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Reframing International Financial Regulation After the Global Financial Crisis: Rational States and Interdependence, not Regulatory Networks and Soft Law

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**REFRAMING INTERNATIONAL FINANCIAL
REGULATION AFTER THE GLOBAL
FINANCIAL CRISIS: RATIONAL STATES AND
INTERDEPENDENCE, NOT REGULATORY
NETWORKS AND SOFT LAW**

*Matthew C. Turk**

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INTRODUCTION

The British bank Northern Rock failed on September 14, 2007; U.S. investment bank Bear Stearns collapsed on March 17, 2008 and was subject to a government-engineered takeover by J.P. Morgan Chase; and, on the night of September 15, 2008, U.S. investment bank Lehman Brothers filed for bankruptcy and sent global financial markets into disarray the following Monday morning. These financial institutions shared several features in common prior to their downfall, but perhaps the most curious is that they were each considered fully compliant with the second generation framework for the Basel Accords on Capital Adequacy (Basel II),¹ an international agreement requiring banks to maintain capital levels consistent with then, state-of-the-art risk metrics.² Basel II, it turns out, was insufficient to ward off the insolvency of many large, multinational financial institutions.

The Basel Committee on Bank Supervision was not the only international body exercising oversight of financial firms and markets prior to the global financial crisis of 2008 (2008 Crisis). One function of the International Monetary Fund (IMF) was to provide continuous “surveillance” of international markets.³ Among other occasions, it did so informally in September of 2008 by publishing statements of its president Olivier Blanchard, entitled “Blanchard Sees Global Economy Weathering Financial Storm.”⁴ Contrary to the IMF’s forecast, however, Lehman Brothers collapsed just two weeks later and the global economy capsized in the ensuing financial storm.

1. BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS: A REVISED FRAMEWORK (2006) [hereinafter BASEL II], available at <http://www.bis.org/publ/bcbs128.pdf>.

2. In fact, Northern Rock executives testified to paying a dividend months before the bank’s failure because of a substantial regulatory capital *surplus* above Basel II requirements. See Press Release, Chairman Christopher Cox, Chairman Cox Letter to Basel Committee in Support of New Guidance on Liquidity Management (Mar 20, 2008), available at <http://sec.gov/news/press/2008/2008-48.htm> (“[A]t all times until its agreement to be acquired by JP Morgan Chase during the weekend, [Bear Stearns] had a capital cushion well above what is required to meet supervisory standards calculated using the Basel II standard.”); U.S. Sec. & Exch. Comm’n Office of Inspector Gen., SEC’s Oversight of Bear Stearns and Related Entities: The Consolidated Supervised Entity Program, Report No. 446-A, at 10–11 (Sept. 2008). See generally, John F. Rosato, *Down the Road to Perdition: How the Flaws of Basel II Led to the Collapse of Bear Stearns and Lehman Brothers*, 17 CONN. INS. L.J. 475 (2011) (providing a critical account of Basel II’s role in capital adequacy regulation).

3. See IMF Executive Board Adopts New Decision on Bilateral Surveillance Over Members’ Policies, Public Information Notice (PIN) No. 07/69, INT’L MONETARY FUND [IMF] (June 21, 2007). See generally, Marcel Fratzscher & Julien Reynaud, *IMF Surveillance and Financial Markets—A Political Economy Analysis*, 27 EUR. J. POL. ECON. 405 (2011) (analyzing the increasing role of surveillance in the IMF’s agenda).

4. *Blanchard Sees Global Economy Weathering Financial Storm*, IMF SURVEY ONLINE (Sept. 2, 2008), <http://www.imf.org/external/pubs/ft/survey/so/2008/int090208a.htm>. The IMF president’s optimistic analysis turned largely on speculation over future fluctuations in oil prices, rather than the robustness of the subprime mortgage market or large financial institutions.

Other disheartening anecdotes regarding international financial regulation abound. But the essential point is that, leading up to the 2008 Crisis, the performance of the so-called “new international financial architecture” (NIFA)—the constellation of international agreements and institutions developed in response to the financial crises of the 1990s⁵—was unimpressive. The 2008 Crisis revealed the weaknesses of the international financial architecture, and has made regulation of the global financial system a central problem facing international law and the world economy.

This Article analyzes the post-2008 efforts at institutional development and international cooperation in finance, and seeks to identify which regulatory projects are likely to succeed and which are not. The overarching aim is to reframe the discussion concerning international financial regulation by taking a step back to investigate the big questions: What exactly are the externalities of cross-border finance that make international regulatory cooperation worth attempting? What are the specific incentive and informational barriers that sovereign states face when addressing these externalities? Which of the tools that states have employed—whether in the form of organizations or particular rules and agreements—have proven useful, and why? Do post-2008 reforms avoid the underlying causes of previous regulatory failures, or not?

In answering these questions, this Article captures the value added by applying a back-to-the-basics rational choice approach to this increasingly complicated and important area of international law.⁶ The analysis proceeds by assuming that rational states are the ultimate actors in international law.⁷ States craft international rules and institutions to capture the joint gains available from correcting international externalities, referred to here as “interdependence problems.” The starting point is to identify interdependence problems, and examine the ability of rational states to overcome them given the specific strategic incentives and information con-

5. See Michael Camdessus, *Towards a New Financial Architecture for a Globalized World*, Address at the Royal Institute of International Affairs in London (May 8, 1998) (providing an early use of the term and laying out the regimes basic principles).

6. See Kenneth A. Shepsle, *Rational Choice Institutionalism*, in OXFORD HANDBOOK OF POLITICAL INSTITUTIONS, 23, 24–27 (R.A.W. Rhodes et al. eds., 2006). See, e.g., ANDREW GUZMAN, *HOW INTERNATIONAL LAW WORKS: A RATIONAL CHOICE THEORY* (2010); ROBERT O. KEOHANE, *AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY* (1984); ERIC A. POSNER & ALAN O. SYKES, *ECONOMIC FOUNDATIONS OF INTERNATIONAL LAW* (2012); ROBERT SCOTT & PAUL STEPHAN, *THE LIMITS OF LEVIATHAN: CONTRACT THEORY AND THE ENFORCEMENT OF INTERNATIONAL LAW* (2006).

7. See DANIEL W. DREZNER, *ALL POLITICS IS GLOBAL: EXPLAINING INTERNATIONAL REGULATORY REGIMES*, 6 (2007) (applying Putnam’s two-level approach, and describing it as follows: “Domestic factors account for preference formation, but not the outcomes of international bargaining . . . The second step is to take [state] preferences as a given for international interactions, and to explain the bargaining outcomes as a function of the distribution of interests and capabilities.”); Robert Putnam, *Diplomacy and Domestic Politics: The Logic of Two-Level Games*, 42 INT’L ORG. 427, 427 (1988).

straints they face.⁸ In doing so, it is important to remember that states confront interdependence problems arising from upheavals in both sovereign and private sector financial markets, which influence and interact with one another.⁹ The significance of international regulatory cooperation can then be understood within this framework.

At a high level, international financial regulation can be divided into the dual goals of maximizing the potential efficiency gains from global integration of financial markets and minimizing the losses threatened by the crises and instability that have historically characterized financial integration. The provision of stability can in turn be broken down into *ex ante* efforts at crisis prevention and *ex post* efforts at crisis management.¹⁰ From this basic rubric, four foundational interdependence problems can be derived, in which the globalization of finance creates potential gains from international cooperation: (1) harmonizing financial standards to lower the cost of cross-border transactions and increase the efficiency of financial integration; (2) maintaining the capital adequacy of financial institutions across jurisdictions to prevent crises *ex ante*; and, managing crises *ex post* by (3) establishing a cross-border resolution mechanism to unwind failed firms, and by (4) implementing an international lender-of-last-resort function to intervene in sovereign debt or currency crises.

