts of OTC derivatives went from \$60 trillion in 1998 to almost \$600 trillion within just a decade.¹⁵ On the one hand, they enable end-users like corporations, including industrial and financial firms, to hedge their underlying risk exposures in a customized manner. On the other hand, they enable banks and other financial intermediaries—the providers of hedging services to end-users—to earn profits, as they, in turn, hedge the customized OTC products they sell, either by diversifying the risk across different end-users or by shedding the risk to other intermediaries via liquid markets for standardized derivatives. It is clear that there is value to the economy from derivative products, which enable users to hedge and transfer risk by altering the patterns of their cash flows.

The financial crisis of 2007–09, however, exposed two aspects of the OTC derivatives market that deserved reform (see, for example, Acharya, Shachar, and Subrahmanyam, 2010). The first aspect is that banks can use OTC derivatives to tailor their own risk-taking and leverage buildup, since some of these positions are not reflected on their balance sheets, from either a regulatory or statutory disclosure perspective. In other words, regulatory capital requirements had not been suitably adjusted to reflect all aspects of OTC derivative exposures. Consider the following illustration. In AIG's 2007 annual report, published in mid-March 2008, well before the firm was brought down, AIG describes its now infamous \$527 billion of credit default swap (CDS) positions by its subsidiary AIG Financial Products Corporation (AIGFP). As stated in the document, “approximately \$379 billion … of the \$527 billion in notional exposure of AIGFP’s super senior credit default swap portfolio as of December 31, 2007, represents derivatives written for financial institutions, principally in Europe, for the purpose of providing them with regulatory capital relief rather than risk mitigation.”¹⁶ If financial institutions held AAA-rated securities and bought protection on those securities from AA- or AAA-rated insurance companies, then these institutions would have zero percent capital reflected on their balance sheets for such positions. Such rules possibly explain the huge leverage positions of UBS, ABN AMRO, and Merrill Lynch, among others, prior to the crisis.

The second aspect that deserves attention concerns the opacity of exposures in OTC derivatives. By definition, an OTC derivatives market does not have a central marketplace, where all trades occur. This is in contrast to exchange-traded derivatives, which are both traded on an exchange and cleared through a clearinghouse. Unlike cleared derivatives, where the clearinghouse monitors the risk of the positions of the various participants and imposes margins and other risk-mitigating devices, the risk-monitoring function in OTC markets is left to the individual counterparties. Going into the crisis, neither market participants nor regulators had accurate knowledge of the full range of the exposures and interconnections of the various market participants. This leads to a counterparty risk externality, where each trade's counterparty risk is affected by other trades that are being done by other counterparties, although this information is not visible (see Acharya and Engle, 2009). The systemic risk arising from the collapse of Lehman Brothers is but one example of a counterparty risk externality. The government support provided to AIG during the crisis is another.

The Dodd–Frank Act, in theory, addresses these two problems through enhanced regulation and increased transparency of derivatives markets. In particular, the act calls for 1) central clearing of standardized derivatives, 2) regulation of complex ones that can remain OTC, in particular by imposing capital requirements, 3) transparency of all positions (that is, price/volume information for the public and position-level information for regulators), and 4) the separation of nonstandardized derivative positions (other than those for interest rate, foreign exchange, and single-name credit derivatives) into well-capitalized subsidiaries. As with other parts of the act, the implementation of the regulation is complicated by trying to define commercial hedging transactions (which are exempt) and standardized derivatives. The rules, for the most part, are still being written, so it remains an open question as to how effective the legislation will be.

That said, there are potential unintended consequences of the Dodd–Frank Act's reform of the derivatives market. Note that the act relies heavily on margin requirements as the first line of defense against leverage buildup through derivatives. In particular, a clearinghouse is required to charge margins such that it can withstand the failure of its largest exposure among the various members. Assuming that it is highly unlikely that two single members of a clearinghouse will default in the same day, this would mean the clearinghouse is reasonably well protected most of the time, and yet offers substantial collateral efficiency to its members. The problem, of course, arises during a systemic event when there might be multiple exposure failures. Tremendous amounts of systemic risk are housed within clearinghouses, with potentially catastrophic consequences for the financial system. Scrutiny of the clearinghouse system will be necessary; but if, as it looks likely, there are multiple clearinghouses, then a race to the bottom is possible, as they institute laxer standards to gain more members. Moreover, for derivative positions outside clearinghouses, there may be a clear cost to dealers and noncommercial users in making markets and trading these derivatives. To the extent that derivatives are useful tools to mitigate aggregate risk, they can potentially lower the systemic risk of SIFIs. This risk reduction role can warrant regulatory capital relief. That said, depending on how the margin rules are written under the Dodd–Frank Act, SIFIs might be pushed away from using derivatives.

NOTES

¹Acharya, Cooley, et al. (2010a).

²The entirety of the Dodd–Frank Act (Public Law 111–203) is available at www.gpo.gov/fdsys/pkg/PLAW-111publ203/pdf/PLAW-111publ203.pdf. Excerpts from this source are quoted throughout this article.

³A video of the June 7, 2011, exchange is available at <http://video.cnbc.com/gallery/?video=3000026289>.

⁴For details on Basel Committee on Banking Supervision and the Basel Accords, see www.bis.org/bcbs/about.htm.

⁵FSOC initially issued a report for designating nonbank financial companies as SIFIs in October 2011. The final official document, which was based on that report and from which I quote, was published in the April 11, 2012, *Federal Register*; see Financial Stability Oversight Council (2012).

⁶That is, the nonbank firm can be regulated differently because of its systemic importance. See Financial Stability Oversight Council (2012), pp. 21641–21642, 21646.

⁷Financial Stability Oversight Council (2012), p. 21641.

⁸See <http://lexicon.ft.com/Term?term=volcker-rule>.

REFERENCES

- Acharya, Viral V., Barry Adler, Matthew Richardson, and Nouriel Roubini**, 2010, “Resolution authority,” in *Regulating Wall Street: The Dodd–Frank Act and the New Architecture of Global Finance*, Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter (eds.), Hoboken, NJ: John Wiley and Sons, pp. 213–240.

Acharya, Viral V., Thomas Cooley, Matthew Richardson, and Ingo Walter (eds.), 2010a, *Regulating Wall Street: The Dodd–Frank Act and the New Architecture of Global Finance*, Hoboken, NJ: John Wiley and Sons.

Acharya, Viral V., Thomas Cooley, Matthew Richardson, and Ingo Walter, 2010b, “Manufacturing tail risk: A perspective on the financial crisis of 2007–09,” *Foundations and Trends in Finance*, Vol. 4, No. 4, pp. 247–325.

Acharya, Viral V., and Robert Engle, 2009, “Derivatives trades should all be transparent,” *Wall Street Journal*, May 15, available at <http://online.wsj.com/article/SB124234528710721693.html>.

Acharya, Viral V., Lasse Pedersen, Thomas Philippon, and Matthew Richardson, 2010, “Taxing systemic risk,” in *Regulating Wall Street: The Dodd–Frank Act and the New Architecture of Global Finance*, Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter (eds.), Hoboken, NJ: John Wiley and Sons, pp. 121–142.

Acharya, Viral V., and Matthew Richardson (eds.), 2009, *Restoring Financial Stability: How to Repair a Failed System*, Hoboken, NJ: John Wiley and Sons.

Acharya, Viral V., Matthew Richardson, Stijn Van Nieuwerburgh, and Lawrence J. White, 2011, *Guaranteed to Fail: Fannie Mae, Freddie Mac, and the Debacle of Mortgage Finance*, Princeton, NJ: Princeton University Press.

Acharya, Viral V., Or Shachar, and Marti Subrahmanyam, 2010, “Regulating OTC derivatives,” in *Regulating Wall Street: The Dodd–Frank Act and the New Architecture of Global Finance*, Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter (eds.), Hoboken, NJ: John Wiley and Sons, pp. 367–425.

Adler, Barry E., 1993, “Financial and political theories of American corporate bankruptcy,” *Stanford Law Review*, Vol. 45, No. 2, January, pp. 311–346.

