

EMBARGOED UNTIL 10 A.M. ET, JUNE 26, 2013

Statement by

Jeffrey M. Lacker
President
Federal Reserve Bank of Richmond

before the

Committee on Financial Services
U.S. House of Representatives
Washington, D.C.

June 26, 2013

Good morning. I am honored to speak to the Committee about the Dodd-Frank Act and the persistence of “too big to fail.”

At the outset, I should point out that within the Federal Reserve System, the Board of Governors has sole authority to write rules implementing the requirements of the Dodd-Frank Act. Federal Reserve Banks supervise financial institutions under authority delegated to them by the Board of Governors. In keeping with Board of Governors guidance, I will not discuss any current or potential Federal Reserve rule-making. I also should say that my comments today are my own views and do not necessarily reflect those of the Board of Governors of the Federal Reserve or my colleagues at other Federal Reserve Banks.¹ My views have been informed by both my leadership of the Fifth Federal Reserve District over the last seven years and my experience as a research economist studying banking policy for the prior 25 years.

The problem known as “too big to fail” consists of two mutually reinforcing expectations. First, some financial institution creditors feel protected by an implicit government commitment of support should the institution face financial distress. This belief dampens creditors’ attention to risk and makes debt financing artificially cheap for borrowing firms, leading to excessive leverage and the overuse of forms of debt — such as short-term wholesale funding — that are most likely to enjoy such protection. Second, policymakers at times believe that the failure of a large financial firm with a high reliance on short-term funding would result in undesirable disruptions to financial markets and economic activity. This expectation induces policymakers to intervene in ways that let short-term creditors escape losses, thus reinforcing creditors’ expectations of support and firms’ incentives to rely on short-term funding. The result is more financial fragility and more rescues.

The Orderly Liquidation Authority of Title II of the Dodd-Frank Act gives the Federal Deposit Insurance Corporation the ability, with the agreement of other financial regulators, to take a firm into receivership if it believes the firm’s failure poses a threat to financial stability.² Title II gives

the FDIC the ability to borrow funds from the Treasury (specifically, the Orderly Liquidation Fund at the Treasury) to make payments to creditors of the failed firm. The funds are to be repaid from recoveries on the assets of the failed firm or from assessments against the largest, most complex financial companies. While the FDIC is to pay creditors no more than they would have received in a liquidation of the firm, the Act provides the FDIC with broad discretion to pay more.³ This encourages short-term creditors to believe they would benefit from such treatment and therefore continue to pay insufficient attention to risk and invest in fragile funding arrangements. Given widespread expectations of support for financially distressed institutions in orderly liquidations, regulators will likely feel forced to provide support simply to avoid the turbulence of disappointing expectations. We appear to have replicated the two mutually reinforcing expectations that define “too big to fail.”

Expectations of creditor rescues have arisen over the last four decades through the gradual accretion of precedents. Research at the Richmond Fed has estimated that one-third of the financial sector’s liabilities are perceived to benefit from implicit protection, based on actual government actions and policy statements.⁴ Adding implicit protection to explicit protection programs such as deposit insurance, we found that 57 percent of financial sector liabilities were expected to benefit from government guarantees as of the end of 2011. This figure was about 45 percent at the end of 1999.

A financial system without the broad expectation of government rescues for creditors would likely look different — potentially quite different — from the financial system we currently have. Without the expectation of implicit government guarantees, the incentives of market participants would be better aligned with our public policy goal of a financial system that effectively allocates capital and risks. Large financial firms themselves would want to be less leveraged and less reliant on unstable short-term funding. Institutions and markets would, accordingly, be more resilient in response to financial stress, and policymakers could credibly commit to forgo incentive-corroding rescues.

The alternative, accepting the inevitability of an implicit federal backstop and trying to correct the resulting distortions through the regulation of firm size, structure and capital, would lead to far less desirable results, I believe. It would tilt financial innovation toward bypassing regulatory constraints and relying on fragile funding methods that are most likely to elicit government protection. The result would be ever-increasing regulatory costs and repeated bouts of financial instability.

Reducing the probability that a large financial firm becomes financially distressed — through enhanced standards for capital and liquidity, for example — is useful, but will never be enough. The path toward a stable financial system requires that the unassisted failure of financial firms does not put the financial system at risk. The resolution planning process prescribed by Section 165(d) in Title I of the Dodd-Frank Act provides the road map for this journey.

A resolution plan, or “living will,” is a description of a firm’s strategy for rapid and orderly resolution under the U.S. Bankruptcy Code, without government assistance, in the event of material financial distress or failure. It spells out the firm’s organizational structure, key management information systems, critical operations and a mapping of the relationship between

core business lines and legal entities. The heart of the plan is the specification of the actions the firm would take to facilitate rapid and orderly resolution and prevent adverse effects of failure, including the firm's strategy to maintain the operations of and funding for their critical operations and material entities.

The Federal Reserve and the FDIC can jointly determine that a plan is "not credible" or would not facilitate an orderly resolution under the Bankruptcy Code, in which case the firm would be required to submit a revised plan to address identified deficiencies. A resubmission could include plans to change the business operations and corporate structure in order to eliminate deficiencies. If the Fed and the FDIC jointly determine that the revised plan does not remedy identified deficiencies, they can require tighter capital, leverage liquidity requirements or restrict the growth, activities or operations of the firm. In essence, regulators can order changes in the structure and operations of a firm to make it resolvable in bankruptcy without government assistance.

The living will process can address the frequently heard objections to ending government rescues. Cooperation between international regulators in a crisis is often cited as an impediment to orderly resolution. Forming distinct legal entities for the material overseas operations of globally active firms, with separate capital and liquidity holdings, can solve this problem by facilitating the expeditious sale of material foreign operations and obviating dependence on cross-national negotiations about interaffiliate movements in capital and funding.

The so-called "liquidity needs" of failing institutions is often cited as a stumbling block to resolving financial firms in bankruptcy. The U.S. Bankruptcy Code allows the bankrupt firm to obtain, subject to court approval, "debtor-in-possession," or DIP, financing that is generally senior to pre-existing creditors. Such financing can be useful to fund ongoing operations. Other creditors often find it advantageous to approve DIP funding, despite the dilution of their own claims, because it ensures continued access to trade credit. The FDIC's authority to lend to distressed institutions under its Orderly Liquidation Authority amounts to government-provided DIP financing. The beneficial feature of privately provided DIP financing is the presumption that, because it's provided by market participants but also approved by creditors and the court, it's fairly priced and thus unsubsidized and does not unduly disadvantage any particular class of creditors. Indeed, this is why unassisted bankruptcy is so critical to ending "too big to fail" and why firms were instructed not to assume extraordinary government support in their resolution plans. A financial firm's liquidity requirements in bankruptcy, however, are a direct function of decisions made prior to entering bankruptcy. A credible living will would include plans for funding critical operations, without government support, throughout the resolution process.

Some recent proposals to address the "too big to fail" problem would make structural changes to financial firms — imposing quantitative limits on their size or prohibiting certain risky activities. I am open to the notion that such restrictions may ultimately be necessary to achieve a more stable financial system, but I do not believe we have a strong basis yet for determining exactly what activity and size limits should be adopted. The living will process, however, will provide an objective basis for decisions about how the structure or activities of large financial firms need to be altered in order to assure orderly unassisted resolution. In addition, the process of writing

credible living wills would illuminate efforts to identify ways in which the bankruptcy code could be improved to make the resolution of financial firms more orderly.⁵

Resolution planning will require a great deal of hard work.⁶ But I see no other way to ensure that policymakers have confidence in unassisted bankruptcy and that investors are convinced unassisted bankruptcy is the norm. Resolution planning provides the framework for identifying the actions we need to take now to ensure that the next financial crisis is handled appropriately, in a way that is fair to taxpayers and establishes the right incentives.

Once robust and credible resolution plans are in place, we would be in a position to responsibly wind down the Orderly Liquidation Authority and other financing mechanisms, such as the Federal Reserve's remaining 13(3) powers to lend in "unusual and exigent circumstances." By allowing creditors to escape losses, such lending distorts incentives and exacerbates moral hazard. Eliminating the ability to provide ad hoc support to firms in financial distress would cement our commitment to orderly unassisted resolutions.

¹ I am grateful to John Weinberg for assistance in preparing this statement.

² For a comparison of the Orderly Liquidation Authority provisions with the U.S. bankruptcy process, see Sabrina R. Pellerin and John R. Walter, "[Orderly Liquidation Authority as an Alternative to Bankruptcy](#)," Federal Reserve Bank of Richmond Economic Quarterly, First Quarter 2012, vol. 98, no. 1, pp. 1-31.

³ See Pellerin and Walter, pp. 16-19.

⁴ The Richmond Fed's estimates of the size of the federal financial safety net are available at https://www.richmondfed.org/publications/research/special_reports/safety_net.

⁵ See Kenneth E. Scott and John B. Taylor (eds.), "Bankruptcy Not Bailout: A Special Chapter 14," Stanford, CA: Hoover Institution Press, 2012.

⁶ For more on resolution planning, see Jeffrey Lacker, "[Ending 'Too Big To Fail' Is Going to Be Hard Work](#)," Speech at the University of Richmond, Richmond, Va., April 9, 2013.



Supplemental Materials

1. [2013 Estimates of the Safety Net](#), Federal Reserve Bank of Richmond.
2. [Orderly Liquidation Authority as an Alternative to Bankruptcy](#), Sabrina R. Pellerin and John R. Walter, Federal Reserve Bank of Richmond *Economic Quarterly*, First Quarter 2012.
3. [“Too Big to Fail,” Our Perspective](#), Federal Reserve Bank of Richmond, February 2013.

2013 Estimates of the Safety Net (Using Data as of Dec. 31, 2011)

As used by [Walter and Weinberg \(2002\)](#) and [Malysheva and Walter \(2010\)](#), the phrase government guarantee means a federal government commitment to protect lenders from losses due to a private borrower's default. Following this definition, our estimate of the safety net includes insured bank and thrift deposits, certain other banking company liabilities, some government-sponsored enterprise (GSE) liabilities, selected private-employer pension liabilities, the dollar value of money market mutual fund shares, as well as a subset of the liabilities of other financial firms.

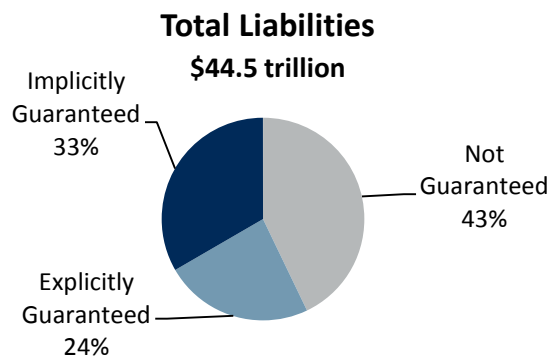
Our estimate (using data as of Dec. 31, 2011) includes a mixture of elements. Some of the liabilities, such as insured deposits, are *explicitly* guaranteed. Others, such as short-term liabilities of the largest banking companies, some deposit balances not explicitly covered by deposit insurance, and the liabilities of certain government-sponsored enterprises, are *believed* by many market participants to be *implicitly* guaranteed by the federal government. Our approach to implicit guarantees is to ask, "Based on past government actions, what might market participants reasonably expect future government actions to be?" Of course, identifying exact market expectations is largely impossible. We therefore provide two estimates—found in our "Most Inclusive" and "Least Inclusive" tables below—that can be thought of as the bounds within which market perceptions are likely to be found.

See the [Methodology and Sources](#) section for greater detail on what we have included in our explicit and implicit categories for each liability type contained in our two estimates.

Most Inclusive Estimate

Financial Firms (in billions)	Explicitly Guaranteed Liabilities (A)	Implicitly Guaranteed Liabilities (B)	A+B	Total Liabilities
Banking & Saving Firms (includes BHCs & SLHCs)	\$7,146 41.1%	\$5,571 32.1%	\$12,718 73.2%	\$17,369
Credit Unions	\$795 90.1%		\$795 90.1%	\$883
GSEs				
Fannie Mae		\$3,278	\$3,278	\$3,278
Freddie Mac		\$2,204	\$2,204	\$2,204
Farm Credit System		\$196	\$196	\$196
Federal Home Loan Banks		\$726	\$726	\$726
Total		\$6,405 100.0%	\$6,405 100.0%	\$6,405
Private Employer Pension Funds	\$2,630 87.8%		\$2,630 87.8%	\$2,994
Money Market Mutual Funds		\$2,691	\$2,691	\$2,691
Other Financial Firms		\$170	\$170	\$14,126
Total for Financial Firms	\$10,572	\$14,838	\$25,409	\$44,468
Percentage of Total Liabilities	23.8%	33.4%	57.1%	100.0%

Note: Total guaranteed liabilities (\$25,409 B) as a share of GDP (\$14,991 B) equals 169%, using this table's estimate.

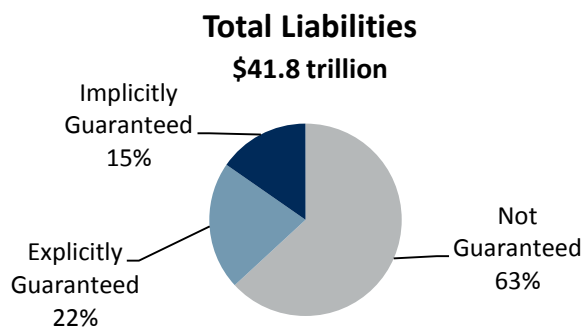


Least Inclusive Estimate

Financial Firms (in billions)	Explicitly Guaranteed Liabilities (A)	Implicitly Guaranteed Liabilities (B)	A+B	Total Liabilities
Banking & Saving Firms (includes BHCs & SLHCs)	\$5,577 32.1%		\$5,577 32.1%	\$17,369
Credit Unions	\$795 90.1%		\$795 90.1%	\$883
GSEs				
Fannie Mae		\$3,278	\$3,278	\$3,278
Freddie Mac		\$2,204	\$2,204	\$2,204
Farm Credit System		\$196	\$196	\$196
Federal Home Loan Banks		\$726	\$726	\$726
Total		\$6,405 100.0%	\$6,405 100.0%	\$6,405
Private Employer Pension Funds	\$2,630 87.8%		\$2,630 87.8%	\$2,994
Money Market Mutual Funds*				
Other Financial Firms				\$14,126
Total for Financial Firms	\$9,003	\$6,405	\$15,407	\$41,777
Percentage of Total Liabilities	21.5%	15.3%	36.9%	100.0%

*Money market mutual fund shares are not treated as liabilities in this estimate.

Note: Total guaranteed liabilities (\$15,407 B) as a share of GDP (\$14,991 B) equals 103%, using this table's estimate.



Methodology and Sources

Banking and Savings Firms

Explicitly Guaranteed Liabilities – FDIC-insured deposits of all commercial banks and savings institutions (up to the \$250,000 insurance limit), which includes transaction accounts covered by the FDIC’s Transaction Account Guarantee (TAG) program¹ plus debt guaranteed by the FDIC’s Debt Guarantee Program (DGP).² (Both of these FDIC programs expired Dec. 31, 2012.)

