Resiliency and Resolvability of U.S. G-SIBs: What Remains To Be Done?

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Increased Resiliency
U.S. G-SIBs now have more stressed capital than they had actual capital in August 2008

U.S. G-SIBs have higher capital today in a stressed environment than actual capital in August 2008…

…because today banks are starting with 2x the capital they did pre-crisis (tier 1 common)

Banks would have 50% more capital after absorbing losses from stress than actual capital compared to 2008…

…even if they went through an economic downturn worse than the last financial crisis…

5.6% 8.4%
2008 2014

Stressed Capital

(3.5%)
Projected Losses

11.9%
Actual Capital
2014

…making them more resilient against insolvency…
…which has been noted by regulators: Quotes from Fed Chairs Janet Yellen and Ben Bernanke

• “From early 2009 through 2014, capital held by the eight most systemically important U.S. bank holding companies more than doubled, reflecting an increase of almost $500 billion in the strongest form of capital held by these companies” – Janet Yellen
• “Even under the severely adverse scenario of the latest stress test, the estimate of these firms’ post-stress tier 1 common capital ratio is more than 2 percentage points higher than actual capital levels at the end of 2008.” – Ben Bernanke

Note: Actual and stressed tier 1 capital ratios reflective of CCAR banks in 2015 DFAST stress test
Source: Federal Reserve, SNL Financial.
U.S. G-SIBs have significantly more liquid balance sheets, making them more resilient against runs and contagion.

...which has been noted by regulators: Quote from Fed Chair Janet Yellen

- “Likewise, the Federal Reserve’s increased focus on liquidity has contributed to significant increases in firms’ liquidity. The high-quality liquid assets held by [the] eight [U.S. G-SIB] firms has increased by roughly one-third since 2012, and their reliance on short-term wholesale funding has dropped considerably.” – Janet Yellen

Liquidity = Cash and Due From Banks + U.S. Treasuries (held to maturity and available for sale).
Average as % Deposits = Arithmetic average of liquidity / total deposits for BAC, BK, C, JPM, STT, WFC
Average as % Assets = Arithmetic average of liquidity / total assets for BAC, BK, C, JPM, STT, WFC

Source: SNL Financial
U.S. G-SIBs have reduced their reliance on short-term wholesale funding, making them more resilient against runs and contagion.

Banks have significantly lowered their reliance on short-term wholesale funding…

…and pushed out the duration of any remaining short-term wholesale funding.

Note: Left chart, short term financing defined as commercial paper, trading liabilities, <1 yr borrowings, repurchase agreements, reflective of all U.S. G-SIBs. Source: SNL Financial, Regulatory Filings, FRBNY, Liberty Street Economics’ Paper “What’s Your WAM? Taking Stock of Dealers’ Funding Durability” published 6/9/2014
Stronger U.S. regulatory standards increase with size and complexity of U.S. banks...

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Less than $10bn assets</th>
<th>$10-$50bn</th>
<th>$50-$250bn</th>
<th>&gt;$250 (not G-SIBs)</th>
<th>U.S. G-SIBs</th>
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<tbody>
<tr>
<td>Recovery Plans</td>
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<td>TLAC Requirement</td>
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<td>Modified Liquidity Coverage Ratio</td>
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<td>Annual Company-run Stress Test</td>
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<td>Volcker Rule</td>
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</table>

\(^1\) 5% requirement at the holding company, 6% at insured depository institutions

Source: Federal Reserve, FDIC.
...including U.S. capital requirements, which increase with size and complexity of U.S. banks

High capital requirements for U.S. G-SIBs were first codified under Basel 3... [Bar charts showing Fed G-SIB requirement and Basel G-SIB requirement with 7.0% and 9.5% for non-G-SIBs and 6.7% and 9.8% for US G-SIBs, respectively.]

...and have been reinforced under CCAR (1)... [Bar charts showing ~46% and ~67% for non-G-SIBs and US G-SIBs, respectively.]

...and amplified with the supplementary leverage ratio (2)... [Bar charts showing 3.0% and 5.0% for non-G-SIBs and US G-SIBs, respectively.]

