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"Progress on Addressing 'Too Big To Fail'"

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Good morning. I would like to thank Josef Tosovsky and the Financial Stability Institute of the Bank for International Settlements for the invitation to discuss progress in the United States on eliminating the "too big to fail" phenomenon.[1] This is an important topic, and one that has received extensive attention by bank regulators and supervisors in the United States.

Of course, the views I will express today are my own, not necessarily those of my colleagues at the Federal Reserve's Board of Governors or on the Federal Open Market Committee (FOMC).

In the wake of the financial crisis, the primary legislative response in the U.S. was enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act. The Act begins with the following phrases:

> *"To promote the financial stability of the United States by improving accountability and transparency in the financial system, to end 'too big to fail,' to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes…"*

This language suggests little ambiguity about the intent of Congress, stressing that the legislative response to the crisis was intended to end "too big to fail" (which I'll refer to today as TBTF) and end financial-sector bailouts. The regulations necessary to carry out this intent are quite extensive, and despite the legislation being enacted in 2010, some of the regulations are still being finalized by the regulatory agencies or are being phased in over a number of years.

Both the Dodd-Frank legislation and the regulations implementing it involve a wide variety of topics relevant to, and designed to address, TBTF. Today, I will focus my remarks on two areas where there has been substantial progress:

- The first area involves increased capital buffers aimed at *reducing the probability of failures*. The largest financial institutions – which had been thinly capitalized going into the financial crisis – have significantly increased their capital, as a result of a variety of supervisory and regulatory initiatives designed to reduce the probability of failure. Today I will highlight two tools in particular – Comprehensive Capital Analysis and Review (CCAR) stress testing, and the U.S.

Global Systemically Important Bank Holding Company (GSIB) capital surcharge – which have contributed to higher capital ratios.

- The second area involves steps to reduce spill-over from one troubled institution to others – essentially, *reducing the cost of failures*. A variety of actions, most of which are in the process of being implemented, would reduce the likelihood that a large financial institution's failure would end up being a systemically destabilizing event. These actions include requiring banks to issue enough debt so that taxpayer funds would not be necessary in the event of a resolution, and requiring firms to provide resolution plans to regulators with the goal that a failure would not have a broad impact on the overall economy.

Before launching into these two topics, let me just briefly mention some other areas that are important and relevant to TBTF, but which our time constraints will not allow me to address in any depth today.

The first such issue is the shift in the clearing of some derivatives to central counterparties (discussed last November by Bill Dudley of the New York Fed, and Governor Jerome Powell of the Federal Reserve's Board of Governors).[2] During the financial crisis that began in the fall of 2008, the vast number of firm-to-firm derivatives transactions made it difficult to assess the extent of counterparty risk, as there was no central conduit through which these transactions flowed and were recorded. Now, because many more derivative contracts are being centrally cleared, transparency about derivative exposures has been improved. In addition, recent regulations will increase margin requirements on those derivative contracts that are not centrally cleared.

A second important issue we will not have as much time to cover today is the application of regulations to *non-bank*, systemically important financial institutions. During the crisis, a large insurance company, AIG, had extensive derivatives exposure that generated significant risk to counterparties. In addition, some non-bank financial institutions were poorly supervised at the holding company level; others were significantly impaired by their dependence on short-term wholesale funding when such funding virtually disappeared in the fall of 2008 (as discussed by Fed Governor Dan Tarullo in speeches last fall).[3] To address these problems, the Financial Stability Oversight Counsel (FSOC) – the federal agency charged with, among other things, identifying and addressing threats to U.S. financial stability – can designate non-bank financial institutions as systemically important, thus subjecting them to supervision by the Federal Reserve and enhanced prudential standards.[4]

A third matter involves the extensive use of Federal Reserve liquidity facilities during the financial crisis by U.S. operations of foreign banking organizations. Specifically, many of these organizations turned to Fed facilities because they were highly dependent on short-term wholesale funding, which dried up during the financial crisis. As a consequence, large foreign banking organizations are now required to form intermediate holding companies covering most of their activities in the United States. This is an effort to increase the resiliency of their operations by, among other things, subjecting them to the same capital standards as their U.S. counterparts, and stress testing requirements.[5]

A fourth area is a set of major changes establishing new liquidity requirements. Events in the financial crisis exposed the fact that many financial institutions had become reliant on funds that could quickly "run" should the firm experience financial stress (or be perceived as experiencing such stress). The regulatory tools – known as the Liquidity Coverage Ratio (LCR), the Net Stable Funding Ratio (NSFR), and the Comprehensive Liquidity Analysis and Review (CLAR) – are all intended to make financial firms more resilient to liquidity shocks.[6]

This is far from a comprehensive list of the major changes that have either been made or are underway to address the issue of TBTF institutions. But my goal is to highlight the reality that truly addressing TBTF involves much more than prudential regulation of individual large banks. Given the complexity involved and the limited time we have today, I will focus on GSIBs and the two issues I mentioned at the outset – increased capital and steps to reduce the spillover of problems from one institution to others and the financial system.

