International Cooperation in Central Banking

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Introduction

This year marks the fifth anniversary of the most acute phase of the financial crisis. The cross-border dimensions of the crisis and the global effects of the Great Recession that followed provoked a major effort to strengthen international cooperation in financial regulation. While a good deal has already been accomplished, I will suggest the next steps that would be most useful in advancing global financial stability.

The fashioning of an international agenda requires a clear understanding of the overall regulatory aims of participating national authorities. Here is where international regulatory cooperation links to the subject of this conference—if not quite the changing *politics* of central banks, then at least their changing *policy goals* in the wake of the financial crisis. Almost by definition, systemic crises reveal failures across the financial system, from breakdowns in risk management at many financial firms to serious deficiencies in government regulation of financial institutions and markets. While the recent crisis was no exception, it has presented particular challenges to the policy foundations of central banks, especially those like the Federal Reserve, which carry out regulatory mandates alongside their monetary policy missions. So, I begin with some remarks on the nature of those challenges, before turning to a discussion of how changes in approach should inform international cooperation in financial regulation.

I. Central Banks and the Financial Crisis

In surveying the failings of financial authorities, both here and abroad, one can certainly identify some specific characteristics of pre-crisis regulation that look today to have been significantly misguided, rather than the advances they formerly appeared to be.[1] So, for example, regulators became prone to place too much confidence in the capacity of firms to measure and manage their risks. Indeed, the decade or so prior to the crisis had seen an acceleration of the shift from a dominantly *regulatory*

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1. One such example is financial authorities' reliance on banks' internal models to set regulatory capital requirements, an issue I have discussed at length elsewhere. *See* Daniel K. Tarullo, Banking on Basel: The Future of International Financial Regulation 139–90 (Peterson Institute for International Economics 2008).

approach to achieving prudential aims—one that rests on activities and affiliation restrictions and other reasonably transparent rules—toward greater emphasis on a *supervisory* approach, which relies on a more opaque, firm-specific process of watching over banks' own risk-management and compliance systems.

Yet the breadth and depth of the financial breakdown suggest that the crisis has much deeper roots. In many respects, this crisis was the culmination of fundamental shifts in both the organization and regulation of financial markets that began in the 1970s. Pre–1970s, the New Deal reforms of financial regulation, themselves sparked by a systemic crisis, had separated commercial banking from investment banking, cured the problem of commercial bank runs by providing federal deposit insurance, and brought transparency and investor protections to trading and other capital markets activities. This regulatory approach fostered a commercial banking system that was, for the better part of forty years, quite stable and reasonably profitable, though not particularly innovative in meeting the needs of depositors and borrowers.

In the 1970s, however, turbulent macroeconomic developments combined with technological and business innovations to produce an increasingly tight squeeze on the traditional commercial banking business model. The squeeze came from both the liability side of banks' balance sheets, in the form of more attractive savings vehicles such as money market funds, and from the asset side, with the growth of public capital markets and international competition. The large commercial banking industry, which saw both its funding and its customer bases under attack, sought removal or relaxation of the regulations that confined bank activities, affiliations, and geographic reach. While supervisors differed with banks on some important particulars, they were sympathetic to this industry request, in part because of the potential threat to the viability of the traditional commercial banking system.

The period of relative legal and industry stability that had followed the New Deal thus gave way in the 1970s to a nearly thirty-year period during which many prevailing restrictions on banks were relaxed. A good number were loosened through administrative action by the banking agencies, but important statutory measures headed in the same direction.[2] This legislative trend culminated in the Gramm-Leach-Bliley Act[3] of 1999, which consolidated and extended the administrative changes that had allowed more extensive affiliations of commercial banks with investment banks, broker-dealers, private equity firms, and other financial entities. These changes

2. For example, the Depository Institutions Deregulation Act of 1980 removed interest rate ceilings that had been in place since the New Deal. Depository Institutions Deregulation Act of 1980, Pub. L. No. 96-221, 94 Stat. 142 (codified as amended at 12 U.S.C. § 3501 (2012)). The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 removed most federally-imposed restrictions on interstate bank mergers and branching. Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, Pub. L. No. 103-328, 108 Stat. 2338 (codified as amended at 12 U.S.C. § 1811 (2012)).