Implicitly Guaranteed Liabilities – In our most inclusive estimate of the safety net, we include total liabilities of the four largest banking institutions (those larger than \$1 trillion in assets)³ minus insured deposits (included in explicit column); plus short-term liabilities (federal funds, repurchase agreements, commercial paper, and other short-term liabilities as reported in financial reports)⁴ and uninsured deposits⁵ of the 34 bank and savings and loan holding companies (beyond the four largest) with assets greater than \$50 billion.

Four largest banking institutions – During the financial turmoil of 2008 and 2009, the government promised to provide capital if needed by any of the largest 19 bank holding companies (BHCs) such that their operations could continue uninterrupted, encouraging the view that all liability-holders of these firms would be protected. However, the Orderly Liquidation Authority (OLA) provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) may reduce the likelihood that these companies would receive capital injections to allow their uninterrupted operation. Nevertheless, one can imagine that many market participants will remain skeptical that the government would allow operations of the very largest and most systemically important institutions to be disrupted, even if the interruption might be minimized and carefully managed by the OLA process.⁶ As a result, our most inclusive estimate includes all of the liabilities of the four largest companies.

Short-term liabilities – Market participants might expect that the short-term liabilities of large financial firms would be protected if the firms are resolved under the OLA. All bank and savings and loan holding companies (SLHCs) with assets greater than \$50 billion have been designated as systemically important financial institutions (SIFIs). While a SIFI designation does not necessarily imply OLA treatment in resolution, market participants are likely to expect that these institutions would not be allowed to enter bankruptcy because it seems ill-suited to handle the failure of SIFIs ([Pellerin and Walter 2012, p. 14–16](#)). The OLA provisions of Dodd-Frank permit the FDIC to pay some creditors more than bankruptcy might allow (Pellerin and Walter 2012, p. 16), and the FDIC’s OLA implementing rule suggests that this treatment could apply to short-term creditors ([FDIC final rule, July 15, 2011, 12 CFR 380](#), p. 41644). Therefore, we include short-term liabilities of the SIFI-designated banking institutions in our most inclusive estimate.

Uninsured deposits – Historically, uninsured depositors in the largest institutions have been protected ([Walter and Weinberg, 2002, p. 380](#)). Additionally, most uninsured depositors were protected during the bank failures that occurred following the financial crisis that began in 2008. Given these facts, market participants are likely to expect uninsured depositors at the largest

banking companies (those with more than \$50 billion in assets) to be protected from losses in future financial crises.

Least Inclusive Estimate

Explicitly guaranteed liabilities – Drops (compared to Most Inclusive Estimate) liabilities covered by TAG and DGP given that such deposits and debt lost their FDIC coverage as of Dec. 31, 2012. In future failures, such programs may not be in place.

Implicitly guaranteed liabilities – Drops all liabilities of the four largest banking companies based on an assumption that these four BHCs will be handled through the OLA process and liability holders will suffer losses. Drops short-term liabilities of banking companies with assets greater than \$50 billion, based on an assumption that OLA treatment may not provide any special protection for such liabilities. Uninsured deposits at banking companies larger than \$50 billion are dropped under the assumption that the FDIC might not protect such depositors in future bank failures.

Total Liabilities – Includes total liabilities of BHCs⁷ and SLHCs,⁸ plus total liabilities of banks and thrifts not owned by BHCs or SLHCs,⁹ plus total liabilities of U.S insured branches of foreign head offices.¹⁰

Credit Unions

Explicitly Guaranteed Liabilities – Total credit union shares at or below the \$250,000 National Credit Union Administration coverage limit.¹¹

Total Liabilities – Total credit union liabilities.¹²

GSEs

Implicitly Guaranteed Liabilities of:

Fannie Mae – Total liabilities, unconsolidated Fannie Mae mortgage-backed securities held by third parties and other Fannie Mae guarantees.¹³

Freddie Mac – Total liabilities, non-consolidated Freddie Mac securities and other guarantee commitments.¹⁴

Farm Credit System – Total liabilities and Farmer Mac guarantees.¹⁵

Federal Home Loan Banks – Total liabilities.¹⁶

Pension Funds

Explicitly Guaranteed Liabilities – Liabilities of all pension funds insured by the Pension Benefit Guaranty Corporation (PBGC), which insures only defined-benefit plans, were \$2,570 billion in 2009, the latest date for which data are estimated.¹⁷ This figure is inflated by twice the average annual growth rate (because 2009–2011 involves two years of growth) of PBGC-insured pension liabilities from 1999–2009

to obtain our estimate of all liabilities in pension funds insured by the PBGC as of Dec. 31, 2011 (\$2,769 billion). Since the PBGC covers pensions only up to a specified maximum payment per year, a portion of beneficiaries' pensions in guaranteed plans—those with pensions paying above this maximum—are not insured. According to the PBGC, this portion is estimated to be 4 percent to 5 percent.¹⁸ To arrive at the guaranteed portion of PBGC guaranteed pension fund liabilities, we multiplied total 2011 fund liabilities (\$2,769 billion) by 0.95 to yield \$2,630 billion.

Total Liabilities – There appears to be no published data estimating total liabilities of all private-employer defined-benefit pension funds. Therefore, we develop our own estimate of total liabilities based on PBGC data. The PBGC insures a portion of private sector single-employer defined-benefit plans, but almost all multi-employer plans.¹⁹ The PBGC does not insure certain single-employer plans, importantly those offered by religious organizations and professional service employers (for example, those employing doctors and lawyers) with fewer than 26 employees. In the following, we refer to this uninsured group as Group U.

In order to calculate the dollar amount of all insured and uninsured pension funds in the United States, we inflate the amount of pensions insured by the PBGC (estimated above at \$2,769 billion) to account for the Group U pensions. As a starting point for our calculation, we use the Bureau of Labor Statistics' (BLS) Quarterly Census of Employment and Wages to determine Group U's total wages as a percent of total private wages in the United States. The BLS provides data on the number of employees who work for professional service employers and for religious organizations and their wages. We use these data to calculate the proportion of wages earned by workers in these sectors relative to all U.S. workers (10 percent). We then inflate our total liability figure by this proportion.²⁰

To derive our figure for total pension fund liabilities, we divide the single-employer portion of all PBGC-guaranteed pensions (\$2,029 billion) by 0.9, which is 1 minus the percent of United States wages earned by Group U, thereby inflating it to account for the Group U employees. That results in a total of \$2,254 billion in liabilities for single-employer programs. We then add the multi-employer portion (\$740 billion) to arrive at \$2,994 billion in total liabilities for all insured and uninsured pension funds in the United States.²¹

Money Market Mutual Funds

Implicitly Guaranteed Liabilities – Total net assets of money market mutual funds (MMFs).²² Included because the federal government protection that was granted to MMFs in 2008 implies that market participants could view MMFs as being likely to receive government protection in future financial crises.

Least Inclusive Estimate – Walter and Weinberg (2002) and [Malysheva and Walter \(2010\)](#) excluded MMF balances because the principal value of mutual fund investments, including MMF investments, can decline, without the mutual fund defaulting, if the entity in which the funds are invested defaults. As a result, these investments are akin to equity and unlike private liabilities—the focus of our estimates—which typically must pay back full principal (or else be in default). For example, an investor in an MMF, which in turn invested in financial firm commercial paper, could lose principal if the commercial paper were not repaid, but the MMF can continue to operate (i.e., not default). We drop MMF balances in our least inclusive table for this reason and based on the idea that they might not be protected by the government in future crises.

Other Financial Firms

Implicitly Guaranteed Liabilities – Short-term liabilities (repurchase agreements, commercial paper, and other short-term liabilities with original maturities less than or equal to one year) of those non-banking financial companies that could be deemed to be SIFIs by the Financial Stability Oversight Council (FSOC)—meaning those firms that appear likely to move past FSOC’s stage-one designation rule analysis announced on April 3, 2012. (See FSOC’s final rule, April 11, 2012, 12 CFR Part 1310, p. 21643.) To move past the stage-one test, the firm must have assets exceeding \$50 billion and also exhibit at least one of the following features:

- Have more than \$30 billion in outstanding credit default swaps;
- Have more than \$3.5 billion in derivative liabilities;
- Have more than \$20 billion in outstanding loans or bonds;
- Have a leverage ratio (assets to equity) of greater than 15-to-1;
- Have a short-term debt-to-total assets ratio of greater than 10 percent.

Market participants might expect that the short-term liabilities of large financial firms that are designated as SIFIs would be protected if the firm is resolved under the OLA. While a SIFI designation does not necessarily imply OLA treatment in resolution, market participants are likely to expect that these institutions will not be allowed to enter bankruptcy because it seems ill-suited to handle the failure of SIFIs (Pellerin and Walter 2012, p. 14-16). The OLA provisions of Dodd-Frank permit the FDIC to pay some creditors more than bankruptcy might allow (Pellerin and Walter 2012, p. 16), and the FDIC’s OLA implementing rule suggests that this treatment could apply to short-term creditors (FDIC final rule, July 15, 2011, 12 CFR Part 380, p. 41644). Therefore, in our most inclusive estimate, we include short-term liabilities of these firms that may be designated as SIFIs.

Least Inclusive Estimate – Excludes short-term liabilities of financial firms that may be designated as SIFIs, based on the possibility that OLA might not provide any special protection for such liabilities.

Total Liabilities – Includes the aggregate amount of liabilities outstanding as of Dec. 31, 2011, from each nonbank financial sector as reported in the Board of Governor’s Flow of Funds Statistical Release. Those financial sectors include:

- Property-Casualty Insurance Companies
- Life Insurance Companies
- Issuers of Asset-Backed Securities
- Finance Companies
- Real Estate Investment Trusts
- Security Brokers and Dealers
- Funding Corporations

¹ Federal Deposit Insurance Corporation. *FDIC Quarterly*, 2012, vol. 6, no. 1, pp. 18. “Table III-B: Estimated FDIC-Insured Deposits by Type of Institution.” <http://www2.fdic.gov/qbp/2011dec/qbp.pdf>.

² Federal Deposit Insurance Corporation. “Monthly Reports Related to the Temporary Liquidity Guarantee Program, Debt Issuance under Guarantee Program.” Dec. 31, 2011. http://www.fdic.gov/regulations/resources/tlgp/total_issuance12-11.html

³ Consolidated Statements for Bank Holding Companies (FR Y9C)

⁴ Our primary source is corporate annual reports because they report short-term liabilities with original maturities of less than one year. FR Y9C uses a broader definition of “other short-term liabilities,” one that includes liabilities that may have had original maturities greater than one year. When the top tier was a foreign holding company, we gathered data on specific short-term liabilities (federal funds, repurchase agreements, and commercial paper, almost all of which have original maturities of less than one year) from FR Y9C because FR Y9C contains data only on the U.S. subsidiaries, so it excludes liabilities of foreign subsidiaries. To capture as many liabilities as possible that would likely fall into the FR Y9C’s “other short-term liabilities” category, we then reviewed the call reports to find any additional U.S. subsidiary short-term borrowings (e.g. FHLB advances with original maturities of less than one year) that the FR Y9C does not separately report. When available, we used average figures. We also added “securities loaned” when it was included as a separate line item from repos.

⁵ “Deposits held in domestic offices” minus “estimated insured deposits” from the FDIC’s report that collects data from individual call and thrift financial reports (TFRs) of the insured subsidiaries of a BHC or SLHC.

⁶ See, for example: <http://www.bloomberg.com/news/2012-04-16/obama-bid-to-end-too-big-to-fail-undercut-as-banks-grow.html>; http://www.nypost.com/p/news/opinion/opedcolumnists/too_big_to_fail_grows_cVFocOFPEAJyQ4LgCR2iIO; <http://www.reuters.com/article/2011/07/12/financial-regulation-research-idUSN1E76B1I20110712>; and <https://www.law.upenn.edu/blogs/regblog/2012/09/11-lipson-orderly-liquidation-authority.html>.

⁷ From FR Y9C and FR Y9SP.

⁸ From a memorandum item on the TFRs that provides total liabilities consolidated across the holding company.

⁹ Bank data from Consolidated Reports of Condition and Income for a Bank, FFIEC 031 and FFIEC 041, and thrift data from TFRs.

¹⁰ FFIEC 002 Report of Assets and Liabilities of U.S. Branches and Agencies of Foreign Banks.

¹¹ *National Credit Union Administration 2011 Annual Report*. Page 76.

¹² Board of Governors of the Federal Reserve System. “Credit Unions, Table L.115.” Federal Reserve Statistical Release Z.1, March 8, 2012. “Flow of Funds Accounts of the United States.” <http://www.federalreserve.gov/releases/z1/20120308/z1.pdf>.

¹³ Fannie Mae Form 10-K. Dec. 31, 2011. Page 83. <http://www.sec.gov/Archives/edgar/data/310522/000119312512087297/d282546d10k.htm>

¹⁴ Freddie Mac Form 10-K. Dec. 31, 2011. Page 203 and page 209. <http://www.sec.gov/Archives/edgar/data/1026214/000102621412000039/f71787e10vk.htm>

¹⁵ Federal Farm Credit Banks Funding Corporation. “2011 Annual Information Statement of the Farm Credit System.” Page 3 and page 12, Feb. 29, 2012.

<http://www.farmcreditfunding.com/farmcredit/serve/public/pressre/finin/report.pdf?assetId=199279>

¹⁶ Federal Home Loan Banks. “2011 Combined Financial Report.” Page F-4, March 29, 2012. http://www.fhlb-of.com/ofweb_userWeb/resources/11yrend.pdf

¹⁷ Pension Benefit Guaranty Corporation. 2010 Pension Insurance Data Tables. “Table S-44: Funding of PBGC-Insured Plans (1980–2009) Single-Employer Program” and “Table M-9: Funding of PBGC-Insured Plans (1980–2009) Multiemployer Program.” <http://www.pbgc.gov/Documents/pension-insurance-data-tables-2010.pdf>

¹⁸ Pension Benefit Guaranty Corporation. *Pension Insurance Data Book 2006*. Page 20, footnote 11.

<http://www.pbgc.gov/documents/2006databook.pdf>. And,

Pension Benefit Guaranty Corporation. *Pension Insurance Data Book 1996*. Footnote to Table B-5.

<http://www.pbgc.gov/documents/1996databook.pdf>

¹⁹ Pension Benefit Guaranty Corporation. *Pension Insurance Data Book 2008*. Page 5.

<http://www.pbgc.gov/docs/2008databook.pdf>

²⁰ Note that our estimate could slightly overstate or understate the amount of total liabilities from private pension funds because the PBGC does not insure pensions provided by employers in these sectors with fewer than 26 employees, while the BLS’s closest comparable category breakdown is fewer than 20 employees.

²¹ Bureau of Labor Statistics. “Quarterly Census of Employment and Wages.” Annual and quarterly data from 2011.