1) Based on capital ratio losses (170bp for U.S. non-G-SIBs, 480bp for U.S. G-SIBs starting vs ending T1C ratio) from 2015 DFAST results over 5% T1C minimum
2) Based on a 3% requirement for U.S. non-G-SIBs on the basic leverage ratio and a 5% requirement for U.S. G-SIBs under the enhanced supplementary leverage ratio (6% at bank sub), which could be conservative as banks could see asset inflation due to the inclusion of off-balance sheet exposures in the eSLR calculation. Source: Federal Reserve, Company Documents.
U.S. G-SIBs are subject to early remediation tools, which become more demanding with size and complexity

All U.S. banks are subject to prompt correction action (PCA) framework

- If PCA triggers are hit, regulators can require capital restoration plans; restrict growth, dividends and executive compensation; replace directors and officers; or divest risky assets

U.S. banks with assets > $50 bn are also subject to Dodd-Frank’s enhanced early remediation tools

- Requires Fed to establish early remediation triggers based on liquidity measures and forward-looking indicators, rather than backward-looking indicators

U.S. G-SIBs are also required to prepare recovery plans

- Recovery plans are different from and in addition to resolution plans
- Recovery plans establish the actions a firm will take to return to a position of financial stability once it is experiencing or is likely to encounter considerable financial distress
- Recovery plans are designed to develop a menu of options that would enable a firm to maintain the confidence of market participants during a range of stress scenarios
Recovery planning by U.S. G-SIBs designed to ensure early remediation well before resolution plans are triggered

**Recovery Plans**

Since 2009, Federal Reserve has required the U.S. G-SIBs to develop recovery plans, which establish the actions a firm will take to return to a position of financial stability once it is experiencing or is likely to encounter considerable financial distress.

- Recovery plans identify a range of options that must be taken to restore safe capital and liquidity levels, including possible sale of valuable assets (Federal Reserve SR 14-8, 9/25/14)
- They require U.S. G-SIBs to address financial weaknesses well before the point of non-viability, thus substantially reducing the risk of bankruptcy
- Recovery plans thus act as a buffer against loss of public confidence in individual firms or the broader financial system
- Federal Reserve has continued to test and require improvements in the recovery plans, and expanded the range of banks required to develop them

**Point of Non-Viability**

- Recovery plans are different from, and in addition to, resolution plans, which are not triggered until a firm approaches the point of non-viability (i.e., runs out or is likely to run out of capital or liquidity)
- Recovery plans are invoked well before a U.S. G-SIB reaches the point of non-viability
Demonstrating Resolvability in the 2015 Title I Resolution Plans
Most U.S. G-SIBs Rely on SPOE to Show Resolvability

Firms that exit SPOE are smaller and simpler

- SPOE widely recognized as most promising solution to TBTF
- Keeps operating subsidiaries out of insolvency. Preserves critical operations.
- Firms that exit SPOE are substantially smaller and simpler than the U.S. G-SIBs that entered SPOE.

### U.S. G-SIBs 2015 Title I Resolution Plans—Public Section Description of Post-Resolution Firm

|------------------------|---------------------------------------------|-----------------|-------------------------------------|
| ~40% reduction in overall assets, including 1/3 reduction in main bank ME’s assets and 80% reduction in non-bank ME’s assets | Nothing will remain of firm upon completion of resolution:  
  - business lines and critical operations housed in bridge bank would be sold to third parties; and  
  - broker-dealer and asset management entities would be sold. | Banking businesses divested; each divested business is significantly smaller and less systemically important  
  - Broker-dealers either sold as going concerns or subject to solvent wind-down | Firm would cease to exist post-resolution; all assets would be sold or unwound  
  - Only surviving businesses would be asset management and merchant banking businesses, which would have been sold |
| Reduction of product offerings, global footprint and customers | Wind down, sale or simplification of certain CBLs | | |
| Wind down, sale or simplification of certain CBLs | | | |

<table>
<thead>
<tr>
<th>JPMorgan – SPOE (except 1 sub)</th>
<th>Morgan Stanley - SPOE</th>
<th>State Street - SPOE</th>
<th>Wells Fargo – FDIC Receivership / Bridge Bank</th>
</tr>
</thead>
</table>
| ~1/3 reduction in main bank ME’s assets (including ME branches). | Firm would cease to exist post-resolution  
  - CBLS would either be sold or wound down | ~50% reduction of bank ME’s balance sheet by one year after idiosyncratic stress event  
  - Firm’s size and operational footprint may shrink further due to the potential sale of investment management business | ~70% reduction in main bank ME’s assets.  
  - Parent would sell certain businesses and seek to reorganize around any remaining businesses; however, if there are no remaining businesses, parent would liquidate its remaining assets and cease to exist |
| ~2/3 reduction in broker-dealer MEs’ assets; none would be systemically important. | | | |
| Reduced demand for services shrink service entities. | | | |
| Certain MEs disposed of as part of parent liquidation. | | | |
Step-by-Step Illustration of SPOE Resolution
Group Structure Before Failure

