

ADAPTATION AND RESILIENCE IN GLOBAL FINANCIAL REGULATION

DOUGLAS W. ARNER*

The global credit crisis of 2008 has demonstrated beyond any doubt that pre-existing international arrangements were insufficient to preserve stability in the global financial system, resulting in the most serious global economic and financial crisis since the Great Depression. This article examines the agenda being pursued through the Group of 20 (G-20), Financial Stability Board (FSB) and related organizations to reform international financial regulation in the wake of the global financial crisis, focusing on whether the international regulatory agenda in fact addresses the fundamental sources of systemic risk underlying the global crisis. In addressing this question, the article begins by suggesting the basic elements of a financial regulatory system to effectively address systemic risk, arguing that in each case, the global financial crisis has highlighted specific failures of the pre-crisis regulatory approach, then provides an overview and analysis of international responses to the global financial crisis, focusing on the G-20 and FSB. The article concludes, arguing that, while much has been achieved to date, the post-crisis international regulatory reforms that have been agreed would not have prevented the global financial crisis nor are sufficient to lay the foundations for future global financial stability.

[INSERT TOC]

INTRODUCTION

The global credit crisis of 2008 has demonstrated beyond any doubt

* Director, Asian Institute of International Financial Law and Professor, Faculty of Law, University of Hong Kong. The author would like to thank Jackson Mabry for extensive comments and suggestions on earlier drafts of this Article, as well as participants in the 2010 North Carolina Law Review Symposium in which an early version was presented.

that pre-existing international arrangements were insufficient to preserve stability in the global financial system, resulting in the most serious global economic and financial crisis since the Great Depression.¹ Similar to most other official reports and post-crisis analyses, in reviewing the causes of the crisis in the United States, the official Financial Crisis Inquiry Commission (FCIC) concluded, first, that the crisis was avoidable,² and second, that the crisis was caused by: (1) “widespread failures in financial regulation and supervision”;³ (2) “dramatic failures of corporate governance and risk management at many systemically important financial institutions”;⁴ (3) “a combination of excessive borrowing, risky investments, and lack of transparency”;⁵ and (4) “a systemic breakdown in accountability and ethics.”⁶ In the context of addressing the crisis, the FCIC found the U.S. government and regulatory system “w[ere] ill prepared for the crisis, and its inconsistent response added to the uncertainty and panic in the financial markets.”⁷

While these conclusions focus on the U.S. financial system, they are

1. There is now a massive and ever-growing literature on the causes of the global financial crisis. For the official analysis in the context of the U.S., see U.S. FIN. CRISIS INQUIRY COMM’N [FCIC], *THE FINANCIAL CRISIS INQUIRY REPORT* (2011), available at <http://www.gpoaccess.gov/fcic/fcic.pdf>. For the leading discussion in the U.K. and global context, see U.K. FIN. SERVS. AUTH., *THE TURNER REVIEW: A REGULATORY RESPONSE TO THE GLOBAL BANKING CRISIS* (2009), available at http://www.fsa.gov.uk/pubs/other/turner_review.pdf. For the leading discussion in the E.U. context, see THE HIGH-LEVEL GRP. ON FIN. SUPERVISION IN THE E.U., *REPORT* (2009), available at http://ec.europa.eu/internal_market/finances/docs/de_larosiere_report_en.pdf. Book-length treatments include, inter alia: JOHN CASSIDY, *HOW MARKETS FAIL: THE LOGIC OF ECONOMIC CALAMITIES* (2009); ROBERT W. KOLB, *THE FINANCIAL CRISIS OF OUR TIME* (2011); ANDREW ROSS SORKIN, *TOO BIG TO FAIL: THE INSIDE STORY OF HOW WALL STREET AND WASHINGTON FOUGHT TO SAVE THE FINANCIAL SYSTEM FROM CRISIS—AND THEMSELVES* (2009); JOSEPH E. STIGLITZ, *FREEFALL: AMERICA, FREE MARKETS, AND THE SINKING OF THE WORLD ECONOMY* (2010); GILLIAN TETT, *FOOL’S GOLD: HOW THE BOLD DREAM OF A SMALL TRIBE AT J.P. MORGAN WAS CORRUPTED BY WALL STREET GREED AND UNLEASHED A CATASTROPHE* (2009). For this author’s analysis of the causes of the crisis, see ROSS P. BUCKLEY & DOUGLAS W. ARNER, *FROM CRISIS TO CRISIS: THE GLOBAL FINANCIAL SYSTEM AND REGULATORY FAILURE* (forthcoming 2011); Douglas W. Arner, *The Global Credit Crisis of 2008: Causes and Consequences*, 43 INT’L LAW. 91 (2009) [hereinafter Arner, *Credit Crisis*].

2. FCIC, *supra* note 1, at xvii.

3. *Id.* at xviii. The terms “regulation” and “supervision” are frequently used interchangeably in the context of finance. However, in a technical sense, “regulation” refers to the actual rules, systems and structures while “supervision” refers to the process of monitoring both compliance with “regulation” and also the overall condition of markets and financial market participants.

4. *Id.*

5. *Id.* at xix.

6. *Id.* at xxii.

7. *Id.* at xxi.

equally applicable to the experiences of the United Kingdom and the European Union.⁸ The financial crisis of 2008 was a global financial crisis and one which emanated from the global financial system and from international regulatory efforts to address common risks and concerns, including financial stability.⁹ Financial stability, at its most elemental level, depends on regulators' effectively monitoring, preventing, and addressing systemic risk,¹⁰ and the global financial crisis of 2008 has underlined that pre-crisis international financial regulatory approaches were insufficient to prevent systemic risk or to maintain the stability of the global financial system. Moreover, the crisis has demonstrated the fact that preventing and addressing systemic risk is the fundamental aspect of financial regulatory design, not only at the domestic level but also in the context of the global financial system and the pseudo-system of international regulatory cooperation which has evolved to address its regulation.

This Article examines the agenda being pursued through the Group of 20 (G-20), Financial Stability Board (FSB) and related organizations to reform international financial regulation in the wake of the global financial crisis, focusing on whether the international regulatory agenda in fact addresses the main sources of systemic risk underlying the global crisis.¹¹ In other words, in the theme of this Symposium issue, is the post-crisis process of adaptation of international financial regulation sufficient to support the future resilience of the global financial system? In addressing this question, Part II of this Article begins by suggesting the basic elements of a financial regulatory system to effectively address systemic risk,

8. For detailed discussion and similar conclusions, see THE HIGH-LEVEL GRP. ON FIN. SUPERVISION IN THE E.U., *supra* note 1.

9. For a detailed discussion of the pre-crisis international arrangements addressing financial stability and their evolution, see DOUGLAS ARNER, FINANCIAL STABILITY, ECONOMIC GROWTH, AND THE ROLE OF LAW 63–88 (2007); Rolf H. Weber & Douglas W. Arner, *Toward a New Design for International Financial Regulation*, U. PA. J. INT'L L. 391, 406–20 (2007).

10. Systemic risk is defined as:

the risk that an event will trigger a loss of economic value or confidence in, and attendant increases in uncertainty about, a substantial portion of the financial system that is serious enough to quite probably have significant adverse effects on the real economy. Systemic risk events can be sudden and unexpected, or the likelihood of their occurrence can build up through time in the absence of appropriate policy responses. The adverse real economic effects from systemic problems are generally seen as arising from disruptions to the payment system, to credit flows, and from the destruction of asset values.

GROUP OF TEN, REPORT ON CONSOLIDATION IN THE FINANCIAL SECTOR 126 (2001), available at <http://www.bis.org/publ/gten05.pdf>.

11. This Article does not consider purely domestic (e.g., U.S.) or regional (e.g., E.U.) responses.

arguing that in each case, the global financial crisis has highlighted specific failures of the pre-crisis regulatory approach.

In order to assess the central question, Part III provides an overview of international responses to the global financial crisis, focusing on the G-20 and FSB. Despite its seeming ambition, it remains open to debate whether the G-20 / FSB response to date, if implemented prior to the global financial crisis, would have in fact been sufficient to prevent its occurrence—arguably the central policy objective at this point in time.¹² With this overall objective in mind, Part IV turns to the issues where arguably the greatest success has been achieved—regulation and infrastructure. Parts V and VI then discuss areas where arguably less has been achieved, notably macroprudential regulation, regulatory system design, addressing systemically important financial institutions (SIFIs), and financial institution resolution. The Article then concludes, arguing that, while much has been achieved to date, the post-crisis international regulatory reforms that have been agreed to date would not have prevented the global financial crisis nor are sufficient to lay the foundations for future global financial stability.

I. FINANCIAL REGULATION AND SYSTEMIC RISK

In this author's opinion, designing a regulatory system to address systemic risk requires addressing seven core elements.¹³ First, the system must ensure the existence of a robust financial infrastructure, especially payment and settlement systems. Financial infrastructure is the essential "plumbing" of any financial system and must be regulated to maintain stability and effectiveness. Second, the regulatory system should support the existence of well-managed financial institutions with effective corporate governance and risk management systems. While regulation cannot and should not prevent the failure of financial institutions, it still must provide ground rules and incentives to improve management when possible. Third, financial markets require information; regulation should thus provide disclosure requirements for financial institutions, markets, and products sufficient to support market discipline and address information asymmetries which may have negative implications for market functioning

12. International efforts need to be forward looking as well and should be seeking to put in place arrangements to address the next crisis, rather than simply addressing the failures relating to the last crisis. However, this Article argues that international efforts have not yet even dealt with the issues raised by the last crisis, let alone addressed issues relating to future crises.

13. This framework is derived from ARNER, *supra* note 9, at 317–19, 322–35.

and confidence. At the same time, disclosure requirements should be sufficient to provide regulators with comprehensive information not only about individual financial institutions and products (“microprudential regulation”), but also about interlinkages across markets, institutions, and products (“macroprudential regulation”). Fourth, in addition to reinforcing risk management and market discipline, the regulatory system should provide minimum requirements for safety and soundness of individual financial institutions, markets, and essential infrastructures—what it traditionally known as “prudential regulation.” These four elements seek to address prevention of systemic financial crises and at the same time establish the primary regulatory elements supporting the effective functioning of any financial system.

At the same time, a system needs to be able to address crises when they occur. The final three elements thus seek to establish a minimum regulatory framework for such circumstances. First, there should be a liquidity provider (or lender) of last resort to provide liquidity to financial institutions and markets on an appropriate basis. This role is typically filled by the central bank of a given monetary system. Second, in order to address the possibility of financial institution failure, there should be mechanisms for resolving problematic financial institutions, including insolvency arrangements. Finally, there must be mechanisms to protect financial services consumers in order to maintain market confidence, including in the event of financial institution failure.

While this framework applies to the design of any domestic or regional financial system in addressing systemic risk, in the context of a globalized financial system, these issues cannot be addressed solely in individual jurisdictions but require global coordination and cooperation. Global coordination is necessary not only to assure high regulatory standards but also to ensure a level playing field across jurisdictions. In the global financial crisis, regulatory weaknesses in each of these areas combined both in allowing excesses to develop and in making their resolution extremely difficult.

First, in relation to infrastructure, the central weakness exposed by the crisis has been in relation to the current bilateral structure of over-the-counter (OTC) derivatives markets. In this structure, OTC derivatives transactions are organized on a bilateral contractual basis, generally supported by collateral, without central trading or clearing, resulting in exposure to risks of counterparty failure, in addition to any risks associated with the transaction itself. In addition, the bilateral OTC structure minimized transparency, both to participants and to regulators, increasing

risks of loss of confidence and contagion across products, institutions and markets. These issues were exposed most directly in the context of the Lehman Brothers and AIG.

Second, in relation to corporate governance, it has become evident that many financial institutions failed to adequately manage their own risks or businesses prior to the global financial crisis.¹⁴ This is certainly one of the central failures in the global financial crisis.

Third, disclosure requirements did not sufficiently support transparency and market discipline. In fact, systemic risks arose due to asymmetric information—essentially, weaknesses in transparency and disclosure.¹⁵ Such issues are characteristic of the highly complex structured products, which acted as the transmission mechanism of the excesses preceding the crisis and led to adverse selection issues during the crisis. The reliance on credit ratings and credit rating agencies exacerbated such issues both prior to and during the crisis.¹⁶ In this respect, transparency is fundamental not only to stability, but also to effective market functioning and should be a continuing major focus.

Fourth, in relation to prudential regulation, in most cases, systemic risk did not arise from areas which were the subject of regulatory responsibility. Instead, risks arose primarily from areas which were largely unregulated; these practices are now described as “shadow banking.”¹⁷ Examples include mortgage broker activities, off-balance-sheet activities of banks, thrifts and securities firms, OTC derivatives, and non-traditional activities of insurance companies. In these cases, risks often arose from regulatory arbitrage as financial firms actively moved activities outside of regulated areas.¹⁸ Such regulatory arbitrage was also in many cases made possible by the splintering of financial regulation in the United States

14. FCIC, *supra* note 1, at xix.

15. *See id.* at xix–xx.

16. *See, e.g.*, Paul Lejot et al., *Securitization in East Asia* 32 (Asian Dev. Bank, Working Paper Series on Reg'l Econ. Integration No. 12, 2008), available at http://aric.adb.org/pdf/workingpaper/WP12_Securitization_in_East_Asia.pdf (“Periods of market disruption tend to include calls for [credit] rating agency reform based upon the observation that they often fail to predict imminent credit problems.”).