3. Gramm-Leach-Bliley Act, Pub. L. No. 106-102, 113 Stat. 1338 (1999) (codified as amended at 12 U.S.C. § 1811 (2012)).

enabled a series of acquisitions that resulted in a number of very large, highly complex financial holding companies. Meanwhile, several investment banks that remained unaffiliated with large commercial banks were also growing into very large, complex, highly leveraged firms. Overall, the character of the financial services sector was changing rapidly, most notably through the progressive integration of capital markets and traditional lending activities. This process included the growth of what has become known as the shadow banking system. Significant portions of financing relied on short-term capital market sources that were often poorly matched with the maturity structure of a firm's assets, and that were not, of course, protected by the federal insurance fund that backed traditional deposits.

The regulatory system had also evolved, particularly through the increased importance and detail of minimum capital standards and through requirements for bank enhancement of risk-management systems. But in sweeping away the remnants of the New Deal regulatory system, neither Gramm-Leach-Bliley nor financial regulators substituted new regulatory mechanisms to match the wholesale changes in the structure of the financial services industry and the dramatic growth of novel financial instruments. The need to address the consequences of the progressive integration of traditional lending, trading activities, and capital markets lies at the heart of three post-crisis challenges to the policy foundations of the Federal Reserve and, to a greater or lesser degree, many other central banks.

Microprudential Regulation. The first challenge posed by the crisis was to traditional, microprudential regulation, which focuses on the safety and soundness of each prudentially regulated firm. Not all central banks have microprudential regulatory authority, of course, and—as in the United States—those that do sometimes share it with other agencies. But the shortcomings of pre-crisis regulatory regimes have been of concern to all central banks. Most notably, capital requirements for banking organizations, particularly the large ones that might be regarded as too-big-to-fail, simply were not strong enough. Risk-weights were too low for certain traded assets that had proliferated as credit, and capital markets integrated more thoroughly. In some cases, the arbitrage opportunities presented by existing capital requirements were an incentive for securitization and other capital markets activities. The exposures created by off-balance-sheet activities such as structured investment vehicles ("SIVs") were badly underweighted. Minimum capital ratios were not high enough and, in meeting even those inadequate requirements, firms were allowed to count liabilities that did not really provide the ability to absorb losses and still maintain the firms as viable, functioning intermediaries. Additionally, some financial firms of systemic importance lay outside the perimeter of microprudential regulation.

There has already been a substantial response to this challenge. With the support of the Federal Reserve and other U.S. bank regulators, the Basel Committee on Banking Supervision has strengthened capital requirements by raising risk-weightings for traded assets and has improved the quality of loss-absorbing capital through a new minimum common equity ratio. The Basel Committee also has created a capital conservation buffer and introduced an international leverage ratio. These "Basel 2.5"[4] and "Basel III"[5] reforms have been implemented in the United States and in other countries that are home to internationally active banking firms. Additionally, the Basel Committee has adopted the Liquidity Coverage Ratio ("LCR"), a quantitative requirement for short-term liquidity positions that was a first step in addressing a broader set of liquidity concerns.

In the United States, some important additional steps have been taken. Beginning at the peak of the crisis, the Federal Reserve conducted stress tests of large banking organizations, making capital requirements more forward-looking by estimating the effect of an adverse economic scenario on firm capital levels in a manner less dependent on firms' internal risk-measurement infrastructure.[6] The provision of the Dodd-Frank Act[7] popularly known as the Collins Amendment[8] ensures that banking organizations cannot use models-based approaches to reduce their minimum capital below generally applicable and more standardized risk-based ratios.

Macroprudential Regulation. A second challenge for central banks is that the crisis revealed the need for an active set of macroprudential monitoring and regulatory policies—that is, a reorientation toward safeguarding financial stability through the containment of systemic risk. The failure to attend to, or even recognize, financial stability risks was perhaps the most glaring public sector deficiency in the pre-crisis period. This was a fault by no means limited to central banks. On the contrary, systemic risk had also come to seem more theoretical than real to many academics and financial market participants. Even most of those inside and outside the official sector who argued for stronger capital or other prudential standards did not appreciate the degree to which the secondary mortgage market had turned into a house of cards. Still, regardless of formal mandates, central banks are better positioned than most other government agencies to see and eval-

4. What has become known as "Basel 2.5" was never denominated as such by the Basel Committee, which characterized the changes it made to trading book capital requirements in July 2009 as enhancements to the Basel II framework that had been concluded some years earlier. Basel Comm. on Banking Supervision, *Revisions to the Basel II Market Risk Framework*, Bank for Int'l Settlements (July 2009), http://www.bis.org/publ/bcbs158.pdf; Basel Comm. on Banking Supervision, *Guidelines for Computing Capital for Incremental Risk in the Trading Book*; Bank for Int'l Settlements (July 2009), http://www.bis.org/publ/bcbs159.pdf.