In evaluating the degree to which a particular interdependence problem is amenable to effective international regulation, it is useful to begin with the standard game-theory distinction between problems of “coordination” and “cooperation.”¹¹ The three interdependence problems concerning crisis prevention and management resemble cooperation games rather than coordination games. This means that they are subject to incentive problems that make effective regulation more difficult to obtain than in the case of harmonization of standards.¹² This Article presents the game-theoretic intuition behind each interdependence problem and measures it against the actual historical performance of the international financial ar-

8. See, e.g., POSNER & SYKES, *supra* note 6, at 17; Emile M Hafner-Burton, David G. Victor, & Yonatan Lupu, *Political Science Research on International Law: The State of the Field 17–19* (Laboratory on Int’l L. & Regulation [ILAR] Working Paper No. 1, 2011).

9. The experience of Greece, Spain and other European countries during the 2008 Crisis illustrates this point well. However, most prominent accounts that are putatively comprehensive in scope limit themselves to regulatory issues created by banks and other private financial institutions. See, e.g., Chris Brummer, *How International Financial Law Works (and How It Doesn’t)*, 99 GEO. L.J. 257, 326–27 (2011); Stavros Gadinis, *The Politics of International Financial Regulation*, 49 HARV. INT’L L.J. 447, 449 (2008); Pierre-Hugues Verdier, *The Political Economy of International Financial Regulation*, 88 IND. L.J. 1405, 1409 (2013).

10. See Steven Schwarcz, *Ex Ante Versus Ex Post Approaches to Financial Regulation*, 15 CHAP. L. REV. 257 (2011).

11. See generally, Duncan Snidal, *Coordination Versus Prisoners’ Dilemma: Implications for International Cooperation and Regimes*, 79 AM. POL. SCI. REV. 923 (1985).

12. Specifically, all three encourage opportunistic free riding and can be modeled as multilateral prisoner’s dilemmas. Harmonization can be modeled as a “battle-of-the-sexes” coordination game, in which the incentives to form and comply with agreements are greater. See DOUGLAS G. BAIRD, ROBERT H. GERTNER, & RANDAL C. PICKER, *GAME THEORY AND THE LAW* 41–43 (explaining battle of sexes games); POSNER & SYKES, *supra* note 6, at 27.

chitecture up to and during the 2008 Crisis. The Article then turns to the international financial architecture's prospects going forward in light of post-2008 reforms. The theoretical insights and historical record are found to be consistent with one another. Together, they support the mixed but somewhat pessimistic conclusion that, post-2008, the international financial architecture will succeed at enhancing the efficiency of cross-border finance but continue to struggle with the more ambitious goal of reducing global financial instability.

A policy implication of this Article's analysis is that ambitious proposals for reform—such as calls for a World Financial Organization (WFO) analogous to the World Trade Organization (WTO)¹³—are less promising than more incremental regulatory projects. The analogy to the WTO breaks down, because the interdependence problems of finance differ from those of international trade in important respects that cannot be overcome by simply choosing a more centralized and legalized institutional structure.¹⁴ Although transformative reforms to the financial architecture are therefore unlikely to be effective, there are two general types of incremental policy solutions that may yield better results.

The first type of incremental policy solution concerns pursuing opportunities for coordination that are embedded in larger, thornier cooperation problems. One application of this approach is the early-stage efforts to facilitate cooperation on cross-border bank resolution by harmonizing standards that require multinational banks to produce resolution plans, also known as living wills.¹⁵ Harmonized resolution plans could provide a common informational base that would allow states to resolve failed multinational financial institutions in a more efficient and timely manner.

A second kind of incremental reform involves scaling global cooperation problems to the regional level. Limiting the geographic scope of regulatory agreements may mitigate incentives for free riding and non-compliance, because at the regional level states are less numerous, have more homogenous capacities and interests, and often enjoy a deeper history of legal and economic interaction. Attempts to provide a regional

13. See, e.g., Oscar Landerretche, et al., *Toward the World Finance Organization: New Financial Architecture Based on a Strategic Regulation Model* (Sept. 28, 2012) (unpublished manuscript) (on file with the Institute for Advanced Development Studies); Eric Helleiner & Stefano Pagliari, *Towards a New Bretton Woods? The First G20 Leaders Summit and the Regulation of Global Finance*, 14 *NEW POL. ECON.* 275, 275 (2009); Daniel Bases, *World Faces New Bretton Woods Moment: Stiglitz*, *REUTERS UK* (Nov. 6 2008), available at <http://uk.reuters.com/article/idUKTRE4A58BI20081106>; Barry J. Eichengreen, *Out of the Box Thoughts about the International Financial Architecture* (IMF, Working Paper No. WP/09/116, 2009).

14. In contrast to trade, the relevant externalities in finance are diffuse and multilateral rather than bilateral, the information costs of monitoring compliance can be prohibitive, and there is no consensus on optimal policies that can be articulated with simple rules. See *infra* Section III.A.1.

15. Resolution plans are documents that specify a financial institution's legal structure and counterparty obligations in order to provide a roadmap for regulators in the event that an emergency liquidation becomes necessary. See *infra* Section III.A.2.

lender of last resort mechanism are in their infancy in Latin America and Asia, but the European Central Bank and European Commission's interventions in Europe's sovereign debt crisis illustrate the potential advantages of regionalism.

Addressing the foundational issues of international financial regulation with the simple rational choice framework presented here constitutes a "reframing" of the field, because the dominant scholarship in this area, while presumably retaining some domain for rational state action, often incorporates more unwieldy theoretical variables. However, introducing theoretical complications can potentially reduce an argument's explanatory power rather than add nuance.¹⁶ For example, a frequent claim in the literature is that there is a need to abandon the rational state assumption in order to explain patterns of international cooperation on finance, including the failure of states to produce an optimal international financial architecture.¹⁷ But as this Article seeks to demonstrate, a basic rational-state approach to international financial law can provide a good account of patterns of regulatory design, compliance, and effectiveness. Moreover, to the extent that more fine-grained, descriptive analyses—such as those focusing on historical path dependence or interest group structures—discard rather than supplement the rational-state assumption, these analyses can fall upon explanatory problems themselves.

The most significant theoretical critique presented by the relatively stripped-down approach of this Article concerns the influential scholarship on "transgovernmental networks" of regulators¹⁸ and the non-binding "soft law" agreements that they create.¹⁹ These literatures argue that

16. Cf. GARY KING, ROBERT O. KEOHANE & SIDNEY VERBA, *DESIGNING SOCIAL INQUIRY: SCIENTIFIC INFERENCE IN QUALITATIVE RESEARCH*, 29–30, 104 (1994) ("Good social science seeks to increase the significance of what is explained relative to the information used in the explanation . . . Explanation of anything seems to require a host of explanatory variables: we use a lot to explain a little. In such cases, our goal should be to design research with more leverage.").

17. See, e.g., DAVID ANDREW SINGER, *REGULATING CAPITAL: SETTING STANDARDS FOR THE INTERNATIONAL FINANCIAL SYSTEM*, 2–3 (2007); Gadinis, *supra* note 9 (arguing that patterns of international financial regulation are incoherent without examining the structure of interest groups); Beth A. Simmons, *The International Politics of Harmonization: The Case of Capital Market Regulation*, 55 INT'L ORG. 589, 590, 601 (2001); Verdier, *supra* note 9, at 1425–27 (arguing that patterns of international financial regulation are incoherent without resort to historical path dependence and interest group politics explanations).

18. See, e.g., ANNE-MARIE SLAUGHTER, *A NEW WORLD ORDER* (2004); Daniel C. Esty, *Good Governance at the Supranational Scale: Globalizing Administrative Law*, 115 YALE L.J. 1490 (2006); Kal Raustiala, *The Architecture of International Cooperation: Transgovernmental Networks and the Future of International Law*, 43 VA. J. INT'L L.I (2002); Anne-Marie Slaughter & David Zaring, *Networking Goes Global: An Update*, 2 ANN. REV. LAW SOC. SCI. 211 (2006); David Zaring, *International Law by Other Means: The Twilight Existence of International Financial Regulatory Organizations*, 33 TEX. INT'L L.J. 281 (1998) [hereinafter *International Law by Other Means*].

