



Economic Policy Program

Financial Regulatory Reform Initiative

Too Big to Fail: The Path to a Solution

A Report of the Failure Resolution Task Force of
the Financial Regulatory Reform Initiative of the
Bipartisan Policy Center

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ABOUT THE FINANCIAL REGULATORY REFORM INITIATIVE

The Financial Regulatory Reform Initiative (FRRI) is co-chaired by Martin Baily and Phillip Swagel. Comprised of five task forces, FRRI's goal is to conduct an analysis of Dodd-Frank to determine what is and what is not working along with recommendations to improve the system.

THIS PAPER IS AUTHORED BY THE CO-CHAIRS OF THE FAILURE RESOLUTION TASK FORCE

John F. Bovenzi
Randall D. Gynn
Thomas H. Jackson

The authors appreciate the work and input of the initiative co-chairs, fellow task force members and BPC staff.

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Executive Summary

If there is one thing that all sides of the “too-big-to-fail” debate can agree on, it is that reliving the financial crisis of 2008 without an effective means of resolving **all** financial institutions would be unacceptable. A central premise of this report is that the too-big-to-fail problem would be solved if all financial institutions, including systemically important ones (SIFIs), could be resolved, that is, **recapitalized, sold or wound down** without triggering the type of **contagious panic** that can severely destabilize or even result in a collapse of the financial system and without resorting to **taxpayer-funded bailouts** to prevent such a catastrophe.

A contagious panic results in a cascade of mass withdrawals of cash from the financial system – also known as **liquidity runs** or just **runs** – that force financial institutions to sell their illiquid but valuable assets at **fire-sale prices**. Fire sales not only result in wealth transfers, but also in deadweight losses and overall value destruction that hurts the economy as a whole.

The reason banks and other financial institutions are vulnerable to liquidity runs and fire sales during a financial crisis is that one of their core activities is **maturity transformation**. Maturity transformation is the vitally important process by which financial institutions fund themselves with various forms of short-term money (e.g. bank deposits) and use these funds to make long-term loans or investments, which are often illiquid (e.g. small business loans). Without maturity transformation, our modern economy would grind to a halt.

If financial institutions are forced to sell their illiquid but valuable assets at fire-sale prices, otherwise solvent firms can become insolvent. A feedback loop consisting of contagious panics, runs and fire sales will destabilize or even result in a collapse of the financial system. A destabilization or collapse of the financial system will result in a severe **contraction in the supply of credit**, which will in turn result in long-term damage to the wider economy in terms of higher unemployment and lower output and it will potentially create social unrest.

The **too-big-to-fail problem** arises if government officials have no real choice other than between bailouts and a collapse of the financial system. If these two choices are the only ones available, responsible officials will typically choose bailouts as the lesser of two evils. To end the too-big-to-fail problem, government officials need a viable alternative to these two choices. The alternative must allow a SIFI to be recapitalized, sold or wound down in a way that does not risk a collapse of the financial system and without taxpayer-funded bailouts.

Taxpayer-funded bailouts are injections of public money as new equity, long-term unsecured debt or other capital structure liabilities of insolvent firms that insulate the holders of the firm's capital structure liabilities against losses. So are government guarantees of a firm's public debt, unless the government is properly compensated for the risk. In contrast, **lender-of-last-resort facilities** that provide fully-secured loans at above-market rates to sufficiently capitalized (or recapitalized) firms are not bailouts.

The purpose of this report is to determine whether the Bankruptcy Code or the Orderly Liquidation Authority (OLA) in Title II of the Dodd-Frank Act – **or both** – provide the tools necessary to resolve SIFIs without triggering a contagious panic or resorting to taxpayer-funded bailouts to prevent one. In particular, it discusses whether the **single-point-of-entry (SPOE) recapitalization strategy**, which has been recently proposed by the Federal Deposit Insurance Corporation (FDIC) to be used under OLA, and which would not be a taxpayer-funded bailout, would be an effective means of resolving SIFIs, including those with significant cross-border or global operations (G-SIFIs). A SPOE strategy recapitalizes a SIFI by imposing all losses on the SIFI's shareholders, long-term unsecured debt holders, and the holders of other capital structure liabilities, and not on taxpayers. This report also discusses whether the SPOE recapitalization strategy could be implemented under the Bankruptcy Code.

This report concludes that the FDIC's SPOE recapitalization strategy, whether carried out under OLA or the Bankruptcy Code, should succeed in solving a critical part of the too-big-to-fail problem, by allowing any SIFI to fail without resorting to taxpayer-funded bailouts or a collapse of the financial system, if the recommendations contained in this report are implemented. With SPOE recap as an option, we do not believe that government officials would have the temerity to select bailout, especially since the statute expressly prohibits that choice. Among other things, the SPOE recapitalization strategy eliminates virtually all of the material impediments to a cross-border resolution of a G-SIFI by keeping the group's domestic and foreign operating subsidiaries, including their foreign branches, out of resolution or other insolvency proceedings. The remaining impediments appear relatively minor and reasonably manageable with advanced planning by the FDIC or SIFIs themselves. Thus, we can solve the **"to fail"** portion of too-big-to-fail, which in our opinion solves the entire problem.

Created by the Dodd-Frank Act, OLA is expressly designed as a last-resort supplement to the Bankruptcy Code. The Bankruptcy Code remains the preferred law to govern the insolvency or other failure of financial institutions that are not themselves insured depository institutions or insurance companies. The Bankruptcy Code is the preferred law for resolving these financial institutions because its rules-based system administered by judges who ultimately respond to the Article III judiciary is considered to be more transparent, predictable and fair than OLA, which is currently a less predictable, more discretionary and less understood administrative system.

OLA may lawfully be invoked only if the government has determined through appropriate procedures that using the Bankruptcy Code to reorganize or liquidate a particular financial

company (or group of financial companies) under prevailing economic conditions “would have serious adverse effects on financial stability in the United States” and that using OLA “would avoid or mitigate such adverse effects.” Given that the effectiveness of the Bankruptcy Code is an important ingredient in this formula, if the Bankruptcy Code is or can be made to be more effective in recapitalizing or winding down SIFIs, including G-SIFIs, the need for OLA could be drastically reduced.

This report focuses on *ex-post* solutions to the too-big-to-fail problem, sometimes called the “to fail” side of the problem. In other words, it focuses on whether all financial institutions, including SIFIs and G-SIFIs, can be allowed “to fail” without a taxpayer-funded bailout and without fostering the sort of contagious panic, runs and fire sales that can destabilize or cause the collapse of the financial system.

This report does not attempt to resolve the debates about the *ex-ante* proposals for solving the too-big-to-fail problem, or the debate over whether some institutions are simply “too big” regardless of their resolvability. *Ex-ante* solutions are designed to reduce the risk that financial institutions fail or the potential consequences to the system if they do. They include enhanced capital, liquidity and prudential regulations, including better risk management, recovery plans, early remediation, exposure limits, swaps clearing requirements and structural simplification.

As far as the *ex-post* or “to fail” solutions to the problem, this report concludes as follows:

- **Key to Successful Resolution.** The key to resolving SIFIs, including G-SIFIs, without triggering a contagious panic or resorting to taxpayer-funded bailouts is for there to be a pre-announced, predictable and viable strategy for the **high-speed capitalization** by the private sector of the new parent holding company and material operating subsidiaries of any such groups that fail.
 - **Capital / Liquidity.** Such a strategy would make a sharp distinction between capital at risk of loss by equity shareholders and the holders of other capital structure liabilities and liquidity needed in the short-run to stop contagion to other financial institutions or to prevent a general panic in the financial markets.
 - **Taxpayer-Funded Bailouts.** Taxpayer-funded bailouts involve injections of public money as new debt or equity capital to insolvent firms in order to insulate the holders of their capital structure liabilities from losses. Title II of Dodd-Frank specifically prohibits the use of any taxpayer funds to recapitalize a failing or failed financial institution, a provision and position we support.
 - **Lender-of-Last-Resort Facilities.** Lender-of-last-resort facilities that only provide fully secured liquidity to solvent financial institutions at above-market interest rates, however, are not taxpayer-funded bailouts.

- **Losses Imposed on Capital Structure Liabilities.** A high-speed recapitalization strategy that does not inject taxpayer-backed funds into insolvent firms would be based on the use of all of the loss-absorbing capacity of a SIFI's capital structure liabilities – including imposing losses on the holders of long-term unsecured debt or turning them into shareholders – to recapitalize the systemically important and other viable parts of the SIFI's business. This would result in ***all losses*** being borne by shareholders, long-term unsecured creditors and other holders of capital structure liabilities, and ***not by taxpayers***.
- **Operating Liabilities Continue to be Satisfied.** If a SIFI has enough loss-absorbing resources to recapitalize its business, a ***temporary, fully secured liquidity facility*** from either the private or public sector must be available to provide enough temporary liquidity to ensure that all operating liabilities of the group, such as short-term debt, are satisfied in a timely manner, until the SIFI's liquidity has stabilized.
- **Four Essential Conditions.** For such a strategy to be successful, four essential conditions must be satisfied.
 - **Sufficient Loss-Absorbing Capacity.** First, SIFIs must have sufficient loss-absorbing capacity in their capital structure liabilities.
 - **Legal Tools.** Second, the legal tools must exist to promptly access this loss-absorbing capacity and effect the recapitalization of their businesses.
 - **Structural or Legal Subordination.** Third, it must be clear in advance that the loss-absorbing equity, long-term unsecured debt and other similar capital structure liabilities are structurally or legally subordinate to the claims of the holders of operating liabilities, including short-term debt.
 - **Secured Liquidity Facility.** Fourth, the recapitalized business must have access to a temporary fully secured liquidity facility from the private or public sector that will allow it to borrow cash secured by its illiquid but valuable assets in order to continue to serve its customers and clients, preserve its franchise value and prevent panic.
- **OLA.** OLA contains the tools necessary to resolve SIFIs, including G-SIFIs, in a high speed manner that is not a taxpayer-funded bailout even in cases of the most severe financial distress, but certain improvements should be made to enhance the certainty and predictability of this result under OLA.
- **Bankruptcy Code.** The Bankruptcy Code also contains the tools necessary to resolve SIFIs in this manner, at least under certain economic conditions, but certain

improvements should be made to make it more effective so as to drastically reduce the need to rely on OLA.

In light of these conclusions, this report makes four sets of **Recommendations** designed to ensure that SIFIs can be resolved without triggering contagious panics or resorting to taxpayer-funded bailouts.

- **OLA.** The first set of Recommendations addresses proposals by the FDIC to increase the certainty and predictability of a successful resolution under OLA. The FDIC's development of its SPOE recapitalization strategy is a significant and positive step toward meeting this standard. The FDIC has also announced that it intends to issue a proposed policy statement to make its SPOE recapitalization strategy more predictable and therefore more viable. This first set of Recommendations is designed to help the FDIC carry out this stated intention in an effective way.
- **Bankruptcy Code.** The second set of Recommendations would make the Bankruptcy Code more effective in achieving the same goals, thus greatly reducing the need to rely on OLA.
- **Sufficient Loss Absorbency.** The third set of Recommendations addresses proposals by the Federal Reserve to ensure that SIFIs that are presumptively resolvable under a SPOE recapitalization strategy have sufficient loss-absorbing capacity in their capital structure liabilities to make that strategy viable under the sort of severe economic conditions that exist during a financial crisis. The Federal Reserve has indicated that it intends to issue for public notice and comment a proposed regulation that would specify the total loss-absorbing resources that would be necessary for a financial holding company to rely on a SPOE resolution strategy for resolution planning purposes. This third set of Recommendations is designed to help the Federal Reserve carry out this intention in a cost-effective way.
- **Convergence of Resolution Planning Processes.** The final set of Recommendations encourages a convergence of the resolution planning process under Title I of the Dodd-Frank Act, which assumes that a SIFI would be reorganized or liquidated under the Bankruptcy Code or other normally applicable insolvency law, with the FDIC's resolution planning process under Title II (OLA).

This report proceeds as follows. It first contains a list of the Recommendations. Next is the main body of the report, which begins with a detailed executive summary, followed by an even more detailed discussion of the too-big-to-fail problem and its proposed solutions under OLA and the Bankruptcy Code. This report also includes three annexes. Annex A describes the process by which the report was developed. Annex B contains a glossary of concepts and terms used in the report. Annex C is a bibliography of sources on all sides of the too-big-to-fail debate. The BPC intends to publish a separate document in the near-term containing a more detailed section-by-section analysis of the Recommendations.

The executive summaries and main body of this paper follow a building-block approach. The advantage of this structure is that it allows readers to read as much or as little of the full report as they want. The disadvantage is that the detailed executive summary is somewhat repetitive of this executive summary, and the main body of the report is somewhat repetitive of both. If a reader intends to read the main body of this report in its entirety, the detailed executive summary can be skipped. Indeed, the detailed executive summary and main body of the paper are each designed to be read on a standalone basis.

A WORD ABOUT TERMINOLOGY

This report uses common terminology wherever possible. For example, the report uses the terms SIFI and G-SIFI to include both a single systemically important financial institution (without operating subsidiaries) and a systemically important group of financial institutions with common ownership through a parent holding company.

The distinction between a SIFI group and an individual SIFI is important. As Simon Gleeson so eloquently pointed out: “all globally systemically important financial institutions . . . in fact operate through a group structure, using multiple legal entities in multiple jurisdictions. . . . Once stated, these concepts seem so obvious that it may be asked why they should need to be stated at all. However, it is clear that much of the discussion on bank resolution thus far has disregarded them – or, to be precise, has proceeded on the simplifying assumption that a SIFI is a single homogeneous entity.”

This point is particularly relevant in the United States since virtually all U.S. banks – systemically important or not – operate through a holding company structure, with a parent bank holding company at the top of the structure. The holding company has direct or indirect ownership interests in one or more operating subsidiaries, including banks, broker-dealers, insurance companies or other financial institution subsidiaries.

Any bank subsidiary that is systemically important is referred to in this report as a systemically important bank (SIB). If it has significant cross-border or other global operations, it is referred to as a global SIB or G-SIB. If it has solely domestic operations, it is referred to as a domestic SIB or D-SIB. Banks are also included in the broader terms SIFI, G-SIFI and D-SIFI, which include all financial institutions (and groups of financial institutions), including both banks and other financial institutions. The specific designations, G-SIFI and D-SIFI, distinguish institutions (or groups) that have cross-border or global operations (G-SIFIs) from those with only domestic operations (D-SIFIs).

The terms SIB and SIFI are used to distinguish systemically important firms from those that are not systemically important. But even within the categories of SIFI, D-SIFI and G-SIFI, some are larger or more complex, interconnected or systemically important than others. This report uses the term SIFI to refer to any bank holding company or foreign banking organization with \$50 billion or more in total assets – the threshold used in the Dodd-Frank

Act to distinguish systemically important bank holding companies and nonbank financial companies from those that are not systemically important. But clearly there is a significant difference in systemic importance between a G-SIFI with \$1 trillion in assets and a D-SIFI with assets at the \$50 billion end of the range and with most of its assets attributable to a single D-SIB. Moreover, even for groups that are designated as G-SIFIs, there are significant variations in size, complexity, interconnectedness and global reach. Rather than try to reflect all of these differences with appropriate adjectives, this report uses the terms SIFI and G-SIFI and does not create an overly complex set of additional subcategories. The reader, however, should keep in mind that all SIFIs and G-SIFIs are not alike, and resolution strategies that may be necessary and appropriate for one may not be necessary or appropriate for another.

To aid readers of this report, a comprehensive ***glossary*** of concepts and terms is contained in Annex B.

Recommendations

OLA: Increasing Certainty and Predictability. The key to resolving SIFIs, including G-SIFIs, without creating contagious panic or resorting to taxpayer-funded bailouts is for there to be a pre-announced, predictable and viable strategy for the high-speed recapitalization of any such institutions or groups that fail. The FDIC has indicated that it intends to issue for public notice and comment a proposed policy statement describing how it will carry out its authority to resolve certain SIFIs under its SPOE recapitalization strategy. These recommendations are designed to help the FDIC carry out this stated intention in an effective way since this report concludes that the FDIC's SPOE recapitalization should succeed in solving the too-big-to-fail problem if properly implemented.

- **FDIC Policy Statement.** In order to ensure that the FDIC's SPOE recapitalization strategy is predictable and viable, the FDIC intends to issue for public notice and comment a proposed policy statement that would include a public commitment to use its SPOE recapitalization strategy to resolve certain SIFIs under all but the most extraordinary circumstances, how it would implement such a SPOE recapitalization strategy and the types of SIFIs to which it would apply. This report agrees with that intent and recommends that the FDIC's proposed policy statement reflect all of the suggestions in this first set of recommendations.
 - **Presumptive Path.** The policy statement should announce a strong presumption in favor of using the FDIC's SPOE recapitalization to resolve all G-SIFIs, so that the market and foreign regulators can plan and act in reliance on the reasonable expectation that such a strategy will be used, and then define and determine how the FDIC expects to do so. The FDIC should also identify its presumptive strategies for other SIFIs, if a strategy other than the SPOE recapitalization strategy would be the presumptive path.
 - **Subordination of Capital Structure Liabilities.** The FDIC should ensure that the capital structure liabilities of a SIFI's parent holding company, including its long-term unsecured debt, are structurally or legally subordinate to the operating liabilities of the parent and its operating subsidiaries, including any demand deposits or other money-like instruments provided by the SIFI.
 - **Limit on Discretion to Discriminate.** The FDIC should confirm that it will not use its general discretion to discriminate among similarly situated creditors and will otherwise treat creditors in a manner consistent with the pre-determined priority of their claims, including the priority described in the Recommendation on the Subordination of Capital Structure Liabilities.

- **Value Maximization Duty.** The FDIC should confirm that it will exercise its powers under OLA in such a manner as to maximize the value of the covered company, except to the extent absolutely necessary to preserve or promote financial stability.
- **Credit Bidding.** The FDIC should confirm that each secured creditor will have the right to credit bid for any collateral securing its claim, if the FDIC values the collateral at less than the secured claim and the secured creditor disagrees with that valuation.
- **Orderly Liquidation Fund.** The FDIC should explain how the Orderly Liquidation Fund will be used in a SPOE recapitalization to provide liquidity to a sufficiently capitalized bridge financial company and its operating subsidiaries. The OLF is clearly intended to provide fully secured liquidity, and the statute precludes it from being used to provide capital. To reinforce that statutory prohibition, however, the FDIC should confirm in its policy statement that the OLF will not be used to provide capital that insulates shareholders or creditors against losses. The distinction between providing capital to insolvent firms and providing temporary, fully secured liquidity at above-market interest rates to solvent, sufficiently capitalized (or recapitalized) institutions marks the line between unacceptable taxpayer-funded bailouts and acceptable government-provided short-term liquidity that is fully secured by collateral.
- **Corporate Governance.** The FDIC should explain how the corporate governance of a bridge financial company used in a SPOE recapitalization strategy would work during the period between the transfer of the failed company's assets to the bridge financial company and the termination of that company's status as a bridge financial company.
- **Securities Laws.** The FDIC should describe how a publicly traded SIFI that is put into OLA receivership and any related bridge financial company will comply with applicable securities laws between the transfer of the failed SIFI's assets to the bridge financial company and the termination of that company's status as a bridge financial company.
- **Valuation.** The FDIC should describe how and when the bridge financial company and its subsidiaries will be valued or revalued.
- **Relative Priority.** The FDIC should confirm that, if necessary to facilitate early intervention without creating legitimate claims under any constitutional protections of property rights and to avoid disputes over the residual value of a failed company or a bridge financial company to which all or a portion of the failed company's assets have been transferred, the FDIC may give warrants or other junior securities to junior claimants and otherwise distribute value to

stakeholders left behind in a receivership on a relative priority basis, rather than pursuant to an absolute priority rule.

- **Administrative or Judicial Review.** The FDIC should propose an efficient procedure that provides all claimants left behind in a receivership with a fair opportunity to challenge the FDIC over whether the FDIC satisfied its various statutory and regulatory duties in resolving a covered company. This would include whether claimants were entitled to receive at least the liquidation value of their claims and did in fact receive at least such liquidation value, as well as an appropriate and effective remedy against the FDIC for any breach of such duties.
- **Cross-Border Cooperation.** The FDIC should explain what it will do to foster cross-border cooperation, including:
 - **Ring-Fencing.** Prevent host-country ring-fencing when a SIFI's top-tier holding company is being resolved in an OLA proceeding, and U.S. ring-fencing when a SIFI's top-tier holding company is being resolved in a foreign resolution proceeding.
 - **Cross-Defaults.** Encourage host countries to enact laws similar to Section 210(c)(16) of the Dodd-Frank Act, which would override contractual termination rights in financial contracts that arise solely because of the failure and resolution of a counterparty's parent holding company or another affiliate, provided that any related parent guarantees are assumed by a creditworthy bridge financial company or third party within a specified period of time.
 - **Cooperation Agreements.** Enter into cooperation agreements in advance with foreign regulators. The FDIC's progress with the Bank of England is an excellent model for the FDIC to build upon with other foreign regulators.
 - **Recognition of U.S. and Foreign Resolution Proceedings.** Encourage host countries to recognize and give effect to resolution proceedings under OLA, including the distribution of equity in a bridge financial company in satisfaction of the claims of stakeholders left behind in a receivership and provisions that permit the transfer of financial contracts, or related guarantees, to bridge financial companies or limit the early termination of financial contracts. Help increase the certainty that U.S. courts will recognize and give effect to foreign resolution proceedings by urging Congress to amend Chapter 15 of the Bankruptcy Code to require U.S. courts to recognize and give effect to foreign resolution proceedings, including with respect to a foreign bank with a branch or agency in the United States, if the stated conditions of Chapter 15 are satisfied.

- **Congressional Alternative.** The FDIC has full power to implement this first set of Recommendations. If the FDIC does not do so within a reasonable period of time and without good reason, then Congress should consider amending the Dodd-Frank Act to reflect this first set of Recommendations.

Bankruptcy Code. Congress should consider amendments to the Bankruptcy Code to make it more effective and to reduce the need to invoke the authority under Dodd-Frank’s OLA. It is also important for the rules that define creditors’ rights and all other distributional rules in both statutes to be harmonized as much as possible to minimize any disruption from invoking OLA.

- **SPOE Recapitalization Strategy.** Congress should amend the Bankruptcy Code to the extent necessary to facilitate a SPOE recapitalization strategy under that Code.
 - **Role for Federal Supervisors.** The primary federal supervisor for a particular financial company should, in consultation with the FDIC, have the right to commence any proceeding or file a petition seeking liquidation, reorganization or other relief in respect of the financial company that will have the effect of a voluntary petition under Section 301 of the Bankruptcy Code. The primary federal supervisor, or the FDIC with the primary federal supervisor’s consent, should also be given standing as a party and to raise motions relevant to its regulation of the company or promoting financial stability in the United States. In particular, the primary federal supervisor or the FDIC should have the power to file motions for the use, sale or lease of the bankruptcy estate under Section 363 of the Bankruptcy Code.
 - **Section 363 Transfers to a New FHC.** A bankruptcy court should be authorized to approve the transfer over a weekend or even overnight of all of a parent holding company’s assets, including its shares in operating subsidiaries, to a newly formed financial holding company (New FHC) under Section 363 of the Bankruptcy Code, without creditor consent, provided that the New FHC is held by a trustee or otherwise exclusively for the benefit of the bankruptcy estate.
 - **Licenses and Registrations.** Any New FHC should be deemed to have all of the state and federal licenses and registrations that the parent holding company in bankruptcy had immediately prior to the transfer of its assets under Section 363 of the Bankruptcy Code.
 - **Subordination of Capital Structure Liabilities.** The Bankruptcy Code should be amended to ensure that the capital structure liabilities of a SIFI’s parent holding company, including its long-term unsecured debt, are structurally or legally subordinate to the operating liabilities of the parent and its operating subsidiaries, including any demand deposits or other money-like instruments provided by the SIFI.

- This recommendation is similar to the Subordination of Capital Structure Liabilities recommendation in the first set of Recommendations above. It will not only make the Bankruptcy Code more effective and reduce the need for OLA, but it will also harmonize this distributional rule in both statutes so as to minimize any disruption from invoking OLA.
- **Limitations on Early Termination Rights**
 - **Temporary Stay.** A provision should be added to the Bankruptcy Code imposing a temporary stay of one business day on the early termination of financial contracts otherwise subject to immediate termination, similar to the one-business-day stay in OLA. If any financial contract is assumed by a creditworthy New FHC or third party during such a temporary stay, any termination rights under such financial contracts may not be exercised solely by virtue of the commencement of a bankruptcy proceeding with respect to the debtor, unless a separate event of default under the financial contract shall have occurred, in which case the counterparty could exercise its remedies.
 - **Cross-Defaults.** A provision similar to Section 210(c)(16) of the Dodd-Frank Act should be added to the Bankruptcy Code. Such a provision would override contractual termination rights in financial contracts that arise solely because of the failure and recapitalization of a counterparty's parent holding company or affiliate, provided that the guarantees of such financial contracts are assumed by a creditworthy New FHC or third party within a specified period of time.
- **Secured Liquidity Facility.** Congress should amend the Federal Reserve's discount window authority so that each New FHC created in a SPOE recapitalization strategy under the Bankruptcy Code and its operating subsidiaries that have been recapitalized by imposing losses on the failed holding company's equity, long-term unsecured debt and other capital structure liabilities have the same access to the discount window for temporary fully secured liquidity purposes as insured depository institutions and the U.S. uninsured branches of foreign banks.
 - This recommendation is essential to ensure that SIFIs being reorganized under the Bankruptcy Code have the same access to a temporary fully secured liquidity facility as SIFIs being resolved under OLA.
- **Corporate Governance.** SIFIs that rely on a SPOE recapitalization strategy in their Dodd-Frank Title I resolution plans should be required to explain how the corporate governance of the New FHC would work during the period

between the transfer of the bankrupt company's assets to the New FHC and the distribution of securities in New FHC in satisfaction of all claims left behind in the bankruptcy estate.

- **Securities Laws.** The Bankruptcy Code should be amended to grant an exemption to a New FHC to which a publicly traded SIFI in bankruptcy has transferred substantially all of its assets in a Section 363 transfer in order to comply with applicable securities laws between the transfer of the failed SIFI's assets to the New FHC and the distribution of securities in New FHC in satisfaction of all claims left behind in the bankruptcy estate.
- **Relative Priority.** If necessary to facilitate early intervention without creating legitimate claims under any constitutional protections of property rights, and to avoid disputes over the residual value of a failed company or any new bank holding companies used in a SPOE recapitalization strategy under the Bankruptcy Code, a bankruptcy or district court should be allowed to cause warrants or other junior securities to be distributed to junior claimants and otherwise to distribute value to stakeholders left behind in a receivership on a relative priority basis, rather than pursuant to the absolute priority rule.
 - This recommendation is parallel to the recommendation on relative priority in the first set of recommendations above. If that recommendation for OLA is implemented, this parallel recommendation is essential to ensure that the distributional rules in bankruptcy and OLA do not diverge.
- **Cross-Border Cooperation.** A process should be established that requires the FDIC and the Federal Reserve to explain what they will do to foster cross-border cooperation in bankruptcy proceedings, including measures to:
 - **Ring-Fencing.** Prevent host-country ring-fencing when a SIFI's top-tier holding company is being resolved in a bankruptcy proceeding, and U.S. ring-fencing when a SIFI's top-tier holding company is being resolved in a foreign resolution or insolvency proceeding.
 - **Cross-Defaults.** Encourage host countries to enact laws similar to Section 210(c)(16) of the Dodd-Frank Act, which would override contractual termination rights in financial contracts that arise solely because of the failure and resolution of a counterparty's parent holding company or another affiliate, provided that the contracts are assumed by a creditworthy bridge financial company or third party within a specified period of time.
 - **Cooperation Agreements.** Enter into advance cooperation agreements with foreign regulators.

- **Chapter 14.** Congress should consider adding a new Chapter 14 to the Bankruptcy Code with specified procedures and rules including those provided by these Recommendations for SIFIs, if necessary to make the Bankruptcy Code more effective and reduce the need for OLA.
- **Chapter 15.** Congress should amend Chapter 15 of the Bankruptcy Code to confirm that courts should apply the same standards to decide whether to recognize and give effect to foreign resolution proceedings as are now applied to foreign bankruptcy proceedings, including with respect to a foreign bank with a branch or agency in the United States, if the conditions of Chapter 15 are satisfied.

Loss-Absorbing Capacity. The Federal Reserve has indicated that it intends to issue for public notice and comment a proposed regulation that would specify the combined equity, long-term unsecured debt and other liabilities in their capital structures that would be necessary for a financial holding company to rely on a SPOE resolution strategy for resolution planning purposes. This third set of recommendations is designed to help the Federal Reserve do so in an effective and reasonable way.

- **Amount.** The amount of loss-absorbing capacity that each SIFI would be required to have should be based on appropriate models using historical data to estimate the amount of loss-absorbing resources that an institution would need to have in a financial crisis scenario to be recapitalized with common equity at levels generally required (*e.g.*, fully phased in Basel III levels), taking into account the risk profile of each firm.
- **Eligible Equity and Liabilities.** The Federal Reserve should recognize all items on the right side of a parent holding company's unconsolidated balance sheet (that is, the liabilities and equity side of its balance sheet) as counting toward an institution's loss-absorbing capacity, less only items that are expressly and appropriately excluded, such as unsecured debt with an original maturity of less than one year.
- **Long-Term / Short-Term.** The Federal Reserve should define the line between long-term and short-term debt based on whether the original maturity is more or less than one year.
- **All Long-Term Unsecured Debt.** The Federal Reserve should treat all long-term unsecured debt as part of a firm's recognized loss-absorbing capacity since it is structurally subordinated to all debt at the operating subsidiary level, instead of restricting recognized debt to contractually subordinated debt.
- **Assets.** As long as the parent of a SIFI has sufficient loss-absorbing resources on the right side of its unconsolidated balance sheet, it will automatically have sufficient loss-absorbing assets on the left side of its unconsolidated balance sheet (that is, the assets side of the balance sheet), provided the SIFI does not have excessive double leverage. Rather than have a separate rule to impose a minimum assets requirement, the Federal Reserve should simply use its supervisory process to

ensure that a parent's assets can be used where they would be most needed in a recapitalization scenario.

- **Top-Down Flexibility.** The Federal Reserve should structure its rule so that the parent holding company and the FDIC as its receiver have maximum flexibility to use the assets where they are most needed to recapitalize its operating subsidiaries, rather than requiring or allowing the assets to be trapped in individual subsidiaries.
- **Capital / Liquidity.** The Federal Reserve should make a distinction between capital and liquidity. It should not impose any additional liquidity requirements on the asset side of a parent holding company's unconsolidated balance sheet in addition to otherwise existing liquidity requirements (*e.g.*, those under Basel III), in order to ensure that the parent has enough loss-absorbing capacity assets to recapitalize its operating subsidiaries.