5. Basel Comm. on Banking Supervision, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems*, Bank for Int'l Settlements (June 2011), http://www.bis.org/publ/bcbs189.pdf. The June 2011 document is a revised version of the framework as originally approved in December 2010. *Id.*

6. For an explanation of the purpose and methodology of stress testing, see Bd. of Governors of the Fed. Reserve Sys., *Dodd-Frank Act Stress Test 2013: Supervisory Stress Test Methodology and Results*, Fed. Res., 3, 9 (March 2013), http://www.federalreserve.gov/newsevents/press/bcreg/dfast_2013_results_20130314.pdf.

7. Dodd-Frank Wall Street Reform and Consumer Protection (Dodd-Frank) Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010) (codified as amended in scattered sections of U.S.C.).

8. Dodd-Frank Act § 171 (codified as amended at 12 U.S.C. § 5371 (2012)).

uate the emergence of asset bubbles, excessive leverage, and other signs of potential systemic vulnerability.

In some respects this second challenge is an extension of the first, because the safety and soundness of large institutions must take account of the relative correlation of their asset holdings, interconnectedness, common liquidity constraints, and other characteristics of large banking organizations as a group. Similarly, systemic risks and too-big-to-fail problems can increase if large, highly leveraged firms may operate outside the perimeter of statutory microprudential oversight, as was the case prior to 2008 with the large, free-standing investment banks in the United States. And market discipline will be badly compromised if financial market participants believe that an insolvent counterparty cannot be resolved in an orderly fashion and thus is likely to receive government assistance under stress.

Here again, domestic and international efforts have already produced significant reform programs, though implementation of some of these programs is less advanced than Basel 2.5 and Basel III. Domestically, the Federal Reserve's annual stress tests examine the effects of unexpected macroeconomic shocks on asset classes held within all major regulated firms. The construction of the adverse scenarios is informed by explicitly macroprudential considerations.[9] The Dodd-Frank Act gave the Financial Stability Oversight Council ("FSOC") authority to bring systemically important firms that are not already bank holding companies within the perimeter of Federal Reserve regulation and supervision.[10] The FSOC has already so designated American International Group, General Electric Capital Corporation, and Prudential Financial.[11] It continues actively to consider other firms for possible designation. Finally, the Dodd-Frank Act gave the Federal Deposit Insurance Corporation orderly liquidation authority for systemically important financial firms, thereby creating an alternative to the Hobson's choice of bailout or disorderly bankruptcy that authorities faced in 2008.

Internationally, the Basel Committee has agreed to a regime of capital surcharges for large banks based on their systemic importance. The inter-

9. For a full explanation of the Board's approach to scenario design, see Policy Statement on the Scenario Design Framework for Stress Testing, Fed. Reg. 70,124 (Nov. 23, 2012) (to be codified at 12 C.F.R. pt. 252). *See also* Nellie Liang, Dir., Office of Fin. Stability Policy and Research, Fed. Reserve Bd., Implementing Macroprudential Policies, Remarks delivered at the Conference on Financial Stability Analysis: Using the Tools, Finding the Data, Federal Reserve Bank of Cleveland and Office of Financial Research (May 31, 2013) (transcript *available at* http://www.clevelandfed.org/events/2013/financial_stability/pdf/Implementing_Macroprudential_Policies_May31-2013_final.pdf).

10. Dodd-Frank Act § 113 (codified as amended at 12 U.S.C. § 5323 (2012)).

11. Press Release, Dep't of the Treasury, Financial Stability Oversight Council (FSOC) Announces Nonbank Financial Company Designation to Address Potential Threats to Financial Stability (Sept. 20, 2013), *available at* http://www.treasury.gov/press-center/press-releases/Pages/jl2169.aspx; Press Release, Dep't of the Treasury, Financial Stability Oversight Council Makes First Nonbank Financial Company Designations to Address Potential Threats to Financial Stability (July 9, 2013), *available at* http://www.treasury.gov/press-center/press-releases/Pages/jl2004.aspx.

national Financial Stability Board ("FSB") is coordinating an initiative to parallel U.S. efforts to identify non-bank systemically important firms.[12] The Basel Committee and the FSB have developed international principles for resolution authority.[13] Title II of the Dodd-Frank Act wholly meets these principles. The European Union has adopted a directive consistent with the principles, and other important jurisdictions are following suit.