Background on U.S. GSIBs

Figure 1 shows the total assets of the eight U.S. GSIBs for the third quarter of 2010 and the third quarter of 2015. The four largest GSIBs all have assets well over $1 trillion and include Bank of America, JP Morgan Chase, Citigroup, and Wells Fargo. The next two largest GSIBs, Goldman Sachs and Morgan Stanley, have assets well over $500 billion and notably have very large broker-dealer businesses. The two smallest GSIBs, Bank of New York Mellon and State Street, have assets well below $500 billion but are processing banks that are responsible for significant back-office activities for financial market participants, and as such have external assets under management and under custody.[7]

While two of the largest banks have reduced their size over the past five years,[8] they still have assets that exceed $1.5 trillion and both had some of the most significant, well-documented problems during the financial crisis. In sum, despite the regulations designed to reduce TBTF, a number of the largest U.S. GSIBs have grown significantly over the past five years.

Figure 2 shows U.S. GSIB banking assets and their share of U.S. banking industry assets. U.S. GSIB banking assets have grown for most of the past five years and now exceed $7.5 trillion, although there has been some decline more recently. As a group, total GSIB assets are a little greater than 40 percent of U.S. GDP. Moreover, GSIB assets represent a sizeable 50 percent of banking industry assets, down slightly from the post-crisis level.

Given that GSIBs are still a significant presence, how can it be argued that the problem of TBTF is seeing significant progress? It is important to remember that many of the new regulations that are designed to provide incentives for banks to shrink are fairly recent, and many have full implementation dates several years in the future. So it may be premature to judge what size GSIBs are likely to be once the full set of TBTF regulations is implemented. But I do believe the most important progress on TBTF to date involves reducing the probability that these institutions will fail – and should they fail, reducing the risks they would pose to the entire economy. I will now share some perspectives on progress made and underway in that regard.

Reducing the Probability of U.S. GSIB failure

There have been a variety of changes made to the supervision of GSIBs as a result of the financial crisis. Perhaps the most crucial change has been the introduction of the CCAR,[9] which examines the ability of large bank holding companies to withstand stressful economic and financial conditions (as discussed by Governor Dan Tarullo).[10] Should the Federal Reserve find a bank's capital inadequate under the stresses modeled in the CCAR exercise, the Fed can object to capital distributions, such as the payment of dividends or stock repurchases. In addition to the CCAR's quantitative stress analysis, bank holding companies are assessed qualitatively on their capital planning process, which can also result in limitations on capital distributions.

Figure 3 provides the U.S. GSIBs' actual Tier 1 leverage ratio in the third quarter of 2014 and the minimum Tier 1 leverage ratio that was estimated to arise in the CCAR's severely adverse scenario conducted at that time.[11] The scenarios model significant adverse shocks to the banks – most of the GSIBs under the severely adverse scenario experience declines in their Tier 1 leverage ratio of more than 2 percentage points, but all remain above 4 percent. The size of the decline can vary significantly across GSIBs, which is unsurprising given their very different business models which can be more or less impacted by a particular set of stress assumptions.

The CCAR is a flexible supervisory tool, in that supervisors can alter the stress scenario to reflect those financial and economic situations that they deem to pose, currently, the biggest concerns. Since the scenarios change from year to year, the GSIBs need to maintain a capital cushion sufficient to exceed minimum capital standards under a variety of potential stress situations.

In sum, the utilization of stress tests has been a major change in the supervisory process, and has caused GSIBs to reduce risks in areas that might lose significant capital under stressful conditions – or alternatively has caused GSIBs to plan on holding significantly more capital against those risks.

In addition to the stress testing required by the Dodd-Frank Act, a number of regulatory changes have also significantly altered the capital regulation of GSIBs. While I will address today the surcharge most directly focused on the GSIBs, it is important to remember that there have been other substantial changes to capital regulation since the financial crisis.[12] The GSIB capital surcharge I am highlighting is a surcharge imposed on GSIBs to reflect the systemic risk posed by these organizations because of the size and complexity of their operations.