### Parent Only Balance Sheet

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposits / advances to subs</td>
<td>45</td>
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<tr>
<td>Equity in subs</td>
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<tr>
<td>Other assets</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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<tr>
<td>Unsecured long-term debt</td>
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</tr>
<tr>
<td>Unsecured short-term debt</td>
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</tr>
<tr>
<td>Secured liabilities</td>
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</tr>
<tr>
<td>Other liabilities</td>
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</tr>
<tr>
<td>Equity</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Step-by-Step Illustration of SPOE Resolution
Hypothetical Losses Resulting in Failure

- Total hypothetical losses: 41
- Model assumes losses are spread evenly among operating subsidiaries
- Model assumes that failure is based on the likely inability of the G-SIB BHC to pay its obligations as they come due in the ordinary course of business because of insufficient liquidity or access to liquidity as a result of the losses
- Red font indicates figures that changed as a result of losses

### Parent Only Balance Sheet

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Deposits / advances to</td>
<td>45</td>
<td>Unsecured long-term debt</td>
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<tr>
<td>subs</td>
<td></td>
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<tr>
<td>Equity in subs</td>
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<td>Unsecured short-term debt</td>
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<tr>
<td>Other assets</td>
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<td>Secured liabilities</td>
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<tr>
<td>Total</td>
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<tr>
<td></td>
<td></td>
<td>Equity</td>
</tr>
<tr>
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<td></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>59</td>
</tr>
</tbody>
</table>

### Diagram Description

- **G-SIB BHC**
  - Deposits / Advances 25
  - Equity 5
- **Domestic Bank**
  - Advances 10
  - Equity 2
- **US Broker-Dealer**
  - Advances 10
  - Equity 2
- **Foreign Broker-Dealer**
  - Advances 10
  - Equity 2
- **Foreign Branch**
  - Public shareholders

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**Davies Polk**

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Step-by-Step Illustration of SPOE Resolution

Step 1: Recapitalizing Business Transferred to Bridge BHC

- **Failed G-SIB BHC**: in receivership (or Chapter 11 bankruptcy proceeding)

- **Bridge BHC**
  - Equity 9
  - Total 59
  - Deposits / Advances 25
  - Equity 5

- **Domestic Bank**
  - Deposits / Advances 25
  - Equity 5
  - Kept out of FDIC receivership proceeding

- **US Broker-Dealer**
  - Advances 10
  - Equity 2
  - Kept out of insolvency proceeding

- **Foreign Broker-Dealer**
  - Advances 10
  - Equity 2
  - Kept out of insolvency proceeding

- **Foreign Branch**
  - Equity 59
  - Kept out of insolvency proceeding

- **Trustee**
  - Holds Bridge BHC for the benefit of the receivership.
  - In an SPOE under the Bankruptcy Code, Trustee would hold Bridge BHC for the benefit of the bankruptcy estate.

- **Claims left behind**
  - Long-term debt: 50
  - Equity: 9

- **Receivership Balance Sheet**
  - Equity of Bridge BHC 59
  - Unsecured long-term debt 50
  - Total 59
  - Equity 9
  - Total 59

- **Bridge BHC Balance Sheet**
  - Deposits / advances to subs 45
  - Liabilities 0
  - Equity in subs 9
  - Equity 59
  - Other assets 5
  - Total 59

- **This slide assumes SPOE under Title II of Dodd-Frank.**
- **This step would be Step 2 in an SPOE under Chapter 11 of the Bankruptcy Code. Recapitalization of the operating subsidiaries would occur before the Chapter 11 filing and transfer to the Bridge BHC, perhaps pursuant to a capital contribution agreement.**
Step-by-Step Illustration of SPOE Resolution
Step 2: Recapitalizing Operating Subsidiaries

Claims left behind
Long-term debt: 50
Equity: 9

Failed G-SIB BHC
in receivership (or
Chapter 11
bankruptcy proceeding)

• Red font indicates figures that have changed as a result of the recapitalization of the subsidiaries.

Receivership Balance Sheet

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<tr>
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<th>Equity of Bridge BHC</th>
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<th>Unsecured long-term debt</th>
<th>50</th>
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<tbody>
<tr>
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<td>Total</td>
<td>59</td>
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<tr>
<td>Total</td>
<td>59</td>
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</table>

BHC Bridge Balance Sheet

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<tr>
<th></th>
<th>Deposits / advances to subs</th>
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<th>Liabilities</th>
<th>0</th>
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</thead>
<tbody>
<tr>
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<tr>
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<tr>
<td>Total</td>
<td>59</td>
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</table>

• This slide assumes SPOE under Title II of Dodd-Frank.
• This step would be Step 1 in an SPOE under Chapter 11 of the Bankruptcy Code. Recapitalization of the operating subsidiaries would occur before the Chapter 11 filing and transfer to the Bridge BHC, perhaps pursuant to a capital contribution agreement.
Step-by-Step Illustration of SPOE Resolution
Step 3: Distribution of Equity (or Net Proceeds from Sale) in Satisfaction of Claims