But meeting the macroprudential challenge will require measures beyond a more comprehensive, cross-firm approach to microprudential regulation. Much academic and policy work of the past several years has revived and elaborated the previously somewhat heterodox view that financial instability is endogenous to the financial system, or at least the kind of financial system we now have. Consider, for example, how the intertwining of traditional lending and capital markets gave rise to what has become known as the shadow banking system. Shadow banking, which refers to credit intermediation partly or wholly outside the limits of the traditional banking system, involves not only sizeable commercial and investment banks, but many firms of varying sizes across a range of markets. While some of the more notorious pre-crisis components of the shadow banking system are probably gone forever, current examples include money market funds, the tri-party repo market, and securities lending.

From the perspective of financial stability, the parts of the shadow banking system of most concern are those that create assets thought to be safe, short-term, and liquid—in effect, cash equivalents. For a variety of reasons, demand for such assets has grown steadily in recent years, and is not likely to reverse direction in the foreseeable future.[14] Yet these are the assets whose funding is most likely to run in periods of stress, as investors realize that their resemblance to cash or insured deposits in normal times has disappeared in the face of uncertainty about their underlying value. And, as was graphically illustrated during the crisis, the resulting forced sales of assets whose values are already under pressure can accelerate an adverse feedback loop, in which all firms with similar assets suffer mark-to-market losses, which, in turn, can lead to more fire sales. This kind of contagion lay at the heart of the financial stresses of 2007 and 2008.

As already noted, pre-crisis shortcomings at the intersection of microprudential and macroprudential regulation have motivated a variety

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12. In July 2013 the FSB, working with the International Association of Insurance Supervisors, announced a list of insurance firms determined to be of global systemic importance, and also announced the elements of the regulatory and supervisory regime that would be applicable to these firms. *Global Systemically Important Insurers (G-SIIs) and the Policy Measures that will Apply to Them*, FIN. STABILITY BD. (July 18, 2013), http://www.financialstabilityboard.org/publications/r_130718.pdf.

13. *Key Attributes of Effective Resolution Regimes for Financial Institutions*, FIN. STABILITY BD. (Oct. 2011), http://www.financialstabilityboard.org/publications/r_111104cc.pdf.

14. For a discussion of these issues, see Daniel K. Tarullo, Fed. Reserve Governor, Bd. of Governors of the Fed. Reserve Sys., Remarks delivered at the Federal Reserve Bank of San Francisco Conference on Challenges in Global Finance: Shadow Banking After the Financial Crisis (June 12, 2012), *available at* http://www.federalreserve.gov/newsevents/speech/tarullo20120612a.pdf.

of reforms, many explicitly directed at the problem of too-big-to-fail institutions. While some of these reforms remain unfinished, and additional measures are needed, there has been considerable progress. Unfortunately, the same cannot be said with respect to shadow banking and, more generally, the vulnerabilities associated with wholesale short-term funding. These vulnerabilities involve both large, prudentially regulated institutions, and thus too-big-to-fail concerns, and the broader financial system. However, except for the liquidity requirements agreed to in the Basel Committee, which are more microprudential than macroprudential in their design, the liability side of the balance sheets of financial firms has barely been addressed in the reform agenda.[15] Yet here is where the systemic problems of interconnectedness and contagion are most apparent. And, as evidenced by the funding stresses experienced by a number of European banks prior to the stabilizing measures taken by the European Central Bank, these problems are still very much with us.

Within the United States, reform efforts are underway in some discrete, but important, areas. The provisions of Dodd-Frank requiring more central clearing of derivatives and minimum margins for those that remain uncleared are designed to provide more systemic stability.[16] As to shadow banking itself, the FSOC recently proposed options to address the structural vulnerabilities in money market mutual funds,[17] and the Securities and Exchange Commission has subsequently proposed regulations directed at run risks in money market mutual funds.[18] And the Federal Reserve has begun using its supervisory authority to press for a reduction in intraday credit risk in the tri-party repo market. But these measures are incomplete, and do not extend to all forms of short-term funding that can pose run risks—a universe that is likely to expand as prudential constraints begin to apply to large existing shadow banking channels and as the unusually flat yield curves of recent years return to more normal slopes.