As Fed Chair Janet Yellen has noted, "A key purpose of the capital surcharge is to require the firms themselves to bear the costs that their failure would impose on others. In practice, this final rule will confront these firms with a choice: they must either hold substantially more capital, reducing the likelihood that they will fail, or else they must shrink their systemic footprint, reducing the harm that their failure would do to our financial system. Either outcome would enhance financial stability."[13]

The GSIB surcharge is imposed in addition to the minimum 4.5 percent common equity Tier 1 risk-based capital ratio and the 2.5 percent capital conservation buffer. Based on data available at the time of adoption, estimates suggest the surcharge would range from 1.0 to 4.5 percent and would be phased in over time, with the full effect of the regulation occurring in January 2019.[14]

The GSIB surcharge is calibrated to reduce the GSIBs' probability of default, with an eye to the impact of a failure on the broader financial system.[15] The surcharge is calculated in two ways, and the higher of the two surcharges is used. The first method considers the size, interconnectedness, cross-jurisdictional activity, substitutability, and complexity of the organization – similar to international standards. The second method considers similar inputs but replaces substitutability with a measure of reliance on short-term wholesale funding.[16] The size of the surcharge will depend on how banks respond by adjusting their inputs to minimize their capital charge.

The effect of both the CCAR stress test and the GSIB surcharge is to significantly reduce the probability that a GSIB fails. The combination of these and other capital regulations (as phased in) should result in a significant improvement in capital ratios for GSIBs. **Figure 4** shows the increases in the common equity Tier 1 risk-based capital ratio for this group over the past five years, even as new capital rules have, on net, increased risk-weightings.[17] The common equity Tier 1 capital ratio for GSIBs now surpasses the ratio for non-GSIB institutions over $50 billion, as well as for non-GSIB institutions under $50 billion.

Figure 5 shows that the Tier 1 leverage ratio for GSIB institutions has also steadily increased. While the GSIB leverage ratio is still below that of non-GSIB institutions, this partly reflects a higher proportion of low-risk-weighted assets at GSIBs that get favorable capital treatment under the risk-based capital ratio but not under the leverage ratio.

I should note that all the capital regulations are not fully phased in, and the counter-cyclical capital buffer is currently zero, and the actual GSIB surcharge is dependent on actions the banks may take to reduce the surcharge. In addition, it has not yet been decided by the Board of Governors of the Federal Reserve whether GSIB institutions will be required to include all or part of the surcharge in the capital required by the CCAR. If they were required to, or if the post-stress CCAR minimums were increased by other means, the stress tests would be even more binding on GSIB institutions. I would be in favor of such changes. My own personal view is that GSIB institutions should be required to increase post-stress minimums, through one means or another.

Reducing the Cost of U.S. GSIB failures

If, despite the stress tests and enhanced capital regulations, a GSIB were still to fail, actions have been taken to try to reduce the impact of that failure. Quite recently the Board of Governors of the Federal Reserve proposed a rule for total loss-absorbing capacity or "TLAC." The purpose of TLAC is to insure that if a GSIB were to fail, sufficient debt financing would have been employed so that taxpayer resources would not be needed in order to resolve the institution.

The proposal requires U.S. GSIBs to issue enough long-term debt so that if a GSIB fails and needs to be resolved, the debt could be converted to equity and negate the need for support from taxpayers. **Figure 6** provides a depiction of the TLAC rule, assuming the fully phased-in capital requirement.[18]

In addition to TLAC, the GSIBs are required to develop resolution plans or so-called "living wills," covering how they could be resolved. Both the FDIC and the Federal Reserve must agree to the resolution plan. Evaluation of the resolution plans is continuing, but when accepted by the FDIC and the Federal Reserve these plans should provide additional protection for taxpayer resources should a GSIB fail.

The combination of the TLAC proposal and resolution plans has caused ratings agency Standard & Poor's to downgrade ratings on the non-operating holding companies of all the domestic GSIBs, reflecting the enhanced possibility that there will not be government support should the largest banks experience financial difficulty. It is noteworthy that Standard & Poor's did not downgrade the operating subsidiaries of these holding companies, since the creditors of the holding company would be a source of funds for the operating subsidiaries. It is encouraging to see that rating agencies are viewing the actions taken as significantly reducing the TBTF problem.

Concluding Observations

Significant progress has been made in eliminating TBTF and the possibility that taxpayers in the United States would need to bail out the domestic GSIBs to preserve the financial system's functioning. But it is important to remember that significant work still remains. Some of the proposals need to be finalized, some of the regulations are only in the process of being phased in, and more work needs to be done on resolution plans to insure that GSIBs can be resolved in an orderly fashion.