<http://www.bls.gov/cew/>

²² Investment Company Institute. *2012 Investment Company Fact Book*. Page 170. “Table 37: Total Net Assets and Number of Shareholder Accounts of Money Market Funds by Type of Fund.”

http://www.ici.org/pdf/2012_factbook.pdf

Orderly Liquidation Authority as an Alternative to Bankruptcy

Sabrina R. Pellerin and John R. Walter

When a large nonbank financial firm becomes troubled and in danger of default, government policymakers traditionally have had two options: they could 1) allow the firm to enter bankruptcy, or 2) if policymakers believed bankruptcy is likely to produce widespread (system-wide or “systemic”) financial difficulties, the government could provide aid (i.e., a bailout) to forestall failure. In 2010, a third option was made available by the Orderly Liquidation Authority (OLA) provisions, contained in the Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”). This legislation authorizes the Federal Deposit Insurance Corporation (FDIC) to pursue an agency-administered wind down for certain troubled financial firms. The OLA provisions are modeled, in part, after the process long followed by the FDIC for handling troubled banks.

The OLA provisions are a reaction to policymakers’ and legislators’ dissatisfaction with the two options previously available for handling failing nonbanks. For example, Ben Bernanke, chairman of the Board of Governors of the Federal Reserve System, argued, in 2009 testimony before the House Committee on Financial Services, that bankruptcy was not an effective option for certain failing financial firms (Bernanke 2009):

In most cases, the federal bankruptcy laws provide an appropriate framework for the resolution of nonbank financial institutions. However, the bankruptcy code does not sufficiently protect the public’s strong interest in ensuring the orderly resolution of a nonbank financial firm

■ The authors would like to thank Kartik Athreya, Keith Goodwin, Michelle Gluck, Trish Nunley, Jonathan Tompkins, Zhu Wang, and John Weinberg for their insightful comments. The views expressed in this article are those of the authors and do not necessarily reflect those of the Federal Reserve Bank of Richmond or the Federal Reserve System. E-mails: sabrina.pellerin@rich.frb.org; john.walter@rich.frb.org.

whose failure would pose substantial risks to the financial system and to the economy. Indeed, after Lehman Brothers and AIG's experiences, there is little doubt that we need a third option between the choices of bankruptcy and bailout for such firms.

In a 2010 speech, Chairman Bernanke expanded on his testimony and noted two goals for this "third option," or "orderly resolution" authority (Bernanke 2010):

The government instead must have the tools to resolve a failing firm in a manner that preserves market discipline—by ensuring that shareholders and creditors incur losses and that culpable managers are replaced—while at the same time cushioning the broader financial system from the possibly destabilizing effects of the firm's collapse.

Legislators focused on these two goals in the language of the Dodd-Frank Act itself when explaining the purposes of the OLA provisions (or the OLA "title"):

It is the purpose of this title to provide the necessary authority to liquidate failing financial companies that pose a significant risk to the financial stability of the United States in a manner that mitigates such risk and minimizes moral hazard.

In this article we review the features of bankruptcy and the OLA. We identify some problem areas when large nonbank financial firm failures are resolved through bankruptcy. We then describe two important features of the OLA that are meant to improve on bankruptcy as a means of handling these types of failures, and discuss how they attempt to achieve the goals of mitigating risk to financial stability while also minimizing moral hazard—goals that are not easily achieved simultaneously.

1. FAILURE RESOLUTION

Goals of any Failure Resolution Regime

Any resolution regime, whether bankruptcy, bailout, or OLA, must address two fundamental problems that arise when a firm faces financial troubles and becomes unable to repay creditors. These three regimes each take different approaches to solving these problems, and these differing approaches are at the core of each regime. The first problem (detailed below) is preserving "asset complementarities" and "going-concern value" in the face of detrimental creditor incentives to rush in and grab the firm's assets immediately upon a firm's default. Resolution methods must take these incentives into account and prevent the detrimental actions. The second problem is determining whether to "liquidate" or "reorganize" the troubled firm. Beyond addressing these two

problems, an additional concern arises when the troubled firm is a large financial firm or one with many interconnections with other financial firms: What so called *systemic effects* might the liquidation or reorganization have? Will there be a significant negative effect on other financial firms or on the macro economy in response to actions taken to resolve the troubled firm? As noted in the introduction, policymakers are likely to have a strong interest in any systemic effects when deciding on the appropriate resolution method.

Preserving Complementarities and Going-Concern Value

Following a firm's default on a debt, creditors are likely to rush to seize, and separately sell, assets that, if sold together with other assets, could produce a higher sale price (assets that are "complementary"). For example, one can imagine that with numerous creditors vying for a manufacturer's assets, individual components of an assembly line might be sold off separately, when, if sold as a complete assembly line, these components would be of greater value and produce a higher price. Therefore, this incentive can reduce the total amount that creditors, as a group, receive and can also undercut productivity and economic efficiency. Creditors who manage to be the first to seize assets are likely to recover a higher proportion of their debts than creditors who are slower to react. As a result, creditors have a strong individual incentive to move quickly to undertake such seizures. Preserving complementarities can be important whether the firm is liquidated or is preserved via a reorganization process.

If creditors are allowed to rush in and seize assets, they are also likely to grab those assets that are fundamental to the firm's continued operations, so called "going-concern assets." Such assets might include, for example, necessary operating equipment for a manufacturing firm, or buildings for a financial firm. For a firm that is going to be closed and liquidated, protecting going-concern assets is unimportant, but for firms that might be successful if reorganized, creditors will be made better off, as a group, if their removal is prevented. Indeed, if creditors are allowed to seize going-concern assets, a troubled firm that might otherwise become quite productive in reorganization could be doomed to fail by the asset seizures.

In bankruptcy, the automatic stay (discussed in detail below) prevents immediate asset seizures, and creates a court-overseen process for allocating

assets in a way that preserves complementarities and going-concern value.^{1,2} The OLA process also involves a stay, but grants the FDIC this preservation role. Bailouts, by (typically) preventing the troubled firm's default on debts, remove the ability of creditors to seize the troubled firm's assets.³

Determining Whether to Liquidate or Reorganize

When a firm becomes unable to meet its debt payments, one of two outcomes are possible. First, as already mentioned, the firm might be closed and its assets liquidated. Alternatively, if the firm can be returned to profitability by restructuring (typically reducing) its debts, then, in many cases, it should be reorganized, allowing it to continue operating after a debt restructuring process. If the firm is unlikely to return to profitability, even with a lowered debt burden, because the firm's assets are unlikely to produce a market rate of return, then the firm should be liquidated: The firm should be shut down and its assets sold to the highest bidders. In this case, liquidation will distribute assets to firms that can make more productive use of them, enhancing economic

¹ According to Boul (2006): "Traditionally, the automatic stay has served to 'prevent dismemberment of the [bankruptcy] estate and insure its orderly distribution.' *SEC v. First Financial Group*, 645 F.2d 429, 439 (5th Cir.1981), citing S. Rep. No. 95-989, 95th Cong., 2d Sess. 50 (1978); H.R.Rep. No. 95-595, 95th Cong., 2d Sess. 341 (1977), U.S.Code Cong. & Admin. News 1978, pp. 5787, 5836, 5963, 6297, 6298. In that capacity, the automatic stay serves the interests of both the debtor and the creditors of the bankruptcy estate. For the debtor, it provides a 'breathing spell' by 'stopping all collection efforts, all harassment, and all foreclosure actions.' S. Rep. No 95-989, 95th Cong., 2d Sess. 54-55 (1978); H.R. Rep. No 95-595, 95th Cong., 1st Sess. 340 (1977), U.S.Code Cong. & Admin. News 1978, pp. 5787, 5840, 5841, 5963, 6296, 6297. However, the stay also serves the interest of creditors, insofar as it 'eliminate[s] the impetus for a race of diligence by fast-acting creditors.' *SEC v. First Financial Group*, at 439. The stay ensures that assets are distributed according to the order of priorities established by Congress. *Id.* at 341."

² Note that if the troubled firm had only one creditor, there would be no need for bankruptcy since that one creditor would always take actions that maximize complementarities and going-concern value. Only in the case where there are many creditors, who, because of their large number, cannot easily coordinate with one another, is bankruptcy necessary.

³ One might imagine that an ideal solution—when a firm has suffered losses such that its capital level is low and default seems likely, but it could be profitable with a lower debt load—one that requires no intervention by bankruptcy courts or government agencies, is for the firm to gather new funding by issuing new equity shares. The new funding could be used to purchase new, profitable assets that will increase revenues available to service debt (lowering the ratio of debt to assets) and reduce significantly the chance of default. This course may be impossible, however, because of the so-called "debt overhang problem" and, as a result, bankruptcy and the reorganization of debt may be the only course available. Because of the overhang problem, existing equityholders will not vote in favor of a new equity issuance. They will not do so, at least in many cases, because most or all of the benefit flows to the debtholders by improving the market value of their debt, and the existing equityholders will suffer dilution because future earnings must be shared with the new equityholders (Duffie 2011, 43–4). The likelihood that new issues of equity might offer a solution is further reduced by an "adverse selection problem." Weak firms issuing new equity, and especially those firms whose assets are opaque, i.e., financial firms, will have to offer to sell shares at a very low price, because equity investors are likely to conclude, based on the fact that the firm wishes to issue new shares, that the firm is in exceptionally poor health (even worse health than it really is). As a result, existing shareholders will suffer a great deal of dilution and vote against new issues.

productivity and efficiency. Any resolution regime is faced with a decision between liquidation and resolution, and, ideally, will choose the one that produces the most economically efficient outcome.

Addressing Systemic Risk⁴ and Moral Hazard

When faced with the failure of a large financial firm, or one with many connections with other financial firms, government decisionmakers will not only wish to ensure that complementarities and any going-concern value are preserved, and that the choice between liquidation or reorganization is optimally made, but they will also care greatly about systemic effects. Simply bailing out the troubled firm will prevent its failure, preserve complementarities and going-concern value, as well as avoid systemic effects. But any bailouts will create a “moral hazard” problem: the view, among investors, that large financial firms are likely to be protected, such that in the future, creditors of such firms will reduce their risk-monitoring efforts and these firms will be willing to undertake an inefficiently large amount of risk-taking. Therefore, any method employed to resolve a large or interconnected financial firm must balance systemic dangers against the danger of excessive risk-taking. Bailouts prevent current systemic problems but are likely to lead to less efficient resource allocation choices in the future. Relying on bankruptcy can avoid future moral hazard because, as discussed later, bankruptcy provides no source of funds for bailouts, but the bankruptcy of a large financial firm carries the risk of heavy current systemic problems. As such, when Congress crafted the OLA, addressing systemic risk was a priority, but so was resolving firms in a manner that does not simultaneously increase moral hazard. The OLA aims to address systemic risks that may otherwise be present when resolving systemically important financial institutions (SIFIs) through bankruptcy, in part, by 1) giving the FDIC broad discretion in how it funds the resolution process and pays out creditors, as well as by 2) changing the way derivatives and repurchase agreements (repos)—known as qualified financial contracts (“QFCs”)—are treated.

Overview of Bankruptcy and OLA

When comparing bankruptcy and OLA, understanding their overarching goals is important. The goal of a bankruptcy proceeding is to maximize recoveries for creditors, through liquidation or the rehabilitation of the debtor. The goal of the OLA, on the other hand, is to resolve “failing financial companies that

⁴ There is no clear consensus about the definition of “systemic risk” (See Taylor 2010). For purposes of this article, we will define systemic risk as “the risk that the failure of one large institution would cause other institutions to fail or that a market event could broadly affect the financial system rather than just one or a few institutions” (Government Accountability Office 2011).

pose a significant risk to the financial stability of the U.S. in a manner that mitigates such risk and minimizes moral hazard.”

Bankruptcy achieves its goals through a court-overseen process that relies largely on the troubled firm’s creditors and other investors to decide how best, and most profitably, to resolve the firm’s troubles. Funding for a bankruptcy resolution typically comes only from the assets of the troubled company and from any funds that might be provided by private investors. See Table 1 for an outline of the bankruptcy process.

OLA borrows several important ideas from bankruptcy, but moves beyond bankruptcy because of policymakers’ dissatisfaction with possible outcomes under bankruptcy. The OLA attempts to capture the firms whose resolution through bankruptcy could be detrimental to the broader financial system. Therefore, the OLA can be differentiated from bankruptcy based on several notable features that are designed specifically with SIFI, or covered financial company (CFC), resolution in mind. See Table 2 for a review of OLA’s main features.

During the 2007–2008 financial crisis, an unwillingness to trust large firm failures to bankruptcy often resulted in government assistance to firms popularly described as “too big to fail,” such as Bear Stearns and AIG. Yet the grant of government assistance sent strong signals to the market that other, similar firms would receive assistance as well if they were to experience trouble, thereby expanding credit subsidies for certain firms and moral hazard. For example, bond prices for the largest financial institutions remained relatively high during the crisis and prices for Lehman credit default swaps (CDS) may not have accurately reflected default risk (Skeel 2010). In contrast, allowing Lehman to fail can be seen as an attempt to mitigate moral hazard; however, some argue this was done at the cost of creating systemic risk.⁵ These objectives are inextricably linked, and focusing on the reduction of one has the likely result of increasing the other. Therefore, the OLA, which charges the FDIC with administering these provisions, was an attempt to address this conflict. How does the FDIC meet this challenge?

⁵ The apparent worsening of the 2008 financial crisis following Lehman’s entrance into bankruptcy provides, for many observers, an illustrative example of the deleterious effect of resolution by bankruptcy for large financial firms. Yet there is some debate about the conclusions one should draw from the Lehman experience. Some observers maintain that the cascading losses following Lehman’s bankruptcy filing were not a result of troubles or anticipated troubles related to the bankruptcy process itself, but were instead the result of a shock to market expectations and therefore to the risk assessments of those who had previously anticipated that Lehman, and firms like Lehman, would certainly be bailed out (see Testimony from Skeel before the Subcommittee on Commercial and Administrative Law, Committee on the Judiciary, U.S. House of Reps., October 22, 2009). Available at <http://judiciary.house.gov/hearings/pdf/Skeel091022.pdf>.

Table 1 Corporate Bankruptcy

Types of Bankruptcy Chapter 7	Chapter 7 bankruptcy (liquidation), the troubled firm is closed down, with the longer-run outcome being the sale of all the company's assets (liquidation) because creditors or management do not believe it can be successfully reorganized. Assets of the troubled firm are assembled by the <i>bankruptcy trustee</i> and then sold in a manner that maximizes the sum of the payouts to the creditors. The trustee typically must sell all of the bankrupt firm before distributing funds to creditors [11 U.S.C. 704(a)].
Chapter 11	Under Chapter 11 bankruptcy (reorganization), the troubled firm's debts are reorganized: debt maturities are lengthened, or interest rates or principal amounts are reduced. Creditors will only agree to a reorganization if they believe that preserving the firm as a <i>going concern</i> will produce larger payments than if the firm is liquidated.
Corporate Bankruptcies are Overseen by Federal Courts	The operating arm of the bankruptcy courts is the Justice Department's Trustee program, so that most bankruptcies are largely handled by trustees.
Circumstances Under which a Firm Enters Bankruptcy	When a firm's management petitions the court to place the firm in bankruptcy because it is unable to pay all its creditors in full. A firm will file for bankruptcy when unpaid creditors will otherwise seize complimentary or going-concern assets. When a firm's creditors petition for bankruptcy. Creditors have incentive to seek a firm's bankruptcy when they believe that other creditors might seize complementary or going-concern assets or that the firm might dissipate assets.
Involuntary Bankruptcy	

Table 1 (Continued) Corporate Bankruptcy**Automatic Stay**

Immediately, upon the filing of a bankruptcy petition with the clerk of the bankruptcy court, creditors' are prohibited ("stayed") from attempting to collect on their claims.