Monetary Policy. While the first two policy challenges are shared among regulatory and financial agencies, the third lies solely with central banks. In the wake of the crisis, we need to consider carefully the view that central banks should consider the effect of monetary policy on financial stability and, in some instances, adjust their policy decisions to take

15. The essentially microprudential orientation of the Basel agreement on liquidity is reflected in the implicit assumption that a firm with a perfectly matched trading book poses minimal liquidity risks. This is a reasonable assumption for any single firm taken in isolation. But, in a stressed financial environment in which counterparties of large banks and broker-dealers are themselves in need of liquidity, the financial system as a whole may be adversely affected if the regulated firms seek to protect their positions by cutting off liquidity to counterparties as their own funding becomes tighter.

16. Dodd-Frank Act § 723 (amending 7 U.S.C. § 2); *id.* § 731 (codified as amended at 7 U.S.C. § 6s (2012)).

17. Press Release, U.S. Dep't of the Treasury, Financial Stability Oversight Council Releases Proposed Recommendations for Money Market Mutual Fund Reform (Nov. 13, 2012), *available at* http://www.treasury.gov/press-center/press-releases/Pages/tg1764.aspx.

18. Money Market Fund Reform; Amendments to Form PF, 78 Fed. Reg. 36,834 (June 19, 2013) (to be codified at 17 C.F.R. pts. 210, 230, 239, 270, 274 & 279).

account of these effects. The dramatic rise in housing prices, and the associated high amounts of leverage taken on by both households and investors, occurred during an extended period of low inflation. Some have suggested that by not raising rates because inflation remained subdued, monetary policy in the United States and elsewhere may have contributed to the magnitude of the housing bubble. Whatever the merits of that much-contested point, it seems wise to address this issue as we face what could well be another extended period of low inflation and low interest rates. It is important to note that incorporating financial stability considerations into monetary policy decisions need not imply the creation of an additional mandate for monetary policy. The potentially huge effect on price stability and employment associated with bouts of serious financial instability gives ample justification.

Here I want to mention some observations by my colleague Jeremy Stein.[19] After reviewing the traditional arguments against using monetary policy in response to financial stability concerns, and relying instead on supervisory policies, Governor Stein has offered several reasons for keeping a more open mind on the subject. First, regulation has its own limits, not the least of which is the opportunity for arbitrage outside the regulated sector. Second, whatever its bluntness, monetary policy has the advantage of being able to "get in all the cracks" of the financial system, an attribute that is especially useful if imbalances are building across the financial sector and not just in a particular area. Finally, by altering the composition of its balance sheet, central banks may have a second policy instrument in addition to changing the targeted interest rate. So, for example, it is possible that a central bank might under some conditions want to use a combination of the two instruments to respond to concurrent concerns about macroeconomic sluggishness and excessive maturity transformation by lowering the target (short-term) interest rate and simultaneously flattening the yield curve through swapping shorter duration assets for longer-term ones.

To be clear, I do not think that we are at present confronted with a situation that would warrant this kind of monetary policy action. But for that very reason, it seems that now is a good time to discuss these issues more actively, so that if and when we do face financial stability concerns associated with asset bubbles backed by excessive leverage, we will have a well-considered view of both the role monetary policy might play in mitigating those concerns and the limits of that role.

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19. Jeremy C. Stein, Member, Bd. of Governors of the Fed. Reserve Sys., Overheating in Credit Markets: Origins, Measurement, and Policy Responses, Remarks at the Federal Reserve Bank of St. Louis Research Symposium: Restoring Household Financial Stability after the Great Recession: Why Household Balance Sheets Matter (Feb. 7, 2013) (transcript available at http://www.federalreserve.gov/newsevents/speech/stein20130207a.pdf).

II. Advancing the International Reform Agenda

Let me turn now to the way in which our shifts in policy approach should inform the agenda for international cooperation in financial regulation. For obvious reasons, the monetary policy issues are not directly related to this agenda, though our understanding of these issues may profit from discussions with our central bank colleagues from around the world. It is equally obvious that the other two sets of policy changes are quite closely related to the international agenda.