Resolution Planning

- **Convergence of Resolution Planning Processes.** The FDIC and the Federal Reserve should interpret the Dodd-Frank Act so that the resolution planning process under Title I, which assumes that an institution will be resolved under the Bankruptcy Code or other normally applicable bankruptcy law, and the resolution planning process under Title II (OLA), converge and reinforce each other, instead of continuing to run down separate and possibly conflicting paths. This convergence will be aided by the implementation of the first two sets of Recommendations above, which are designed to reduce the differences between bankruptcy and OLA for resolution of a SIFI.
- **Congressional Alternative.** Alternatively, Congress should amend the Dodd-Frank Act to mandate such a convergence.

Discussion

The executive summaries and main body of this paper follow a building-block approach. The advantage of this structure is that it allows readers to read as much or as little of the full report as they want. The disadvantage is that the detailed executive summary below is somewhat repetitive of the executive summary at the outset of this report, and the main body of the report is somewhat repetitive of both. If you intend to read the main body of this report in its entirety, you may want to skip the detailed executive summary below. Indeed, the detailed executive summary and the main body of this report are each designed to be read on a standalone basis.

Detailed Executive Summary

If there is one thing that all sides of the “too-big-to-fail” debate can agree on, it is that relieving the financial crisis of 2008 without an effective means of resolving SIFIs would be unacceptable. A central premise of this report is that the too-big-to-fail problem would be solved if SIFIs could be **recapitalized, sold, or wound down** without triggering the type of **contagious panic** that can severely destabilize or even result in a collapse of the financial system and without resorting to **taxpayer-funded bailouts** to avoid such a catastrophe.

MATURITY TRANSFORMATION, PANICS AND RUNS

A **contagious panic** is characterized by a strong, sudden and unexpected preference for cash rather than claims against private-sector financial institutions, triggered by some sort of unexpected common shock such as a sudden drop in the national or global values of an important asset such as real estate, which in turn undermines the public’s confidence in the financial system. Economists call a preference for cash a liquidity preference. A panic can start by a loss of confidence in the solvency or liquidity of a single bank or other financial institution, resulting in its depositors, other short-term creditors, counterparties on financial contracts and other holders of **operating liabilities** making a cascade of mass withdrawals of cash from that institution. These mass withdrawals of cash – also known as **liquidity runs** or just **runs** – will force the financial institution to liquidate its temporarily illiquid but valuable assets at **fire-sale prices**.

These fire sales can cause the value of other financial institutions to drop, causing a loss of confidence in the solvency or liquidity of these other financial institutions. This can result in liquidity runs on these other institutions, resulting in further fire-sale liquidations. These fire sales can cause the value of still other financial institutions to drop. This cycle of runs and fire-sale liquidations can spread throughout the financial system in a feedback loop. Fire sales not only result in wealth transfers, but also in deadweight losses or overall value

destruction. If these liquidity runs and fire sales continue to spread throughout the financial system, they will destabilize the system and can eventually cause its collapse. A destabilization or collapse of the financial system will cause a severe ***contraction in the supply of credit***, which will in turn result in long-term damage to the wider economy in terms of higher unemployment, lower output and potentially social unrest.

The reason banks and other financial institutions are vulnerable to liquidity runs during a financial crisis is that one of their core activities is ***maturity transformation***. Maturity transformation is the socially beneficial process by which financial institutions fund themselves with short-term borrowings and use these funds to make longer-term loans or investments in other illiquid assets. Without maturity transformation, our modern economy would grind to a halt.

The maturity transformation process is so important because it intermediates between savers and investors, giving savers the option to deposit their cash in very liquid instruments, while giving borrowers the ability to obtain longer-term loans or issue longer-term debt securities. The process is also socially beneficial because it provides the holders of demand deposits, checks and other operating liabilities with claims against financial institutions that can be used as money to make payments electronically and more efficiently than physical deliveries of cash. Indeed, the Federal Reserve includes deposits, checking accounts and other money-like claims against financial institutions in various definitions of the money supply.

A run on a bank or other financial institution engaged in maturity transformation is a classic “tragedy-of-the-commons” problem. This problem arises when individuals have access to a shared resource such as fish in a shared pond. Each individual, acting independently, has an incentive to catch as many fish as possible because of the risk that other individuals will empty the pond of fish, leaving any individual who did not do so with nothing. A run on a bank or other financial institution engaged in maturity transformation is similar. Even if the institution is indisputably solvent, and every depositor or similar creditor knows it, each of them has an incentive to run if others start running to protect against the risk that the others will force the institution to sell its illiquid assets at fire-sale prices, causing it to become insolvent. If that happens, any individual who did not run will suffer losses that could have been avoided had he or she run in the first place when everyone else did.

The establishment of industry-funded deposit insurance in 1934 significantly reduced the frequency and intensity of runs on insured banks by retail depositors, but such runs can still occur as we witnessed during the recent crisis. Technology has made it easy and cheap to move deposits from one insured bank to another through online banking. Retail depositors can simply move deposits out of their insured bank to a healthier insured bank at the first sign of trouble. It is not that they lack confidence in the FDIC’s deposit insurance, but that there is virtually no cost to moving the money electronically from the troubled insured bank to a healthy insured bank.

Moreover, deposit insurance is capped at \$250,000 per account type, per bank and applies only to deposits that are payable in the United States. Uninsured depositors continue to have strong incentives to run at the first sign of trouble. Finally, demand deposits and checks are not the only form of money-like claims against financial institutions. Other money-like claims include repurchase agreements, asset-backed commercial paper, interest-rate swaps, currency swaps and other financial contracts with institutional investors or other sophisticated counterparties.

Runs are not limited to the banking system. Other financial institutions engage in maturity transformation. Indeed, a large part of the contagious panic that occurred in 2008 took place among both investors in money market funds and “repo” lenders – overnight or short-term lenders who extend credit in the form of repurchase (repo) agreements. Large broker-dealers, which are not permitted to take deposits, funded themselves largely with repo borrowing from corporations, insurance companies, pension funds, money market funds, other mutual funds, hedge funds and other institutional investors that needed a safe place to deposit their funds in amounts that exceeded deposit insurance limits. These broker-dealers invested their funds in various tranches of mortgage-backed securities, collateralized debt obligations (CDOs), corporate debt securities, mortgage loans and other relatively illiquid assets, and then used those securities as collateral for repo borrowing. Under a repo agreement, a borrower sells securities to a lender subject to an agreement by the borrower to repurchase the securities. The repo lender also generally has the right to rehypothecate, repledge or otherwise reuse the securities to obtain cash from another lender or purchaser. This allows the repo lender to resell the collateral to another repo lender or an outright buyer in return for cash. Although repos are a form of secured credit, during the recent financial crisis corporations and institutional investors that were on the lending side of repo transactions ran when they lost confidence in the solvency or liquidity of their counterparties.

This run took two forms. Some repo lenders demanded all of their cash in return for delivering the purchased securities back to the broker-dealers. Other repo lenders effectively demanded some of their cash by increasing the size of the “haircuts” on the securities collateral – that is they increased the discount they applied when calculating the collateral value of any securities collateral. Either way, this run drained hundreds of billions of dollars in cash out of broker-dealers and other financial institutions engaged in similar maturity transformation activities in a matter of weeks.

TOO-BIG-TO-FAIL PROBLEM

The ***too-big-to-fail problem*** arises because of the inability to liquidate a failed SIFI without causing the sale of assets at fire-sale prices, which can then trigger the sort of contagious panic that can destabilize or bring down the financial system. By forcing firms to sell their valuable but illiquid assets at liquidation value during a financial panic, fire-sale liquidations can foster panic by turning liquidity problems into solvency problems.

Economists have shown that fire-sale liquidations also impose deadweight losses on society by forcing assets to be transferred from persons who are able to put the assets to their highest and best use to those who cannot. Reorganizations under the Bankruptcy Code can also foster panic if they take so long to complete that the going concern value of the business is destroyed like a melting ice cube before the firm can be reorganized.

A collapse of the financial system will cause long-term harm to the wider economy in terms of higher unemployment, lower output, and potential social unrest. This is because a collapse of the financial system will result in a severe reduction in the amount of credit available which will cause a sharp and severe recession and potentially a depression. Milton Friedman referred to the severe reduction of credit during the Great Depression as the Great Contraction. Faced with a choice between bailout and fire-sale liquidations or value-destroying reorganizations that can result in a contagious panic and a collapse of the financial system, responsible policymakers typically choose bailout as the lesser of two evils.

To end the too-big-to-fail problem, policymakers need a viable alternative to these two choices. The alternative must allow a SIFI to be recapitalized, sold, or wound down in a way that does not risk a collapse of the financial system and without a taxpayer-funded bailout. Regardless of one's view on whether banks are too big for other reasons, there must be a solution that allows the largest firms to fail without risking a collapse of the financial system or needing a government bailout.

DISTINCTION BETWEEN CAPITAL AND LIQUIDITY

In order to develop a viable alternative to contagious panics that can result in a collapse of the financial system and taxpayer-funded bailouts to avoid such panics, it is important to distinguish between capital and liquidity. Government bailout programs like the Troubled Asset Relief Program (TARP) provided equity **capital** to both viable and troubled financial firms. In contrast, traditional lender-of-last-resort facilities provide only temporary fully **secured liquidity** at above-market interest rates to solvent firms with sufficient capital. Government-provided, secured liquidity is justified to address the value-destroying tragedy-of-the-commons problem that arises when dangerous feedback loops of panics, runs, and fire sales begin to spread throughout the financial system. Only when this distinction between capital and liquidity is appreciated can a viable alternative to taxpayer-funded bailouts be developed.

PURPOSE, CONCLUSIONS AND RECOMMENDATIONS

The primary focus of this report is to discuss whether the Bankruptcy Code or OLA – or both – provides the tools necessary to resolve SIFIs without triggering a contagious panic or resorting to taxpayer-funded bailouts to prevent one. In particular, it discusses whether the FDIC's SPOE recapitalization strategy under OLA would be an effective means of resolving SIFIs in this manner, including G-SIFIs. It also discusses whether the SPOE recapitalization strategy could be implemented under the Bankruptcy Code.

This report concludes as follows:

- **Key to Successful Resolution.** The key to resolving SIFIs, including G-SIFIs, without triggering a contagious panic or resorting to taxpayer-funded bailouts is for there to be a pre-announced, predictable and viable strategy for the **high-speed recapitalization** of the parent holding companies and material operating subsidiaries of any such groups that fail.
 - **Capital / Liquidity.** Such a strategy would make a sharp distinction between capital and liquidity.
 - **No Taxpayer-Funded Bailouts.** Title II of Dodd-Frank specifically prohibits the use of any taxpayer funds to recapitalize a failing or failed financial institution, a provision and position we support.
 - **Lender-of-Last-Resort Facilities.** Lender-of-last-resort facilities that only provide fully secured liquidity to solvent financial institutions at above-market interest rates, however, are not taxpayer-funded bailouts.
 - **Losses Imposed on Capital Structure Liabilities.** Such a strategy would use all of the loss-absorbing capacity of a SIFI's capital structure liabilities – including imposing losses on the holders of long-term, unsecured debt or turning them into shareholders – to recapitalize the systemically important and other viable parts of the SIFI's business. This would result in **all losses** being borne by shareholders, long-term unsecured creditors, and other holders of capital structure liabilities, and **not by taxpayers**.
 - **Operating Liabilities Continue to be Satisfied.** If a SIFI has enough loss-absorbing resources to recapitalize its business, a **temporary, fully secured liquidity facility** from either the private or public sector must be available to provide enough temporary liquidity to ensure that all operating liabilities of the group, including short-term debt, are satisfied in a timely manner, until the group's liquidity has stabilized.
- **Four Essential Conditions.** For such a strategy to be successful, four essential conditions must be satisfied.
 - **Sufficient Loss-Absorbing Capacity.** First, SIFIs must have sufficient loss-absorbing capacity in their capital structures.
 - **Legal Tools.** Second, the legal tools must exist to promptly access this loss-absorbing capacity and effect the recapitalization of their businesses.
 - **Structural or Legal Subordination.** Third, it must be clear in advance that the loss-absorbing equity, long-term unsecured debt and other similar capital structure liabilities are structurally or legally subordinate to operating liabilities, including short-term debt.

- **Secured Liquidity Facility.** Fourth, the recapitalized business must have access to a temporary fully secured liquidity facility from the private or public sector that will allow it to borrow cash secured by its illiquid but valuable assets in order to continue to serve its customers and clients and prevent a tragedy-of-the-commons problem in which indisputably solvent financial institutions become insolvent.
- **OLA.** OLA contains the tools necessary to resolve SIFIs in this manner even in cases of the most severe financial distress, but certain actions should be taken by the FDIC and Fed to enhance the certainty and predictability of resolution under OLA.
- **Bankruptcy Code.** The Bankruptcy Code also contains the tools necessary to resolve SIFIs in this manner, at least under certain economic conditions, but certain amendments to that Code are needed to make it more effective so as to drastically reduce the need to rely on OLA.

In light of these conclusions, this report makes four sets of **Recommendations** designed to ensure that SIFIs can be resolved without triggering contagious panics or resorting to bailouts.

- **OLA.** The first set of Recommendations addresses proposals by the FDIC to increase the certainty and predictability of a successful resolution under OLA. The FDIC's development of its SPOE recapitalization strategy is a significant and positive step toward meeting this standard. The FDIC has also announced that it intends to issue a proposed policy statement to make its SPOE recapitalization strategy more predictable and therefore more viable. This first set of Recommendations is designed to help the FDIC carry out this stated intention in an effective way.
- **Bankruptcy Code.** The second set of Recommendations would make the Bankruptcy Code more effective in achieving the same goals, thus drastically reducing the need to rely on OLA.
- **Sufficient Loss Absorbency.** The third set of Recommendations addresses proposals by the Federal Reserve to ensure that SIFIs that are presumptively resolvable under a SPOE recapitalization strategy have sufficient loss-absorbing capacity in their capital structures to make that strategy viable under the sort of severe economic conditions that exist during a financial crisis. The Federal Reserve has indicated that it intends to issue for public notice and comment a proposed regulation that would specify the total loss-absorbing resources that would be necessary for a financial holding company to rely on a SPOE resolution strategy for resolution planning purposes. This third set of Recommendations is designed to help the Federal Reserve carry out this intention in a cost-effective way.
- **Convergence of Resolution Planning Processes.** The final set of Recommendations would encourage a convergence of the resolution planning process under Title I of the Dodd-Frank Act, which assumes that an institution would

be reorganized or liquidated under the Bankruptcy Code or other normally applicable insolvency law, with the FDIC's resolution planning process under Title II (OLA).

ORDERLY LIQUIDATION AUTHORITY

OLA was enacted in the wake of the global financial crisis of 2008. OLA was designed to provide a back-up solution to what has become known as the ***too-big-to-fail problem*** if all of the new enhanced capital, liquidity and other enhanced prudential regulations implemented under the Dodd-Frank Act are not successful in preventing failure in the first place, and if a liquidation or reorganization under the Bankruptcy Code would not provide an adequate solution. It was a reaction to what was widely described as the disorderly liquidation of Lehman Brothers, the use of TARP to inject capital into large portions of the banking system, the Federal Reserve's use of its emergency lending powers to keep AIG out of bankruptcy, and the use of the conservatorship powers granted to the Federal Housing Finance Agency by the Housing and Economic Recovery Act of 2008 (HERA) and Treasury's injection of capital into Fannie Mae, and Freddie Mac.

OLA was not designed to replace the Bankruptcy Code for reorganizing or liquidating SIFIs. Instead, it was designed as a supplement to the Bankruptcy Code. The Bankruptcy Code remains the preferred law to govern the insolvency or other failure of most financial institutions, other than insured depository institutions and insurance companies. Bankruptcy is the preferred law for resolving these financial institutions because its rules-based system administered by bankruptcy judges is considered to be more transparent, predictable and fair than OLA, which is currently a less predictable, more discretionary and less well-understood administrative system.

One of the conditions for invoking OLA is a finding by the Treasury secretary that using the Bankruptcy Code to liquidate or reorganize a particular financial company under prevailing economic conditions at the time of failure "would have serious adverse effects on financial stability in the United States" and that using OLA "would avoid or mitigate such adverse effects." Given that the effectiveness of the Bankruptcy Code is an important ingredient in this formula, if the Bankruptcy Code is or can be made to be more effective in recapitalizing or winding down all SIFIs, the need for OLA could be drastically reduced.

OLA was designed to avoid using taxpayer funding for bailouts. Among other things, it established an Orderly Liquidation Fund (OLF) that allows the FDIC to borrow funds from the Treasury Department to provide temporary fully secured liquidity to institutions during a resolution proceeding. The OLF is not really a fund at all, but instead is a term used to describe the FDIC's borrowing and secured lending power under OLA. The statute requires the FDIC to recoup any funds lent to the receivership from the assets of the receivership, including its beneficial interest in the residual value of any bridge financial company, any excess value received by creditors who received a pro-rata distribution greater than what was received by other creditors in the same class. If that is not enough to recoup the lent funds in full the FDIC would be required to impose assessments on a specified pool of large financial institutions.

The OLF is an unusual creation. As a result, the application of the ordinary governmental budgetary scoring has not produced logical results. For example, in implementing the government-wide sequester, the Office of Management and Budget (OMB) determined that there were \$77 million in “savings” by implementing the sequester on the OLF. This makes no sense, given that the OLF has never been used and its use is not contemplated absent the failure and resolution of a SIFI under OLA. Another example is the Congressional Budget Office’s (CBO) decision to score the repeal of OLA as providing “savings” to the government. The logic behind CBO’s score has to do with the temporal sequencing of events over a ten-year time horizon. Specifically, CBO’s practice is to assume a small but non-zero probability of use in each year, with repayment coming after the end of the ten-year period. Thus, if there is a failure in years nine or ten of the ten-year window, the government has to provide funding for OLF immediately but is not repaid until after year ten, which is outside the budget window.

In reality, if the OLF is used properly to provide only temporary, fully secured liquidity to recapitalized entities and not to provide capital to insolvent entities, it should not cost the taxpayers (or other financial institutions) anything. Both the Administration and some in Congress have used budgetary scoring rules in ways that are not consistent with what should occur. Both sides should debate these issues on their merits and not use artificial scoring results in ways that are not consistent with what taxpayers will actually experience.

SINGLE-POINT-OF-ENTRY (SPOE) RECAPITALIZATION STRATEGY

The FDIC has the authority to develop strategies for implementing its power under OLA whenever the conditions for invoking OLA are satisfied. FDIC Chairman Gruenberg recently announced that the FDIC’s preferred strategy for resolving the largest and most complex financial groups under OLA is the SPOE recapitalization strategy. The key elements of the strategy can be executed over a weekend or even overnight. It imposes **all losses** on the parent company’s **shareholders and long-term unsecured debt holders**, as well as any other holders of comparable capital structure liabilities of the parent, and **not on taxpayers**. If the parent has sufficient loss-absorbing resources in its capital structure and sufficient access to liquidity, this strategy ensures that all short-term obligations and other similar operating liabilities of the group, including demand deposits, are satisfied in a timely manner.

The FDIC has issued a joint paper with the Bank of England advocating the SPOE recapitalization strategy for resolving G-SIFIs. FDIC Chairman Gruenberg and Bank of England Deputy Governor for Financial Stability Paul Tucker also jointly published an editorial in the *Financial Times* lauding the SPOE recapitalization strategy for resolving G-SIFIs without a taxpayer-funded bailout.

The FDIC has indicated that it intends to propose a policy statement or regulation describing how it will use its authority under OLA to resolve a covered financial company using the SPOE recapitalization strategy.

The FDIC will probably continue to use its pre-existing tools for resolving SIFIs on the less complex, more domestic and smaller end of the continuum between D-SIFIs with \$50 billion in assets and G-SIFIs with over \$1 trillion in assets. This means that it would probably continue to use its tool of choice under the FDI Act – ***purchase-and-assumption transactions*** – to resolve any bank subsidiary of a domestic or D-SIFI’s parent holding company. This tool involves the sale of a failed bank to one or more healthier third-party banks through an auction process, with or without loss-sharing supported by the industry-funded Deposit Insurance Fund. Moreover, as long as the consolidated operations of the parent holding companies of D-SIBs are essentially domestic in nature, the FDIC will probably also allow their parents to be reorganized or liquidated under the Bankruptcy Code rather than invoking OLA to resolve them.

The SPOE recapitalization strategy is one way to resolve SIFIs, including G-SIFIs, without creating contagious panic or resorting to taxpayer-funded bailouts. As a result, it is a viable solution to the too-big-to-fail problem if properly implemented. The FDIC’s decision to use SPOE is a significant, positive step toward ending the too-big-to-fail problem.

Figures 1, 2 and 3 illustrate the before and after scenarios of the first step in a SPOE recapitalization of a stylized U.S. G-SIFI.

Figure 1. SPOE: Group Structure Before Recapitalization

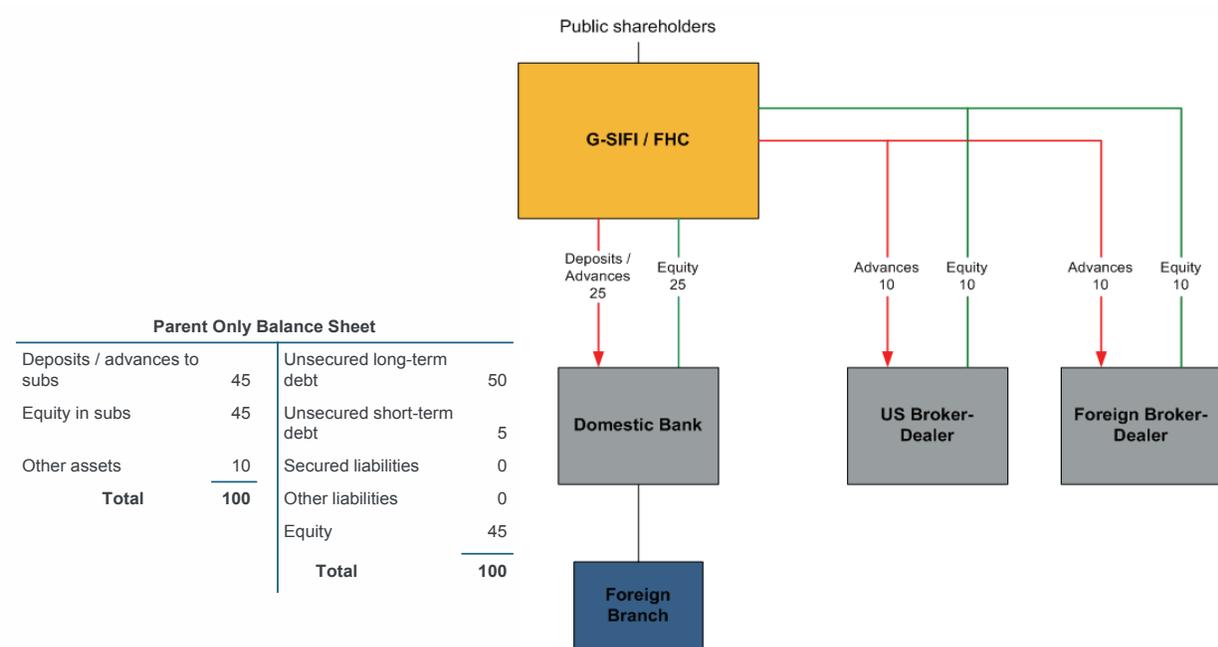


Figure 2. SPOE: Hypothetical Losses

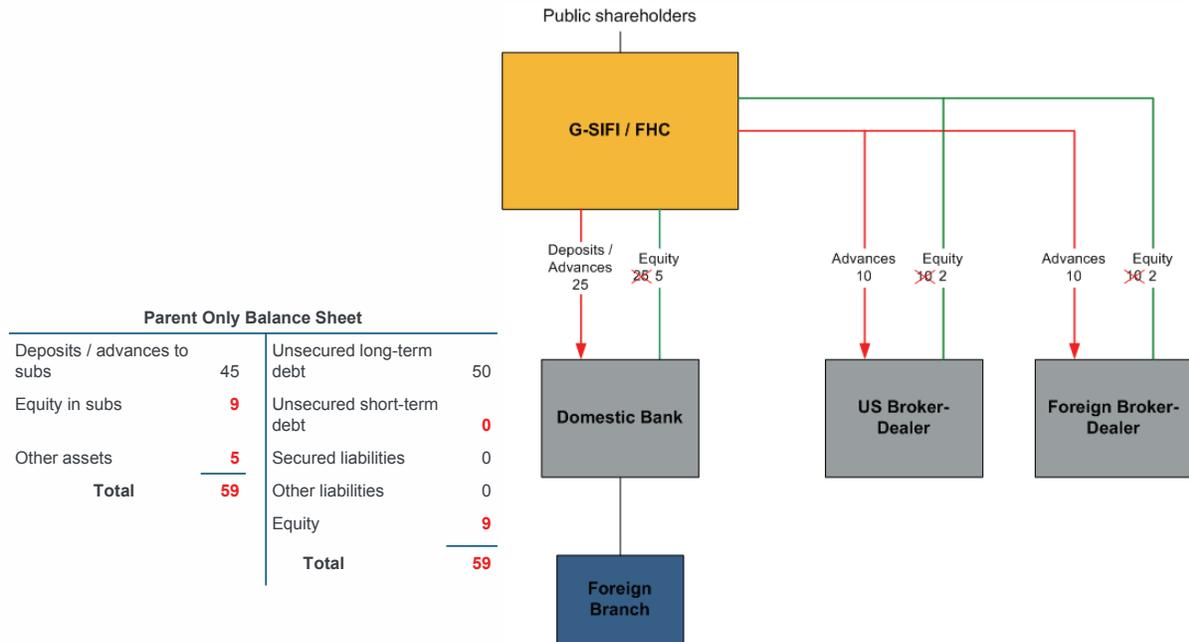
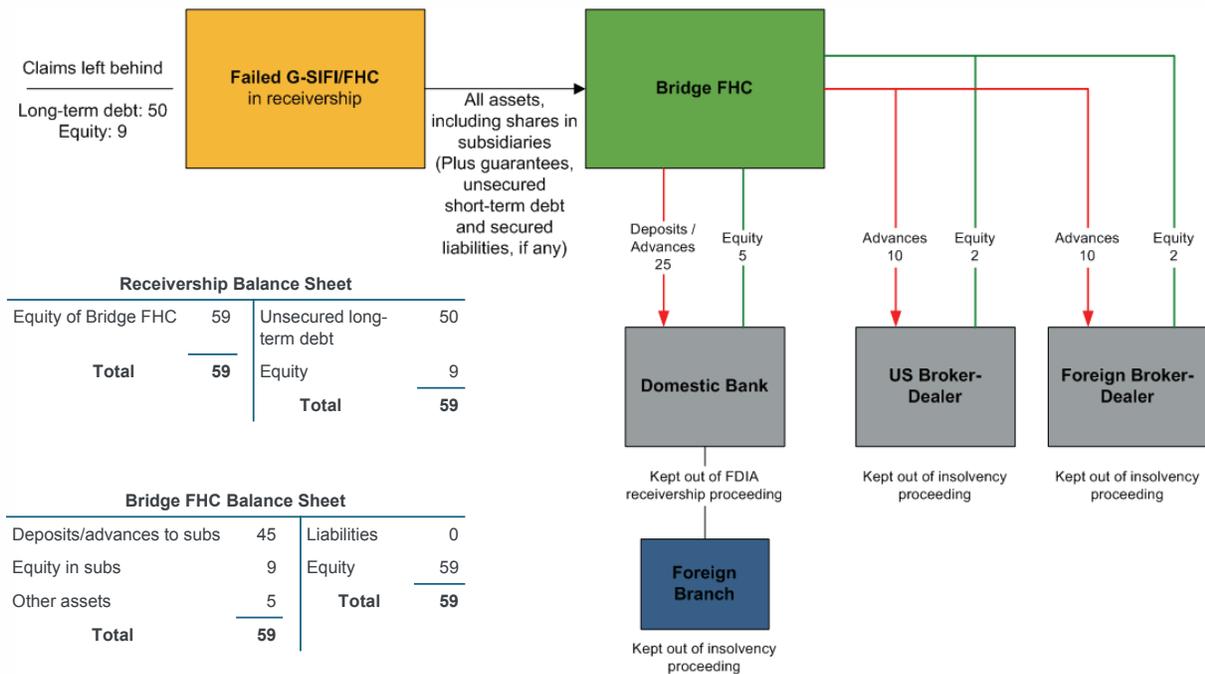


Figure 3. SPOE Step 1: Recapitalizing Business Transferred to Bridge FHC

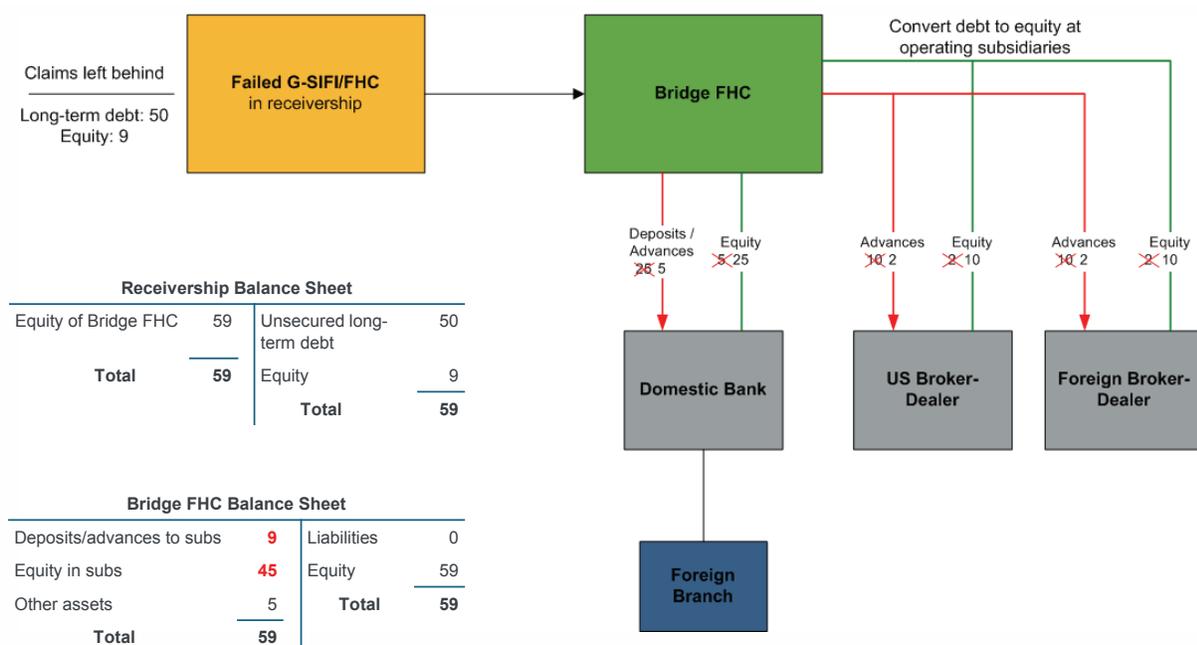


Under the SPOE recapitalization approach, a parent holding company that failed would be put into an FDIC receivership under OLA, which is similar to a proceeding under the Bankruptcy Code. Rather than immediately selling the firm or its assets to a third party, however, all of the firm’s assets, including its ownership interests in and intercompany loans to its bank, broker-dealer and other operating subsidiaries, would be transferred to a newly established holding company called a **bridge holding company** (or bridge) over a weekend or even overnight.

