Changing Perceptions of Systemic Risk in Financial Regulation

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After the onset of the financial crisis in 2007 official reports noted that the crisis demonstrated failures of pre-crisis financial regulation. Since the crisis, governments, international organizations and regulators have emphasized systemic risk and financial stability as a core concern of financial regulation. A focus on interconnectedness is a critical component of the analysis of financial stability: financial market activity interconnects across territorial borders, across market sectors, and through transactional linkages in ways that pre-crisis financial regulation did not effectively address. The institutional arrangements for transnational financial regulation have also changed: the G20 countries committed to a new co-ordination of financial regulation emphasizing financial stability, an enterprise commentators have characterized as a departure from the pre-crisis paradigm of networks of regulators. Public pronouncements by governments, regulators and international organizations suggest that there has been a transnational paradigm shift in financial regulation.

However, there are reasons to doubt that there has in fact been a paradigm shift rather than an evolution of pre-crisis financial regulation. Systemic risk was a concern of regulators before the crisis, and the new Financial Stability Board is the renamed Financial Stability Forum, established in 1999 in response to the Asian financial crisis. Progress in development and implementation of new transnational standards of financial regulation is slow, and the new standards are developments of, rather than substitutes for, earlier standards. Financial regulation remains excessively complex in ways that impede effectiveness and make it hard for non-experts in financial regulation to understand what the rules are. Enforcement actions arising out of pre and post-crisis events suggest that there has been and remains a systemic problem in the culture of finance.

The Financial Crisis and Systemic Risk

Before the global financial crisis banking regulators and the markets generally behaved as though risk was under control: there were financial assets that were risk-free, and regulators and market participants trusted in risk mitigation techniques with respect to assets that were

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perceived as involving risk.[1] The Basel Committee on Banking Supervision ("Basel Committee") developed standards for banking regulation generally and capital adequacy in particular that aimed to identify and neutralize a range of risks associated with the business of banking.[2] The crisis demonstrated that this faith in the control of risk had been misplaced. Many commentators noted before the crisis, or have emphasized subsequently, that the prevailing paradigm in financial regulation was one of decentring of financial regulation,[3] or, less subtly, that the markets should regulate themselves with as little governmental intervention as possible.[4] Investigations of the financial crisis identified deregulation[5] broadly, or excessive faith in mathematical models more narrowly,[6] as an important cause of the crisis, and initial responses to the crisis emphasized the need to bolster regulation.[7]

After the onset of the financial crisis governments acknowledged the need for

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[1] *See, e.g.*, The Joint Forum, Credit Risk Transfer: Developments from 2005 to 2007, 1 (Jul. 2008) (noting that credit risk transfer (CRT) "allows credit risk to be more easily transferred and potentially more widely dispersed across the financial market. CRT has made the market pricing of credit risk more liquid and transparent. But CRT also poses new risks. A failure to understand and manage some of these risks contributed to the market turmoil of 2007.")

[2] *See, e.g.*, Charles Goodhart, THE BASEL COMMITTEE ON BANKING SUPERVISION: A HISTORY OF THE EARLY YEARS 1974-1997 (2011)

[3] *See, e.g.*, Julia Black, *Paradoxes and Failures: 'New Governance' Techniques and the Financial Crisis*, 75 MODERN LAW REVIEW 1037-1063 (2012).

[4] For an articulation of the rationale for financial deregulation, *see, e.g.*, James A. Dorn, *Financial Deregulation in a Global Economy*, 13:2 CATO JOURNAL 155 (1993).

[5] *See, e.g.*, Brooksley Born, *Deregulation: A Major Cause of the Financial Crisis*, 5 HARVARD LAW & POLICY REVIEW 231-243 (2011). *Cf.* Ross Levine, *The Governance of Financial Regulation: Reform Lessons from the Recent Crisis*, 12 INTERNATIONAL REVIEW OF FINANCE 39-56 (2012).

[6] *See, e.g.*, Financial Services Authority, The Turner Review: A Regulatory Response to the Global Banking Crisis, 22 (Mar. 2009).

[7] *See, e.g.*, G20, Declaration of the Summit on Financial Markets and the World Economy (Nov. 15, 2008) ("We are determined to enhance our cooperation and work together to restore global growth and achieve needed reforms in the world's financial systems.")

governmental, and even international governmental action,[8] to promote and maintain confidence in the financial markets. Money provided by governments and the IMF and new rules were employed to support the financial markets.[9] But the mutual dependence of banks and governments led to new difficulties.[10] In the EU, government bailouts of financial institutions increased stresses on public finances,[11] which in turn led to market participants worrying about sovereign credit risk, and a reduction in the value of some sovereign debt held by banks.[12] The EU experienced a sovereign debt crisis on top of the financial crisis, and the EU and IMF imposed austerity measures as a condition for loans to states which needed financial assistance.[13]

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[8] *See, e.g.*, G20, Declaration on Strengthening the Financial System (Apr. 2, 2009) (stating a commitment to take "action to strengthen regulation and supervision ... to reform the regulation of the financial sector.") *Cf.* Stijn Claessens, Giovanni Dell'Ariccia, Deniz Igan, & Luc Laeven, Lessons and Policy Implications from the Global Financial Crisis, IMF Working Paper WP/10/44 (2010) at 3 ("The crisis highlights that the international financial architecture is still far from institutionally matching the closely-integrated financial systems.)

[9] *See, e.g.*, United States Department of the Treasury Office of Financial Stability, Troubled Asset Relief Program: Two Year Retrospective (Oct. 2010); Independent Evaluation Office of the International Monetary Fund, IMF Response to the Financial and Economic Crisis: An IEO Assessment (Dec. 13, 2013); John C. Coffee Jr., The Political Economy of Dodd-Frank: Why Financial Regulation Tends to be Frustrated and Systemic Risk Perpetuated, 97 Cornell L. Rev. 1019 (2012).

[10] *See, e.g.*, Caroline Bradley, *Breaking Up is Hard to Do: The Interconnection Problem in Financial Markets and Financial Regulation: A European (Banking) Union Perspective ,* 49 TEX. INT'L L. J. 269 (2014) .

[11] *See, e.g.*, Douglas Sutherland, Peter Hoeller & Rossana Merola, Fiscal Consolidation: How Much, How Fast and by What Means?, OECD Economic Policy Papers No. 1 (Apr. 2012).

[12] *See, e.g.*, European Central Bank, Financial Stability Review (Dec. 2010); Philip R. Lane, *The European Sovereign Debt Crisis*, 26 J. ECON. PERSPECTIVES 49-68 (2012).

[13] *See, e.g.*, International Monetary Fund, Greece: Request for Stand-By Arrangement, IMF Country Report No. 10/111 (May 2010); Manos Matsaganis, *The Welfare State and the Crisis: The Case of Greece*, 21 J. EUR. SOC. POL. 501 (2011); Kevin Featherstone, *The Greek Sovereign Debt Crisis and EMU: A Failing State in a Skewed Regime*, 49 JOURNAL OF COMMON MARKET STUDIES 193-217 (2011).