The stay allows a government-appointed trustee to ensure that assets of the bankrupt firm are liquidated in a manner that maximizes the total pool of funds available for creditor repayment.

As a result, the stay allows the trustee to produce a better result for creditors in aggregate than if creditors were simply acting in their own self interest. The trustee can be thought of as solving a joint action problem. Similarly, the stay is also the means in bankruptcy by which creditors are prevented from seizing going-concern assets.

Qualified financial contract (QFC) holders are typically exempt from the automatic stay: They can retrieve their collateral in the event of bankruptcy.

Under bankruptcy law a number of financial instruments are QFCs, including repurchase agreements (repos), commodity contracts, forward contracts, swap agreements, and securities contracts.

Reasons for the QFCs exemption:

Observers worry that preventing QFC holders from retrieving their collateral could create systemic financial problems.

Some observers believe that QFCs are not complementary with one another or with other assets, and can be removed without undercutting the troubled firm's going-concern value.

Table 1 (Continued) Corporate Bankruptcy

Priority Rules	Payouts coming from asset sales are divided among creditors based upon the creditor's location in the priority order, which is established in the Bankruptcy Code. Secured creditors are repaid from the assets that secure their debts prior to payments to unsecured creditors. A secured creditor will be fully repaid if the value of his security exceeds the amount he is owed. If not, he joins unsecured creditors and must depend on the sale of other assets for repayment. Unsecured claimants are paid based on the following priority list (White 1998, 1): First to be repaid are those owed any administrative expenses produced by the bankruptcy process. Second, claims are given statutory priority, such as taxes owed, rent, and unpaid wages and benefits. Third are unsecured creditors' claims, including trade creditors' claims, long-term bondholders, and holders of damage claims against the bankrupt firm. Last, equityholders receive any remaining funds.
In Reorganization	Payments to creditors and equityholders will often differ from those that would arise based simply on priority rules, because reorganization payments typically arise from negotiation between creditors and equityholders (White 1998, 8). Reorganization negotiations are driven by two rules: 1) each class of creditors and equityholders must consent to the bankruptcy plan adopted in the negotiation, and 2) if the negotiation produces no plan that is acceptable to all classes, then the firm is liquidated and payments are determined by the priority rules listed above. Because of the mutual consent requirement, some classes can be expected to receive more than would be expected if the priorities rules were strictly followed. For example, if assets are insufficient to repay all creditors, abiding by the priority rule would mean equityholders could expect to receive nothing. But creditors are likely to allow equityholders to receive payments in exchange for the investors' agreement to a plan that allows reorganization rather than liquidation, because the reorganization preserves some going-concern value for all classes. In other words, an equityholder agreement is achieved by paying them more than they would get if they held up the plan.
Debtor-in-Possession (DIP) Loans	Loans made to a firm in reorganization, post-bankruptcy filing. Such loans are often senior to all pre-bankruptcy debts.

When the FDIC is appointed as the receiver of a failing financial firm designated as a CFC, it assumes complete financial and operational control of the institution. The FDIC has the authority to manage, sell, transfer, or merge all the assets of the failing firm, as well as provide the funds needed for an orderly liquidation, giving it broad discretion.⁶ The FDIC's guiding principles in carrying out these responsibilities include using its best efforts to maximize returns, minimize losses, and, unique to this regime, mitigate the potential for serious adverse effects to the financial system and minimize moral hazard.⁷ Moreover, the language of the OLA forces the FDIC to balance two competing interests. On one hand, it is to pay creditors no more than what they would receive in bankruptcy⁸ and ensure that creditors bear losses in order to promote market discipline. On the other hand, it is to minimize adverse effects on financial stability. In bankruptcy, creditors only inject additional funds when the firm seems viable. The FDIC, on the other hand, may find it necessary to prop up a firm or perhaps protect certain creditors, at least for a time, to prevent any potential systemic consequences even though the firm may not be viable. The Dodd-Frank Act granted the FDIC a line of credit from the Treasury to fund these efforts. Because the FDIC has broad discretion over the way in which it balances these competing objectives, market participants may find it difficult to predict which objective might receive more weight in any given failure.

2. KEY FEATURES OF BANKRUPTCY, ITS WEAKNESSES, AND OLA AS AN ALTERNATIVE

In the United States, the failure of a business firm typically results in that firm entering *bankruptcy*, and actions taken by the firm shift from being determined by management to being guided by rules established under federal law, specifically under the U.S. Bankruptcy Code. What are the core features of bankruptcy? What features lead observers to conclude that bankruptcy is not an appropriate way to handle a SIFI whose failure could pose substantial risk to the financial system? What are the alternative resolution arrangements created by Dodd-Frank's OLA provisions?

⁶ The OLA gives the FDIC authority to operate the company "with all of the powers of the company's shareholders, directors and officers, and may conduct all aspects of the company's business." Dodd-Frank Act § 210(a)(1)(B).

⁷ Dodd-Frank Act § 204(a) and § 210(a)(9)(E).

⁸ Dodd-Frank Act § 210(d)(2). Under § 210(d)(4)(A) additional payments (in excess of what would be received in bankruptcy) are authorized only with approval of the Treasury Secretary and only if determined to be necessary or appropriate to minimize losses to the receiver.

Table 2 OLA**Who Qualifies as a “Covered Financial Company” (CFC)?**

A “financial company” whose failure would have serious adverse effects on financial stability.

Process for Designating a Firm as a CFC

1. Recommendation by Federal Reserve and either FDIC, Securities and Exchange Commission, or Federal Insurance Office, based on their findings that the following is true for the financial company:

- It is in default or in danger of default
- A resolution under the Bankruptcy Code would produce serious adverse consequences
- There is no viable private-sector alternative
- 2. Determination made by the Treasury Secretary in consultation with the President
- 3. Appointment of FDIC as receiver of CFC

The FDIC’s Powers and Duties

- They can 1) sell the CFC, or any portion of the assets or liabilities to a third party; 2) establish a temporary bridge financial company to preserve the company’s value prior to being sold to a third party; or 3) liquidate the company.
- Use their best efforts to maximize returns, minimize losses, and mitigate the potential for serious adverse effects to the financial system.
- Must ensure unsecured creditors bear losses and ensure the directors and management team responsible for the company’s condition are removed.
- Has authority to make additional payments to certain creditors (over what their priority would demand and possibly more than similarly situated creditors) if determined to maximize value or limit losses (excess may be “clawed back”), see below.

FDIC’s Access to Funding

- Treasury: FDIC may immediately borrow funds from the Treasury (up to 10 percent of the CFC’s pre-resolution book-value assets within first 30 days; 90 percent once fair-value is determined and liquidation and repayment plan is in place and approved by Treasury)
- If funds from disposition of failed firm’s assets are insufficient to repay Treasury:
 - Creditors (who were paid more than they would in bankruptcy) would have to return excess funds (“claw backs”)
 - Large financial institutions can be assessed

Notes: “Financial Company” includes bank holding companies, nonbank financial firms, and securities broker-dealers. Nonbank financial firms are characterized as firms that are supervised by the Fed (because of SIFI designation) or that derive at least 85 percent of their revenues from activities that are financial in nature.

Key Bankruptcy Feature: The Automatic Stay

The “automatic stay” is a primary component of bankruptcy and one that underlies many of the complaints raised against bankruptcy as a means of handling SIFI failures. The stay works as follows. Immediately upon the filing of a bankruptcy petition with the clerk of the bankruptcy court, creditors are enjoined from attempting to collect on their claims.⁹ This feature of bankruptcy allows a government-appointed trustee to ensure that assets of the bankrupt firm are liquidated in a manner that maximizes the total pool of funds available for creditor repayment. Without the stay, as discussed earlier, creditors can be expected to rush in, grab, and then sell the bankrupt firm’s assets. In so doing, creditors could destroy asset complementarities. The stay typically lasts for the length of the bankruptcy process, though the courts may grant exceptions.

In a Chapter 7 bankruptcy (liquidation),¹⁰ the type of corporate bankruptcy in which the troubled firm is closed down (liquidated), the court-appointed trustee typically must sell all of the assets of the bankrupt firm before distributing funds to creditors.¹¹ The goal of the trustee is to sell the assets in a manner that maximizes the sum of payouts to creditors. Achieving this maximization goal can result in a lengthy process, so that creditors’ funds may be inaccessible for an extended period. Based on a study of all corporate bankruptcies from two federal bankruptcy court districts between 1995 and 2001, the average liquidation lasts 709 days (Bris, Welch, and Zhu 2006; 1,270). It seems likely that for the largest, most complex financial firms the process will take at least as long as average or perhaps longer.

Compared to liquidation, a corporate Chapter 11 bankruptcy (reorganization) process tends to last longer still, 828 days on average according to Bris, Welch, and Zhu (2006), though in reorganization creditors will often be repaid well before this process ends. In reorganization, the troubled firm’s debts are rescheduled or cut—but it continues to operate.¹² A corporation that finds itself unable to repay all creditors in full can seek protection from creditors’ claims by petitioning the bankruptcy court to enter reorganization. This protection from creditors, which includes a stay of claims, is important when a firm is being reorganized because the stay prevents creditors from seizing “going-concern” assets (assets that might be necessary to keep the firm running). The stay can mean that, in aggregate, creditors receive more than

⁹ 11 U.S.C. § 362

¹⁰ In the remainder of the article, for the sake of simplicity, we will typically replace the phrase Chapter 7 bankruptcy with “liquidation” and the phrase Chapter 11 bankruptcy with “reorganization.” We will use the phrase “orderly liquidation” or the acronym OLA when referring to a Dodd-Frank Orderly Liquidation Authority process.

¹¹ 11 U.S.C. 704(a)1

¹² The airline industry provides many well-known examples of reorganization, in which planes continue to fly and contracts are renegotiated with creditors and employees.

they would if individual creditors had been allowed to seize assets to protect themselves. Because creditors must agree to the troubled firm's proposed reorganization plan—if not, the firm is likely to proceed to a liquidation—firms receiving reorganization treatment are those for which creditors, as a group, believe going-concern value exceeds the value of firm assets if such assets are sold, i.e., if the firm is liquidated (White 1998, 2–3).

While reorganization can last longer than liquidation, payouts to creditors will often be made well before the end of the reorganization process. As part of the reorganization, creditors may agree to lower repayments and some may receive these repayments quickly. Further, additional funding can flow into the troubled firm fairly quickly to help keep it afloat.

A source of funding often available to a firm in reorganization is “debtor-in-possession” (DIP) funding. In reorganization, the troubled corporation, the debtor, continues to operate, or “possess,” the troubled entity. Any loans to the troubled corporation are therefore loans to the DIP. Such loans are often senior to all former—prior to the bankruptcy filing—debts of the bankrupt firm. The prospect of being senior to other creditors allows funding to flow as long as creditors can be convinced that the firm is likely to survive and therefore repay.

Key Bankruptcy Feature: Limited Sources of Funding

Repayment of a bankrupt firm's creditors and funds to sustain a firm reorganized under bankruptcy can only derive from two sources: the assets of the troubled firm, and, in the case of reorganization, added (DIP) loans that might flow to the troubled firm. While bankruptcy law and practice do not prohibit government aid to troubled firms, such funding is not typically available. As a result, creditors have an incentive to carefully evaluate the riskiness of any firm prior to providing funding and to monitor its activities once funding has been provided. Such monitoring will tend to ensure that the firm undertakes only those risks with a positive expected return. Yet, the government has often provided aid to troubled firms because of the sluggishness with which creditors are often repaid following failure and because of the apparent difficulty of lining up DIP funding. In some cases this aid has been provided prior to bankruptcy, in others during bankruptcy.¹³ Therefore, the

¹³ Bear Stearns and AIG provide examples of financial firms that received government aid prior to bankruptcy. In 2009, both General Motors and Chrysler received aid from the federal government during their reorganizations. Earlier cases of government aid include Penn Central Railroad in 1970, Lockheed Aircraft in 1971, and Chrysler in 1980.

monitoring advantage offered by bankruptcy can be diminished by the expectation of government aid for certain (especially large) financial firms.¹⁴

There is no DIP financing in a liquidation. In liquidation, a “bankruptcy estate” is created, including all of the assets of the bankrupt firm. One of the responsibilities of the trustee is to locate all assets and gather them into the estate. The estate assets are sold by the bankruptcy trustee and the proceeds of the sale provide the funds from which creditors are repaid. Funds from no source beyond the assets of the failed firm are available to the trustee and therefore to the creditors.

In a reorganization proceeding, debts are restructured in a manner such that the firm can continue operating. For example, the creditors of a firm might come together and all agree to reduce the amounts the bankrupt firm owes each of them by 30 percent, and extend the maturity of all debts by two years. As a result, the bankrupt firm faces lower monthly debt payments, payments that it might successfully manage. The creditors will only agree to such a plan if they believe that sustaining the operations of the firm is likely to mean larger payments than if the firm descends into liquidation. The debt restructuring and the mode of future operation is called the “reorganization plan” and is subject to court review and creditor appeal to the bankruptcy court. Typically the current management of the troubled firm operates the reorganized firm. If the firm’s liabilities exceed its assets, owners are wiped out and the creditors inherit the decisionmaking rights formerly enjoyed by owners. The debtor can acquire funding for the reorganized firm because it can offer very favorable terms to the lenders who provide DIP funding because the new lenders have a claim that is senior to all other creditors. Thus, lenders will have an incentive to provide DIP funding if they believe that the reorganized firm is likely to be able to repay their loans from future earnings—that the reorganized firm will be profitable.

Weaknesses of Bankruptcy

A Weakness of Bankruptcy for Financial Firms: The Stay Threatens Short-Term Debtholders

While the automatic stay, in liquidation or reorganization, may cause no spread of losses when the creditors of the troubled firm are typically long-term debtholders (who are not counting on quick receipt of their funds), in the

¹⁴ One might argue that there could be times in which government aid is appropriate, for example if credit standards have become inefficiently (or irrationally) strict, as in a financial panic. If market participants believe that government aid will only be forthcoming at such times, and will only provide the amount of funding that private lenders would provide if they had not become irrationally strict, then the expectation of government aid will not diminish private investors’ risk-monitoring efforts.

case of a failing financial firm, creditors are likely to include a large contingent of those with very short-term claims. Funds invested in financial firms (such as investment banks) often have maturities of one or a few days. Creditors with such short maturity claims are likely to be dependent on the immediate access to their funds in order to pay their own creditors. If funds are tied up for an extended period, as assets are gathered and sold in a liquidation process or as a reorganization agreement is negotiated, the bankrupt firm's creditors may find themselves unable to make payments to their own creditors. As a result, the bankruptcy of one firm may result in the failure of some of its creditors, especially if some of these creditors are also financial firms with their own very short-term debts to repay. Therefore, while the automatic stay may have significant value in preventing creditors from separating complementary assets in liquidation and preserving going-concern value in reorganization, the stay, if it continues more than a very short time, may cause financial distress to spread. The importance of short-term funding, which is often present for non-bank financial firms, may make policymakers unwilling to rely on bankruptcy when such firms become troubled.