The equity, long-term unsecured debt and other similar capital structure liabilities of the failed holding company would be left behind in the receivership. Any short-term unsecured debt, secured liabilities, financial contracts, guarantees of a subsidiary’s financial contracts or other operating liabilities at the parent company level would be transferred to the bridge, if necessary to prevent contagion. It is rare, however, for secured liabilities or financial contracts to be booked at holding companies. Moreover, the holding company parents of G-SIFIs increasingly have very little, if any, commercial paper or other short-term debt at the holding company level, and the FDIC has the discretionary authority to make long-term debt legally subordinate to short-term debt. Finally, OLA contains a provision that overrides the early termination rights of counterparties on financial contracts booked at operating subsidiaries if those rights arise solely because of a failure of a parent holding company or an affiliate, as long as a creditworthy bridge financial company or third party assumes any parent or affiliate guarantees of those contracts within one business day after the parent’s failure.

The FDIC is required to remove any directors and senior management responsible for the firm’s failure, but it is free to include any other directors and senior management on the new bridge company’s board of directors and senior management team.

Figure 4. SPOE Step 2: Recapitalizing Operating Subsidiaries



The business transferred to the bridge would be recapitalized as a result of leaving behind the long-term unsecured debt in the receivership. The FDIC would cause the bridge to recapitalize the operating subsidiaries by contributing its unconsolidated assets to any operating subsidiaries that need to be recapitalized. See Figure 4. One of the most common holding company assets is intercompany loans from the holding company to its operating subsidiaries. If there are enough such assets, the FDIC could cause the bridge to recapitalize the operating subsidiaries by forgiving such intercompany loans. For example, Figure 4 shows the bridge holding company forgiving \$20 of the U.S. bank subsidiary's obligations on intercompany advances and deposits, resulting in an increase in the bank's capital of \$20. If a subsidiary did not have enough intercompany debt for the bridge to forgive, the bridge could, subject to any regulatory requirements or limitations, contribute receivables from other subsidiaries to the troubled subsidiary since receivables would be assets on the bridge company's unconsolidated balance sheet. For example, if the U.S. bank subsidiary in Figure 4 did not have enough intercompany debt for the bridge to forgive, and the U.S. broker-dealer did not need additional capital, the bridge could contribute any receivables from the U.S. broker-dealer to the U.S. bank. This is because the receivable is an asset on the bridge's balance sheet and the bank would not be paying any purchase price for the contribution or assuming any liabilities in connection with the contribution.

In this manner, the FDIC could effectively cause any losses incurred at the operating subsidiary level to be pushed up to the failed holding company's receivership. The operating companies would therefore be recapitalized and kept out of insolvency proceedings without the use of any taxpayer money. The FDIC also might choose to cause the failed holding company to recapitalize the operating subsidiaries after the FDIC has been appointed receiver but before any assets are transferred to the bridge.

The bridge holding company with its recapitalized business and its recapitalized operating subsidiaries would open for business at the normal opening time on the day after resolution weekend or resolution night.

If the bridge holding company or any of its operating subsidiaries were unable to obtain enough liquidity from the market to fund their operations despite being recapitalized, the FDIC would use the OLF to provide them with temporary, fully secured liquidity at modestly above-market rates until the market stabilized. Once the market stabilized, the bridge and its operating subsidiaries should be able to obtain liquidity from the private sector and pay back the FDIC. Without such a temporary fully secured liquidity facility, the bank and other operating subsidiaries of the holding company would not be able to continue to serve customers and clients, and the going concern value of the recapitalized group could be destroyed. If the group were forced to sell its otherwise valuable but illiquid assets for cash at fire-sale prices, it could destroy the franchise value of the otherwise well-capitalized bridge and foster the very sort of contagious panic that needs to be avoided to solve the too-big-to-fail problem.

From the point of view of averting contagion, certain features of a SPOE recap are critical. Specifically, the operating subsidiaries of the bridge holding company would be kept out of

receivership or insolvency proceedings and would open for business at the normal opening time on the day after resolution weekend or resolution night. All holders of any operating liabilities of the failed SIFI parent and its operating subsidiaries, including any depositors, would be paid in full in the ordinary course of business. The holding company's long-term, unsecured debt and other capital structure liabilities would be structurally subordinated to any debt at the operating subsidiary level, including any short-term, unsecured debt and comparable operating liabilities. In addition, to calm depositors and other short-term creditors and provide the markets with comfort regarding the safety and soundness of the recapitalized group, the OLF would be available to provide temporary, fully secured liquidity at modestly above-market rates to the bridge holding company and, indirectly, its operating subsidiaries until the group's liquidity stabilized. The going concern value of the recapitalized group would thus be preserved, and valuable but illiquid assets would not have to be sold for cash at fire-sale prices.

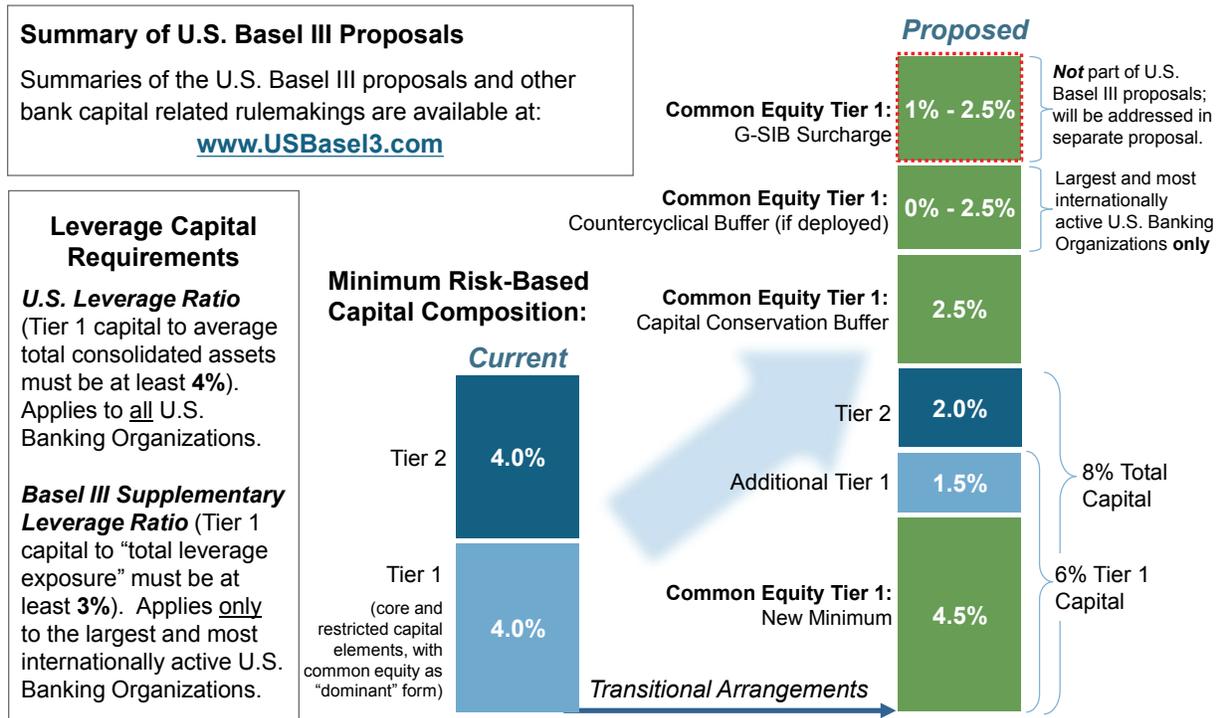
The distinction between **capital** and **liquidity** is critical. Under the law, the FDIC is only permitted to use the OLF to provide temporary fully secured liquidity to the bridge and its newly acquired operating subsidiaries, and not to provide capital to the failed parent, bridge or operating subsidiaries. New capital would be created solely by imposing losses on the holding company's creditors left behind in the receivership, and not by capital injections from the OLF. This distinction between prohibiting the OLF from being used to provide **capital to absorb losses** on the one hand, and allowing the OLF to be used to provide temporary **secured liquidity** to recapitalized bridge companies to stabilize the financial system on the other, is what distinguishes a taxpayer-funded bailout from traditional lender-of-last-resort facilities. The action of the government as lender-of-last-resort, including the Federal Reserve's discount window, has never been considered to be a taxpayer-funded bailout by the vast majority of observers, including such free market advocates as Milton Friedman, if the relevant lender-of-last-resort facilities satisfy the conditions of Bagehot's dictum.

Walter Bagehot in his classic 1873 book on central banking, defined the extension of credit under lender-of-last-resort-facilities such that it must only be made to solvent entities on a fully secured basis at above-market cost. If the OLF is used only as a temporary, fully secured **liquidity facility** that complies with the traditional safeguards for lender-of-last-resort facilities, it would **not be a taxpayer bailout**.

Bagehot's solvency condition clearly would be satisfied in a SPOE recapitalization because the borrowers – the bridge and indirectly its new operating subsidiaries – would be more than solvent, having been recapitalized at generally applicable capital requirements, such as at fully phased in Basel III levels. When fully phased in, the U.S. version of Basel III will require banks and bank holding companies to have tangible common equity to risk-weighted assets of between 7 percent and 9.5 percent, depending on whether they are G-SIBs or G-SIFIs or not. See "Basel III" in the glossary contained in Annex B and as graphically illustrated in Figure 5. Taxpayers would be further insulated against any risk of loss by the fact that the statute requires the FDIC to recoup any losses that might nevertheless be

sustained by the OLF – for example by mistakes in valuing collateral – by imposing assessments on large, private-sector financial institutions.

Figure 5. U.S. Basel III Proposals



Source: Davis Polk & Wardwell LLP

Figure 6. SPOE Step 3: Distribution of Equity in Bridge FHC in Satisfaction of Claims Left Behind in Receivership

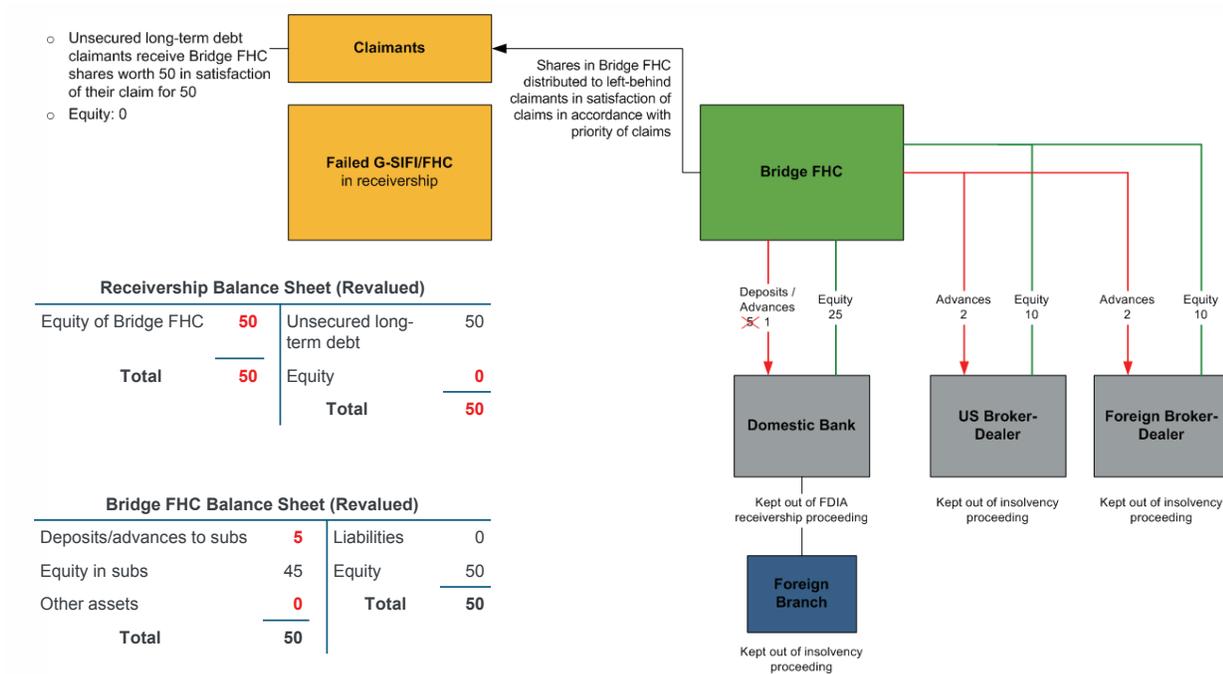
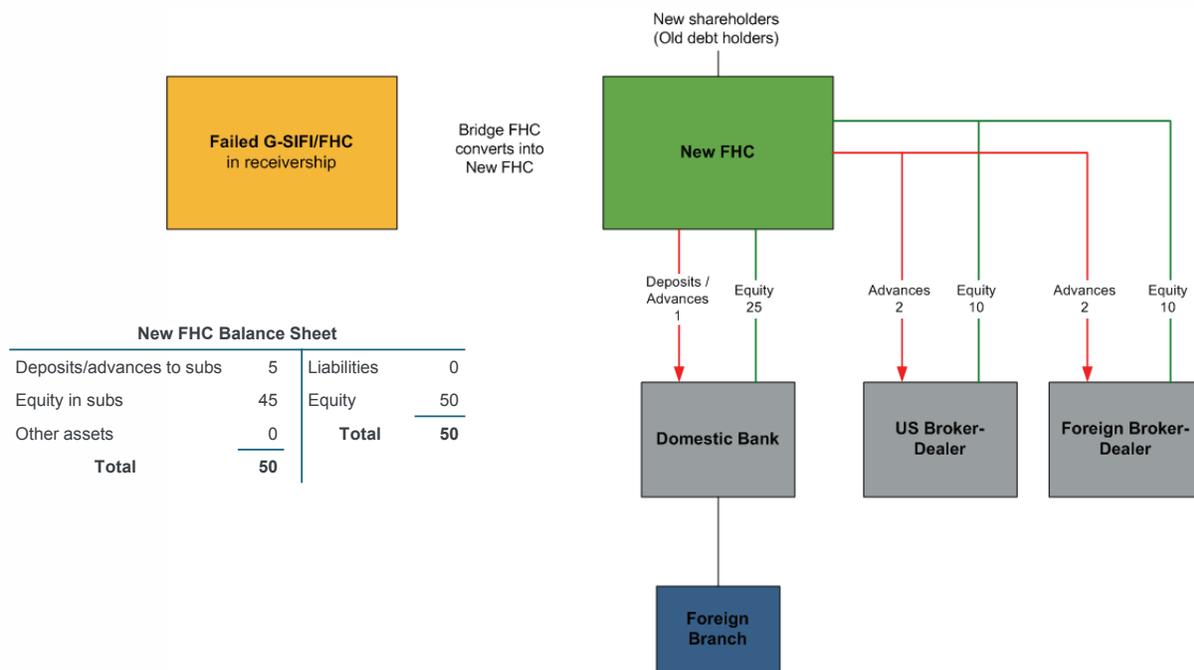


Figure 7. SPOE Step 4: Termination of Bridge Status



After a normal claims process, the holders of the failed holding company's equity, long-term unsecured debt and other similar capital structure liabilities left behind in the receivership would receive all of the residual value of the recapitalized bridge holding company – that is, its equity – in satisfaction of their claims against the failed company in accordance with the predetermined priority-of-claims rules. At the same time, the bridge holding company would be converted into a normal state- or federally chartered corporation. See Figures 6 and 7. As a result, all of the group's losses would be borne by the failed parent holding company's equity, long-term unsecured debt holders and any other claimants left behind in the receivership, and not by taxpayers.

The failed holding company's combined equity, long-term unsecured debt and other similar capital structure liabilities would act as a shield against any losses by short-term creditors and the holders of other operating liabilities at the operating company level. As a result, using the SPOE strategy to recapitalize the group should, like deposit insurance, greatly reduce or even eliminate the incentive of the group's demand depositors, repo lenders, and holders of other money-like claims to run or for contagious runs to spread throughout the system. Using the OLF to provide interim liquidity to the bridge and its subsidiaries until confidence in the recapitalized group could be restored would further reduce the incentive to run.

A key to making this work is the distinction between capital structure liabilities, including long-term unsecured debt, and operating liabilities, including short-term debt. The reason for preferring short-term creditors and other holders of operating liabilities over long-term, unsecured creditors and other holders of capital structure liabilities is that they are not really similarly situated during a financial crisis. Short-term creditors and the holders of other operating liabilities have effectively bargained for the right to "run" during a financial crisis because they have the right to demand the return of their money or demand additional cash or liquid collateral immediately or within a very short period of time. They have also effectively paid for such rights, since the return on short-term debt and other operating liabilities is generally lower than the return on long-term debt and other capital structure liabilities of the same debtor.

By clearly making long-term, unsecured debt and other capital structure liabilities structurally or legally subordinate to the group's short-term debt and other operating liabilities in advance, the SPOE recap strategy signals to the market that these two types of liabilities are not similarly situated during a financial crisis and therefore will not be treated as if they were a single class. This signaling will result in efficient market pricing of long-term, unsecured debt and other capital structure liabilities, on the one hand, and short-term debt and other operating liabilities, on the other, thus eliminating any unfairness that might arise from a last-minute, unexpected discretionary decision to treat long-term, unsecured debt or other capital structure liabilities as subordinate to short-term unsecured debt and other operating liabilities.

The SPOE recap strategy is functionally equivalent to a high-speed reorganization of the failed parent holding company under Chapter 11 of the Bankruptcy Code, where the

essential features of the reorganization are completed over resolution weekend or even overnight. The going concern value of the systemically important and other viable part of the business is preserved, with the final distribution of value taking place at the end of the claims process. Most importantly the clients and customers of the operating subsidiaries will continue to be served without interruption.

While the FDIC is still working out the final details of this strategy, the FDIC's SPOE recap approach should solve the too-big-to-fail problem for SIFIs, including G-SIFIs, by providing a viable alternative to the unpalatable choice between bailout and the sort of contagious panic that can bring down the financial system if properly implemented. The essential conditions for this result to be achieved are as follows:

- **Pre-Announced, Predictable and Viable Strategy.** The FDIC must publicly announce in a policy statement in advance of any particular SIFI's or G-SIFI's failure that it will use the SPOE recapitalization strategy to resolve certain types of SIFIs under OLA if invoked, so that the market and foreign regulators can rely on its public commitment to do so.
- **Sufficient Loss-Absorbing Capacity.** The parent holding company of the SIFI has enough loss-absorbing capacity in its capital structure to immediately recapitalize its business if transferred to a bridge and all of its operating subsidiaries at whatever levels are generally required (e.g., fully phased-in Basel III levels), assuming the group suffers losses of some specified amount greater than those projected under the most severely adverse scenario used by the Federal Reserve in its most recent Comprehensive Capital Analysis and Review (CCAR) process.
- **Structural or Legal Subordination.** The parent's equity, long-term unsecured debt, and other similar capital structure liabilities counted in its loss-absorbing capacity are either structurally subordinate to all material claims by the group's depositors, short-term creditors and other holders of operating liabilities, or the FDIC has publicly committed to exercise its discretionary authority to treat operating liabilities as if they were senior to capital structure liabilities.
- **Secured Liquidity Facility.** The OLF provides the bridge holding company with access to temporary, fully secured liquidity that is secured by any of its assets or those of its subsidiaries that are pledged or repledged to the OLF in an amount equal to the fair market value of such assets less reasonable haircuts.

This report also recommends that the FDIC have the option of distributing the residual value of the resolved SIFI among the claimants left behind in the receivership based on **relative priority**. This will minimize valuation disputes, reduce the risk of legitimate claims based on violations of constitutionally protected property rights, and effectively mirror the distributions produced by "**bail-in**" proposals currently being considered in Europe.

BANKRUPTCY CODE

OLA is a statutory back-up option to be invoked only when the government has determined through appropriate procedures that using the Bankruptcy Code to reorganize or liquidate a particular financial company under prevailing economic conditions at the time of failure “would have serious adverse effects on financial stability in the United States” and that using OLA “would avoid or mitigate such adverse effects.” Given that the effectiveness of the Bankruptcy Code is an important ingredient in this formula, if a SPOE recapitalization strategy can be successfully implemented under the Bankruptcy Code or if the Bankruptcy Code can be amended to improve its effectiveness, the need for OLA could be drastically reduced.

If the Recommendations made by this report are implemented, it should be possible to implement a SPOE recapitalization strategy under the Bankruptcy Code under most if not all economic scenarios.

Similar to a SPOE recap under OLA, voluntary Chapter 11 proceedings would be commenced solely with respect to a SIFI’s parent holding company. The SIFI would then be recapitalized through the immediate transfer of the holding company’s assets, including the stock of its solvent operating subsidiaries, and any parent company short-term debt, guarantees of subsidiary financial contracts, and other operating liabilities to a new holding company comparable to a bridge financial company under OLA. The judge presiding over the failed holding company’s bankruptcy proceedings would have to approve this transfer, despite its unprecedented speed, but should do so because it would not prejudice, and in fact will preserve value for, the holders of the failed parent holding company’s equity, long-term unsecured debt and other similar capital structure liabilities left behind in the bankruptcy proceedings, with the ultimate goal of distributing the stock of the new holding company or its value to such stakeholders. It is at this point that there is an important congruence with effective resolution plans prepared under Title I of the Dodd-Frank Act. Pending such distribution, the stock of the new holding company could be maintained in trust for the benefit of the stakeholders and subject to distribution under the ultimate plan of reorganization for the old holding company in its Chapter 11 proceedings.

Such a speedy transfer of assets to a new holding company controlled by a trust for the benefit of the stakeholders left behind in the bankruptcy proceedings can be accomplished under Section 363 of the current Bankruptcy Code. Section 363 provides for the use, sale or lease of the bankruptcy estate, including a transfer of assets or liabilities to a newly formed company. But, as in a SPOE recap under OLA, the transfer would need to occur without material delay and with little to no advance notice to the failed company’s creditors. It would occur pursuant to mechanisms designed to protect and preserve value for the failed company’s bankrupt estate and its stakeholders that would need to be worked out and thoroughly vetted in advance of any particular SIFI’s failure – such as in a well-thought-out resolution plan submitted to the Federal Reserve and the FDIC under Section 165(d) of the Dodd-Frank Act. Moreover, while there are bankruptcy doctrines that may permit the effective subordination of long-term, unsecured debt and other capital structure liabilities

(left behind) to short-term liabilities and other operating liabilities (transferred in the Section 363 sale), this contemplated use of a speedy sale under Section 363 would be significantly aided by a structural or legal subordination of the long-term, unsecured debt and other capital structure liabilities of the SIFI's parent holding company to operating liabilities.

Just as under OLA, for a SPOE recap strategy to work under the Bankruptcy Code under the most extreme economic conditions, a source of temporary fully secured liquidity would need to be available from the public or private sector until market confidence in the recapitalized SIFI were restored. The new holding company will be strongly capitalized, but it still may not be able to access the private-sector credit markets right away. That is why OLA includes the OLF, a government lender-of-last-resort facility in case an adequate private-sector source of liquidity is not available. Since the holding company left behind in bankruptcy will be without material assets other than its beneficial ownership in the residual value of the new holding company after the Section 363 transfer is made to the new holding company, conventional debtor-in-possession (DIP) financing will not be a potential liquidity source. Access to the OLF, available to a bridge holding company under OLA, also will not be available to the new holding company because the OLF is available only when the OLA conditions are met and OLA is invoked. As a result, liquidity from some other source will need to be found, presumably by the individual operating companies on a secured basis. Among the recommendations contained in this report is that the Federal Reserve's discount window authority should be expanded to permit the Federal Reserve to provide fully secured liquidity at above-market rates to a recapitalized bank holding company and its operating subsidiaries that are executing a SPOE recapitalization strategy under the Bankruptcy Code. This is consistent with the historical role of the central bank as the "lender of last resort" on a fully secured basis for solvent banks in generally sound condition.

In order to make it more feasible to carry out an SPOE recapitalization strategy under the Bankruptcy Code, the Bankruptcy Code should also be amended as recommended in this paper. Among other amendments, the Bankruptcy Code should be amended to impose a temporary stay of one business day on the termination of any financial contracts with the bankrupt holding company, comparable to the stay in OLA. The second amendment would add a provision like Section 210(c)(16) of the Dodd-Frank Act. That provision overrides cross-default provisions in financial contracts entered into by a group's operating subsidiaries that would permit counterparties to terminate such contracts upon the failure of the parent holding company or an affiliate, provided that any parent guarantees of those contracts are assumed within one business day by a bridge financial company or creditworthy third party. A similar provision should be included in the Bankruptcy Code to override cross-defaults that would be triggered by the commencement of bankruptcy proceedings with respect to the parent if any such guarantees are promptly assumed by a new, otherwise sufficiently capitalized holding company, under Section 363 of the Bankruptcy Code. This report also recommends, in parallel to this report's OLA recommendation, that an amendment to the Bankruptcy Code be considered that would contemplate a distribution of equity or other residual value according to relative priority

among the claimants left behind in the bankruptcy proceeding and not transferred to the new holding company in the Section 363 transfer.

If the recommendations contained in this report are carried out, a SPOE recapitalization strategy would be feasible under the Bankruptcy Code. This would make it easy for a SPOE recapitalization strategy to be included in resolution plans or living wills and the conditions for invoking OLA will rarely, if ever, be satisfied. But Title II OLA should be retained as a fallback authority because the circumstances that might warrant its invocation might arise.

Detailed Discussion

Financial System, Maturity Transformation, Panics and Runs

The globalization of the world's energy, manufacturing, technology and other markets has resulted in an abundance of large, multinational companies. It is not surprising that a global financial system has arisen to service the market.

Banks and other financial institutions provide two vital functions to the global markets. First, they provide much of the money, payment, safekeeping, asset transfer and transaction settlement services necessary for markets to operate efficiently. Second, they provide much of the credit necessary for the same purpose. They not only use their balance sheets to do so, but they also act as intermediaries between borrowers, lenders and investors in the capital markets.

To provide these vital functions, they engage in **maturity transformation**. Maturity transformation is the process by which banks and other financial institutions fund themselves with short-term credit, including demand deposits and other money-like instruments such as repos, asset-backed commercial paper, interest-rate swaps, foreign-currency swaps and other operating liabilities. They use these funds to make long-term loans or invest in asset-backed and other debt securities and other assets that are or can quickly become illiquid.

These financial intermediaries provide money and payment services by agreeing to borrow short-term and providing efficient ways for households, businesses and institutional investors to withdraw and transfer money-like claims against the banks and other financial institutions and collateral **anywhere in the world**, anytime, instantly or very quickly. Indeed, Professor Gary Gorton argues in his book, *Misunderstanding Financial Crises*, that the essential "output" of banks and other financial institutions engaged in maturity transformation is not some kind of widget like ordinary corporations, but rather money-like debt – that is, debt that is ordinarily treated as if it were as good as cash or other central bank money without inquiring into the financial condition of the bank or other financial institution:

"The output of a car company is cars. The output of a consulting company is advice. The output of a shipping company is transportation services. The output of a bank is debt. Banks create debt so that people and firms have a way to transact. To produce debt that people and companies find useful for transactions is not easy. It would be best if this debt were riskless, like modern government-produced money, because then it would be very easy to transact. People and companies would accept the

money without questions. But private firms cannot create riskless debt, and that is the basic problem. Unlike other products, bank debt comes with a kind of contractual warranty: if you don't want it anymore, the bank has to return all your cash. But there cannot be enough cash, because the cash is lent out, leading to a multiplying process creating more than a dollar of bank debt for each dollar of cash."

Conversely, Professor Gorton argues that the capital and assets of banks are the essential "inputs" in this money creation process.

Given the tight link between the creation of money and credit in the maturity transformation process, it is also possible to argue that the supply of credit is an essential "output" of banks and other financial institutions, and that the essential "inputs" in this credit creation process are the institution's equity, long-term debt and short-term funding. Banks and other financial institutions supply credit to the market by using their capital and funding to lend long-term, invest in long-term debt securities or act as an intermediary between borrowers, lenders and investors in the capital markets.

They also provide transaction settlement services, such as efficient delivery of securities, securities collateral or other financial instruments against payment, by providing their payment, safekeeping, asset transfer and credit services on an integrated basis.

Maturity transformation is socially beneficial because it intermediates between savers and investors, giving savers the option to invest their cash in money-like or other short-term claims against financial institutions while giving investors the ability to obtain longer-term loans or issuing longer-term asset-backed or other debt securities. The process also provides households, businesses and institutional investors with claims against financial institutions that can be used as money to make payments and securities deliveries more efficiently by electronic transfer rather than by physical deliveries of cash or physical securities. Indeed, the Federal Reserve has from time to time included demand deposits, time deposits, checks, repos, and other similar claims against financial institutions in various components of the money supply. Without maturity transformation, our modern economy would grind to a halt.

Commercial banks are not the only financial institutions that engage in maturity transformation. As Professor Gary Gorton has also shown, many other regulated and unregulated financial institutions engage in maturity transformation, including broker-dealers, money market funds, hedge funds, institutional investors and so forth. According to Professor Gorton in his book, *Slapped by the Invisible Hand*:

"What has become known as the shadow banking system is, in fact, genuine banking Where do firms and institutional investors save their money when they do not want to make long-term investments? In other words, what is the equivalent of a checking account for firms? There are no insured deposit accounts large enough for these depositors. But they have large amounts of money that they would like to deposit safely and with easy access, like a checking account. Over the last 25 years, a number

of forces led to a banking solution. The solution is banking, but it does not happen in the familiar form of a depository institution.

Firms 'deposit' in the sale and repurchase ('repo') market, a short-term market for firms, banks and institutional investors. Here's how it works. Imagine a large institutional investor wants to save \$500 million short-term. The investor wants to earn some interest, wants the money to be safe (no risk), and wants to have easy access to the money. . . . [O]ur institutional investor may well engage in the following transaction: the \$500 million is 'deposited' overnight with a bank (investment bank or commercial bank, foreign or domestic). The institutional investor will receive bonds (not necessarily government bonds) with a market value of \$500 million; in other words, he receives collateral. In the panic, the collateral most likely will be securitization-related bonds, which represent claims on the portfolios of loans held by special legal entities that only hold that portfolio. . . . The institutional investor will earn interest on the deposit. The bonds have to be given back when the institutional investor withdraws his money by not renewing (not 'rolling') the transaction. Note that the firm receiving the deposit of \$500 million has just financed the bonds that were given as collateral.