- American International Group Inc., 2008, 2007 Annual Report**, New York, March 14, available at www.ezodproxy.com/AIG/2008/AR2007/images/AIG_AR2007.pdf.
- Bagehot, Walter**, 1873, *Lombard Street: A Description of the Money Market*, 3rd ed., London: Henry S. King.
- Bernanke, Ben S.**, 2009, “Ben Bernanke’s greatest challenge,” interview by Scott Pelley, *60 Minutes*, CBS, March 15 (updated on June 4, 2009), available at www.cbsnews.com/8301-18560_162-4862191.html.
- Caballero, Ricardo J., and Arvind Krishnamurthy**, 2009, “Global imbalances and financial fragility,” *American Economic Review*, Vol. 99, No. 2, May, pp. 584–588.
- Federal Deposit Insurance Corporation**, 2011, “The orderly liquidation of Lehman Brothers Holdings Inc. under the Dodd–Frank Act,” *FDIC Quarterly*, Vol. 5, No. 2, pp. 31–49, available at www.fdic.gov/bank/analytical/quarterly/2011_vol5_2/Article2.pdf.
- Financial Stability Oversight Council**, 2012, “Authority to require supervision and regulation of certain nonbank financial companies,” *Federal Register*, Vol. 77, No. 70, April 11, pp. 21637–21662, available at www.gpo.gov/fdsys/pkg/FR-2012-04-11/pdf/2012-8627.pdf.
- Jackson, Thomas H.**, 2010, “Chapter 11F: A proposal for the use of bankruptcy to resolve financial institutions,” in *Ending Government Bailouts as We Know Them*, Kenneth E. Scott, George P. Shultz, and John B. Taylor (eds.), Stanford, CA: Hoover Institution Press, pp. 217–251.
- Kacperczyk, Marcin, and Philipp Schnabl**, 2010, “Implicit guarantees and risk taking: Evidence from money market funds,” New York University, Stern School of Business, Department of Finance, working paper, September.
- Malysheva, Nadezhda, and John R. Walter**, 2010, “How large has the federal financial safety net become?,” *Economic Quarterly*, Federal Reserve Bank of Richmond, Vol. 96, No. 3, Third Quarter, pp. 273–290.
- Portes, Richard**, 2009, “Global imbalances,” in *Macroeconomic Stability and Financial Regulation: Key Issues for the G20*, Mathias Dewatripont, Xavier Freixas, and Richard Portes (eds.), London: Centre for Economic Policy Research, pp. 19–26.
- Ricks, Morgan**, 2010, “Shadow banking and financial regulation,” presentation at International Monetary Fund conference, Conference on Operationalizing Systemic Risk Monitoring, Washington, DC, May 27, available at www.imf.org/external/np/seminars/eng/2010/mcm/pdf/Ricks.pdf.
- Taylor, John B.**, 2009, “The financial crisis and the policy responses: An empirical analysis of what went wrong,” National Bureau of Economic Research, working paper, No. 14631, January.
- Tirole, Jean**, 2010, “Lessons from the crisis,” in *Balancing the Banks: Global Lessons from the Financial Crisis*, Mathias Dewatripont, Jean-Charles Rochet, and Jean Tirole (authors), Keith Tribe (trans.), Princeton, NJ: Princeton University Press, pp. 10–77.
- Walter, John R., and John A. Weinberg**, 2002, “How large is the federal financial safety net?,” *Cato Journal*, Vol. 21, No. 3, Winter, pp. 369–393.

Implementing Dodd–Frank: Orderly resolution

Martin J. Gruenberg

I would like to take the opportunity to discuss one of those challenging issues—the orderly resolution of systemically important financial institutions (SIFIs). The Dodd–Frank Wall Street Reform and Consumer Protection Act provided important new authority to the Federal Deposit Insurance Corporation (FDIC) to resolve SIFIs. Prior to the recent crisis, the FDIC's receivership authority was limited to federally insured banks and thrift institutions. There was no authority to place the holding company or affiliates of an insured institution or any other nonbank financial company into an FDIC receivership to avoid systemic consequences. The lack of this authority severely constrained the ability of the government to resolve a SIFI. This authority has now been provided to the FDIC under the Dodd–Frank Act.

The question is whether the FDIC can develop the operational capability to utilize this authority effectively and a credible strategy under which an orderly resolution of a SIFI can be carried out without putting the financial system itself at risk. These key challenges have been the focus of the FDIC's efforts since the enactment of Dodd–Frank in July 2010. I would like to focus my comments on the progress we have made in meeting these important challenges.

Orderly liquidation authority, resolution planning, and the Office of Complex Financial Institutions

The FDIC has taken a number of steps since Dodd–Frank was passed to carry out its new systemic resolution responsibilities.

First, the FDIC established a new Office of Complex Financial Institutions to carry out three core functions:

- Monitor risk within and across these large, complex financial firms from the standpoint of resolution;
- Conduct resolution planning and develop strategies to respond to potential crisis situations; and

- Coordinate with regulators overseas regarding the significant challenges associated with cross-border resolution.

For the past year, this office has been developing its own resolution plans in order to be ready to resolve a failing systemic financial company. These internal FDIC resolution plans, developed pursuant to the orderly liquidation authority provided under title II of Dodd–Frank, apply to a SIFI many of the same powers that the FDIC has long used to manage failed-bank receiverships. This internal resolution planning

Martin J. Gruenberg is the acting chairman of the Federal Deposit Insurance Corporation (FDIC). The views expressed in this article are the author's and do not necessarily reflect the views of the FDIC.

© 2012 Federal Reserve Bank of Chicago

Economic Perspectives is published by the Economic Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors' and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.

Charles L. Evans, *President*; Daniel G. Sullivan, *Executive Vice President and Director of Research*; Spencer Krane, *Senior Vice President and Economic Advisor*; David Marshall, *Senior Vice President, financial markets group*; Daniel Aaronson, *Vice President, microeconomic policy research*; Jonas D. M. Fisher, *Vice President, macroeconomic policy research*; Richard Heckinger, *Vice President, markets team*; Anna L. Paulson, *Vice President, finance team*; William A. Testa, *Vice President, regional programs*; Richard D. Porter, *Vice President and Economics Editor*; Helen Koshy and Han Y. Choi, *Editors*; Rita Molloy and Julia Baker, *Production Editors*; Sheila A. Mangler, *Editorial Assistant*.

Economic Perspectives articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *Economic Perspectives* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org.

ISSN 0164-0682

work is the foundation of the FDIC's implementation of its new responsibilities under Dodd-Frank.

Second, the FDIC has largely completed the basic rulemaking necessary to carry out its responsibilities under Dodd-Frank.

In July 2011, the FDIC Board approved a final rule implementing title II—orderly liquidation authority. This rule addressed, among other things, the priority of claims and the treatment of similarly situated creditors.

Last September, the FDIC Board adopted two rules regarding resolution plans that systemically important financial institutions themselves will be required to prepare—the so-called living wills.

The first resolution plan rule, jointly issued with the Federal Reserve, requires bank holding companies with total consolidated assets of \$50 billion or more, and certain nonbank financial companies that the Financial Stability Oversight Council designates as systemic, to develop, maintain, and periodically submit resolution plans to regulators.

Complementing this joint rulemaking, the FDIC issued another rule requiring any FDIC-insured depository institution with assets over \$50 billion to develop, maintain, and periodically submit plans outlining how the FDIC would resolve it through the FDIC's traditional resolution powers under the Federal Deposit Insurance Act.

These two resolution plan rules are designed to work in tandem and complement each other by covering the full range of business lines, legal entities, and capital-structure combinations within a large financial firm. Both of these resolution plan requirements will improve efficiencies, risk management, and contingency planning at the institutions themselves. Importantly, they will supplement the FDIC's own resolution planning work with information that would help facilitate an orderly resolution in the event of failure.

With the joint rule final, the FDIC and the Federal Reserve have started the process of engaging with individual companies on the preparation of their resolution plans. The first plans, for companies with assets over \$250 billion, were due in 2012.

Resolution strategy

What I would like to do now is describe the current thinking on our strategy for resolving a large systemically important financial firm.

The FDIC's resolution strategy has three key goals. The first is financial stability, ensuring that the failure of the firm does not place the financial system itself at risk. The second is accountability, ensuring that the investors in the failed firm bear the firm's losses. The third is viability, converting the failed firm through

the public receivership process into a new, well-capitalized, and viable private sector entity. As I describe the strategy, I will try to identify how each of these goals is being addressed.

We can start by considering the type of firm that we may be presented with. It is likely to be a firm with several business lines—perhaps commercial banking, capital markets, global asset management, and transaction services—and which operates across national borders. The corporate structure is likely to be a holding company with a parent at the top and multiple layers of subsidiaries. The number of subsidiaries will be in the hundreds, if not thousands. It is also likely that the structure of the legal entities within the company will not be aligned with the business lines. Additionally, intracompany risk transfers and financial relationships will not be transparent.

While there are numerous differences between a typical bank resolution and what the FDIC would face in resolving a SIFI, I want to focus on a few key differences.

The first is whether the proximate cause of failure is capital depletion or liquidity pressures. The typical path toward failure for an insured bank starts with bad loans. As the bank sets aside reserves for and charges off credit losses, capital ratios fall, triggering the requirements of prompt corrective action. The bank is required to either raise capital or find a buyer. In the meantime, the bank normally continues to operate in large measure because its major source of liquidity is insured deposits, which are not likely to run. Eventually, if it is unable to raise capital or find a buyer, the chartering agency closes the bank. Essentially, the bank has failed a market test of viability.

In the case of a large financial firm, it is likely that its problems will also arise from the losses it has suffered in one or more of its business lines. However, it is also likely that this firm relies to a greater extent on market sources of funding and thus would face liquidity pressures not typically present in the case of an insured bank. There are several implications to this. The FDIC and other regulators will have less time to craft a resolution. There may not be time for the firm to undergo a market test of viability. Finally, there may be a significant need to shore up liquidity in the course of the resolution.

In addition, the resolution of a large U.S. financial firm involves a more complex corporate structure than the resolution of a single insured bank. Large financial companies conduct business through multiple subsidiary legal entities with many interconnections, owned by a parent holding company. A resolution of the individual subsidiaries of the financial company would increase

the likelihood of disruption and loss of franchise value by disrupting the interrelationships among the subsidiary companies. A much more promising approach from the FDIC's point of view is to place into receivership only the parent holding company while maintaining the subsidiary interconnections.

Another difference arises from sheer size alone. In the typical bank failure, there are a number of banks capable of quickly handling the financial, managerial, and operational requirements of an acquisition. This is unlikely to be the case when a large financial firm fails. Even if it were the case, it may not be desirable to pursue a resolution that would result in an even larger, more complex institution. This suggests the need to create both a bridge financial institution and the means of returning control and ownership to private hands.