***A Weakness of Bankruptcy for Financial Firms: Opacity
Reduces Availability of DIP Financing***

New funding, quickly available, will often be necessary in order for a troubled firm to be successfully reorganized. After all, funds from former sources may have dried up because of the losses these creditors suffered on former loans to the troubled firm. But, financial firms may find it to be relatively difficult, compared to nonfinancial firms, to quickly obtain DIP funding. Such firms often have quite opaque assets: assets that are difficult for outsiders, such as lenders, to value. For example, assets of financial firms often include a heavy concentration of loans to other firms. The value of such loans may depend importantly on information that can be gathered only by performing detailed analyses of the financial condition of the borrowing firms.¹⁵ As a result, DIP loans may be available only after lenders spend a great deal of time reviewing the troubled firm's assets. Further, DIP loans made to financial firms are likely to involve unusually high interest rates to compensate for time spent in asset review and for the potential risk of lending to a firm with highly opaque assets.

¹⁵ Using statistical analysis to measure firm opacity, by comparing the frequency of bond rating disagreements, Morgan (2002, 876) finds that banks and insurance firms are the most opaque of major industry groups. Large nonbank SIFIs are likely to have a portfolio of assets that are fairly similar to bank asset portfolios so can be expected to be similarly opaque. Interestingly, Morgan notes that the industry grouping "Other Finance and Real Estate" seems to be among the least opaque, though, according to Morgan, this is likely because the securities being analyzed for this group are "asset-backed bonds backed by a pool of specific, homogeneous assets 'locked' up in special purpose vehicles. This structure, which reduces the risk of asset substitution, seems to make the securities relatively safe and certain to outsiders" (2002, 877).

The opacity of financial firm assets contributes to the desire to employ some method (i.e., bailouts or OLA) for their resolution instead of bankruptcy.¹⁶

Key Features of OLA and OLA's Weaknesses

As in bankruptcy, when a troubled financial firm enters the OLA process, creditors—with the exception of holders of QFCs, discussed below—are stayed (prevented) from collecting their debts. The stay lasts the duration of the period in which the financial firm is in the OLA process. During the stay, the FDIC will typically establish a receivership estate into which most assets and liabilities will be placed. Assets placed in the receivership will be sold by the FDIC in the manner that results in the largest returns to creditors—so that the receivership may last, and creditors wait, an extended period while the FDIC lines up buyers. In addition, some of the bankrupt firm's assets and liabilities can be moved into a “bridge entity,” a separate company formed by the FDIC, which might be sold off as a whole entity to a private buyer or might even be capitalized by some of the creditors of the bankrupt firm, and continue as a going concern.¹⁷ One purpose of a bridge can be to preserve going-concern value of portions of the troubled firm.¹⁸

The Dodd-Frank OLA process also abides by a priority schedule similar to the one defined in bankruptcy law (see Table 1 for an overview of bankruptcy priorities). But Dodd-Frank authorizes the FDIC to violate the priority list established in OLA under certain circumstances. Specifically, section 210(d)(4) of the Dodd-Frank Act permits the FDIC to pay a creditor more than priority rules might otherwise allow “if the Corporation determines that such payments or credits are necessary or appropriate to minimize losses to the Corporation as receiver from the orderly liquidation of the covered financial company.” According to the FDIC's discussion of its proposed rules related to this section of the Dodd-Frank Act, such additional payments may be made if they are necessary to “continue key operations, services, and transactions that will

¹⁶ An alternative to bailouts or OLA that would address the problem of a lack of DIP funding as a result of SIFI opacity is to allow a troubled SIFI to enter reorganization, and permit the government to make DIP loans to the bankrupt firm. The government could quickly provide DIP funds to keep the firm operating but the bankruptcy process could handle all other aspects of the resolution.

¹⁷ See Acting Chairman Martin J. Gruenberg's (2012) presentation before the Federal Reserve Bank of Chicago Bank Structure Conference for a discussion of how a bridge bank might be capitalized and continue operations as a private entity.

¹⁸ Acting FDIC Chairman Gruenberg (2012) discussed the formation of a bridge, and noted its advantages for protecting going-concern (franchise) value: “... the most promising resolution strategy from our 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 closings... In short, we believe that this resolution strategy will preserve the franchise value of the firm and mitigate systemic consequences.”

maximize the value of the firm's assets and avoid a disorderly collapse in the marketplace."¹⁹

Beyond the authority to, in some cases, make greater payments to creditors than their priority might allow, the Dodd-Frank Act also provides the FDIC with Treasury funding that might be used to make payments to creditors. The Act provides that the FDIC can borrow, within certain limits, from the Treasury. Immediately upon their appointment as receiver of a firm, the FDIC can borrow 10 percent of the value of the firm's pre-resolution assets. For a large financial firm, this initial amount can be significant. In the Lehman failure, for example, 10 percent of assets would have amounted to \$63.9 billion. Once the fair value of the failing firm's assets is determined and a liquidation and repayment plan is in place, the FDIC may borrow an additional 90 percent of the value of the firm's assets (with approval from the Treasury). The Act provides that these funds are to be repaid to the Treasury from the sale of the liquidated firm's assets. But, importantly, the Act also specifies a means of repayment if such assets are not sufficient for repayment, first by attempting to "claw back" any "additional payments" (payments beyond what would have been received in a liquidation) made to creditors, and, if that is insufficient, by taxing all large bank holding companies and other SIFIs (Dodd-Frank Act § 210(o)(1)(A)).^{20,21,22} The fact that assets might not be sufficient to repay the Treasury in full, and that the legislation authorizes taxes (on large financial

¹⁹ <http://edocket.access.gpo.gov/2011/pdf/2011-1379.pdf>; 4,211

²⁰ The Dodd-Frank Act § 210(o) specifies that assessments (taxes) to repay the Treasury are to be imposed on bank holding companies with assets greater or equal to \$50 billion and on nonbank financial companies supervised by the Board of Governors of the Federal Reserve (meaning nonbank SIFIs). Assessments are to be sufficient to repay the Treasury within 60 months, with the opportunity for extension if repaying in 60 months would have a "serious adverse effect on the financial system." Assessments are to be graduated based on company size and riskiness. When determining assessment amounts, the FDIC, in consultation with the Financial Stability Oversight Council, should take account of "economic conditions generally affecting financial companies so as to allow assessments to increase during more favorable economic conditions and to decrease during less favorable economic conditions...the risks presented by the financial company [being assessed] to the financial system and the extent to which the financial company has benefitted, or likely would benefit, from the orderly liquidation of a financial company under this title," and any government assessments already imposed on the firm under such government programs as deposit insurance or securities investor protection insurance.

²¹ The Dodd-Frank Act § 210(o)(1)(D)(i) prohibits the FDIC from imposing claw backs on creditors who receive "additional payments" if such payments are "necessary to initiate and continue operations essential to implementation of the receivership or any bridge financial company." The FDIC's implementing regulation, at 12 CFR 380.27, seems to imply that a good portion of any additional payments made by the FDIC will be for such essential purposes so will be protected from claw back. Note that if all additional funds could be clawed back, there might be little reason to be concerned about the potential moral hazard problem created by FDIC payments. But, given that the FDIC is likely to be prohibited from imposing claw backs on some significant portion of payment recipients, the moral hazard concern seems to be in play.

²² Analysts (Acharya et al. 2009, 31–2; Acharya et al. 2011, 10–1) have noted that it would be more appropriate to impose this tax prior to any failure, and base the tax rate on a firm's riskiness. Such a tax would discourage risk-taking. The current tax does not discourage risk-taking, since the failing firm does not pay it. In fact, because it is paid by survivors, it punishes, and therefore discourages, caution.

firms) to repay the Treasury, implies that creditors may be repaid more than the sum of funds generated by asset sales—more than they would have been repaid in liquidation.

It seems likely that Congress intended to provide the FDIC with a good bit of discretion to bypass strict priority as well as discretion over whether to borrow Treasury funds in order to mitigate systemic risk. For example, given the FDIC's ability to pay some creditors more than they would receive in bankruptcy, these creditors may be less likely to pass on losses to other firms, lowering the risk of a systemic problem.

One might argue that legislators' intention for providing the FDIC with the authority to borrow from the Treasury was simply to allow the FDIC the ability to move quicker than bankruptcy courts. By providing an immediate source of funds, the FDIC could gather funds, which it could then use to make payments equivalent to what would be paid in bankruptcy. In this way creditors would not be denied access to their funds for months or years (as in liquidation), and the FDIC could slowly sell the assets of the failing firm such that fire sales are avoided. Under such an arrangement, legislators could have required the FDIC to immediately estimate the value of the failing firm's assets (similar to the type of analysis currently performed by the FDIC when it determines—and announces in a press release—the cost to the FDIC of a bank's failure), and then limit itself to paying creditors no more than their pro-rata share (given priorities) of this estimated amount. Yet, Congress did not choose this course, i.e., it did not require the FDIC to limit the sum of its payments to be no more than the estimated value of the failing firm's assets. Instead it left the FDIC to determine payments to creditors and authorized taxes on large financial firms if payments exceed the liquidation value of assets. Therefore, it seems clear that Congress intended for some creditors of a failing firm to receive larger payments than bankruptcy allowed, as a means of mitigating systemic risk.

Investors certainly realize that the OLA provisions provide the FDIC with the authority to make larger-than-bankruptcy payments to creditors. As a result, they will tend to under price risk-taking by nonbank firms that might get OLA treatment and such firms will engage in more risk-taking than if they did not enjoy the potential benefits of receiving government aid.²³ Congress was aware that larger payments would have this moral-hazard-exacerbating impact on firm risk-taking and took steps to mitigate the impact in the OLA provisions of the Dodd-Frank Act. Broadly, the legislation requires that the FDIC attempt to liquidate SIFIs “in a manner that . . . minimizes moral

²³ Some authors, such as Jackson (2011), argue that a modified bankruptcy procedure can address this excessive risk-taking weakness and better resolve SIFIs. According to them, a system of established rules, judicial oversight, and full public disclosure has a better chance of both reducing bailouts and making the costs of them known than does a non-bankruptcy resolution authority.

hazard.”²⁴ More specifically, the law calls on the FDIC to ensure that any member of the management or the board of directors of the failed firm who is deemed responsible for the failure is fired. Similarly, the OLA provisions require the FDIC to “ensure that the shareholders of a covered financial company do not receive payment until after all other claims and the Fund are fully paid and ensure that unsecured creditors bear losses...”^{25,26} The provisions requiring the removal of management and directors are likely to encourage these corporate leaders to limit risk-taking. However, the OLA contains provisions for certain creditors to receive better treatment than they might in bankruptcy, even if some creditors suffer losses, so that creditor oversight is likely diminished by the prospect of OLA treatment.

Dealing With Systemic Risk in Failure Resolution: Exceptions to the Automatic Stay

The class of financial contracts, which are exempt from the automatic stay, are commonly referred to as “qualified financial contracts” (QFCs).²⁷ Therefore, investors who are holding QFCs have the ability to immediately terminate and net-out their contracts or liquidate the collateral on their claims once a party has defaulted or filed for bankruptcy. Today, under bankruptcy law, a number of financial instruments are QFCs, including repos, commodity contracts, forward contracts, swap agreements, and securities contracts.²⁸ The treatment of QFCs in bankruptcy (and under OLA provisions) has been the focus of a great deal of public debate.

A possible explanation for exempting QFCs is that the collateral that typically backs QFCs is not directly tied to the defaulting firm’s going concern value. A primary objective of the automatic stay in bankruptcy is to prevent

²⁴ Dodd-Frank Act § 204(a)

²⁵ Dodd-Frank Act § 206(1-5)

²⁶ The Dodd-Frank Act includes other provisions intended to minimize moral hazard including 1) a requirement that SIFIs create resolution plans (“living wills”) to increase the likelihood that they would be resolved through bankruptcy [Dodd-Frank Act § 165(d)]; and 2) a requirement that the FDIC have a plan in place, before borrowing greater than 10 percent of the failing firm’s asset, for repaying the Treasury [Dodd-Frank Act § 210(n)(9)(B)].

²⁷ In the Bankruptcy Code, contracts exempt from the automatic stay are referred to as “safe harbor contracts.” The Federal Depositary Institution Act and the Dodd-Frank Act refer to the safe harbor contracts as QFCs. Since safe harbor contracts and QFCs generally refer to the same types of contract, we will use the term “QFC” to refer to both, which is consistent with industry practice.

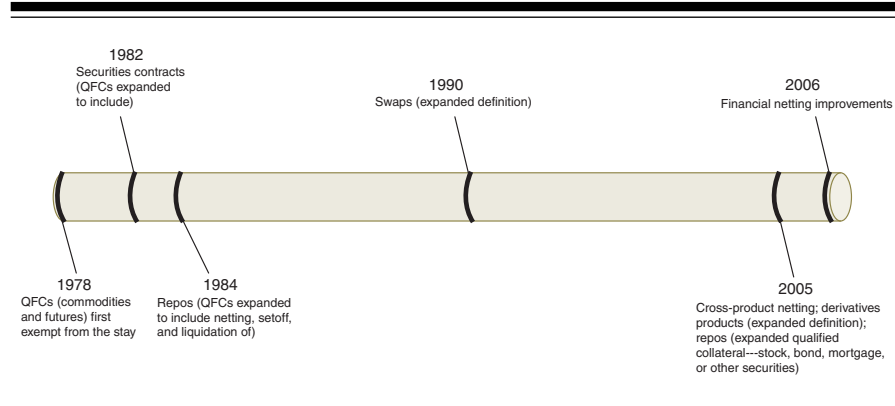
²⁸ The types of contracts exempt from the stay are listed in the following sections of the Bankruptcy Code: 11 U.S.C. § 362(b)(6), (b)(7), (b)(17), 546, 556, 559, 560. All terms are defined in 11 U.S.C. § 101 with the exception of a “securities contract,” which is defined as “the purchase, sale, or loan of a security, including an option for the purchase or sale of a security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any option entered into on a national securities exchange relating to foreign currencies, or the guarantee of any settlement of cash or securities by or to a securities clearing agency” (11 U.S.C. § 741).

the separation of complementary assets (an important goal of the trustee in liquidation) or to preserve the going-concern value of a firm (typically a goal in reorganization). QFCs can be immediately closed out because the collateral backing them will typically not be complementary to other assets of the firm, nor will QFC collateral be important to the firm's going-concern value. For instance, collateral consisting of highly marketable or cash-like securities (for example Treasury bills or mortgage-backed securities) can be removed from the firm without necessarily undercutting the firm's ability to produce loans or other financial products, since the production of these products depends on such resources as the skill of lending staff, staff contacts with possible borrowers, IT assets, office space and equipment, and funding (liabilities) from which to make loans. However, some argue that the collateral backing certain QFCs can be firm-specific (e.g., a pool of mortgage cash flows used as repo collateral) and therefore not all QFCs should be treated equally (Jackson 2011).