19. See, e.g., Kenneth W. Abbott & Duncan Snidal, *Hard and Soft Law in International Governance*, 54 INT'L ORG. 421 (2000); Brummer, *supra* note 9, at 326–27; Chris Brummer, *Why Soft Law Dominates International Finance—And Not Trade*, 13 J. INT'L ECON. L. 623 (2010); David Zaring, *Finding Legal Principle in Global Financial Regulation*, 52 VA. J.

networks and soft law are both pervasive and effective instruments of international regulation.²⁰ Furthermore, they attribute their greatest empirical support to finance, where soft law-producing networks such as the Basel Committee and the Financial Stability Board are prominent.

The analysis presented here demonstrates that the networks and soft law scholarship dramatically overstates its case at both the evaluative and descriptive levels. Measured by their ability to successfully address the interdependence problems outlined in this Article, networks and soft law mechanisms do not stand out relative to other institutional forms. They have only made real progress with respect to the harmonization of standards, an area in which private industry groups have enjoyed equal or even greater success.²¹ Scholarship on networks and soft law also misses the mark as a purely descriptive matter of the role these phenomena play in the international regulation of finance. Despite claims that networks and soft law wholly occupy the field, the mode and degree of legalization of any particular endeavor in international financial cooperation is highly varied. This Article shows that networks, treaty-based international organizations (such as the IMF), private industry groups (such as the International Swaps and Derivatives Swaps Association, Inc.), and purely political bodies (such as the G20) are all deeply involved in the regulation of international finance in overlapping ways. It follows then, that the at times celebratory scholarship on networks and soft law should reconsider some of its core claims. In comparison, the framework presented here offers a more accurate and parsimonious story of how international cooperation on financial regulation works.

This Article is organized as follows. Section I provides a historical overview, which traces the development and performance of the international financial architecture from World War II through the 2008 Crisis. Section II then presents the four interdependence problems posed by global finance and evaluates the ability of the post-2008 financial architecture to address them. Next, Section III.A explores the implications of this Article's main findings for policy reforms. Finally, Section III.B examines the implications for the theoretical literature on international financial law, including that on transgovernmental networks and soft law.

I. HISTORICAL DEVELOPMENT OF THE INTERNATIONAL FINANCIAL ARCHITECTURE

This Section provides an overview of the historical evolution of international cooperation on the regulation of global finance since World War

INT'L L., 686 (2012) [hereinafter *Finding Legal Principle*]; David Zaring, *Informal Procedure, Hard and Soft, in International Administration*, 5 CHI J. INT'L L. 547 (2005) [hereinafter *Informal Procedure*].

20. See *infra* Section III.B.1 (providing specific citations to claims made in these articles).

21. This fact carries a certain irony, because the literature typically regards private industry groups as inferior vehicles for policymaking relative to networks of regulators. See, e.g., SLAUGHTER, *supra* note 18, at 9–10.

II. The historical perspective provides context, but also illuminates several key features of international financial regulation and the global economy within which it operates. First, since the 1960s, there has been a steady trend of cross-border integration of financial markets, accompanied by an equally consistent trend of increasing financial instability. Second, financial instability has appeared both in the form of sovereign debt and currency crises, and private sector banking crises. Third, in response to deepening market integration, states have cooperated by developing international institutions with the aim of either increasing the efficiency of cross-border financial transactions, or reducing and containing financial crises and instability. Lastly, the international financial architecture has been characterized by the variety of its institutional forms, which include organizations that are public and private, legal and informal. Section II analyzes the interdependence problems of international financial regulation against this historical backdrop.

A. *Bretton Woods (1944–1973)*

Modern regulation of the international economic system began at a meeting in July of 1944 among the victorious allies in Bretton Woods, New Hampshire. There, a set of agreements was made that became known as the “Bretton Woods system.”²² An important feature of the Bretton Woods system was that it was designed to be administered by a handful of treaty-based international organizations: the World Bank, the International Trade Organization (ITO), and the IMF.²³ Although the former two organizations were quickly marginalized,²⁴ the IMF emerged as the key institution during this period because of its role in facilitating monetary coordination.²⁵ A second central feature of Bretton Woods was its policy of fixed exchange rates, which were intended to serve as a functional equivalent to the pre-War War I gold standard system.²⁶ Pursuant to the IMF Articles of Agreement, the United States was to commit to the gold standard and maintain the convertibility of U.S. dollars to gold at a rate of \$35 per ounce.²⁷ All other IMF members then agreed to peg their curren-

22. See generally, Michael D. Bordo, *The Bretton Woods International Monetary System: A Historical Overview*, in *A RETROSPECTIVE ON THE BRETTON WOODS SYSTEM: LESSONS FOR INTERNATIONAL MONETARY REFORM*, 3 (Michael D. Bordo & Barry Eichengreen eds., 1993).

23. See Rolf H. Weber & Douglas W. Arner, *Toward A New Design for International Financial Regulation*, 29 U. PENN. J. INT’L L. 391, 395–96 (2008).

24. The World Bank was originally conceived as a vehicle for post-war reconstruction, but was quickly marginalized by the Marshall Plan. *Id.* at 394. The ITO also floundered at its outset and was displaced by a complex collection of trading rules known as “the GATT” (General Agreement on Tariffs and Trade), which was later transformed into the World Trade Organization (WTO) in 1994. JOHN H. JACKSON, *THE JURISPRUDENCE OF GATT AND THE WTO 196–97* (2000); Weber & Arner, *supra* note 23, at 394.

25. Weber & Arner, *supra* note 23, at 397.

26. *Id.*, at 395.

27. Bordo, *supra* note 22, at 23–25 tbl.1.2. See ARTICLES OF AGREEMENT OF THE IMF, art. IV §§ 1, 4(b), 5, Dec. 27, 1945, 60 Stat. 1401.

cies to the dollar at a fixed rate and to intervene in foreign exchange markets when necessary to maintain their peg.²⁸

The Bretton Woods system was remarkably stable over the two decades following 1945, during which time international financial disruptions were rare.²⁹ One reason for this stability was that the fixed exchange rate system required strict capital controls, which meant that financial markets at the time were largely un-integrated. Another, perhaps more fundamental, factor contributing to the financial tranquility was a run of global macroeconomic stability in which most advanced economies experienced steady growth while inflation and interest rates remained low and steady.³⁰ In retrospect, the Bretton Woods period was a relatively halcyon time when finance was not yet global in character, and as a result, required little international regulatory attention beyond the IMF's role in coordinating exchange rates.

B. *Financial Integration & Early Coordination (1973–1994)*

Cross-border integration of financial markets began to gain momentum in the late 1960s and ushered in a newfound instability as it accelerated through the 1970s.³¹ Eventually, this led to growing U.S. current account deficits, which spurred a global run on the dollar from 1968 to 1971, and ultimately caused Richard Nixon to suspend the direct convertibility of dollars to gold and to devalue the dollar to \$38 per ounce pursuant to the Smithsonian Agreement.³² These measures proved insufficient, and in 1973 the Bretton Woods system completely unraveled: the dollar was allowed to float, foreign currencies dropped their peg to the dollar, and the post-War era of fixed exchange rates came to an end.³³ The 1970s also saw the first notable failures of large, internationally interconnected financial institutions, namely Germany's Bankhaus Herstatt and the United States's Franklin National Bank, both in 1974.³⁴

Modest forms of international cooperation on finance began to take hold even as the Bretton Woods system fell apart. The "Group of 10,"

28. Bordo, *supra* note 22, at 37.

29. See CARMEN M. REINHART & KENNETH S. ROGOFF, THIS TIME IS DIFFERENT: EIGHT CENTURIES OF FINANCIAL FOLLY 205 fig. 13.1, 253 fig. 16.2 (2009).

30. See ANAT ADMATI & MARTIN HELLWIG, THE BANKER'S NEW CLOTHES: WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT IT 47 (2012).