More than in most other areas, the financial sphere suffers from a basic lack of congruence between the authority to regulate and the object of regulation. Thus, we have a significantly internationalized financial system, in which shocks are quickly transmitted across borders, but we have a national structure of regulation. Within countries, responsibilities may be divided between prudential regulators and market regulators, among regulators with similar mandates, or both. Central banks may have exclusive prudential regulatory authority, share it with other agencies, or have none at all.

International arrangements both reflect, and try to compensate for, this web of divided and overlapping domestic authority. Thus, there are sectoral standards setters like the Basel Committee, the International Organization of Securities Commissions ("IOSCO"), and the International Association of Insurance Supervisors ("IAIS") on the one hand, but also broader groupings such as the Group of Twenty, the FSB, and the International Monetary Fund, on the other. In addition, under the umbrella of the international home of central bankers, the Bank for International Settlements, numerous other committees work across fields also covered by one or more of the groups I have just mentioned.[20]

There are some obvious weaknesses with such an assortment of international arrangements, notably the difficulty of coordinating initiatives where more than one group is working on an issue. This kind of coordination challenge can be further complicated by the participation in international discussions of various national officials without domestic authority in a particular area. The sheer proliferation of international arrangements, each with its own staff, has at times also led to a proliferation of studies and initiatives that become burdensome to the national regulators and supervisors who have been overtaxed at home since the onset of the crisis and ensuing domestic reform efforts.

Yet there are also some strengths derived from the crowded international field of organizations and committees. One such virtue is that issues not falling squarely within the remit of a particular kind of standards setter can nonetheless be dealt with internationally. This, in fact, was our experience with the successful international effort to agree on minimum margin

20. Among these are the Committee on Global Payment Systems and the Committee on the Global Financial System.

requirements for derivatives that are not centrally cleared.[21] It would have been hard for just one of the international standard-setters to address the issue adequately, because the field of relevant national authorities included both bank regulators and market regulators. The FSB was able to coordinate, and contribute to, the work of the Basel Committee and IOSCO that produced the eventual agreement. Another obvious virtue of a multiplicity of international entities with a financial focus is that different, complementary perspectives are frequently brought to bear on a single set of problems.

At some point, it likely will be beneficial to rationalize somewhat the overlapping, sometimes competing efforts of these various international arrangements. For the near to medium term, though, it is important to have some principles for deciding upon the international agenda that should govern the efforts of these arrangements as a whole.

First, initiatives should be prioritized. One point of emphasis should be completing, and ensuring implementation of, the internationally agreed-upon framework for containing the too-big-to-fail risks associated with systemically important firms. Another should be distilling the various ideas relating to short-term funding vulnerabilities into a few that have promise as relatively near-term initiatives, while continuing monitoring of potential risks and consideration of additional measures.

A second, related principle is that initiatives should be focused and manageable, reflecting not only the limited capacity of participating national authorities, but also the desirability of reaching at least a temporary equilibrium at which firms can continue with the business of planning their strategies in a clearer regulatory environment, and regulators can begin to take stock of the cumulative effects and effectiveness of the changes that have taken place in that environment.

A third principle is that, in most instances at least, international efforts to develop new regulatory mechanisms or approaches should build on experience derived from national practice in one or more jurisdictions. The challenges encountered during the initial effort to devise a Liquidity Coverage Ratio in the Basel Committee, with little or no precedent of national quantitative liquidity requirements from which to learn, should counsel caution in trying to construct new regulatory mechanisms from scratch at the international level. Of course, in the immediate aftermath of the crisis, there was a need to harness the broad-based demands for reform and move forward on some priority reforms without the benefit of learning from national initiatives. And, on an ongoing basis, there will need to be exceptions to this general principle, such as where the transnational arbitrage incentives of a regulatory measure are so strong as to make national efforts difficult to initiate and sustain without substantial loss of financial activity to other countries. One such example is the agreement on minimum margin requirements for uncleared derivatives, mentioned earlier.

21. Basel Comm. on Banking Supervision & Bd. of the Int'l Org. of Sec. Comm'ns, *Margin Requirements for Non-Centrally Cleared Derivatives*, Bank for Int'l Settlements (Sept. 2013), http://www.bis.org/publ/bcbs261.pdf.