This transaction has notable features. It resembles checking in that it is short-term, often lasts overnight; it is backed by the collateral; and the bond received as collateral can be 'spent,' that is, it can be used as collateral in some other transaction that the institutional investor may undertake. And that party can pass it on, as well. This process of reusing the collateral repeatedly is called 'rehypothecation.' In short, repo is banking. You can see why the Federal Reserve System counted these transactions as 'money' when it computed a measure of money called M3, now discontinued."

Professor Gorton argues in *Misunderstanding Financial Crises* that the idea that financial institutions other than commercial banks engaged in maturity transformation or money creation process was not widely understood before the financial crisis of 2008:

"An important misunderstanding revealed by the crisis [of 2008] is that regulators and economists did not know what firms were banks, or what debt was 'money.' They thought that banks were only the firms that had bank charters, and that money was only in currency and demand deposits. They did not realize that repo and asset-backed commercial paper (ABCP) are also money; indeed, the two most important money market instruments – the two forms of money that suffered runs during the financial crisis of 2007-8."

While banks and other financial institutions that engage in maturity transformation are generally solid institutions, they have an Achilles heel. They are more dependent on public confidence than other institutions. If the public loses confidence in their solvency **or** liquidity a panic will ensue. Depositors, repo lenders and other holders of money-like or other short-term claims against financial institutions will demand immediate conversion of their claims into currency and the institution will not be able to liquidate their assets fast enough to

satisfy those demands. This is what is known as a **run on a bank** or **other financial institution** engaged in maturity transformation.

Professor Gorton has argued that:

“A financial crisis in its pure form is an exit from bank debt. Such an exit can cause massive deleveraging of the financial system. It is not the asset side of banks which is the problem (though assets may be impaired) but the liability side. Financial intermediaries cannot possibly honor these short-term debt obligations if they are withdrawn or not renewed. And when the whole banking system cannot honor its contractual demands, it is a systemic problem.”

Modern runs on demand deposits, repos and other money-like claims against banks and other financial institutions are fundamentally the same as runs on traditional banks throughout history, even though they “involve different kinds of bank money.” According to Professor Gorton:

“In 1857 customers of banks demanded gold and silver in exchange for their banknotes and demand deposits. In the panics of the National Bank Era, like the Panic of 1907, depositors demanded National Bank Notes in exchange for their checking accounts. In the Panic of 2007-8, depositors did not want the bonds as collateral for repo anymore. . . . [A] run on repo involves the same vulnerability of bank debt that occurred with private banknotes and demand deposits.”

To be sure, the financial crisis of 2008 involved runs on many commercial banks as well as broker-dealers and other nonbank financial institutions. The runs on commercial banks occurred despite deposit insurance, causing hundreds of community and mid-size banks to fail and a handful of very large banks to fail, including Wachovia, Washington Mutual and IndyMac. These banks failed either because their commercial loans and other banking assets were worth less than their liabilities (i.e., they were insolvent) or because their depositors lost confidence in the value of their loan books and other illiquid assets and they could not liquidate them fast enough to satisfy the demand for cash or other central bank money without becoming insolvent in the process. The financial crisis of 2008 also involved runs on other financial institutions engaged in maturity transformation, including Bear Stearns, Lehman Brothers and AIG. These runs were not on deposits because none of these firms were permitted to take deposits. Instead, they were runs on repos, asset-backed commercial paper and margin calls on securities lending transactions.

A run on one bank or other financial institution can undermine the public’s confidence in other financial institutions engaged in maturity transformation. A **contagious panic** is characterized by a sudden, strong and unexpected preference for cash or other central bank money rather than claims against private-sector financial institutions. Economists call a preference for cash or other central bank money a liquidity preference. It results in a cascade of mass withdrawals of cash from the financial system by depositors, repo lenders, holders of asset-backed commercial paper and other holders of money-like **operating liabilities**. These mass withdrawals of cash – also known as **liquidity runs** or just **runs** –

force financial institutions to liquidate their illiquid but valuable assets at **fire-sale prices**. Fire sales can result in contagious panics that can cause otherwise solvent financial institutions to fail.

Professor Gorton illustrates the problem with fire sales of illiquid assets by the following example:

“[I]f you had to sell a Van Gogh painting (lucky you to own one!) quickly, you would lose money. You don’t really know what the painting is worth unless you are an art expert. And few people would believe that it was a Van Gogh. Anyone who actually knew the painting’s worth could claim it was fake and try to buy it at a very low price. So you would take the painting to an auction house, and they would research its provenance, put out a catalogue, and after a year or so hold an auction. You would realize more of the value of the painting. You could not realize the value of the painting at short notice unless you were willing to take a great loss.”

In the first of a series of lectures at George Washington University, Federal Reserve Chairman Ben Bernanke provided a simple description of the dynamics and psychology of a run on commercial banks and its connection to fire sales. The same dynamics and psychology apply to runs on other financial institutions engaged in money creation and maturity transformation.

“I need to talk a little bit about what a financial panic is. In general, a financial panic is sparked by a loss of confidence in an institution. The best way to explain this is to give a familiar example. If you have seen the movie *It’s a Wonderful Life*, you know that one of the problems Jimmy Stewart’s character runs into as a banker is a threatened run on his institution. What is a run? Imagine a situation like Jimmy Stewart’s, before there was deposit insurance and the FDIC. And imagine you have a bank on the corner, just a regular commercial bank; let’s call it the First Bank of Washington, D.C. This bank makes loans to businesses and the like, and it finances itself by taking deposits from the public. These deposits are called demand deposits, which means that depositors can pull out their money anytime they want, which is important because people use deposits for ordinary activities, like shopping.

Now imagine what would happen if, for some reason, a rumor goes around that this bank has made some bad loans and is losing money. As a depositor, you say to yourself, ‘Well, I don’t know if this rumor is true or not. But what I do know is that if I wait and everybody else pulls out their money and I’m the last person in line, I may end up with nothing.’ So, what are you going to do? You are going to go to the bank and say, ‘I’m not sure if this rumor is true or not, but, knowing that everybody else is going to pull their deposits out of the bank, I’m going to pull my money out now.’ And so, depositors line up to pull out their cash.

Now, no bank holds cash equal to all its deposits; it puts that cash into loans. So the only way the bank can pay off the depositors, once it goes through its minimal cash reserves, is to sell or otherwise dispose of its loans. But it is very hard to sell a

commercial loan; it takes time, and you usually have to sell it at a discount. Before a bank even gets around to doing that, depositors are at the door asking, 'Where is my money?' So a panic can be a self-fulfilling prophecy, leading the bank to fail; it will have to sell off its assets at a discount price and, ultimately, many depositors might lose money, as happened in the Great Depression.

Panics can be a serious problem. If one bank is having problems, people at the bank next door may begin to worry about problems at their bank. And so, a bank run can lead to widespread bank runs or a banking panic more broadly. Sometimes, pre-FDIC, banks would respond to a panic or a run by refusing to pay out deposits; they would just say, 'No more; we're closing the window.' So the restriction on the access of depositors to their money was another bad outcome and caused problems for people who had to make a payroll or buy groceries. Many banks would fail and, beyond that, banking panics often spread into other markets; they were often associated with stock market crashes, for example. And all those things together, as you might expect, were bad for the economy.

A financial panic can occur anytime you have an institution that has longer-term illiquid assets – illiquid in the sense that it takes time and effort to sell those loans – and is financed on the other side of the balance sheet by short-term liabilities, such as deposits. Anytime you have that situation, you have the possibility that the people who put their money in the bank may say, 'Wait a minute, I don't want to leave my money here; I'm pulling it out,' and you have a serious problem for the institution."

A run on a bank or other financial institution engaged in maturity transformation is a classic "tragedy-of-the-commons" problem. This problem arises when individuals have access to a shared resource such as fish in a shared pond. Each individual, acting independently, has an incentive to catch as many fish as possible because of the risk that other individuals will empty the pond of fish, leaving any individual who did not do so with nothing. A run on a bank or other financial institution engaged in maturity transformation is similar. Even if the institution is indisputably solvent, and every depositor or similar creditor knows it, each of them has an incentive to run if others start running to protect against the risk that the others will force the institution to sell its illiquid assets at fire-sale prices, causing it to become insolvent. If that happens, the first individual will suffer losses that could have been avoided had he or she ran in the first place when everyone else did.

As noted by Chairman Bernanke, fire-sale liquidations can result in contagious panics, which are bad for the economy. Indeed, they can result in a collapse of the financial system, which will have serious knock-on effects on the wider economy. Chicago school economist Milton Friedman won the Nobel Prize in large part because of his diagnosis of the Great Depression. He showed that the Great Depression was caused largely by the collapse of the financial system and what he called the Great Contraction in money and credit. He argued that the Federal Reserve and other central banks around the world had largely been responsible for the depth and length of the Great Depression by failing to use their lender-of-last-resort powers aggressively enough. The Great Depression was a worldwide

phenomenon that created terrible economic and social conditions that contributed to the outbreak of World War II. The Great Contraction, the Great Depression, and World War II illustrate how a collapse of the financial system can result in long-term harm to the real economy in terms of higher unemployment, reduced output, social unrest and even war.

Although deposit insurance has reduced the frequency and intensity of runs by retail depositors on insured banks, such runs still occur. Technology has made it easy to move deposits from one insured bank to another and retail depositors simply move deposits out of their insured bank to a healthier insured bank at the first sign of trouble. It is not that they lack confidence in the FDIC's deposit insurance, but that there is virtually no downside and little cost to moving the money electronically from the failing insured bank to a healthy insured bank.

Moreover, deposit insurance is capped at \$250,000 per account type per bank and applies only to deposits that are payable in the United States and not solely payable outside the United States. Uninsured depositors continue to have strong incentives to run at the first sign of trouble. In addition, deposits are not the only form of short-term funding. Other money-like claims include repos, asset-backed commercial paper, interest rate swaps, currency swaps and other financial contracts with corporations and institutional investors. The holders of these claims also have a strong incentive to run at the first sign of trouble. Not only are these other money-like claims uninsured by any government insurance program, most of the financial institutions that issue them have no access to the Federal Reserve's discount window or any other lender-of-last-resort facility unless the Federal Reserve invokes its powers under Section 13(3) of the Federal Reserve Act. These powers have always been limited to "unusual and exigent circumstances." The Dodd-Frank Act further conditioned them on the secretary of the Treasury consenting to their use and using them only to provide liquidity pursuant to market-wide programs rather than one-off loans to individual firms.

Too-Big-to-Fail Problem

The ***too-big-to-fail problem*** arises because of the unpalatable choice between fire-sale liquidations that can trigger the sort of contagious panic that can bring down the financial system and a taxpayer-funded bailout to avoid such a panic. By forcing firms to sell their valuable but temporarily illiquid assets at liquidation value during a financial panic, fire-sale liquidations can foster contagious panic by turning a liquidity problem into a solvency problem.

Economists have shown that fire-sale liquidations also impose deadweight losses on society by forcing assets to be transferred from persons who are able to put the assets to their highest and best use to those who cannot. Reorganizations under the Bankruptcy Code can also foster panic if they take so long to complete that the going concern value of the business is destroyed like a melting ice cube before the firm can be reorganized.

A collapse of the financial system can cause long-term harm to the wider economy in terms of higher unemployment, lower output, and social unrest, as noted above. This is because a collapse of the financial system will result in a severe reduction in the amount of credit available, which will trigger a severe recession and potentially a depression. If the only choices are between bailout and fire-sale liquidations or value-destroying reorganizations that can result in a contagious panic and a collapse of the financial system, responsible policymakers typically choose bailout as the lesser of two evils.

To end the too-big-to-fail problem, policymakers need a viable alternative to these two choices. The alternative must allow a SIFI to be recapitalized, sold, or wound down in a way that does not risk a collapse of the financial system and without government bailouts.

THE TROUBLE WITH GOVERNMENT BAILOUTS

Taxpayer-funded bailouts are troublesome for two main reasons: the massive costs they impose on taxpayers and the market distortions they create. Taxpayers, not surprisingly, do not want to bear the costs of bailing out any private industry, its owners, management or creditors. They believe that those are costs that the industry, its owners, management and creditors should bear. Bailouts therefore create **political problems** for government officials who implement or vote in favor of them. They must either persuade their constituents that a particular bailout was better than the alternative choices, and could not have been avoided by any action on their part, or else risk being voted out of office. Numerous members of Congress were defeated in re-election after they voted for the TARP program, which was used (among other things) to recapitalize the U.S. banking industry in 2008.

Taxpayer-funded bailouts also create **market distortions**. If the owners, managers, long-term unsecured creditors and the other holders of the capital structure liabilities of an institution expect that it will be bailed out, their expectation will result in a market distortion known as **moral hazard**. Moral hazard refers to the risk that owners, managers, long-term unsecured creditors and other holders of the capital structure liabilities of an institution will not monitor and control the risks taken by such institutions as efficiently as they otherwise would. Why should they monitor and control those risks if they can rely on the government to step in and absorb any losses? If the holders of capital structure liabilities expect their institutions to be bailed out, the owners will encourage the institutions to engage in excessive risk-taking and the long-term unsecured creditors and other holders of capital structure liabilities will turn a blind eye to such risk-taking. Owners will enjoy the upside from any such risk-taking, and none of the owners, the long-term unsecured creditors or the holders of other capital structure liabilities will bear the downside.

Bailouts do not create moral hazard with respect to demand depositors, repo lenders and other holders of money-like claims against banks and other financial institutions. Such creditors are not investors and will not monitor their financial intermediaries regardless of whether they are bailed out or not. If they think their bank or other financial institution could fail, they will simply take their money and run. Unlike long-term creditors, they have bargained for the legal right to do so based on the terms of their contractual relationship,

and they have the practical ability to do so. In short, their only form of monitoring is to exit the relationship by running if they lose confidence in the solvency or liquidity of their intermediary. They will either demand that their claims be converted to cash and put it under the proverbial mattress or look for other financial intermediaries that can offer them money-like debt that does not depend on monitoring the creditworthiness of the intermediary. As Professor Gorton has shown, the very reason they invested their money in these instruments with these institutions in the first place was to have a risk-free store of value and means of payment that are the functional equivalents of cash or other central bank money.

Another market distortion that government bailouts can produce is an ***implicit government subsidy*** of funding costs. The reason is that shareholders, long-term unsecured debt holders and the holders of other capital structure liabilities might accept below-market returns if they expect the institutions or their claims to be bailed out by the government. The lower interest returns would reflect their lower expected risk of loss. Such an implicit subsidy would give the subsidized financial institutions a competitive advantage over those who do not enjoy such a subsidy.

Some economists, journalists, and government officials have argued that U.S. SIFIs currently enjoy an implicit subsidy in the form of lower funding costs because of the continuing expectation that they will be bailed out by the government. The editors of Bloomberg, for example, have attempted to estimate the value of the subsidy, publishing an article in which they argued that the ten largest U.S. bank holding companies enjoy an implicit annual subsidy of \$83 billion.

These assertions are based on studies that are subject to dispute over their methodologies and conclusions. For example, the \$83 billion number is extrapolated by journalists at Bloomberg from an attempt by two IMF researchers in a working paper to estimate the level of the implicit subsidy that certain large banking groups allegedly received. The researchers' estimates are based on judgments made by a single credit rating agency. As the researchers themselves stated in their paper, "rating agencies have been known to make mistakes in their judgments."

Most economists agree that the largest, most diversified banking groups enjoy lower funding costs than smaller, less diversified banks. This relationship should not be surprising because the same relationship exists between the funding costs of large, diversified commercial (*i.e.*, non-financial) groups and smaller, less diversified commercial companies. These advantages arise from a variety of factors, not necessarily because anyone believes that large commercial companies would be bailed out. For example, creditworthiness, amount of debt issued, business mix, exposure to different markets and many other factors all influence the relative borrowing costs of large and small commercial and financial companies.

Economists also do not agree on the size of the funding advantage of the largest U.S. banking groups. Some argue that the right figure is much lower by orders of magnitude, if it

exists at all. They argue that many of the higher estimates are based on historical data from narrow periods that are not representative of the full range of relevant time periods. They also argue that many of the higher estimates are based solely on a comparison of the relative cost of deposit funding at subsidiary bank levels, and do not take into account the higher cost of funding for the largest banking groups at the bank holding company levels. This is important because the largest U.S. banking groups raise a significant amount of their funding at the holding company level.

The most important point of dispute is whether any of the studies that allege a funding advantage have actually proven that there is a cause-and-effect relationship between the funding advantage and a reasonable expectation by the market that the largest banking groups will be bailed out by the government if they fail. The studies that allege a funding advantage appear simply to assume rather than to prove that an alleged funding advantage is caused by the market's belief that the largest U.S. banking groups will be bailed out by the government if they fail. Under Secretary of the Treasury for Domestic Finance Mary Miller recently argued that no such connection has been proven.

These studies also do not reflect the new legal tools created by the Dodd-Frank Act that allow both the banking regulators and our bankruptcy courts to impose losses on the holders of common equity, preferred stock, long-term unsecured debt and other capital structure liabilities without the need for a government bailout and without destabilizing or risking a collapse of the financial system. Nor do these studies reflect the publicly announced commitment of the federal government, the U.S. banking agencies or the bankruptcy courts to impose such losses on a firm's shareholders and creditors, and not taxpayers. These studies also do not take into account the explicit congressional mandate in Title II of the Dodd-Frank Act that "taxpayers shall bear no losses from the exercise of any authority under this title." For example, the research paper from which the \$83 billion number was extrapolated attempts to estimate the alleged subsidy as of end-2007 and end-2009 – before the passage of the Dodd-Frank Act and well before the regulatory implementation phase of the statute's key provisions, which is currently underway.

Under Secretary Miller argued that because of these new legal tools, statutory requirements and public commitments, it would be unreasonable for the market to assume that large U.S. banking groups will be bailed out by the government if they fail. She also pointed out that since the financial crisis, the borrowing costs of the largest banking groups have not only increased at a rate greater than those of certain regional bank competitors, but have also increased to higher absolute levels.

This report does not attempt to resolve the debate over whether or not an implicit subsidy exists, other than to note that the debate seems far from over. In addition to the debate over whether the subsidy exists, and if so, what its magnitude is, there is still the matter of cause-and-effect. Those who claim an implicit subsidy exists do not seem to offer sufficient empirical evidence to prove a cause-and-effect connection between any funding advantage and a reasonable expectation that U.S. SIFIs will be bailed out in a post Dodd-Frank world.

PROPOSED SOLUTIONS

The proposed solutions to the too-big-to-fail problem tend to focus on either the **too big** or the **to fail** components of the problem. This report focuses on the “to fail” component, although it discusses the proposals that focus on the “too big” component, as well as similar concepts such as “too risky,” “too complex,” “too systemically important” or “too interconnected.”

The proposed solutions that focus on too-big-to-fail can be divided between **ex-ante** and **ex-post** solutions. *Ex-ante* solutions focus on **reducing the risk of failure**. They include higher capital and liquidity requirements, size limitations, activities restrictions, transaction taxes, risk management, recovery planning, early intervention and contingency planning. If they are successful, the institutions would never fail and the *ex-post* solutions to failure would never be needed. But the *ex-ante* solutions are **not cost-free**. They involve **tradeoffs** between costs and benefits.

To illustrate this tradeoff, consider a rule that banned maturity transformation. Such a rule would almost certainly end all failures of banks and other financial institutions resulting from contagious panics. But it would do so at a cost of eliminating perhaps the most socially beneficial function that banks and other financial institutions perform. Without maturity transformation, our modern economy would grind to a halt.

Ex-post solutions focus on resolution strategies, assuming that the various *ex-ante* solutions were not successful and a particular institution or group of institutions failed. OLA, the Bankruptcy Code, the SPOE recapitalization resolution strategy and other resolution strategies are all last-resort options for solving the too-big-to-fail problem. **Resolution planning** is the tool used by financial institutions and their regulators to prepare to effectively use one of these last-resort options.

LEAST-COST TEST

While the costs of bailout are substantial, they are dwarfed by the catastrophic costs of a collapse of the financial system and its long-term knock-on effects on the real economy in terms of increased unemployment, reduced output, and potential social unrest. That is why responsible policymakers typically choose bailout when faced with a choice between bailout and such a collapse. To end the too-big-to-fail problem, policymakers need an alternative that allows them to recapitalize or wind down a SIFI in a way that results in lower social costs than either a bailout or a collapse of the financial system.

Distinction Between Capital and Liquidity

In order to develop a viable alternative to contagious panics that can result in a collapse of the financial system and government bailouts, it is important to distinguish between capital and liquidity. This distinction is critical to distinguish between taxpayer-funded bailout programs like TARP, which provide capital to rescue some failed or failing firms, and traditional lender-of-last-resort facilities, such as the Federal Reserve’s discount window,

which provide only temporary, fully secured liquidity at above-market rates to solvent firms in generally sound condition. Only when these distinctions are appreciated can a viable alternative to government bailouts be developed.

GOVERNMENT BAILOUTS: CAPITAL AND UNCOMPENSATED RISKS

The Financial Stability Board (FSB) recently defined a government bailout as follows:

“Any transfer from public sources to a failed firm or a commitment by a public authority to provide funds with a view to sustaining a failed firm (for example, by way of guarantees) that results in benefit to the shareholders or uninsured creditors of that firm, or the assumption of risks by the public authority that would otherwise be borne by the firm and its shareholders, where the value of the funds transferred is not recouped from the firm, its shareholders and unsecured creditors or, if necessary, the financial system more widely, or where the public authority is not compensated for the risks assumed.”

This definition was included in the FSB’s 2013 peer review of resolution regimes around the world to determine which ones comply with the FSB’s recommendations contained in its *Key Attributes of Effective Resolution Regimes for Financial Institutions*. According to the foreword to the FSB’s report, the final report (including its definitions) was based largely on a draft prepared by an FSB team chaired by FDIC Chairman Martin Gruenberg and included a representative from the Federal Reserve.

The FSB’s definition properly distinguishes between bailouts, which provide capital to insolvent or severely undercapitalized firms, and traditional lender-of-last-resort facilities, which provide only temporary fully secured liquidity to solvent firms with sufficient capital. Under the FSB’s definition, government action constitutes a taxpayer-funded bailout if it involves a transfer of government funds or a commitment to transfer government funds to a **failed firm** with a view to sustaining the firm if the value of the government funds transferred is not recouped from the firm, its shareholders, unsecured creditors or, if necessary, the financial system more widely. Government action also would constitute a bailout if it involves the assumption of risks by a public authority where the public authority is not compensated for the risks assumed.

Under this definition, the injection of public funds as capital into the mortgage giants Fannie Mae and Freddie Mac would be treated as a government bailout. Both firms had failed, neither had been recapitalized by converting any unsecured debt to equity, and the injections of public funds had been structured to protect their unsecured creditors from suffering any losses. The same could be said for many of the other U.S. and non-U.S. programs initiated during the financial crisis of 2008 that resulted in injections of capital into individual banks and the banking system generally.

LENDER-OF-LAST-RESORT FACILITIES: LIQUIDITY

In contrast to a taxpayer-funded bailout, a traditional lender-of-last-resort facility does not provide capital to a failed firm or protect its shareholders or creditors against losses.

Instead, a traditional lender-of-last-resort facility complies with the conditions established by Walter Bagehot in 1873. Under Bagehot's dictum, lender-of-last-resort facilities are only permitted to provide liquidity on a fully secured basis to firms that are solvent and have sufficient capital, and at an interest rate that is above the prevailing market rate.

Lender-of-last-resort facilities thus provide firms with an emergency source of fully secured liquidity, allowing them to borrow cash secured by valuable assets that have become temporarily illiquid, rather than forcing such assets to be sold at fire-sale prices. They do not provide capital to failed firms that protect shareholders or creditors against losses. Nor do they result in governments assuming risks for which they are not compensated.

Instead they are designed to prevent the unnecessary destruction of value that would otherwise be caused by the tragedy-of-the-commons problem that arises when the public loses confidence in certain banks or other financial institutions engaged in the maturity transformation process or the banking system as a whole. Recall that this problem arises when individuals have access to a shared resource such as fish in a shared pond. A run on a bank or other financial institution engaged in maturity transformation is similar. Even if the institution is indisputably solvent, and every depositor or similar creditor knows it, each of them has an incentive to run if others start running to protect against the risk that the others will force the institution to sell its illiquid assets at fire-sale prices, causing it to become insolvent. If that happens, individuals who did not run will suffer losses that could have been avoided had they run in the first place when everyone else did.

Recall that Professor Gorton illustrated the difference between capital and liquidity by his example about trying to sell a Van Gogh painting described above. If you are forced to sell a Van Gogh quickly, you will only receive a fraction of its value. But if you have the time to prove that it is genuine and organize a healthy auction, you should be able to obtain its fair market value. Unfortunately, it may take a year or more to do so in this manner. A Van Gogh painting is an example of an illiquid asset. In contrast, a U.S. Treasury security is an example of a highly liquid asset. You should be able to sell it very quickly almost any time and still receive full value for it.

Federal Reserve Chairman Bernanke illustrated the difference between capital and liquidity in describing what the Federal Reserve might have done for Jimmy Stewart's character in the movie, *It's a Wonderful Life*, without insulating his shareholders or creditors against losses:

"So how could the Fed have helped Jimmy Stewart? Remember that central banks act as the lender of last resort. Imagine that Jimmy Stewart is paying out the money to his depositors. He has plenty of good loans, but he cannot change those into cash, and he has people at the door demanding their money immediately. If the Federal Reserve was on the job, Jimmy Stewart could call the local Fed office and say, 'Look, I have a whole bunch of good loans that I can offer as collateral; give me a cash loan against this collateral.' Then Jimmy Stewart can take the cash from the central bank, pay off his depositors, and then, so long as he really is solvent (that is, as long as his

loans really are good), the run will be quelled and the panic will come to an end. So by providing short-term loans and taking collateral (the illiquid assets of the institution), central banks can put money into the system, pay off depositors and short-term lenders, calm the situation, and end the panic.

This was something the Bank of England figured out very early. In fact, a key person in the intellectual development of banking was a journalist named Walter Bagehot, who thought a lot about central banking policy. He had a dictum that during a panic central banks should lend freely to whoever comes to their door; as long as they have collateral, give them money. Central banks need to have collateral to make sure that they get their money back, and that collateral has to be good or it has to be discounted. Also, central banks need to charge a penalty interest rate so that people do not take advantage of the situation; they signal that they really need the money by being willing to pay a slightly higher interest rate. If a central bank follows Bagehot's rule, it can stop financial panics. As a bank or other institution finds that it is losing its funding from depositors or other short-term lenders, it borrows from the central bank. The central bank provides cash loans against collateral. The company then pays off its depositors and things calm down. Without that source of funds, without that lender of last resort activity, many institutions would have to close their doors and could go bankrupt. If they had to sell their assets at fire-sale discount prices, that would create further problems because other banks would also find the value of their assets going down. And so, panic – through fear, rumor, or declining asset values – could spread throughout the banking system. So it is very important to get in there aggressively. As a central banker, provide that short-term liquidity and avert the collapse of the system or at least serious stress on it."

The reason central banks or other public agencies typically provide lender-of-last-resort facilities during financial panics, instead of relying on private-sector resources, is that private-sector resources typically have not been able to supply enough liquidity, even on a fully secured basis, during financial panics in the past. Chairman Bernanke explains this in his George Washington lectures:

"Let's talk a little bit specifically about the United States and the Federal Reserve. The Federal Reserve was founded in 1914, and concerns about both macroeconomic stability and financial stability motivated the decision of Congress and President Woodrow Wilson to create it. After the Civil War and into the early 1900s, there was no central bank, so any kind of financial stability functions that could not be performed by the Treasury had to be done privately. There were some interesting examples of private attempts to create lender of last resort functions; for example, the New York Clearing House. The New York Clearing House was a private institution; it was basically a club of ordinary commercial banks in New York City. It was called the Clearing House because, initially, that is what it was; it served as a place where banks could come at the end of each day to clear checks against one another. But over time, clearing houses began to function a little bit like central banks. For example, if one bank came under a lot of pressure, the

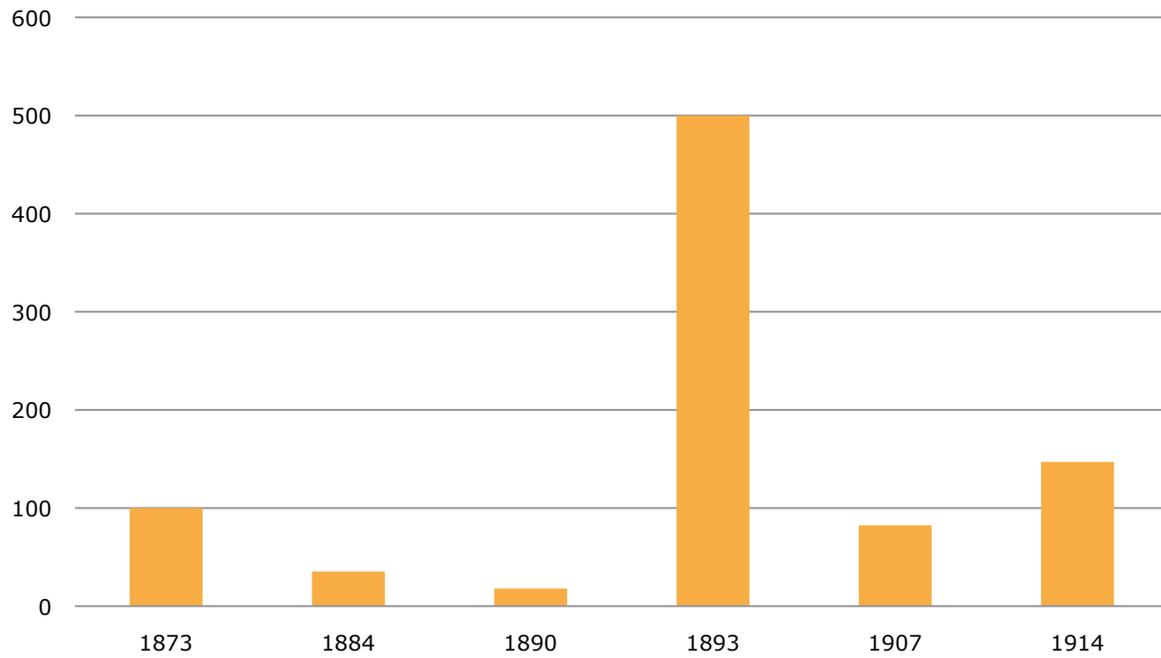
other banks might come together in the clearing house and lend money to that bank so it could pay its depositors. And so in that respect, they served as a lender of last resort. Sometimes, the clearing houses would agree that they were going to shut down the banking system for a week in order to look at the bank that was in trouble, evaluate its balance sheet, and determine whether it was in fact a sound bank. If it was, it would reopen and, normally, that would calm things down. So there was some private activity to stabilize the banking system.