- Unsecured long-term debt claimants receive Bridge BHC shares worth 50 (or the net proceeds from a public or private sale) in satisfaction of their claim for 50
- Equity: 0

### Receivership Balance Sheet (Revalued)

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<td>Equity</td>
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### Bridge BHC Balance Sheet (Revalued)

<table>
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<tbody>
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<td>Other assets</td>
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<tr>
<td>Total</td>
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### Failed G-SIB BHC in receivership (or Chapter 11 bankruptcy proceeding)

- Shares in Bridge BHC (or net proceeds from sale) distributed to left-behind claimants in satisfaction of claims in accordance with the priority of their claims

### Trustee

- All other assets sold and 4 in intercompany deposits withdrawn to service Bridge BHC’s liquidity needs during SPOE process.
- Red font indicates figures that have changed.

### Foreign Branch

- Kept out of insolvency proceeding

### Domestic Bank

- Kept out of FDIC receivership proceeding

### US Broker-Dealer

- Kept out of insolvency proceeding

### Foreign Broker-Dealer

- Kept out of insolvency proceeding
Step-by-Step Illustration of SPOE Resolution

Step 4: Termination of Bridge Status

Failed G-SIB BHC in receivership (or Chapter 11 bankruptcy proceeding)

Bridge BHC converts into New BHC (loses status as a bridge institution)

New BHC Balance Sheet

<table>
<thead>
<tr>
<th></th>
<th>Deposits / Advances to subs</th>
<th>Equity in subs</th>
<th>Other assets</th>
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<tr>
<td>Equity in subs</td>
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<tr>
<td>Other assets</td>
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<td></td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

- New shareholders (Either old debt holders or third parties pursuant to public or private sale)

- In this example, the new BHC that exits SPOE has half the balance sheet of the failed G-SIB BHC that entered SPOE. Indeed, the BHC that exits SPOE is virtually always substantially smaller than the BHC that entered SPOE because of losses and the sale of assets to provide liquidity during the SPOE process. See public summaries of 2015 Title I Resolution Plans of the G-SIB BHCs, which you can access here.
Usable TLAC: The most important structural change that you have never heard of . . . and the key to SPOE

U.S. G-SIBs have substantially increased and restructured their equity and long-term unsecured debt so that all of it can now be used to absorb losses without threatening financial stability

- Total loss-absorbing capacity (TLAC) consists of equity plus long-term unsecured debt that can be converted to common equity in bankruptcy
- In 2008, long-term senior debt not usable without causing contagion; losses could not be legally imposed on LT senior debt without doing so on short-term debt
- Even subordinated debt, preferred stock and trust preferred securities (TruPS) unusable in 2008 because market confusion about loss waterfall
- U.S. G-SIBs have restructured themselves to make long-term senior debt structurally subordinate to short-term debt
- Long-term senior debt can now be converted to common equity without converting short-term debt or causing contagion or financial instability
- U.S. G-SIBs now have 5X more usable TLAC
- No more market confusion about loss waterfall
- Enough TLAC to recapitalize U.S. G-SIBs at full Basel III capital levels under conditions twice as severe as 2008 financial crisis

Fed's Proposed TLAC / LTD Rule
DESIGNED TO ENSURE ENOUGH USABLE TLAC AT FAILURE

- TLAC = Tier 1 Capital + Eligible Long-Term Debt (LTD)
- Structurally Subordinated to Short-term Debt, Other Operating Liabilities and Ineligible LTD

<table>
<thead>
<tr>
<th>Minimum Ratio or Buffer</th>
<th>Risk-Based Ratios (% of RWAs)</th>
<th>SLR Ratios (% of Basel III Exposures)</th>
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</thead>
<tbody>
<tr>
<td>Minimum TLAC Ratio</td>
<td>18%</td>
<td>9.5%</td>
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<tr>
<td>TLAC Buffer</td>
<td>2.5% + Method 1 G-SIB Surcharge</td>
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<tr>
<td>Minimum LTD Ratio</td>
<td>6% + Method 2 G-SIB Surcharge</td>
<td>4.5%</td>
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Fed's Proposed TLAC / LTD Rule
COMPONENTS OF ELIGIBLE TLAC / LTD

- The proposed rule would require G-SIB BHCs to maintain minimum ratios of external TLAC and external LTD, plus an external TLAC buffer.
- TLAC would include all instruments that would count towards Tier 1 capital, except minority interests. TLAC buffer consists of CET1 capital.
- Both requirements would include **eligible debt securities** with a remaining maturity of at least 1 year.
- The external LTD requirement would apply a 50% haircut to the principal amount of eligible debt securities with a remaining maturity of more than 1 year but less than 2 years.
- A G-SIB BHC may not redeem or repurchase external LTD prior to maturity without the Federal Reserve’s prior approval if doing so would cause the G-SIB BHC to fall below its external LTD requirement.
Usable TLAC and SPOE