Nonetheless, capital ratios at the GSIBs have been steadily increasing, with the goal of reducing the chances that a GSIB will fail. In the event that one does fail, the new TLAC proposal and resolution plans intend to reduce the potential costs to taxpayers of such a failure and make it less likely that there would be a need for any financial support from taxpayers to preserve financial system functioning.

Thank you.

[1] See the speech by Jerome H. Powell, "Ending 'Too Big to Fail,'" March 4, 2013. This speech highlights the too big to fail phenomenon.

[2] See William C. Dudley, "Panel Remarks at The Clearing House Annual Conference," November 18, 2015. This speech highlights some of the progress made on closing out cross-border derivatives contracts. Also see Jerome H. Powell, "Central Clearing in an Interdependent World," November 17, 2015. This speech discusses some of the benefits and costs of central clearing and the implications for key financial-market infrastructures.

[3] See Daniel K. Tarullo, "Thinking Critically about Nonbank Financial Intermediation," November 17, 2015. The speech discusses some of the challenges with shadow banking and the challenges for addressing systemic concerns. Also see Daniel K. Tarullo, "Capital Regulation Across Financial Intermediaries," September 28, 2015. The speech discusses capital regulation for non-bank intermediaries, particularly insurance companies.

[4] See https://www.treasury.gov/initiatives/fsoc/about/Pages/default.aspx.

[5] See Federal Reserve System, 12 CFR Part 252, Enhanced Prudential Standards for Bank Holding Companies and Foreign Banking Organizations; Final Rule for more details on rules on intermediate holding companies.

[6] See Daniel K. Tarullo, "Liquidity Regulation," November 20, 2014. This speech provides an overview of the LCR, NSFR and CLAR.

[7] Both firms have over $1 trillion in assets under management and over $25 trillion in assets under custody.

[8] Note that several of the GSIBs grew significantly during the financial crisis as they acquired other troubled financial institutions. These transactions largely occurred in 2008.

[9] In addition to CCAR, large bank holding companies (BHCs) are also subject to the Dodd-Frank Stress Testing Act (DFAST). DFAST, like CCAR, is an annual exercise which assesses large BHCs' capital adequacy under a stressed macroeconomic environment. Unlike CCAR, however, DFAST does not include BHCs' planned capital actions but rather uses a standardized set of capital action assumptions that are specified in the Dodd-Frank Act stress test rules. For more on CCAR and DFAST see http://www.federalreserve.gov/bankinforeg/stress-tests-capital-planning.htm.

[10] See Daniel K. Tarullo, "Stress Testing after Five Years," June 25, 2014. This speech provides an overview of the stress testing process and the progress made in conducting stress tests.

[11] The March 2015 CCAR results may be found here: http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20150311a1.pdf.

[12] These changes include increases in minimum capital requirements, the capital conservation buffer, the counter-cyclical capital buffer, and the enhanced supplementary leverage ratio.

[13] See http://www.federalreserve.gov/newsevents/press/bcreg/20150720a.htm.

[14] The July 20, 2015 press release states: "The surcharges will be phased in beginning on January 1, 2016, becoming fully effective on January 1, 2019." See http://www.federalreserve.gov/newsevents/press/bcreg/20150720a.htm.

[15] See Federal Reserve Board of Governors, "Calibrating the GSIB Surcharge," July 20, 2015.

[16] See http://www.federalreserve.gov/newsevents/press/bcreg/20150720a.htm.

[17] The implementation of new Basel rules during the selected period impacts the calculation of risk-weighted assets and the definition of capital, causing, at least in part, several sharp declines in the ratios. Key changes occurred as of 2013:Q1 (implementation of market risk rule ("Basel 2.5")), 2014:Q1-Q2 (phase in of Basel III and receipt of permission to use Advanced Approaches capital framework by eight banking organizations), and 2015:Q1 (Standardized Approach became effective for all banking organizations subject to the final capital rule (with a capital floor for Advanced Approaches banking organizations)).

[18] The October 30, 2015 press release states: "The proposed rule would apply to domestic firms identified by the Board as global systemically important banks (GSIBs) and to the U.S. operations of foreign GSIBs. These institutions would be required to meet a new long-term debt requirement and a new "total loss-absorbing capacity," or TLAC, requirement. The requirements will bolster financial stability by improving the ability of banks covered by the rule to withstand financial stress and failure without imposing losses on taxpayers."