Another possible explanation for exempting QFCs is that the markets in which QFCs trade are special, such that delaying creditor recovery attempts in these markets (by imposing a stay on QFC counterparties) is especially destructive, compared to staying creditors operating in other markets. More specifically, proponents who hold this view seem to be arguing that staying QFCs is more likely to create systemic problems than staying the collection of other debts. This explanation for special treatment—what we will call the “systemic risk” rationale—appears to stand out as the argument used by policymakers supporting the expansion of the list of QFCs that took place over several decades through numerous reforms to the Bankruptcy Code. The rationale offered by those supporting the exemption is that in a fast-paced, highly interconnected market, a counterparty to a QFC may need the proceeds from the contract to pay off other debts in a timely manner. If this counterparty is unable to meet other obligations as a result of having its contracts held up in bankruptcy, other firms relying on that counterparty may become exposed and experience financial distress, which could bleed to other counterparties, and so on, causing a ripple effect and possibly “destabilizing” markets (Edwards and Morrison 2005).²⁹

Today, the transactions and agreements covered under the definition of a QFC include a wide range of instruments. However, when the automatic stay

²⁹ In a letter dated September 30, 1998, to Hon. George W. Gekas, Chairman, Subcommittee on Commercial and Administrative Law, Committee on the Judiciary, Robert Rubin, former Treasury Secretary, argued that applying traditional insolvency laws, such as the stay, to QFCs could cause a “possible domino effect that could turn the failure of one market participant into a failure of the market.” See www.wilmerhale.com/files/Publication/eacecfbd-0400-4cb1-80a0-cf3a2c3f1637/Presentation/PublicationAttachment/29b1ce6d-1ce1-4544-a3ec-63ecd65d11e1/Bankruptcy%20%20Derivatives%20outline%20-%20final_.pdf.

Figure 1 History of QFC Exemptions from the Stay

was first created as part of the new Bankruptcy Code in 1978,³⁰ only commodities and futures contracts were exempt.³¹ At the time, these protections were intended to “prevent the insolvency of one commodity firm from spreading to other brokers or clearing agencies and possibly threatening the collapse of the market.”³² In the decades to follow, various reforms to the Bankruptcy Code expanded the types of contracts classified as QFCs, as well as expanding the types of collateral that could be used to back them (see Figure 1 timeline).

Legislation enacted in 2005 and 2006³³ expanded the safe harbor treatment significantly by broadening the definition of a QFC to such an extent that it would capture any newly created derivatives product that may otherwise not be explicitly included.³⁴ Moreover, the most recent reforms also expanded contractual netting rights to allow for “cross-product netting” of QFCs (Figure 1). Netting occurs when a non-defaulting counterparty of a defaulting bankrupt firm is allowed to offset debts it owes to the defaulting firm against debts owed it by the defaulting firm.³⁵ Cross-product netting allows contracts

³⁰ The *stay* existed as a fundamental feature of bankruptcy before 1978. The Bankruptcy Reform Act of 1978, however, created the “automatic stay,” which takes effect immediately upon the filing of a bankruptcy petition. Prior to the Bankruptcy Reform Act of 1978, the stay typically took effect only after the grant of an injunction by a court. Such grants were typical, but were often not immediate, and certainly not automatic (Jessup 1995).

³¹ U.S.C. §362(b)(6)

³² See H.R. Rep. No. 97-420, at 2 (1982).

³³ The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (Pub. L. 109-8, 119 Stat. 23) and the Financial Netting Improvements Act of 2006 (Pub. L. 109-390, 120 Stat. 2692).

³⁴ The following language was added to the definition of commodities, forward, repo, and securities contracts: “any other agreement or transactions referred to” in the definition and “any combination of the agreements or transactions referred to” in the definition.

³⁵ For example, in the simplest case of two contracts, the non-defaulting firm is owed \$1,000 by the bankrupt firm on, say, an interest rate swap (derivative) contract, and owes the defaulting

of differing types to be netted against one another, for example a debt owed on a swap to be netted against a debt owed on an option contract. Netting, whether the netting of like product contracts or cross-product contracts, can reduce the credit exposure of firms that use financial contracts. In turn, the chance that the bankruptcy of one firm might lead to large losses for its financial contract counterparties is reduced, which some observers argue could reduce systemic risk (Jones 1999).³⁶

Observers explain that the expansion of special treatment for QFCs occurred in order to account for the considerable growth in the number and diversity of complex financial products over the previous decade (Jones 1999, Skadden 2010). These instruments grew in popularity as they served as mechanisms for financial firms to insure and hedge against risk, helping to reduce uncertainty and stabilize earnings. This increasingly expansive protection for derivatives and repos was intended to achieve the goal of “minimizing the systemic risks potentially arising from certain interrelated financial activities and markets.”^{37,38}

Some Possible Weaknesses of Bankruptcy’s QFC Exemption

The onset of the financial crisis led many observers to reexamine whether this systemic risk rationale was consistent with the events that occurred when financial markets became severely stressed during the recent financial crisis. Therefore, the idea that QFCs should be exempt from the stay was revisited in the lead up to Dodd-Frank and ultimately addressed in the OLA. The systemic risk argument is the prominent justification given by those supporting the expansion of the special treatment given to QFCs. However, there is another cohort, which argues that any reduction in systemic risk, because of QFC exemptions, may be offset by another form of systemic risk

firm \$800 on a different interest rate swap contract. Under bankruptcy law, the creditor firm may net the two contract debts such that the \$800 it owes the defaulting firm is cancelled (netted against the \$1,000) and the defaulting firm ends up owing only \$200 to the non-defaulting firm. The non-defaulting firm will have to wait for the bankruptcy process to proceed before being repaid any portion of the remaining \$200 it is owed. This outcome is superior for the non-defaulting party compared to the case in which netting were not allowed. Here the non-defaulting party would be required to pay the defaulting party the \$800 it owed, but wait for the bankruptcy process to be completed before getting any of the \$1,000 defaulting party owes it. Of course, in reality, the defaulting firm and the non-defaulting firm are likely to have many contracts outstanding with one another at the time of default, all of which might be netted (Mengle 2010).

³⁶ This may have magnified the concentration of the derivatives industry according to Bliss and Kaufman (2006, 67–8), who argue that “by explicitly protecting these netting agreements, the 2005 bankruptcy changes reinforced the competitive advantage of the biggest counterparties.”

³⁷ See Jones 1999.

³⁸ “Immediate termination of outstanding contracts and liquidation of collateral facilitates the acquisition of replacement contracts, reduces uncertainty and uncontrollable risk, improves liquidity and reduces the risk of rapid devaluation of collateral in volatile markets” (Yim and Perlstein 2001, 3).

involving runs on repos³⁹ and fire sales⁴⁰ of the collateral underlying closed-out derivatives contracts (Edwards and Morrison 2005, Taylor 2010, Acharya et al. 2011). The simultaneous termination and liquidation of numerous QFCs (which is allowed by the exemption of QFCs from the stay) may lead to fire sales and possibly further insolvencies. In Lehman's case, of their 930,000 derivatives counterparties, 733,000 sought to terminate their contracts upon their bankruptcy filing on September 15, 2008 (Miller 2009).

Additionally, some observers note that the 2005 bankruptcy laws, which, among other things, extended QFC protections to repos backed by all types of collateral, including all mortgage-related securities, may have encouraged use of mortgage-backed securities as repo collateral (Lubben 2010), and thereby contributed to losses during the financial crisis (Skeel 2010, Government Accountability Office 2011). As Skeel (2010) points out, mortgage values could have spiraled down even more had AIG's counterparties been forced to sell a significant amount of the mortgage-related securities they had posted as collateral on their QFCs (which was avoided when AIG was bailed out).

The idea that QFC fire sales might result from their exemption is not new. In fact, it appears to be what led the Federal Reserve to step in and encourage private firms to come to the aid of Long-Term Capital Management L.P. (LTCM), preventing it from entering bankruptcy (Edwards and Morrison 2005).⁴¹

As discussed, the bankruptcy process can be long, but among other things, this is intended to give the troubled financial firm and its creditors the time to develop plans to salvage the value of the firm. However, with the exemption from the stay, a large financial firm facing possible default (because of a number of factors, such as a recent credit downgrading or an overall crisis of confidence) has a strong incentive not to file for bankruptcy since doing so would likely trigger simultaneous termination of all QFCs (Skeel and Jackson 2012). Thus, a troubled firm may put it off until the last moment and be forced into a rapid liquidation that significantly depresses values to the detriment of other market participants. These arguments suggest that bankruptcy's current treatment of QFCs may not be optimal.

Observers also find that the special treatment given to QFCs—in order to prevent the perceived systemic risks that arise when these instruments are

³⁹ By "runs on repos" we mean when counterparties, en masse, seize the collateral underlying these deposit-like instruments.

⁴⁰ The phrase "fire sale" typically refers to the possibility that the sale of an asset might yield a lower-than-typical price if holders of one type of asset attempt to sell en masse. In comparison, the "typical" (non-fire sale) price will result if sales are distributed over time.

⁴¹ Krimminger (1999, 1) notes that, "[i]n the case of LTCM, the absence of any mechanism under the Bankruptcy Code to 'slow' the liquidation of assets and collateral, [a power granted to the FDIC under the Federal Deposit Insurance Act] and the resulting 'dump' upon the markets, was a key motivation for the pre-insolvency facilitation provided by the Federal Reserve Bank of New York."

subjected to the automatic stay—not only create a different form of systemic risk, but weaken market discipline (Edwards and Morrison 2005, Scott 2011). The special treatment awarded to QFC counterparties in bankruptcy essentially places them ahead of all other creditors in the bankruptcy repayment line, allowing QFC counterparties to get out of their contracts when all other creditors cannot. As a result, their incentive to monitor the debtor prior to bankruptcy and base their pricing and investment decisions on the perceived risk of the counterparty may be significantly reduced, increasing moral hazard (Edwards and Morrison 2005, Roe 2011). It is argued that this leads to market distortions whereby debtors favor short-term repo financing over traditional sources of funding, encouraging a more fragile liability structure (Edwards and Morrison 2005, Skeel and Jackson 2012). For example, at the time of Bear Stearns’ failure, a quarter of its assets (approximately \$100 billion) were funded by repos (Roe 2011). Roe (2011) suggests that, without the priority given to these instruments in bankruptcy, it is plausible that Bear would have financed a much larger proportion of its assets with longer-term debt, which would have allowed for a more stable funding structure during the financial turmoil.

Some observers who support these arguments maintain that QFCs should be subject to the automatic stay provisions in the Bankruptcy Code, although there are a range of views concerning the length of the stay and whether all QFCs should be treated equally. According to Harvey Miller (2009), lead bankruptcy attorney for the Lehman bankruptcy, the automatic stay, as originally contemplated, is intended to provide a firm with the “breathing space” to find a third party source of liquidity or to carry out an “orderly, supervised wind down of its business assets.” Miller argues that, had the special treatment given to QFCs not applied, Lehman’s failure may have been avoided and certainly would not have been as “systemically challenging.” For instance, Lehman suffered a significant loss of value when nearly 80 percent of their derivatives counterparties terminated their contracts upon their filing of bankruptcy (Miller 2009).

The OLA’s One-Day Automatic Stay for QFCs

Given the controversy—with some experts arguing the exemption from the stay is necessary to prevent systemic risk and others arguing that the exemption creates systemic risk—it is natural that Congress chose a solution that leaves the FDIC with discretion to determine the treatment of QFCs for covered financial companies. Under Congress’s solution, QFCs are subject to a

one-day automatic stay upon appointment of the FDIC as receiver, whereas QFCs are subject to no stay in bankruptcy.⁴²

During the one-day stay under the OLA, the FDIC, as receiver of the failing financial company, must quickly identify how to manage the SIFI's QFC portfolio. The one-day stay is aimed at addressing fears associated with a failing firm's QFC counterparties cancelling their contracts all at once and driving asset prices down. Instead, counterparties' rights to cancel their contracts are put on hold for one day while the FDIC determines how to treat these contracts. The FDIC has this same type of authority when dealing with bank failures. Under the OLA, during this short period, the FDIC has the option to retain the QFCs in receivership, transfer QFCs to another financial institution (to an outside acquirer or to a bridge company created by the FDIC), or reject the QFCs.⁴³ However, in all instances, the FDIC must retain, reject,⁴⁴ or transfer *all* of the QFCs with a particular counterparty and its affiliates.^{45,46}

Each action taken by the FDIC has different implications for QFC counterparties of the debtor, as well as the failing firm. Retaining the QFCs in receivership is most similar to bankruptcy in that after the one-day stay expires, QFC counterparties may terminate or net-out their contracts.⁴⁷ What differs significantly from bankruptcy, but is very similar to the FDIC's resolution process for depository institutions, is the FDIC's ability to transfer or reject QFCs. If the FDIC chooses to transfer all of the QFCs with a particular counterparty and its affiliates to a third party (including a bridge company), the counterparty is not permitted to exercise its rights to terminate or close out the contract.⁴⁸ This awards the FDIC an opportunity to possibly preserve the value of the contracts by removing the ability of counterparties to terminate contracts early and sell off the collateral at fire sale prices (Cohen 2011).

⁴² The one-day stay lasts until 5:00 p.m. on the business day following the date the FDIC is appointed as receiver. Therefore, the "one-day" stay could last four days if the FDIC is appointed as receiver on a Friday.

⁴³ For the most part, the FDIC's powers under the OLA to reject or transfer a QFC during their limited one-day stay are much like the powers of the FDIC and bankruptcy trustees under the Federal Deposit Insurance Act and the Bankruptcy Code, respectively, with the exception that they are not supervised by a court nor do they receive counterparty input (Skadden 2010).

⁴⁴ In bankruptcy, only contracts or leases that are executory—a contract where both parties have unperformed obligations—may be rejected.

⁴⁵ Dodd-Frank Act § 210(c)(9)(A). This is intended to eliminate "cherry picking" (selective assumption and rejection) of QFCs by the debtor.

⁴⁶ This differs from the Bankruptcy Code's setoff provision, which allows a creditor to offset all obligations under a single master agreement but not all of the contracts with a single counterparty and its affiliates (Skeel 2010, Cohen 2011). When Lehman filed for bankruptcy, they were a counterparty to 930,000 derivatives transactions documented under 6,120 master agreements (Summe 2011).

⁴⁷ If a nondefaulting counterparty has an unsecured claim after terminating a QFC and liquidating any collateral, the claim would then be subject to the same claims process as other unsecured creditors.

⁴⁸ If the counterparty were to default at a later time on a separate occasion, they may exercise their close-out rights.