17. *See generally* Z. POZSAR ET AL., FED. RESERVE BANK OF N.Y., STAFF REPORTS NO. 458: SHADOW BANKING (Jul. 2010), available at http://www.newyorkfed.org/research/staff_reports/sr458.pdf (discussing shadow banks and their role in the U.S. economy and their relationship with traditional, central-bank-backed banks); Financial Stability Board, *Shadow Banking: Scoping the Issues – A Background Note of the Financial Stability Board* (Apr. 2011), available at http://www.financialstabilityboard.org/publications/r_110412a.pdf.

18. FCIC, *supra* note 1, at xx.

across a large number of regulators, with individual regulators usually less concerned about activities falling outside of the scope of their major responsibilities.¹⁹ In addition, systemic risks arose due to improperly designed prudential regulatory standards, especially in relation to capital, liquidity, and leverage. In this respect, appropriate coverage of regulation is an essential focus, especially with regard to improving the quality, quantity, and international consistency of capital, including regulation to prevent excessive leverage and requiring buffers of resources to be built up in good times.

Fifth, in relation to liquidity, resolution, and consumer protection, systemic risk arose due to the lack of appropriate mechanisms to deal with problems which arose from unregulated and/or unexpected sources. Examples include the necessity of rescuing AIG and also the lack of a mechanism for appropriately resolving Lehman Brothers.²⁰ Prior to 2008, liquidity assistance was generally limited to banks. The crisis exposed the limitations of the separation of liquidity provision from prudential regulation, most obviously in the cases of Bear Stearns, Lehman Brothers, Merrill Lynch, and AIG. In addition to the clear need for effective resolution mechanisms for banks, the lack of a similar mechanism capable of dealing with non-banks or financial conglomerates (whether bank, thrift, or other financial holding company structures) has highlighted a key weakness in most regulatory systems.

In hindsight, it is now clear that too much attention was placed on monetary policy rather than balancing monetary policy and financial stability, that regulatory attention focused excessively on the safety and soundness of individual financial institutions rather than on systemic risks and linkages across institutions and markets, that prudential regulatory and risk management systems did not take adequate account of market cycles and crises, and that the realities of potential failures of large complex financial institutions had not been adequately addressed in advance. Against this framework, this Article next turns to the post-crisis international regulatory agenda of the G-20 and FSB.

II. THE POST-CRISIS INTERNATIONAL FINANCIAL REGULATORY AGENDA

At the international level, since 2008 the G-20 has assumed the leading role in coordinating post-crisis responses and financial regulatory reforms, and thus its responses over the last three years logically provide

19. *Id.* at xxi.

20. *See* POZSAR ET AL., *supra* note 17, at 2.

the starting point for analysis of global financial reforms.²¹ While the G-20 is not a traditional treaty-based international organization and its pronouncements have no international legal force, it has become the main policy-directing body for international financial and economic policy.²² The impact of the G-20 on international financial regulation results mainly from domestic implementation of internationally agreed approaches as well as through voting control of the more formal international organizations, such as the International Monetary Fund (IMF) and World Bank.²³ Unlike areas such as trade and currency issues, the G-20 has arguably been quite effective in both formulating and implementing its international financial regulatory agenda. This section thus first discusses the contours of the G-20 financial regulatory agenda, before turning to the consequential issue of mechanisms for ensuring its implementation.

A. *The First G-20 Leaders' Summit: Establishing the Agenda for Post-Crisis Financial Regulatory Reform*

At its initial leaders' summit in Washington, D.C., in November 2008, the G-20 began to address financial regulatory reform by focusing on the causes of the global financial crisis and identifying its overall agenda. In

21. The G-20 was created in 1999 after the 1997 Asian financial crisis. *About G-20*, G-20.ORG, http://www.g20.org/about_what_is_g20.aspx (last visited Mar. 12, 2011). From 1999 to 2008, it was comprised of ministers of finance and central bank governors meeting annually, supported by biannual meetings of deputy ministers and deputy central bank governors. *Id.* In November of 2008, it met at Washington, D.C., for the first time at the heads-of-government level. *Id.* Since that time, it has met four times at the heads of government level: in London, U.K. (Apr. 2009); in Pittsburgh, Pa. (Sept. 2009); in Toronto, Can. (July 2010); and in Seoul, S. Kor. (Nov. 2010). *Id.* The next G-20 leaders' summit is scheduled for Paris, France in July of 2011. Since 2008, the G-20 has also met twice per year (in advance of each leaders' summit) at the level of deputy ministers of finance and deputy central bank governors. *Id.* Official communiqués are typically released for each leaders' summit and each meeting of ministers of finance and central bank governors. *Id.* Meetings at the level of deputy ministers of finance and deputy central bank governors do not typically result in officially released communiqués. *Id.*

22. This Article considers only the G-20 agenda for financial regulatory reform and does not discuss G-20 initiatives relating to reform of the international financial architecture. For a comprehensive discussion of the Washington and London summits, see Arner, *supra* note 1, at 120–34. For discussion of the G-20 agenda for reform of the international financial architecture, see Douglas W. Arner & Ross P. Buckley, *Redesigning the Architecture of the Global Financial System*, MELB. J. INT'L L., Nov. 2010, at 22–36, available at <http://mjil.law.unimelb.edu.au/go/issues/current-issue>.

23. Control of the IMF and World Bank is exerted through a system of voting based on shareholding, with the G-20 holding together over eighty percent of the votes of both institutions. See JOHN HEAD, LOSING THE GLOBAL DEVELOPMENT WAR: A CONTEMPORARY CRITIQUE OF THE IMF, THE WORLD BANK AND THE WTO 113–15 (2008); Arner & Buckley, *supra* note 22, at 27–30.

addressing the causes and necessary responses to the global financial crisis, the G-20 set the parameters for its approach to post-crisis financial regulation:

[W]e will implement reforms that will strengthen financial markets and regulatory regimes so as to avoid future crises. Regulation is first and foremost the responsibility of national regulators who constitute the first line of defense against market instability. However, our financial markets are global in scope, therefore, intensified international cooperation among regulators and strengthening of international standards, where necessary, and their consistent implementation is necessary to protect against adverse cross-border, regional and global developments affecting international financial stability. Regulators must ensure that their actions support market discipline, avoid potentially adverse impacts on other countries, including regulatory arbitrage, and support competition, dynamism and innovation in the marketplace.²⁴

Leaders established five main principles to guide the reform agenda: (1) strengthening transparency and accountability; (2) enhancing sound regulation; (3) promoting integrity in financial markets; (4) reinforcing international cooperation; and (5) reforming the financial architecture.²⁵ For each of these five principles, the G-20 agreed a detailed action plan, incorporating both immediate and medium-term actions and outlining the core agenda for post-crisis reform of international financial regulatory standards. The action plans for “enhancing sound regulation” and “reinforcing international cooperation” are summarized in Table 1 below.

24. Group of Twenty (G-20), *Declaration: Summit on Financial Markets and the World Economy*, at 2 (Nov. 15, 2008), available at http://www.g20.org/Documents/g20_summit_declaration.pdf.

25. *Id.* at 3. Issues relating to reform of the international financial architecture are beyond the scope of this Article. For detailed discussion, see generally Arner & Buckley, *supra* note 22; BUCKLEY & ARNER, *supra* note 1.

*Table 1: Summary of G-20 Financial Regulatory Reform Agenda*²⁶

Immediate Actions	Medium-Term actions
I. Regulatory Regimes	
Mitigate pro-cyclicality, including in the context of valuation and leverage, bank capital, executive compensation, and provisioning practices	<ul style="list-style-type: none"> •Review of the structure and principles of individual regulatory systems to ensure compatibility with global finance. •G-20 members undertake a Financial Sector Assessment Program (FSAP) report and support the transparent assessments of countries' national regulatory systems
	Review the differentiated nature of regulation in the banking, securities, and insurance sectors. Review scope of financial regulation, with a special emphasis on institutions, instruments, and markets that are currently unregulated, along with ensuring that all systemically-important institutions are appropriately regulated.
	Review resolution regimes and bankruptcy laws to ensure that they permit an orderly wind-down of large complex cross-border financial institutions.
	Definitions of capital to be harmonized in order to achieve consistent measures of capital and capital adequacy.
II. Prudential Oversight	
Regulators to take steps to ensure that credit rating agencies meet high standards and avoid conflicts of interest, provide greater disclosure to investors and to issuers, and differentiate ratings for complex products.	Credit Ratings Agencies that provide public ratings to be registered.
Review credit rating agencies' adoption of	Develop robust and internationally

26. G-20, *Action Plan to Implement Principles for Reform* (Nov. 15, 2008), available at http://www.g20.org/Documents/g20_summit_declaration.pdf [hereinafter G-20, *Action Plan*].

2011]

GLOBAL FINANCIAL REGULATION

111

the standards and mechanisms for monitoring compliance.	consistent approaches for liquidity supervision of, and central bank liquidity operations for, cross-border banks.
Ensure that financial institutions maintain adequate capital. Set strengthened capital requirements for banks' structured credit and securitization activities.	
Reduce the systemic risks of credit default swaps (CDS) and over-the-counter (OTC) derivatives transactions.	
III. Risk Management	
Develop enhanced guidance to strengthen banks' risk management practices.	Ensure that regulatory policy makers are aware and able to respond rapidly to evolution and innovation in financial markets and products.
Develop and implement procedures to ensure that financial firms implement policies to better manage liquidity risk, including by creating strong liquidity cushions.	Monitor substantial changes in asset prices and their implications for the macroeconomy and the financial system.
Ensure that financial firms develop processes that provide for timely and comprehensive measurement of risk concentrations and large counterparty risk positions across products and geographies.	
Reassess their risk management models to guard against stress and report to supervisors on their efforts.	
Develop firms' new stress testing models, as appropriate.	
Clear internal incentives for financial institutions.	

Exercise effective risk management and due diligence over structured products and securitization.	
IV. Reinforcing International Cooperation	
Establish supervisory colleges for all major cross-border financial institutions.	Collect information on areas where convergence in regulatory practices such as accounting standards, auditing, and deposit insurance is making progress, is in need of accelerated progress, or where there may be potential for progress.
Strengthen cross-border crisis management arrangements.	Ensure that temporary measures to restore stability and confidence have minimal distortions and are unwound in a timely, well-sequenced and coordinated manner.

Within this agenda, G-20 leaders tasked their respective finance ministers to focus on developing concrete recommendations in six specific areas:

- (1) Mitigating against pro-cyclicality in regulatory policy;
- (2) Reviewing and aligning global accounting standards, particularly for complex securities in times of stress;
- (3) Strengthening the resilience and transparency of credit derivatives markets and reducing their systemic risks, including by improving the infrastructure of over-the-counter markets;
- (4) Reviewing compensation practices as they relate to incentives for risk taking and innovation;
- (5) Reviewing the mandates, governance, and resource requirements of the [international financial institutions, especially the IMF]; and
- (6) Defining the scope of systemically important institutions

and determining their appropriate regulation or oversight.²⁷

This initial G-20 agenda clearly seek to address all the seven regulatory elements above as necessary to address systemic risk. However, as always, the real test of effectiveness lies in the approaches taken to address the individual elements. Subsequent leaders' summits have successively agreed to progressively more detailed implementation arrangements.

B. The Second G-20 Leaders' Summit: Establishment of the FSB

Building on the commitments and resolutions of this initial meeting, the G-20 leaders met in London in April 2009 for their second summit. The second summit focused mainly on fleshing out policy directions within the context of the agenda set at the first leaders' summit in November 2008 in Washington. Leaders agreed to policy directions in major areas of the reform agenda and established a new organization, the Financial Stability Board (FSB), to be responsible for technical details and to monitor implementation. In the resulting communique, G-20 leaders reaffirmed their commitment to the Washington agenda and action plan for financial regulatory reform²⁸ and announced a range of substantive agreements in major areas of the action plan,²⁹ with additional details in a supplementary declaration.³⁰ The result was agreement on the guiding parameters for specific action items of the Washington financial regulatory reform agenda.

Of greatest significance, in relation to international cooperation and financial standards, the Financial Stability Forum (FSF), established along with the G-20 in 1999 in the wake of the Asian financial crisis, was renamed and reconstituted as the FSB.³¹ The G-20 leaders provided the

27. G-20, *supra* note 24, at 4.

28. Commencing a pattern which has been repeated at subsequent summits, the G-20 released a detailed progress report on implementation of previous commitments. G-20 London Summit, *Progress Report on the Actions of the Washington Action Plan* (Apr. 2, 2009), available at http://www.g20.org/Documents/FINAL_Annex_on_Action_Plan.pdf.

29. G-20, *The Global Plan for Recovery and Reform*, ¶ 13–16, (Apr. 2, 2009) available at <http://www.g20.org/Documents/final-communique.pdf> [hereinafter G-20, *Global Plan*].

30. G-20, *Declaration on Strengthening the Financial System* (Apr. 2, 2009), available at http://www.g20.org/Documents/Fin_Deps_Fin_Reg_Annex_020409_-_1615_final.pdf. The Declaration in fact addresses eight areas: (1) "Financial Stability Board"; (2) "International cooperation"; (3) "Prudential regulation"; (4) "The scope of regulation"; (5) "Compensation"; (6) "Tax havens and non-cooperative jurisdictions"; (7) "Accounting standards"; and (8) "Credit Rating Agencies." *Id.* The Declaration also addresses issues relating to the IMF and FSB's developing early warning systems. *Id.* at 1.