31. See BARRY EICHENGREEN, EXORBITANT PRIVILEGE: THE RISE AND FALL OF THE DOLLAR AND THE FUTURE OF THE INTERNATIONAL MONETARY SYSTEM 49–66 (2012); REINHART & ROGOFF, *supra* note 29, at 206; Beth A. Simmons, *The Internationalization of Capital*, in CHANGE AND CONTINUITY IN CONTEMPORARY CAPITALISM 36, 44 (Herbert Kitschelt, Peter Lange, Gary Marks & John D. Stephens eds., 2000).

32. Richard Myrus, Note, *From Bretton Woods to Brussels: A Legal Analysis of Exchange-Rate Arrangements of the International Monetary Fund and the European Community*, 62 FORDHAM L. REV. 2095, 2102–04 (1994).

33. See EICHENGREEN, *supra* note 31, at 57–62.

34. Verdier, *supra* note 9, at 1416. See CHARLES P. KINDLEBERGER & ROBERT ALIBER, MANIAS, PANICS, AND CRASHES: A HISTORY OF FINANCIAL CRISES, 267–69 (5th Ed. 2005).

consisting of finance ministers and central bank governors from the United States and other advanced economies, began meeting in the late 1960s and coordinated their exit from the Bretton Woods system.³⁵ In response to the failure of Bankhaus Herstatt, the Group of 10 established the Basel Committee on Banking Supervision under the auspices of the Bank of International Settlements (BIS). In 1975, the Basel Committee signed its “Concordat,” which outlined core principles of banking supervision.³⁶ The International Accounting Standards Committee (IASC), a private sector group founded in 1973, also became active during this period and sought to harmonize accounting standards in response to the growing internationalization of capital markets.³⁷

The dual trends of increasing market integration and financial upheaval continued during the 1980s.³⁸ In 1979, the Federal Reserve’s decision under Paul Volcker to sharply raise the federal funds rate triggered a financial crisis in Latin American countries, which had been pursuing a borrowing-heavy development strategy known as import-substitution-industrialization and could no longer service their ballooning public debts at higher rates. Mexico defaulted in August of 1982, and Latin America’s “Lost Decade” followed.³⁹ This period also experienced more high-profile instances of financial institution failure than the 1970s, including many small banks during the U.S. Savings & Loan crisis, Banco Ambrosiano of Italy in 1982, Continental Illinois in 1984, and the Bank of Credit and Commerce International in 1991.⁴⁰

As with the 1970s, international regulatory coordination in the 1980s and early 1990s sought to both mitigate the turbulence resulting from growing, and increasingly interconnected, financial markets, and develop arrangements to capture the gains from trade made possible by greater integration. In an attempt at crisis management, the IMF provided emergency lending during the Latin American debt crisis and the United States

35. See Verdier, *supra* note 9, at 1416. The Group of 10 consisted of: Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, the United Kingdom, and the United States.

36. COMM. ON BANKING REGULATIONS & SUPERVISORY PRACTICES, BANK FOR INT’L SETTLEMENTS, REPORT TO THE GOVERNORS ON THE SUPERVISION OF BANKS’ FOREIGN, BS/75/44E (1975) [hereinafter *BASEL CONCORDAT*]. See DANIEL TARULLO, *BANKING ON BASEL: THE FUTURE OF INTERNATIONAL FINANCIAL REGULATION* 4 (2008) (detailing the origins of the BIS).

37. See KEES CAMFFERMAN & STEPHEN A. ZEFF, *FINANCIAL REPORTING AND GLOBAL CAPITAL MARKETS: A HISTORY OF THE INTERNATIONAL ACCOUNTING STANDARDS COMMITTEE, 1973-2000*, 43–45 (2007).

38. See Simmons, *supra* note 31, at 44.

39. See KINDLEBERGER & ALIBER, *supra* note 34, at 170; Julia Preston & Samuel Dillon, *OPENING MEXICO: THE MAKING OF A DEMOCRACY*, 123 (2004).

40. The saving-and-loan firm Home State Savings Bank collapsed in 1985, with thousands more S&Ls needing to be resolved by federal agencies thereafter. Continental Illinois, the first institution to be dubbed “Too Big to Fail,” was the largest U.S. bank failure ever until Washington Mutual’s collapse in 2008. See KINDLEBERGER & ALIBER, *supra* note 34, at 170, 219–21, 267–69.

tried to facilitate debt restructuring through a variety of programs, including the failed Baker Plan and slightly more successful issuance of “Brady Bonds.”⁴¹ As a measure for crisis prevention, BIS members agreed to the Basel Capital Accords (Basel I), which outlined capital requirements for banks based on the perceived riskiness of their assets.⁴² Efforts to increase the efficiency of cross-border finance included the formation in 1986 of the International Organization of Securities Commissions (IOSCO), a trans-governmental network of domestic securities regulators that worked to harmonize regulatory standards for capital markets.⁴³ Similarly, in 1985, a private industry group known as the International Swaps and Derivatives Association (ISDA) was founded. The ISDA began developing its “Master Agreement” to standardize transactions in over-the-counter derivatives, which was eventually completed in 1992.⁴⁴ Finally, the International Association of Insurance Supervisors (IAIS), another network of regulators, was formed in 1994.⁴⁵ Thus, in the first few decades of post-Bretton Woods financial market integration, the interdependence problems and regulatory strategies that are at center stage today were already in sight.

C. *The New International Financial Architecture (1994–2007)*

The collapse of Bretton Woods left a void in the governance of international finance that was not fully filled until after the 1990s financial crises originating in Mexico and East Asia. Mexico exited its stagnant 1980s with economic growth that was led by a combination of market liberalization, privatization of state-owned enterprises, and rising debt. But progress came to a halt with its “Tequila Crisis” in December of 1994, when the government announced that it would devalue the peso and drop its peg to

41. See Alberto Gonzalo Santos, *Beyond Baker and Brady: Deeper Debt Reduction for Latin American Sovereign Debtors*, 66 N.Y.U. L. REV. 66, 78–81, 110 (1991) (“The Baker Plan was a failure from the perspective of the Latin American debtors, and the new Brady Initiative, by failing to provide for sufficient debt reduction, will likely not result in effective relief either.”).

42. BASEL II, *supra* note 1, ¶¶ 40–49.

43. See SINGER, *supra* note 17, at 72–73; Verdier, *supra* note 9, at 1418 (“Unlike Basel I,” the formation of IOSCO, “was not prompted by an identifiable crisis, but rather by a sense that securities regulators increasingly faced common problems, particularly in respect to cross-border transactions.”).

44. Based out of New York, the ISDA has over 815 members from 60 countries, which include, global, international and regional banks, asset managers, energy and commodities firms, government and supranational entities, insurers and diversified financial institutions, corporations, law firms, exchanges, clearinghouses and other service providers. ISDA.org, About ISDA, <http://www2.isda.org/about-isda/>.

45. About IAIS, INT’L ASS’N OF INS. SUPERVISORS [IAIS], <http://www.iaisweb.org/> (last visited Aug. 20, 2013); see generally Elizabeth F. Brown, *The Development of International Norms for Insurance Regulation*, 34 BROOK. J. INT’L L. 954, 963 (2009) (describing the origins of the IAIS).

the dollar.⁴⁶ The Asian financial crisis of 1997–98 roughly resembled the preceding episode in Mexico.⁴⁷ A period of financial market liberalization, credit expansion, and rapid growth for several East Asian countries came to an end with the collapse of the Thai baht on July 2, 1997.⁴⁸ Financial market “contagion” spread to other previously booming economies in the region, including Indonesia, South Korea, the Philippines, and Malaysia, and eventually to seemingly remote Russia.⁴⁹ A surprising casualty of this turmoil was U.S. hedge fund Long-Term Capital Management (LTCM),⁵⁰ which collapsed after Russia defaulted on its debt in September of 1998. Foreshadowing the events of 2008, the Federal Reserve Bank of New York took emergency measures to merge LTCM into its Wall Street counterparties because of its perceived status as Too-Big-to-Fail.⁵¹

The institutional innovation that took place in response to these crises came to be seen as a fundamental renovation of the old Bretton Woods regime, and was dubbed the “New International Financial Architecture” (NIFA).⁵² In contrast to Bretton Woods, the NIFA did not consist exclusively of a handful of treaty-based international organizations. Instead, a complex flora and fauna of informal state-to-state bodies, transgovernmental networks, and private industry organizations arose, all with varying aims and degrees of legalization.⁵³ The intellectual consensus underlying the NIFA was that, although developed economies had essentially sound financial systems, developing countries had dysfunctional and improperly regulated banking sectors that needed to be reformed to resemble their more advanced counterparts.⁵⁴

46. KINDLEBERGER & ALIBER, *supra* note 34, at 125–26, 162. Speculation quickly moved to Argentina and Brazil, which suffered speculative runs on their currencies as well. *Id.*, at 125–26.