Finally, in the case of a failure of an insured bank, the FDIC acts as both a resolution authority and a deposit insurer. In resolving a firm that is not an insured bank, the FDIC will be acting only as a resolution authority and not in any capacity that is analogous to deposit insurer. The new resolution authority does not provide insurance or credit protection for creditors and counterparties, and creditors will always be subject to potential losses. This is a central feature of the new resolution authority and is designed to ensure that there is market accountability.

Taking these factors into account, let me now describe how we envision the resolution of a large, systemically important financial institution. Assume for this exercise that credit or market losses have weakened the capital position of the firm, causing funding sources to withdraw and creating severe liquidity pressure. Despite the losses sustained, the firm has several business lines that have considerable value if the operations are preserved.

As I suggested earlier, the most promising resolution strategy from the FDIC's point of view will be to place the parent company into receivership and to pass its assets, principally investments in its subsidiaries, to a newly created bridge holding company. This will allow subsidiaries that are equity solvent and contribute to the franchise value of the firm to remain open and avoid the disruption that would likely accompany their closing. Because these subsidiaries will remain open and operating as going-concern counterparties, we expect that qualified financial contracts will continue to function normally as the termination, netting, and liquidation will be minimal. In short, we believe that this resolution strategy will preserve the franchise value of the firm and mitigate systemic consequences. This responds to the goal of financial stability.

Equity claims of the firm's shareholders and the claims of the subordinated and unsecured debtholders will be left behind in the receivership. In exchange, the receivership will have the equity in the bridge holding company as an asset.

Therefore, initially, the bridge holding company will be owned by the receivership. The next stage in the resolution is to transfer ownership and control of the surviving franchise to private hands. But before this happens, we must ensure that the bridge has a strong capital base and address whatever liquidity concerns remain.

To create the capital base of the bridge, some of the debt of the former parent company, which has been left in the receivership, will be converted to equity in the new bridge holding company. To do this, the FDIC will estimate the extent of losses in the receivership and apportion these losses to the firm's equity and subordinated and unsecured debtholders, according to their order of priority. In all likelihood, the firm's equity holders will be wiped out and their claims will likely have little or no value.

To capitalize the new company, therefore, the FDIC expects that it will have to look to subordinated debt or even senior unsecured debt claims as the immediate source of capital. These debtholders can thus expect that their claims will be written down to reflect any losses in the receivership that the shareholders cannot cover and that, like those of the shareholders, these claims will be left in the receivership.

At this point, the remaining claims of the debt-holders will be converted, in part, into equity claims that will serve to capitalize the new company. The debtholders will also receive convertible subordinated debt in the new company. This debt will provide a cushion against further losses in the firm, as it can be converted into equity if needed. Finally, any remaining claims of the failed firm's debtholders will be transferred to the new firm in the form of new unsecured debt. These measures go to the goals of accountability for investors in the failed company and the viability of the new, well-capitalized private entity.

The transfer of the business lines from a weakened holding company to a newly capitalized bridge entity should do much to alleviate the liquidity pressures by allowing the bridge entity to fund itself directly from the market. Nevertheless, it may be the case that more liquidity support is needed, either for immediate cash needs or to allow parts of the organization to roll over its debt. The new resolution authority comes with access to a new source of liquidity support provided by the Dodd-Frank Act: the Orderly Liquidation Fund, or OLF, located in the Treasury Department. The OLF

must either be repaid from recoveries on the assets of the failed firm or from assessments against the largest, most complex financial companies. Taxpayers cannot bear any loss from the resolution of a financial company under the Dodd–Frank Act. The OLF does address a critical issue to prevent a systemwide collapse (such as we saw with the 2008 Lehman bankruptcy), because it provides an emergency source of liquidity to allow the bridge financial company to complete transactions that provide real value and prevent contagion effects.

While the OLF can be a source of direct funding for the resolution, it can also be used to provide guarantees, within limits, on the debt of the new company. The guarantees could be quite similar to the debt guarantee that was provided through the Debt Guarantee Program, or DGP, which was part of the FDIC's Temporary Liquidity Guarantee Program. Even though there were limits on firms' use of the DGP, the program was quite effective in allowing firms to access liquidity and in opening up credit markets. We expect that our resolution strategy will rely more on the use of guarantees than on direct funding from Treasury, while adhering to the statutory mandate confining its use to liquidity support.

In addition to capital and liquidity, effective governance will be an important issue to address for both the transitional bridge holding company and the newly recapitalized private sector company into which the bridge company will be converted. Initially, the FDIC, as receiver, will own the bridge company and will immediately appoint a temporary new board of directors and chief executive officer (CEO) from the private sector to run the bridge under the FDIC's oversight during the first step of the process.

The second step will be the conversion of the debt-holders' claims to equity. The old debtholders of the failed parent will become the owners of the new company and, thus, be responsible for electing a new board of directors. The new board will in turn appoint a CEO of the fully privatized new company. For a variety of reasons, we would like this to be a rapid transition.

In summary, what we envision is a resolution strategy under which the FDIC takes control of the failed firm at the parent holding company level and establishes a bridge holding company as an interim step in the conversion of the failed firm into a new, well-capitalized private sector entity. We believe this strategy holds the best possibility of achieving our key goals of maintaining financial stability, holding investors in the failed firm accountable for the losses of the company, and producing a new, viable private sector company out of the process.

Cross-border issues

I would like to say a few words about the crucial international and cross-border issues. As I mentioned earlier, the type of firm we would need to resolve will likely have significant international operations. This creates a number of challenges, as the International Conference co-sponsored each fall by the Federal Reserve Bank of Chicago has explored over the years.¹ We take these challenges very seriously, and we have been actively working on them with our foreign colleagues.

The FDIC has participated in the work of the Financial Stability Board through its membership on the Resolution Steering Group, which produced the *Key Attributes of Effective Resolution Regimes for Financial Institutions*.² We have also participated in the Cross-Border Crisis Management Group and a number of technical working groups, and have co-chaired the Basel Committee's Cross-border Bank Resolution Group since its inception in 2007.

In addition, the FDIC is actively reaching out on a bilateral basis to the foreign supervisors and resolution authorities with jurisdiction over the foreign operations of key U.S. SIFIs. Our goal is to forge a more collaborative process and lay the foundation for more reliable cooperation based on mutual interests in national and global financial stability. The focus of our bilateral discussions has been to identify and mitigate impediments to orderly resolution that are unique to specific jurisdictions and to examine possible resolution strategies and practical issues related to their implementation.

We conducted a heat-map exercise that determined that the operations of U.S. SIFIs are concentrated in a relatively small number of jurisdictions, particularly the United Kingdom (UK). Working with the authorities in the UK, we have made substantial progress in understanding how possible U.S. resolution structures might be treated under existing UK legal and policy frameworks. We have examined potential impediments to efficient resolutions in depth, and we are working on a cooperative basis to explore methods of resolving them.

The FDIC is also negotiating the terms of memoranda of understanding pertaining to resolutions with regulators in various countries that will provide a formal basis for information sharing and cooperation, relating to our resolution planning and implementation functions under the legal framework of the Dodd–Frank Act.

While a full discussion of this topic is beyond the scope of this article, I will offer one point. The resolution strategy we have outlined, which calls for the continued operations of key subsidiaries both here and abroad, offers the promise of overcoming many of the cross-border issues that have been identified in both theory and practice.

Conclusion

In conclusion, I have tried to sketch out the progress the FDIC has made since the enactment of the Dodd–Frank Act to develop the operational capability to carry out its new systemic resolution authorities, as well as a resolution strategy that can credibly envision how a SIFI can be closed without putting the financial system itself at risk. As we carry forward this work, we believe it is important to be as transparent as possible so as to gain the benefit of the wisdom of others, as well as to establish an understanding by financial markets and the public of what we are doing. For this reason, we have been actively reaching out to the financial industry, academia, and the public interest community.

I would like to conclude by noting that developing a credible capacity to place a systemically important financial institution into an orderly resolution process is essential to subjecting these companies to meaningful market discipline. Without this capability, these institutions—which by definition pose a risk to the financial system—create an expectation of public support to avert failure. That distorts the financial marketplace, giving these institutions a competitive advantage that allows them to take on even greater risk, and creating an unlevel playing field for other financial institutions that are not perceived as benefiting from potential public support. Therefore, there is a very strong public interest in the FDIC developing the capability to carry out its new systemic resolution responsibilities in a credible and effective way.

NOTES

¹More information about this conference series is available at www.chicagofed.org/webpages/events/international_series.cfm.

²For further information, see Financial Stability Board, 2011, *Key Attributes of Effective Resolution Regimes for Financial Institutions*, report, October, available at www.financialstabilityboard.org/publications/r_111104cc.pdf.

Dodd–Frank Act implementation: Well into it and no further ahead

Wayne A. Abernathy

A parlor game that we have inflicted on our family and friends involves one person reading the first line of a book while the others try to guess the title and author. For example, here is one that some of you would get right away, although it might cause others of you to struggle: “It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife.” Of course, that is from Jane Austen’s *Pride and Prejudice*. Those of you who guessed that one right away may be feeling very smug.