More generally, policy-makers have emphasized the need to solve the problem that financial firms that are "too big to fail" are subject to moral hazard and could cause financial crises in the future.[14] And regulators and market participants recognize that the idea of a risk-free financial asset is an illusion.[15]

The scale of the crisis, and of governmental financial support for troubled financial institutions, a US foreclosure crisis, and EU sovereign debt crisis, domestic policies of austerity implemented with or without the involvement of the IMF,[16] all led to financial regulation becoming part of the general political conversation in a way that it had not been before the crisis when financial regulation was a matter for technocrats and market participants rather than politicians and citizens. Citizens engaged in public protests about austerity and failures of government from Syntagma Square to Wall Street.[17] The Occupy movement has spawned groups which have produced long and detailed critiques of regulatory proposals,[18] but citizens generally lack the expertise and resources to participate effectively in political and regulatory discussions

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[14] *See, e.g.*, European Commission Communication, COM (2010)579 (Oct. 20, 2010) (An EU Framework for Crisis Management in the Financial Sector); Caspar Siegert & Matthew Willison, Estimating the Extent of the `Too Big to Fail' Problem - A Review of Existing Approaches, Bank of England Financial Stability Paper 32 (Feb. 13, 2015).

[15] *See, e.g.*, Bank for International Settlements, Sovereign Risk: a World Without Risk-free Assets?, BIS Papers No. 72 (Jul. 2013).

[16] *Cf., e.g.*, Ulrich Beck, *Why 'Class' Is Too Soft a Category to Capture the Explosiveness of Social Inequality at the Beginning Of the Twenty-first Century*, 64 BRITISH JOURNAL OF SOCIOLOGY 68 (2013) ("The risks posed by big banks are being socialized by the state and imposed on retirees through austerity dictates.")

[17] *See, e.g.*, Craig Calhoun, *Occupy Wall Street in Perspective*, 64 BRITISH JOURNAL OF SOCIOLOGY 26-38 (2013).

[18] *See, e.g.*, Occupy the SEC, Comment on Prohibitions and Restrictions on Proprietary Trading and Certain Interests in and Relationships With, Hedge Funds and Private Equity Funds (Feb. 13, 2012) at http://www.occupythesec.org/files/OSEC%20-%20OCC-2011-14%20-%20Comment%20Letter.pdf; Hannah Appel, *Occupy Wall Street and the Economic Imagination*, 29 CULTURAL ANTHROPOLOGY 602-625, 603-5 (2014) (describing the work of the Alt Banking group).

of the complexities of financial regulation.[19] And the politics surrounding financial regulation can be incomprehensible: in the US the Chairman of the House Financial Committee on Financial Services asked "who will protect consumers from the overreach of the Consumer Financial Protection Bureau?"[20]

The causes of the financial crisis included phenomena which had been present in other financial crises: asset bubbles, credit booms, build-up of risk and failures of regulation.[21] But policy-makers identified what they described as new or newly significant phenomena that exacerbated the crisis: innovation involving complex and opaque financial instruments, increased interconnectedness of financial institutions and markets, and increased leverage of financial institutions.[22]

Governments, international organizations and regulators reacted to the financial crisis by announcing that they would develop new and better rules of financial regulation. In 2008 the G20 states announced that they would do whatever was necessary to stabilize financial markets.[23] Although the G20 Declaration of 2008 referred to the need to improve financial regulation there was no detail about what changes were planned,[24] although there was an agreed Action Plan

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[19] *See, e.g.*, Levine, *supra* note 5, at 40.

[20] House Committee on Financial Services Press Release, Hensarling: "Who Will Protect Consumers from the Overreach of the Consumer Financial Protection Bureau?" (Mar. 3, 2015).

[21] *See, e.g.*, Stijn Claessens, Giovanni Dell'Ariccia, Deniz Igan & Luc Laeven, Lessons and Policy Implications from the Global Financial Crisis, IMF Working Paper WP/10/44 at 4 (Feb. 2010).

[22] *See, e.g.*, *id.* at 7. The authors also states that problems in the household sector were more significant in this financial crisis than in previous crises. *Id.* at 10-11.

[23] G20, Declaration of the Summit on Financial Markets and the World Economy (Nov. 15, 2008) ("we will..Continue our vigorous efforts and take whatever further actions are necessary to stabilize the financial system.") On the role of the G20, *see, e.g.*, Ross P Buckley, *The G20's Performance in Global Financial Regulation* , 37 UNIVERSITY OF NEW SOUTH WALES LAW JOURNAL 63-93 (2014).

[24] *See, e.g.*, G20 Declaration of the Summit on Financial Markets and the World Economy (Nov. 15, 2008) ("We commit to protect the integrity of the world's financial markets

which assigned tasks to various actors. The new measures to deal with risk in the financial system would be developed through international standards, and the G20 reiterated this plan the following year[25] together with a commitment by the G20 states to implement the new standards.[26] The Financial Stability Forum, which was established in 1999 to address issues of financial stability revealed by the Asian financial crisis,[27] would be reconstituted as the Financial Stability Board (FSB) with a broader mandate and with increased institutional capacity.[28] The G20 committed to "implement international financial standards (including the 12 key International Standards and Codes)"[29] and to "undergo periodic peer reviews, using among other evidence IMF / World Bank public Financial Sector Assessment Program reports."[30] Transnational standards

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by bolstering investor and consumer protection, avoiding conflicts of interest, preventing illegal market manipulation, fraudulent activities and abuse, and protecting against illicit finance risks arising from non-cooperative jurisdictions. We will also promote information sharing, including with respect to jurisdictions that have yet to commit to international standards with respect to bank secrecy and transparency.")

[25] *See, e.g.*, G20, Declaration on Strengthening the Financial System (Apr. 2, 2009).

[26] *See, e.g.*, *id.*

[27] *See, e.g.*, Enrique R. Carrasco, *The Global Financial Crisis and the Financial Stability Forum: The Awakening and Transformation of an International Body*, 19 TRANSNATIONAL LAW & CONTEMPORARY PROBLEMS 203-220, 204 (2010).

[28] G20, Declaration on Strengthening the Financial System (Apr. 2, 2009).

[29] The International Standards and Codes are the IMF's Code of Good Practices on Fiscal Transparency, Code of Good Practices on Transparency in Monetary and Financial Policies, General Data Dissemination System, and Special Data Dissemination System the Basel Committee's Core Principles for Effective Banking Supervision, IOSCO's Objectives and Principles of Securities Regulation, IAIS' Insurance Core Principles, The Basel Committee and IADI's Core Principles for Effective Deposit Insurance Systems, the World Bank's Insolvency and Creditor Rights Standard, the OECD's Principles of Corporate Governance, the IASB and IAASB's International Financial Reporting Standards (IFRS) and International Standards on Auditing (ISA), the CPMI/IOSCO Principles for Financial Market Infrastructures, and the FATF Recommendations on Combating Money Laundering and the Financing of Terrorism & Proliferation. *See* http://www.financialstabilityboard.org/cos/key_standards.htm.

[30] *See, e.g.,* G20, Declaration on Strengthening the Financial System (Apr. 2, 2009).

for financial regulation would be improved and expanded and would be implemented more effectively. A significant component of the project was an intensification of the institutional arrangements for developing and ensuring implementation of international standards of financial regulation.[31] In the EU, the crisis led to new institutional mechanisms for the control of banking risks with the creation of a European Banking Union and the transfer of powers to supervise eurozone banks to the European Central Bank.[32]

In addition to redeveloping the architecture of international financial regulation the G20 emphasized that systemic risk and financial stability are a core concern of financial regulation.[33] The FSB has taken on the task of evaluating states' implementation of international standards by means of country peer reviews,[34] and has also carried out thematic peer reviews which focus on issues the FSB regards as important for financial stability.[35] The FSB characterizes a major function of both types of peer review as encouraging dialogue and the sharing of experiences between FSB members.[36]

In 2009, in addition to commitments with respect to capital adequacy, credit rating agencies, pay and compensation, banking secrecy and accounting standards, the G20 announced that the FSB and IMF would collaborate to identify and warn of macroeconomic and financial risks, and that regulation would take account of macro-prudential risks, and would deal with

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[31] *See, e.g.,* Financial Stability Board, First Annual Report: 28 January 2013 - 31 March 2014, ii (Jan. 29, 2015) (noting that the Financial Stability Board "became a separate legal entity in the form of an association ("Verein") under Swiss law on January 28, 2013.")