In the end, though, these kinds of private arrangements were just not sufficient. They did not have the resources or credibility of an independent central bank. After all, people could always wonder whether the banks were acting in something other than the public interest since they were all private institutions. So it was necessary for the United States to get a lender of last resort that could stop runs on illiquid but still solvent commercial banks.

This was not a hypothetical issue. Financial panics in the United States were a very big problem in the period from the restoration of the gold standard after the Civil War in 1879 through the founding of the Federal Reserve. Figure [8] shows the number of banks closing during each of the six major banking panics during that period in the United States.

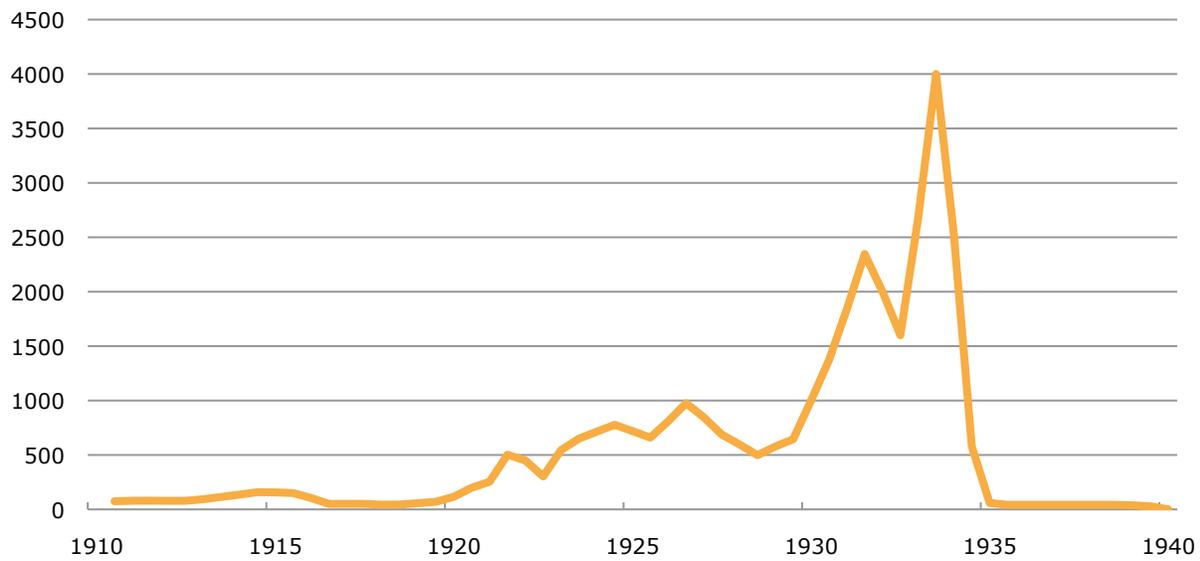
You can see that in the very severe financial panic of 1893, more than five hundred banks failed across the country, with significant consequences for the financial system and for the economy. Fewer banks failed in the panic of 1907, but the banks that did fail were larger. After the crisis of 1907, Congress began to think that maybe they needed a government agency that could address the problem of financial panics. A twenty-three-volume study was prepared for the Congress about central banking practices, and Congress moved deliberately toward creating a central bank. The new central bank was finally established in 1914, after yet another serious financial panic. So financial stability concerns were a major reason that Congress decided to create a central bank in the early twentieth century.”

Figure 8. Bank Closings During Banking Panics, 1873 – 1914



Source: Ben S. Bernanke, *The Federal Reserve and the Financial Crisis* (Princeton 2013)

Figure 9. Number of Bank Failures, 1910 – 1940

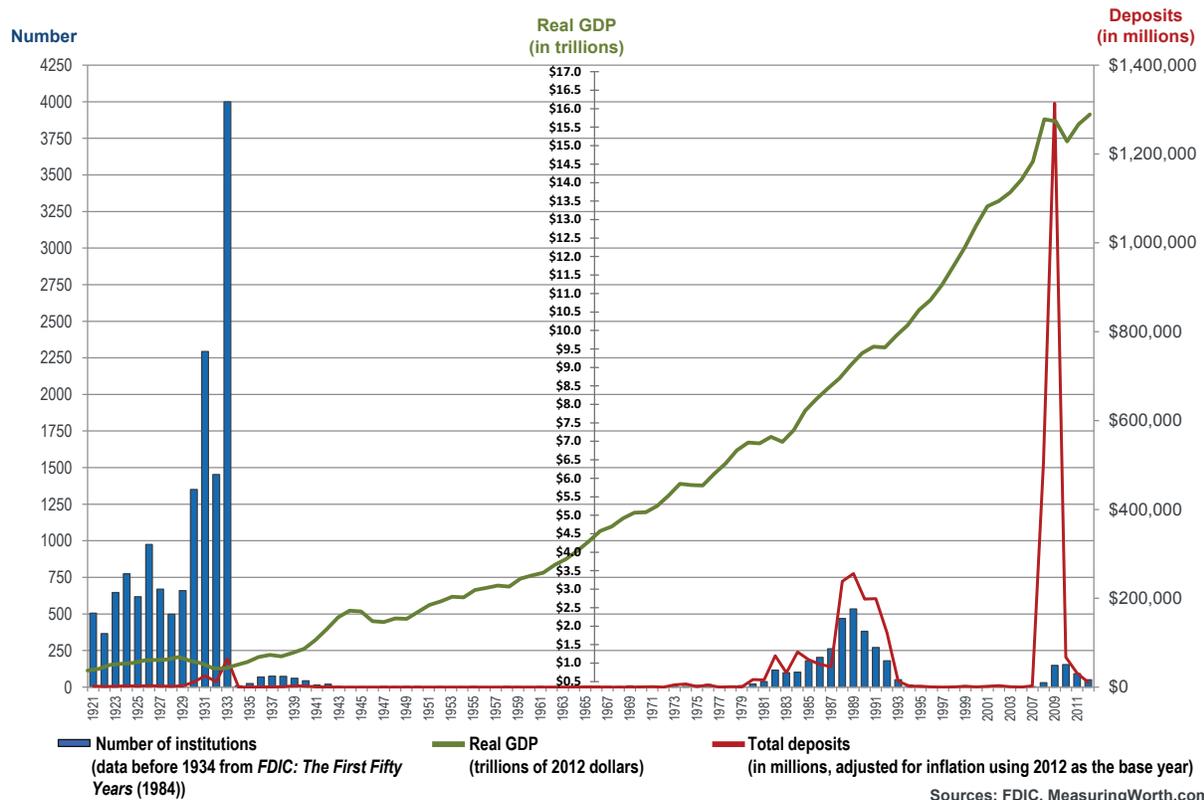


Source: Ben S. Bernanke, *The Federal Reserve and the Financial Crisis* (Princeton 2013)

Banking panics have been the norm in American history rather than the exception, at least since 1792. Regular panics continued until the financial panic of 1837, which resulted in the "Free Banking Period." This referred to the period during which the laws were modernized to allow investors to obtain banking charters under general enabling statutes rather than by a charter granted by the legislature. It was believed that this innovation would result in a stronger banking system. Instead, regular banking panics continued to be the norm. The National Bank Act of 1863 ushered in the National Bank Era, which was also expected to result in a stronger banking system. Instead, regular banking panics continued to be the norm. The banking panic of 1907 led to the creation of the Federal Reserve. As Chairman Bernanke has observed, the primary motivation for setting up the Federal Reserve was to have a central bank with lender-of-last-resort powers. Yet banking panics continued until the establishment of industry-funded deposit insurance in 1934 and the Federal Reserve's more aggressive use its lender-of-last-resort authority shortly thereafter. Figure 9 shows the number of bank failures from the creation of the Federal Reserve until 1940.

In their classic work on the monetary history of the United States from 1867-1960, Milton Friedman and Anna Schwartz showed that the Federal Reserve was largely responsible for many of the bank failures before 1935 because it failed to exercise its lender-of-last-resort authority aggressively enough. The establishment of industry-funded deposit insurance in 1934 and the Federal Reserve's more aggressive use of its lender-of-last-resort authority helped usher in what has since been called the Quiet Period – an extended period of time when bank failures became rare rather than common. The Quiet Period was interrupted by the wave of bank and savings association failures during the 1980s and early 1990s, which has come to be called the savings and loan crisis, or S&L crisis, and the financial crisis of 2008. Figure 10 shows bank failures by number and assets, and relative to GDP, from 1921 to 2012.

Figure 10. Failed Banks/Thriffs (1921-2012)



Sources: FDIC, MeasuringWorth.com

ORDERLY LIQUIDATION FUND

If used properly in a SPOE recapitalization, the OLF would not be a taxpayer-funded bailout under the FSB’s definition. Instead, the systemically important and other viable parts of a failed SIFI’s business would be recapitalized by transferring all of its parent holding company’s assets, including its shares in its operating subsidiaries, to a bridge financial company, leaving the failed parent’s long-term unsecured debt behind in a receivership or bankruptcy proceeding. The operating subsidiaries would be recapitalized by the bridge contributing enough holding company assets to the subsidiaries. The OLF would only be used to provide liquidity on a fully secured basis at an above-market interest rate, while requiring the bridge to pledge any of its own assets or repledge any of its subsidiary’s assets as collateral for any such liquidity.

Key to a Successful Resolution

The key to resolving SIFIs, including G-SIFIs, without creating contagious panic or resorting to taxpayer-funded bailouts is for there to be a pre-announced, predictable and viable strategy for the **high-speed recapitalization** of any such institutions that fail. Such a strategy would make a sharp distinction between **capital** and **liquidity**.

The recent experience in Cyprus shows how important it is to have a well thought-out plan for responding to contagion. In the absence of such a plan, insured and uninsured depositors and other short-term creditors will run and contagious panic will spread throughout the financial system. The going concern value of banks and other financial institutions throughout the financial system will be lost and the too-big-to-fail problem will not be solved because the market and foreign regulators will not have confidence that the local authorities are committed to choosing a market-stabilizing option rather than a fire-sale liquidation option.

An appropriate strategy would use all of the loss-absorbing capacity of an institution's capital structure – including a transformation of long-term unsecured debt into equity – to recapitalize the systemically important and other viable parts of its business. This would result in **all losses** being borne by shareholders, long-term, unsecured creditors and other holders of capital structure liabilities, and **not by taxpayers**. If an institution has enough loss-absorbing resources to recapitalize the continuing business, a **temporary, fully secured liquidity facility** from either the private or public sector must be available to provide enough temporary liquidity to ensure that all short-term obligations and other operating liabilities of the group, including deposit obligations, are satisfied in a timely manner, until the group's liquidity has stabilized.

For such a strategy to be successful, four essential conditions must be satisfied. First, the SIFIs must have sufficient loss-absorbing capacity in their capital structures. Second, the legal tools must exist to promptly access this loss-absorbing capacity and effect the recapitalization of their businesses. Third, it must be clear in advance that the loss-absorbing equity, long-term, unsecured debt and other capital structure liabilities are structurally or legally subordinate to the claims of depositors, other short-term creditors and other holders of operating liabilities. Fourth, the recapitalized business must have access to a temporary, fully secured liquidity facility from the private or public sector that will allow it to borrow cash secured by its temporarily illiquid but valuable assets in order to continue to serve its customers and clients and prevent the tragedy-of-the-commons problem inherent in the banking industry when panics arise from turning a liquidity problem into a system-wide solvency problem.

Orderly Liquidation Authority

OLA was enacted in the wake of the global financial crisis of 2008. OLA was designed to provide a back-up solution to what has become known as the **too-big-to-fail problem** if all of the new enhanced capital, liquidity, and other enhanced prudential regulations implemented under the Dodd-Frank Act are not successful in preventing failure in the first place, and if a reorganization or liquidation under the Bankruptcy Code would not provide an adequate solution. OLA was a reaction to what was widely described as the disorderly liquidation of Lehman Brothers, the use of TARP to inject capital into large portions of the banking system, the Federal Reserve's use of its emergency lending powers to keep AIG out of bankruptcy, and the use of the conservatorship powers granted to the Federal Housing

Finance Agency by the Housing and Economic Recovery Act of 2008 (HERA) to inject capital into Fannie Mae, Freddie Mac.

OLA was not designed to replace the Bankruptcy Code for reorganizing or liquidating SIFIs. Instead, it was designed as a supplement to the Bankruptcy Code. The Bankruptcy Code remains the preferred law to govern the insolvency or other failure of most financial institutions, other than insured depository institutions and insurance companies, unless the conditions for invoking OLA are satisfied. Bankruptcy is the preferred law for resolving these financial institutions because its rules-based system administered by bankruptcy judges is considered to be more transparent, predictable and fair than OLA, which is currently a less predictable, more discretionary and less well-understood administrative system.

The conditions for invoking OLA are commonly referred to as the “**three keys**” process. Any decision to invoke OLA requires an affirmative decision by the secretary of the Treasury (first key), in consultation with the President, as well as the consent of two-thirds of the Board of Governors of the Federal Reserve System (second key) and two-thirds of the FDIC Board of Directors (third key). If the failed company is a broker-dealer, the third key is held by two-thirds of the SEC’s commissioners instead of the FDIC’s Board of Directors. If the failed company is an insurance company, the third key is held by the Director of the Federal Insurance Office instead of the FDIC.

Among other things, all three of the relevant key holders must find that:

- the company in question is a financial company;
- it is in default or danger of default, which is defined to mean the firm is insolvent or unable to pay its debts as they come due in the ordinary course of its business or is in danger of becoming such;
- using the Bankruptcy Code to liquidate or reorganize the company under prevailing economic conditions at the time of failure “would have serious adverse effects on financial stability in the United States” and using OLA “would avoid or mitigate such adverse effects;” and
- the effect on creditors of using OLA to resolve the company is appropriate in light of the dangers to financial stability.

The decision to invoke OLA is subject to only the most limited judicial review. By contrast, the appointment of the FDIC as the receiver or conservator of an insured depository institution under Section 11 of the Federal Deposit Insurance Act (FDI Act) is subject to judicial review under Section 11(b)(7) of the FDI Act. No one, however, appears to have successfully challenged the appointment of the FDIC as receiver of a failed bank.

The standard and substance of review of the OLA invocation process is limited to whether the secretary of the Treasury abused his or her discretion in determining that the company is a financial company or is in default or danger of default. There is no judicial review of any of the other determinations required to be made by the Treasury secretary, including

whether using the Bankruptcy Code to liquidate or reorganize the company “would have serious adverse effects on financial stability in the United States” and using OLA “would avoid or mitigate such adverse effects.”

There is no judicial review of the OLA invocation process if a company’s board of directors consents to the use of OLA. Boards of SIFIs are almost certain to do so if the secretary of the Treasury, the chairman of the Federal Reserve Board and the chairman of the FDIC all request them to do so for the good of the country especially since the statute insulates the board from liability for so consenting in good faith. In any event, that was what the boards of Fannie Mae and Freddie Mac did when they received a similar request to consent to the appointment of the Federal Housing Finance Authority (FHFA), as the conservator for their institutions, and HERA insulated them from liability for doing so in good faith.

If the board does not consent, and the right to judicial review is used, the judicial review must be conducted in secret and completed within 24 hours. If not, the conditions for invoking OLA will be deemed to have been satisfied.

Upon its appointment as receiver of a covered financial company, the FDIC succeeds by operation of law to all of the rights, interests and powers of the company’s shareholders, board of directors and management. OLA generally authorizes the FDIC to pick any resolution strategy it wants to resolve a particular failed firm, provided that the FDIC complies with its statutory duties, including its duty to maximize the value of the firm for the benefit of its creditors, subject to any countervailing duty to promote financial stability.

Among other things, OLA authorizes the FDIC to establish one or more bridge financial institutions. The bridge institutions are automatically deemed to have all the licenses and registrations held by the company immediately before it was placed in receivership. The statute authorizes the FDIC to transfer all or any portion of a failed firm’s assets and liabilities to the bridge. It overrides any state or federal law requirement to obtain the consent of counterparties or any judicial consent for such a transfer. It imposes a one-business-day stay on the exercise of any early termination rights on financial contracts with the failed firm or its affiliates to give the FDIC time to decide whether to transfer the parent’s contracts and any parent guarantee of an affiliate’s contracts to a third party or the bridge. If the FDIC transfers any such contracts and guarantees, any early termination rights in financial contracts booked at the failed holding company or its operating subsidiaries based on a cross-default to the parent’s failure or receivership are permanently overridden unless another default occurs.

The FDIC also has plenary power to operate the firm in receivership until the receivership is terminated, and to operate any bridge until the bridge’s status as a bridge is terminated. This includes the authority to comply with the securities laws if the failed firm was a publicly traded company.

OLA authorizes the FDIC to use the OLF to provide liquidity to a bridge financial company. This power includes the authority to accept a pledge of collateral from the bridge or a repledge of collateral from an operating subsidiary of the bridge. The amount of liquidity

provided to a bridge is limited to 10 percent of the book value of the failed firm's consolidated assets (including the receivership's interest in any bridge) during the initial 30-day period of a receivership. After the 30-day period expires or at an earlier time at which the firm's assets are revalued, the amount of liquidity provided is limited to 90 percent of the fair value of the failed firm's consolidated assets (including the receivership's interest in any bridge). The FDIC's claim on any liquidity provided to a failed company in receivership or any bridge is senior to the claims of general creditors, although it is subject to any perfected security interest in any assets.

OLA also authorizes the FDIC to organize and conduct a claims process. This power includes the authority to distribute any shares in the bridge or other residual value in satisfaction of any claims left behind in the receivership in accordance with the priority of such claims.

In their joint paper on cross-border resolution, the FDIC and the Bank of England described the FDIC's powers and obligations under OLA as follows:

"Title II of the Dodd-Frank Act provides the FDIC with new powers to resolve SIFIs by establishing [OLA]. Under the OLA, the FDIC may be appointed receiver for any U.S. financial company that meets specified criteria, including being in default or in danger of default, and whose resolution under the U.S. Bankruptcy Code (or other relevant insolvency process) would likely create systemic instability. Title II requires that the losses of any financial company placed into receivership will not be borne by taxpayers, but by common and preferred stockholders, debt holders, and other unsecured creditors, and that management responsible for the condition of the financial company will be replaced. Once appointed as receiver for a failed financial company, the FDIC would be required to carry out a resolution of the company in a manner that mitigates risk to financial stability and minimizes moral hazard. Any costs borne by the U.S. authorities in resolving the institution not paid from proceeds of the resolution will be recovered from the industry."

Similar to the limited judicial review of the process for invoking OLA, there is very limited judicial review of the actions of the FDIC during the receivership or claims process. OLA provides claimants with *de novo* judicial review of the FDIC's failure to recognize or give effect to a valid claim, after their administrative remedies have been exhausted. But OLA does not appear to contain any judicial review of many of the FDIC's actions, including whether the FDIC satisfied its duty to maximize the value of the assets of the failed firm for the benefit of its creditors, subject to any countervailing duties to promote financial stability. Nor does it appear to provide any judicial review for a decision to treat similarly situated creditors differently, or for a determination of the pro rata hypothetical liquidation value of the company to which any disfavored creditors would be entitled.

The OLF is an unusual creation. As a result, the application of the ordinary governmental budgetary scoring has not produced logical results. For example, in implementing the government-wide sequester, the Office of Management and Budget (OMB) determined that there were \$64 million in "savings" by implementing the sequester on the OLF. This makes

no sense, given that the OLF has never been funded or used, and its use is not contemplated absent the failure and resolution of a SIFI under OLA. Another example is the Congressional Budget Office's (CBO) decision to score the repeal of OLA as providing "savings" to the government. The logic behind CBO's score has to do with the temporal sequencing of events over a ten-year time horizon. Specifically, CBO's practice is to assume a small but non-zero probability of use in each year, with repayment coming after the end of the ten-year period. Thus, if there is a failure in years nine or ten of the ten-year window, the government has to provide funding for OLF immediately but is not repaid until after year ten, beyond the budgetary window.

In reality, if the OLF is used properly to provide only temporary fully secured liquidity to recapitalized entities and not to provide capital to insolvent entities, it should not cost the taxpayers (or other financial institutions) anything. Both the Administration and some in Congress have used budgetary scoring rules in ways that are not consistent with what should occur. Both sides should debate these issues on their merits and not use artificial scoring results in ways that are not consistent with what taxpayers will actually experience.

Single-Point-of-Entry (SPOE) Recapitalization Strategy

The FDIC has the authority to develop strategies for implementing its power under OLA whenever the conditions for invoking OLA are satisfied. FDIC Chairman Martin Gruenberg recently announced that the FDIC's preferred strategy for resolving the largest and most complex financial groups under OLA is the SPOE recapitalization strategy. The key elements of the strategy can be executed over a weekend or even overnight. It imposes **all losses** on the parent company's **shareholders and long-term unsecured debt holders**, as well as any other holders of comparable capital structure liabilities of the parent, and **not on taxpayers**. If the parent has sufficient loss-absorbing resources in its capital structure and sufficient access to secured liquidity, this strategy ensures that all short-term obligations and other similar operating liabilities of the group, including deposit obligations, are satisfied in a timely manner.

PUBLIC, PRIVATE, AND INTERNATIONAL REACTIONS

The FDIC has issued a joint paper with the Bank of England advocating the SPOE recap strategy for resolving G-SIFIs. FDIC Chairman Gruenberg and Bank of England Deputy Governor for Financial Stability Paul Tucker co-authored an editorial published in the *Financial Times* lauding the SPOE recapitalization strategy for resolving G-SIFIs without a taxpayer-funded bailout.

The two agencies stated that the primary purpose of their joint paper was to provide **greater predictability** to market participants about how a SPOE recap strategy would work:

"The focus of this paper is on a single point of entry resolution approach. It is hoped that the detail it provides on the single point of entry approach, when combined with

the published FSB Guidance on Recovery and Resolution Planning, will give greater predictability for market participants about how resolution authorities may approach resolution. This predictability cannot, however, be absolute, as the resolution authorities must not be constrained in exercising discretion in pursuit of their statutory objectives in how best to resolve a firm.”

According to the FDIC and the Bank of England, the SPOE recapitalization strategies that they jointly developed were primarily designed to facilitate cross-border resolutions of G-SIFIs:

“These strategies have been designed to enable large and complex cross-border firms to be resolved without threatening financial stability and without putting public funds at risk. This work has taken place in connection with the implementation of the G20 Financial Stability Board’s *Key Attributes of Effective Resolution Regimes for Financial Institutions*.” ...

Both the U.S. and U.K. approaches ensure continuity of all critical services performed by the operating firm(s), thereby reducing the risks to financial stability. Both approaches ensure activities of the firms in foreign jurisdictions in which it operates are unaffected, thereby minimizing the risks to cross-border implementation. The unsecured debt holders can expect that their claims would be written down to reflect any losses that shareholders cannot cover, with some converted partly into equity in order to provide sufficient capital to return the sound businesses of the G-SIFI to private sector operation. Sound subsidiaries (domestic and foreign) would be kept open and operating, thereby limiting contagion effects and cross-border complications. In both countries, whether during execution of the resolution or thereafter, restructuring measures may be taken, especially in the parts of the business causing the distress, including shrinking the businesses, breaking them into smaller entities, and/or liquidating or closing certain operations. Both approaches would be accompanied by the replacement of culpable senior management.”

Other government officials, market participants and rating agencies have expressed various degrees of confidence that this strategy will end the too-big-to-fail problem and the need for government bailouts.

For example, the SPOE approach has been endorsed with varying degrees of confidence by former FDIC Chairman Sheila Bair, current Federal Reserve Chairman Ben Bernanke, Federal Reserve Governors Daniel Tarullo, Jerome Powell and Jeremy Stein, and Federal Reserve Bank of New York President William Dudley.

Senators Bob Corker, David Vitter, Susan Collins, Sherrod Brown and Elizabeth Warren all recently signed a letter to the Federal Reserve, the FDIC and the Office of the Comptroller of the Currency urging them to require SIFIs to have sufficient combined equity and long-term debt at the holding company level to ensure that a SPOE recapitalization strategy could work.

“Even with tougher capital standards, there is no guarantee that a large bank failure can be prevented in the future. As a consequence, it is imperative that you ensure that should a large institution fail, the losses associated with the failure can be absorbed by its own shareholders and creditors. These losses should not be forced on other members of the industry through special assessments, as [the Dodd-Frank Act] would require, or worse, despite the prohibition in [the Dodd-Frank Act], on taxpayers. The FDIC, working in consultation with the Federal Reserve Board and international regulators, is developing a new strategy for the orderly resolution of a large, internationally active bank which involves seizing control of its holding company. However, to be successful, it is imperative that the holding company issue enough equity and long-term unsecured debt to absorb losses. For this reason, commentators, including FDIC and Federal Reserve Board officials, have acknowledged the wisdom and need for requiring complex financial institutions to issue an appropriate amount of equity and long-term unsecured debt at the holding company level, where investors and creditors clearly understand there is a risk of loss in the event of failure. We urge you to consider the vital step of having loss absorption capacity at the holding company level, as you draft rules for the regulation of large systemically risky firms.”

The SPOE approach has also been endorsed by the Financial Stability Board, an international body established by the Group of 20 countries (including the United States) to develop and promote effective regulatory, supervisory and other financial sector policies.

Moody’s has recently issued a special report stating that it may reduce the long-term debt ratings of the largest financial holding companies, if it becomes convinced that the SPOE recap strategy will actually be used to impose a SIFI’s losses on its shareholders and long-term debt holders, instead of insulating them from losses through a government bailout. Moody’s recently stated the following about the SPOE recapitalization strategy and its potential impact on long-term debt ratings of financial holding companies:

“The Dodd-Frank Act . . . is intended to end US taxpayer-funded rescues of failing financial institutions and creates a legal structure for the [FDIC] to resolve systemically important financial institutions through its Title II Orderly Liquidation Authority

At present, however, we believe the government remains likely to provide direct financial support, by obtaining new legislative authority if necessary, in order to avoid the failure of one or more of the system’s eight systemically important banking groups.

Nonetheless, we think the FDIC has made considerable progress toward reducing the likelihood of government support in the future by identifying the hurdles to successfully implementing OLA without triggering contagion and a systemic crisis and developing plans to remove or reduce those hurdles. The FDIC’s adoption of Single Entry Receivership (SER) as its preferred approach to implementing OLA is a key

development in this regard. We expect the FDIC will make further progress this year in resolving OLA hurdles.

In June 2012, we placed negative outlooks on the bank holding company ratings of the eight systemically important US banking groups whose ratings benefit from 'uplift,' reflecting the potential that we might lower our assumptions on the likelihood of government support for those firms. However, operating company ratings have a stable outlook because even if the FDIC were to implement a SER, support for operating entities of systemically important firms would continue, with the source of support shifting from the taxpayer to bank holding company creditors. By year-end 2013 we expect to update our bank holding company support assumptions – either maintaining or lowering them – for those eight banking groups.”

The Securities Industry and Financial Markets Association (SIFMA), the members of which include both large and small financial institutions on both the buy and sell sides, has submitted a number of comment letters, submitted jointly with The Clearing House (TCH), on the FDIC's proposed regulations implementing OLA. One of its comment letters urged the FDIC to develop a recapitalization-within-resolution strategy.

The TCH, the 18 members of which include most of the nation's G-SIFIs and many of its D-SIBs, recently issued a white paper on the FDIC's SPOE recap strategy. The paper concluded that a large, complex financial institution could be successfully resolved using the SPOE recap strategy under OLA, if resolution under the Bankruptcy Code and the existing bank resolution regimes would not prevent serious adverse systemic consequences. The report noted, however, that OLA is a "safety valve" for use in extraordinary circumstances where failure poses significant adverse systemic risks and the SPOE recap strategy is only one possible model for resolving the nation's largest, complex financial institutions. Instead, the non-bank affiliates of banking institutions, including their parent holding companies, may be liquidated or reorganized under the Bankruptcy Code or other applicable insolvency laws and their bank subsidiaries could be resolved using the FDIC's pre-existing purchase-and-assumption techniques under the Federal Deposit Insurance Act.

On November 2012, TCH organized and carried out a simulation of systemic and bank-specific stresses leading to the failure and subsequent resolution of a hypothetical G-SIFI using the FDIC's SPOE recap strategy under OLA. The simulation assumed stressful economic, financial and market conditions similar to those that existed in the fall of 2008 and was designed to simulate the time, political and market pressures felt by a decision-maker under those conditions. Over 160 individuals participated in the simulation. In addition to TCH's 18 member banks, the simulation also included representatives from:

- five other systemically important financial institutions that are not members of TCH;
- systemically important financial market utilities;

- former U.S. and U.K. regulators, some of whom played the role of foreign regulators in the simulation trying to decide whether or not to cooperate with the FDIC or ring-fence local assets and liabilities;
- think tanks and academic institutions; and
- law firms and consultants that are active in the bankruptcy, restructuring, resolution and resolution planning areas.

The simulation resulted in the successful resolution of a G-SIFI, without spreading contagion throughout the financial system, and a number of lessons were drawn from it. These lessons are described in TCH's January 2013 report about the simulation titled *Report on the Orderly Liquidation Authority Resolution Symposium and Simulation*. One of the most important lessons learned was how important it is for financial institutions that are not failing, buy-side investors and foreign regulators to be able to predict with as much certainty as possible that the FDIC really would use its SPOE recap strategy and understand how it would carry out that strategy. In the absence of confidence about how the FDIC would act, buy-side investors tended to run and the foreign regulators tended to ring-fence local assets.

The overwhelming majority of the government officials, private-sector institutions and other persons interviewed in the course of writing this report were strongly optimistic and supportive of the SPOE recap strategy as a viable solution to the too-big-to-fail problem. Most believed it would be a viable alternative to the unpalatable choice between fire-sale liquidations that could destabilize the financial system and government bailouts to avoid such destabilization.

A handful of people interviewed for this report expressed skepticism that the SPOE recap strategy could be carried out in a manner that eliminated contagious panic, even if the failed SIFI could be strongly recapitalized and provided with as much liquidity as their available assets would support. These people believed that government bailouts would continue to be inevitable under severely adverse economic conditions because otherwise contagion would result. At least one of them believed that the only viable alternative to contagious panics or government bailouts would be a requirement for massive amounts of high-trigger contingent capital debt securities, which would convert to equity long before a financial institution failed.

The FDIC has indicated that it intends to propose a policy statement or regulation describing how it would use its authority under OLA to resolve a covered financial company using the SPOE recapitalization strategy.