Here is another, a first line that my children would get every time, but one that may not be as familiar to adults: “Mr. and Mrs. Dursley, of number four, Privet Drive, were proud to say that they were perfectly normal, thank you very much.” And of course, that is from J. K. Rowling’s *Harry Potter and the Sorcerer’s Stone*.¹

One of my own favorites, which I am sure just about everyone would quickly identify because of the boost to the book’s sales from the Obama administration, is this opening line: “Who is John Galt?” This line of dialogue is uttered at the beginning of Ayn Rand’s *Atlas Shrugged*.²

No doubt most of you have found these first lines to be relatively easy chestnuts. Consider the game from another direction. What if you had to come up with the first line yourself? What would be the appropriate first line for the Dodd–Frank Act? Of course, technically it is as follows: “This Act may be cited as the ‘Dodd–Frank Wall Street Reform and Consumer Protection Act.’” Unlike the other first lines, however, that is far too prosaic and tells us really nothing, providing us no legitimate clue as to the real contents awaiting the reader. It does little to prepare you adequately for what follows. Maybe this first line would be better for the act: “Marley was dead: to begin with.” That line actually opens Charles Dickens’s *A Christmas Carol*. And it is certainly better and more informative than what opens the act now, but in view of the act’s impact on the banking

industry, I feel some partiality for yet another first line: “One January day, thirty years ago, the little town of Hanover, anchored on a windy Nebraska tableland, was trying not to be blown away.” That is the opening line to *O Pioneers!* by Willa Cather. Although this book is less well known than Dickens’s holiday classic, Cather’s novel provides us with a first line that is more appropriate for describing the act’s effects.

Secretary Geithner’s six principles

Just how is implementation of the Dodd–Frank Act faring? How might we measure its progress? Within

Wayne A. Abernathy is the executive vice president for financial institutions policy and regulatory affairs at the American Bankers Association. The views expressed are the author’s and do not necessarily reflect those of the American Bankers Association or any of its member institutions.

© 2012 Federal Reserve Bank of Chicago

Economic Perspectives is published by the Economic Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors’ and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.

Charles L. Evans, *President*; Daniel G. Sullivan, *Executive Vice President and Director of Research*; Spencer Krane, *Senior Vice President and Economic Advisor*; David Marshall, *Senior Vice President, financial markets group*; Daniel Aaronson, *Vice President, macroeconomic policy research*; Jonas D. M. Fisher, *Vice President, macroeconomic policy research*; Richard Heckinger, *Vice President, markets team*; Anna L. Paulson, *Vice President, finance team*; William A. Testa, *Vice President, regional programs*; Richard D. Porter, *Vice President and Economics Editor*; Helen Koshy and Han Y. Choi, *Editors*; Rita Molloy and Julia Baker, *Production Editors*; Sheila A. Mangler, *Editorial Assistant*.

Economic Perspectives articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *Economic Perspectives* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org.

ISSN 0164-0682

two weeks of enactment, Treasury Secretary Timothy F. Geithner did the nation an important service by outlining the Obama administration's vision for the implementation of this unprecedented legislation. In an address delivered on August 2, 2010, at New York University's Stern School of Business, Secretary Geithner outlined six principles that would not only guide but govern how the administration would proceed with the act's implementation.³ This was an important and necessary speech because the legislation's 2,319 pages are surprisingly short on details, delegating the duty of writing them to the executive branch.

As a measure of the value that the Obama administration had given to the principles laid out in the speech, Secretary Geithner made the bold but appropriate declaration to the world that "you should hold us accountable for honoring them."⁴ No one should complain, then, if 18 months following enactment we do just that. How is the Obama administration, by its own chosen yardstick, doing at implementing the Dodd–Frank Act?

First principle: Speed

Secretary Geithner described his first principle in these words: "First, we have an obligation of speed." He elaborated on that principle by stating the following:

We will move as quickly as possible to bring clarity to the new rules of finance. The rule writing process traditionally has moved at a frustrating, glacial pace. We must change.⁵

This was a bold promise, given the unprecedented rulemaking challenge. At least in the financial regulatory history of the United States, there has never been anything like it. I have seen no definitive count of the number of regulations that the Dodd–Frank Act calls forth. The numbers seem to range between 250 and 400—numbers so large that they are numbing. It all defies hyperbole. The Fair and Accurate Credit Transactions Act, adopted in 2003, astonished the financial industry with more than a dozen significant new regulations to be written. Looking at the Dodd–Frank challenge, I note that the following words of the Lord Chancellor in Gilbert and Sullivan's comic opera *Iolanthe* are appropriate: "I conceive you may use any language you choose to indulge in, without impropriety." In short, it is an impossible task—one on which the regulators are surely working as best they can. From early on, they all fell behind and have no hope of catching up. The law firm Davis Polk & Wardwell LLP keeps a monthly "progress report" on the rulemaking. The report found that by January 2012 some 200 statutory deadlines for new regulations had come and gone, and 75 percent of them had been missed.⁶ One proposed rule—the so-called

Volcker rule⁷—alone contains an astonishing 1,400 questions from regulators back to the public for input. This is hard stuff if you want to get it right.

Secretary Geithner's first principle sounds much like Glendower's boast to Hotspur in William Shakespeare's *Henry IV* that he "can call spirits from the vasty deep." To which we may be forgiven for rejoining with Hotspur, "But will they come when you do call for them?"

To Secretary Geithner's credit, he also said in his speech, probably drawing upon his vast government experience, "Now, this process is very broad in scope and very complicated. It will take time."⁸ In view of all that, it is perplexing that there have been other voices from the Treasury Department calling for what some might characterize as "pedal to the metal" implementation, despite the impossibility of meeting the Dodd–Frank Act deadlines.

Second principle: Transparency and consultation

Consider Secretary Geithner's next principle: "Second, we will provide full transparency and disclosure." The Treasury Secretary explained this principle this way:

The regulatory agencies will consult broadly as they write new rules. Draft rules will be published. The public will have a chance to comment. And those comments will be available for everyone to see.⁹

The latter parts of this pledge are unsurprising. They are the law. With regard to consulting broadly, that is certainly intended by the law on federal rulemaking, too. If Secretary Geithner meant anything beyond doing what the Administrative Procedure Act and other relevant statutes require, then the record to date has been spotty. Again, this is not meant as a pointed criticism of the rule writers. It is tough for regulatory staff to write so many complex rules in such a short amount of time as the Dodd–Frank Act allows and, at the same time, meet with the people who will have to live with the consequences. Yet meeting with those people is exactly what is needed if we want to have rules that do not do much more harm than good.

Especially at the beginning of the process, proposed rules were published with unusually short comment periods. Many were offered as interim final rules, which means that they went into effect immediately upon publication, even while they were open for comment as drafts. Consultation with industry members, affected parties, and the public while the rules were still being thought over and before their formal presentation has been the exception rather than the norm. In more recent

weeks, regulators have slowed down the process and increased their consultation with others when necessary, possibly ignoring the statutory deadlines. That is all to the good and will make for better rulemaking and fewer mistakes needing correction later.

Third principle: Avoiding layering of new rules on top of old ones

Here is the third principle, in Secretary Geithner's words: "Third, we will not simply layer new rules on top of old, outdated ones." This very welcome idea was explained like this:

Everyone that is part of the financial system—the regulated and regulators—knows that we have accumulated layers of rules that can be overwhelming, and these failures of regulation were in some ways as appalling as the failures produced where regulation was absent.

So alongside our efforts to strengthen and improve protections for the economy, we will eliminate rules that did not work. Wherever possible, we will streamline and simplify.¹⁰

President Obama reinforced this message of reducing the regulatory burden in an initiative that he announced on January 24, 2011. The premise and the promise were both right on target. All banks and their customers feel the weight of excess regulation (ask anyone who has been through a mortgage closing, for just one example). Sadly, the promise remains unfulfilled. In a news article in May 2011 examining this very issue, *American Banker* editor at large, Barbara A. Rehm, observed, "None of the numerous people interviewed could name a single rule that has been repealed or simplified."¹¹ The situation has not improved since May 2011.

Fourth principle: Innovation

The fourth principle addresses an issue of progress that is important to banks and bank customers. Secretary Geithner said, "Fourth, we will not risk killing the freedom for innovation that is necessary for economic growth." The description provided for this principle is as follows:

Our system allowed too much freedom for predation, abuse and excess risk, but as we put in place rules to correct for those mistakes, we have to strive to achieve a careful balance and safeguard the freedom, competition and innovation that are essential for growth.¹²

Given how relatively few of the Dodd–Frank Act rules have been finalized and how even fewer of them have gone into effect, it may now be too early to test this principle. It is clear, however, that there has

been no innovation in financial services since the enactment of the Dodd–Frank Act, unless we should count the degradation in customer services developing in response to the Durbin Amendment's price controls on debit card interchange fees.¹³

Rather than a realization of the promises of Secretary Geithner, what we have been seeing is more of a fulfillment of the predictions of investigative journalist John Stossel (commenting on the behavioral costs of regulation):

The bigger harm is the indirect cost, all the money businesses spend trying to wade through the red tape (lobbying, filling out forms, hiring lawyers), plus the damage the regulation does to the American spirit. So much creativity now goes not into inventing things, but into gaming the system, manipulating the regulatory leviathan.¹⁴

Fifth principle: Level playing field

Secretary Geithner combined the fifth principle with its explanation in this way:

Fifth, we will make sure we have a more level playing field—not just between banks and nonbanks here in the United States—but also between our financial institutions and those in Europe, Japan, China, and emerging markets who are all competing to finance global growth and development. We will do this by setting high global standards and blocking a "race to the bottom" from taking place outside the United States.¹⁵

Again, these promises are good and reassuring, likely to raise no objections other than those from nonbanks and foreigners. Advocates for the new federal Consumer Financial Protection Bureau (CFPB) have repeatedly pledged to go after nonbanks. Additionally, those making pronouncements regarding the new Financial Stability Oversight Council (FSOC) have pledged to extend the FSOC's monitoring for systemic risk to nonbanks. Finally, defenders of the new, elevated capital standards for banks and the Volcker rule have assured us that these regulations will be embraced internationally.