On the other hand, there may also be areas where, notwithstanding the importance of a particular regulatory objective for international financial stability, it may be preferable to have different jurisdictions pursue a variety of approaches to achieving that objective.

Bearing in mind both these principles and the key areas for policy change at central banks and other financial regulators, let me now suggest some specific subjects for near-term emphasis. As to the framework for Systemically Important Financial Institutions ("SIFIs"), I would urge that two ongoing initiatives be completed and two ideas that have been in the discussion stage be developed into concrete proposals.

First, the proposal for a capital surcharge for SIFIs is nearing completion. The Basel Committee has done additional work to refine the methodology used in identifying the firms and calibrating the surcharge amount—perhaps a byproduct of the fact that this methodology had to be developed in the Basel Committee without the benefit of prior precedent. But this work has been completed, the updated list of systemically important banks will be announced in November 2013, and I am confident the surcharges will be applied to these banking organizations by their national regulatory authorities.

Second, we should complete work on designating non-bank SIFIs and developing appropriate policy measures to manage the risks they pose to global financial stability. In July 2013, the FSB announced a list of nine insurance firms of global systemic importance and the policy measures being developed by the IAIS to apply to these firms.[22] Because of the considerable differences in the risks posed by traditional insurance activities, as compared to commercial banks or broker-dealers, it was important to take the time to evaluate carefully the actual systemic risk associated with these companies, and to understand the amount of such risk relative to other financial firms. These considerations will, among others, inform the development of capital requirements in the IAIS. As the FSB turns to an evaluation of non-bank, non-insurance financial firms, a similarly careful analysis is warranted.[23] It will also be important to bear in mind the possibility that the most effective measures to address systemic risk associated with the business model of a particular kind of financial intermediary may be requirements applicable to all such intermediaries, as opposed to designating the largest such firms.[24]

Third, we should build on the very good analytic work in the Basel Committee, both on simplifying capital requirements for credit risk and on

22. *Global Systemically Important Insurers*, *supra* note 12.

23. For example, the considerations relevant to evaluating the potential systemic importance of asset managers are arguably quite different from those relevant to evaluating banks, broker-dealers, *or* insurance companies. *See* Office of Fin. Research, *Asset Management and Financial Stability*, U.S. Dep't of the Treasury (Sept. 2013), http://www.treasury.gov/initiatives/ofr/research/Documents/OFR_AMFS_FINAL.pdf.

24. For a discussion of this point, see Daniel K. Tarullo, Member, Bd. of Governors of the Fed. Reserve Sys., Regulating Systemic Risk, Remarks at the 2011 Credit Markets Symposium (Mar. 31, 2011) (transcript available at http://www.federalreserve.gov/newsevents/speech/tarullo20110331a.pdf).

fashioning standardized capital requirements for market risk, to apply standardized credit and market risk capital measures to all internationally active banking firms.[25] As I mentioned earlier, the United States has already adopted such a requirement for capital requirements on credit risk. These standardized measures serve as a floor to guard against the potential for models-based capital measures to understate capital needs under some circumstances. They are also substantially less opaque than, for example, the advanced internal ratings-based approach of Basel II, and thus would provide more comparable measures that are also substantially more amenable to international monitoring.[26]

Fourth, I would hope to see us move from discussion to an international proposal for a regulatory requirement for minimum amounts of long-term unsecured debt in large internationally active financial institutions, which would be available to absorb losses in the event of insolvency. Towards this end, the Chairman of the FSB has reported publicly that the FSB will make proposals on the total amount of loss-absorbing capacity that systemically important institutions should maintain.[27] As I mentioned earlier, work on resolution continues, albeit at different paces in different jurisdictions. Given the complexities arising from the independent, often differing national bankruptcy and insolvency laws, the goal of achieving a fully integrated resolution regime for internationally active financial firms may take a good deal of time. But a minimum long-term debt requirement would at least provide national authorities with sufficient equity and long-term debt in these firms to bear all losses in the event of insolvency, and thereby counteract the moral hazard associated with taxpayer bailouts without risking disorderly failure. This requirement would not break brand new regulatory ground, since it would really be a modification of existing Tier 2 gone-concern capital concepts, and would complement the requirement for minimum equity levels included in Basel III.