[32] *See, e.g.,* Niamh Moloney, *European Banking Union: Assessing its Risks and Resilience*, 51 COMMON MARKET L. REV. 1609-1670 (2014).

[33] *See, e.g.*, G20, Declaration on Strengthening the Financial System (Apr. 2, 2009).

[34] *See, e.g.*, Financial Stability Board, Country Review of Mexico, Peer Review Report (Sept. 23, 2010).

[35] *See, e.g.,* Financial Stability Board, Thematic Review on Deposit Insurance Systems Peer Review Report (Feb. 8, 2012).

[36] *See, e.g., id.* at 2. For a description of the procedures for FSB peer reviews see Financial Stability Board, Handbook for FSB Peer Reviews (Jan. 7, 2014).

"systemically important financial institutions, instruments and markets."[37] The G20 countries also committed to "conduct all our economic policies cooperatively and responsibly with regard to the impact on other countries."[38] Thus the G20 recognized that maintaining financial stability required focusing on risks in three different but inter-related ways, through the lenses of micro-prudential risk (risks affecting individual firms), macro-prudential risk (systemic risks) and monetary policy.[39]

In a number of ways the G20 program of stabilizing financial markets looked like a dramatic shift away from the pre-crisis paradigm of financial regulation in which technocratic regulators acknowledged and deferred to the expertise of market actors in identifying and controlling risk. The financial crisis was a political rather than merely a regulatory problem, and it required political as well as regulatory solutions. Governments stated publicly that they would take control of systemic risk domestically and through intensified transnational arrangements. The next sections of the chapter explore the extent to which the new transnational arrangements and the new approaches to systemic risk do and do not represent a paradigm shift in transnational financial regulation.

The New Transnational Arrangements for Addressing Systemic Risk

The G20's commitment to a new co-ordination of financial regulation emphasizing financial stability is a departure from the pre-crisis paradigm of networks of regulators.[40] The

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[37] G20, Declaration on Strengthening the Financial System (Apr. 2, 2009).

[38] *Id.*

[39] *See, e.g.*, Daniel K. Tarrullo, *International Cooperation in Central Banking*, 47 CORNELL INT'L L. J. 1 (2014).

[40] *See, e.g.*, Stavros Gadinis, *The Financial Stability Board: The New Politics of International Financial Regulation*, 48 TEX. INT'L L. J. 157, 161 (2013) (arguing that new arrangements for co-ordinating transnational financial regulation through the G20 and Financial Stability Board "constitute a stark departure from the paradigm of networks of independent regulators.")

Basel Committee, the International Organisation of Securities Commissions (IOSCO) and the International Association of Insurance Supervisors (IAIS) had been developing transnational standards for financial regulation since the 1980s. The Basel Committee published the Basel Accord in 1988,[41] but central bankers and banking regulators had been focusing on issues raised by the internationalization of financial markets since the early 1970s.[42] IOSCO was formed in 1974 as a forum for discussion of issues relating to securities regulation and was formalized a decade later when it was incorporated in Quebec.[43] In 1987 IOSCO established a Technical Committee which would be "responsible for the co-ordination of international co-operation on the regulation of securities transactions."[44] The IAIS was formed in 1994.[45] These three organizations developed as international policy networks, linking policy-makers from different jurisdictions with common interests and facing common problems.[46]

But although the transnational standard setters for financial regulation developed a range of agreed standards the standards are not formally binding, even on states which participate in the

[41] *See, e.g.*, Goodhart, *supra* note 2, at 184.

[42] *See, e.g.*, *id*. at 10-12.

[43] *See, e.g.*, A.A. Sommer, *IOSCO: Its Mission and Achievement*, 17 N.W. J. INT'L L & BUS. 15, 15 (1996-7).

[44] *See, e.g.*, IOSCO, International Equity Offers: Summary of Report, 2 (1989).

[45] *See, e.g.*, John Braithwaite & Peter Drahos, GLOBAL BUSINESS REGULATION, 119 (2000).

[46] *See, e.g.*, Anne-Marie Slaughter, A NEW WORLD ORDER (2004). Cf. Wolfgang H. Reinicke, *The Other World Wide Web : Global Public Policy Networks*, 117 FOREIGN POLICY 44-57, 45 (1999-2000) ("Trapped by the territoriality of their power, policy makers in traditional settings often have little choice but to address the symptoms rather than the causes of public problems.")

relevant networks.[47] States may feel pressure to comply with the standards,[48] the IMF can focus on standards as a component of conditionality with respect to its borrowers,[49] and the IMF and World Bank have developed a Financial Sector Assessment Program (FSAP) to examine the extent to which states' laws are consistent with the international standards.[50] But the standards have often been drafted in language that is vague and open to multiple interpretations.[51] Even Basel II, which was much more detailed and specific than the original Basel Accord, provided states with significant leeway in implementation.[52] In responding to the crisis the G20 and the Financial Stability Board have emphasized the need to develop transnational standards to be more demanding and to give states less discretion with respect to implementation.[53]

It was the G20, rather than the transnational regulatory networks, that took the lead in responding to the crisis at the international level.[54] States collaborated outside the established networks to implement responses to the crisis.[55] The G20 set out the parameters for the regulatory

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[47] *See, e.g.*, Duncan E. Alford, *Core Principles for Effective Banking Supervision: An Enforceable International Financial Standard?*, 28 B.C. INT'L & COMP. L. REV. 237, 286 (2005).

[48] *See, e.g.*, Chris Brummer, SOFT LAW AND THE GLOBAL FINANCIAL SYSTEM , 136-147(2012); Maximillian L. Feldman, *The Domestic Implementation of International Regulations*, 88 N.Y.U. L. REV. 401, 407-08 (2013).

[49] *See, e.g.*, Brummer, *supra* note 48, at 147.

[50] *See, e.g.*, Brummer, *supra* note 48, at 157-170.

[51] *See, e.g.*, Michael S. Barr & Geoffrey P. Miller, *Global Administrative Law: The View from Basel*, 17 EUR. J. INT. LAW 15-46, 31 (2006).

[52] *Cf.* Edward J. Kane, *Basel II: A Contracting Perspective*, 32 J. FINAN. SERV. RES. 39-53, 39 (2007) ("the original 1988 BCBS Accord (Basel I) and its successor Accord (Basel II) are better viewed as a collection of strategic guidelines than as systems of rules.").

[53] *See, e.g.* G20, Declaration on Strengthening the Financial System (Apr. 2, 2009).

[54] *See, e.g.*, David Zaring, *International Institutional Performance in Crisis*, 10 CHI. J. INT'L L. 475-504 (Winter 2010).

[55] Although *see, e.g.*, Zaring, *supra* note 54, at 485 (suggesting that co-ordinated responses to the crisis may have been facilitated by a history of co-operation through regulatory

responses which the Financial Stability Board and the transnational networks would implement, thus giving political direction to processes which had previously seemed to be technocratic.[56] That financial regulation seemed more political during the crisis, when states were bailing out financial firms, was not surprising. And it was necessary for states to co-ordinate their behavior at the transnational level because individual states could not control a transnational crisis on their own. Meanwhile, the international responses to the crisis, in particular the implementation and imposition of austerity measures, have also led to a new emphasis on the international financial system and financial regulation as political issues within domestic systems.