47. See Aaron Tornell, *Common Fundamentals in the Tequila and Asian Crisis*, (Nat’l Bureau of Econ. Research, Working Paper No. 7139, 1999).

48. See *id.* at 2–4; KINDLEBERGER & ALIBER, *supra* note 34, at 140–41.

49. KINDLEBERGER & ALIBER, *supra* note 34, at 140–41.

50. LTCM pursued a bond arbitrage strategy based on complex mathematical models developed by its Nobel Prize winning founders, but the strategy blew up after Russia’s entanglement in the Asian crisis led to its default on sovereign debt and an unexpected divergence in U.S. and European bond prices. See generally, ROGER LOWENSTEIN, *WHEN GENIUS FAILED: THE RISE AND FALL OF LONG-TERM CAPITAL MANAGEMENT* 144, 234 (2001).

51. Tyler Cowen, *Bailout of Long-Term Capital: A Bad Precedent?*, N.Y. TIMES, Dec. 26, 2008, available at <http://www.nytimes.com/2008/12/28/business/economy/28view.html> (identifying parallels between LTCM and the 2008 Crisis).

52. See Camdessus, *supra* note 5; Rubin, *supra* note 5.

53. See Barry Eichengreen, *Reforming the International Financial Architecture*, 2011 Edition, Keynote Address Before the Annual Research Conference of the Bank of Korea, Seoul 1, May 26, 2011 (transcript available through University of California, Berkeley).

54. See Camdessus, *supra* note 5, at 2 (listing three factors leading to the Asian crisis: “weakness of their public and private banking and financial structures; an unsustainable accumulation of short-term financing . . . and . . . deep-seated problems of governance, corruption, and what U.S. commentators call ‘crony capitalism.’”); *id.*, at 3–4 (citing as a “building block” of the NIFA, “a set of standards and codes of best practices Our challenge today is to disseminate these good practices in emerging markets.”); Eichengreen, *supra* note 53, at

An important institutional innovation of the NIFA was the emergence of the Group of 7 (the G7, later the G8), an informal state-to-state forum where heads of government of the seven largest economies met annually. Mainly thought of as a mere talking shop in its earlier incarnations, the G8 took more affirmative steps to facilitate the process of developing global standards for financial regulation after the 1990s crises.⁵⁵ In direct response to the Asian crisis, the G7/8 created the Financial Stability Forum (FSF), which developed a set of core principles that define best practices for financial regulators and also coordinated similar projects under the auspices of transgovernmental regulatory networks and treaty-based international organizations such as the IMF.⁵⁶

Along with the G7/8, transgovernmental networks of regulators became an active and important part of the NIFA. The Basel Committee updated its Basel Accords on capital adequacy with a more sophisticated Basel II agreement, formally adopted in 2004 and gradually implemented by member states thereafter.⁵⁷ IOSCO also accelerated its efforts, formulating a standard form for disclosures in cross-border securities listings in 1998, establishing a permanent secretariat in Madrid in 1999, and concluding an information-sharing agreement in 2002, known as the Multilateral Memorandum of Understanding.⁵⁸ Though less prominent than the other two networks, the IAIS also heightened its presence by contributing a set of solvency principles for insurance companies in 2007.⁵⁹

Private industry bodies also took a new and more aggressive role at harmonizing national regulatory practices.⁶⁰ The International Accounting

2; Stanley Fischer, *Economic Crises and the Financial Sector*, Speech at Conference on Deposit Insurance ¶7 (Dec. 10, 1998) (transcript available through the IMF).

55. The G7 became the G8 with the inclusion of Russia in 1998. A more inclusive G20 was established in September 1999, but initially served as a fairly marginal complement to the G8. See Douglas W. Arner & Michael W. Taylor, *The Global Financial Crisis and the Financial Stability Board: Hardening the Soft Law of International Financial Regulation*, 32 U.N.S.W. L.J. 488, 489, 492–93 (2009); David Zaring, *International Institutional Performance in Crisis*, 10 CH. J. INT'L L. 475, 494–96 (2010) [hereinafter *Institutional Performance*].

56. See FIN. STABILITY FORUM, INTERNATIONAL STANDARDS AND CODES TO STRENGTHEN FINANCIAL SYSTEMS (2001) [hereinafter FSF STANDARDS]. See, e.g., INT'L ORG. OF SEC. COMM'NS. [IOSCO], OBJECTIVES AND PRINCIPLES OF SECURITIES REGULATION (2003) [hereinafter IOSCO SECURITIES REGULATION PRINCIPLES]; ORG. FOR ECON. CO-OPERATION & DEV. [OECD], OECD PRINCIPLES OF CORPORATE GOVERNANCE (2004) [hereinafter OECD CORPORATE GOVERNANCE PRINCIPLES].

57. See BASEL II, *supra* note 1.

58. IOSCO, MULTILATERAL MEMORANDUM OF UNDERSTANDING CONCERNING CONSULTATION AND COOPERATION AND THE EXCHANGE OF INFORMATION (2002) [hereinafter IOSCO MMoU].

59. IAIS, THE IAIS COMMON STRUCTURE FOR THE ASSESSMENT OF INSURER SOLVENCY (2007) [hereinafter IAIS SOLVENCY PRINCIPLES].

60. See generally, Walter Mattli & Time Büthe, *Setting International Standards: Technological Rationality or Primacy of Power*, 56 WORLD POLITICS 1 (2003) (analyzing the rise of private standard-setting organizations beginning in the 1990s); TIM BÜTHE & WALTER MATTI, THE NEW GLOBAL RULERS: THE PRIVATIZATION OF REGULATION IN THE WORLD ECONOMY, 60–126 (2011) (same).

Standards Board (IASB) became the successor organization to the IASC in 2001 and created a set of standards known as the International Financial Reporting Standards (IFRS).⁶¹ In 2002, the ISDA updated its over-the-counter derivatives codes with the Second Edition of its Master Agreement. A number of other significant industry associations formed during this period as well.⁶²

The last major institutional piece of the NIFA was the IMF, a formal, treaty-based international organization. The IMF's most prominent role was as an international lender of last resort, supplying emergency loans to countries experiencing balance of payments crises, including Mexico, Russia, Argentina, and several East Asian countries.⁶³ The IMF also took the lead under the NIFA in providing "surveillance" of the international financial system.⁶⁴ IMF surveillance consisted of Financial Sector Assessment Programs (FSAPs), which monitored implementation of the best practices standards formulated by the transgovernmental networks.⁶⁵ The IMF also provided broader supervision of the global macroeconomy through its semi-annual Global Financial Stability Reports.⁶⁶

D. *The 2008 Financial Crisis*

The NIFA presided over a period of relative stability in global finance from 2001 to 2007 and, at the time was, widely considered a success.⁶⁷ But the illusion that a large financial crisis could only happen in developing economies with defective, "crony" banking systems was shattered in 2008.⁶⁸ The proximate cause of the 2008 Crisis was a precipitous drop in

61. IAIS, INT'L FIN. REPORTING STANDARDS [IFRS]: AN AICPA BACKGROUNDER app. 10.11 (2011) (showing the timeline of the IASC and the IFRS); *About the IASB*, IFRS, available at http://www.ifrs.com/updates/iasb/about_the_iasb.html.