- The centerpiece of the proposed rule for U.S. G-SIBs is the external LTD requirement.
- The purpose of the external LTD requirement is to enhance the resiliency and resolvability of a U.S. G-SIBs.
- In a single point-of-entry (SPOE) resolution, only the top-tier BHC would enter into a resolution proceeding, allowing operating subsidiaries to be recapitalized by pushing losses up to the BHC, transferring the subsidiaries to a new debt-free bridge holding company and keeping the subsidiaries out of insolvency proceedings.
- The top-tier BHC must have a minimum amount of structurally subordinated long-term debt to absorb losses in the BHC’s resolution without fostering runs on the short-term debt of its operating subsidiaries, which can destabilize the financial system if the runs spread to other institutions.

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Pre-resolution Entity

- External LTD

Bridge Company

- ...and external LTD would be exchanged for equity and possibly new LTD in a new bridge company to which its subsidiaries would be transferred...

Losses incurred by operating subsidiaries would be pushed up to the U.S. SIB's top-tier parent and be absorbed by its capital...

...thus recapitalizing the business transferred to the bridge.
The proposed risk-based external TLAC and external LTD requirements would complement existing U.S. Basel III capital requirements.

- Tier 1 capital, excluding minority instruments, would count towards external TLAC.
- Tier 2 instruments meeting the definition of eligible debt securities would count towards external LTD.
- Any shortfall in required minimum external TLAC not met by the sum of Tier 1 capital used to satisfy the U.S. Basel III capital rules (excluding minority interests) and external LTD would need to be met with additional external TLAC.

*On a fully phased-in basis, including capital conservation buffers and G-SIB surcharges, and assuming no countercyclical buffer is in effect.*
Estimated Fully Phased-In Risk-Based TLAC / LTD Ratios
By U.S. G-SIB\(^1\)

![Diagram showing TLAC and LTD ratios for various banks]

\(^1\) This chart does not depict any higher amount of LTD or TLAC that could be required under the proposed LTD SLR and TLAC SLR requirements. Nor does it reflect capital that would be needed to maintain applicable minimum requirements on a stressed basis.

\(^2\) Includes each firm’s method 2 G-SIB surcharge--which is applied to the minimum LTD risk-based ratio and the CET1 capital buffers--based on Federal Reserve estimates disclosed with the G-SIB surcharge final rule in July 2015.

\(^3\) Although minority interests are excluded from eligible TLAC, we have not adjusted minimum capital ratios and capital buffers to correct for the fact that these amounts are not similarly excluded from capital. Thus, we assume for purposes of this chart that minority interests recognized in T1 capital are de minimis.

\(^4\) Includes each firm’s method 1 G-SIB surcharge--which is applied to the minimum-plus-buffer TLAC risk-based ratio--based on FR Y-15 disclosures as of YE 2014.
Required External TLAC and External LTD Ratios
SLR Requirements

- Federal Reserve Proposal:
  - Any Eligible External TLAC: 9.5%
  - Eligible External LTD: 4.5%
  - Tier 1 (with eSLR Buffer): 5.0%
- FSB Standard:
  - Any Eligible External TLAC: 6.75%
  - Eligible External LTD: 2.25%
  - Tier 1 (with eSLR Buffer): 3.75%

TLAC SLR
Both market and regulators expect SPOE and usable TLAC to make U.S. G-SIBs resolvable under the Bankruptcy Code

During 2008 financial crisis, market expected both long-term debt and short-term debt of U.S. G-SIBs to be bailed out because losses could not be imposed on long-term debt without imposing losses pro rata on short-term debt, which would have fostered contagion and threatened financial stability

- Moody’s and S&P have eliminated uplift on ratings of U.S. G-SIBs from expected government support, because government bailouts no longer expected
- No more market confusion about loss waterfall
- Market understands that long-term unsecured debt will act as a private-sector buffer against losses by short-term unsecured debt
- Spreads on long-term debt of U.S. G-SIBs are now higher than spreads on long-term debt of other U.S. banks

"Rather than relying on public funds to bail-out one of [the U.S. G-SIBs], we expect that bank holding company creditors will be bailed-in and thereby shoulder much of the burden to help recapitalize a failing bank."
- Robert Young, Moody’s Managing Director (April 2013)