The FSB and the transnational standard setters have worked on implementing the G20 program for financial reform, but domestic legislators and regulators have taken steps to implement reforms to some extent independently.[57] The G20 established some general principles for reform of financial regulation, but although the transnational standard setters have developed more detailed standards to flesh out the general principles, states have been implementing their own versions of reformed regulation at the same time.[58] Thus the G20 principles have been implemented according to different timetables in different places (specifically in the EU and the US), and the details of the new domestic regulatory regimes are not always consistent with each

networks).

[56] *See, e.g.*, *id.* (The networks seem to be "working for the G20, rather than guiding it or offering a de-politicized alternative.") *Cf.* Eric J. Pan, *Challenge of International Cooperation and Institutional Design in Financial Supervision: Beyond Transgovernmental Networks*, 11 CHI. J. INT'L L. 243-284, 245 (2010) ("For financial law scholars, the G20, both in its existence and in the types of actions it puts forward, represents only a temporary solution to an on-going problem of regulation of international financial markets and institutions.")

[57] Note that it may sometimes be complex to achieve co-ordination of regulatory efforts domestically. *See, e.g.*, Government Accountability Office, Dodd-Frank Regulations: Regulators' Analytical and Coordination Efforts, GAO-15-81 (Dec. 2014).

[58] *See, e.g.*, Financial Markets Law Committee, Discussion Paper: Coordination in the Reform of International Financial Regulation: Addressing the Causes of Legal Uncertainty (Feb. 2015).

other.[59] Market participants have critiqued these regulatory inconsistencies.[60]

The G20 committed to a new FSB peer review process to improve implementation of international standards, and, in addition, the standard setters have focused more attention on implementation of their standards than they had in the pre-crisis period. The Basel Committee had established an Accord Implementation Group to focus on implementation of the Basel II capital adequacy framework and in 2009 the AIG was renamed the Standards Implementation Group,[61] and it was given a broader task of focusing on the Basel Committee standards more generally.[62] In 2011 the Basel Committee announced that it would be reviewing states' implementation of Basel III,[63] and this initiative developed into a Regulatory Consistency Assessment Program.[64] IOSCO carried out rather formal exercises in evaluating implementation of its resolutions and standards beginning in the 1990s.[65] More recently IOSCO has carried out

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[59] See, e.g., GAO, International Financial Reforms: U.S. and Other Jurisdictions' Efforts to Develop and Implement Reforms, GAO-14-261 (Apr. 3, 2014); Klaus Deutsch, Transatlantic Consistency? Financial Regulation, the G20 and the TTIP, Deutsche Bank Research. EU Monitor Global Financial Markets (Jul. 9, 2014).

[60] *See, e.g.* GFMA et al, Letter to IOSCO Re: Recommendations on Global Regulatory Coordination and Responses to IOSCO Task Force on Cross-Border Regulation Roundtable Question Sets (May 30, 2014) at http://www.iosco.org/library/cross-border-taskforce/pdf/GFMA-JFMC-written-submission.pdf .

[61] This renaming may or may not be connected with the bailout of the other AIG which occurred in 2008. As to the bailout, *see, e.g.*, William K. Sjostrom Jr., *The AIG Bailout*, 66 WASH. & LEE L. REV. 943-991 (2009).

[62] BIS, Steps to Strengthen Implementation of Supervisory Standards and Guidance Taken by the Basel Committee (Jan.8, 2009).

[63] Basel Committee on Banking Supervision, Progress Report on Basel III Implementation (Oct. 2011).

[64] Basel Committee on Banking Supervision, Basel III Regulatory Consistency Assessment Programme (RCAP) (Oct. 2013).

[65] *See, e.g.*, IOSCO, Report on the Implementation of IOSCO Resolutions (1996); IOSCO, Report on Implementation of International Disclosure Standards (May 2000).

significantly more detailed assessments of the extent to which states are implementing some of its standards. These assessments include evaluations of implementation of IOSCO standards and principles relating to benchmarks,[66] credit rating agencies,[67] and financial market infrastructures.[68] Thus during and after the financial crisis the Basel Committee and IOSCO intensified their existing interest in issues of implementation rather than developing an entirely new interest in implementation: and evolution rather than a change of paradigm.

In addition to the work of the Basel Committee and IOSCO, the IMF and World Bank continue to monitor implementation of the standards through the FSAP process. Within the IMF structure FSAPs were originally conceived as voluntary technical assistance, but the IMF decided to make Financial Sector Assessments a mandatory component of surveillance for countries with systemically important financial sectors (assessed based on criteria of size and interconnectedness).[69] Originally the IMF identified twenty-five such countries,[70] and in 2013 the

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[66] *See, e.g.*, IOSCO, Review of the Implementation of IOSCO's Principles for Financial Benchmarks, OR02/2015 (Feb. 25, 2015); IOSCO, Review of the Implementation of IOSCO's Principles for Financial Benchmarks by WM in respect of the WM/Reuters 4.p.m Closing Spot Rate , FR07/2014 (Sep.30, 2014); IOSCO, Review of the Implementation of IOSCO's Principles for Financial Benchmarks by Administrators of Euribor, Libor and Tibor, FR03/2014 (Jul. 22, 2014).

[67] IOSCO, A Review of Implementation of the IOSCO Code of Conduct Fundamentals for Credit Rating Agencies (Mar. 2009).

[68] IOSCO, Implementation Monitoring Of PFMIs - Level 1 Assessment Report (Apr. 2013).

[69] IMF Decision No. 14736-(10/92), adopted September 21, 2010. See also IMF, Integrating Stability Assessments Under the Financial Sector Assessment Program into Article IV Surveillance: Background Material (Aug. 27, 2010). The IMF's approach to surveillance has been evolving. See, e.g., IMF, 2014 Triennial Surveillance Review — Overview Paper (Jul. 30, 2014).

[70] These were: Australia, Austria, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, Russia, Singapore, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States. *See* IMF, Top 25 Financial Sectors to Get Mandatory IMF Check-Up, IMF Survey Online (Sep. 27, 2010).

number of such countries was increased to twenty-nine.[71] The list includes a large number of European countries because of the emphasis on interconnectedness.[72]

The FSB peer reviews were intended to demonstrate that the G20 countries were leading by example: their compliance with transnational standards, established by the peer reviews, would allow them more credibly to encourage other countries to comply.[73] But the FSB peer reviews do not in fact demonstrate compliance with international standards. They build on FSAP assessments rather than duplicating them: for example they may assess how a state has responded to FSAP recommendations.[74] The FSB Handbook for Peer Reviews states that "[u]nlike the FSAP, a country review does not comprehensively analyse a jurisdiction's financial system structure or policies, nor does it provide an assessment of its conjunctural vulnerabilities or its compliance with international financial standards."[75]

What the decision not to reproduce FSAPs means is that the peer reviews are carried out on the basis of data in FSAPs which is not current, and on the basis of statements of regulators about what they are doing. For example, the Peer Review of Canada, published in January 2012, noted that it was "largely based on the Canadian financial authorities' responses to a questionnaire designed to gather information about the actions taken in response to the relevant recommendations of the most recent Financial Sector Assessment Program Assessment for

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[71] IMF, Mandatory Financial Stability Assessments under The Financial Sector Assessment Program: Update (Nov. 15, 2013). The twenty-nine jurisdictions include all of the original twenty-five and Denmark, Finland, Norway, and Poland. *Id.* at 16.