31. For a detailed discussion of the FSB, see Douglas W. Arner & Michael W. Taylor, *The Global Credit Crisis and the Financial Stability Board: Hardening the Soft Law of International*

FSB with a mandate to coordinate international financial regulatory initiatives and monitor their implementation.³² Hosted by the Bank for International Settlements (BIS)³³ in Basel, Switzerland, the FSB brings together G-20 finance ministries, central banks, and regulatory authorities, along with the main international and regional financial institutions: the BIS, IMF, World Bank, Organization for Economic Cooperation and Development (OECD), European Central Bank, and European Commission. In addition, the main international standard-setting bodies are included: the Basel Committee on Banking Supervision (BCBS), International Organization of Securities Commissions (IOSCO), International Association of Insurance Supervisors (IAIS), International Accounting Standards Board (IASB), Committee on the Global Financial System (CGFS), and Committee on Payment and Settlement Systems (CPSS).³⁴

As reconstituted following the 2009 London G-20 summit, the FSB has a ten-point mandate detailing its role in supporting international financial regulatory cooperation.³⁵ In turn, FSB member jurisdictions,

Financial Regulation?, 32 U. N.S. WALES L.J. 488 (2009).

32. The FSB Charter provides:

The Financial Stability Board (FSB) is established to coordinate at the international level the work of national financial authorities and international standard setting bodies (SSBs) in order to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. In collaboration with the international financial institutions, the FSB will address vulnerabilities affecting financial systems in the interest of global financial stability.

FSB Charter, art. 1, available at http://www.financialstabilityboard.org/publications/r_090925d.pdf [hereinafter FSB Charter]. The FSB Charter explicitly provides that it is not a legal document. *Id.*, art. 16 (“This Charter is not intended to create any legal rights or obligations.”).

33. Formed initially to support reparations payments in the wake of World War I, the BIS is now the main international organization for central banks. *BIS History—Overview*, BANK FOR INTERNATIONAL SETTLEMENTS, <http://bis.org/about/history.htm> (last visited Mar. 21, 2011). Today, the BIS serves as the main international organization and forum for central banks. *About BIS*, BANK FOR INT’L SETTLEMENTS, <http://bis.org/about/index.htm> (last visited Mar. 21, 2011). The BIS also hosts a range of financial regulatory organizations, such as the FSB. Douglas W. Arner et al., *Central Banks and Central Bank Cooperation in the Global Financial System*, 23 PAC. MCGEORGE GLOBAL BUS. & DEV. L. J. 1, 40 (2010) (discussing the BIS in detail).

34. See *Links to FSB Members*, FINANCIAL STABILITY BOARD, <http://www.financialstabilityboard.org/members/links.htm> (last visited Mar. 21, 2011) (listing FSB members).

35. The FSB Charter specifically provides:

(1) As part of its mandate, the FSB will:

subject to FSB reporting and evaluation, commit to “pursue the maintenance of financial stability”; “maintain the openness and transparency of the financial sector”; “implement international financial standards”; and “undergo periodic peer reviews, using among other evidence IMF/World Bank public Financial Sector Assessment Program reports.”³⁶

The FSB can therefore be seen as the central organization responsible for coordinating detailed development of the G-20 international regulatory reform agenda and also for monitoring its implementation.

C. *The Third and Fourth Leaders’ Summits: Maintaining Commitment*

The third and fourth leaders’ summits in September 2009 and June 2010 were most significant in affirming commitment to the agreed agenda and major policy directions established in previous summits. In September 2009, at their third summit in Pittsburgh, Pennsylvania, G-20 leaders reiterated their support for existing initiatives and committed to continuing implementation of previously agreed-upon actions.³⁷ Unlike the

-
- (a) assess vulnerabilities affecting the global financial system and identify and review on a timely and ongoing basis the regulatory, supervisory and related actions needed to address them, and their outcomes;
 - (b) promote coordination and information exchange among authorities responsible for financial stability;
 - (c) monitor and advise on market developments and their implications for regulatory policy;
 - (d) advise on and monitor best practice in meeting regulatory standards;
 - (e) undertake joint strategic reviews of the policy development work of the international standard setting bodies to ensure their work is timely, coordinated, focused on priorities and addressing gaps;
 - (f) set guidelines for and support the establishment of supervisory colleges;
 - (g) support contingency planning for cross-border crisis management, particularly with respect to systemically important firms;
 - (h) collaborate with the International Monetary Fund (IMF) to conduct Early Warning Exercises; and
 - (i) undertake any other tasks agreed by its Members in the course of its activities and within the framework of this Charter.

- (2) The FSB will promote and help coordinate the alignment of the activities of the SSBs to address any overlaps or gaps and clarify demarcations in light of changes in national and regional regulatory structures relating to prudential and systemic risk, market integrity and investor and consumer protection, infrastructure, as well as accounting and auditing.

FSB Charter, *supra* note 32, art. 2.

36. *Id.* at art. 5(1).

37. See generally G-20, *The Pittsburgh Summit Leaders’ Statement* (Sept 24–25, 2009), available at http://www.g20.org/Documents/pittsburgh_summit_leaders_statement_250909.pdf

Washington or London summits, in the area of international financial regulatory reform the Pittsburgh summit did little more than reaffirm commitment to the previously established agenda. While not a dramatic achievement, this reaffirmation served to continue the process of development of technical proposals through the FSB and its constituents.

In June 2010, at their fourth summit in Toronto, Ontario, G-20 leaders refocused attention on financial sector reform under a four-pillar structure: first, “a strong regulatory framework,” second, “effective supervision,” third, “resolution and addressing systemic institutions,” and fourth, “transparent international assessment and peer review.”³⁸ This framework, while useful analytically, was not repeated in the most recent leaders’ summit at Seoul, South Korea in November of 2010.

D. The Fifth G-20 Leaders’ Summit: Endorsing the “New Financial Regulatory Framework”

In November 2010, in their fifth summit in Seoul, South Korea, leaders addressed a range of issues, including international financial regulation.³⁹ Significantly, the fifth summit in November 2010 announced general agreement on technical details developed through the FSB and its constituent organizations. In relation to financial regulation, abandoning the four-pillar structure of the Toronto summit, the G-20 announced the adoption of the “core elements of a new financial regulatory framework to transform the global financial system.”⁴⁰ Specific policies adopted address: (1) “capital and liquidity standards”; (2) “systemically important financial institutions (SIFIs)” and “global SIFIs (G-SIFIs)”; (3) financial institution resolution; (4) supervisory effectiveness; and (5) implementation.⁴¹

(discussing previous actions and new initiatives for improving the global economy) [hereinafter G-20, *Pittsburgh Leaders’ Statement*];

G-20, *Progress Report on the Actions to Promote Financial Regulatory Reform Issued by the U.S. Chair of the Pittsburgh G-20 Summit* (2009), available at http://www.g20.org/Documents/pittsburgh_progress_report_250909.pdf (reiterating the commitment and specific regulations aimed at improving the global economic crisis).

38. See G-20, *The G-20 Toronto Summit Declaration*, at 4–5 (June 26–27, 2010), available at http://www.g20.org/Documents/g20_declaration_en.pdf [hereinafter G-20, *Toronto Summit*].

39. See generally G-20, *The G-20 Seoul Summit Leaders’ Declaration* (Nov. 11–12, 2010), available at http://www.g20.org/Documents2010/11/seoulsummit_declaration.pdf (outlining a new stage of international financial regulation and continued commitment to previously implemented rules) [hereinafter G-20, *Seoul Summit*].

40. *Id.* at 7.

41. G-20, *The Seoul Summit Document*, at 7–9 (Nov. 11–12, 2010), available at http://www.g20.org/Documents2010/11/seoulsummit_declaration.pdf. In addition, leaders identified a range of regulatory issues for further attention, specifically: (1) “macro-prudential

The period following the fifth summit, consequently, constitutes an ideal point to review whether the G-20 has in fact put in place the “core elements of a new financial regulatory framework” sufficient, at a minimum, to have prevented the global financial crisis.⁴² Table 2 summarizes the official view of the G-20 and FSB of the status of the post-crisis financial regulatory reform agenda at the conclusion of the fifth leaders’ summit:

*Table 2:
G-20/FSB Financial Regulatory Reform Agenda: Review of Status⁴³*

FSB Objective	Status
Building high quality capital and liquidity standards and mitigating procyclicality	Draft capital and liquidity standards agreed
Addressing SIFIs and resolution regimes	Framework approach agreed
Improving the OTC derivatives markets	Detailed principles agreed
Strengthening accounting standards	Convergence between U.S. and international accounting standards in progress
Strengthening adherence to international supervisory and regulatory standards	FSB established and monitoring exercises in progress
Reforming compensation practices to support financial stability	Detailed principles, standards and guidance agreed; implementation being monitored
Developing macroprudential frameworks and tools	In progress
Expanding and refining the regulatory perimeter	Under discussion

policy frameworks”; (2) “reforms relating to emerging market and developing countries”; (3) “shadow banking”; (4) “commodity derivatives markets”; (5) “market integrity and efficiency”; and (6) “consumer protection.” *Id.* at 9–10.

42. G-20, *supra* note 39, at 2.

43. FSB, *Progress Since the Washington Summit in the Implementation of the G20 Recommendations for Strengthening Financial Stability: Report of the Financial Stability Board to G20 Leaders* (Nov. 2010), available at http://www.financialstabilityboard.org/publications/r_110219.pdf [hereinafter G-20, *Progress Since Washington Summit*]; G-20, *Progress Report on the Economic and Financial Actions of the Previous G20 Summits*, at 18–26 (Jul. 2010), available at: http://www.g20.org/Documents2010/07/July_2010_G20_Progress_Grid.pdf.

The following Part addresses financial infrastructure and prudential regulatory standards, incorporating the G-20/FSB initiatives relating to capital, OTC derivatives, accounting and compensation. These are the areas where arguably the most concrete progress has been achieved and are the central parts of the G-20's "core elements." Parts V and VI then turn to issues where arguably less has been achieved, namely macroprudential supervision and regulatory design, and addressing SIFIs and financial institution resolution, respectively.⁴⁴

IV. FINANCIAL INFRASTRUCTURE AND PRUDENTIAL REGULATION

The G-20 and FSB have focused on five areas to improve financial infrastructure and prudential regulation: (1) capital, leverage, liquidity, and procyclicality; (2) OTC derivatives markets; (3) accounting standards; (4) compensation arrangements; and (5) expanding the regulatory perimeter to address hedge funds, credit ratings and credit rating agencies, and securitization.⁴⁵ This Part discusses progress in each area.

A. *Capital, Leverage, and Liquidity*

Weaknesses in capital and liquidity, combined with excess leverage, was a central factor underlying the global financial crisis.⁴⁶ As a result, the G-20 and FSB have placed major attention on regulatory reform in these areas. In addressing related issues, however, G-20 members face conflicting objectives. Specifically, stronger capital requirements are necessary to prevent future crises, but at the same time, higher capital requirements restrict lending, thereby limiting the financial sector's capacity to support growth amid economic weakness.⁴⁷ This is further complicated by the different economic situations across the G-20, with the United States, Europe, and Japan experiencing weak growth, while emerging markets, especially in Asia, are at risk of possible overheating

44. For discussion of implementation arrangements, see generally Arner & Taylor, *supra* note 31, suggesting international views on implementing financial regulations globally.

45. FSB, *Overview of Progress in the Implementation of the G20 Recommendations for Strengthening Financial Stability*, at 2 (June 18, 2010) [hereinafter *FSB Overview*], available at http://www.financialstabilityboard.org/publications/r_100627c.pdf?frames=0.

46. See FCIC, *supra* note 1, at xix–xx.

47. See, e.g., Int'l Monetary Fund [IMF], *Global Financial Stability Report: Sovereigns, Funding, and Systemic Liquidity*, at 38–39 (Oct. 2010), available at <http://www.imf.org/external/pubs/ft/gfsr/2010/02/pdf/text.pdf>.

and asset price inflation.⁴⁸

In 2008 and 2009, the G-20 committed to introducing an enhanced system for capital regulation, along with new international regulatory standards addressing liquidity and leverage regulation, with the BCBS and FSB given the task of development.⁴⁹ This revised framework is now referred to as Basel III.

To implement this G-20 mandate, the BCBS has begun to develop detailed recommendations for adoption. In April of 2009 it made a series of recommendations for addressing procyclicality.⁵⁰ In July of 2009 it announced measures to strengthen the market risk framework⁵¹ and enhance Basel II.⁵² Initial changes included introducing higher-risk weightings for securitization, issues relating to supervisory review of risk management, and disclosure requirements.⁵³ Third, the Committee released for consultation, as part of its comprehensive approach announced in September 2009, a proposal to address (1) improving the quality and harmonization of capital, focusing on the role of Tier 1 equity; (2) strengthening counterparty capital requirements relating to derivatives, repos, and securities financing, with an intention to incentivize movement to central counterparties and exchanges; (3) introducing a leverage ratio; (4) measures to promote a countercyclical capital framework, including

48. See, e.g., IMF, *World Economic Outlook: Recovery, Risk, and Rebalancing*, at 61–77 (Oct. 2010), available at <http://www.imf.org/external/pubs/ft/weo/2010/02/pdf/text.pdf>.