This report concludes that the FDIC's SPOE recapitalization strategy, whether carried out under OLA or the Bankruptcy Code, should succeed in solving a critical part of the too-big-to-fail problem, by allowing any SIFI to fail without resorting to taxpayer-funded bailouts or a collapse of the financial system, if the recommendations contained in this report are implemented. With SPOE recap as an option, we do not believe that government officials

would have the temerity to select bailout, especially since the statute expressly prohibits that choice. Among other things, the SPOE recapitalization strategy eliminates virtually all of the material impediments to a cross-border resolution of a G-SIFI by keeping the group's domestic and foreign operating subsidiaries, including their foreign branches, out of resolution or other insolvency proceedings. The remaining impediments appear relatively minor and reasonably manageable with advance planning by the FDIC or SIFIs themselves. Thus, we can solve the 'to fail' portion of too-big-to-fail, which in our opinion, solves the entire problem.

ALTERNATIVE STRATEGIES FOR D-SIFIS AND D-SIBS

As suggested by the TCH white paper on ending too-big-to-fail, the FDIC will probably continue to use its pre-existing tools for resolving D-SIBs and D-SIFIs. This means that it would probably continue to use its tool of choice under the FDI Act – ***purchase-and-assumption (P&A) transactions*** – to resolve D-SIBs. This P&A tool involves the sale of a failed bank to one or more healthy third-party banks through an auction process, with or without loss-sharing supported by the Deposit Insurance Fund. Moreover, as long as the consolidated operations of the parent holding companies of D-SIBs are essentially domestic in nature, the FDIC will probably also allow their parents to be reorganized or liquidated under the Bankruptcy Code rather than invoking OLA to resolve them.

DESCRIPTION OF SPOE RECAPITALIZATION STRATEGY

Under the heading "U.S. approach to single point of entry resolution strategy" in their joint paper, the FDIC and the Bank of England describe the first step in a SPOE recapitalization strategy as follows:

"Under the U.S. approach, the FDIC will be appointed receiver of the top-tier parent holding company of the financial group following the company's failure and the completion of the appointment process set forth under the Dodd-Frank Act. Immediately after the parent holding company is placed into receivership, the FDIC will transfer assets (primarily the equity and investments in subsidiaries) from the receivership estate to a bridge financial holding company. By taking control of the SIFI at the top of the group, subsidiaries (domestic and foreign) carrying out critical services can remain open and operating, limiting the need for destabilizing insolvency proceedings at the subsidiary level. Equity claims of the shareholders and the claims of the subordinated and unsecured debt holders will likely remain in the receivership.

Initially, the bridge holding company will be controlled by the FDIC as receiver. The [final] stage in the resolution is to transfer ownership and control of the surviving operations to private hands. Before this happens, the FDIC must ensure that the bridge has a strong capital base and must address whatever liquidity concerns remain. The FDIC would also likely require the restructuring of the firm – potentially into one or more smaller, non-systemic firms that could be resolved under bankruptcy."

Figures 1, 2 and 3 (pp. 24-25) illustrate the before and after scenarios of the first step in a SPOE recapitalization of a stylized U.S. G-SIFI.

An FDIC receivership under OLA is similar to a liquidation or other proceeding under the Bankruptcy Code. Under a SPOE recap strategy, however, rather than immediately selling the firm or its assets to a third party, all of the firm's assets, including its ownership interests in and intercompany loans to its bank, broker-dealer and other operating subsidiaries, would be transferred to a newly established holding company called a **bridge holding company** (or bridge) over a weekend or even overnight.

The equity, long-term unsecured debt and other similar capital structure liabilities of the failed holding company would be left behind in the receivership. Any short-term unsecured debt, secured liabilities, financial contracts, guarantees of a subsidiary's financial contracts or other operating liabilities at the parent company level would be transferred to the bridge, if necessary to prevent contagious panic. It is rare, however, for secured liabilities or financial contracts to be booked at holding companies. Moreover, the holding company parents of G-SIFIs increasingly have very little, if any, commercial paper or other short-term debt at the holding company level, and the FDIC has the discretionary authority to make long-term debt legally subordinate to short-term debt. Finally, OLA contains a provision that overrides the early termination rights of counterparties on financial contracts booked at operating subsidiaries if those rights arise solely because of a failure of a parent holding company or an affiliate, as long as a creditworthy bridge financial company or third party assumes any parent guarantees of those contracts within one business day after the parent's failure.

The FDIC is required to remove any directors and senior management responsible for the firm's failure, but it is free to include any other directors and senior management on the new bridge company's board of directors and senior management team.

The FDIC and the Bank of England continue in their joint paper:

"By leaving behind substantial unsecured liabilities and stockholder equity in the receivership, assets transferred to the bridge holding company will significantly exceed its liabilities, resulting in a well-capitalized holding company. After the creation of the bridge financial company, but before any transition to the private sector, a valuation process would be undertaken to estimate the extent of losses in the receivership and apportion these losses to the equity holders and subordinated and [other] unsecured creditors according to their order of priority. In all likelihood, the equity holders would be wiped out and their claims would have little or no value.

To capitalize the new operations – one or more new private entities – the FDIC expects that it will have to look to subordinated debt or even senior unsecured debt claims as the immediate source of capital. The original debt holders can thus expect that their claims will be written down to reflect any losses in the receivership of the parent that the shareholders cannot cover and that, like those of the shareholders, these claims will be left in the receivership."

As the FDIC and the Bank of England note, the parent company's business transferred to the bridge would be recapitalized as a result of leaving behind the long-term unsecured debt in the receivership. The FDIC would cause the bridge to recapitalize the operating subsidiaries by contributing its unconsolidated assets to any operating subsidiaries that need to be recapitalized. See Figure 4. One of the most common holding company assets is intercompany loans from the holding company to its operating subsidiaries. If there are enough such assets, the FDIC could cause the bridge to recapitalize the operating subsidiaries by forgiving such intercompany loans. For example, Figure 4 (p.27) shows the bridge holding company forgiving \$20 of the U.S. bank subsidiary's obligations on intercompany advances and deposits, resulting in an increase in the bank's capital of \$20. If a subsidiary did not have enough intercompany debt for the bridge to forgive, the bridge could, subject to any applicable regulatory requirements and limitations, contribute receivables from other subsidiaries to the troubled subsidiary since receivables would be assets on the bridge company's unconsolidated balance sheet. For example, if the U.S. bank subsidiary in Figure 4 did not have enough intercompany debt for the bridge to forgive, and the U.S. broker-dealer did not need additional capital, the bridge could contribute any receivables from the U.S. broker-dealer to the U.S. bank because the receivable is an asset on the bridge's balance sheet and the bank would not be paying any purchase price for the contribution or assuming any liabilities.

In this manner, the FDIC could effectively cause any losses incurred at the operating subsidiary level to be pushed up to the failed holding company's receivership. The operating companies would therefore be recapitalized and kept out of insolvency proceedings without the use of any taxpayer money. The FDIC also might choose to cause the failed holding company to recapitalize the operating subsidiaries after the FDIC has been appointed receiver but before any assets are transferred to the bridge.

The bridge holding company with its recapitalized business and its recapitalized operating subsidiaries would open for business at the normal opening time on the day after resolution weekend or resolution night.

If the bridge holding company or any of its operating subsidiaries were unable to obtain enough liquidity from the market to fund their operations despite being recapitalized, the FDIC would use the OLF to provide them with temporary fully secured liquidity until the market stabilized. Once the market stabilized, the bridge and its operating subsidiaries should be able to obtain liquidity from the private sector and pay back the FDIC. Without such a temporary fully secured liquidity facility, the bank and other operating subsidiaries of the holding company would not be able to continue to serve customers and clients, and the going concern value of the recapitalized group could be destroyed. If the group were forced to sell its otherwise valuable but illiquid assets for cash at fire-sale prices, it could destroy the franchise value of the otherwise well-capitalized bridge and foster the very sort of contagious panic that needs to be avoided to solve the too-big-to-fail problem.

As the FDIC and the Bank of England put it:

“The transfer of equity and investments in operating subsidiaries to the bridge holding company should do much to alleviate liquidity pressures. Ongoing operations and their attendant liabilities also will be supported by assurances from the FDIC, as receiver. As demonstrated by past bridge-bank operations, the assurance of performance should encourage market funding and stabilize the bridge financial company. However, in the case where credit markets are impaired and market funding is not available in the short term, the Dodd-Frank Act provides for FDIC access to the Orderly Liquidation Fund (OLF), a fund within the U.S. Treasury. In addition to providing a back-up source of funding, the OLF may also be used to provide guarantees, within limits, on the debt of the new operations. An expected goal of the strategy is to minimize or avoid use of the OLF. To the extent the OLF is used, it must either be repaid from recoveries on the assets of the failed company or from assessments against the largest, most complex financial companies. The Dodd-Frank Act prohibits the loss of any taxpayer money in the orderly liquidation process.”

From the point of view of averting contagious panic, certain features of a SPOE recap are critical. Specifically, the operating subsidiaries of the bridge holding company would be kept out of receivership or insolvency proceedings and would open for business at the normal opening time on the day after resolution weekend or resolution night. All holders of any operating liabilities of the failed SIFI parent and its operating subsidiaries, including any depositors, would be paid in full in the ordinary course of business. The holding company’s long-term, unsecured debt and other capital structure liabilities would be structurally subordinated to any debt at the operating subsidiary level, including any short-term unsecured debt and comparable operating liabilities. In addition, to calm depositors and other short-term creditors and provide the markets with comfort regarding the safety and soundness of the recapitalized group, the OLF would be available to provide temporary liquidity to the bridge holding company and, indirectly, its operating subsidiaries until the group’s liquidity stabilized. The going concern value of the recapitalized group would thus be preserved, and valuable but illiquid assets would not have to be sold for cash at fire-sale prices.

The distinction between **capital** and **liquidity** is critical. Under the law, the FDIC is only permitted to use the OLF to provide temporary fully secured liquidity to the bridge and its newly acquired operating subsidiaries, and not to provide capital to the failed parent, bridge or operating subsidiaries. New capital would be created solely by imposing losses on the holding company’s shareholders and creditors left behind in the receivership, and not by capital injections from the OLF. This distinction between prohibiting the OLF from being used to provide **capital to absorb losses** on the one hand, and allowing the OLF to be used to provide temporary, **secured liquidity** to recapitalized bridge companies to stabilize these companies on the other, is what distinguishes a bailout from traditional lender-of-last-resort facilities. The action of the government as lender-of-last-resort, including the Federal Reserve’s discount window, has never been considered to be a taxpayer-funded bailout by the vast majority of observers, including such free market advocates as Milton Friedman, if

the lender-of-last-resort facilities satisfy the conditions of Bagehot's dictum, which is discussed below.

If the statute allowed the OLF to be used to provide capital to absorb losses, it might be rightly characterized as a form of government bailout. But since the OLF is only permitted to be used as a temporary fully secured **liquidity facility** and if it is structured to comply with the traditional safeguards for lender-of-last-resort facilities announced by Walter Bagehot in his classic 1873 book on central banking, the risk of taxpayer losses should be zero and it would **not be a bailout**. Under Bagehot's rules, extensions of credit under lender-of-last-resort-facilities must only be made to solvent entities on a fully secured basis at above-market cost.

Bagehot's solvency condition clearly would be satisfied in a SPOE recapitalization because the borrowers – the bridge and indirectly its new operating subsidiaries – would be more than solvent, having been recapitalized at generally applicable capital requirements, such as at fully phased in Basel III levels. When fully phased in, the U.S. version of Basel III will require banks and bank holding companies to have tangible common equity to risk-weighted assets of between 7 percent and 9.5 percent, depending on whether they are G-SIBs or G-SIFIs or not. (See "Basel III" in the glossary contained in Annex 2 and a graphical illustration in Figure 5.) Taxpayers would be further insulated against any risk of loss by the fact that the statute requires the FDIC to spread any losses that might nevertheless be sustained by the OLF – for example by mistakes in valuing collateral – by imposing assessments on large, private-sector financial institutions

After a normal claims process, the holders of the failed holding company's equity, long-term unsecured debt and other similar capital structure liabilities left behind in the receivership would receive all of the residual value of the recapitalized bridge holding company – that is, its equity – in satisfaction of their claims against the failed company in accordance with the predetermined priority of claims rules. At the same time, the bridge holding company would be converted into a normal state-chartered corporation. See Figures 6 and 7 (pp.30-31). As a result, all of the group's losses would be borne by the failed parent holding company's equity, long-term unsecured debt holders and any other claimants left behind in the receivership, and not by taxpayers.

The FDIC and the Bank of England described this final step as follows:

"At this point, the remaining claims of the debt holders will be converted, in part, into equity claims that will serve to capitalize the new operations. The debt holders may also receive convertible subordinated debt in the new operations. This debt would provide a cushion against further losses in the firm, as it can be converted into equity if needed. Any remaining claims of the debt holders could be transferred to the new operations in the form of new unsecured debt."

During the period when the FDIC controls the bridge, or as a supervisory condition when the bridge is fully transferred back to the private sector, the FDIC might decide to restructure the firm in order to make it less systemic in light of the firm's Title I resolution plan:

“During the period in which the FDIC controls the bridge financial company, decisions will be made on how to simplify and shrink the institution. It also would likely require restructuring of the firm – perhaps into one or more smaller, non-systemic firms. Consideration will also be given to how to create a more stable, less systemically important institution. Required changes, including divestiture, may be influenced by the failed firm’s Title I resolution plan. Once determined, the required actions and relevant time frames for their execution will be specified in formal supervisory agreements with the new owners of the private sector operations.

The required actions would be executed in private markets by the new owners. For example, the new owners might be required to sell a portion of their branch structure to reduce their footprint, divest their foreign operations, or separate their commercial and investment banking operations. The resulting new private-sector operations would be smaller, more manageable – and perhaps more profitable. They would also be easier to examine and supervise. Importantly, all new operations must be resolvable under bankruptcy without public support.”

The failed holding company’s combined equity, long-term unsecured debt and other similar capital structure liabilities would act as a shield against any losses by short-term creditors and the holders of other operating liabilities at the operating company level. As a result, using the SPOE strategy to recapitalize the group should, like deposit insurance, greatly reduce or even eliminate the incentive of the group’s demand depositors and the holders of similar operating liabilities to run or for contagious runs to spread throughout the system. Using the OLF to provide interim liquidity to the bridge and its subsidiaries until confidence in the recapitalized group could be restored would further reduce the incentive to run.

A key to making this work is the distinction between capital structure liabilities, including long-term unsecured debt, and operating liabilities, including short-term debt. The reason for preferring short-term creditors and other holders of operating liabilities over long-term, unsecured creditors and other holders of capital structure liabilities is that they are not really similarly situated during a financial crisis. Short-term creditors and the holders of other operating liabilities have effectively bargained for the right to “run” during a financial crisis because they have the right to demand the return of their money or demand additional cash or liquid collateral immediately or within a very short period of time. They have also effectively paid for such rights, since the return on short-term debt and other operating liabilities is generally lower than the return on long-term debt and other capital structure liabilities of the same debtor.

By clearly making long-term unsecured debt and other capital structure liabilities structurally or legally subordinate to the group’s short-term debt and other operating liabilities in advance, the SPOE recap strategy signals to the market that these two types of liabilities will not be similarly situated during a financial crisis and therefore will not be treated as if they were a single class. This signaling will result in efficient market pricing of long-term unsecured debt and other capital structure liabilities, on the one hand, and short-term debt and other operating liabilities, on the other, thus eliminating any unfairness that

might arise from a last-minute, unexpected discretionary decision to treat long-term unsecured debt or other capital structure liabilities as subordinate to short-term unsecured debt and other operating liabilities.

The SPOE recap strategy is functionally equivalent to a high-speed reorganization of the failed parent holding company under Chapter 11 of the Bankruptcy Code, where the essential features of the reorganization are completed over resolution weekend or even overnight. The going concern value of the systemically important and other viable part of the business is preserved, with the final distribution of value taking place at the end of the claims process, and most importantly the clients and customers of the operating subsidiaries will continue to be served without interruption.

The SPOE recap strategy should also **avoid or mitigate** the most serious **impediments to a cross-border resolution** of a G-SIFI. As the FDIC and the Bank of England concluded:

“It should be stressed that a key advantage of a whole group, single point of entry approach is that it avoids the need to commence separate territorial and entity-focused insolvency proceedings, which could be disruptive, difficult to coordinate, and would depend on the satisfaction of a large number of pre-conditions in terms of structure and operations of the group for successful execution. Because the whole group resolution strategies maintain continuity of business at the subsidiary level, foreign subsidiaries and branches should be broadly unaffected by the resolution action taken at the home holding company level. The strategies remove the need to commence foreign insolvency proceedings or enforce legal powers over foreign assets (although, as discussed later, it may be necessary to write down or convert debt at the top of the group that are subject to foreign law). Liquidity should continue to be downstreamed from the holding company to foreign subsidiaries and branches. Given minimal disruption to operating entities, resolution authorities, directors, and creditors of foreign subsidiaries and branches should have little incentive to take action other than to cooperate with the implementation of the group resolution. In particular, host stakeholders should not have an incentive to ring-fence assets or petition for preemptive insolvency – preemptive actions that would otherwise destroy value and may disrupt markets at home and abroad.”

Of course, even under a SPOE recap strategy, it may be necessary to obtain change-in-control approvals from regulatory authorities around the globe for the transfer of operating subsidiaries of the parent company of a G-SIFI to a bridge holding company. But experience has shown that such change-in-control approvals are not difficult to obtain when necessary to facilitate the resolution of a G-SIFI during a financial crisis.

While the FDIC is still working out the final details of this strategy, the FDIC’s SPOE recap approach should solve the too-big-to-fail problem for SIFIs, including G-SIFIs, by providing a viable alternative to the unpalatable choice between bailout and the sort of contagious panic that can bring down the financial system if properly implemented. The essential conditions of success are the following:

- **Pre-Announced, Predictable and Viable Strategy.** The FDIC must publicly announce in a policy statement in advance of any particular SIFI's or G-SIFI's failure that it will use the SPOE recapitalization strategy to resolve G-SIFIs and certain other SIFIs under OLA if invoked, so that the market and foreign regulators can rely on its commitment to do so.
- **Sufficient Loss-Absorbing Capacity.** The parent holding company of the SIFI has enough loss-absorbing capacity in its capital structure to immediately recapitalize its business if transferred to a bridge and all of its operating subsidiaries at whatever levels are generally required (e.g., fully phased-in Basel III levels), assuming the group suffers losses of some specified amount greater than those projected under the most severely adverse scenario used by the Federal Reserve in its most recent CCAR process.
- **Structural or Legal Subordination.** The parent's equity, long-term, unsecured debt and other similar capital structure liabilities counted in its loss-absorbing capacity are either structurally subordinate to all material claims by the group's depositors, short-term creditors and other holders of operating liabilities, or else the FDIC has publicly committed to exercise its discretionary authority to treat operating liabilities as if they were senior to capital structure liabilities.
- **Secured Liquidity Facility.** The OLF provides the bridge holding company with access to temporary fully secured liquidity that is secured by any of its assets, or those of its subsidiaries, that are pledged or repledged to the OLF in an amount equal to the fair market value of such assets less reasonable haircuts.

Bankruptcy Code

OLA is a statutory back-up to be invoked only when the government has determined through appropriate procedures that using the Bankruptcy Code to reorganize or liquidate a particular financial company under prevailing economic conditions at the time of failure "would have serious adverse effects on financial stability in the United States" and that using OLA "would avoid or mitigate such adverse effects." Given that the effectiveness of the Bankruptcy Code is an important ingredient in this formula, if a SPOE recapitalization strategy can be successfully implemented under the Bankruptcy Code or if the Bankruptcy Code can be amended to improve its effectiveness, the need for OLA could be drastically reduced.

If the Recommendations made by this report are implemented, it should be possible to implement a SPOE recapitalization strategy under the Bankruptcy Code under most if not all economic scenarios.

Similar to a SPOE recap under OLA, voluntary Chapter 11 proceedings would be commenced solely with respect to a SIFI's parent holding company. The SIFI would then be recapitalized through the immediate transfer of the holding company's assets, including the stock of its

solvent operating subsidiaries, and any parent company short-term debt, guarantees of subsidiary financial contracts, and other operating liabilities to a new holding company comparable to a bridge financial company under OLA. The judge presiding over the failed holding company's bankruptcy proceedings would have to approve this transfer, despite its unprecedented speed, but should do so because it would not prejudice, and in fact will preserve value for, the holders of the failed parent holding company's equity, long-term, unsecured debt, and other similar capital structure liabilities left behind in the bankruptcy proceedings, with the ultimate goal of distributing the stock of the new holding company or its value to such stakeholders. It is at this point that there is an important congruence with effective resolution plans prepared under Title I of the Dodd-Frank Act. Pending such distribution, the stock of the new holding company could be maintained in trust for the benefit of the stakeholders and subject to distribution under the ultimate plan of reorganization for the old holding company in its Chapter 11 proceedings.

Such a speedy transfer of assets to a new holding company controlled by a trust for the benefit of the stakeholders left behind in the bankruptcy proceedings can be accomplished under Section 363 of the current Bankruptcy Code. Section 363 provides for the use, sale or lease of the bankruptcy estate, including a transfer of assets or liabilities to a newly formed company. But, as in a SPOE recap under OLA, the transfer would need to occur without material delay and with little to no advance notice to the failed company's creditors. It would occur pursuant to mechanisms designed to protect and preserve value for the failed company's bankrupt estate and its stakeholders that would need to be worked out and thoroughly vetted in advance of any particular SIFI's failure – such as in a well-thought-out resolution plan submitted to the Federal Reserve and the FDIC under Section 165(d) of the Dodd-Frank Act. Moreover, while there are bankruptcy doctrines that may permit the effective subordination of long-term unsecured debt and other capital structure liabilities (left behind) to short-term liabilities and other operating liabilities (transferred in the Section 363 sale), this contemplated use of a speedy sale under Section 363 would be significantly aided by a structural or legal subordination of the long-term unsecured debt and other capital structure liabilities of the SIFI's parent holding company to short-term debt, and other operating liabilities of the parent and its operating subsidiaries.

Just as under OLA, for a SPOE recap strategy to work under the Bankruptcy Code under the most extreme economic conditions, a source of temporary fully secured liquidity would need to be available from the public or private sector until market confidence in the recapitalized SIFI were restored. The new holding company will be strongly capitalized, but it still may not be able to access the private-sector credit markets right away. That is why OLA includes the OLF, a government lender-of-last-resort facility in case an adequate private-sector source of liquidity is not available. Since the holding company left behind in bankruptcy will be without material assets other than its beneficial ownership in the residual value of the new holding company after the Section 363 transfer is made to the new holding company, conventional debtor-in-possession financing will not be a potential liquidity source. Access to the OLF, available to a bridge holding company under OLA, also will not be available to the new holding company because the OLF is available only when the OLA conditions are met

and OLA is invoked. As a result, liquidity from some other source will need to be found, presumably by the individual operating companies on a secured basis. Among the recommendations contained in this report is that the Federal Reserve's discount window authority should be expanded to permit the Federal Reserve to provide fully secured liquidity at above-market rates to a recapitalized bank holding company and its operating subsidiaries that are executing a SPOE recapitalization strategy under the Bankruptcy Code. This is consistent with the historical role of the central bank as the "lender of last resort" on a fully secured basis for solvent banks in generally sound condition.

In order to make it more feasible to carry out a SPOE recapitalization strategy under the Bankruptcy Code, the Bankruptcy Code should also be amended as recommended in this paper. Among other amendments, the Bankruptcy Code should be amended to impose a temporary stay of one business day on the termination of any financial contracts with the bankrupt holding company or any of its operating subsidiaries based on the parent's bankruptcy, comparable to the stay in OLA. The second amendment would add a provision like Section 210(c)(16) of the Dodd-Frank Act. That provision overrides cross-default provisions in financial contracts entered into by a group's operating subsidiaries that would permit counterparties to terminate such contracts upon the failure of the parent holding company, provided that any parent guarantees of those contracts are assumed within one business day by a bridge financial company. A similar provision should be included in the Bankruptcy Code to override cross-defaults that would be triggered by the commencement of bankruptcy proceedings with respect to the parent if any such guarantees are promptly assumed by a new, otherwise sufficiently capitalized and creditworthy holding company, under Section 363 of the Bankruptcy Code. This report also recommends, in parallel to this report's OLA recommendation, that an amendment to the Bankruptcy Code be considered that would contemplate a distribution according to relative priority among the claimants left behind in the bankruptcy proceeding and not transferred to the new holding company in the Section 363 transfer.

If the recommendations contained in this report are carried out, a SPOE recapitalization strategy would be feasible under the Bankruptcy Code. This would make it easy for a SPOE recapitalization strategy to be included in resolution plans or living wills and the conditions for invoking OLA will rarely, if ever, be satisfied. But Title II OLA should be retained as a fallback authority because the circumstances that warrant its invocation might arise.

Ex-Ante Proposals

This report focuses on *ex-post* solutions to the too-big-to-fail problem, sometimes called the **to fail** side of the problem. In other words, it focuses on whether all financial institutions, including SIFIs and G-SIFIs, can be allowed "to fail" without a taxpayer-funded bailout and without fostering the sort of contagious panic, runs and fire sales that can destabilize or cause a collapse of the financial system.

This report does not attempt to provide a detailed analysis designed to resolve the debates about the *ex-ante* proposals for solving the too-big-to-fail problem, sometimes called the **too big** side of the problem. *Ex-ante* solutions are designed to reduce the risk that financial institutions fail or the potential consequences to the system if they do. *Ex-ante* solutions include enhanced capital, liquidity and prudential regulations, including better risk management, recovery plans, early remediation, counterparty exposure limits, swaps clearing requirements, mandatory issuances of contingent capital debt securities (Co-Cos) and structural simplification. They also include more controversial proposals, such as breaking up and capping the largest institutions, imposing super equity capital surcharges on SIFIs and imposing activities restrictions on them. All of these *ex-ante* proposals and solutions involve tradeoffs between the benefits and costs of such measures, including in terms of the supply and price of credit and money market instruments.

This section summarizes the current debate about the most controversial *ex-ante* proposals.

BREAK-UP AND CAPS

One of the most controversial *ex-ante* proposals is to break up the largest banks and other financial institutions, coupled with caps on the maximum size of these institutions. Some of the most vocal advocates of this “break-up-and-cap” proposal are FDIC Vice Chairman Thomas Hoenig, Federal Reserve Bank of Dallas President Richard Fisher and MIT Professor Simon Johnson. Section 165(d) of the Dodd-Frank Act authorizes the FDIC and the Federal Reserve to break-up a SIFI that fails to cure a deficient resolution plan within two years after the plan was jointly found to be “not credible” by the FDIC and the Federal Reserve. Finally, Section 121 of the Dodd-Frank Act permits the Financial Stability Oversight Council, after a two-thirds vote, to impose limits on the activities of or to break up any financial institution that poses a “grave threat” to the financial stability of the U.S.

The main justification for the break-up-and-cap proposals is that the too-big-to-fail problem cannot be solved unless banks and other institutions are no longer “too big.” Simon Johnson has expressed skepticism that the FDIC’s SPOE recapitalization proposal will work in practice. He has expressed particular skepticism that it could successfully resolve a G-SIFI with significant cross-border operations. A related justification is that, unless SIFIs are broken-up and capped, they will continue to enjoy an **implicit government subsidy** of funding costs. As noted above in the section “Too-Big-to-Fail Problem – The Trouble with Bailouts,” there is an unresolved debate among economists about whether SIFIs enjoy a funding advantage, how much that funding advantage is and, most importantly, whether a cause-and-effect connection exists between such an alleged funding advantage and a reasonable expectation of taxpayer-funded bailouts.

Some economists have tried to estimate the amount of the purported subsidy and show a cause-and-effect relationship with a public expectation of government bailouts. The editors of Bloomberg, for example, have used one study to estimate that the 10 largest U.S. bank holding companies enjoy an implicit annual subsidy of \$83 billion. Several government officials, including Senators Brown and Vitter, have made the same assertion.

Other economists dispute the methodology and validity of these studies, the size of any funding advantage and whether there is a cause-and-effect relationship between any such funding advantage and a reasonable expectation of taxpayer-funded bailouts. Under Secretary of the Treasury for Domestic Finance Mary Miller, for example, recently argued that no such connection has been proven. Under Secretary Miller further argued that because of new legal tools, statutory requirements and public commitments, it would be unreasonable for the market to assume that large U.S. banking groups will be bailed out by the government if they fail. She also pointed out that since the financial crisis, the borrowing costs of the largest banking groups have not only increased at a rate greater than those of certain regional bank competitors, but have also increased to higher absolute levels.

The most vocal opponents of the break-up-and-cap view include Peter Wallison of the American Enterprise Institute and the late Andrew Crockett, former General Manager to the Bank for International Settlements. Mr. Wallison has argued that the proponents of break-up-and-cap strategies have not provided any serious logical or empirical evidence to support the view that the benefits of such a strategy would outweigh its costs in terms of harm to the efficiency and competitiveness of the U.S. financial system in today's global market environment. Mr. Crockett has argued that break-up-and-cap strategies risk their "own resource misallocations by (1) diverting possibly excessive levels of capital into financial intermediation; (2) distorting competition between regulated and unregulated institutions; and (3) substituting administrative judgment for market processes in determining the most efficient structure of the financial industry." In Crockett's view, "[d]eveloping techniques to make failure a tolerable option . . . would not only restore market discipline and protect taxpayers but also avoid potentially costly measures that seek to eliminate the possibility of failure."

Still others have argued that the proponents of break-up-and-cap strategies have, so far, failed to offer enough empirical evidence that the resulting smaller banks or other financial institutions would actually be less likely to fail or easier to resolve as a group than their constituent SIFIs or G-SIFIs, or otherwise reduce the risk of a taxpayer-funded bailout of the entire banking system. The proponents of break-up-and-cap strategies have assumed that their preferred approach would make the resulting institutions less likely to fail, easier to resolve and less likely to give rise to taxpayer-funded bailouts, and that the benefits of such action would outweigh any costs. They have challenged their opponents to prove otherwise. In other words, much of the argument has been dominated by means of burden-of-proof shifting, rather than by providing affirmative arguments or empirical evidence to support their positions.

There is substantial reason to doubt that break-up-and-cap strategies would make the resulting banks and other financial institutions less likely to fail. The historical record suggests otherwise. For example, nearly 10,000 banks failed during the 1930s. Senator Carter Glass, the principal architect of the Banking Act of 1933, which included both the Glass-Steagall Act and deposit insurance, argued that the principal reason why so many

banks failed after 1929 was that they were too small and undiversified. His prescription was that they be merged with each other and allowed to branch interstate in order to have the critical mass and diversification that saved the Canadian banks of the day from failing en masse. His first prescription was reflected in the earliest version of the FDIC's bank receivership authority and has remained to this day. The current provisions of this authority are now contained mainly in Sections 11 and 13 of the FDI Act. But his second prescription was not enacted until 60 years later, when the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 substantially relaxed the limits on interstate branching.