62. For example, the Bond Market Association (BMA), which merged into the Securities Industry and Financial Markets Association (SIFMA) in 2006, and the European-based International Capital Market Association (ICMA). See Hal S. Scott, *An Overview of International Finance: Law and Regulation*, RESEARCH HANDBOOK IN INTERNATIONAL ECONOMIC LAW, 361, 370 (Andrew T. Guzman & Allen O. Sykes eds., 2008).

63. KINDLEBERGER & ALIBER, *supra* note 34, at 208, 245, 248–49, 292–93; see generally, James M. Boughton, *From Suez to Tequila: The IMF as Crisis Manager*, 110 THE ECON. J. 273 (2000).

64. See *Institutional Performance*, *supra* note 55, at 490.

65. The output of FSAPs were reports known as ROSCs (Reports on Observance of Standards and Codes), which evaluated the implementation of standards and codes developed by the FSF and other networks.

66. The IMF began to issue its Global Financial Stability Reports in 2002. See generally Andrew Berg, Eduardo Borensztein, & Catherine Pattillo, *Assessing Early Warning Systems: How Have They Worked in Practice?*, IMF Staff Papers 462 2005 (describing early warning system (EWS) models and how they can be used to determine a country's financial vulnerability).

67. See Pierre-Hugues Verdier, *Transnational Regulatory Networks and Their Limits*, 34 YALE J. INT'L L. 113, 137 (2007).

68. See Barry Eichengreen, *Reforming the International Financial Architecture After Ten Years: The View From Emerging Markets*, Speech at the Tokyo Club Foundation for

housing prices across the United States⁶⁹ and Europe,⁷⁰ beginning in 2006.⁷¹ Because homebuyers and mortgage originators did not anticipate such a severe drop in housing prices, defaults on mortgages rapidly increased.⁷² Losses in the housing market were transmitted through the financial system with the practice of securitization, which allowed for the creation and sale of financial instruments, the value of which depended on the viability of residential mortgages.⁷³

Large financial institutions also assigned a very low probability to the chance that housing prices would substantially and rapidly decline, and as a result, they underestimated the risks of securitized products such as residential mortgage-backed securities (RMBS) and collateralized debt obligations (CDOs).⁷⁴ Failure to appreciate the risks involved in housing-related securities led the banks and government sponsored enterprises that held these instruments as assets to finance their operations with large amounts of short-term debt;⁷⁵ they were overleveraged. As the value of housing-related securities dropped, the cost of financial institutions' short-

Global Studies Conference: The Global Monetary and Financial System and its Governance (Nov. 11, 2008), in *MACRO ECON. PROC.*, Feb. 2009, at 1–2.

69. U.S. housing prices fell 30 percent in less than three years, and the stock of US housing wealth is estimated to have declined by approximately \$15 trillion over a similar period. Robert M. Solow, *How to Understand the Disaster*, N.Y. REV. BOOKS, May 14, 2009, at 4 (reviewing RICHARD A. POSNER, *A FAILURE OF CAPITALISM: THE CRISIS OF '08 AND THE DESCENT INTO DEPRESSION* (2009)).

70. Equal or greater fluctuations in housing prices occurred in several European countries, including Ireland, Spain, Belgium, and France. Paul Hilbers et al., *House Price Developments in Europe: A Comparison* 12–13 (IMF, Working Paper WP/08/2011, 2008) (providing a comparison across European countries and noting that the fall in U.S. housing prices would put it at the mid-range of European housing price fluctuations).

71. Cf. Robert E. Hall, *Why Does the Economy Fall to Pieces After a Financial Crisis?*, 24 J. ECON. PERSP. 3 (2010); Edward E. Leamer, *The Housing Is the Business Cycle*, Presentation at the Federal Reserve Bank of Kansas City Symposium: Housing, Housing Finance and Monetary Policy (Oct. 11, 2007) in *ECON. SYMP. CONF. PROC.*, 2007, at 149.

72. Many homeowners were vulnerable to the collapse in housing prices because they had taken out mortgages based on the widespread expectation that prices would continue to rise or would at least not fall very much. Mortgage lenders on the other side shared similar expectations. See Christopher L. Foote, Kristopher S. Gerardi, & Paul S. Willen, *Why Did So Many People Make So Many Ex Post Bad Decisions? The Causes of the Foreclosure Crisis* 36–39 (Fed. Reserve of Boston, Pub. Pol'y Discussion Paper No. 12-2, 2012).

73. The markets for these financial instruments were large and global. See MCKINSEY GLOBAL INST., *MAPPING THE GLOBAL CAPITAL MARKET, THIRD ANNUAL REPORT* 12 (2007); Sec. Indus. & Fin. Mkts. Assoc'n, *Statistics*, SIFMA.ORG, <http://www.sifma.org/research/statistics.aspx>.

74. See Foote et al., *supra* note 72, at 13–15, 21–25, 56 fig. 9; Arnold Kling, *The Financial Crisis: Moral Failure or Cognitive Failure?*, 33 HARV. J.L. & PUB. POL'Y 508, 511 (2010).

75. Importantly, a large portion of this debt financing took place through the so-called “shadow banking system,” in which repurchase agreements, asset-backed commercial paper, and money market mutual funds were tapped on an extremely short-term basis, often overnight. See generally Zoltan Pozsar et al., *Shadow Banking* (Fed. Reserv. Bank of N.Y., Staff Report No. 458, 2012) (providing an overview of the structure of the shadow banking sector).

term financing shot up and they faced potential insolvency.⁷⁶ In late 2008, a trio of events—Lehman Brothers’s bankruptcy filing of Sunday September 15, the “breaking of the buck” by Lehman’s money market creditor Reserve Primary Fund the following Monday, and the failure of AIG, also on September 16—precipitated a generalized chaos in credit markets.⁷⁷ In response, the U.S. government announced its Troubled Asset Relief Program (TARP) on October 3, which was quickly revised to entail directly recapitalization of large U.S. financial institutions through government purchases of several hundred billion dollars’ worth of senior preferred stock and warrants.⁷⁸

Fallout from the 2008 Crisis was not limited to individual firms. After the near simultaneous collapse and emergency nationalization of its three largest banks, Iceland was offered a \$4.6 billion rescue package led by the IMF on November 19, 2008.⁷⁹ European countries that had premised their macroeconomic and tax policies on financial gains from the housing boom—including Ireland, Portugal, Spain, Greece, and Italy—also experienced runs on their sovereign debt.⁸⁰ Beginning in 2010, these indebted European countries received emergency aid that was delivered jointly through the “troika” of the IMF, European Commission, and European Central Bank (ECB).⁸¹ In 2012, the ECB made a promise of unlimited open market purchases of sovereign bonds, providing a temporary guarantee that appears to have stemmed the rising tide of speculation on

76. See Gary Gorton & Andrew Metrick, *Securitized Banking and the Run on Repo*, 104 J. FIN. ECON. 425, 447–48 (2012). The number of major banks and other financial institutions that failed or were rescued during the fall of 2008 remains startling to this day. A partial list of well-known names includes: Northern Rock, Bear Stearns, Fannie Mae, Freddie Mac, IndyMac, Merrill Lynch, Lehman Brothers, AIG, Washington Mutual, Wachovia, Royal Bank of Scotland, Fortis, and Dexia.

77. The “TED Spread” between risk-free treasury bonds and inter-bank lending rose to over 300 basis points on September 17. Frederic S. Mishkin, *Over the Cliff: From the Subprime to the Global Financial Crisis* 4–7, 9 (Nat’l Bureau of Econ. Research, Working Paper No. 16609, 2010).

78. See Lucian A. Bebchuk, *Buying Troubled Assets*, 26 YALE J. REG. 343, 352–54 (2009). In the same month, the U.S. Federal Reserve also took the unusual step of temporarily expanding its reciprocal swap lines with foreign central banks to allow greater access to U.S. dollars. See Maurice Obstfeld, *Lenders of Last Resort in a Globalized World*, Keynote Address at the 2009 International Conference, Institute for Monetary and Economic Studies, Bank of Japan, Tokyo 8–9 (May 27, 2009) (transcript available through University of California Berkeley).