"We believe the U.S. resolution framework is now ‘effective,’ which implies that the probability that a U.S. GSIB would receive extraordinary government support if it came under stress is lower. … The amount of TLAC that U.S. GSIBs will be required to hold was one of the key factors in whether we would deem the U.S. as having an effective and actionable resolution regime."
- S&P (December 2015)

"[S]uccessful resolution without taxpayer assistance would be most effectively accomplished if a firm has sufficient long-term unsecured debt to absorb additional losses and to recapitalize the business transferred to a bridge operating company. The presence of a substantial tranche of long-term unsecured debt that is subject to bail-in during a resolution and is structurally subordinated to the firm’s other creditors should reduce run risk by clarifying the position of those other creditors in an orderly liquidation process."
- Fed Governor Tarullo (Senate Testimony, September 2014)

"[I]t is notable that, at present, large U.S. firms have substantial amounts of long-term debt on their balance sheets."
- Fed Governor Tarullo (December 2012)
U.S. G-SIBs have made substantial efforts to comply with all five requirements of joint Fed/FDIC Aug 2014 guidance

<table>
<thead>
<tr>
<th>Category</th>
<th>Regulatory Requirement</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holdco Structure</td>
<td>■ Holding company structure that supports resolvability</td>
<td>■ Restructured long-term unsecured debt to be structurally subordinate to short-term unsecured debt so that all TLAC is usable to absorb losses without threatening financial stability; usable TLAC now 5X more than in 2008&lt;br&gt;■ Created “clean” holdcos</td>
</tr>
<tr>
<td>Legal Entity Structure</td>
<td>■ More rational, less complex legal structures</td>
<td>■ Reduced interconnectedness; increased separability; projects for other simplifications underway</td>
</tr>
<tr>
<td>Financial Contracts</td>
<td>■ Amend financial contracts to impose temporary stay on direct defaults and override cross-defaults under SPoE and other resolution strategies</td>
<td>■ 6 of the 8 U.S. G-SIBs are among the 18 G-SIBs that have adhered to ISDA Resolution Stay Protocol; they have also encouraged regulations that would expand principles to broader range of counterparties and financial contracts</td>
</tr>
<tr>
<td>Shared Services</td>
<td>■ Ensure continuity of shared services for critical operations and core business lines throughout resolution process</td>
<td>■ Shared services organized in service companies or operating subs that survive under preferred strategy, and governed by improved SLAs</td>
</tr>
<tr>
<td>Operational Capabilities</td>
<td>■ Improve operational readiness for resolution, including better management information systems (MIS) during resolution</td>
<td>■ Enhanced management information systems (MIS), direct engagement with FMUs, and other improvements</td>
</tr>
</tbody>
</table>
U.S. G-SIBs have made other significant structural changes to improve resolvability

| Simplification                        | Reorganized critical operations and core business lines to be less interconnected and more separable in failure scenarios  
|                                     | Where appropriate, projects to separate retail from wholesale operations  |
| Restructured Assets                  | Concentrate excess assets at parent holdco to be available wherever needed to recapitalize affiliates throughout group regardless of which affiliates suffer losses  
|                                     | Now have enough assets to recapitalize affiliates in severely adverse scenario  |
| Restructured Liquidity               | Concentrate excess liquidity at parent holdco to be available wherever needed throughout group in resolution scenario  
|                                     | Now have enough liquidity for resolution strategies to be feasible in idiosyncratic scenario without government liquidity  |
| Cross-border Cooperation             | Plans to consider internal TLAC requirements to foster trust between home and host-country resolution authorities and discourage ring-fencing |
ISDA Resolution Stay Protocol: addresses obstacle from early termination issues in financial contracts

**ISDA Protocol and Regulations**

- 6 of 8 U.S. G-SIBs are among 18 G-SIBs adhering to new ISDA Stay Protocol
- Protocol imposes temporary stay on direct defaults and overrides cross-defaults in existing and future ISDA contracts among 18 G-SIBs
- ISDA Protocol is being reflected in all new financial contracts
- Support regulations to expand principles of ISDA Protocol to more counterparties and financial contracts
- No similar mechanism existed during the 2008 crisis

**Eliminate Impediment to Resolution**

- Overriding cross-defaults prevents liquidity runs when parent fails but direct counterparty operating subsidiary is still performing on financial contracts
- Temporary stay gives bankruptcy courts more time to avoid value destruction from early termination without undermining risk management function of financial contracts
- Pause in the collection of swaps collateral could give U.S. G-SIBs enough time to re-capitalise and avoid the kind of panic that followed the 2008 failure of Lehman Brothers

“This initiative is an important step toward mitigating the financial stability risks associated with the early termination of bilateral, OTC derivatives contracts triggered by the failure of a global banking firm with significant cross-border derivatives activities.”