As of this writing, all of these pledges have yet to be fulfilled, and the assurances remain largely unrealized. CFPB leaders continue their rhetorical offensive, but six months after receiving responsibility for 17 consumer laws and following the appointment of a bureau director, no action has been taken against any nonbanks; in addition, a rigorous nonbank examination program has not emerged from the planning stages. FSOC continues to promulgate rules about how it will go about designating certain nonbanks as

systemically important financial institutions (SIFIs), as well as guidelines for what it will do to nonbank SIFIs. However, at the time of this writing, not a single nonbank firm has been declared to be a SIFI, despite the fact that it was the collapse of the “shadow” banking system¹⁶ that inaugurated the recent financial crisis. The cloud of burdensome uniform international capital rules has spread across the globe, but the Europeans are already trying to figure out how to fudge them as they recognize the contractionary effect of excessively high capital requirements. No nation outside of the United States has embraced the Volcker rule. Indeed, the word is that European financial authorities are preparing to lodge protests against it with the U.S. Treasury Department.

Sixth principle: Coordination and cost-benefit analysis

Perhaps the Treasury Secretary did not want seven principles, so he combined two for his sixth and last:

Finally, we will bring more order and coordination to the regulatory process, so that the agencies responsible for building these reforms are working together, not against each other. This requires us to look carefully at the overall interaction of regulations designed by different regulators and assess the overall burden they present relative to the benefits they offer.¹⁷

Again, these are worthy desiderata that all can embrace. The Dodd–Frank Act significantly increased the number of federal regulators and expanded their scope, so coordination—hard to come by leading up to and during the financial crisis—is essential to a cohesive regulatory program. Rigorous cost–benefit analysis is essential for the justification of any federal regulatory program if it is not to become detrimental to the public good.

Sadly, these remain unfulfilled goals rather than operative administration mandates. One of the most common criticisms of Dodd–Frank implementation has been a lack of order and coordination in the regulatory process. Instead, the Dodd–Frank Act has succeeded in replacing the financial crisis with a regulatory crisis. No agency has been able to reach equanimity about its primary job, in large part because each agency has been so preoccupied with implementation issues; in addition, cooperation with other agencies appears to have been achieved only when driven by necessity or convenience. As agencies are grappling with impossible rulemaking tasks, most of them are also engaged in major structural reorganizations and shifts in the areas of responsibility.

A good example is consumer protection regulation. A whole new federal agency, the CFPB, was created

to centralize consumer protection in one agency. Not to be left out of this area of regulation, the Federal Deposit Insurance Corporation (FDIC) has established its own division of consumer protection, and the Office of the Comptroller of the Currency has found consumer protection to be part of its remaining safety and soundness responsibilities. Additionally, the Dodd–Frank Act encourages state attorneys general to get more actively involved in enforcing federal consumer protection standards. There are and will continue to be more independent regulatory and enforcement players wearing consumer protection sashes than there were in 2007.

It is worth noting with some comfort that the Dodd–Frank Act reinforces the importance of regulators conducting cost–benefit analyses in the promulgation of the new rules, and the courts are showing some appetite for enforcing those statutory requirements. It cannot be said that the regulatory analyses are anywhere near adequate yet, but regulators are paying more attention, as are the entities being regulated.

Failing to follow the Geithner principles

By the standard of the six principles set out by Secretary Geithner, the implementation of the Dodd–Frank Act—as measured a year and a half after its enactment—is not going well. Not only is it failing to follow the Geithner principles, it is violating them in many cases.

Acknowledging that this is actually the case is not the same as placing fault with those charged with the act’s implementation. Nothing like this has ever been tried before in the history of the United States. Writing 400 financial regulations of the highest significance and the greatest complexity in a couple of years has clearly been too much to expect. Policymakers in Congress and in the executive branch can easily discern from the experience thus far that a reform of the Dodd–Frank Act is in order, as others have recognized in the past for many far less ambitious legislative projects.

Getting on with the work to end our self-inflicted regulatory crisis should be among the highest priorities. It is hard for regulators to do their jobs while enmeshed in impossible implementation tasks—and even harder for financial institutions and their customers to get on with life while all this regulatory reshuffling and reconstruction take place. The Gramm–Leach–Bliley Act (also known as the Financial Services Modernization Act of 1999) was built upon the foundation of functional regulation. The Dodd–Frank Act has produced dysfunctional regulation.

Unless the failings of the Dodd–Frank Act are addressed, the closing line of that legislation will not be:

“And they lived happily ever after.” A more appropriate final line might be one borrowed from *The Guns of August* by historian Barbara W. Tuchman:

After the first thirty days of war in 1914,
there was a premonition that little glory lay
ahead.¹⁸

NOTES

¹J. K. Rowling, 1998, *Harry Potter and the Sorcerer’s Stone*, New York: Scholastic / Arthur A. Levine Books.

²Ayn Rand, 1957, *Atlas Shrugged*, New York: Random House.

³Timothy F. Geithner, 2010, “Rebuilding the American financial system,” speech at New York University, Stern School of Business, August 2, available at www.treasury.gov/press-center/press-releases/Pages/tg808.aspx.

⁴Ibid.

⁵Ibid.

⁶Davis Polk & Wardwell LLP, 2012, *Dodd–Frank Progress Report*, January, p. 2, available at www.davispolk.com/publications/list.aspx.

⁷See <http://lexicon.ft.com/Term?term=volcker-rule>.

⁸Geithner (2010).

⁹Ibid.

¹⁰Ibid.

¹¹Barbara A. Rehm, 2011, “The principal issues with the Geithner principles,” *American Banker*, May 2, available at www.americanbanker.com/issues/176_84/geithner-dodd-frank-1036842-1.html.

¹²Geithner (2010).

¹³Interchange fees are per debit (or credit) transaction fees paid by merchants’ financial institutions to the card issuer. For details on the Durbin Amendment, see <http://thomas.loc.gov/cgi-bin/bdquery/z?d111:SP03989:>.

¹⁴John Stossel, 2004, *Give Me a Break: How I Exposed Hucksters, Cheats, and Scam Artists and Became the Scourge of the Liberal Media ...*, New York: HarperCollins, p. 49.

¹⁵Geithner (2010).

¹⁶The shadow banking system represents the network of financial firms (for example, hedge funds and insurance companies) that are outside the traditional banking system.

¹⁷Geithner (2010).

¹⁸Barbara W. Tuchman, 1962, *The Guns of August*, New York: Macmillan, chapter 22.

Implementing Dodd–Frank: Identifying and mitigating systemic risk

Mark Van Der Weide

The 2008 financial crisis revealed some basic flaws in our financial system and in our financial regulatory framework. Specifically, the crisis demonstrated that the failure or the material financial distress of some of our largest, most complex firms could pose a threat to the financial stability of the United States.

The crisis also made manifest that the existing framework for government oversight of our major financial firms and our authority for resolving those firms when they get into trouble were suboptimal. Bankruptcy proceedings, which could be quite panic-inducing, and federal government assistance were the only available options for addressing the failures of some of these large, nonbank financial firms.

As a result of these infirmities in our regulatory framework and the imprudent risk-taking of many financial firms, unprecedented government assistance was necessary to support these firms and the broader financial system to prevent an economic catastrophe. Market participants before the crisis assumed there was a nonzero probability that our most colossal firms would receive government assistance if they became troubled. But the actions taken by the federal government during the crisis, although necessary, I think, to prevent the implosion of our financial system and significant damage to the real economy, have certainly solidified this market perception.

So taking on this moral hazard problem, this “too-big-to-fail” problem, and the threats to financial stability that are imposed by our most systemic financial firms are the central goals of the Dodd–Frank Wall Street Reform and Consumer Protection Act and of the Fed’s implementation of the act. That will be the focus of my remarks today.

Addressing problems with “systemically important financial institutions” (SIFIs) is a necessary condition to protecting financial stability. However, it is not a sufficient condition. Systemic risk can certainly be generated

and propagated outside of our largest financial firms. It can arise in systemic herds, that is, collections of firms that individually may not be systemic but collectively are systemic. Money market mutual funds would be a great example of that. It can arise in common funding patterns across broad financial sectors, and it can arise in collective underestimations of risk by the financial sector broadly during an irrationally exuberant credit boom. So efforts to tamp down on systemic risk need to address the SIFI problem at a minimum, but they also need to pitch themselves quite a bit more broadly.

Mark Van Der Weide is senior associate director in the Division of Banking Supervision and Regulation at the Board of Governors of the Federal Reserve System. The views expressed are those of the author and may not be those of the Board of Governors of the Federal Reserve System or other members of its staff.

© 2012 Federal Reserve Bank of Chicago

Economic Perspectives is published by the Economic Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors’ and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.

Charles L. Evans, *President*; Daniel G. Sullivan, *Executive Vice President and Director of Research*; Spencer Krane, *Senior Vice President and Economic Advisor*; David Marshall, *Senior Vice President, financial markets group*; Daniel Aaronson, *Vice President, microeconomic policy research*; Jonas D. M. Fisher, *Vice President, macroeconomic policy research*; Richard Heckinger, *Vice President, markets team*; Anna L. Paulson, *Vice President, finance team*; William A. Testa, *Vice President, regional programs*; Richard D. Porter, *Vice President and Economics Editor*; Helen Koshy and Han Y. Choi, *Editors*; Rita Molloy and Julia Baker, *Production Editors*; Sheila A. Mangler, *Editorial Assistant*.