49. The BCBS was formed in 1974 to coordinate international banking regulation among G-10 countries. Basel Comm. on Baking Supervision [BCBS], *History of the Basel Committee and its Membership*, at 1 (2009), available at <http://www.bis.org/bcbs/history.pdf>. In 1988, the BCBS agreed the 1988 Basel Capital Accord, setting the basic framework for regulation of capital of internationally active banks, subsequently adopted in over 100 countries. *Id.* at 2. Following the Asian financial crisis, it released a revised framework in 2004, known as Basel II. *Id.* at 3. For discussion of Basel I and Basel II and their role in the global financial crisis, see Arner, *Global Credit Crisis*, *supra* note 1. For discussion of the development of the Basel Committee, see JOSEPH JUDE NORTON, *DEVISING INTERNATIONAL BANK SUPERVISORY STANDARDS* 171–224 (1995).

50. Fin. Stability Forum [FSF], *Report of the Financial Stability Forum on Addressing Procyclicality in the Financial System*, *passim* (Apr. 2009).

51. See BCBS, *Revisions to the Basel II Market Risk Framework*, 1–3 (July 2009) available at <http://www.bis.org/publ/bcbs158.pdf>; BCBS, *GUIDELINES FOR COMPUTING CAPITAL FOR INCREMENTAL RISK IN THE TRADING BOOK 2* (2009), available at <http://www.bis.org/publ/bcbs/159.pdf>.

52. BCBS, *Enhancements to the Basel II Framework*, *passim* (July 2009), available at <http://www.bis.org/publ/bcbs157.pdf>.

53. While Basel II is being replaced with Basel III, at present, the risk-weighting system and the three Pillar structure of Basel II are being maintained, so these changes are incorporated into the new framework.

provisioning; and (5) introducing a minimum liquidity standard.⁵⁴

In June 2010, the G-20 reiterated its support for development of “a new global regime for bank capital and liquidity.”⁵⁵ Under the agreement, “the amount of capital will be significantly higher” and “the quality of capital will be significantly improved” to “enable banks to withstand—without extraordinary government support—stresses of a magnitude associated with the recent financial crisis.”⁵⁶ Specifically, the G-20 agreed that the new capital framework would:

- (1) establish a new requirement that each bank hold in Tier 1 capital, at a minimum, an increasing share of common equity, after deductions, measured as a percentage of risk-weighted assets sufficient to withstand with going concern fully-loss absorbing capital stresses equivalent to those of the global financial crisis; and
- (2) move to a globally consistent and transparent set of conservative deductions generally applied at the level of common equity or its equivalent in the case of non-joint stock companies over a suitable globally consistent transition period.

⁵⁷

Finally, almost two years after the first G-20 leaders’ summit, the BCBS agreed in September of 2010 to the underlying elements of the new Basel III capital adequacy regime.⁵⁸ This new system was endorsed by the G-20 at their Seoul summit in November of 2010.⁵⁹

Under Basel III, in relation to capital, rather than the Basel I–Basel II framework of 8% capital to risk-weighted assets, with at least half in Tier 1 equity and hybrid instruments supplemented by Tier 2 subordinated debt and a range of innovative instruments supporting market risk (Tier 3),⁶⁰ the BCBS adopted a structure focused on common equity capital. Under the

54. BCBS, *Consultative Document: Strengthening the Resilience of the Banking Sector*, at 2–3 (Dec. 2009); BCBS, *Consultative Document: International Framework for Liquidity Risk Measurement Standards and Monitoring*, at 1–2 (Dec. 2009).

55. G-20, *Toronto Summit*, *supra* note 38, at 4.

56. *Id.*

57. *Id.* at 16.

58. Press Release, BCBS, Group of Governors and Heads of Supervision announces Higher Global Minimum Capital Standards 1 (Sep. 12, 2010) [hereinafter Group of Governors], available at <http://www.bis.org/press/p100912.pdf?frames=0>.

59. G-20, *supra* note 39, at 7.

60. BCBS, *International Convergence of Capital Measurements and Capital Standards*, at 12, 16–17 (2006), available at <http://www.bis.org/publ/bcs128.pdf>.

agreement, total minimum capital remains at 8%.⁶¹ However, minimum common equity capital is 4.5%, with Tier 1 capital at 6%, leaving Tier 2 at most 2%.⁶² In addition, there will be a 2.5% conservation buffer, made up of common equity, for a minimum capital adequacy ratio of 10.5%.⁶³ Finally, there will be the possibility for an additional countercyclical buffer of 0–2.5% of common equity or “other fully loss absorbing capital”, the details of which are yet to be finalized.⁶⁴

It is now abundantly clear that financial institutions, as now required by markets, will in many cases need to have higher amounts of equity capital. In addition, the global crisis highlighted that subordinated debt, when held by other financial institutions, is unlikely to provide for external monitoring, thereby detracting from its ability to support corporate governance and financial stability.⁶⁵ As a result, subordinated debt has become significantly less important in terms of capital.

The crisis has also brought forward proposals relating to innovative capital instruments, such as contingent convertible securities (“cocos”), which automatically convert to equity when financial institutions’ capital ratios drop to certain preset levels, as well as other hybrids pre-committing investors to provide additional capital as equity or debt at certain trigger points.⁶⁶ At this point, however, there is no internationally agreed approach to these sorts of instruments.

The other side of the equation is also being considered, relating to the various methodologies for calculating risk-weightings for assets. While Basel I was overly simplistic, Basel II was overly complex and too reliant on both external credit ratings and internal quantitative models. As a result, both were highly subject to gaming by market participants, with regulators in the U.S. and UK adopting excessively permissive approaches to such behavior and instruments.⁶⁷ The crisis has also emphasized the need to address the way that financial institutions calculate their assets. Issues relating to off-balance-sheet treatment are being reconsidered and tightened

61. BCBS, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems*, at 64 (Dec. 2010), available at <http://www.bis.org/publ/bcbs189.pdf>.

62. *Id.*

63. *Id.*

64. *Id.*

65. See U.K. FIN. SERVS. AUTH., *supra* note 1, at 45–47.

66. See, e.g., Patrick Jenkins & Haig Simonian, *Swiss Urge Capital Boost for Banks*, THE FINANCIAL TIMES, Oct. 4, 2010, at 21 available at: <http://www.ft.com/cms/s/0/4a24a1c8-cf26-11df-9be2-00144feab49a.html#axzz1E1Fnb31W>.

67. See generally Arner, *supra* note 1.

to avoid a return of the shadow banking system and also to reduce complexity of institutions and products. One area receiving particularly close scrutiny is market risk, with the view that market risk should be much more closely regulated than has previously been the case.⁶⁸ Such issues are tied closely not only with regulatory standards, but also with accounting treatment.

Beyond capital, Basel III includes both leverage and liquidity standards. As of January 2011, liquidity standards have been finalized⁶⁹ but remain under discussion, while the leverage ratio at present is being tested on an experimental basis, without any final agreement. Beyond bank capital, the work of the BCBS, and the emergence of Basel III, other financial standards setters (namely IOSCO for securities and the IAIS for insurance) are now developing parallel capital frameworks to enhance financial stability and reduce regulatory arbitrage at G-20 direction.⁷⁰

In reviewing progress, the development of comprehensive new standards for capital, with much higher requirements for equity capital and the reduction of the role of subordinated debt is clearly an important development. However, studies suggest that even at the new Basel III rates, capital would still be insufficient to meet the stresses faced in the global financial crisis.⁷¹ At the same time, the complexity has not been significantly decreased, indicating the continuing possibility of market participants' seeking to game the new system, as they became highly adept at doing with both Basel I and Basel II.

In relation to liquidity, while agreement on a new international approach is significant, the reality of the standards themselves is that they are highly subjective and therefore subject to great variations between markets. At the same time, liquidity must be complemented by work in other areas, especially OTC derivatives (the subject of the next section) and issues relating to overall market liquidity provision (discussed in Part VI). As a result, while there is now an internationally agreed approach to

68. See, e.g., BCBS, *Messages from the Academic Literature on Risk Measurement for the Trading Book* (BCBS, Working Paper No. 19, 2011), available at http://www.bis.org/publ/bcbs_wp19.pdf; BCBS, *Findings on the Interaction of Credit Risk and Market Risk*, (BCBS, Working Paper No. 16, 2009), available at http://www.bis.org/publ/bcbs_wp16.pdf.

69. BCBS, *Basel III: International Standards for Liquidity Risk Measurement, Standards and Monitoring*, at 3–25 (Dec. 2010), available at <http://www.bis.org/publ/bcbs188.pdf>.

70. See Tables 1 & 2 *supra* and sources cited.

71. See, for example, BCBS, *An Assessment of the Long-term Economic Impact of Stronger Capital and Liquidity Requirements*, at 14–17 (Aug. 2010), available at <http://www.bis.org/publ/bcbs173.pdf>.

liquidity, in practice, the implications are highly unclear.

In relation to leverage, a simple leverage ratio has the important potential to not only limit a central aspect of the buildup of the crisis (through leverage and related asset price inflation), but also to limit the potential for gaming the capital framework, which given its complexity is to some extent unavoidable. Leverage and capital are thus probably the two most important international prudential regulatory issues. At this point, the G-20's core elements do not yet contain a simple, internationally agreed standard, necessary to complement complex capital requirements. Without an agreed limit on leverage, the G-20's reform project fails to meet the test of being able to prevent the last crisis, before even considering the next crisis.

At the same time, given the increasing lack of differentiation between business models of banks, securities firms and insurance companies, there is a clear need to urgently develop capital, leverage, and liquidity standards that apply to non-banks, especially to the extent that different institutions are conducting similar activities. Significantly, the G-20 has made this a priority moving forward but its absence at present is further evidence that international regulatory reforms to date are still not sufficient to have prevented the global financial crisis.

B. *OTC Derivatives Markets*

The global financial crisis has also exposed the need for a comprehensive overhaul of derivative regulation. Prior to the global financial crisis, regulation of OTC derivatives markets was generally left to private ordering, most often led by the International Swaps and Derivatives Association (ISDA), with markets limited to only sophisticated participants and supervision being undertaken through monitoring of the major bank participants in the market.⁷² At the same time, OTC derivatives received significant legal and regulatory support through amendments to Basel I and their incorporation into Basel II, as well as legal changes to support netting in many jurisdictions.⁷³ In the wake of the global financial crisis, the lack of transparency in these instruments and markets has been a particular area of concern, especially given their central role in the context of the near collapse of AIG in 2008 and concerns about their role in the 2010 Greek debt crisis.⁷⁴

72. SCHUYLER HENDERSON, *HENDERSON ON DERIVATIVES* (1st ed. 2003).

73. See generally Arner, *supra* note 1.

74. See William Sjoström, *The AIG Bailout*, 66 WASH. & LEE L. REV. 943, 989–90 (2009).

The G-20 has identified strengthening the resilience and transparency of credit derivatives markets and reducing their systemic risks, including by improving the infrastructure of the OTC markets, as an area of priority concern. In this context, the G-20 and FSB have focused on five elements: (1) standardization, (2) central clearing, (3) exchange or electronic platform trading, and (4) reporting to trade repositories.⁷⁵

In relation to OTC markets, to provide technical expertise similar to that provided by the BCBS in the context of banking, in 2009 an OTC Derivatives Regulators' Forum (ODRF) was established.⁷⁶ In June 2010, the G-20 pledged to accelerate the implementation of OTC derivatives regulation, reaffirming commitments to trade all standardized OTC derivatives on exchanges or electronic clearing platforms and clear through central counterparty clearinghouses (CCPs) by the end of 2012, with reporting to trade repositories.⁷⁷ Most significantly, the FSB released a set of twenty-one principles designed to implement the G-20 agenda in relation to OTC derivatives.⁷⁸ In furtherance of this G-20/FSB plan, IOSCO and the CPSS are currently reviewing existing standards for central counterparties and developing standards for OTC derivatives trade repositories, with draft guidance released in May 2010⁷⁹ and draft principles released for consultation in March 2011.⁸⁰

Overall, the FSB principles provide significant detail of an agreed approach to achieve the four targets identified by the G-20. Their effectiveness, however, will only be determinable in about three years time—the amount of time it will probably take for major financial jurisdictions to implement the principles through legislation and/or regulation. While the agreed approach may be successful in time in addressing counterparty risks and even in migrating products to more transparent and robust exchange-based environments, it is certainly the case at present that markets remain largely unchanged from their pre-crisis

75. FSB, *Implementing OTC Derivatives Market Reforms*, at 1 (Oct. 2010), available at http://www.financialstabilityboard.org/publications/r_101025.pdf.

76. See THE OTC DERIVATIVES REGULATORS' FORUM, <http://www.otcdrf.org/> (last visited Mar. 21, 2011).

77. G-20, *Toronto Summit*, *supra* note 38, at 19.

78. *Id.*

79. Comm. on Payment & Settlement Sys, Int'l Org. of Sec. Comm'ns [CPSS-IOSCO], *Guidance on the Application of the 2004 CPSS-IOSCO Recommendations for Central Counterparties to OTC Derivatives CCPs*, at 39 (Sept. 2009), available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD301.pdf>.