79. Tasneem Brogger & Helga Kristin Einarsdottir, *Iceland Gets \$4.6 Billion Bailout from IMF, Nordics*, BLOOMBERG, (Nov. 20, 2008, 6:11 PM), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=anS9Ze0bmXmM#share>.

80. See Tyler Cowen, *Is the Eurozone Crisis a Sovereign Fiscal Crisis?*, MARGINALREVOLUTION.COM (Sept. 19, 2011, 12:37 PM) (characterizing the fiscal strategies of European countries as analogous to selling a naked put option), <http://marginalrevolution.com/marginalrevolution/2011/09/is-the-eurozone-crisis-a-sovereign-fiscal-crisis-2.html>; see also Matthew C. Turk, *Implications of European Disintegration for International Law*, 17 COLUM. J. EUR. L. 395, 413–15 (2011) (providing a similar argument).

81. *Less Cash, More Impact*, ECONOMIST, Oct. 6, 2012.

Eurozone debt while leaving the medium-term future of the European Monetary Union unresolved.⁸²

During the 2008 Crisis, the G20 supplanted the G7/8 of the NIFA.⁸³ The G20 convened on an accelerated schedule and coordinated the international crisis management agenda by issuing a series of “Communiqués,” declaring its members’ commitments to stimulative fiscal and monetary policies, free trade, and comprehensive financial regulatory reform on both a domestic and coordinated, international basis.⁸⁴ As with the G7/8, the G20 also worked towards post-crisis institutional development, particularly by establishing the Financial Stability Board (FSB) as a broader-based successor to the FSF.⁸⁵

With the G20 taking the lead, many of the high profile networks of the NIFA were sidelined from any crisis management role.⁸⁶ However, new measures aimed at crisis prevention eventually did take shape and were coordinated through networks of regulators under the auspices of the FSB. Among the more prominent projects was the Basel Committee’s development of a third version of its capital adequacy accord, Basel III, adopted by the G20 in 2010.⁸⁷ The FSB also began to implement its expanded mandate, which includes a new mandatory process for peer-review of members’ compliance with international financial codes and standards.⁸⁸

Despite the admittedly substantial regulatory activity and institutional development in response to the 2008 Crisis, it was not a watershed in the

82. See Claire Jones & Michael Steel, *Draghi Outlines Bond Buying Plan*, FIN. TIMES (Sept. 6, 2012) (quoting ECB chairman Mario Draghi’s promise to do “whatever it takes” to save the euro), <http://www.ft.com/intl/cms/s/0/448a6f28-f822-11e1-828f-00144feabdc0.html#axzz3BhAkUdzF>.

83. Mario Giovanoli, *The Reform of the International Financial Architecture After the Global Crisis*, 42 N.Y.U. J. INT’L L. & POL. 81, 90 (2009) (“[At] the international level, the approach chosen was to revive the G-20 . . . which had been more or less dormant since its inception in 1999, and to establish it as the main forum for reforming the international financial architecture.”); *Institutional Performance*, *supra* note 55, at 485–86, 496–503.

84. While the G/78 met annually, the G20 met every six months from 2008–2011. See Arie C. Eernisse, *Banking on Cooperation: The Role of the G-20 in Improving the International Financial Architecture*, 22 DUKE J. COMP. & INT’L L. 239, 241, 242–45 (2012).

85. The FSB expanded on the membership of the FSF by including those G20 countries not among the G8. See Financial Stability Board Charter, Annex A, Sept. 25, 2009; Communiqué, Group of Twenty, London Summit—Leaders’ Statement ¶¶ 13–21 (Apr. 2, 2009), available at <http://www.g20.org/Documents/final-communication.pdf>. See generally Arner & Taylor, *supra* note 55.

86. See *Institutional Performance*, *supra* note 55, at 478 (admitting that “international networks, such as the Basel Committee on Banking Supervision and the International Organization of Securities Commissions (IOSCO), have not been the loci of any serious response to the crisis.”).

87. BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT’L SETTLEMENTS, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS (Dec. 2010) [hereinafter BASEL III], available at <http://www.bis.org/publ/bcbs128.pdf>; The G20 Seoul Summit Leaders’ Declaration, ¶¶ 27–33 (Nov. 11–12, 2010), available at http://www.g20.org/Documents2010/11/seoulsummit_declaration.pdf.

88. See Arner & Taylor, *supra* note 56, at 497–98.

evolution of the international financial architecture that some observers predicted or hoped for: there was no grand Bretton Woods II bargain.⁸⁹ Instead, a NIFA 2.0 emerged, as existing institutions of the original NIFA became more active, expanded their membership or mandates at the margins, and began to busily prepare the next generation of best practices standards for financial regulation.⁹⁰ This marginal expansion of the previous regulatory framework, which itself was not particularly successful, must grapple with a global financial system that has not seen its fifty-year trends of turbulent expansion and integration reversed by the 2008 Crisis.⁹¹ In addition to an unforgiving economic environment, the latest version of the NIFA must also operate in an increasingly multipolar and fragmented international political context due to the relative economic decline of the United States and EU⁹² Whether the new reforms have made the international financial architecture better prepared to meet the daunting demands of post-2008 global finance is the subject of Section II.

II. INTERDEPENDENCE PROBLEMS IN INTERNATIONAL FINANCIAL REGULATION

The preceding Section attempted to provide a historical perspective to the international financial system and to sketch its complexity: the crazy-quilt of international regulatory institutions, dynamism of international financial integration, and variety of financial crises. Following an approach common in political science and economic analyses of international law and international relations, this Section aims to reduce this factual complexity by identifying and analyzing the fundamental interdependence problems created by global finance.⁹³ An interdependence problem exists

89. See Editorial, *Still Lost in the Old Bretton Woods*, FIN. TIMES, Dec.28, 2009 at 8 (“[E]ven after the worst financial and economic shock since the Depression, and much grand talk of a new Bretton Woods, little reform has happened . . . The crisis has not produced a new world order.”).

90. See Joseph Norton, *Comment on the Developing Transnational Network(s) in the Area of International Financial Regulation: The Underpinnings of a New Bretton Woods II Global Financial System Framework*, 43 INT’L L. 179, 191 (2009) (“NIFA-I did produce virtually all the important components for building NIFA-II.”).

91. See IMF, *THE REFORM AGENDA, AN INTERIM REPORT ON PROGRESS TOWARD A SAFER FINANCIAL SYSTEM* 103, Oct. 2012 (summarizing the relevant statistics and concluding that, “In general, up until 2011, the crisis had not reversed the long-term trend of globalization even though some selected areas have suffered. There is currently no evidence of a generalized move toward de-globalization.”).

92. See Ian Bremmer & Nouriel Roubini, *A G-Zero World: The New Economic Club Will Produce Conflict, Not Cooperation*, FOREIGN AFF., at 1, Jan. 31, 2011 at 2 (“We are now living in a G-Zero world, one in which no single country or bloc of countries has the political and economic leverage—or the will—to drive a truly international agenda. The result will be intensified conflict on the international stage over vitally important issues, such as international macroeconomic coordination, financial regulatory reform, trade policy, and climate change.”); DREZNER, *supra* note 7, at 218 (“[T]he scope of regulatory coordination is negatively correlated with the number of major economic powers in the system.”).

93. See Hafner-Burton et al., *supra* note 8, at 17 (“[T]he tenor of recent political science research has been to look at the underlying characteristics of the problems—rather than

when the actions of one state produce positive or negative spillovers affecting the welfare of other states. In these instances, a rational, self-interested state will act in accordance with a private cost-benefit calculation that diverges from the same analysis if done on a global scale. Interdependence problems therefore present opportunities for states to develop cooperative arrangements that discourage negative spillovers or encourage positive spillovers in ways that can benefit all parties involved.⁹⁴ Accordingly, identifying the interdependence problems of cross-border finance is the best starting point for understanding the domain over which international financial regulation can potentially be useful.