Banking panics have been the norm in American history rather than the exception, at least since 1792. Regular panics continued until the financial panic of 1837, which resulted in the Free Banking Period. This referred to the period during which state laws were modernized to allow investors to obtain banking charters under general enabling statutes rather than by individual charters granted by state legislatures. It was believed that this innovation would result in a stronger national banking system. Instead, regular banking panics continued to be the norm. The National Bank Act ushered in the National Bank Era in 1863, which was also expected to result in a stronger banking system. Instead, regular banking panics continued. The banking panic of 1907 led to the creation of the Federal Reserve in 1914. As Chairman Bernanke has observed, the primary motivation for setting up the Federal Reserve was to have a central bank with lender-of-last-resort powers. Yet, banking panics continued until the establishment of industry-funded deposit insurance in 1934.

The major exception to this rule is what many call the Quiet Period – the period that began with the establishment of deposit insurance in 1934, coupled with the Federal Reserve's more aggressive use its lender-of-last-resort authority and the Roosevelt Administration's broader use of the Reconstruction Finance Corporation (RFC) to inject capital into the U.S. banking system. The period continued until 2008, punctuated only by the S&L crisis of the 1980s and early 1990s. Figures 8, 9 and 10 (pp. 51 and 53) graphically illustrate the changes in the pattern of bank failures from 1873 to 2012.

There is also reason to doubt that break-up-and-cap strategies will reduce the risk of taxpayer-funded bailouts, and they may actually increase the likelihood of system-wide bailouts. For example, one of the first government responses to the failure of thousands of small banks in the 1930s was the creation of the RFC. Like TARP, the RFC used public funds to recapitalize large portions of the U.S. banking system. It was established in 1932 and remained in business until it was dissolved in 1953. TARP was also used not only to inject equity capital into all nine of the largest financial groups, but also to inject capital in every U.S. bank or thrift holding company that applied for such capital injections and was deemed to be sufficiently healthy. Indeed, the parent holding companies of nearly 3,000 community, mid-size and regional banks applied for some capital injections. Though the Treasury's revenues from the program have exceeded its original \$204.9 billion investment, a number of institutions have not yet been able to fully repay the government, nearly five years later. Similarly, the FDIC's Temporary Liquidity Guarantee Program guaranteed the bonds of 122

banks and bank holding companies, ranging in size from community banks to the largest financial institutions, throughout the country.

It is hardly clear whether a break-up-and-cap strategy would make the resulting banks and other financial institutions more resolvable as a group without taxpayer-funded bailouts. Indeed, one major flaw in the argument that break-up-and-cap strategies will make the resulting banks more resolvable is that the related caps will effectively prohibit the FDIC from using its traditional tool of choice for resolving failed institutions.

The FDIC's tool of choice since its resolution authority was first established in 1933 has been a sale of a failed bank to a healthier bank through a purchase-and-assumption or merger transaction, with or without loss-sharing supported by the industry-funded Deposit Insurance Fund. Since a break-up-and-cap strategy would impose a hard cap on the size of all institutions, including those that are being resolved, it would launch the FDIC into uncharted territory because the FDIC has never been subject to such a hard cap in the past. Indeed, when its resolution authority was first established in the Banking Act of 1933, the FDIC was encouraged to resolve failing banks by merging them into healthier, larger and more diversified banks.

A major flaw in the break-up-and-cap strategy can be illustrated by re-running the tape of the 2008 financial crisis, after assuming that all of the largest SIFIs had been broken up into units of not more than some specified amount of assets and subjected to a permanent cap on assets at the specified level. The flaw exists whether the maximum asset size of the units is set at 4 percent of GDP (about \$570 billion as of 2010) as suggested by Simon Johnson in *13 Bankers*, \$500 billion as implied by the Brown-Vitter TBTF Act (S. 798), \$250 billion, \$100 billion, \$50 billion or some smaller amount.

Now suppose that Congress decided to break up the banks into units of \$300 billion or less, with a cap on size equal to \$300 billion. Suppose further that Washington Mutual, which had roughly \$300 billion in assets when it failed, failed when it did. The FDIC would not have been able to resolve Washington Mutual in the way it did by selling it to JPMorgan Chase (JPMC) in a purchase-and-assumption transaction. There would have been no entity large enough or strong enough to purchase a bank the size of Washington Mutual in such a relatively quick and efficient way. Recall that the FDIC proudly announced at the time it sold Washington Mutual to JPMC that the transaction resulted in no loss to the industry-funded Deposit Insurance Fund.

It is unknown how much more it would have cost the Deposit Insurance Fund, and by extension the rest of the country, to resolve Washington Mutual in the absence of a sale to JPMC. It almost certainly would have cost the Deposit Insurance Fund something more than it did, and perhaps a significant amount more.

The FDIC would not even have been able to resolve Washington Mutual through a merger of equals with a healthy institution if a break-up and cap proposal at the \$300 billion level had been implemented. That is because the combined institution would have had assets of \$600 billion, or twice the cap. Such a combination would have been prohibited by the cap or

required an exception to it. If an exception had been granted, none of the healthy banks would have bid for Washington Mutual unless the exception had been made permanent. But if it was permanent, it would have represented a major hole in the argument that break-up-and-cap strategies make the resulting institutions more resolvable than the original SIFIs.

Moreover, if the combined institution later failed, it would be unresolvable under the purchase-and-assumption technique unless the new acquirer were granted another exception from the cap on size, permitting it to have four times or more than the cap in total assets. There is no logical stopping point to the potential need for exceptions under a break-up-and-cap strategy.

There may be no way out of this conundrum other than a SPOE recapitalization strategy for smaller institutions. The adoption of such a strategy for smaller institutions would likely result in the Federal Reserve and the FDIC imposing minimum long-term, unsecured debt and minimum assets requirements on these smaller institutions in order to make the SPOE recapitalization strategy viable. But if such a strategy would be the only viable one for resolving these smaller institutions after a break-up-and-cap strategy had been implemented, then it would be clear that break-up-and-cap did not really make them more resolvable – the SPOE recapitalization strategy did all the work.

This report does not attempt to empirically resolve the debate over whether or not SIFIs enjoy an implicit subsidy in their funding costs because of a reasonable belief that the government will not let them fail, other than to note that the debate seems far from over. Those who claim an implicit subsidy exists have yet to offer enough reliable empirical evidence to prove a cause-and-effect connection between any funding advantage and a reasonable expectation that U.S. SIFIs will be bailed out despite the Dodd-Frank Act. It is important to consider the impact that Dodd-Frank has had on this issue and to consider the time period in which the law has been in place when conducting this research.

Nor does this report attempt to resolve the debate over the merits of break-up and cap strategies, other than to note that the advocates of break-up-and-cap have not yet provided convincing logical or empirical proof that their strategies will in fact result in a reduced failure rate of the resulting smaller financial institutions in terms of total failed assets, reduce the risk of system-wide, taxpayer-funded bailouts, or make the resulting institutions more resolvable under traditional purchase-and-assumption techniques.

“COST-FREE” SUPER EQUITY CAPITAL

Another of the most controversial *ex-ante* proposals is to impose substantially higher equity capital requirements on the largest U.S. banking groups and their affiliates than currently applicable or contemplated by Basel III. For example, Stanford Professors Anat Admati and Martin Hellwig argued in their popular book, *The Bankers’ New Clothes*, that the largest U.S. banking groups should be subject to minimum common equity leverage ratios of 20 to 30 percent. Professor Johnson has made the same argument in a series of articles. Senators Brown and Vitter recently introduced a bill in the Senate – the TBTF Act (S. 798) – that would require all U.S. banking groups with assets of \$500 billion or more to be subject to a

minimum tangible common equity leverage ratio of 15 percent. Their bill would require U.S. banking groups with assets between \$50 billion and \$500 billion to be subject to a minimum leverage ratio of 8 percent.

Some argue that these proposals to impose dramatically higher equity capital requirements are simply disguised break-up-and-cap proposals. If equity capital requirements are set high enough, so the argument goes, the affected institutions will have an economic incentive to break themselves up in order to increase their returns on the higher equity.

The main justification for this version of the proposals is that the too-big-to-fail problem will never be solved unless banks and other institutions are no longer “too big.” Simon Johnson has expressed skepticism that the FDIC’s SPOE recapitalization proposal will actually work in practice. He has expressed particular skepticism that it could successfully resolve a G-SIFI with significant cross-border operations. A related justification is that, unless SIFIs are broken up and capped, they will continue to enjoy an ***implicit government subsidy*** of funding costs.

Proponents of dramatically higher equity capital requirements argue that the implicit government subsidy unfairly favors SIFIs at the expense of community banks and other, smaller financial institutions. They say that higher equity requirements can reduce or eliminate the subsidy, and reduce the risk of failure.

Some economists who oppose this view dispute whether SIFIs have a funding advantage over non-SIFIs, what the amount of that subsidy is, and whether any cause-and-effect relationship has been established between any funding advantage and a reasonable belief in taxpayer-funded bailouts. As noted above in the section entitled, “Break-up and Caps,” there is an unresolved debate among economists over these issues.

Another group of economists dispute whether higher capital requirements will eliminate the risk of failure. They argue that the reason banks and other financial institutions engaged in maturity transformation fail during a contagious panic is not necessarily because they run out of equity capital or are genuinely insolvent. They fail even when they are solvent if markets panic and require them to sell their illiquid assets to meet a run on the money market instruments they have issued. Such fire sales can cause even solvent institutions to become insolvent by forcing them to realize losses on their illiquid but valuable assets.

A very influential group of proponents of significantly higher equity capital requirements, however, have not justified them on the ground that their potential benefits outweigh their costs. Instead, they have argued that higher equity requirements would reduce the risk of failure without imposing any costs on the banking industry in terms of higher costs, or on society in terms of a reduced supply of credit or increased cost of credit and money market instruments. In other words, in a world in which every other choice has an opportunity cost, requiring tradeoffs between costs and benefits, they have effectively argued that this choice to impose higher equity capital requirements is one of the rare examples of a “free lunch” – a policy choice that has no opportunity costs and no social costs, only potential benefits.

The leading proponents of this argument are professors Admati and Hellwig. They have based their argument on a well-known and very influential economic model of corporate finance developed by Nobel laureates Franco Modigliani and Merton Miller (MM model). Under the MM model, if certain idealistic assumptions are satisfied, the overall cost of debt and equity capital does not change based on the mix of those two types of capital. Under this model, any increase in equity capital decreases the default risk of the debt capital, so that the cost of the increased equity capital is completely offset by the decreased cost of the debt capital, reflecting its lower risk.

The MM model is a very powerful and useful model in the field of corporate finance. It can provide interesting insights into a variety of issues. But like any economic model, it is not foolproof, nor is it a substitute for empirical evidence. Its general principle about the irrelevance of the mix of debt and equity capital is not valid if any of its material assumptions is not satisfied.

Other economists, notably NYU Professor Douglas Gale, and professors René Stultz and Harry DeAngelo, contend that the MM model is based on idealistic assumptions that do not apply to banks and other financial institutions, or to the financial industry as a whole, especially to the extent they: (1) are engaged in the maturity transformation process; (2) provide money and money-like instruments to the market; and (3) allow payments to be made more efficiently by electronic transfer than by physical deliveries of cash. These economists argue that the theoretical MM model is not an appropriate tool for developing equity capital requirements on the financial industry on a macro basis in the real world.

Other economists argue that when a more realistic model is applied to banks and other financial institutions, the cost of these higher equity requirements is an increase the combined cost of debt and equity capital and a reduction in the supply of credit provided by these institutions. Economists at Standard & Poor's, for example, have estimated that the increased combined cost of debt and equity capital to the banking industry of a 15 percent leverage ratio on U.S. banking groups with \$500 billion or more in total assets would be \$1.2 trillion. Economists at Goldman Sachs also have estimated that such an increase in equity capital would cause the supply of credit provided by these institutions to drop by \$3.8 trillion, or 25 percent of today's levels.

This report does not attempt to resolve the debate over whether or not SIFIs enjoy an implicit subsidy in their funding costs because of a reasonable belief that the government will not let them fail, other than to note that the debate seems far from over. Those who claim an implicit subsidy exists do not seem to have offered enough empirical evidence to prove a cause-and-effect connection between any funding advantage and a reasonable expectation that U.S. SIFIs will be bailed out despite the Dodd-Frank Act.

This report also does not reach any conclusion as to whether higher equity capital requirements are a socially cost-free option or whether they involve tradeoffs between benefits in terms of reducing the risk of failure and reducing the supply or increasing the cost of credit and money market instruments. It concludes, however, that this debate is

very much alive. It also concludes the case has not been persuasively made that increasing common equity capital leverage ratios is a cost-free solution to the too-big-to-fail problem. It is important to consider the impact that Dodd-Frank has had on this issue and to consider the time period in which the law has been in place when conducting this research.

Conclusion

In light of the foregoing, this report concludes that the SPOE recap strategy would be an effective solution to the too-big-to-fail problem. OLA contains the tools necessary to resolve SIFIs using SPOE even in cases of the most severe financial distress, but certain improvements should be made to enhance the certainty and predictability of resolution under OLA. This report also concludes that the Bankruptcy Code contains the tools necessary to resolve SIFIs in this manner, at least under certain economic conditions, but certain improvements should be made to make it more effective so as to drastically reduce the need to rely on OLA.

In light of these conclusions, this report makes four sets of **Recommendations** designed to ensure that SIFIs can be resolved without triggering contagious panics or resorting to bailouts.

- **OLA.** The first set of Recommendations would increase the certainty and predictability of a successful resolution under OLA.
- **Bankruptcy Code.** The second set of Recommendations would make the Bankruptcy Code more effective in achieving the same goals, thus reducing the need to rely on OLA.
- **Sufficient Loss Absorbency.** The third set of Recommendations would ensure that institutions which are presumptively resolvable under a SPOE recapitalization strategy have sufficient loss-absorbing capacity in their capital structures.
- **Convergence of Resolution Planning Processes.** The final set of Recommendations would encourage a convergence of the living will process under Title I of the Dodd-Frank Act, which assumes that an institution would be reorganized or liquidated under the Bankruptcy Code or other normally applicable insolvency law, with the FDIC's resolution planning process under Title II (OLA).

Annex A. Process for Researching and Writing the Report

THE FAILURE RESOLUTION TASK FORCE

The co-chairs of the Failure Resolution Task Force are as follows:

- **John F. Bovenzi**, a partner at Oliver Wyman and a former Deputy to the Chairman and Chief Operating Officer of the FDIC;
- **Randall D. Guynn**, Partner and Head of the Financial Institutions Group at Davis Polk & Wardwell LLP; and
- **Thomas H. Jackson**, Distinguished University Professor at the University of Rochester, one of the leading bankruptcy scholars in the country and the primary author of the Hoover Institution's proposed Chapter 14 of the Bankruptcy Code.

Special thanks to those connected with BPC's Financial Regulatory Reform Initiative who helped inform and guide us through this process, especially: Co-Chairs **Martin Baily** and **Phillip Swagel**; BPC staff **Aaron Klein**, **Shaun Kern**, and **Justin Schardin**; and Senior Advisors **Jim Sivon**, partner with Barnett Sivon & Natter, PC, and **Greg Wilson**, Wilson Consulting. The Task Force also benefitted from the contributions of **Donald Bernstein**, Partner and Head of Davis Polk's Bankruptcy and Restructuring Group and former chairman of the National Bankruptcy Conference, and **Cristina V. Regojo**, Counsel in the firm's Financial Institutions Group.

BACKGROUND ON THE TASK FORCE CO-CHAIRS

The co-chairs of the Failure Resolution Task Force developed its conclusions and recommendations based on years of collective experience with:

- bank and other financial institution failures, including some of the largest and most systemically important financial institution failures around the globe during September and October of 2008;
- the major U.S. bankruptcy and resolution laws, including the Bankruptcy Code, the bank resolution provisions of the Federal Deposit Insurance Act, Title II of the Dodd-Frank Act and the Securities Investor Protection Act;

- preparation of several resolution plans under Title I of the Dodd-Frank Act; and
- extensive discussions with foreign public and private sector experts, including representatives of the Financial Stability Board, the International Monetary Fund and various European and Asian central banks, in connection with various foreign and international proposals to solve the too big to fail problem, including the Key Attributes of Effective Resolution Regimes, published by the Financial Stability Board in 2011, and the European Union’s proposed Recovery and Resolution Directive.

INFORMATION GATHERING SESSIONS

We held information-gathering sessions with a range of public and private sector experts, agencies, organizations and individuals. We benefitted their input, but our recommendations and conclusions are our own. While not all of the agencies, organizations and individuals with whom we spoke will agree with our conclusions, we remain greatly indebted to them for informing, improving, and refining our thoughts and broadening our perspective as we undertook this process.

DISCUSSION TEMPLATE

In an effort to maintain as consistent a conversation as possible in our information gathering sessions, we used the document below as a starting point in each of our discussions.

[Bipartisan Policy Center: Failure Resolution Task Force](#)

SAMPLE OUTREACH MEETING TOPICS

FDIC SPOE Concept. In January 2012, the FDIC introduced the concept of the single point of entry (SPOE) model of recapitalization in resolution. The FDIC has indicated that SPOE is its preferred approach to resolution of a systemically important financial institution (SIFI) under Title II of the Dodd-Frank Act. In the SPOE model, the FDIC is appointed receiver of the top-tier holding company of the financial group following the holding company’s failure and the invocation of the orderly liquidation authority as set forth under Title II.

Immediately after the parent holding company is placed into receivership, the FDIC will transfer all of the failed company’s assets (including its shares in, guarantees of, and extensions of credit to its operating subsidiaries) from the receivership estate to a bridge financial holding company. In contrast, the FDIC will leave behind in the receivership, all of the equity interests of the holding company’s shareholders and enough of its unsecured long-term debt to ensure that the business transferred to the bridge financial holding company is strongly recapitalized. To the extent any operating subsidiaries were undercapitalized, their capital would be restored to strong levels by converting any extensions of credit from the bridge holding company into new capital or by downstreaming other assets from the bridge. The FDIC would use the Orderly Liquidation Fund (OLF) to provide temporary liquidity (but not capital) to the bridge financial company and the operating subsidiaries. In this way, the operating subsidiaries would continue their

operations uninterrupted and not be placed into resolution, bankruptcy or other insolvency proceedings. Keeping operating subsidiaries out of resolution should reduce or eliminate the incentive for foreign regulators to ring-fence foreign branches or other operations, and should eliminate the need for any consents from foreign counterparties or courts, thus avoiding some of the most serious impediments to a cross-border resolution of a global SIFI.

Sample Questions:

- Do you believe the FDIC’s SPOE concept work in practice?
- What, if anything, can be done to improve its effectiveness?
 - Should we recommend that SIFIs be required to have enough capital and long-term debt at the holding company level to support a successful resolution through SPOE?
 - If so, what should be the dividing line between long-term and short-term debt?
 - Should there be a requirement for sufficient intercompany extensions of credit or assets at the holding company level that can be contributed to operating subsidiaries as additional capital?
- Will the SPOE concept reduce or eliminate the need for foreign regulators to ring-fence foreign operations and any of the other serious impediments to a cross-border resolution of a global SIFI?

Predictability of Outcome. Because the triggering process of Title II makes it uncertain as to whether and when it will be invoked, and because Title II gives the FDIC discretion in how to resolve an institution invoked, market participants and foreign regulators cannot assess, *ex ante*, whether a SIFI will be resolved under Title II or bankruptcy. Further, it is not exactly clear how it will be resolved if Title II is invoked. While the FDIC has indicated in speeches and presentations to the market that SPOE is the preferred method of resolution, there are other approaches available and market participants currently cannot be sure whether SPOE will in fact be the method of resolution for a particular firm. Some critics of Title II assert that this uncertainty will prevent it from solving the problem as short-term creditors may still run and foreign regulators may still ring-fence local operations at the first sign of trouble.

Sample Questions:

- Are there steps the FDIC should take to provide more predictable outcomes for market participants and foreign regulators under Title II?
- For example, a clear and predictable resolution strategy, or at least a “presumptive path?”

- What role should the Bankruptcy Code play in the “presumptive path?”
- Do you believe further legislative clarity could be helpful? If so, what should it say?

Creditor Rights. Critics of Title II assert that it gives the FDIC significant discretion to treat some creditors better than other creditors within the same class, as long as the disfavored creditors receive at least what they would have received in a liquidation under Chapter 7 of the Bankruptcy Code. For example, it permits the FDIC to treat short-term unsecured creditors better than long-term unsecured creditors, even if long-term unsecured debt is not expressly subordinated to short-term debt as a matter of contract, if necessary to stem runs by short-term creditors, as long as long-term creditors receive at least what they would have received for their claims in a Chapter 7 liquidation. These critics argue that such discriminatory treatment amounts to a “bail-out” of the favored creditors by the disfavored creditors, or at least a subsidy from the disfavored creditors to the favored creditors.

Others argue that this is not a material issue under the FDIC’s SPOE recap model because U.S. bank holding companies have very little short-term unsecured debt at the holding company level, and long-term unsecured debt at the holding company is structurally subordinated to short-term debt at the operating subsidiary level.

Still others argue that short-term and long-term unsecured debt are not really in the same class during a financial crisis, even if long-term debt is not expressly subordinated to short-term debt as a matter of contract, because short-term creditors have the ability and right to run, whereas the long-term creditors do not. Indeed, because short-term unsecured debt generally has a lower interest rate than long-term unsecured debt, short-term creditors have arguably negotiated and paid for the right to run whereas the long-term creditors have not. Treating short-term creditors as senior to long-term creditors simply reflects this reality.

Still others agree that the FDIC has too much discretion, but argue that this open-ended discretion to discriminate should be replaced by legislation that expressly makes long-term unsecured debt subordinate to short-term unsecured debt in the statutory priority scheme. They argue that if the discretionary power were replaced in this express priority rule, Title II would not only be more effective in stemming runs and but it would also result in more efficient pricing of long- and short-term debt, eliminating any alleged subsidy from long-term to short-term debt.

Sample Questions:

- Does Title II give the FDIC too much, the right amount, or too little discretion to discriminate among unsecured creditors within the same class?
- Is the guarantee of liquidation value to any disfavored creditors a sufficient safeguard of their general right to equal treatment?

- Is the criticism of the FDIC’s power legitimate under the FDIC’s SPOE recap model because bank holding companies do not have a material amount of short-term debt at the holding company, so there is nothing material at stake?
- Should the Federal Reserve prohibit bank holding companies from having a material amount of short-term unsecured debt on their balance sheets?
- Is it correct to consider short-term and long-term unsecured debt as the same class or should they be considered two separate classes, at least during a financial crisis?
- Should Congress replace the FDIC’s discretionary authority to discriminate among unsecured creditors of the same class with a new priority scheme that expressly treats long-term unsecured debt as subordinate to short-term unsecured debt?
 - If so, what should be the dividing line between long-term and short-term debt?

Title I Resolution Plans. Certain large financial firms with at least \$50 billion in total consolidated assets are required to prepare a plan for rapid and orderly resolution in the event of material financial distress or failure (“living will”) and submit to the Federal Reserve and in most cases, the FDIC. The first set of plans of the largest financial firms was submitted in July 2012.

Sample Questions:

- What is your opinion of the living will process?
 - Do you think it has had a positive, negative or neutral effect?
- Will the living wills process work as it is currently structured?
 - What improvements, if any, are necessary or advisable?
- What relationship should Title I resolution planning have to Title II resolution planning?

Cross-Border Resolution. The need for effective cross-border resolution of SIFIs was clearly seen during the 2008 financial crisis. In December 2012, the FDIC and the Bank of England published a joint paper on resolving globally active SIFIs that lays out their respective approaches for resolving SIFIs and cooperation efforts in resolution planning.

Sample Questions:

- From the perspective of cross-border resolution, which resolution regime is likely to work best in a SIFI failure scenario, Title II, or Chapter 7, 11 or proposed new 14 of the Bankruptcy Code?
- What else should be done to improve Title II or the Bankruptcy Code to make them more effective in resolving SIFIs?

Recognition of Foreign Resolution Proceedings. A number of foreign jurisdictions are enacting laws that permit them to implement SPOE or similar resolution strategies that involve converting or exchanging unsecured debt of foreign banks or their holding companies to or for equity in a recapitalized foreign bank or other financial company, including bridge financial companies. Chapter 15 of the Bankruptcy Code directs U.S. courts to give recognition to foreign bankruptcy proceedings if certain conditions are satisfied. Chapter 15 does not expressly refer to foreign resolution proceedings, and it excludes foreign banks with a U.S. branch or agency from its scope of coverage.

Sample Questions:

- Should Chapter 15 be amended legislatively to expressly refer to foreign resolution proceedings? To include the resolution of foreign banks within its scope of coverage even if they have U.S. branches or agencies?

New Chapter 14 of the Bankruptcy Code. Title II contains a strong presumption in favor of the Bankruptcy Code. In fact, the Treasury secretary is not permitted to invoke Title II unless the secretary determines, among other things, that the failure and resolution of a particular financial company under the Bankruptcy Code would destabilize the U.S. financial system and the use of Title II would avoid or mitigate those adverse effects, and certain other conditions are satisfied. Critics argue, however, that the Bankruptcy Code has a number of weaknesses that prevent it from being used to resolve financial companies under certain stressful financial conditions without risking a destabilization of the U.S. financial system. In response to such criticism, a number of bankruptcy experts have proposed a new Chapter 14 of the Bankruptcy Code, which would address many of the alleged weaknesses. They urge its inclusion in the Bankruptcy Code, arguing that it could be a useful supplement to Title II, making the Bankruptcy Code more effective and reducing the need for invoking Title II. Others argue that Title II should be repealed and replaced by Chapter 14. Still others argue that while Chapter 14 would be an improvement over the current Bankruptcy Code, it should be improved to further reduce the gap between the Bankruptcy Code and Title II.

Sample Questions:

- Should Congress consider amending the Bankruptcy Code to add a new Chapter 14?
- Would Chapter 14 be a useful supplement to Title II?
- Should Title II be repealed and replaced by Chapter 14?
- Are there improvements that should be made to the current proposed Chapter 14 in order to narrow the gap between it and Title II?
 - If so, what are they?

Derivatives. During the failure of Lehman Brothers, the simultaneous close out by thousands of counterparties of millions of financial contracts led to destabilizing effects on

markets and value destruction for financial counterparties. On the other hand, protection of close out rights is designed to prevent the contagion effect of one company's failure and permit counterparties to assess and hedge their risk properly. The treatment of derivatives and financial contracts during the resolution of a SIFI requires balancing the sometimes incompatible goals of market stability and preservation of counterparty rights.

Sample Questions:

- How should derivatives and financial contracts be treated in a failure situation, either under the Bankruptcy Code or Title II?
- Should they be protected at all?
- Is it possible to distinguish, preferably ex ante, between derivatives and financial contracts that are really capital structure liabilities (and that should be treated like other long-term liabilities) from those that are operating liabilities (that should be treated like other short-term operating liabilities)?
- Are there steps that can be taken to repudiate at least some of them or leave at least some of them behind in receivership without creating systemic risk?
- Should there be an override of cross-guarantee and cross-default provisions among related entities?
- If the financial institution has the ability to assume and assign derivatives, how much time is appropriate (under Title II, it is one business day)?
 - Can the time period be reduced by providing the parties likely to control the resolution process transparency regarding the derivatives and financial contract portfolio in advance of failure?

Liquidity and Funding. Restoration of solvency to a SIFI through SPOE could, in theory, restore confidence of counterparties and clients such that the market is willing to provide necessary liquidity to the SIFI in resolution. However, during a crisis, it is likely that liquidity would be difficult to obtain through traditional means.

Sample Questions:

- How should liquidity be provided to SIFIs in resolution to ensure successful Title II resolution process?
- Should liquidity be provided with government funding and how should OLF funding or guarantees be structured?
- Will the private sector be willing or able to provide liquidity to a firm in resolution and post-resolution?

- Dodd-Frank restricted the ability of the government to act as a lender of last resort during a crisis. Are these new restrictions positive or negative steps to promote financial stability and protect the taxpayer?

Annex B. Glossary

Absolute priority rule. The standard for "cramming down" a plan of reorganization on a dissenting class of creditors or shareholders under Chapter 11 of the Bankruptcy Code. The Bankruptcy Code requires the plan to be "fair and equitable" to the dissenting class, which has long been interpreted to mean that to confirm the reorganization plan the court must find that the plan provides for "payment in full" of the dissenting class in money or money's worth if any class junior to the dissenting class is to receive or retain anything under the plan. In other words, stakeholders must be satisfied under the plan in the order of their absolute priorities (as would occur in a liquidation under Chapter 7 of the Bankruptcy Code). The current statute includes a non-exclusive list of types of treatment of secured and unsecured creditors that satisfy this requirement. Because applying the absolute priority rule requires the bankruptcy court to determine whether or not distributing securities of the reorganized debtor to the dissenting class constitutes payment in full, applying the rule often requires that the projected value of the reorganized debtor and its debt and equity securities be determined by the court. The valuation question is often a subject of heated dispute among the parties. See **relative priority**.

Automatic stay. An automatic bar that arises upon the filing of a petition under the Bankruptcy Code to all judicial and extrajudicial collection efforts against a debtor or the debtor's property on any claim that arose before the commencement of the bankruptcy case, subject to certain statutory exceptions. Among the exceptions in the current Bankruptcy Code are for the exercise of termination rights by counterparties of qualified financial contracts.

Bagehot's dictum. The standards for lender-of-last-resort facilities established by Walter Bagehot in 1873. Bagehot thought central banks should lend freely during a financial panic, but only to persons or entities that are solvent, on a fully secured basis and at penalty rates. Bagehot's dictum has been largely codified in Section 10B of the Federal Reserve Act, which provides the authority for the Federal Reserve's Discount Window.

Bail-in. The exchange of debt for equity, either by contract before a resolution proceeding or by statute within a resolution proceeding. See **Co-Cos**.

Bail-in within resolution. A method of recapitalizing a firm or its business in resolution through the write-down of debt instruments or the distribution of equity in the firm, its parent company or a newly formed bridge institution in satisfaction of the claims on such debt instruments.

Bailout. As defined by the Financial Stability Board, any transfer of funds from public sources to a failed firm or a commitment by a public authority to provide funds with a view to sustaining a failed firm (for example, by way of guarantees) that results in benefit to the

shareholders or uninsured creditors of that firm, or the assumption of risks by the public authority that would otherwise be borne by the firm, its shareholders and unsecured creditors or, if necessary, the financial system more widely, or where the public authority is not compensated for the risks assumed. It does not include the provision of liquidity to solvent firms in accordance with the conditions set forth in Bagehot's dictum. See open bank assistance.

Bank. Any firm that takes deposits from the public, makes loans and is defined as a bank under applicable law.

Bank holding company. A company that controls a bank as defined in the BHC Act.

Bank resolution provisions of the FDI Act. The resolution regime that governs the resolution of insured depository institutions, consisting principally of Sections 11 and 13 of the FDI Act.