80. CPSS & IOSCO, *Principles for Financial Market Infrastructures: Consultative Report* (Mar. 2011), available at <http://www.bis.org/publ/cpss94.pdf>.

form.

C. Accounting Standards

The role of accounting standards in the global financial crisis is a divisive issue, with many arguing that market-based accounting for financial instruments (“market-to-market”) was central in worsening the crisis, as financial institutions were forced to continually revalue assets in downward spiraling markets, thereby giving an illusion of ever greater and more solvency-threatening losses.⁸¹ Others argue that financial assets can only be valued at current market prices and that any alternative hides the real financial condition of financial institutions, thus impeding necessary failures and restructuring.⁸² At the same time, there is little disagreement that the lack of transparency of institutions, products, and markets was central to the process of adverse selection and loss of confidence central to the global financial crisis.⁸³ Likewise, issues relating to transparency made regulation of firms, markets, and products difficult, and complicated responses as the crisis developed.

In addressing accounting, the G-20 has repeatedly stated its commitment to the development of a single set of international accounting standards.⁸⁴ At the same time, it appears increasingly likely that, for the foreseeable future, there will remain two main systems of accounting: IASB International Financial Reporting Standards (IFRS) and U.S.

81. See, e.g., *Mark It and Weep: Mark-to-Market Accounting Hurts, But There is No Better Way*, THE ECONOMIST, Mar. 6, 2008, at 14, 14, available at <http://www.economist.com/node/10808525>; OFFICE OF THE CHIEF ACCOUNTANT, SECURITIES & EXCHANGE COMM’N, REPORT AND RECOMMENDATIONS PURSUANT TO SECTION 133 OF THE EMERGENCY ECONOMIC STABILIZATION ACT OF 2008: STUDY ON MARK-TO-MARKET ACCOUNTING I (2008), available at <http://www.sec.gov/news/studies/2008/marktomarket123008.pdf>.

82. OFFICE OF THE CHIEF ACCOUNTANT, *supra* note 81, at 2.

83. See U.S. FIN. CRISIS INQUIRY COMM’N, *supra* note 1, at xix–xxiv (describing the lack of transparency in markets, products and institutions such as large securities firms and the governmental regulatory agencies); U.K. FIN. SERVS. AUTH., *supra* note 1, at 45 (noting that many responses to the financial crisis call for increased disclosure and transparency as the single most important response); THE HIGH-LEVEL GRP. ON FIN. SUPERVISION IN THE E.U., *supra* note 1, at 8 (concluding that the lack of transparency combined with the complexity of structured financial products contributed to the breakdown in confidence in financial institutions which spread to tensions in other parts of the financial sector).

84. See G-20, *Action Plan*, *supra* note 26, at 1 (listing the development of global accounting standards as both an immediate and medium-term goal); G-20, *Progress Since Washington Summit*, *supra* note 43, at 52–53 (reiterating the G-20’s goal of achieving a “single set of high quality, global accounting standards” and noting the progress that has been made since the 2008 summit).

Generally Accepted Accounting Principles (GAAP). At present, major issues have arisen in the context of what is the appropriate focus of accounting: the fair value approach based on market values or the historical basis approach focused on longer horizons.⁸⁵ While accounting standard-setters are moving closer on these issues, they are likely to remain contentious for some time.

In addition, there are a range of issues relating to the relationship between accounting and regulatory treatment, for instance in relation to capital, off-balance sheet treatment, and provisioning. In this context, one objective of Basel II was to bring economic, accounting, and regulatory capital together. At present, in this author's opinion, standards and approaches to economic, accounting, and regulatory capital may once again be diverging, even though convergence of the three forms of capital remains a goal.

D. Compensation Arrangements

Improperly assigned incentives inherent in pre-crisis financial sector compensation arrangements played an important role in the buildup of excesses leading to the global financial crisis, leading to short-term bias and excessive risk-taking.⁸⁶ Particular attention has therefore been focused on compensation practices in the financial sector, including in the G-20, with compensation reform as an important reform agenda item since the first leaders' summit in 2008.⁸⁷ These commitments have been implemented through G-20 endorsement of new FSB compensation principles⁸⁸ and implementation standards.⁸⁹ In relation to implementation, the FSB concluded a thematic review of member implementation of the

85. See generally sources cited *supra* note 1 (describing controversy that has arisen over accounting methods).

86. See FCIC, *supra* note 1, at xix, 61–64 (criticizing compensation systems that rewarded the “quick deal” and encouraged the “big bet”); HIGH-LEVEL GRP. ON FIN. SUPERVISION IN THE E.U., *supra* note 1, at 30–31 (recommending that compensation incentives should be better aligned with shareholder interests and long-term firm-wide profitability in place of the short-term, high-risk compensation incentives that led to the crisis).

87. See Tables 1 & 2 *supra*.

88. See FSF, *FSF Principles for Sound Compensation Practices*, at 1 (Apr. 2, 2009), available at http://www.financialstabilityboard.org/publications/r_0904b.pdf?frames=0 (setting forth recommendations that “are intended to reduce incentives towards excessive risk taking that may arise from the structure of compensation schemes”).

89. See generally FSF, *FSF Principles for Sound Compensation Practices: Implementation Standards* (Sep. 25, 2009), available at http://www.financialstabilityboard.org/publications/r_090925c.pdf?frames=0 (outlining standards for the swift implementation of compensation reforms).

compensation principles and standards in 2010, its first review of the implementation of post-crisis standards under its new mandate.⁹⁰

Compensation is the first major area where the initial G-20 agenda has proceeded through detailed agreement, implementation and FSB review, with overall implementation and compliance across FSB members. As a result, this can be seen as a key test for the effectiveness of the process. At the least, regulators around the world are now considering compensation as one element of their supervisory mandate, and financial institutions have implemented changes to change compensation practices accordingly. At present, the impact is uncertain. The central question will be whether regulators over time are able to maintain focus in this respect.

E. Expanding the Regulatory Perimeter: Regulation of Non-traditional Financial Firms

At the heart of the global financial crisis were markets, financial institutions and products structured to avoid regulation—the “shadow banking system”—and also markets, institutions and products which were viewed as not requiring regulation, such as OTC derivatives. In the wake of the global financial crisis, there is consensus among G-20 and FSB members that markets, institutions and products should no longer be unregulated but that all aspects of the financial sector should be subject to appropriate levels of regulation and supervision.⁹¹ In the context of the G-20 financial reform agenda, related issues have been loosely grouped together under the heading of “expanding and refining the regulatory perimeter,”⁹² with the central focus to date being hedge funds and credit ratings and credit rating agencies. In addition, issues relating to securitization and shadow banking generally are now being discussed.

1. Hedge Funds

While hedge funds were often viewed as major causes of the 1997–98 Asian financial crisis, during the recent global financial crisis, they have not received a central portion of the blame.⁹³ Due to the lack of

90. FSB, *Thematic Review on Compensation: Peer Review Report* (Mar. 2010), available at http://www.financialstabilityboard.org/publications/r_100330a.pdf.

91. See *supra* Tables 1 & 2.

92. FSB, *supra* note 42, at 25-31.

93. HIGH-LEVEL GRP. ON FIN. SUPERVISION IN THE E.U., *supra* note 1, at 24 (“[H]edge funds . . . did not play a major role in the emergence of the crisis.”). For detailed discussion, see SEBASTIAN MALLABY, *MORE MONEY THAN GOD: HEDGE FUNDS AND THE MAKING OF A NEW ELITE* 9–14 (2010).

transparency in the industry, however, they have still remained a continuing issue for attention, especially in continental Europe.⁹⁴ At the international level, the G-20 has agreed that hedge funds should be subject to appropriate regulation, especially in the context of systemically important hedge funds.⁹⁵ To date, IOSCO has established six high level principles for regulation,⁹⁶ guidance addressing funds of hedge funds,⁹⁷ and a template for the global collection of hedge fund information to support transparency and supervision.⁹⁸ Significantly, IOSCO released a revised version of its key principles document, Objectives and Principles of Securities Regulation, including a new principle requiring hedge funds and hedge fund managers/advisors to be subject to appropriate oversight.⁹⁹

Overall, while not directly a cause of the global financial crisis, the lack of transparency in the hedge fund industry poses clear potential risks for financial stability going forward. As a result, this may be one area where the international regulatory reform agenda is in fact successful in moving beyond merely addressing the causes of the last crisis to seeking to address future risks.

2. Credit Ratings and Credit Rating Agencies

Prior to the global financial crisis, credit rating agencies (CRAs) had been periodically subject to criticism in the context of most corporate and financial crises.¹⁰⁰ As a result some attention had been given to their role and regulation, such as IOSCO's 2003 Principles for the Activities of Credit Rating Agencies¹⁰¹ and Code of Conduct.¹⁰² However, since the global financial crisis, credit ratings and CRAs have become a central focus.

As an initial step in 2008, IOSCO revised the Code of Conduct in

94. *See id.*

95. *See supra* Tables 1 & 2 & sources cited.

96. *See* IOSCO, *Hedge Funds Oversight: Final Report*, at 8–9 (June 2009), available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD293.pdf>.

97. *Id.* at 7–9.

98. *See* FSB, *supra* note 36, at 13.

99. IOSCO, *Objectives and Principles of Securities Regulation*, at 10 (Jul. 2010), available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD329.pdf>.

100. *See generally* A. Sy, *The Systemic Regulation of Credit Rating Agencies and Rated Markets*, (IMF, Working Paper No. WP/09/129, Jun. 2009), available at <http://www.imf.org/external/pubs/ft/wp/2009/wp09129.pdf>.

101. IOSCO, *IOSCO Statement of Principles Regarding the Activities of Credit Rating Agencies* (Sep. 2003), available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD151.pdf>.

102. Technical Comm., IOSCO, *Code of Conduct Fundamentals for Credit Rating Agencies: Report of the Technical Committee*, at 1–2 (Dec. 2004), available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD180.pdf>.

response to the initial stages of the crisis, including adding provisions regarding structured finance.¹⁰³ The FSF also met and released a report on Enhancing Market and Institutional Resilience which, in many ways, would come to be overshadowed by subsequent events. In this report, the FSF focused on regulatory reforms in five main areas, including the role and uses of credit ratings, and a mandate to review the use of credit ratings and regulation of CRAs through IOSCO, the Joint Forum, and domestic regulators.¹⁰⁴ This report focused on two main aspects: first, regulation of CRAs, and, second, reducing regulatory and market reliance on credit ratings themselves.¹⁰⁵ In a follow-up report during the systemic phase of the crisis, the FSF reviewed progress and recommitted to the content of its April 2008 report, including CRAs and credit ratings, especially in regard to establishing a globally consistent approach to CRA regulation.¹⁰⁶ Both of these FSF reports were subsequently largely subsumed in the November 2008, April 2009, and September 2009 G-20 statements, all of which express commitment to the regulation of CRAs.

IOSCO recently has conducted a review of the implementation of the Code of Conduct¹⁰⁷ and released guidance relating to international cooperation in CRA oversight.¹⁰⁸ More significantly, and related to the 2008 FSF report, the Joint Forum has reviewed the use of credit ratings.¹⁰⁹ Most significantly, in June of 2010, the G-20 committed “to reduce reliance on external ratings in rules and regulations,”¹¹⁰ with the FSB releasing a related principles in October 2010.¹¹¹

103. Technical Comm., IOSCO, *Code of Conduct Fundamentals for Credit Rating Agencies: Report of the Technical Committee*, at 5–6, 10–11 (rev. 2008), available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD271.pdf>.

104. FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience*, at 2, 34, 39, 44 (2008), available at http://www.financialstabilityboard.org/publications/r_0804.pdf.

105. *Id.* at 32–39.

106. FSF, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience: Follow-up on Implementation*, at 2–9, 20–23 (2008), http://www.financialsbailityboard.org/press/pr_081009f.pdf.

107. IOSCO, *A Review of the Implementation of the IOSCO Code of Conduct Fundamentals for Credit Rating Agencies—Report of the Technical Committee of IOSCO*, at 3 (Mar. 2009), <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD286.pdf>.

108. IOSCO, *International Cooperation in Oversight of Credit Rating Agencies: Report of the Technical Committee of IOSCO*, at 3–5 (Mar. 2009), <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD287.pdf>.

109. Joint Forum, BCBS, *Stocktaking on the Use of Credit Ratings*, at 1–2 (Jun. 2009), available at <http://www.bis.org/publ/joint22.pdf>.

110. G-20, *Toronto Summit*, *supra* note 38, at 19.

111. FSB, *Principles for Reducing Reliance on CRA Ratings*, at 1–7 (Oct. 2010), available at

Credit ratings and CRAs certainly share an important portion of the blame for the global financial crisis. In initial international efforts, focusing on registration and regulation of CRAs, the G-20, FSB, and IOSCO began the process of addressing related issues. However, the determination in 2010 to refocus attention on reducing reliance on credit ratings must be seen as by far the most important step from the standpoint of systemic stability, with the new principles setting the basis for addressing an important element underlying the global financial crisis.