Economic Perspectives articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *Economic Perspectives* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org.

ISSN 0164-0682

In this article, I will outline some of the core efforts that the Federal Reserve has been taking to implement the Dodd–Frank Act and some related reforms to improve supervision and regulation of the most systemic firms and also to promote financial stability. I will also discuss some of the key challenges the Fed faces in implementing the act. I'll start by describing some of the work we have been doing as part of the Financial Stability Oversight Council (FSOC) and then rotate pretty quickly to talk about things that we are doing independently.

Work of the Financial Stability Oversight Council

The Dodd–Frank Act created the FSOC principally to help identify and mitigate threats to the financial stability of the United States. We have made some meaningful progress as we have established the organizational structure of the FSOC, and its committee structure was designed to help us get our duties done.

We have also completed a number of studies that were required by the act on some of the important provisions in Dodd–Frank, including the Volcker rule, financial sector concentration limits, risk retention, and the macroeconomic effects of systemic risk regulation. And we are working on additional studies, including one on contingent capital instruments and secured creditor haircuts.

A key task of the FSOC in the coming months will be to finalize its conceptual framework for identifying and designating nonbank financial firms that could pose a threat to financial stability. The council has issued for public comment several advance notices of proposed rulemaking and several proposed rulemaking documents on how to get that job done. What should the substantive framework be and what should the process be for designating such firms?

Consistent with SIFI identification principles that the Financial Stability Board has articulated, the council has indicated that the core factors that we intend to look at when deciding whether a particular firm is systemic are size, interconnectedness, and availability of substitutes for the services provided by the firm. A set of secondary factors has also been identified that includes the extent of leverage, maturity transformation, and the extent of existing regulation that applies to those firms. Now, those six factors are obviously concepts—they are not formulas. It is going to take a lot of work to figure out within each of those categories how to quantify systemic importance and how to weigh the categories against each other.

Many comments on the FSOC's proposals in this area have urged us to be as transparent as possible about the standards by which firms will be designated. And

we are looking for ways to increase the predictability of council decision-making in this area. It is important that we be consistent, though, with our prevailing need, I think, for an adaptive SIFI designation framework that is robust to financial innovation and to the intense heterogeneity in the U.S. financial sector. In any event, we are committed to providing very high levels of due process to any firm that the FSOC considers a potential candidate for designation and consequent oversight by the Fed.

Macroprudential regulatory policy

In addition to its role as a member of the FSOC, the Federal Reserve has other important responsibilities under the Dodd–Frank Act to help promote financial stability. As Chairman Bernanke has noted, a key element of the Dodd–Frank Act is its injunction to the Fed and other financial regulators to employ macroprudential approaches to supervision and regulation.¹ We are to oversee financial firms and to review their mergers and acquisitions activity with a view toward protecting the financial stability of the broader financial system, not just protecting the solvency of individual firms. We have a lot to do in fleshing out how precisely to implement that mandate.

I want to highlight a few points on macroprudential regulatory policy before moving on to address some of the more concrete provisions of the Dodd–Frank Act. I think the Chairman made a crucial distinction between what I consider the two major strands of macroprudential regulation. The first is the structural or spatial components of it and the second is the temporal, time-related components.

On the spatial/structural side, it is very important that we endeavor to mitigate threats to financial stability that can come from structural problems in our financial system—for example, from excessive entanglements among firms, from excessive herding behavior by financial firms, and from the high risk of contagion effects in the financial markets. But at the same time, we have to look at the time-varying element. We have to work to mitigate threats from the buildup of excessive risk during credit booms or other types of financial booms. So we have to watch for problems on the upside. At the same time, we have to pay attention to what the right tools are on the downside. You try to mitigate threats that might build up from the deleveraging or de-maturity transforming activities of financial firms that are rushing to crouch defensively as they see an economic thunderstorm approaching.

A final macroprudential comment I want to make deals with the occasional tension between microprudential and macroprudential goals. Typically, micro- and

macroprudential goals reinforce each other. Strengthening capital requirements across the financial system, for example, will make individual banks safer and that will help make the broader financial system more resilient. However, they do not always reinforce each other. For example, actions by a particular firm to improve its capital adequacy, such as by selling assets or cutting back on lending, might very well serve microprudential goals and make the bank safer and sounder. But if we are in a recession, or a period of financial instability, that kind of behavior can be quite inconsistent with macroprudential goals for maintaining liquidity in the system and moving forward.

In addition to managing the potential conflicts between micro- and macroprudential goals, we also need to carefully measure the costs of macroprudential policies. These can be measured in terms of higher credit costs, lower credit availability, and slower economic growth. Those costs need to be contrasted with any systemic risk mitigation benefits we can achieve from the macroprudential policies.

Prudential standards for large bank holding companies and nonbanks

The second element of the Dodd–Frank Act that I want to discuss is the obligation of the Fed to develop more stringent prudential standards for large bank holding companies (BHCs) and nonbank financial firms that the council designates as SIFIs. This is one of the Fed’s most important Dodd–Frank implementation duties and it is consuming a great deal of the blood, sweat, and tears of Fed lawyers, economists, and supervisors. Fortunately, the act gives the Fed a great deal of flexibility in how we design this framework, although it does hardwire a few parameters.

The act tells us that we have to apply the framework to bank holding companies above \$50 billion in assets. We are also required to have the framework increase in proportion to what I like to call the “systemic footprint” of firms, that is, the size, interconnectedness, and complexity of firms in that set of BHCs above \$50 billion.

Third, the act specifies the types of regulatory standards we need to apply in an enhanced way to the big firms. We need to calculate additional capital requirements, additional leverage requirements, and additional liquidity requirements. We have to develop single counterparty credit limits. We have to conduct stress tests, to develop living wills, and to design an early remediation framework.

The act required that we implement these enhanced standards by January 2012, although they did not have to go into effect then. Our goal with this package of

standards will be to produce a well-integrated set of rules that meaningfully reduces the probability of default of our largest financial firms and at the same time minimizes the losses to the financial system and the economy if such a firm should fail.

The enhanced standards should force these firms to internalize any cost that they would pose to the financial system if they were to fail or become distressed. It should help offset the implicit subsidy that some of them enjoy due to the “too-big-to-fail” phenomenon and it should give the firms incentives to shrink their systemic footprint.

I am not in a position to give you a sneak peek as to how the Fed plans to come out on this set of enhanced standards for SIFIs. However, I can say that the included firms will not all be treated equally. They are not equally systemically important. This generates some challenges for the Fed.

I want to highlight some of the challenges in designing this new framework. The first issue deals with the proportionality of the regulatory process. I think the Dodd–Frank Act was spot-on in requiring the Fed to make sure that we do not apply a one-size-fits-all approach to every bank holding company above \$50 billion. However, designing exactly how to do that gradation—how to make the regulatory framework proportional to the systemic footprint of the firms above \$50 billion—is not an easy task.

We have been spending a lot of energy trying to figure out what the differences are in the systemic footprint between a Huntington Bank Shares or a Zions Bancorp sitting just north of \$50 billion and the colossuses that we deal with such as Citi, JPMorgan, and Goldman Sachs. We need some way to measure how much more systemically important the largest of the firms are relative to the firms just above the threshold.

Once we develop a means to measure the proportional size, complexity, and interconnectedness of these firms, how do we adapt the regulatory apparatus to those differentials? Do we have some kind of continuous function of the systemic footprint of the firm for some or all the standards? Do we have a multi-bucket, a many-bucket approach, or do we just have a small number of buckets? We need to answer these questions realizing that there are costs and benefits to each of those approaches and they vary somewhat between capital rules, liquidity rules, single counterparty credit limits, and stress-testing. We are currently evaluating approaches to deal with that gradation/proportionality question.

A second core issue we have is calibration. This is difficult. It is one thing to say that you want SIFIs to internalize their externalities or to absorb any implicit subsidy they receive from market perceptions that

they are “too-big-to-fail.” It is quite another thing to actually calibrate a regulatory regime to achieve those goals with any precision. As we designed the enhanced standards framework, we have been attentive and will continue to be attentive to the cumulative, quantitative, and qualitative costs of these rules. We will do our best to consider the costs of the aggregate package that constitutes the higher regulatory standards for SIFIs.

A third challenge for the Fed is the integration issue. Importantly, we are not designing each of these standards in isolation. We have different people thinking about how to develop a capital surcharge, liquidity requirements, single counterparty credit limits, stress tests, and living wills for large, systemically important firms. At the same time, we have an overarching team of people making sure that these separate work streams link well together to produce a well-integrated set of rules that will apply to banks where the whole is more than the sum of the parts.

A fourth issue that is consuming much of our time deals with foreign banks. In the Dodd–Frank Act, Congress set the \$50 billion threshold and said we had to apply that to any U.S. bank holding company, but also to any foreign bank that is treated as a bank holding company under federal law. There are a lot of foreign banks that satisfy these criteria. In fact, there are more such foreign banks than domestic banks. Here again, Congress, I think quite wisely, gave the Fed substantial discretion in how we implement our U.S. SIFI framework for foreign banks.

In determining that framework, Congress told us that we could consider national treatment, equality of competitive opportunity, and the quality of home country regulation for these firms. However, deciding on the appropriate factors and appropriate weights of those factors is a complicated process. Foreign banks operate in the United States in a complex and diverse set of ways. They have branches. They have agencies. They have subsidiary banks. They have subsidiary bank holding companies. They have subsidiary broker-dealers. We are spending a lot of time trying to determine the extent to which we should apply these standards to the parent foreign bank, or to just the U.S. operations of the firm, and how to best incorporate the adequacy of the home country regulatory framework into that calculus. I consider addressing this foreign bank adaptation issue to be one of the most difficult tasks we have in getting the SIFI framework figured out.