Bankruptcy Code. The Bankruptcy Code of 1978, as amended. It is the statutory mechanism for the collective liquidation, reorganization or adjustment of debts of a debtor.

Basel III. A comprehensive revision, developed by the Basel Committee on Banking Supervision, of the 2006 Basel II risk-based capital framework applicable to internationally active banks, which was in turn a revision of the original 1988 Basel I capital accord. Among other requirements, the Basel III framework encompasses:

- stricter requirements for instruments to qualify as capital;
- a new common equity tier 1 risk-based capital ratio based on tangible common equity (tangible common equity as a percentage of total risk-weighted assets);
- a capital conservation buffer consisting of tangible common equity capital which, if not fully satisfied, imposes restrictions on capital distributions and discretionary bonus payments for senior management;
- deductions from and adjustments to common equity tier 1 capital;
- stricter criteria for calculating risk-weighted assets, including counterparty credit risk exposures and securitization exposures, compared to Basel I and Basel II;
- capital requirements for exposures to central counterparties; and
- a non-risk-based leverage ratio.

When fully phased in, Basel III will require a minimum common equity tier 1 risk-based capital ratio of 7 percent (including the full amount of the capital conservation buffer), plus a common equity tier 1 surcharge for G-SIBs, which ranges from 1 to 2.5 percent of risk-weighted assets.

Basel III also introduces a set of liquidity requirements, consisting of a liquidity coverage ratio (LCR), which is designed to ensure that a bank has an adequate stock of

unencumbered, high-quality liquid assets that can be converted into cash easily and immediately in private markets to meet its liquidity needs for 30 days under stressed conditions, and a net stable funding ratio (NSFR), which is designed to ensure that a bank has at least one year of long-term, stable funding for its long-term assets.

BHC Act. The Bank Holding Company Act of 1956, as amended.

Bridge financial company. A company organized under Title II of the Dodd-Frank Act that is predominantly engaged in activities that are financial in nature as defined by the BHC Act, including a bridge financial holding company.

Capital Structure Liabilities. Equity, long-term debt and other similar ways a firm finances its assets, but excluding operating liabilities. The holders of a firm's capital structure liabilities generally do not have the legal right or practical ability to run during a financial panic. See **operating liabilities**.

Cash. Physical currency issued by a central bank, including Federal Reserve notes or United States dollars.

CCAR. See **Comprehensive Capital Analysis and Review**.

Central bank money. Cash or other demand claims against a central bank.

Chapter 7. Chapter 7 of the Bankruptcy Code, which is primarily designed for the liquidation of a debtor.

Chapter 11. Chapter 11 of the Bankruptcy Code, which is designed for the reorganization or liquidation of a debtor.

Chapter 14. A proposed new chapter to the Bankruptcy Code, which would be specially designed for large financial institutions other than insured depository institutions.

Chapter 15. Chapter 15 of the Bankruptcy Code, which implements the Model Law on Cross-Border Insolvency published by the United Nations Commission on International Trade Law (UNCITRAL). It provides a framework for U.S. courts to recognize and give effect to foreign bankruptcy proceedings. Chapter 15 currently excludes from its coverage foreign banks with any branch or agency in the United States.

Claimants. Persons who formally assert a right, demand, or property interest, including those that are unmatured, contingent or disputed. In this report, claimants include the holders of equity or debt in a failed financial institution whose interests and claims are left behind in either a bankruptcy proceeding or receivership.

Collateral. Assets or securities pledged to secure a debt, usually pursuant to real estate mortgage law, Article 9 of the Uniform Commercial Code as enacted in a particular state and similar laws of jurisdictions outside the United States.

Co-Cos. See **contingent convertible debt securities**.

Comprehensive Capital Analysis and Review. The Federal Reserve's central mechanism for developing supervisory assessments of capital adequacy. It involves stress testing a covered firm's capital adequacy under three macroeconomic scenarios – baseline, adverse and severely adverse. The Federal Reserve provides the parameters for each scenario toward the end of each year.

Contagion. The spread of liquidity runs on one bank or other financial institution to an expanding number of other banks and other financial institutions, resulting in a severe reduction in the amount of funding available to the financial system and a contraction in the credit provided by the financial system to the wider economy. See **contagious panic**.

Contagious panic. A **contagious panic** is characterized by a strong, sudden and unexpected preference for cash or other central bank money, rather than claims against private-sector financial institutions. Economists call a preference for cash or other central bank money a liquidity preference. It can start by a loss of confidence in the solvency or liquidity of a single bank or other financial institution, resulting in its depositors, other short-term creditors, counterparties on financial contracts and other holders of **operating liabilities** making a cascade of mass withdrawals of cash from that institution. These mass withdrawals of cash – also known as **liquidity runs** or just **runs** – will force the financial institution to liquidate its temporarily illiquid but valuable assets at **fire-sale prices**. These fire sales can cause the value of other financial institutions to drop, causing a loss of confidence in the solvency or liquidity of these other financial institutions. This can result in liquidity runs on these other institutions, resulting in further fire-sale liquidations. These fire sales can cause the value of still other financial institutions to drop. This cycle of runs and fire-sale liquidations can spread throughout the financial system like a feedback loop. If it continues, it can destabilize the financial system and eventually cause its collapse. A collapse of the financial system will result in a severe **contraction of credit**, which will result in long-term damage to the wider economy in terms of higher unemployment, lower output and social unrest.

Contingent convertible debt securities. Debt securities that are automatically converted into or exchanged for common or preferred equity upon the occurrence of certain specified trigger events.

Contractual subordination. Subordination by contract of the payment obligations on certain debt instruments to the payment obligations on other debt instruments.

Credit bidding. A process used by secured creditors to protect against the undervaluation of collateral. Credit bidding allows a secured creditor to purchase collateral in return for reducing its claim against the borrower or bankruptcy estate in an amount slightly higher than the next lowest bid for the collateral or the value otherwise assigned to the collateral.

Credit default swap. A swap that is structured so that payment occurs if a credit instrument, such as a bond, is in default or some other credit event occurs.

Cross-default. A right to exercise early termination rights on a financial contract based not on a default by a direct counterparty to the contract, but on an event related to an affiliate of the counterparty, such as the parent holding company filing a voluntary petition for bankruptcy or being put into a receivership proceeding.

Deadweight loss. The loss to society when an asset is sold to a person unable to put the asset to its highest and best use at a price that is lower than the price a person would voluntarily pay who could put the asset to its highest and best use, if the second person had sufficient cash or access to sufficient credit to pay the higher price.

Debtor. A person or municipality for or against which a case has been commenced under the Bankruptcy Code.

Depositor preference. A legal preference or seniority for deposit claims over other specified claims, such as the claims of general creditors. Depositor preference laws can prefer all deposit claims or only claims on insured deposits or domestic deposits.

Derivative or derivative contract. See **financial contracts**.

Discount window. The Federal Reserve's lender-of-last-resort facility generally available to insured depository institutions, uninsured branches of foreign banks and, subject to certain conditions, SIFMUs primarily under Sections 10B and 19 of the Federal Reserve Act and Title 8 of the Dodd-Frank Act. Discount window privileges are only available to eligible financial institutions that are solvent and in generally sound condition, and only on a fully secured basis secured by collateral that is satisfactory to the Federal Reserve.

Discriminatory depositor preference. Depositor preference laws that favor domestic deposits over foreign deposits. The Financial Stability Board has identified discriminatory depositor preference laws that prefer claims on domestic deposits to claims on foreign deposits as a serious impediment to the optimal resolution of a G-SIB because they provide a powerful incentive for host-country regulators to ring-fence the G-SIB's local assets and liabilities if the G-SIB fails rather than cooperate with the home country resolution authority of the G-SIB. See **depositor preference**.

Disorderly liquidation. A term typically used to refer to liquidation under the Bankruptcy Code during a financial crisis. The term is confusing because there is really nothing disorderly about a liquidation under the Bankruptcy Code. Instead, the term seems to be used as shorthand for a value-destroying liquidation of financial assets at the bottom of the market during a financial panic, or a value-destroying reorganization that takes so long to consummate that the firm, like a melting ice cube, has lost most of its value by the time the reorganization is approved. A more apt term might be fire-sale liquidation or value-destroying reorganization.

Distributional rules. Rules that govern how the assets of a debtor or financial company in receivership are distributed among claimants by a Bankruptcy Court or the FDIC.

Dodd-Frank Act. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.

Domestic deposit. A deposit that is payable in the United States. Under the FDI Act, this includes deposits that are dually payable in and outside the United States. The FDIC has proposed a regulation that would purport to treat dually payable deposits booked at a non-U.S. branch of an insured depository institution as uninsured deposits.

Double Leverage. The amount by which a parent's equity investments in subsidiaries exceeds the parent's own equity on its unconsolidated balance sheet. For example, if a company has double leverage of 110 percent, that means that 10 percent of its equity in subsidiaries must be funded by the parent's debt liabilities rather than its equity.

D-SIB. A SIB with U.S. domestic operations and no material cross-border or global operations.

D-SIFI. A SIFI with U.S. domestic operations and no material cross-border or global operations.

D-SIFI group. A systemically important group of financial institutions with U.S. domestic operations and no material cross-border or global operations.

Early termination rights. Contractual acceleration, termination or other close-out rights in financial contracts held by counterparties of a firm that may be triggered on the occurrence of an event or circumstances set out in the financial contract, such as an insolvency event or the entry into resolution of the firm or an affiliate.

Entry into resolution. The formal determination by the relevant authority or authorities that a firm meets the conditions for entry into resolution and that it will be subject to resolution powers, such as under OLA.

FDI Act. The Federal Deposit Insurance Act, as amended.

FDIC. The Federal Deposit Insurance Corporation.

Financial contract. Any securities contract, commodities contract, forward contract, repurchase agreement, options contract, swap agreement and any similar agreement that, in every case, is expressly identified under applicable law as subject to defined treatment in resolution and bankruptcy (for example, in relation to early termination rights or to preserve the effect of netting agreements) that is distinct from other (non-financial) contracts.

Financial Crisis of 2008. The global financial crisis that reached its apex during September and October 2008.

Financial firm. See **financial institution**.

Financial group. A group of financial companies typically consisting of a financial holding company and operating subsidiaries.

Financial holding company. A bank holding company that is treated as a financial holding company under the Bank Holding Company Act of 1956.

Financial institution. Any entity the principal business of which is the provision of financial services or the conduct of financial activities, including deposit-taking, credit intermediation, insurance, investment or securities business or operating an FMU or FMI.

Financial market infrastructure. A multilateral system among participating financial institutions, including the operator of the system, used for the purposes of clearing, settling or recording payments, securities, derivatives or other financial transactions. It includes payment systems, central securities depositories, securities settlement systems, central counterparties and trade repositories.

Financial market utility. See **financial market infrastructure.**

Financial panic. See **contagious panic.**

Financial Panic of 2008. See **Financial Crisis of 2008.**

Financial Stability Board. An international body established by the Group of 20 countries to coordinate at the international level the work of national financial regulatory authorities and international standard setting bodies and to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. It brings together national authorities responsible for financial stability in significant international financial centers, international financial institutions, sector-specific international groupings of regulators and supervisors, and committees of central bank experts. Its members consist of twenty-four countries, including the United States, and certain international organizations and international standard setting bodies.

Fire sale. See **fire-sale liquidation.**

Fire-sale liquidation. An immediate, forced sale of financial, typically illiquid assets for cash when the market is dysfunctional. According to Shleifer and Vishny, fire sales of financial assets not only result in transfers of value from sellers to buyers, but can also result in significant deadweight losses of value because the assets are typically transferred to persons who are incapable of putting the assets to their highest and best uses since those who can are temporarily frozen out of the market as a result of dysfunctional credit markets.

FMI. See **financial market infrastructure.**

FMU. See **financial market utility.**

Foreign bank. A non-U.S. organization that engages in the business of banking and is recognized as a bank by its home country regulator. Generally, a foreign bank is authorized to receive deposits to a substantial extent in the regular course of business and make loans.

Foreign banking organization. A foreign bank with a branch, agency, commercial lending subsidiary or Edge Act subsidiary in the United States or any company that directly or indirectly controls such a foreign bank.

Foreign deposit. A deposit that is payable solely outside the United States.

G-SIB. A systemically important bank with cross-border or global operations.

G-SIFI. A systemically important financial institution with cross-border or global operations. This term includes a systemically important group of financial institutions under the common ownership of a holding company with cross-border or global operations.

Great Contraction. The term given by Milton Friedman and Anna Schwartz to the severe contraction of credit that occurred during the Great Depression in their classic work, *A Monetary History of the United States, 1867-1960*. According to Friedman and Schwartz, the Great Contraction occurred because the Federal Reserve did not use its lender-of-last-resort authority aggressively enough during the 1930s, thus causing or at least deepening and prolonging the Great Depression.

HERA. The Housing and Economic Recovery Act of 2008, as amended.

Insured deposits. Deposits that are insured by the FDIC. The current cap on insurance is \$250,000 per person per institution, with certain exceptions. Only deposits that are payable in the United States qualify for deposit insurance. Deposits that are payable solely outside of the United States do not qualify and are not insured. Under the FDI Act, deposits that are dually payable both in and outside the United States qualify for deposit insurance, although the FDIC has issued for public notice and comment a regulation that would purport to treat dually payable deposits booked at a non-U.S. branch of an insured depository institution as uninsured deposits.

Insured depository institution. Any institution that is defined as an insured depository institution in Section 3 of the Federal Deposit Insurance Act.

High-speed recapitalization. A recapitalization or “bail-in” of a financial company that has become insolvent or otherwise has failed, in which the essential features occur over a weekend or even overnight. The essential features include the conversion of some or all of the failed company’s long-term unsecured debt and other capital structure liabilities to equity, or the transfer of enough of the failed company’s assets to a bridge financial company or other newly incorporated company with enough of the failed company’s liabilities left behind in the failed company’s bankruptcy estate or receivership to recapitalize the business transferred to the bridge or other new company. The essential features of recapitalization should be distinguished from the claims process for claimants left behind in the bankruptcy estate or receivership, which can take place over a longer period of time.

Home jurisdiction. The jurisdiction that has consolidated supervisory authority, including resolution powers, over a financial company.

Host jurisdiction. Any jurisdiction where any branch, office or subsidiary of a financial company does business, other than the company's home jurisdiction.

Housing and Economic Recovery Act of 2008. A law that subjected Fannie Mae, Freddie Mac and other government sponsored enterprises to enhanced regulation and special resolution powers, including a provision that originally authorized the secretary of the Treasury to inject an unlimited amount of capital into Fannie Mae and Freddie Mac.

Legal subordination. Subordination by operation of law of the payment obligations on a certain class of debt instruments to the payment obligations on other debt instruments. For example, depositor preference – such as making deposit claims senior to the claims of general creditors – is a form of legal subordination whereby the claims of general creditors are subordinated to the claims of depositors.

Lender-of-last-resort. An entity, typically a central bank, willing to lend to institutions when no other creditors can be found. An example of this function is the Federal Reserve's discount window, which permits qualified financial institutions that are solvent and in generally sound condition to borrow from the Federal Reserve on a fully secured basis generally at above-market interest rates. Acting as the lender-of-last-resort during financial panics is one of the key functions of a central bank.

Liquidation. The process under Chapter 7 of the Bankruptcy Code of collecting a debtor's property, converting it to cash, and distributing the cash to claimants. See **wind-down**.

Liquidity facility. A lender-of-last-resort facility temporarily made available to solvent banks or other financial institutions on a fully secured basis at above-market rates during a financial panic that allows them to borrow cash by pledging valuable but temporarily illiquid assets.

Liquidity run. Mass withdrawals of cash by depositors, other holders of money market instruments, or other holders of operating liabilities from one or more banks or other financial institutions engaged in maturity transformation, or the financial system as a whole.

Living will. A contingency plan that spans the full spectrum of contingency planning from risk management to recovery planning to resolution planning. This term is also used to refer simply to resolution plans prepared under Title I or Title II of the Dodd-Frank Act or other law or regulation.

Long-term credit. See **long-term debt**.

Long-term debt. Debt with an original or remaining maturity of one year or more. It can be secured or unsecured.

Loss-absorbing capacity. In connection with recapitalizing a financial holding company, this refers to all items on the left side of the company's unconsolidated balance sheet, other than specifically excluded items such as commercial paper, other short-term unsecured debt and other operating liabilities the holders of which have the legal right and practical ability

to withdraw on demand or short order during a financial panic. In connection with recapitalizing the operating subsidiaries of a financial holding company, it refers to all items on the right side of the parent company's balance sheet, other than specifically excluded items.

Maturity Transformation. Maturity transformation is the vitally important process by which banks and other financial institutions fund themselves with demand deposits or other money market instruments and use these funds to make long-term loans or invest in other illiquid assets. Without maturity transformation, our modern economy would grind to a halt.

Money market instruments. Demand deposits, repos, asset-backed commercial paper and other instruments that provide money or money-like claims against financial institutions, governments and other entities.

Moral hazard. The phenomenon by which individuals and firms engage in riskier behavior if someone else, such as an insurance company or the government, bears the cost of that risk in their stead.

OLA. See **Orderly Liquidation Authority.**

OLF. See **Orderly Liquidation Fund.**

Open bank assistance. The provision of government assistance to a bank that has not been closed or placed into a resolution proceeding, including injections of capital and guarantees of obligations. See **bailout.**

Operating liabilities. A firm's liabilities that are repayable upon demand or short order, financial contracts and other short-term debt, other than derivative contracts that were structured to look like operating liabilities in form, but are capital structure liabilities in substance. Operating liabilities include obligations on demand deposits, checking accounts, repurchase agreements and other financial contracts (except any that are operating liabilities in form but capital structure liabilities in substance), clearance and settlement transactions, and collateral and margin requirements. The holders of a firm's operating liabilities generally have the legal right and practical ability to run during a financial panic. See **capital structure liabilities.**

Orderly liquidation. A liquidation of a financial firm that does not result in a fire sale liquidation of its assets, but instead results in a recapitalization or orderly wind down of the financial firm.

Orderly Liquidation Authority. The authority for resolving non-bank financial companies set forth in Title II of the Dodd-Frank Act. It is expressly designed as a last-resort supplement to the Bankruptcy Code, which remains the preferred law to govern the insolvency or other failure of most nonbank financial institutions. OLA may only be legally invoked if certain conditions are satisfied, including that the secretary of the Treasury has determined that allowing the Bankruptcy Code to liquidate or reorganize a particular financial company under prevailing financial conditions "would have serious adverse effects

on financial stability in the United States” and that using OLA “would avoid or mitigate those adverse effects.” Given that the effectiveness of the Bankruptcy Code is an important ingredient in this formula, if the Bankruptcy Code is or can be made to be more effective in recapitalizing or winding down SIFI groups, including G-SIFI groups, the need for OLA could be drastically reduced.

Orderly Liquidation Fund. The Orderly Liquidation Fund is not really a fund. Instead, it is the statutory term for the FDIC’s authority to borrow money from the Treasury to provide temporary, fully secured liquidity to recapitalized bridge financial companies at above-market interest rates. The statute gives the OLF priority over the claims of general creditors. It limits the amount of money that can be lent to or used to guarantee the obligations of a covered company for bridge financial company to 10 percent of the book value of a covered company’s available assets for the first 30 days after the company has been put into receivership and 90 percent of the market value of its available assets after such period. If the FDIC suffers any losses on loans or guarantees made by the OLF, and cannot recover those losses from the assets of the covered company or certain creditors of the covered company, it is required to recover those losses by imposing assessments on a defined pool of the largest financial institutions.

Orderly wind-down. When referring to a corporation, the process of selling all the assets of a corporation, paying off creditors, distributing any remaining assets to the principals or parent company, and then dissolving the corporation in a way that does not have significant negative externalities or impact the broader financial system.

Panic. See **contagious panic**.

Person. Any individual, partnership, corporation or other legal entity. Section 101(41) of the Bankruptcy Code is the provision used by bankruptcy law to determine eligibility, subject to certain statutory exemptions, to be a debtor..

Pledge. The granting of a security interest in securities or other collateral.

Presumptive path. The strongly presumed, but ultimately nonbinding preferred resolution strategy that the FDIC has publicly announced it would expect to use to resolve a specific SIFI or class of SIFIs under OLA.

Primary federal financial supervisor. The federal agency primarily responsible for regulating and supervising a particular class of financial institutions. The Board of Governors of the Federal Reserve System is the primary federal financial supervisor for financial holding companies and foreign banking organizations.

Priority scheme. The order in which creditors and shareholders must be repaid on their claims by a person in bankruptcy or receivership.

Purchase-and-assumption transaction. A technique used by the FDIC to resolve failed, insured banks, involving the sale of all or a portion a failed, insured bank’s assets, and the

assumption of all or a portion of the failed, insured bank's deposits or other liabilities, to a qualified third party or bridge bank.

QFC. See **financial contract**.

Qualified financial contract. See **financial contract**.

Quiet Period. The period between 1934 and 2008, commencing with the establishment of deposit insurance in 1934 and the Federal Reserve's more aggressive use of its lender-of-last-resort authority, and ending with the Financial Crisis of 2008. The Quiet Period was interrupted by the wave of bank and savings association failures during the 1980s and early 1990s, which has come to be called the savings and loan crisis, or S&L crisis. According to Professor Gary Gorton, before the Quiet Period, regular waves of contagious panics and bank failures was the norm in the United States. The Quiet Period was the exception to this norm.

Recapitalization. The recapitalization of a firm or business transferred to a bridge financial company by imposing losses on the holders of the firm's long-term, unsecured debt and other capital structure liabilities in return for equity in the firm or bridge financial company, whether in- or outside of a resolution proceeding. See **bail-in**.

Recapitalization within resolution. The recapitalization of a firm or business transferred to a bridge financial company in a resolution proceeding. See **bail-in within resolution**, which is the term used by the Financial Stability Board for the same thing.

Reconstruction Finance Corporation. A U.S. government agency, which was established in 1932 and dissolved in 1953, that injected capital in the U.S. banking system during its period of operation. See **Troubled Asset Relief Program**.

Recovery plan. A plan that identifies options to restore financial strength and viability to a financial institution prior to failure but when the institution is under severe stress. If a recovery plan fails, a resolution plan is triggered. See **living will** and **resolution plan**.

Relative priority. An alternative to the absolute priority rule for allocating distributions to stakeholders in a reorganization or recapitalization. Unlike the absolute priority rule, which typically requires a valuation of the reorganized company and its securities to determine whether a junior class is in the money or out of the money (that is, whether the class should or should not be "wiped out" in the reorganization, receiving nothing of value for their claims or interests), a rule based on relative priority would bypass the need for a judicial valuation by allowing junior classes to receive junior securities, warrants, options or other contingent rights in the reorganized company that maintain (but do not enhance) their junior position in the company's capital structure. Rather than requiring a contentious judicial valuation to decide whether to cut off the rights of the junior class, after emergence from bankruptcy the market can value the junior securities or rights retained by the junior class for whatever such securities or rights may (or may not) be worth. See **absolute priority rule**.

Reorganization. A form of bankruptcy under Chapter 11 of the Bankruptcy Code that allows for a reorganization of the business of a debtor in order to preserve the going concern value of the debtor's business. It involves a restructuring of the firm's debts and a continuation of its operations. A court-approved plan of reorganization lays out how the firm will change in order to pay its debts as they come due going forward. Increasingly, reorganizations often involve going-concern sales of significant parts of a debtor's business under Section 363 of the Bankruptcy Code.

Rehypothecation. See **repledge**.

Repledge. The reuse of securities pledged to one person to secure that person's borrowings from a third party.

Repo. See **repurchase agreement**.

Repurchase agreement. An agreement to sell assets – frequently U.S. government or agency securities, or asset-backed securities – at a fixed price subject to an obligation to repurchase the same or similar assets at a fixed price on a specified future date. The person on the initial selling side of a repurchase agreement is effectively a secured borrower of money from the person on the initial purchasing side of a repurchase agreement. Many broker-dealers fund themselves by entering into overnight and other short-term repos with hedge funds another prime brokerage customers. See **reverse repurchase agreement**.

Resolution. Any action taken by a public authority with respect to a firm to deal with its financial distress or failure that meets the conditions for entry into resolution, including in particular the exercise of a resolution power, with or without private sector involvement, with the aim of achieving one or more of the statutory objectives of resolution. Resolution may include the application of the procedures under bankruptcy or insolvency law to parts of a financial group in resolution, in conjunction with the exercise of resolution powers.

Resolution authority. A public agency that, either alone or together with other agencies, is responsible for the resolution of firms established in its jurisdiction (including resolution planning functions).

Resolution plan. A plan that describes the strategy for the rapid and orderly resolution of a financial institution or group of financial institutions under the applicable resolution regime in the event of material financial distress or failure of any such institution or group. See **living will**. See also **recovery plan**.

Resolution powers. The legal powers and tools available to public agencies under applicable law to resolve a financial firm under financial distress or failure.

Resolution regime. The elements of the legal framework and policies governing the application of resolution powers by national authorities to a particular institution.

Reverse repo. See **reverse repurchase agreement**.

Reverse repurchase agreement. The same thing as a repurchase agreement, but from the initial purchaser's point of view.

Ring-fencing. The process by which a portion of a company's assets or profits are legally or financially separated so as to benefit a defined set of claimants (such as claimants of the branch or other operation of the company located in the host country). Ring-fencing can be used as a method to mitigate liquidation risk to particular assets.

Run. See **liquidity run**.

Section 13(3) of the Federal Reserve Act. A provision that permits the Federal Reserve to provide emergency secured liquidity to any person under "unusual and exigent" circumstances, if certain other conditions are satisfied. The Dodd-Frank Act amended Section 13(3) to restrict the Federal Reserve's ability to use this authority.

Section 165(d) of the Dodd-Frank Act. The provision that requires U.S. bank holding companies and foreign banking organizations with \$50 billion or more in total assets to prepare resolution plans or living wills, assuming that the Bankruptcy Code or other normally applicable insolvency law applies.

Section 363 of the Bankruptcy Code. The section of the Bankruptcy Code that provides for the use, sale or lease of the bankruptcy estate, including a transfer of assets or liabilities to a newly formed company.

Secured debt. Debt that is partially or fully secured by collateral.

Secured liquidity facility. A lender-of-last-resort or similar temporary liquidity facility that is fully secured and priced at an above-market interest rate.

Short-term credit. See **short-term debt**.

Short-term debt. Debt with an original or remaining maturity of less than one year. It can be secured or unsecured. Short-term debt is a type of operating liability. See **long-term debt**.

SIB. Systemically important bank. A bank with \$50 billion or more in total assets.

SIFI. Systemically important financial institution. A financial holding company, bank, broker-dealer, insurance company or other financial institution that has \$50 billion or more in total assets or has been designated as systemically important by an appropriate governmental authority. This term includes a systemically important group of financial institutions under the common ownership of a holding company.

SIFMU. Systemically important financial market utility, such as a central securities depository or a central counterparty.

SPOE. Single-point-of-entry.

SPOE recapitalization (or recap) strategy. A strategy for the recapitalization of a financial group in which only the top-tier holding company is placed in a receivership, bankruptcy, insolvency or other similar proceeding. It achieves a recapitalization of the group by imposing all losses on the parent holding company's shareholders, long-term unsecured debt holders and the holders of other capital structure liabilities, and not on taxpayers.

Structural subordination. Effective subordination of payment obligations on a certain class of debt instruments to the payment obligations on other debt instruments as a result of where they are incurred within a corporate group. For example, payment obligations on debt at a parent financial holding company are structurally subordinated to payment obligations of an operating subsidiary with respect to the assets of the subsidiary.

Subordinated debt. Debt that is contractually, structurally or legally subordinate to senior debt, the claims of general creditors or any other debt that is not so subordinated.

Swap agreement. A type of derivative financial contract that involves the exchange of one form of cash flow for another, where at least one of the cash flows represents uncertain value such as a foreign exchange rate, commodity price, interest rate or credit event. See **credit default swap**.

Systemically important activity. An activity or operation which, if interrupted, suspended or discontinued, could lead to a disruption of services vital for the functioning of the financial system or wider economy.

TARP. See Troubled Asset Relief Program.

Temporary stay. The temporary postponement or halting of a proceeding, judgment or enforcement of rights under a contract, such as contractual acceleration or early termination rights, against an entity that has commenced resolution proceedings.

Troubled Asset Relief Program. A \$700 billion program authorized by Congress under the Emergency Economic Stabilization Act of 2008, used to recapitalize part of the U.S. banking industry and other companies to purchase certain illiquid, hard-to-value assets from financial institutions for the purpose of promoting financial stability.

Too-big-to-fail problem. A problem that arises if a particular financial institution cannot be allowed to fail and be recapitalized, sold, or wound down without triggering the type of contagious panic that can result in a collapse of the financial system. The problem arises if the only choice available to government officials is between a taxpayer-funded bailout and a collapse of the financial system. If these are the only choices available, responsible government officials typically choose bailout as the lesser of two evils. To end the too-big-to-fail problem, government officials need a viable alternative to these two choices that allows a financial institution to be recapitalized, sold, or wound down without triggering a contagious panic and a destabilization or collapse of the financial system, or resorting to a taxpayer-funded bailout to avoid such a catastrophe. Since size may have nothing to do

with whether the failure of a particular financial firm triggers a contagious panic, it may be more accurate to call this the too-systemically-important-to-fail problem. This report uses the phrase “too-big-to-fail” in this report because of its more common usage in every day discourse.

Too-systemically-important-to-fail problem. See **too-big-to-fail problem**.

Title I. Title I of the Dodd-Frank Act. This is the title that includes the enhanced prudential regulation of SIFIs and systemically important activities, including enhanced capital and liquidity requirements and the requirement to prepare resolution plans or living wills.

Title II. Title II of the Dodd-Frank Act. This is the title that contains the orderly liquidation authority.

Triple Keys. The three regulatory agencies that are required to consent in order to invoke OLA as the law governing the resolution of a particular financial company. Specifically, the secretary of the Treasury (first key), in consultation with the president, must make certain determinations upon recommendation by two-thirds of the Board of Governors of the Federal Reserve System and two-thirds of the FDIC’s Board of Directors. If the relevant company is a broker-dealer, two-thirds of the commissioners of the SEC is required instead of the FDIC’s Board of Directors. If the relevant company is an insured company, the Director of the Federal Insurance Office must consent in lieu of the FDIC’s Board of Directors.

Unsecured debt. Debt that is not secured by collateral, including any portion of any debt that exceeds the value of any collateral securing it.

Uninsured deposits. Deposits that are not insured by the FDIC.

Wind-down. When referring to a corporation, the process of selling all the assets of a corporation, paying off creditors, distributing any remaining assets to the principals or parent company, and then dissolving the corporation.

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BIPARTISAN POLICY CENTER

1225 Eye Street NW, Suite 1000
Washington, DC 20005
(202) 204-2400

WWW.BIPARTISANPOLICY.ORG