- Federal Reserve Board and FDIC Joint Press Release (October 2014)

“This is a major achievement, by the industry….With the adoption of the protocol by the top 18 dealer G-SIBs in November, over 90% of their OTC bilateral trading activity will be covered by stays of either a contractual or statutory nature.”

- Financial Stability Board, Press Release (October 2014)
U.S. G-SIBs have made structural and other changes to ensure the continuity of material shared services.

### What Are Shared Services?
An example of shared services is when back office operations such as payments and cash management are performed by one affiliate for another affiliate.

See table below for visual explanation where three affiliates are supported by a fourth affiliate for payments and cash management.

<table>
<thead>
<tr>
<th>Affiliate 1</th>
<th>Affiliate 2</th>
<th>Affiliate 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking activities</td>
<td>Securities activities</td>
<td>Asset management</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Affiliate 4</th>
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</thead>
<tbody>
<tr>
<td>Payments</td>
</tr>
<tr>
<td>Cash Management</td>
</tr>
</tbody>
</table>

### Fed/FDIC Requirement

**Fed/FDIC release:** “ensuring the continuity of shared services that support critical operations and core business lines throughout the resolution process”

### How U.S. G-SIBs Have Responded

- **Organization:** Have organized many shared services that support critical operations and core business lines into service companies or operating subsidiaries that survive under preferred strategy.

- **Service Level Agreements (SLAs):** Have established SLAs for material shared services.

- **Amended terms:** Have restructured terms of SLAs that assure continuity of the supply of services in resolution.

- **Improvements:** Projects to remedy any open issues within reasonable time frame.
U.S. G-SIBs have made substantial changes to operational readiness, including MIS and FMU access

### What is Operational Readiness?

“The Federal Reserve … has observed a range of capabilities which are critical to … operational resilience and contingency planning …. Specifically, a bank holding company subject to this guidance should have:

- Effective processes for managing, identifying, and valuing collateral it receives from and posts to external parties and affiliates;
- A comprehensive understanding of obligations and exposures associated with payment, clearing, and settlement activities;
- The ability to analyze funding sources, uses, and risks of each material entity and critical operation, including how these entities and operations may be affected under stress;
- Demonstrated management information systems capabilities for producing certain key data on a legal entity basis that is readily retrievable and controls in place to ensure data integrity and reliability; and
- Robust arrangements in place for the continued provision of shared or outsourced services needed to maintain critical operations that are documented and supported by legal and operational frameworks.”

- Federal Reserve, SR 12-14 (January 24, 2014)

### FMU Activities

“Describe the Covered Company's strategies for meeting its payment, clearing, and settlement obligations in the event access to some, or all, services provided by critical FMUs … and/or third party agents is restricted or unavailable in resolution. The discussion should consider the imposition of higher margin and collateral requirements, restrictions on clearing and settlement activity across different product types, and the impact of suspension or termination of the Covered Company's membership across any or all entities.”

- 2013 Federal Reserve & FDIC Guidance

### Fed/FDIC Requirement

**Fed/FDIC release:** “ensuring the continuity of shared services that support critical operations and core business lines throughout the resolution process”

### How U.S. G-SIBs Have Responded

- Enhancing management information systems (MIS) to provide U.S. G-SIBs and their supervisors with timely access to reliable information during resolution
- Direct engagement with FMUs on resolution-related initiatives
G-SIBs have responded in good faith to guidelines provided by the regulators

- Developed a variety of resolution strategies under the Bankruptcy Code, the FDIA, SIPA or other normal insolvency laws
  - Single-point-of-entry (SPoE) and other recapitalization within resolution strategies using Section 363 of the Bankruptcy Code
  - Orderly wind-down strategies
  - Solvent wind-down strategies
  - Bridge bank strategies under the FDIA

- Eliminated or provided additional support for assumptions identified by regulators as unrealistic or inadequately supported in 2013 living wills
- Complied with mandatory assumptions imposed by regulators, whether or not adjusting business to comply with assumptions might reduce amount of credit and liquidity U.S. G-SIBs can supply to the market
The U.S. regulators have made substantial progress in cross-border cooperation