3. Securitization

Techniques of securitization were clearly abused prior to the global financial crisis. Instruments, markets, and methodologies—especially their overcomplexity, financialization, and lack of transparency—were at the heart of the crisis.¹¹² At the same time, securitization provides a range of potential benefits in relation to financing and risk-sharing.¹¹³ While securitization should not be prohibited, significant changes to regulatory treatment are necessary to support effectively functioning markets. To date, securitization markets have not yet recovered internationally. While a range of reports and standards have been released,¹¹⁴ significant questions regarding the future of securitization remain.

This is a clear area requiring further international attention and one at the heart of the most recent crisis. Since the market is still barely functioning, the issue currently has less urgency than others. However, if the issue is not addressed comprehensively at the international level in the near future, it is most certainly possible that momentum for reform will be lost – potentially leaving one of the most important causes of the global crisis unaddressed.

http://www.financialstabilityboard.org/publications/r_101027.pdf.

112. See FCIC, *supra* note 1, at 42–45, 67–72; FIN SERVS. AUTH., *supra* note 1, at 14–16; HIGH-LEVEL GRP. ON FIN. SUPERVISION IN THE E.U., *supra* note 1, at 39–42.

113. See generally D. Arner et al., *The Global Credit Crisis and Securitization in East Asia*, CAPITAL MARKETS L.J., July 2008, 291 (2008) (noting that securitization has the ability to assist with funding and investment in East Asia).

114. See generally Joint Forum, BCBS, *Report on Special Purpose Entities* (2009), available at <http://www.bis.org/publ/joint23.pdf> (describing special purpose entity structures and associated policy issues for regulators and market participants); Technical Comm., IOSCO, *Hedge Funds Oversight: Final Report* (2009), available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD293.pdf> (recommending various principles regarding the regulation of hedge funds); Technical Comm., IOSCO, *Transparency of Structured Finance Products: Consultation Report* (2009), <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD306.pdf> (describing factors for consideration regarding the development of “post-trade transparency” for structured finance products).

Overall, then, significant progress has been made in core areas relating to financial infrastructure and prudential regulation. At the same time, despite this level of progress, this analysis suggests that reforms to date would still not have been sufficient to prevent the global financial crisis and that forward looking reforms are even more limited. If the most progress at the international level has been achieved in the context of financial infrastructure and prudential regulation, far less has been achieved in relation to three other core issues addressed in the following two Parts of this Article: macroprudential supervision and regulatory coverage; addressing SIFIs, especially G-SIFIs; and financial institution resolution.

V. MACROPRUDENTIAL REGULATION AND REGULATORY DESIGN

At the heart of the global financial crisis were two serious failures, both relating to the scope and coverage of regulation, domestically, regionally, and internationally.¹¹⁵ The first failure was the regulatory gaps, overlaps, and divisions in a number of jurisdictions, especially the United States, that presented opportunities for regulatory avoidance and arbitrage. Combined with a general philosophy of regulatory permissiveness,¹¹⁶ this allowed financial institutions to organize their operations to minimize and in many cases avoid regulatory scrutiny. At the same time, global markets and financial institutions maximized regulatory arbitrage opportunities within individual economies and across jurisdictions, with the result being that no single regulator had a clear picture of all of the activities and risks of any given global financial institution or market despite the attention placed on consolidated supervision during the two decades prior to the global financial crisis. Moreover, in reality, financial institution management in most cases did not have a clear understanding of the scope of their own operations, risks, and legal structure.¹¹⁷ These elements have

115. See FIN. CRISIS INQUIRY COMM'N, *supra* note 1, at 52–56, 75–80; FIN SERVS. AUTH., *supra* note 1, at 36–37; HIGH-LEVEL GRP. ON FIN. SUPERVISION IN THE E.U., *supra* note 1, at 15.

116. See generally A. GREENSPAN, *THE AGE OF TURBULENCE: ADVENTURES IN A NEW WORLD* (2007) (describing his approach to financial sector issues as Fed chairman); **FCIC**, *supra* note 1, at xviii; FIN. SERVS. AGENCY (UK), *PRINCIPLES-BASED REGULATION: FOCUSING ON THE OUTCOMES THAT MATTER* (Apr. 2007), available at <http://www.fsa.gov.uk/pubs/other/principles.pdf> (describing the UK's “high-level” and less rules-oriented approach to financial regulation).

117. See, e.g., Report of Anton R. Valukas, Examiner, at 142, In re Lehman Brothers Holdings Inc., Chapter 11 Case No. 08-13555 (JMP) (Bankr. S.D.N.Y. Mar. 11, 2010), available at <http://lehmanreport.jenner.com/> (“Some [Lehman Brothers’] directors did not recall knowing that Lehman had ever been in breach of its risk appetite limits.”).

been brought to light most clearly by the near-failure of AIG and the insolvency of Lehman Brothers. Likewise, significant financial markets were organized to minimize regulatory scrutiny and interference, resulting in a lack of transparency for complex global financial institutions and for many of the markets and products in which they dealt.¹¹⁸ The clearest examples were the markets for credit risk transfer such as securitization and CDS, with the most extreme example being the pre-crisis shadow banking system of conduits, SIVs, and complex structured products.

The second supervisory failure was the excessive focus of financial authorities—finance ministries, central banks, and regulatory agencies—on the safety and soundness of individual financial institutions, or microprudential supervision. As noted in the previous paragraph, in many cases authorities failed even in this responsibility while in addition failing to consider linkages across institutions, markets, and products, or macroprudential supervision. Macroprudential supervision—focusing on overall market stability and interlinkages—was largely neglected, despite increasing numbers of central banks being given or taking on specific objectives relating to overall financial stability in the ten years preceding the global crisis.

Two central lessons can be drawn. The first is the necessity of putting in place appropriate macroprudential arrangements, domestically and regionally. The second is the necessity of reviewing the design of domestic and regional regulatory structures to address gaps and reduce the potential for regulatory arbitrage.

A. *Macroprudential Supervision*

Following the November 2008 G-20 Declaration that all systemically important financial institutions, markets, and instruments would be subject to appropriate regulation, in April 2009, the G-20 Financial System Declaration provided a much greater level of detail.¹¹⁹ Specifically, the April Declaration included eight aspects. First, regulatory systems should be reformed to ensure authorities are able to identify and take account of macroprudential risks across the financial system including in the case of regulated banks, shadow banks, and private pools of capital to limit the build-up of systemic risk, with the FSB, BIS, and international standard-

118. See, e.g., R. Herring & J. Carmassi, *The Structure of International Financial Conglomerates: Complexity and Its Implications for Systemic Risk*, in OXFORD HANDBOOK OF BANKING (A. Berger et al. eds., 2009).

119. G-20, *Global Plan*, *supra* note 29.

setters tasked to develop specific macroprudential tools.¹²⁰ Second, the G-20 agreed that large and complex financial institutions require particularly careful oversight given their systemic importance.¹²¹ While seemingly self-evident, this reflects an important shift in emphasis from the pre-crisis period, in which such firms were viewed as better able to address the risks they faced than regulators, to the post-crisis period, in which the internal risk management systems of large financial institutions will be particularly closely monitored by regulators. In support of this, G-20 national regulators must have the powers necessary to gather relevant information on all material financial institutions, markets, and instruments in order to assess the potential for either their failure or severe stress to contribute to systemic risk. Beyond traditionally systemically significant firms, the G-20 proposed requiring hedge funds or their managers are to be registered and required to disclose appropriate information on an ongoing basis to supervisors or regulators—including leverage—necessary for assessment of the systemic risks that they pose individually or collectively.¹²² At the same time, supervisors will “require institutions which have hedge funds as their counterparties to have effective risk management,” including “mechanisms to monitor the funds’ leverage and set limits for single counterparty exposures.”¹²³ In relation to credit derivatives, “standardization and resilience of credit derivatives markets, in particular through the establishment of central counterparties and clearing arrangements subject to effective regulation and supervision”, will be promoted through working in conjunction with industry participants in developing an action plan on standardization, with ISDA having taken a particularly active role thus far.¹²⁴ Finally, in relation to keeping pace with future innovation, G-20 members will “review and adapt the boundaries of their regulatory frameworks regularly to keep pace with developments in the financial system and promote good practices and consistent approaches at the international level.”¹²⁵

In June 2010, the G-20 tasked the FSB in consultation with the IMF to report on recommendations to strengthen both macroprudential and microprudential oversight and supervision, “specifically relating to the mandate, capacity and resourcing of supervisors and specific powers” to

120. *Id.* at 3.

121. *Id.*

122. *Id.*

123. *Id.*

124. *Id.*

125. *Id.*

proactively identify and address risks.¹²⁶ Further, in November 2010, the G-20 identified macroprudential supervision as requiring further attention,¹²⁷ a sentiment echoed by the FSB.¹²⁸

At this point, despite an increasing amount of attention to the subject¹²⁹ and the fact that there is universal agreement that it is highly important, there is in fact little agreement on how actually to go about it.

B. *Designing Effective Regulatory and Supervisory Systems*

Aside from implementing appropriate macroprudential supervision to address the scope and coverage of regulation, jurisdictions must evaluate the overarching design and structure of the financial regulatory and supervisory system. The financial crisis brought into clear focus the potential for regulatory arbitrage, and it illustrated the very real need for jurisdictions to address the gaps in their regulatory systems that made that possible. In the context of the financial stability issues which arose during the global financial crisis, given that many issues arose from regulatory gaps and divisions, an important aspect is to consider the system in a broad and integrated way.

The global financial crisis has thus demonstrated that the overall design and coverage of a regulatory system are vital to its effectiveness. As highlighted by the G-20, there is an urgent need to review and enhance the scope of regulation, focusing on regulatory design to eliminate gaps and implement effective macroprudential financial system oversight. This requires a reshaping of regulatory systems so that authorities are able to identify and take account of macroprudential risks, with the scope of regulation and oversight extending to systemically important financial institutions, instruments and markets, including non-bank financial institutions. Furthermore, prudential standards must be designed to address cross-sectional dimensions (how risk is distributed across a financial

126. G-20, *Toronto Summit*, *supra* note 38, at 5, 17.

127. G-20, *Seoul Summit*, *supra* note 39, at 3, 9–10.

128. FSB, IMF, & BIS, *Macroprudential Policy Tools and Frameworks: Update to the G20 Finance Ministers and Central Bank Governors*, at 1 (Feb. 14, 2011), available at <http://www.bis.org/publ/othp13.pdf>.

129. See, e.g., Gabriele Galati & Richhild Moessner, *Macroprudential Policy—A Literature Review* 3–4 (BIS Working Papers No. 337, 2011), available at <http://www.bis.org/publ/work337.pdf>; Lotte Schou-Zibell et al., *A Macroprudential Framework for Monitoring and Examining Financial Soundness* 1–2 (ADB Working Paper Series on Regional Economic Integration No. 43, 2010), available at <http://www.adb.org/documents/papers/regional-economic-integration/WP43-Macroprudential-Monitoring.pdf>.

system) and time dimensions (how aggregate risk evolves over time) to build buffers for use in bad times.

International consensus and guidance on structural issues has been limited, with design being a domestic matter. Following G-20 directions, in September 2009, IOSCO released guidance related to unregulated financial markets and products.¹³⁰ In October 2009, the IMF and FSB discussed information gaps in regulation, including those resulting from regulatory design.¹³¹

Most significantly, in January 2010, the Joint Forum—comprising the BCBS, IOSCO, and the International Association of Insurance Supervisors (IAIS)—released an initial review of related issues.¹³² The Joint Forum emphasized four fundamental guiding principles:

- (1) Similar activities, products, and markets should be subject to similar minimum supervision and regulation.
- (2) Consistency in regulation across sectors is necessary; however, legitimate differences can exist across the three sectors.
- (3) Supervision and regulation should consider the risks posed, particularly any systemic risk, which may arise not only in large financial institutions but also through interactions and interconnectedness among institutions of all sizes.
- (4) Consistent implementation of international standards is critical to avoid competitive issues and regulatory arbitrage.¹³³

In relation to reducing regulatory differences, the Joint Forum's recommendations included consistency across sectoral financial principles (e.g., the BCBS Core Principles of Effective Banking Supervision) and organizations (e.g., the BCBS, IOSCO, IAIS, and IASB); development of uniform capital standards for insurance and securities similar to those for

130. See Technical Comm., IOSCO, *Elements of International Regulatory Standards on Funds of Hedge Funds Related Issues Based on Best Market Practices: Final Report*, at 3–7 (Sept. 2009), available at <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD305.pdf>.

131. IMF & FSB, *The Financial Crisis and Information Gaps: Report to the G-20 Finance Ministers and Central Bank Governors*, at 9–11 (Oct. 2009), available at <http://www.imf.org/external/np/g20/pdf/102909.pdf>.

132. The Joint Forum, BCBS et al., *Review of the Differentiated Nature and Scope of Financial Regulation: Key Issues and Recommendations*, at 1–2 (Jan. 2010), available at http://www.iaisweb.org/_temp/Review_of_the_Differentiated_Nature_and_Scope_of_Financial_Regulation_January_2010.pdf.

133. *Id.* at 4.

banking; development of cross-sectoral standards as necessary (e.g., in relation to mortgage origination and credit risk transfer).¹³⁴

In relation to financial groups, recommendations focused on ensuring that all financial groups, particularly those operating cross-border, are subject to comprehensive regulation and supervision on the basis of updated international standards addressing conglomerates, and that supervisory colleges¹³⁵ operate consistently across sectors and cross-sectoral issues are appropriately addressed.¹³⁶ Given the central role of regulatory gaps and regulatory arbitrage in the global financial crisis, these are issues that are likely to be central to future IMF and FSB regulatory reviews, in particular concerns that arise in the context of complex financial groups of systemic significance.