As implied in my identification of short-term funding vulnerabilities as a priority area, the way forward here is considerably less easy to specify. Short-term initiatives on money market funds and tri-party repo are both possible and desirable. In truth, though, because money market funds are largely American and, to a somewhat lesser extent, European, the United States and the European Union together have the ability to address the global run risks associated with these products. I think we also have the

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25. *See* Basel Comm. on Banking Supervision, *The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability*, Bank for Int'l Settlements (July 2013), http://www.bis.org/publ/bcbs258.pdf.

26. The difficulties inherent in assessing whether these more opaque, complicated measures are being rigorously and consistently implemented across jurisdictions and among banks are evidenced in the Basel Committee's efforts to compare risk-weightings using banks' internal models. *See* Basel Comm. on Banking Supervision, *Regulatory Consistency Assessment Programme (RCAP): Analysis of Risk-Weighted Assets for Credit Risk in the Banking Book*, Bank for Int'l Settlements (July 2013), http://www.bis.org/publ/bcbs256.pdf. *See generally* Banking on Basel, *supra* note 1, at 166–72, 205–06.

27. Memorandum from Mark Carney, Chairman, Fin. Stability Bd., to G20 Leaders, *Progress of Financial Reforms* 2–3 (Sept. 5, 2013), http://www.financialstabilityboard.org/publications/r_130905.pdf.

responsibility to do so, but not necessarily in identical ways. Accordingly, I would hope that both the United States and the European Union would each take effective action to counter the run risk, tailored as appropriate to their regulatory environments, and then explain those actions at IOSCO and the FSB, where their efficacy can be reviewed. Similarly, since the settlement process for tri-party repo that remains of concern is centered at two institutions, both of which are regulated American banks, the United States can take effective action without need of an international agreement.

As to broader initiatives, proposals to require minimum haircuts for all securities financing have been discussed in the FSB. This is certainly a ripe subject for consideration, insofar as securities financing transactions facilitate leverage, enable maturity transformation, and produce the kind of interconnectedness that can spawn runs and contagion. At present, no set of generally applicable prudential standards governs these activities. Even within regulated firms, microprudential risk-weighted capital standards have little effect, since they are calibrated against credit risk and most such transactions are short-term and fully (or over) collateralized. International liquidity requirements—including the LCR and the Net Stable Funding Ratio, a proposal intended to complement the LCR by setting minimum standards with a one-year horizon—are also essentially microprudential in orientation, since they focus on the funding and asset positions of each firm individually, rather than the funding needs of the financial system as a whole.

Accordingly, requirements that would attach to instruments and transactions, as opposed to firms that happen to be prudentially regulated for other reasons, have considerable attraction. In the first place, such an approach would more directly prompt some internalization of the costs of securities financing transactions associated with the tail risk of normally-safe, short-term lending contracting dramatically in the face of sudden and significant uncertainty about asset values and the conditions of counterparties. Second, the application of measures to transactions, rather than firms, would avoid creating an incentive for securities financing to migrate outside the regulatory perimeter.[28]

The FSB has published, and solicited comment on, a proposal for a framework of numerical haircut floors on securities financing transactions in which entities not subject to prudential regulation receive financing from regulated financial intermediaries against collateral other than government securities.[29] This is a limited proposal, in that it relies upon existing, largely microprudential regulation to cover transactions between regulated entities, and it leaves uncovered transactions between unregu-

28. The substantial negative externalities that could result from the rapid unwinding of a large trading book, even one that was reasonably well-matched, may aid arguments in favor of complementary regulatory or supervisory measures to be directed at firms with those very large books.

29. *Strengthening Oversight and Regulation of Shadow Banking*, FIN. STABILITY BD. 22–34 (Aug. 29, 2013), http://www.financialstabilityboard.org/publications/r_130829b.pdf.

lated entities. Also, by excluding transactions backed with government securities, it leaves a significant portion of even regulated-to-unregulated securities financing uncovered. Still, it is a start, and the comments and data collected in evaluating the proposal should be useful in considering whether to broaden the proposal.

Conclusion

Responses to what I have described as the three challenges to pre-crisis central bank policies will continue to evolve. So will the reenergized international agenda for cooperation in international financial regulation. My aim here has not been to lay out a comprehensive program for either, but rather to show that these changing agendas are neither completely correlated nor completely independent. In suggesting some concrete next steps, I have tried to define some useful and important points of intersection between the two.