Moreover, a QFC counterparty may find that their contracts are held with a new, and presumably more stable, counterparty or a temporary bridge bank following the one-day stay and, therefore, may have no incentive to terminate (in addition to the fact that it has no ability to terminate), leaving the market undisrupted by their original counterparty's failure while also maintaining what are possibly valuable hedge transactions. Finally, the FDIC may reject (or repudiate) the QFCs of a given counterparty to the debtor, effectively closing them out at the current market value, if they determine that they are somehow burdensome or doing so would otherwise promote orderly administration.⁴⁹ However, counterparties may recover, from the FDIC, any damages suffered as a result of the FDIC's rejection of QFCs.⁵⁰

Possible Weaknesses of OLA's One-Day Stay

Some commentators find that the one-business-day stay does not provide the FDIC with sufficient time to identify the potential recipients of the failed firm's derivatives portfolio (Skeel 2010, Bliss and Kaufman 2011, Summe 2011). Given this time constraint coupled with the "all or nothing" approach to the treatment of QFCs (where the FDIC must retain, reject, or transfer all QFCs with a particular counterparty) and the potential systemic risks from its failure to protect a SIFI's QFCs, some suggest that the FDIC is highly likely to transfer all QFC contracts of a given counterparty to a bridge financial institution (i.e., protecting or guaranteeing them in full) (Skeel 2010). After all, if the FDIC does not protect all contracts, then the non-defaulting counterparties may close out and liquidate their contracts upon the expiration of the one-day stay, effectively resulting in the systemic problems previously discussed related to the QFC exemption—closing out the contracts and selling collateral at fire sale prices. Thus, even if various QFC counterparties have differing risk exposures to the defaulting firm, they are all likely to be treated the same and "bailed out." If counterparties believe that their QFCs are likely to be protected by placement in a well-funded bridge company, they are likely to provide more funding (or provide lower-cost funding) to a risky firm than they otherwise would. Further, counterparties may care little about the differing risks associated with the various types of QFCs, because all QFCs of a given counterparty are treated the same. Therefore, while bridge company placement of QFCs may limit systemic risk, it is likely to do so at the cost of increasing moral hazard.

In response to the concern that a one-day stay is likely to lead to the protection of most QFCs, some observers, such as Thomas Jackson, author of a proposal to create a new chapter in the Bankruptcy Code tailored to the

⁴⁹ Dodd-Frank Act § 210(c)

⁵⁰ Damages are calculated as of the date of repudiation. The word "damages" is defined as the "normal and reasonable costs of cover or other reasonable measures of damages utilized in the industries for such contract and agreement claims" Dodd-Frank Act § 210(c)(3)(C).

resolution of SIFIs (Chapter 14), proposes an extension of the duration of the automatic stay for QFCs to three days. Jackson and others argue that a longer stay duration will give the FDIC additional time to make an informed decision regarding how to handle the failing firm's QFC portfolio (Jackson 2011). Jackson's three-day stay appears to be an attempt to balance the desire to give the FDIC more time, against the danger of producing QFC counterparty failures.⁵¹

Moreover, the protections for derivatives contracts have broadened over the last several decades and this legislation does not account for the differences across QFC products (such as between repos and swaps), or the types of collateral backing QFCs, which some observers believe should be considered. For instance, several observers find that special treatment (i.e., exemption from the stay) should be limited to derivatives collateralized by highly liquid collateral, such as short-term Treasury securities, since there is little reason to assume that such instruments are important for the going-concern value of the bankrupt firm (Herring 2011, Jackson 2011). In Jackson's 2011 Chapter 14 proposal, highly liquid, or otherwise highly marketable, instruments with no firm-specific value remain exempt from the stay so that creditors who rely on the immediate availability of their funds can get them back quickly and without disruption upon the failure of a firm. On the other hand, the exemption is removed (i.e., the stay would apply) for less liquid instruments, such as CDS, in an effort to prevent these creditors from running on the troubled firm. Clearly, there remains a good bit of controversy about the best way to handle the QFC exemption, in both bankruptcy and the OLA, with no obvious best solution.

3. CONCLUSION

While bankruptcy probably provides the ideal failure resolution mechanism for most corporations, it may not be optimal for some financial firms (i.e., SIFIs). Financial firms are typically more heavily dependent on short-term funding, often including a heavy reliance on QFCs, and their balance sheets are opaque. Because of this dependence on short-term funding, a long stay, while the bankruptcy process plays out, is likely to result in financial difficulties for some of the troubled firm's counterparties. Moreover, DIP funding, which is the usual means of keeping a troubled, but viable, firm alive during reorganization, is likely to be quite difficult to arrange, given the opacity of most financial firms. Because of these weaknesses, handling a SIFI through bankruptcy is likely

⁵¹ While the three-day stay may not provide significantly more time than one day to make such valuations, the Dodd-Frank requirement that SIFIs create resolution plans or "living wills" and provisions forcing swaps to be traded on exchanges could expedite the QFC valuation process, improving the ability of the FDIC to make appropriate decisions within a three-day stay period.

to result in significant risks to financial stability. Policymakers are therefore understandably reluctant to allow SIFIs to enter bankruptcy, given that these risks can be mitigated through bailouts. But bailouts, or the expectation that they could be forthcoming, drive down economic efficiency by exacerbating moral hazard problems.

In an effort to address these difficulties, the OLA was created with the explicit goals of mitigating risk to the financial system and minimizing moral hazard. Specifically, the OLA adjusts the way that QFCs are handled and how creditors are paid out. Despite the attempt to achieve these well-founded goals, because they are conflicting, reducing one inevitably leads to an increase in the other. The one-day QFC exemption does not clearly resolve potential risks to financial stability and it also does not go far to ameliorate the moral hazard problem that is apparent when giving QFCs special treatment. Additionally, the ability to pay some creditors more than they would be likely to receive in bankruptcy may reduce systemic risk, but at the cost of increasing moral hazard. In conclusion, the threat of a SIFI's failure, or the failure itself, presents policymakers with a daunting challenge that neither bankruptcy nor the OLA seems capable of fully resolving.

REFERENCES

- Acharya, Viral V., Barry Adler, Matthew Richardson, and Nouriel Roubini. 2011. "Resolution Authority." In *Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance*, edited by Viral V. Acharya, Thomas F. Cooley, Matthew Richardson, and Ingo Walter. Hoboken, N. J.: John Wiley & Sons, Inc., 213–40.
- Acharya, Viral, Thomas Cooley, Matthew Richardson, and Ingo Walter. 2009. "Chapter 6, Taxing Too-Big-to-Fail Institutions: The Current Proposals." In *Real-Time Recommendations for Financial Reform*. New York University: The NYU Stern Working Group on Financial Reform (December).
- Bernanke, Ben S. 2009. Testimony of Ben S. Bernanke, Chairman of the Board of Governors of the Federal Reserve System, to the U.S. House of Representatives Committee on Financial Services, October 1. Available at www.federalreserve.gov/newsevents/testimony/bernanke20091001a.htm.
- Bernanke, Ben S. 2010. Remarks on "The Squam Lake Report: Fixing the Financial System" at the Squam Lake Conference, New York, June 16. Available at www.federalreserve.gov/newsevents/speech/bernanke20100616a.htm.

- Bliss, Robert R., and George G. Kaufman. 2011. "Resolving Large Complex Financial Institutions: The Case for Reorganization." Available at www.richmondfed.org/conferences_and_events/research/2011/pdf/bankruptcy_workshop_2011_bliss_paper.pdf.
- Bliss, Robert R., and George G. Kaufman. 2006. "Derivatives and Systemic Risk: Netting, Collateral, and Closeout." *Journal of Financial Stability* 2 (April): 55–70.
- Boul, Harry. 2006. "Repeat Filings under BAPCPA: Stays, Multiple Discharges and Chapter 20." *ABI Committee News* Volume 4, Number 6 (December). Available at www.abiworld.org/committees/newsletters/consumer/vol4num6/RepeatFilings.html.
- Bris, Arturo, Ivo Welch, and Ning Zhu. 2006. "The Costs of Bankruptcy: Chapter 7 liquidation versus Chapter 11 Reorganization." *The Journal of Finance* 61 (June): 1,253–303.
- Cohen, Hollace T. 2011. "Orderly Liquidation Authority: A New Insolvency Regime to Address Systemic Risk." *University of Richmond Law Review* 45 (May): 1,143–229.
- Duffie, Darrell. 2011. *How Big Banks Fail, and What to Do About It*. Princeton, N. J.: Princeton University Press.
- Edwards, Franklin R., and Edward R. Morrison. 2005. "Derivatives and the Bankruptcy Code: Why the Special Treatment?" *Yale Journal on Regulation* 22 (January): 101–33.
- Government Accountability Office. 2011. "Bankruptcy: Complex Financial Institutions and International Coordination Pose Challenges." U.S. Government Accountability Office, Report to Congressional Committees, GAO-11-707 (July). Available at www.gao.gov/assets/330/321213.pdf.
- Gruenberg, Martin J. 2012. Remarks to the Federal Reserve Bank of Chicago Bank Structure Conference, Chicago, May 10. Available at www.fdic.gov/news/news/speeches/chairman/spmay1012.html.
- Herring, Richard J. 2011. The Meeting of the Systemic Resolution Advisory Committee of the Federal Deposit Insurance Corporation, Washington, D.C., June 21. Available at www.fdic.gov/about/srac/11JuneMeetingMins.PDF.
- Jackson, Thomas. 2011. "Bankruptcy Code Chapter 14: A Proposal." Hoover Institution Resolution Task Force, February 2012. Available at <http://media.hoover.org/sites/default/files/documents/Bankruptcy-Code-Chapter-14-Proposal-20120228.pdf>.

- Jessup, Clifton R., Jr. 1995. "Should the Automatic Stay Be Abolished?" The ABI National Symposia Series, ABI Bankruptcy Reform Study Project. Alexandria, Va.: American Bankruptcy Institute (June). Available at www.abiworld.org/abidata/online/symposium/stay.html.
- Jones, Douglas H. 1999. "Statement of Douglas H. Jones, Senior Deputy General Counsel, Federal Deposit Insurance Corporation, on Bankruptcy Reform Legislation, Committee on Banking, United States Senate, March 25, 1999." Available at www.fdic.gov/news/news/speeches/archives/1999/sp25mar99b.html.
- Krimminger, Michael. 1999. "Insolvency in the Financial Markets: Banks, Hedge Funds and Other Complications." *Banking Policy Report*, January 18.
- Lubben, Stephen J. 2010. "The Bankruptcy Code Without Safe Harbors." *American Bankruptcy Law Journal* 84: 123–38.
- Mengle, David. 2010. "The Importance of Close-Out Netting." *ISDA Research Notes* Number 1.
- Miller, Harvey R. 2009. "Too Big to Fail: The Role for Bankruptcy and Antitrust Law in Financial Regulation Reform." Testimony before the Subcommittee on Commercial and Administrative Law, House of Representatives, Committee on the Judiciary, October 22.
- Morgan, Donald P. 2002. "Rating Banks: Risk and Uncertainty in an Opaque Industry." *American Economic Review* 92 (September): 874–88.
- Roe, Mark J. 2011. "The Derivatives Market's Payment Priorities as Financial Crisis Accelerator." *Stanford Law Review* 63 (March): 539–90.
- Scott, Kenneth. 2011. "A Guide to the Resolution of Failed Financial Institutions: Dodd-Frank Title II and Proposed Chapter 14." Stanford Law School. Available at <http://media.hoover.org/sites/default/files/documents/ken-scott-guide-to-resolution-project.pdf> (May).
- Skadden. 2010. "The Dodd-Frank Act: Commentary and Insights." Available at www.skadden.com/sites/default/files/publications/Skadden_Insights_Special_Edition_Dodd-Frank_Act1_6.pdf.
- Skeel, David A. 2010. "Bailouts, Bankruptcy or Better? Resolution Authority II." In *The New Financial Deal: Understanding the Dodd-Frank Act and its (Unintended) Consequences*. Hoboken, N. J.: John Wiley & Sons, Inc., 129–52.
- Skeel, David A., and Thomas Jackson. 2012. "Transaction Consistency and the New Finance in Bankruptcy." *Columbia Law Review* 112 (February).

- Summe, Kimberly. 2011. "An Examination of Lehman Brothers' Derivatives Portfolio Post-Bankruptcy and Whether Dodd-Frank Would Have Made Any Difference." Available at <http://media.hoover.org/sites/default/files/documents/Kimberly-Summe-Dodd-Frank-20110421.pdf>.
- Taylor, John B. 2010. "Defining Systemic Risk Operationally." In *Ending Government Bailouts as We Know Them*, edited by George Shultz, Kenneth Scott, and John B. Taylor. Stanford University: Hoover Institution Press, 33–57.
- White, Michelle J. 1998. "Corporate Bankruptcy." In *The New Palgrave Dictionary of Economics and the Law*, edited by Peter Newman. Macmillan Press. Available at <http://weber.ucsd.edu/~miwhite/>.
- Yim, Soo J., and William J. Perlstein. 2001. "The Effect of Proposed Amendments to U.S. Insolvency and Banking Laws on Transactions Involving Securities, Commodities and Other Financial Contracts." Presentation prepared in connection with the American Bar Association 2001 Spring Meeting Section of Business Law Business Bankruptcy Committee Forum on Derivatives And Proposed Financial Contract Netting Legislation, March 24.

Our Perspective

Our Perspective is a series of essays that articulates the Richmond Fed's views on issues of particular importance to the Fifth District and the national economy, and their policy implications. The following essay is the Richmond Fed's view on "too big to fail."

Too Big to Fail

The federal financial safety net is intended to protect large financial institutions and their creditors from failure and to reduce the possibility of "systemic risk" to the financial system. However, federal guarantees can encourage imprudent risk taking, which ultimately may lead to instability in the very system that the safety net is designed to protect.

Introduction

Occasional turbulence in financial markets is inevitable. There will always be short-term "shocks" that spark new awareness of previously unknown risks, just as the housing market decline that started in 2006 made clear that some financial institutions had taken on greater risk than many investors had realized.

Shocks, however, do not easily or frequently lead to large-scale panics like the global financial crisis of 2007 and 2008. Many complicated factors led to that outcome. Among the most important factors was a long history of government interventions that led market participants to expect certain firms to be rescued in the event of distress. That "safety net" may make market participants less inclined to protect themselves from risk, making instability and financial panic a more common and severe occurrence.

Part of the government's financial safety net is explicit, such as deposit insurance that protects relatively small investors such as households and small businesses. Commercial banks are charged fees for that service and are supervised, which limits their incentive to take risk.

A large portion of the safety net is ambiguous and implicit, however, meaning that it is not spelled out in advance. For decades the federal government has proven its willingness to intervene with emergency loans when institutions seen as "too big to fail" (TBTF) are on the brink of collapse. Market participants conduct their business making educated guesses about which institutions may be supported in times of distress.