At this point, there is no international consensus on which model of regulatory structure is best.¹³⁷ However, there is an important relationship among regulatory structure (and attendant financial and human resources), financial structure (i.e., the relative importance of banking, insurance, and capital markets and the level of financial development), and the structure of financial institutions (e.g., strict separation of financial sectors versus universal banking). The fundamental issue is how to appropriately tailor an economy's financial regulatory structure to its own circumstances and structure for addressing financial intermediary activities and financial conglomerates. To the extent that systemically important financial institutions, instruments, and markets are unregulated, or opportunities for regulatory arbitrage exist, the potential risks for future instability increase.

With this in mind, regulatory structure must be designed to coincide with an economy's financial structure.¹³⁸ There must be full coverage of

134. *Id.* at 11–24.

135. Supervisory colleges are groupings of individual regulators from the various jurisdictions in which a cross-border financial institution operates. The objective is to ensure that regulators have a clear picture of the entire operations of a given financial institution and that their actions are coordinated to the extent possible. See generally BCBS, *Good Practice Principles on Supervisory Colleges* (Oct. 2010), available at <http://www.bis.org/publ/bcbs177.pdf> (describing supervisory colleges and the most effective ways to implement them).

136. Joint Forum, *supra* note 132 at 11–24.

137. For a discussion of options in the context of Hong Kong, see Douglas W. Arner et al., *Financial Regulation in Hong Kong: Time for a Change*, 5 *ASIAN J. COMP. L.*, no. 1, 2010 at 1, 41–47. For discussion of options in the context of the US, see U.S. DEP'T OF THE TREASURY, *BLUEPRINT FOR A MODERNIZED FINANCIAL REGULATORY STRUCTURE* 138–42 (2008), available at <http://www.treasury.gov/press-center/press-releases/Documents/Blueprint.pdf>.

138. For a full discussion of financial structure, see generally ARNER, *supra* note 9, discussing the fundamental relationship between law, institutional framework of financial

the intermediaries (especially financial conglomerates), functions, and risks inherent in a given financial system, in such manner that coincides with the history, culture, legal system, and level of financial development of that economy. An additional risk involves financial structure and regulatory design—a potential financial and regulatory mismatch. The risk is that a jurisdiction's financial regulatory structure will not equate with the structure of its financial sector; in this author's opinion, financial intermediaries will seek to organize their activities on a basis not appropriately addressed by the regulatory structure. In such circumstances, it is possible that significant risks may develop through financial intermediary operations which are not supervised by the existing structure. For example, in a financial system requiring strict separation of financial institutions and activity across sectors (e.g., the U.S. Glass–Steagall model), informal financial groups may develop that are regulated not on a group basis, but rather on a sectoral institutional basis, leaving the financial system exposed to the risks of the group.

Finally, a key issue highlighted in systems in which the regulatory functions are separated from the central bank is coordination, especially in the context of macroprudential supervision and liquidity provision. In economies where these functions are separated, in this author's opinion, the global financial crisis has underlined an absolutely fundamental need for robust information-sharing and coordination arrangements, especially in times of crisis.

Unlike issues relating to financial infrastructure and prudential regulation discussed in Part IV, issues relating to macroprudential supervision and overall regulatory design have not yet been significantly addressed at the international level. In the context of macroprudential supervision, this will likely reflect the fact that, while it is a very good idea in theory, this translates into practice with difficulty. In relation to regulatory design, G-20 and FSB members have adopted a range of differing domestic approaches and any international consensus seems unlikely. At the same time, in the context of the FSB and IMF review and monitoring process, this must take a central place.

VI. SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTIONS AND FINANCIAL INSTITUTION RESOLUTION

Problems in SIFIs were central to the global financial crisis, as was the lack of effective financial institution resolution mechanisms in G-20 jurisdictions at the time of the global financial crisis. Both are fundamental issues for international consideration in the context of reviewing their effectiveness in addressing related systemic risks. Following discussion of progress in relation to regulation of SIFIs, this Part considers mechanisms to address financial institution difficulties in three key areas: liquidity arrangements, deposit insurance, and resolution systems.

A. *Addressing SIFIs and G-SIFIs*

SIFIs and G-SIFIs—not only banks but also non-bank financial institutions such as investment banks, insurance companies, and the shadow banking system—were at the heart of the global financial crisis.¹³⁹ Around the world, a key lesson of the crisis is the need for appropriate regulatory and supervisory arrangements for such institutions, especially large complex global financial institutions, regardless of their form.

In April 2009, the G-20 established an outline of approaches going forward, with the FSB¹⁴⁰ tasked, *inter alia*, to “set guidelines for, and support the establishment, functioning of, and participation in, supervisory colleges, including through ongoing identification of the most systemically important cross-border firms.”¹⁴¹ Additionally, the FSB will “support contingency planning for cross-border crisis management, particularly with respect to systemically important firms,”¹⁴² while continuing “to support continued efforts by the IMF, FSB, World Bank, and BCBS to develop an international framework for cross-border bank resolution arrangements.”¹⁴³

The FSB has focused on three aspects: (1) reducing the probability and impact of failure through regulation and supervision, (2) improving resolution capacity and preparedness, and (3) strengthening core financial infrastructure and markets.¹⁴⁴ As an initial step, the IMF, BIS, and FSB

139. See FCIC, *supra* note 1, at xviii.

140. The FSF, at this point, had been reconstituted as the FSF. Press Release, FSF, Financial Stability Forum Re-established as the Financial Stability Board (Apr. 2, 2009), http://www.financialstabilityboard.org/press/pr_090402b.pdf.

141. G-20 London Summit, *supra* note 30, at 1.

142. *Id.*

143. *Id.* at 2.

144. FSB, *Progress Since the Pittsburgh Summit in Implementing the G20 Recommendations for Financial Stability: Report of the Financial Stability Board to G20 Finance Ministers and*

have developed guidance on assessing the systemic importance of financial institutions, markets, and instruments, addressing questions relating to systemically important institutions as well as macroprudential considerations.¹⁴⁵ In addition, the IMF and FSB have analyzed information gaps in cross-border institutions and their supervision.¹⁴⁶ Supervisory colleges have been the major mechanism to be adopted, with such arrangements established for more than thirty large complex financial conglomerates and coordinated through the FSB, with similar arrangements being developed through European bodies for European systemically important financial institutions.¹⁴⁷ In addition, institution-specific recovery and rapid resolution plans, known as “living wills”, are in the process of being developed for the identified G-SIFIs.¹⁴⁸

In June 2010, the FSB released an initial report on reducing moral hazard risks posed by SIFIs.¹⁴⁹ Further, in June 2010, the G-20 tasked the FSB to develop recommendations to address problems associated with and resolve systemically important financial institutions, including financial sector responsibilities for associated costs.¹⁵⁰ In October 2010, the FSB

Governors, at 9 (Nov. 2009), available at http://www.financialstabilityboard.org/publications/r_091107a.pdf.

145. IMF et al., *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations*, at 24–31 (Oct. 2009), available at <http://www.bis.org/publ/othp07.pdf>.

146. IMF & FSB, *The Financial Crisis and Information Gaps: Report to the G-20 Finance Ministers and Central Bank Governors*, at 9–26 (Oct. 29, 2009), available at <http://www.imf.org/external/np/g20/pdf/102909.pdf>.

147. FSB, *supra* note 144, at 13. The BCBS has developed draft guidance on supervisory colleges. See generally BCBS, *Good Practice Principles on Supervisory Colleges* (Mar. 2010), available at <http://www.bis.org/publ/bcbs170.pdf> (offering a set of principles supervisory colleges should follow to perform effective supervision). Supervisory colleges are groups formed of the major regulators of cross-border financial institutions. *Id.* at 2. The objective is for regulators in individual jurisdictions to have an overall understanding of the business and risks of the financial institution concerned and to provide a mechanism for dialogue, coordination, and cooperation. *Id.*

148. G-20 Toronto Summit, *supra* note 38, at 18. For full discussion of “living wills” or “resolution and recovery plans”, see generally E. Avgouleas et al., *Living Wills as a Catalyst for Action* (Duisenberg School of Finance, Policy Paper No. 4, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1533808 (describing the benefits of living wills for the resolution and insolvency of SIFIs).

149. See generally FSB, *Reducing the Moral Hazard Posed by Systemically Important Financial Institutions* (June 18, 2010) http://www.financialstabilityboard.org/publications/r_100627b.pdf (proposing a supervisory framework that will reduce moral hazards in financial entities).

150. G-20 Toronto Summit, *supra* note 38, at 5, 18. According to FSB report, guidance is built on the following principles:

1. All jurisdictions should have in place a policy framework to reduce the moral hazard

released detailed recommendations and timelines for their implementation,¹⁵¹ endorsed by the G-20 in Seoul.¹⁵² The SIFI recommendations contain a very large number of recommendations—fifty-one—across six areas, addressing overall framework, G-SIFIs, SIFI resolution, SIFI supervision, financial infrastructure, and consistency of implementation.

This central issue, then, is finally progressing, with the SIFI recommendations representing a significant consensus with an agreed timeline (the end of 2012).¹⁵³ If implementation is successful, this will mark a major milestone and one which would have gone a long way in preventing the global financial crisis had it been in place beforehand. At the same time, implementation will pose particular challenges in many jurisdictions, given that many have concentrated banking systems, with a small number of banks dominating most markets.¹⁵⁴ Moreover, in many jurisdictions, these dominant banks have close connections with the state, making any potential problems arising in such institutions both

risks associated with [SIFIs] in their jurisdictions.

2. All jurisdictions should have effective resolution tools that enable the authorities to resolve financial firms without systemic disruptions and without taxpayer losses. . . .

3. All jurisdictions should have the capacity to impose prudential requirements on firms commensurate with their systemic importance. . . .

4. All national supervisory authorities should have the powers to apply differentiated supervision requirements for institutions based on the risk they pose to the financial system.

5. All jurisdictions should put in place or strengthen core financial market infrastructures to reduce contagion risk upon a firm's failure, and encourage their use.

6. FSB members will establish an ongoing peer review process to promote national policies to address the risks associated with SIFIs that are effective in global risk reduction, as well as consistent and mutually supportive and thus avoid regulatory arbitrage and promote a level playing field. Supervisory colleges and crisis management groups will have an important role in seeking to ensure that the legitimate interests of home and host authorities are being taken into account and to assist in improving cooperation.

FSB, *supra* note 149, at 1–2.

151. FSB, *Reducing the Moral Hazard Posed by Systemically Important Financial Institutions: Recommendations and Timelines* (Oct. 2010), available at http://www.financialstabilityboard.org/publications/r_101111a.pdf.

152. G-20, *Seoul Summit*, *supra* note 39, at 7.

153. *Id.* at 12.

154. Thorsten Beck and Asli Demirgüç-Kunt, *Financial Institutions and Markets Across Countries and over Time: Data and Analysis* 8–9 (World Bank Policy Research Working Paper No. 4943, May 2009). For the most comprehensive source of data for these conclusions, see generally Thorsten Beck et. al, A New Database on Financial Development and Structure (rev. Nov. 2010) <http://go.worldbank.org/X23UD9QUX0> (last visited Mar. 23, 2011).

economically and politically significant.¹⁵⁵ Such dominant and systemically important institutions raise not only special concerns for financial stability but also in the context of moral hazard, given their significance and interconnection, economically and politically. Such issues indicate that regulation and supervision, especially of dominant banks in individual economies, are of significant and continuing concern, and rate the highest level of attention from both domestic regulators and regional cooperative mechanisms.

In the context of SIFIs, especially those with government involvement, individual jurisdictions will have to carefully consider the sorts of risks that such institutions will be allowed to undertake. Internationally, related debate currently centers around the proposal in the United States, known as the Volcker Rule, to limit trading activities of banks.¹⁵⁶ While it is arguable that a Volcker Rule prohibiting banks from engaging in proprietary trading would not, in fact, have prevented the global financial crisis (and this argument in all likelihood even extends as far as the pre-1999 U.S. separation between banking and securities in the context of the Glass-Steagall system),¹⁵⁷ jurisdictions will need to carefully balance the sophistication of their major banks and other financial institutions, level of development of their markets (especially in terms of cross-sectoral activities), effectiveness of their regulatory and supervisory arrangements and, most importantly, personnel.

The global financial crisis has shown not only that domestic institutions pose potential systemic risk but also that foreign financial institutions—whether banks or otherwise—do as well. Foreign institutions

155. For bank ownership data and analysis, see J. BARTH ET AL., *RETHINKING BANK REGULATION: UNTIL ANGELS GOVERN* (2005) and supporting database, J. Barth et al., *Bank Regulation & Supervision* (last updated June 2008), available at <http://go.worldbank.org/SNUSW978P0>.

156. See, e.g., President Barack Obama, Remarks by the President on Financial Reform (Jan. 21, 2010), available at <http://www.whitehouse.gov/the-press-office/remarks-president-financial-reform>.