[72] *Id.*

[73] FSB, FSB Framework for Strengthening Adherence to International Standards (Jan. 9, 2010).

[74] *See, e.g.*, FSB Handbook, supra note 36, at 2.

[75] *Id.*

Canada."[76] This FSAP assessment of Canada had been carried out four years earlier, in 2008.[77] The FSB suggests that its peer reviews are geared to examining the responsiveness of the states subject to the reviews to recommendations made in the FSAP process rather than to monitoring compliance with international standards. In the case of Canada the time lag was significant: Canada's FSAP was completed in the early stages of the financial crisis, and so a focus on how Canada responded to recommendations made at that time does not help very much to instil confidence about what Canada was doing with respect to changes in thinking about standards between 2008 and 2012. At the same time, the peer review report does include a lot of information about Canada's reactions to the financial crisis.[78] And the Canadian financial system fared well during the crisis.

The FSB says that one of the main functions of the peer reviews is to encourage dialogue between the participants:

> The added value of the FSB comes in significant part from the cross-sectoral, cross-functional, system-wide perspective brought by its members. Dialogue with peers and the sharing of lessons and experiences are a key benefit of FSB peer reviews.[79]

The FSB is not the only body which can promote dialogue, but unlike the Basel Committee or IOSCO it includes participants who focus on different sectors of finance. As some of the complex issues financial regulators need to deal with relate to regulatory perimeters, gaps and arbitrage,[80] a body which can bring together people who understand the different parts of the

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[76] FSB Peer Review of Canada, 3 (Jan. 30, 2012).

[77] IMF, Canada: Financial System Stability Assessment—Update, IMF Country Report No. 08/59 (Feb. 2008).

[78] *See, e.g.*, FSB Peer Review of Canada, 14 (Jan. 30, 2012).

[79] FSB Handbook, supra note 36, at 3.

[80] Shadow banking is this type of complex issue. *See, e.g.*, Steven L. Schwarcz, Regulating Shadows: Financial Regulation and Responsibility Failure, 70 Wash. & Lee L. Rev. 1781-1825 (2013). *Cf.* Financial Stability Board, Transforming Shadow Banking into Resilient Market-based Financing: An Overview of Progress and a Roadmap for 2015 (Nov. 14, 2014).

overall picture is useful. And the FSB's decision to focus on thematic as well as country peer reviews reflects this idea: the objective of thematic peer reviews is

> to evaluate (where possible) the extent to which standards and policies have had their intended results; and to identify gaps and weaknesses in reviewed areas and to make recommendations for potential follow-up (including via the development of new standards) by FSB members.[81]

This idea of the benefit of dialogue among regulators was cited before the financial crisis as an advantage of the regulatory networks which proved to be unable to limit the crisis without governmental intervention. What the FSB describes is a process which involves a wider range of technocrats than participated in the individual standard-setters: it is cross-sectoral, cross functional and system-wide rather than being limited to banking, securities or insurance. This cross-sectoral communication is not new: beginning in 1993 the sectoral regulators did co-operate in a Tripartite Group, later renamed the Joint Forum, to address issues raised by the " growing emergence of financial conglomerates and the blurring of distinctions between the activities of firms in each financial sector."[82] The Joint Forum met three times a year between 1996 and 2001,[83] and it has established working groups to focus on particular issues. For example, in 2000 the Joint Forum established a working group to compare the core principles which had been developed by the sectoral standard-setters.[84] In 2004 the IMF published a paper which identified a number of emerging risks and cross-sectoral issues the standard-setters should address.[85] The Joint Forum had convened an industry roundtable to address cross-sectoral issues in 2003; it established a Working Group on Regulatory and Market Differences, noted the IMF's

[81] FSB Handbook, supra note 36, at 2.

[82] Basel Committee on Banking Supervision, Compendium of Documents Produced by the Joint Forum, 5 (Jul. 2001)

[83] *Id.*

[84] Basel Committee on Banking Supervision, The Joint Forum, Core Principles: Cross-Sectoral Comparison,1 (Nov. 2001).

[85] IMF, Financial Sector Regulation: Issues and Gaps (Aug. 4, 2004).

paper and published its own paper on cross sectoral issues in 2006.[86] These are only a few examples of the Joint Forum's work, but they do illustrate that cross-sectoral discussions were occurring before the financial crisis, and that the FSB's cross-sectoral work is not really new.

The Joint Forum's 2006 cross-sectoral issues paper noted that there had been some convergence in market practice and regulation across sectors.[87] For example, the paper identifies risk management within financial conglomerates as an area of convergence in market practice.[88] Generally the Joint Forum characterized this development as positive, although the paper did note that "supervisors recognise that models are only one tool in a firm's risk management process and that they have their limitations."[89] In 2013 the Joint Forum decided to survey regulators and firms in order to "understand the current state of credit risk..management given the significant market and regulatory changes since the financial crisis of 2008."[90]

This brief sketch of some aspects of the work of the transnational standard setters, individually and together through the Joint Forum, with the co-operation of the IMF, illustrates that the work of the FSB is really another step in an evolving process of transnational co-ordination of financial regulation, rather than a new phenomenon. The developing discourse among financial regulators is also an example of evolution rather than something that is novel. And while a more comprehensive and regulator dialogue among regulators may be useful we should also note that groupthink has been identified as an issue in the lead-up to the crisis,[91] and the new processes are not guaranteed to produce better thinking. Nor are they guaranteed to apply

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86 Basel Committee on Banking Supervision, The Joint Forum, Regulatory and Market Differences: Issues and Observations, 1 (2006).

87 *Id.* at 3.

88 *Id.* at 4-5.

89 *Id.* at 5.

90 The Joint Forum, Consultative Document: Developments in Credit Risk Management Across Sectors: Current Practices and Recommendations, 1 (Feb. 2015).

91 Independent Evaluation Office of the IMF, IMF Performance in the Run-Up to the Financial and Economic Crisis: IMF Surveillance in 2004–07, 1 (2011).

an appropriate level of scepticism to the claims of financial market participants.[92]

Systemic Risk After the Financial Crisis

Just as the structures and processes for international cooperation in financial regulation seem to be an evolution rather than a paradigm shift, the regulatory approaches to systemic risk can be characterized as an evolution of pre-crisis financial regulation. The language policy-makers use to describe their focus on systemic risk has changed: macroprudential regulation is added to micro-prudential regulation,[93] and monetary policy must take account of financial stability concerns.[94] In its Financial Stability Report in December 2014 the Bank of England analyzed market liquidity from microstructural and macrofinancial perspectives, describing how market liquidity can build up systemic risk.[95] During the financial crisis securitizations involved liquidity problems,[96] and the Report states that "[e]fforts are now underway internationally to improve the simplicity and transparency of securitisations."[97] The example clearly comes from the last crisis and the acknowledgment of the relationships between firm safety and soundness,

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[92] *Cf.* Anat Admati & Martin Hellwig, THE BANKERS' NEW CLOTHES, (2013) (arguing that not much has really changed in banking regulation).

[93] See, e.g., Andrew Baker, *The Gradual Transformation? The Incremental Dynamics of Macroprudential Regulation*, 7 REGULATION & GOVERNANCE 417–434, 418 (2013) (suggesting that "the macroprudential regulatory turn that has materialized since 2008 is both dramatic or (potentially) transformational, and gradual and incremental at the same time.")