The trouble caused by implicit guarantees is that they effectively subsidize risk. Investors feel little need to demand higher yields to compensate for the risk of loss in their contracts with protected firms since losses are expected to be cushioned by the government. Implicitly protected funding sources are therefore cheaper, causing market participants to rely more heavily on them. At the same time, risk is more likely to accumulate in institutions believed to be protected. The expectation of access to government support

reduces the incentive for firms that might be protected to prepare for the possibility of distress by, for example, holding adequate capital to cushion against losses. Meanwhile, investors who have made loans to support activities assumed to be guaranteed face less incentive to assess the risks and related costs associated with extending funds to those firms or markets. This is the so-called "moral hazard" problem of the financial safety net — expectation of government support weakens the private sector's ability and willingness to limit risk.

In essence, the implicit public safety net provides incentive for firms to make themselves relatively more fragile and makes creditors less likely to pay attention to that fragility. Both effects endorse risk and make the firm or activities more likely to require a bailout to remain solvent. This self-reinforcing cycle is the essence of the TBTF problem.

Although the term "too big to fail" has become the popular way to talk about financial safety net issues, it is actually something of a misnomer. The incentive problems created by the safety net stem from the belief on the part of a firm's creditors that they may be protected from losses if the firm experiences financial distress. Protection of some creditors can happen even if the firm fails — that is, even if the shareholders lose everything and management is replaced.

How extensive is the TBTF problem? The nature of the problem does not lend itself easily to study, as argued by Gary Stern, former president of the Federal Reserve Bank of Minneapolis, and Ron Feldman, the Minneapolis Fed's current head of Supervision, Regulation, and Credit, in their book on the subject (Stern and Feldman 2004). There is no list of institutions that governments implicitly view as TBTF, and there is no direct way to observe private markets' suspicions about firms or activities that would appear on such a list. Moreover, the amount of the subsidy provided by implicit support exists only on the margin and is likely to vary across firms and activities. These characteristics make it difficult to directly identify the effects of TBTF treatment on, for example, the relative performance of large and small banks (Ennis and Malek 2005).

Economists have accumulated some evidence, however. Financial institutions ostensibly viewed as TBTF have enjoyed better credit ratings and favorable financial market treatment after mergers expanding their size. Perhaps the most salient evidence of TBTF lies with Fannie Mae and Freddie Mac, the two firms that were most broadly viewed as implicitly supported by a government backstop. For decades markets have been willing to lend more cheaply to these institutions than to competitors that do not benefit from government support. Economist Wayne Passmore at the Federal Reserve Board of Governors has estimated the value of that subsidy between \$122 billion and \$182 billion (Passmore 2005). Suspicions of government support were proven correct when the firms were taken into government conservatorship during the financial crisis.

While the extent of the TBTF problem has not been conclusively determined, the Richmond Fed believes that it is significant. This intuition is based on past experience. The history of government interventions — from the bailout of Continental Illinois National Bank and Trust Company in 1984 to the public concerns raised during the Long Term Capital Management crisis in 1998 — shaped market participants' expectations of official support leading up to the events of 2007–08.

Why Does This Problem Exist?

It is easy to see why the TBTF problem developed. The potential damage from a large firm's failure is so great that governments feel compelled to intervene. That damage comes from at least three forms of spillovers. Most directly, when a firm fails, it may be unable to honor its financial obligations to other firms, which can snowball until other firms are jeopardized despite being fundamentally sound (Athreya 2009). To some extent, firms will protect themselves from this possibility by charging a premium to counterparties whose risks are unclear. However, the expectation of safety net protection reduces the likelihood that a firm will face the full cost of that risk, so it will be less likely to charge those higher premiums.

A large failure also can provide information about real risks in the economy. However, it is not obvious that it would be desirable or even possible to stop that kind of information from spreading.

Finally, a large firm's failure can cause market participants to scramble to reassess which of their counterparties are likely to receive government support. This type of panic contributed to the most tumultuous days of the financial crisis after the failure of investment bank Lehman Brothers in September 2008.

Earlier that year, the investment bank Bear Stearns was rescued when the Federal Reserve lent funds to JPMorgan Chase to purchase the ailing bank, the first time the Fed had directly extended financing to an investment bank. This unprecedented action, along with others taken to treat the financial market strains, likely signaled that similar support would be available for other firms. Yet in September, Lehman Brothers, at nearly twice the size of Bear Stearns, was allowed to fail.

The government appeared to be offering support on a case-by-case basis in a time of already extraordinary market uncertainty (Steelman and Weinberg 2008). But by that time, many investors were too entrenched in their contracts to charge premiums for the risks to which they now understood they were exposed — in particular, the risk that the government would not prevent failures. Lehman's failure was a turning point after which the financial crisis escalated severely, leading to extraordinary volatility and worsening the downturn in global economic activity. This type of panic — resulting from reassessment of the likelihood of protection — would cease to exist if the government's safety net boundaries were made explicit and transparent in advance.

In other words, the negative, long-term effects of a large firm's failure can be amplified by government support. In the short term, the spillovers create pain. In the extreme, they could translate to reduced economic activity, increased unemployment, and restricted credit to households and businesses. They make the case for intervention appear stronger, even as policymakers understand the moral hazard problems that intervention creates for the future.

For this reason, ambiguity around the implicit safety net nearly guarantees that it will grow ever larger over time (Lacker and Weinberg 2010). According to Richmond Fed estimates, the proportion of total U.S. financial firms' liabilities covered by the federal financial safety net has increased by 27 percent during the past 12 years. The safety net covered \$25 trillion in liabilities at the end of 2011, or 57.1

percent of the entire financial sector. Nearly two-thirds of that support is implicit and ambiguous (Marshall, Pellerin, and Walter 2013).

What Can Be Done?

In the wake of the financial crisis, most policymakers agree that TBTF is a problem that must be addressed to reduce the frequency and magnitude of future financial crises. There is no consensus on solutions, however.

Many advocate broadening the scope of regulation to include all institutions and markets that could be a source of shocks that lead to financial crises. This is often referred to as systemic risk regulation. However, more regulation alone cannot be the answer. Regulations impose burdens of their own, creating incentive to innovate around them, forcing regulators and rule makers to carefully follow and adapt to an ever-changing financial landscape (Lacker 2011). Staff at the Federal Reserve and other regulatory agencies put significant resources toward understanding the institutions and markets they supervise. Yet it will always be a challenge for them to be as intimately familiar with the complex financial arrangements into which a given firm has entered as that firm is itself.

Therefore, it is essential for firms to face incentives, separate from the requirements of regulators, to limit their own risk. This is called market discipline, and it is a critical element of a well-functioning and stable financial system (Hetzel 2009). Market discipline is created when creditors expect to face the full costs of a firm's losses, and so they have a greater interest in monitoring the risk of firms with which they do business. By definition, implicit guarantees erode market discipline.

As regulatory reform continues, it is critical to create rules and policies that support market discipline rather than merely attempting to supplant it with regulation. In the Richmond Fed's view, adopting stronger regulations without changing what people believe about the boundaries of the implicit public safety net would fail to address a major source of the very risks that regulations attempt to minimize.

A useful first step would be for policymakers to publicly commit to adhering to a safety net policy that is transparent and limited in scope. Reasonable people can debate the exact contours of the safety net's boundaries. In the Richmond Fed's view, the safety net should focus on smaller creditors because, as discussed, a larger safety net has proven to grow inexorably over time. Regardless of where the safety net boundaries ultimately are drawn, making those boundaries explicit should be at the forefront of policymakers' efforts to address the TBTF problem.

The actions of the federal government, including the Federal Reserve, over the past several years have no doubt made it harder for commitments against intervention to be credible. In fact, due to that complication, some view bailouts as inevitable, believing it would make more sense for the government to make its guarantees explicit and then charge the associated firms fees for that service to make those activities rightfully costly.

However, the Fed has some experience dealing with seemingly insurmountable credibility problems. Many onlookers thought it would be impossible for the Fed to establish credibility that it would fight

inflation in the late 1970s. The solution then was to build a reputation for being willing to tighten monetary policy to dampen inflation even if it meant higher unemployment in the short run. Similarly, only building a reputation to limit lending powers — perhaps by letting large firms fail, which could cause disruptions for parts of the financial sector — can avoid the moral hazard the central bank's lending authority has the potential to create (Goodfriend and Lacker 1999). The stance of the Richmond Fed is that, like in the 1970s, the long run benefits of credibility are likely to outweigh the short-term costs of the measures taken to establish it.

One step that could help establish credibility against intervention without enduring an institution's costly failure is the creation of "living wills." Living wills are blueprints, written by firms and approved in advanced by regulators, for winding down large financial institutions in the event of financial distress. The purpose of living wills is for firms to plan for how their operations could be unwound in a manner that minimizes spillovers and is unassisted from government protection of creditors, preferably with lower costs than a process featuring government assistance. Therefore, living wills present policymakers with a viable alternative to emergency "bailouts" in a crisis. The more precisely living wills are written, the more likely regulators would be to invoke them instead of bailouts in a crisis, and the more likely that firms and creditors would be to operate without the expectation of government assistance (Lacker and Stern 2012). Living wills have the potential to truly end the TBTF problem by making the government safety net the less attractive option in a crisis.

The Dangers of Discretion

To help reduce the possibility that a large firm would have to fail for the Fed's commitment to be demonstrated, an additional option is for policymakers to be "tied to the mast" with explicit rules that limit their ability to intervene. A guiding principle for ongoing regulatory reform should be limiting policymakers' discretion to provide loans or other means of support to distressed firms. This would prevent market participants from pricing the possibility of that support into contracts (Lacker 2010).

Some aspects of reform have the potential to broaden policymakers' discretion if not implemented carefully. For example, regulating systemic risk requires some specificity about what makes an institution systemically important. That alone is a difficult question. Despite the notion that some firms are "too big to fail", size is not the only determinant of riskiness. A firm's connectedness to others in the financial system is also important. Connectedness, however, is often hard to determine; there are many possible direct and indirect avenues through which one firm may be exposed to others, and those exposures evolve continuously with innovation (Price and Walter 2011). Therefore, the basic task of identifying systemically important firms necessarily entails discretion (Grochulski and Slivinski 2009).

One provision of regulatory reform gives the government authority to step in to unwind the liabilities of failing large financial institutions and allocate losses among creditors. It is difficult to specify in advance the terms of such arrangements since designating any threshold for which creditors will bear losses creates considerable incentive for investors to place themselves on the beneficial side of the line, subsidizing activities located there. For example, the Orderly Liquidation Authority, established by recent regulatory reform efforts, gives the Federal Deposit Insurance Corporation broad discretion over how it balances the competing goals of maintaining financial stability (perhaps bailing out short-term creditors)

and limiting moral hazard (perhaps allowing creditors to bear losses) (Pellerin and Walter 2012). To the extent that such discretion is unavoidable, it should include clear terms of accountability like the least-cost resolution requirements that apply to the Federal Deposit Insurance Corporation when it unwinds failing banks (Lacker and Weinberg 2010).

Conclusion

Many onlookers believe financial crises and excessive risk-taking are inherent features of a market system. The view of the Richmond Fed is that poor incentives, often provided by well-intended but unwise market interventions, are more likely to be behind episodes of financial panic. The financial crisis of 2007–08 was the culmination of many factors, but chief among them was the long history of government intervention that extends back at least to the early 1980s. Such interventions created incentives for increased risk-taking. These incentives are much harder to correct than they were to create, but doing so is imperative to financial stability in the future.

Richmond Fed Research

Athreya, Kartik B. "[Systemic Risk and the Pursuit of Efficiency](#)." Federal Reserve Bank of Richmond *2009 Annual Report*.

Ennis, Huberto, and H.S. Malek. "[Bank Risk of Failure and the Too-Big-to-Fail Policy](#)." Federal Reserve Bank of Richmond *Economic Quarterly*, Spring 2005, vol. 91, no. 2, pp. 21-44.

Goodfriend, Marvin, and Jeffrey M. Lacker. "[Limited Commitment and Central Bank Lending](#)." Federal Reserve Bank of Richmond *Economic Quarterly*, Fall 1999, vol. 85, no. 4, pp. 1-27.

Grochulski, Borys, and Stephen Slivinski. "[System Risk Regulation and the 'Too Big to Fail Problem'](#)." Federal Reserve Bank of Richmond *Economic Brief* 09-07, July 2009.

Hetzel, Robert L. "[Should Increased Regulation of Bank Risk-Taking Come from Regulators or from the Market?](#)" Federal Reserve Bank of Richmond *Economic Quarterly*, Spring 2009, vol. 95, no. 2, pp. 161-200.

Lacker, Jeffrey M. "[Real Regulatory Reform](#)." Speech to the Institute of International Bankers, Washington, D.C., March 1, 2010.

Lacker, Jeffrey M., and John A. Weinberg. "[Now How Large is the Safety Net?](#)" Federal Reserve Bank of Richmond *Economic Brief* 10-06, June 2010.

Lacker, Jeffrey M. "[Innovation in the New Financial Regulatory Environment](#)." Speech to the 2011 Ferrum College Forum on Critical Thought, Innovation & Leadership, Roanoke, Va., April 7, 2011.

Malysheva, Nadezhda, and John R. Walter. "[How Large Has the Federal Financial Safety Net Become?](#)" Federal Reserve Bank of Richmond Working Paper No. 10-03R, March 2010.

Malysheva, Nadezhda, and John R. Walter. "[How Large Has the Federal Financial Safety Net Become?](#)" Federal Reserve Bank of Richmond *Economic Quarterly*, Third Quarter 2010, vol. 96, no. 3, pp. 273-290.

Marshall, Liz, Sabrina R. Pellerin, and John R. Walter. "[How Large Is the Federal Financial Safety Net? New Estimates](#)." Federal Reserve Bank of Richmond Special Report, February 2013.

Pellerin, Sabrina R., and John R. Walter. "[Orderly Liquidation Authority as an Alternative to Bankruptcy](#)." Federal Reserve Bank of Richmond *Economic Quarterly*, First Quarter 2012, vol. 98, no. 1, pp. 1-31.

Price, David A., and John R. Walter. "[Identifying Systemically Important Financial Institutions](#)." Federal Reserve Bank of Richmond *Economic Brief* 11-04, April 2011.

Steelman, Aaron, and John A. Weinberg. "[The Financial Crisis: Toward an Explanation and Policy Response](#)." Federal Reserve Bank of Richmond *2008 Annual Report*.

Additional Resources

Lacker, Jeffrey M., and Gary H. Stern. "Lacker and Stern: Large Banks Need Living Wills." *Wall Street Journal*, June 12, 2012, p. A13.

Passmore, S. Wayne. "[The GSE Implicit Subsidy and the Value of Government Ambiguity](#)." Federal Reserve Board of Governors Finance and Economics Discussion Series 2005-05, February 2005.

Stern, Gary H., and Ron J. Feldman. *Too Big to Fail: The Hazards of Bank Bailouts*. Washington, D.C.: Brookings Institution Press, 2004. ([Excerpts from the book](#)² are available on the Minneapolis Fed's website.)

["Ending 'Too Big to Fail' Is Going to Be Hard Work"](#)

April 9, 2013 speech by Richmond Fed President Jeffrey M. Lacker

[Too Big to Fail](#)

A full list of related research and speeches from the Richmond Fed