157. See generally Martin Mayer, Brookings Inst., *Glass-Steagall in our Future: How Straight, How Narrow*, (unpublished policy brief) (Nov. 2010) (arguing that a direct relationship exists between the repeal of Glass-Steagall and the financial crisis), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1505488&http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1505488; Peter J. Wallison, Am. Enterprise Inst., *Did the “Repeal” of Glass-Steagall Have Any Role in the Financial Crisis? Not Guilty; Not Even Close.*, (unpublished policy brief) (Nov. 2009) (arguing no relation between the repeal of Glass-Steagall and the financial crisis), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1507803&rec=1&srcabs=1505488.

therefore must also be subject to appropriate regulation and supervision in each jurisdiction in which they operate, across regions in which they are potentially systemically important, as well as globally. Supervisory colleges are an appropriate starting point for such institutions at each level: domestic, regional, and international.

B. Liquidity Arrangements

Liquidity arrangements were central to addressing the systemic phase of the global financial crisis, including domestic measures (especially in the United States and United Kingdom), regional measures (through the European Central Bank), and international measures (primarily through bilateral swap lines from the U.S. Federal Reserve). There is a mixture of implicit and explicit structures for liquidity provision, which, prior to the crisis, were generally referred to in the context of a lender of last resort. In most cases, the lender of last resort is the central bank, but in some cases it can be the deposit insurance authority, usually in conjunction with the central bank. Under the prevailing pre-crisis formulation, the provision of liquidity support in the context of lender of last resort operations generally followed the following rules:

- (1) Support should only be provided to temporarily illiquid but solvent financial intermediaries.
- (2) Support should be provided freely but at penalty interest.
- (3) Support should be provided to anyone with good collateral who meets both rules (1) and (2).
- (4) The lender of last resort should make its readiness to lend *ex ante*.
- (5) Nonetheless, the decision to provide support should remain discretionary.
- (6) This discretion should be based upon the test of the existence of potential systemic risk.¹⁵⁸

Based on experiences during the global financial crisis, there was one main weakness in this formulation and its operation: although the formulation was not explicitly limited to banks, as practiced up to the global financial crisis, the general rule applied by central banks operating

158. ARNER, *supra* note 9, at 139.

as lenders of last resort was to limit the availability of support to systemically significant banks. In retrospect, this formulation, when tied to the regulatory focus on banks rather than all systemically significant institutions and markets, made responses to the initial stages of the crisis difficult, especially in the United States. Overall, lender of last resort support (perhaps more appropriately: liquidity provider of last resort) needs to be available across the financial system to any illiquid but solvent and systemically significant financial institution or market.

Based on experiences during the global financial crisis, it is clear that financial authorities should develop appropriate systems of liquidity support for financial institutions and the financial system generally. As such, the legal foundation for liquidity provision needs to be carefully considered in each jurisdiction in the context of regulatory arrangements, macroprudential systems, and financial structure.

C. *Deposit Insurance and Investor Protection Arrangements*

Like liquidity arrangements, deposit insurance arrangements have been central to addressing systemic issues. Recognizing that existing guidance was insufficient, the BCBS and the International Association of Deposit Insurers (IADI), which was established in May 2002,¹⁵⁹ released an extensively revised set of principles for deposit insurance in June of 2009.¹⁶⁰

Jurisdictions that have put in place blanket guarantees will face initial challenges. In these jurisdictions, there is a clear necessity to review existing arrangements to identify weaknesses which required the use of the blanket guarantee as a backstop during the crisis. Based on experiences in the global financial crisis, it is likely that many of these weaknesses resulted from inadequate coverage (in both banks and non-bank-financial institutions) as well as improperly designed payout systems, in which depositors faced long delays in payment, thus incentivizing runs.¹⁶¹ In

159. The IADI is hosted by the BIS but is not presently a member of the FSB.

160. See BCBS & IADI, *Core Principles for Effective Deposit Insurance Systems*, at 2–5 (June 2009), available at <http://www.bis.org/publ/bcbs156.pdf>. The standards, comprising eighteen principles in ten groups, address: (1) “[s]etting objectives” (principles 1–2); (2) “[m]andates and powers” (principles 3–4); (3) “[g]overnance” (principle 5); (4) “[r]elationships with other safety-net participants and cross-border issues” (principles 6–7); (5) “[m]embership and coverage” (principles 8–10); (6) “[f]unding” (principle 11); (7) “[p]ublic awareness” (principle 12); (8) “[s]elected legal issues” (principles 13–14); (9) “[f]ailure resolution” (principles 15–16); and (10) “[r]eimbursement of depositors and recoveries” (principles 17–18). *Id.* at 2–5.

161. See William Buiter, *The Lessons from Northern Rock*, FIN. TIMES ECONOMISTS’ FORUM

moving from blanket guarantees to improved defined coverage systems, jurisdictions can maximize understanding and thereby effectiveness by focusing not only on the design of the system, but also on communicating the removal of the guarantee and disseminating details of the system.

Other jurisdictions still maintain implicit guarantees—often in the financial systems with large, systemically important and, in some cases, government-connected banks and other financial institutions. Such jurisdictions should carefully review their safety net design in the context of reviewing regulatory and supervisory arrangements for systemically significant financial institutions (discussed above). In this context, there is a need for careful balancing of reality (large financial institutions will often not be allowed to fail) and real moral hazard risks. In jurisdictions where large financial institutions are unlikely to be allowed to fail under any circumstances, the corollary is that the risks that these institutions undertake must be strictly limited. At the same time, even in the context of the largest financial institutions, having in place an explicit system of deposit insurance and other compensation arrangements for financial institution customers (especially insurance customers) has the potential to enhance incentives of management and reduce moral hazard.

D. Financial Institution Resolution Arrangements

Overall, it is clear that the systemic phase of the current global financial crisis was triggered by the failure of large complex global financial conglomerates. As recognized by the G-20, one of the greatest failures of both international and domestic legal and regulatory systems has been the lack of appropriate arrangements, including adequate insolvency arrangements, to address such failures when they occur.¹⁶² Following the difficulties experienced in dealing with the failure or near-failure of large complex global financial conglomerates such as Lehman Brothers and AIG, the central approach is a framework based upon prevention of failure as the first element and mechanisms to address failure when they occur as the second.

In the context of financial institution resolution arrangements, the most significant element is the increased focus on mechanisms to address failure of financial institutions operating on a cross-border basis—a problem that is not easy to solve and one which is likely to require

(Nov. 13, 2007, 4:05 PM), <http://blogs.ft.com/economistsforum/2007/11/the-lessons-frohtml/>.

162. See Part II *supra*, especially Tables 1 & 2.

significant time and effort before a workable approach is reached.¹⁶³ In response to the G-20 mandate to address this issue, the FSF released the most significant attempt to date to address issues of failure resolution.¹⁶⁴ In this set of principles, the FSF stated “[t]he objective of financial crisis management is to seek to prevent serious domestic or international financial instability that would have an adverse impact on the real economy”.¹⁶⁵ At the same time, the FSF recognized that such financial crisis management “remains a domestic competence,” albeit one requiring cross-border cooperation.¹⁶⁶

In relation to preparation, authorities are to

[d]evelop common support tools for managing a cross-border financial crisis, including these principles: a key data list; a common language for assessing systemic implications (drawing on those developed by the [EU] and by national authorities); a document that authorities can draw on when considering together the specific issues that may arise in handling severe stress at specific firms; and an experience library, which pools key lessons from different crises.¹⁶⁷

In addition, supervisors will meet at least annually through the college framework,¹⁶⁸ share a range of information on large complex financial institutions,¹⁶⁹ and ensure that firms have internal contingency plans in place.¹⁷⁰

In managing financial crises, authorities are to

[s]trive to find internationally coordinated solutions that take account of the impact of the crisis on the financial systems and real economies of other countries, drawing on information, arrangements, and plans developed ex-ante. These coordinated solutions will most likely be mainly driven by groups of authorities of the most directly involved economies.¹⁷¹

163. See Douglas Arner & Joseph Norton, *Building a Framework to Address Failure of Complex Global Financial Institutions*, 39 HONG KONG L. J. 95, 112–13 (2009).

164. See Press Release, FSF, Financial Stability Forum Issues Recommendations and Principles to Strengthen Financial Systems, 1 (Apr. 2, 2009), <http://www.bis.org/press/p090403b.pdf>.

165. *Id.* at 11.

166. *Id.*

167. *Id.*

168. *Id.*

169. *Id.* at 11–12.

170. *Id.* at 12.

171. *Id.*

In June 2010, G-20 leaders committed to “design and implement a system where we have the powers and tools to restructure or resolve all types of financial institutions in crisis, without taxpayers ultimately bearing the burden.¹⁷² Leaders endorsed the recommendations of the BCBS on cross-border bank resolution,¹⁷³ stating that resolution regimes should provide for¹⁷⁴

- 1) proper allocation of losses to reduce moral hazard and protect taxpayers;
- 2) continuity of critical financial services, including uninterrupted service for insured depositors;
- 3) credibility of the resolution regime in the market;
- 4) minimization of contagion;
- 5) advanced planning for orderly resolution and transfer of contractual relationships; and
- 6) effective cooperation and information exchange domestically and among jurisdictions in the event of a failure of a cross-border institution.

The recent pronouncements from the G-20 and FSB are a very useful start, especially in relation to regulation, supervision and contingency planning for financial institution failure. However, the statements, reports, and principles, while recognizing the problems raised by such failures, largely leave actual resolution to domestic authorities. This suggests that in the final analysis, individual jurisdictions will have to carefully consider their own arrangements with respect to the potential failure of a large complex financial institution operating within their jurisdiction and to take appropriate precautionary actions *ex ante*. Unfortunately, even in the wake of the global financial crisis, while it may be possible to develop adequate international arrangements relating to prevention of financial institution failure, there is still insufficient consensus with respect to actual insolvency arrangements for any international framework to emerge at present. In such

172. G-20, *Pittsburgh Leaders' Statement*, *supra* note 37, at 5, 17.

173. BCBS, *Report and Recommendations of the Cross-border Bank Resolution Group: Final Paper*, at 1 (Mar. 2010), available at <http://www.bis.org/publ/bcbs169.pdf>. The ten recommendations address (1) “[e]ffective national resolution powers”; (2) “frameworks for coordinated resolution of financial groups”; (3) “[c]onvergence of national resolution mechanisms”; (4) “[c]ross-border effects of national resolution mechanisms”; (5) “[r]eduction of complexity and interconnectedness of group structures and operations”; (6) “[p]lanning in advance for orderly resolution”; (7) “[c]ross-border cooperation and information sharing”; (8) “[s]trengthening risk mitigation mechanisms”; (9) “[t]ransfer of contractual relationships”; and (10) “[e]xit strategies and market discipline.”

174. G-20, *Toronto Summit*, *supra* note 38, at 17–18.

a context, individual jurisdictions must act proactively in building preventive arrangements based on internationally agreed upon approaches. At the same time, there is likely to be a continued lack of arrangements to deal with actual insolvencies of large complex financial institutions at the international level. Individual jurisdictions should thus separately mandate capitalized subsidiaries that are subject to domestic insolvency arrangements for global firms appropriate for the activities being engaged in the individual jurisdiction. At present this is the only arrangement capable to some extent of limiting the damage in individual jurisdictions resulting from the failure of large complex cross-border financial institutions.

CONCLUSION

This Article began with a question: has the post-crisis international financial regulatory reform agenda met its minimum objective of putting in place an agreement on the necessary elements to prevent and address the systemic risks which arose in the global financial crisis? In seeking to answer this question, this Article has reviewed the agenda set by the G-20 and developed by the FSB and its constituents.

At the outset, the agenda largely parallels the agreed causes of the global financial crisis and the necessary elements of regulation to address systemic risk. In addition, there has in fact been a great deal of work and progress on agreeing international approaches to major post-crisis regulatory issues. At the same time, it is clear that despite its claims of having established the “core elements of a new financial regulatory framework to transform the global financial system”¹⁷⁵ at its most recent leaders’ summit in Seoul, South Korea, in November 2010, that the G-20 and the FSB have not been entirely successful in meeting this minimum test. Adaptation, therefore, to date has not yet been sufficient to establish future resilience.

First, while there has been significant progress in addressing financial infrastructure, prudential regulation, and regulation of SIFIs and G-SIFIs, there has been much less progress in relation to macroprudential supervision, regulatory design and coverage, and resolution of financial institutions—all core crisis issues. Second, in relation to the central issue relating to financial infrastructure—OTC derivatives markets—there has been significant agreement on the way forward and one which may in fact

175. G-20, *Seoul Summit*, *supra* note 39, at 7.

ultimately prove sufficient to have prevented the crisis. Only time will tell, with it still being possible at this time that markets will not change fundamentally from their pre-crisis structure and that significant systemic risk will remain. Third, in relation to the fundamental prudential issues—capital, liquidity, and leverage—while there has been very significant progress in relation to capital and to a lesser extent liquidity, leverage requirements remain to be dealt with and these are in fact central to the effectiveness of the capital and liquidity requirements.

Going beyond the minimum requirement of policies sufficient to have prevented the last crisis, post-crisis international regulatory efforts to date have been far less successful in meeting the real desire: putting in place a financial regulatory system which is able to address future crises. At this point, with the limited exception of regulation of hedge funds, the G-20 and the FSB have yet to move towards a more forward looking approach. This certainly must be the objective over the coming years.