[94] Although *cf.* Janet Yellen, Monetary Policy and Financial Stability, Remarks at the 2014 Michel Camdessus Central Banking Lecture, International Monetary Fund, Washington, D.C. (Jul. 2, 2014) ("In my remarks, I will argue that monetary policy faces significant limitations as a tool to promote financial stability.")

[95] Bank of England, Financial Stability Report, 54-6 (Dec. 2014).

[96] *Id.* at 56 "during the recent financial crisis, the opacity and complexity of some securitisation markets made them vulnerable to illiquidity, in part because assets became hard to finance.")

[97] *Id.*

systemic stability and monetary policy reflects a complex thinking about financial stability, which, as of December 2014 also included issues relating to damage to market confidence from bank misconduct.[98] In March 2015 the Bank of England, noted that it is "one of a handful of institutions internationally with responsibility for monetary macroprudential and microprudential policy," and published an agenda for research on the inter-relationship between these policy areas.[99] The agenda recognizes that recent changes in the regulatory environment and the conduct of monetary policy demand further research to understand their implications for financial stability.[100]

Policy-makers did not begin to think about issues of financial stability (or even macro-prudential regulation) in 2007. The Bank of England published the first financial stability review in 1996 after the failure of BCCI and Barings.[101] Claudio Borio at the Bank for International Settlements, the institution which houses the Basel Committee's secretariat, advocated a macroprudential approach in 2003,[102] and some years earlier than that he wrote about regulation and financial stability.[103] The European Central Bank has published a Financial Stability Review since December 2004.[104] Recent developments in thinking about financial stability thus look, as

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[98] *Id.* at 48 (".. recent misconduct and other operational failings have highlighted that rebuilding confidence in the banking system requires more than financial resilience. That, and changes to banks' business models in response to commercial and regulatory developments, make it important for banks to continue to enhance the effectiveness of their governance arrangements.")

[99] Bank of England, One Bank Research Agenda: Discussion Paper, 1 (Mar. 2015).

[100] *Id.* at 3-4.

[101] Sander Oosterloo, Jakob de Haan & Richard Jong-A-Pin, Financial Stability Reviews: a First Empirical Analysis, 2 Journal of Financial Stability 337-355, 339 (2007)

[102] Claudio Borio, Towards a Macroprudential Framework for Financial Supervision and Regulation?, BIS Working Papers No. 128 (Feb. 2003).

[103] Claudio Borio & Renato Filosa, The Changing Borders of Bankig: Trends and Implications, BIS Working Papers No. 23 (Nov. 1994).

[104] European Central Bank, Financial Stability Review, 7 (Dec. 2004).

do the changes in the institutional arrangements for setting international standards for regulation, like an evolution rather than a dramatic change.

Although the terminology of macro-prudential regulation has spread since the crisis, policy-makers were concerned about similar issues under the rubric of financial stability before 2007: financial crises with varying causes and characteristics had preceded the global financial crisis.[105] Other financial crises have involved losses of confidence in financial institutions.[106] So rules of financial regulation aim to boost confidence in the safety and soundness of financial institutions, and particularly of commercial banks. Rules to address safety and soundness address issues within individual financial firms, but they also address the risk of contagion, which is a systemic issue. And the concern about panics are not new: Alex Preda notes that "panics became an object of systematic description in the 1860s."[107]

Speculative bubbles are frequently a component of crises,[108] and legislators and regulators have designed rules of financial regulation to reduce the likelihood of speculation.[109] The margin requirements which apply to securities and derivatives trading are meant to limit speculation.[110] Bubbles are phenomena which do not just affect individual firms or investments but categories of

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[105] *See, e.g.*, Paul Krugman, *Balance Sheets, the Transfer Problem, and Financial Crises*, International Tax and Public Finance, 6, 459–472 (1999).

[106] *See, e.g.*, Ben S. Bernanke, *Non-Monetary Effects of the Financial Crisis in the Propagation of the Great Depression*, 73 American Economic Review 257-76, 258 (1983).

[107] Alex Preda, FRAMING FINANCE, 221 (2009).

[108] *See, e.g.*, J. Bradford De Long & Andrei Shleifer, *The Stock Market Bubble of 1929: Evidence from Closed-end Mutual Funds*, 51 Journal of Economic History 675-700, 677 (1991) (estimating "that at the peak the stock index was more than one-third above its fundamental value.")

[109] *See, e.g.*, Caroline Bradley, *Disorderly Conduct: Day Traders and the Ideology of "Fair and Orderly Markets,"* 26 J. CORP. L. 63 (2000).

[110] *See, e.g.*, Dean Furbush & Annette Poulsen, *Harmonizing Margins: The Regulation of Margin Levels in Stock Index Futures Markets*, 74 CORNELL L. REV. 873 (1989).

investments: tulips, securities of high-tech firms, or real property.[111] Housing markets and speculation in real property were part of the background to the financial crisis.[112]

Policy-makers worried about the transnational transmission of risk through the financial system before 2007. Charles Goodhart identifies concerns relating to systemic risk and the Euromarkets dating back to the early 1970s, but which were exacerbated by the collapse of Bank Herstatt in 1974.[113] In 1985 the Governors of the G10 Central Banks established a study group to focus on international banking.[114] When the group reported the following year it warned that innovation in the financial markets could be contributing to systemic vulnerabilities.[115] This was the beginning of the process which led to the development of the transnational standard-setters. As Goodhart shows, over the period between the early 1970s and the collapse of Lehman Brothers policy-makers and academics worried about risks to financial stability, including those which derived from the internationalization of the financial markets. In 1998 Benjamin Cohen warned that "monetary geography needs to be reconceptualized in functional terms, to focus on

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[111] *See, e.g.*, Barry Eichengreen, HALL OF MIRRORS, 26-31 (2015) (describing the Florida property market bubble of the 1920s). Peter Garber has written: "Gathered around the campfires early in their training, fledgling economists hear the legend of the Dutch tulip speculation from their elders, priming them with a skeptical attitude toward speculative markets." Peter M. Garber, *Tulipmania*, 97 JOURNAL OF POLITICAL ECONOMY 535-560, 535 (1989). *Cf.* Nouriel Roubini, *Why Central Banks Should Burst Bubbles*, 9 INTERNATIONAL FINANCE 87-107 (2006); Adam S. Posen, *Why Central Banks Should Not Burst Bubbles*, 9 INTERNATIONAL FINANCE 109-124 (2006).

[112] *See, e.g.*, Financial Crisis Inquiry Commission, The Financial Crisis Inquiry Report, xvi (Jan. 2011) ("While the vulnerabilities that created the potential for crisis were years in the making, it was the collapse of the housing bubble— fueled by low interest rates, easy and available credit, scant regulation, and toxic mortgages—that was the spark that ignited a string of events, which led to a full-blown crisis in the fall of 2008.")

[113] *See, e.g.*, Goodhart, *supra* note 2, at 3-4.

[114] *See, e.g.*, Goodhart, *supra* note 2, at 352-3.