Resolvability of financial firms

The last issue I want to talk about on the SIFI regulatory front is how to improve the resolvability of financial firms. Under the Dodd–Frank Act, the

Fed and other regulators are required to work to reduce the expected adverse impact of a SIFI failure on the financial system. There are two ways to do that. One is to reduce the probability of the firm’s failure. The second is to reduce the impact on the system if the firm does fail. In Basel II-speak, there are probability-of-default-related tools (PD) and there are loss-given-default tools (LGD).

As Pat Parkinson explained here at the 2010 Conference on Bank Structure and Competition, financial regulators historically have focused almost exclusively on the PD-related tools, that is, reducing the probability of a firm’s failure.² They have given very short shrift to any kind of tools that would reduce the impact of that failure on the financial system. For example, we have given financial firms great flexibility in how they organize their internal structures, even if those internal structures might make them difficult to resolve if they fail. This is going to have to change in the post-apocalyptic Dodd–Frank world. As macro-prudential supervisors, I think we can no longer rely solely on the traditional *ex ante* going concern, prudential tools like capital and liquidity that are designed to reduce the probability of a firm’s failure. We are going to have to incorporate *ex post*, resolvability-enhancing tools to reduce the loss to the financial system when these firms fail. This is a complicated endeavor and we have a lot of work to do to figure out how to get this right.

I want to touch on a few challenges concerning this resolvability issue. The first challenge is to determine the most socially efficient means to improve the resolvability of SIFIs. This could include requirements that the firms simplify their internal organizational structures by reducing the number of legal entities (and in doing so reducing the intrafirm guarantees, funding relationships, and derivative transactions). There could also be a movement toward requiring firms to operate their system-critical businesses in financially and operationally autonomous packets. I think we have a lot of work to do to try to figure out which of these tools might make sense.

A second sub-issue under this resolvability framing is to determine how aggressive we want to be on the resolution front. We need to be able to answer the question of how much going-concern costs we are willing to impose on the firms to achieve resolvability benefits. On this point, the comments made by Wayne Abernathy are certainly correct. There will be going-concern costs for firms to simplify their organizational structures. So we need to be able to strike the right balance between the benefits on the resolvability front and the costs on the going-concern front.

The final sub-issue under resolvability deals with choosing the right mix of policy tools. We have these two types of tools: the PD tools and the LGD tools. We need to strike the right balance between the two. Should the emphasis mostly be on the PD tools? On the LGD tools? What is the appropriate balance? Again, we have started to think about these issues, but I think a lot of work remains to be done.

Financial stability efforts here and abroad

I am obviously giving very short shrift to other sub-issues concerning Dodd–Frank issues that we are working on. Let me simply list some of these efforts. We are working with our U.S. regulatory colleagues at other agencies to implement financial stability-related reforms. Those include risk-retention requirements for securitization sponsors; margin requirements for non-cleared over-the-counter derivatives; incentive compensation rules; limits on the proprietary trading and private fund investment activities of banking firms; and risk-management standards for central counterparties and other financial market utilities. We are also working in close coordination with the Office of Thrift Supervision, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation as we prepare to take over supervisory authority for thrift holding companies.

Finally, in addition to the massive amount of energy being spent by regulators to implement the Dodd–Frank Act, there have also been a lot of discussions concerning how to make the international financial system safer.

The Basel Committee, Financial Stability Board, and the G20 leaders have been doing a lot of work on issues such as improving capital requirements and the overall prudential framework for globally active banking firms. The Fed has played an important role in those discussions and I think there have been some pretty significant achievements in the Basel III Accord.

There is still a lot of work that will be done internationally in parallel with Dodd–Frank implementation in the United States. The key issues that remain for the international community include determining how to increase the loss-absorbency of systemic firms beyond those of other banks, the so-called SIFI capital surcharge issue. There is also the issue of assessing the potential role of contingent capital and bail-in mechanisms for addressing systemic banking firms. And there is the issue of how best to strengthen resolution regimes around the world to enable governments to minimize the costs resulting from the failure of a large, complex international bank.

Let me close by just saying the Dodd–Frank Act gives the Fed and other financial regulators new powers and new responsibilities to protect U.S. financial stability. With a few exceptions, Congress wisely chose not to micromanage the ways and means by which we get to the financial stability goals. I think that was a wise decision. We have a lot of degrees of freedom. I think that increases our obligation to get the job done correctly. We are determined to accomplish that, but I think we have a long way to go before we get to the end of the journey.

NOTES

¹Ben S. Bernanke, 2011, “Implementing a macroprudential approach to supervision and regulation,” speech delivered at the Federal Reserve Bank of Chicago’s 47th Annual Conference on Bank Structure and Competition, Chicago, May 5, available at www.federalreserve.gov/newssevents/speech/bernanke20110505a.htm.

²Patrick M. Parkinson, 2010, “Restoring market discipline on large financial institutions,” in *The Future of the Financial Services Industry—Structure, Regulation & Performance*, proceedings of the 46th Annual Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, pp. 38–43.

Implementing the Dodd–Frank Act: Progress to date and recommendations for the future

Scott D. O'Malia

I know that I don't have to tell you that the Commodity Futures Trading Commission (CFTC) has been extraordinarily busy in its efforts to fulfill the regulatory mandates of the Dodd–Frank Wall Street Reform and Consumer Protection Act. As of May 2011, the CFTC has put forth 66 proposed and final rules under the Dodd–Frank Act. Not even counting the last four rule proposals the CFTC voted on, we're at over 1,046 dense *Federal Register* pages filled with legal jargon and regulatory requirements. If you were to run the comment periods on all of those proposals consecutively, it would take 2,964 days, or a little over eight years. I doubt I have to give those numbers much context; they speak for themselves. But just for fun, if you were to lay each of those *Federal Register* pages end to end, they'd stretch two-thirds of the way up the newly renamed Willis Tower. And we're not done yet, so I am sure we'll reach the top of the tower before this is all over.

Sequencing and implementation

When you're putting out that much paper, I think you should have a plan for how to get through it. We are nearly halfway through the rulemaking process and we are just about to start consideration of the final rules. As Winston Churchill once advised, "If you are going through hell, keep going." I'm going to accept that advice, but I have made two recommendations for the chairman of the CFTC to make our trip a little better.

First, I have asked the chairman to put forward a provisional sequencing of the final rules to allow the market to comment on where you think we got it right and, of course, where we can do better. Second, and even more importantly, the CFTC should set an implementation schedule for all of the Dodd–Frank rules and publish it in the *Federal Register* for comment. This will allow the market to suggest changes to the schedule before the CFTC misses the mark. Market participants need to know when they will be expected to implement

the rules so that appropriate investment, staffing, and reorganization decisions can be made. Until a final schedule is published, market participants will continue to play a very high-stakes game of pin-the-tail-on-the-donkey. Providing an additional level of transparency is entirely appropriate. We have already conceded we can't meet the deadline set by Congress in the first place, so providing a plan will not keep the CFTC from meeting that date.

CFTC–SEC roundtables

The CFTC and Securities and Exchange Commission (SEC) conducted a roundtable discussion on

Scott D. O'Malia is commissioner of the Commodity Futures Trading Commission. The views expressed are the author's and do not necessarily reflect the views of the Commodity Futures Trading Commission.

© 2012 Federal Reserve Bank of Chicago

Economic Perspectives is published by the Economic Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors' and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.

Charles L. Evans, *President*; Daniel G. Sullivan, *Executive Vice President and Director of Research*; Spencer Krane, *Senior Vice President and Economic Advisor*; David Marshall, *Senior Vice President, financial markets group*; Daniel Aaronson, *Vice President, macroeconomic policy research*; Jonas D. M. Fisher, *Vice President, macroeconomic policy research*; Richard Heckinger, *Vice President, markets team*; Anna L. Paulson, *Vice President, finance team*; William A. Testa, *Vice President, regional programs*; Richard D. Porter, *Vice President and Economics Editor*; Helen Koshy and Han Y. Choi, *Editors*; Rita Molloy and Julia Baker, *Production Editors*; Sheila A. Mangler, *Editorial Assistant*.

Economic Perspectives articles may be reproduced in whole or in part, provided the articles are not reproduced or distributed for commercial gain and provided the source is appropriately credited. Prior written permission must be obtained for any other reproduction, distribution, republication, or creation of derivative works of *Economic Perspectives* articles. To request permission, please contact Helen Koshy, senior editor, at 312-322-5830 or email Helen.Koshy@chi.frb.org.

ISSN 0164-0682

Dodd–Frank implementation in May 2011. From this discussion, I took away three very clear messages that the public was sending the CFTC.

First, market participants would like an implementation schedule so they can make investments to comply with the rules. Second, there is nothing the market can't build, integrate, and execute, but the CFTC must provide clear rules and enough time to implement the rules. The panelists made it clear they needed months, not years, to implement these rules. Third, phased implementation of the rules is essential to ensure that all the pieces work together.

What was not clear from this discussion, however, was the appropriate phasing. There was not consensus about whether we should start with participants, products, or both nor about how the CFTC will handle the challenges presented by the clearing mandate for standardized over-the-counter (OTC) derivatives. So, we have more work to do on this front. The ball is now in our court. The market has been frank about the challenges and has only asked for schedules, regulatory certainty, and patience.