<table>
<thead>
<tr>
<th>Progress</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSB Initiatives</td>
<td>• FDIC and Federal Reserve regularly participate in FSB initiatives that are designed to improve regulatory cooperation and coordination of the cross-border resolution of G-SIBs</td>
</tr>
<tr>
<td></td>
<td>• They also regularly participate in Crisis Management Groups consisting of the U.S. and foreign regulators of the U.S. G-SIBs and their material U.S. and foreign operating subsidiaries</td>
</tr>
<tr>
<td>Memorandum of Understanding</td>
<td>• The FDIC has entered into a memorandum of understanding and engaged in resolution war games with the UK, the most important host-country jurisdiction for most U.S. G-SIBs</td>
</tr>
<tr>
<td>U.S. G-SIB Encouragement</td>
<td>• The U.S. G-SIBs have consistently encouraged more cooperation and coordination among U.S. and foreign resolution authorities</td>
</tr>
<tr>
<td></td>
<td>• The U.S. G-SIBs have consistently encouraged the FDIC to identify SPOE as its preferred strategy and otherwise give host-country supervisors confidence that resolution will be carried out in a predictable way that will minimize any losses to foreign subsidiaries in order to foster cross-border cooperation and discourage ring-fencing</td>
</tr>
</tbody>
</table>
The regulators have recognized the progress the U.S. G-SIBs have made in improving their resolvability

"I would suggest that there has been no greater or more important regulatory challenge in the aftermath of the financial crisis than developing the capability for the orderly failure of a systemically important financial institution. While there is still a lot of work to do, looking at where we were and where we are today, in my view the progress has been impressive…"

- FDIC Chairman Gruenberg (May 2015)

"[W]e established a set of enhanced standards for large U.S. banking organizations to help increase the resiliency of their operations and thus promote financial stability. … These and other measures have already created a financial regulatory architecture that is much stronger and much more focused on financial stability than the framework in existence at the advent of the financial crisis."

- Fed Governor Tarullo (September 2014)

"Work on the use of the resolution mechanisms set out in the Dodd-Frank Act, based on the principle of a single point of entry … holds the promise of making it possible to resolve banks in difficulty at no direct cost to the taxpayer."

"[C]onsiderable progress has been made … in developing suitable resolution regimes for financial institutions"

- Fed Vice Chairman Fischer (August 2014)

"The single-point-of-entry approach offers the best potential for the orderly resolution of a systemic firm …, in part because of its potential to mitigate run risks and credibly impose losses on parent holding company creditors and, thereby, to enhance market discipline."

- Fed Governor Tarullo (October 2013)

"My view is that those steps have made the system safer, sounder and more resilient—and by a wide margin. It's frankly hard to overestimate the impact of Dodd-Frank. The Volcker Rule, the Financial Stability Oversight Council, risk retention, enhanced resolution authority—these and a dozen other important provisions of that historic law laid the groundwork for a safer and more stable financial system."

- Comptroller of the Currency Curry (June 2015)
What is a “credible” living will?

- Title I of the Dodd-Frank Act requires all BHCs with > $50 bn in assets to submit annual resolution plans (living wills) showing how they can be resolved under the Bankruptcy Code
- Fed/FDIC decide whether these living wills are “not credible” or would not facilitate and orderly resolution under the Bankruptcy Code
- In August 2014, FDIC determined that all of the 2013 living wills submitted by the first-wave filers* were “not credible”
- Fed did not make a credibility determination, but joined FDIC in identifying shortcomings in the 2013 living wills
- Agencies need to articulate clear, reasonable and transparent benchmarks

> “[T]he living will process is intended to be iterative…”
> Janet Yellen, Testimony, U.S. Senate (July 15, 2014)

> “[We]… expect the process of submission and review of the initial resolution plan iterations to include an ongoing dialogue with firms”
> 12 C.F.R. Part 381 (September 9, 2011)

|------------|-------------|----------------------------------------|-------------|-------------|-----------------------------------------|-------------|

* The first-wave filers included all of the U.S. G-SIBs, except Wells Fargo.
What happens if the agencies determine that some or all of the 2015 living wills are “not credible”?

- U.S. G-SIBs have developed strategies and made enough structural changes to demonstrate that they could be resolved under the Bankruptcy Code without government support or threatening financial stability.

- But what happens if the Fed/FDIC nevertheless jointly determine that one or more of the 2015 living wills are “not credible”?

**Identification of Deficiencies**

- The Fed and the FDIC must identify the deficiencies.

**Remediation of Deficiencies**

- The firm that submitted the plan would be given an opportunity to cure the identified deficiencies.

**Restrictions and Requirements Imposed**

- If the firm failed to cure the identified deficiencies within the specified cure period, the Fed and the FDIC could jointly impose various restrictions and requirements depending on the nature of the deficiency.
  - Presumably, the remedy would be different if the identified deficiency was inadequate MIS versus inadequate TLAC or liquidity.

**Divestment of Assets or Operations**

- If the firm failed to cure the identified deficiencies within a two-year period after the Fed and the FDIC jointly imposed any restrictions or requirements, then the Fed and the FDIC, in consultation with FSOC, could jointly order it to divest certain assets or operations if that would facilitate an orderly resolution of the firm under the Bankruptcy Code.