[115] Recent Innovations in International Banking (Cross Report) CGFS Publications No 1 April 1986.

evolving networks of currency transactions and relationships."[116]

The post-financial crisis developments with respect to micro-prudential risk are refinements of and additions to regulatory standards that applied before the financial crisis: banking regulators have been revising capital adequacy requirements for banks so that they address credit risk more effectively,[117] and also so that they now address liquidity risk.[118] These refinements of capital adequacy requirements are designed to make sure that risks are contained within banking firms. Banking regulators evaluate the effectiveness of the new requirements by carrying out stress-tests which examine how a bank's capital would deal with adverse events.[119] In order to bolster the internal containment of risks, policy-makers argue that banks should issue contingent convertible bonds ("CoCos") as a component of capital. CoCos are bonds which are designed to absorb losses either by means of a writedown of principal or because they are convertible into equity on the occurrence of defined events, such as when the issuer's regulatory capital falls below a specified proportion of risk-weighted assets.[120] The regulatory focus on liquidity, stress-testing and instruments to ensure that capital actually absorbs risks reflect reactions to the circumstances of the last crisis. It is a perennial characteristic of regulation that it tends to address issues which are historic, and policy-makers' ability to predict the future is limited. And regulation introduced to control risks which developed in the past may create their

[116] Benjamin J. Cohen, THE GEOGRAPHY OF MONEY, 5 (1998).

[117] *See, e.g.*, Basel Committee on Banking Supervision, Basel III Monitoring Report (Mar. 2015) (examining implementation of new capital standards).

[118] *See, e.g.*, *id.* at 3-4 (referring to the liquidity coverage ratio and net stable funding ratio).

[119] *See, e.g.*, Board of Governors of the Federal Reserve System, Comprehensive Capital Analysis and Review 2014: Assessment Framework and Results (Mar. 2014); European Banking Authority, Results of 2014 EU—Wide Stress Test (Oct. 26, 2014).

[120] *See, e.g.*, Stefan Avdjiev, Anastasia Kartasheva & Bilyana Bogdanova, *CoCos: A Primer*, BIS Quarterly Review 43, 44 (Sep. 2013),

own new risks as market participants manoeuvre around the rules.[121]

Like the new rules to address microprudential risk, the recent developments in thinking about macroprudential risk are designed to address the issues that policy-makers can identify based on past events. The need to identify, analyze and corntrol for interconnectedness is a critical component of the thinking about financial stability since the crisis:[122] financial market activity interconnects across territorial borders, across market sectors, and through transactional linkages in ways that pre-crisis financial regulation did not effectively address. Transnational financial regulation had in the past sought to address some of these issues. For example the Joint Forum had studied cross sectoral issues[123] and credit risk transfer[124] before the crisis. But this focus did not prevent the problems which led to the bailout of AIG, an insurance firm which took on excessive amounts of credit risk via credit default swaps.[125] So in the post crisis period regulators seek to identify firms which, like AIG, pose risks to financial stability: such firms are systemically significant financial institutions (SIFIs).[126]

As the Basel capital adequacy requirements focused on the need for capital to address credit risk, banks could comply with the requirements by increasing capital or by reducing the credit risks to which they were exposed. Banks developed various strategies which were designed

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[121] *Cf.* e.g., Patricia Jackson et al, Capital Requirements and Bank Behaviour: The Impact of the Basle Accord, Basle Committee on Banking Supervision, 2 Working Papers No. 1 (Apr. 1999) ("over time the banks have learnt how to exploit the broad brush nature of the requirements - in particular the limited relationship between actual risk and the regulatory capital charge. For some banks, this has probably started to undermine the meaningfulness of the requirements.")

[122] *See, e.g.*, Prasanna Gai, Andrew Haldane & Sujit Kapadia, *Complexity, Concentration and Contagion*, 58 JOURNAL OF MONETARY ECONOMICS 453-470 (2011).

[123] *See, e.g.*, *supra* note 86.

[124] *See, e.g.*, Joint Forum, Credit Risk Transfer (Mar. 2005).

[125] *See, e.g.*, Sjostrom, *supra* note 61.

[126] *See, e.g.*, Financial Stability Board, Policy Measures to Address Systemically Important Financial Institutions (Nov. 4, 2011).

to have the effect of transferring credit risk to firms which were not regulated as banks and which were not subject to the same capital adequacy requirements as banks.[127] Firms which perform functions which are similar to the functions we associate with banks are now known as shadow banks, and policy-makers have been trying to address a range of issues associated with shadow banking.[128] This includes new rules to address risks associated with securitization,[129] securities lending and repo transactions,[130] and money market funds.[131]

Money market funds and asset management firms are an important part of the new focus on financial stability because of their "systemic interconnectedness ...with the banking sector on

[127] *See, e.g.*, Joint Forum, Credit Risk Transfer 1 (Mar. 2005) ("In recent decades, loan syndication and securitisation activities experienced significant growth. The present report, however, focuses more narrowly on the newest forms of CRT, in particular on those activities associated with credit derivatives.") *Cf.* Eichengreen, *supra* note 111, at 381 (noting that the focus on regulating banks obscured the risks developing in nonbanks.)

[128] *See, e.g.*, EU Commission, Shadow Banking – Addressing New Sources of Risk in the Financial Sector, COM (2013) 0614 final, (Apr. 9, 2013) EU Commission, Shadow Banking Green Paper, COM (2012) 102 final (Mar. 19, 2012); Financial Stability Board, Strengthening Oversight and Regulation of Shadow Banking Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities (Aug. 29, 2013), IMF, Global Financial Stability Report: Risk Taking, Liquidity, and Shadow Banking—Curbing Excess While Promoting Growth, Chapter 2 (Oct. 2014).

[129] *See, e.g.*, Miguel Segoviano, Bradley Jones, Peter Lindner & Johannes Blankenheim, Securitization: The Road Ahead, IMF Staff Discussion Note, SDN/15/01 (Jan. 2015); Department of the Treasury Office of the Comptroller of the Currency, Federal Reserve System, Federal Deposit Insurance Corporation, Federal Housing Finance Agency, Securities and Exchange Commission, Department of Housing and Urban Development, Credit Risk Retention, 79 Fed. Reg. 77602 (Dec. 24, 2014).

[130] *See, e.g.*, Financial Stability Board, Strengthening Oversight and Regulation of Shadow Banking: Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos (Aug. 29, 2013).

[131] *See, e.g.*, EU Commission, Proposal for a Regulation on Money Market Funds, COM (2013) 615 final (Apr. 9, 2013).

the one hand and with corporate and government finance, on the other hand,"[132] and they are perceived as vulnerable to runs.[133] In the US, the Office of Financial Research published a report on the asset management industry in 2013 which identified possible risks to financial stability from asset management firms and concluded that there was a need for more date to allow for effective macroprudential analysis.[134] In December 2014 the US Financial Stability Oversight Council, the body which is responsible for designating SIFIs in the US, published a notice in the Federal Register asking for information about asset management.[135] Meanwhile the Financial Stabbility Board has been working on developing criteria for identifying non-bank, non-insurer, (NBNI) global SIFIs, (NBNISIFIs) publishing an initial consultative document in 2014,[136] which generated a number of comments and was followed by a second consultation document in 2015.[137] The initial consultation document identified three ways in which an NBNI could have an impact on financial stability: through the impact of its failure on counterparties, through the impact on the market from asset liquidation forced by its failure, and from its failure to provide a

[132] *Id.* at 2.

[133] *Id.* at 3.

[134] Office of Financial Research, Asset Management and Financial Stability,24 (Sep. 2013).

[135] Financial Stability Oversight Council, Notice Seeking Comment on Asset Management Products and Activities, 79 Federal Register 77488 (Dec. 24, 2014); Financial Stability Oversight Council, Notice Seeking Comment on Asset Management Products and Activities, 80 Fed. Reg. 7595 (Feb. 11, 2015).