Regulating the swaps markets

Still, we are making a good deal of progress in our rulemaking process. In fact, we are exceeding expectations. At the last CFTC open meeting, we finally released the much-anticipated joint proposal with the SEC on definitions of products, including swaps.¹ As you know, the CFTC had previously released proposals addressing the definition of swap execution facilities (SEFs), as well as the definitions of swap dealers and major swap participants. While we all share as common ground the goal of reducing systemic risk, we do have some differences of opinion as to the best way to meet that goal.

Swap dealer and end-user definitions

For example, I believe our proposed definition of swap dealer is too broad and will likely capture commercial entities that use swaps primarily to hedge their risks. As a result, these entities, which do not pose systemic risk, will see their costs go up. In contrast, the proposed definition of end-user was too narrow. That proposal even missed an uncontroversial opportunity to clearly exempt certain Farm Credit System (FCS) financial entities—or FCS banks—from clearing requirements. Congress made it clear that regulators were permitted to exempt these banks. The CFTC failed to make it clear that FCS banks' swap transactions would qualify for the bona fide hedging exemption.

Capital and margin

My concerns with the proposed definitions of swap dealer and end-user also have implications for the recently proposed capital and margin rules. For example, if the definition of swap dealer captures commercial end-users, then they will be required to take a direct capital charge for the credit and market risks associated with each swap they enter into with other commercial end-users. Also, there is no language in the margin proposal that makes it clear that end-users won't be assessed margin. Instead, the proposal states that each swap dealer may accept margin in a manner agreed to by the parties in a credit support arrangement. In stark contrast, the prudential regulators have put forward draft rules that prohibit bank swap dealers from posting margin to their counterparties and provide no capital threshold exemptions for end-users.

What does all of this mean? I believe costs for commercial end-users will increase. Congress did not want us to impose increased costs on commercial firms that are not systemically relevant and force those firms to decide between hedging risk and investing in their business. Unfortunately, I believe the draft rules ignored congressional direction.

Swap execution facilities

One element of the new market structure, which seems to have captured everyone's imagination, is the swap execution facility. This new exchange offers the best opportunity to improve swaps market transparency and improve our ability to manage risk with real-time pricing, contract standardization, and better liquidity. I am often reminded that the swaps market developed in parallel with the futures market because of the important differences in liquidity between those markets. A one-size-fits-all approach—namely, a central limit order book—will not work in the swaps market because it is less liquid. The CFTC's SEF proposal allows for both limit-order-book and request-for-quote approaches in order to provide flexibility and to encourage liquidity formation.

I believe the number and variety of SEF platforms in existence and under development highlight the innovative capabilities of this market and confirm that no technological challenge is too big for it. To highlight what the market is capable of when it is given clear direction, I hosted an SEF showcase back at the end of March 2011 at the CFTC headquarters in Washington, DC. I invited any organization that developed an SEF platform to participate and show off its technology. No one was turned away, and the exchange of ideas among the participants promoting 16 different SEF platforms, representing all asset classes, lasted all day.

I was impressed with how quickly and creatively potential SEFs met the proposed requirements outlined in the CFTC's rulemaking, but I think we need to continue to provide flexibility in our rules to allow SEFs to innovate and compete for business. Also, I want to make sure that without penalty this market can execute transactions of sufficient size to meet participants' needs. We've received feedback from the public that the requirement that bids for less liquid swaps are shown to at least five dealers and the requirement that any order be visible to the market for at least 15 seconds (as with SEC rules for other securities) would harm the market.

Technology

We have massive new responsibilities under the Dodd–Frank Act that will require a heightened focus on technology investments, data management, and analysis. We cannot continue to use yesterday's solutions for today's problems. We can't continue to ignore the fact that the markets we regulate are no longer dominated by traders who take orders over landline telephones and stand in crowded pits yelling out bids and offers that only the initiated can understand. I don't need to tell anyone from Chicago that those scenes are more part of our past than our present. Today, the futures and swaps markets are by and large electronic markets, heavily dependent upon advanced technologies. It's time that the CFTC adapts to that reality.

If we are to establish a credible surveillance and oversight program of both the futures and swaps markets, the CFTC needs to move past its antiquated ways of doing business. I am repeatedly struck by the lack of technological capacity at the agency. Our forms and filings are not required to be filed electronically, and those that are filed electronically do not automatically populate our trade surveillance databases. We have only a few automated surveillance alerts. None of those monitor real-time trading. While we rely on each designated contract market (DCM) to police its own trading to a certain degree, we have long recognized the interconnectedness of the market as a whole but have done little to address that reality.

Anniversary of the Flash Crash

May 6, 2011, was the first anniversary of the Flash Crash, an event that "highlighted the interconnectedness of the equities and derivatives markets."² In minutes the markets dropped an unprecedented \$1 trillion. Thankfully, the market recovered, but not before it gave us a terrible example of how badly things can go when we don't have the right safeguards in place.

On February 18, 2011, over nine months after the Flash Crash, a joint CFTC–SEC advisory committee released a report that contained 14 recommendations. Both commissions will seek to integrate most of the recommendations into the Dodd–Frank rulemaking. They included putting circuit breakers or pauses in place; requiring DCMs to have strict supervisory requirements for firms implementing algorithmic trading; reporting measures; and establishing pre-trade risk safeguards. The Technology Advisory Committee (TAC), which I chair at the CFTC, formed a subcommittee to also look at safeguards and pre-trade practices for firms that engage in direct market access. The subcommittee came up with several pre-trade risk-management measures—which included pre-trade quantity limits on individual orders and price collars; execution and message throttles; a kill button on existing orders; clear error trade and order cancellation policies at the exchange level; and trading functionalities that operate within parameters set by clearing firms.

But the joint CFTC–SEC advisory committee noted that since May 6, 2010, there have been at least three other "crashes" related to algorithmic trading, which I believe have shaken market confidence and will undermine the important role both the equities and futures markets play. The CFTC can't possibly review each and every algorithm and certify its performance—that would be impossible. Instead, we are hoping to establish rigorous standards by which all firms must comply if they are going to utilize algorithms in their trading strategies.

CFTC's own technological divide

As market participants make investments in their technological capabilities to keep up with the ever-improving speed of business, the CFTC must also make critical investments in our own capabilities. For the past year, I have requested the CFTC be reorganized to create an Office of Data Collection and Analysis. This office should focus on securing and managing all of the CFTC's trade and surveillance data, working with all other divisions to monitor the futures and swaps markets and performing broad risk analysis for the CFTC. This office can drive the automation of cross-market surveillance programs, including the development of our own algorithms, enabling the CFTC to keep pace with new computer-generated trading styles as well as nefarious activities. Using the additional resources provided by Congress, we should attack our highest-priority technological challenges, such as automating our surveillance and integrating the swaps market data with futures market data.

Technology Advisory Committee

Finally, if we are going to keep pace with the market's appetite for new technological capabilities, we have got to keep a dialogue going with market participants about where the market is headed. I mentioned the work of the TAC to help identify possible safeguards in response to the Flash Crash of May 6, 2010. I recently established another TAC subcommittee to focus on developing standardized reference data for the universe of legal and financial terms used to describe, define, and value various derivatives and other financial instruments. The creation of standardized reference points and data terms will aid in the development of universal entity, product, and/or instrument identifiers and provide greater consistency in the collection, reporting, and management of individual transactions.

Sound and fury signifying nothing?

It's easy to focus on how much is changing because of the Dodd-Frank Act. The CFTC and the other federal financial regulators are writing rules at a frenetic pace, and the market is already positioning itself to deal with the changes to come. There's no doubt that much is changing and that a lot of good will come of this. Earlier I quoted Winston Churchill, so let me close with some more of his good advice: "However beautiful the strategy, you should occasionally look at the results."

As such, I find myself asking if we are really going to change the fundamentals of the market. If we take the flexibility out of the swaps market by trying to make those unique instruments trade as though they're futures and if we ignore the characteristics that make swaps

useful tools to hedge risk, aren't we sacrificing market innovation for the lazy comfort of sticking to what is more familiar?

From the way the draft rules seem to be shaping up, I would argue that the dealers will remain in a key market-making role, though it will be a more expensive responsibility. Do we want a market that leaves dealers as the prime marketmakers in the swaps arena, which would result in less competition, not more? Much of this will depend on whether or not we can move to more-standard products and reduce the customization of these products.

While I didn't mention it before, I am interested to know what others think the impacts of establishing two different margining regimes for futures and swaps will be. Will there be any opportunities to better manage risk in the futures and swaps markets? Or might capital flee into fewer but more-esoteric, bespoke products traded in dark over-the-counter markets that can't be cleared?

And finally, a question for all of us to consider: If we have perpetuated concentrations of risk and harmed competition, have we really fixed the nemesis that is "too big to fail"? If we haven't, I'm afraid that at the end of the day, we may have created a good deal of sound and fury that for the American people will signify nothing.

I'm looking forward to the ongoing discussions on these issues and to doing some of that listening that I have been counseled I should do. I know that if we are going to find answers to any of these questions, it will be because we were thoughtful and took into consideration the views of the entire market.

NOTES

¹Working definitions of these products and related terms are available at www.cftc.gov/ConsumerProtection/EducationCenter/CFTCGlossary/glossary_s.s.

²Joint CFTC-SEC Advisory Committee on Emerging Regulatory Issues, 2011, "Recommendations regarding regulatory responses to the market events of May 6, 2010," report, Washington, DC, February 18, available at www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/jacreport_021811.pdf.