[136] Financial Stability Board, IOSCO, Consultative Document: Assessment Methodologies for Identifying Non-Bank Non-Insurer Global Systemically Important Financial Institutions: Proposed High-Level Framework and Specific Methodologies (Jan. 8, 2014) (FSB NBNI Consultation 2014).

[137] Financial Stability Board, IOSCO, Consultative Document (2nd) Assessment Methodologies for Identifying Non-Bank Non-Insurer Global Systemically Important Financial Institutions Proposed High-Level Framework and Specific Methodologies (Mar. 4, 2015)(FSB NBNI Consultation 2015) . The initial consultation generated 50 comments mostly relating to asset management. *Id.* at 1.

service on which other market participants relied.[138] The FSB noted that the task of identifying NBNISIFIs was a complex one because many different types of firm with different characteristics might be implicated: "the methodologies have to allow sufficient flexibility to capture different risks (or externalities) posed by entities in each type/sector appropriately while maintaining a certain degree of consistency across the entire NBNI financial space."[139] The FSB's criteria for evaluating systemic significance are: size, interconnectedness, substitutability, complexity and global activities (cross-jurisdictional activities).[140]

Even this very brief outline of the work that policy-makers have been doing to identify and seek to control macroprudential risks makes it clear that the endeavour is time- and resource-intensive, and that the policy approaches are as complex as the phenomena they address. The starting point for thinking about macroprudential risks is the events leading up to and during the financial crisis. The idea of focusing on interconnectedness and complexity derives from the crisis. But at the same time the policy-makers are trying to develop methodologies for identifying risks in more and more nuanced ways. And the ongoing process of working to understand systemic risk more completely as illustrated, for example, by the Bank of England's One Bank Research Agenda gives some hope for the future, because it does not take the easy or obvious route but attempts to engage with the real substance of market activity.[141]

Monetary policy does have implications for financial stability, and a recognition of this fact is part of the new approach to thinking about financial institutions and markets, but the idea of considering financial stability as a component of monetary policy is not really new,[142] it is

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[138] FSB NBNI Consultation 2014, *supra* note 136 at 3.

[139] *Id.* at 5.

[140] Id. See also FSB NBNI Consultation 2015, *supra* note 137 at 6.

[141] *Supra* note 99. *Cf.* Richard Bookstaber & Paul Glasserman, Process Systems Engineering as a Modeling Paradigm for Analyzing Systemic Risk in Financial Networks, Office of Financial Research Working Paper 15-01 (Feb. 11, 2015).

[142] *See, e.g.*, Roubini, supra note 111 at at p 93 "Although the precise magnitude of the effect may be uncertain, the fact that bubbles have an impact on the economy – on the way up and on the way down – means that monetary policy needs to take them into account."

difficult to implement, and different policy-makers have different views about the extent to which monetary policy should take account of financial stability as well as price stability and employment. Those who argue that monetary policy should address issues of financial stability note that "financial institutions have a natural tendency to accumulate assets that are too risky and to hold too little capital."[143] Increasing interest rates could reduce asset price bubbles.[144] But the actions of central banks in managing monetary policy to address domestic issues have implications not only for domestic financial stability but also for international financial stability.[145]

Together, new approaches to microprudential, macroprudential and monetary policy are designed to address the risks that policy-makers worry about as a result of their understanding of the global financial crisis. But our understandings of crises are only partial, and fixing the problems we can see may disguise the fact that other problems are building up.[146] Progress in development and implementation of new transnational standards of financial regulation is slow, and the new approaches are often developments of, rather than substitutes for, earlier standards. Financial regulation remains complex in ways that impede effectiveness and make it hard for non-experts in financial regulation to understand what the rules are. The development of complex research and analysis of risk in central banks and financial regulators provides a useful expertise counterpoint to the expertise claims of market participants, perhaps reducing risks of over-reliance on market-based expertise. However there are contexts in which regulators depend on information they acquire from market participants,[147] and market participants and trade

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[143] Stephen G. Cechetti &Marion Kohler, When Capital Adequacy and Interest Rate Policy Are Substitutes (And When They Are Not), International Journal of Central Banking, 205-231, 208 (Sep. 2014).

[144] *Id.* at 209,

[145] *Cf.* Oliver Bush, Katie Farrant & Michelle Wright, Reform of the International and Monetary System, Bank of England Financial Stability Paper No. 13 (Dec. 2011) at 4.

[146] *See, e.g.*, Eichengreen, *supra* note 111 at 379.

[147] *See, e.g.*, Joint Forum 2015, *supra* note 90, at 1.

associations are not shy about expressing their views on financial regulation.[148]

Conclusions

This chapter characterizes policy responses to the financial crisis as evolutionary rather than as a paradigm shift.[149] Some commentators query how much has actually changed, seeing new moves towards deregulation as firms complain about over-regulation, dangers of regulatory capture,[150] pressures to focus on domestic rather than transnational regulation, revolving doors between regulators and financial firms,[151] new build-ups of risk,[152] and evidence of ongoing cultural problems in finance (for example, the benchmark manipulation scandals) which are different from the problems the post-crisis regulatory reforms were designed to fix.[153] On the other hand, it may be true, as Ulrich Beck argued, that "Global risks—like climate change or the financial crisis—have given us new orientations, new compasses for the 21st-century world."[154] And central banks and financial regulators are exploring risk in new and serious ways. Andrew Haldane of the Bank of England has given a number of speeches in which he has argued for a

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148 *See, e.g.*, Cross-Border Regulation Forum, Public Comment on the Task Force on Cross-Border Regulation (Feb. 23, 2015); ISDA, Public comment on the IOSCO Task Force on Cross-Border Regulation Consultation Report (Feb. 23, 2015).

149 *Cf.* Eric Helleiner, THE STATUS QUO CRISIS (2014).

150 *See, e.g.*, Pierre C. Boyer & Jorge Ponce, Regulatory Capture and Banking Supervision Reform, 8 J. Fin. Stability 206, 206 (2012)

151 *Cf.* David Lucca, Amit Seru & Francesco Trebbi, The Revolving Door and Worker Flows in Banking Regulation, Federal Reserve Bank of New York Staff Reports No. 678 (Jun. 2014); Project On Government Oversight, Dangerous Liaisons: Revolving Door at SEC Creates Risk of Regulatory Capture (Feb. 11, 2013).

152 *See, e.g.*, Segoviano et al, supra note 129, at 5 ("Aggressive forms of risk-taking are creeping back into select areas of corporate credit markets.")

153 *See, e.g.*, Fair and Effective Markets Review, Consultation Document: How Fair and Effective are the Fixed Income, Foreign Exchange and Commodities Markets? (Oct. 2014).

154 Ulrich Beck, *Emancipatory Catastrophism: What Does it Mean to Climatye Change and Risk Socierty?*, 63 CURRENT SOCIOLOGY 75-88, 79 (2014).

financial reformation,[155] a more radical rethinking of financial regulation that takes on the complexity of financial regulation rather than taking it for granted..[156]

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155 Andrew Haldane, Executive Director, Financial Stability and Member of the Financial Policy Committee, A Leaf Being Turned, Speech at Occupy Economics, "Socially Useful Banking" at Friend's House, Euston, London (Oct. 29, 2012).

156 *See, e.g.*, Andrew G Haldane &Vasileios Madouros, The Dog and the Frisbee, Speech at the Federal Reserve Bank of Kansas City's 36th economic policy symposium, "The Changing Policy Landscape", Jackson Hole, Wyoming (Aug. 31, 2012).