The standard game theoretic distinction between problems of “coordination” and “cooperation” is a helpful starting point for determining the degree to which a particular interdependence problem is amenable to effective international regulation.⁹⁵ In coordination games, parties receive a higher payoff by adopting a common strategy rather than acting unilaterally.⁹⁶ As a result, resolution of coordination problems tends to be self-enforcing, because negotiating parties benefit from complying with the terms of the bargain after it is made, and conflict is limited to the relative distribution of the bargain’s benefits.⁹⁷ In cooperation games, most famously the prisoner’s dilemma, the collective payoff is also greatest when all parties choose a common cooperative strategy. But in contrast to coordination games, each party in a cooperation game receives a superior payoff if it chooses not to cooperate or reneges on its commitments after the fact.⁹⁸ Cooperation problems are thus not normally self-enforcing, as the conflict between individual and collective payoffs can cause cooperation to unravel. At the same time, cooperation games do not inevitably lead to inefficient outcomes.⁹⁹ It is possible for parties to maintain a cooperative equilibrium under certain conditions, depending on the parties’ numer-

the issue-area—that define possibility, content and results of cooperation. We call these characteristics the ‘type of problem.’”).

94. See POSNER & SYKES, *supra* note 6, at 17 (“[T]he gains from international cooperation arise primarily from the fact that actions in or by one state have implications for the well-being of citizens in other states. In such settings, we will say that actions create an international externality.”).

95. See generally, Snidal, *supra* note 11.

96. See BAIRD, *supra* note 12, at 41–43 (explaining coordination games); JACK L. GOLDSMITH & ERIC A. POSNER, *THE LIMITS OF INTERNATIONAL LAW* 33–35 (2005) (discussing coordination games specifically in the context of international law); see also Richard McAdams, *Beyond the Prisoner’s Dilemma*, 82 U.S.C. L. REV. 209 (2009) (arguing for the prevalence of coordination games in law); THOMAS SCHELLING, *THE STRATEGY OF CONFLICT* 134 (1960) (explaining that every cooperation problem entails a question of coordination regarding the form that cooperation should take).

97. Cf. Lester G. Telser, *A Theory of Self-Enforcing Agreements*, 53 J. BUS. 27 (1980) (providing the seminal theoretical account of self-enforcing agreements).

98. See BAIRD, *supra* note 12, at 31–35 (explaining prisoner’s dilemma games); GOLDSMITH & POSNER, *supra* note 96, at 87 (same, in the context of international law).

99. Cf. Todd Sandler & Keith Hartley, *Economics of Alliances: The Lessons for Collective Action*, 39 J. ECON. LIT. 869 (2001) (analyzing the conditions that give rise to cooperative equilibria); ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* (rev. ed. 1984)

osity, patience, regularity of interaction, and ease of monitoring and punishing non-cooperative behavior.¹⁰⁰

This Section uses the above framework to delineate the most fundamental interdependence problems of cross-border finance and evaluate the international financial architecture's prospects for effectively dealing with them. As mentioned at the outset, the interconnection of domestic financial markets creates a dual role for cooperation on international regulatory policy: maximizing gains from trade in international finance and minimizing the losses that arise in the form of financial instability. Efforts to mitigate the losses from financial instability can be further subdivided into *ex ante* regulation aimed at crisis prevention, and *ex post* crisis management interventions. These basic categories give rise to four specific interdependence problems: (1) harmonizing financial standards to lower the cost of cross-border transactions and increase the efficiency of financial integration; (2) maintaining the capital adequacy of financial institutions across jurisdictions to prevent crises *ex ante*; and, managing crises *ex post* by (3) establishing a cross-border resolution mechanism to unwind failed firms, and by (4) implementing an international lender-of-last-resort function to intervene in sovereign debt or currency crises.

In general, the discussion below concludes that states will be able to develop an international financial architecture that is capable of solving coordination problems, such as the harmonization of standards to facilitate financial integration. At the same time, states will continue to struggle with regulatory projects that seek to enhance the stability of the global financial system, all of which imply problems of cooperation that are not easily overcome. Section III then explores the policy implications of this analysis, and argues that progress can be made on otherwise intractable cooperation problems by scaling cooperation to the regional level, or by focusing on coordination problems embedded within more complex cooperative efforts to provide stability.

A. Harmonization of Standards

1. Defining the Interdependence Problem

“Harmonization of standards” is a phrase that is sometimes used quite broadly in the literature.¹⁰¹ At times, it refers to any agreement upon com-

(same); SCOTT BARRETT, *WHY COOPERATE? THE INCENTIVE TO SUPPLY GLOBAL PUBLIC GOODS* (2010) (same).

100. See POSNER & SYKES, *supra* note 6, at 27–36.

101. See, e.g., SINGER, *supra* note 17, at 2 (using the phrase to cover nearly all international cooperation on financial regulation); David E. van Zandt, *The Regulatory and Institutional Conditions for an International Securities Market*, 32 VA. J. INT'L L. 47, 72 (1991) (referring to standards in the securities fraud context in writing that “[some] regulatory differences . . . reflect different governmental judgments about the social dangers or costs of the operation of unfettered securities markets.”); see also Alan O. Sykes, *Regulatory Competition or Regulatory Harmonization? A Silly Question?*, 3 J. INT'L ECON. L. 254 (2000) (providing a taxonomy of the forms of “standards” used in the literature). Under Sykes’s taxonomy, capital requirements or securities fraud efforts would include coordination through “minimum standards” or “agreement on non-homogeneous regulatory targets.” *Id.* at 259.

mon substantive regulations—including those such as capital requirements or prohibitions against securities fraud—that are intended to restrain socially wasteful forms of profit-seeking behavior by firms or to contribute to greater financial stability.¹⁰² This usage therefore equates all regulations with “standards.” In a different but also broad sense, the label is applied to the many codes of best practices or “principles” that international bodies formulate and urge members to implement.¹⁰³ Although sometimes touted in the literature as substantive “legislative achievements,” these documents are essentially hortatory and consist of provisions that are too abstract to serve as practical regulatory guidance.¹⁰⁴ Thus, it is dubious whether the principles documents result in any actual convergence or harmonization of regulatory practices.¹⁰⁵

However, understood more narrowly, harmonization of standards is about agreements on rules governing the form (rather than substance) that cross-border financial transactions or disclosures must take. When regulatory standards diverge across national jurisdictions, the cost of a cross-border transaction may exceed that of an otherwise economically identical domestic transaction because of the need to comply with two different sets of rules. The result is a distortion of the decision to allocate capital, drawing resources from more efficient to less efficient uses. Bringing domestic regulations into conformity through agreements on common international standards, or agreeing to mutual recognition of domestic standards,¹⁰⁶ can

102. *Id.*

103. See, e.g., FIN. STABILITY FORUM [FSF], PRINCIPLES FOR SOUND COMPENSATION PRACTICES (2009) [hereinafter FSF EXECUTIVE COMPENSATION PRINCIPLES]; BASEL CONCORDAT, *supra* note 36; FSF STANDARDS, *supra* note 56; OECD CORPORATE GOVERNANCE PRINCIPLES, *supra* note 56; IOSCO SECURITIES REGULATION PRINCIPLES, *supra* note 56; IAIS SOLVENCY PRINCIPLES, *supra* note 59.

104. Compare *How International Financial Law Works*, *supra* note 9, at 278–79 (referring to these documents as “legislation” and “legislative achievements”) with DREZNER, *supra* note 7, at 81–85 (referring to these documents somewhat derogatorily as “sham standards”).

105. A few representative examples confirm Drezner’s “sham standards” view: most provisions in principles documents amount to vague platitudes. See e.g., FSF, EXECUTIVE COMPENSATION PRINCIPLES, *supra* note 12, at Nos. 1, 7 (“1. The firm’s board of directors must actively oversee the compensation system’s design and operation . . . 7. The mix of cash, equity and other forms of compensation must be consistent with risk alignment.”); IOSCO SECURITIES REGULATION PRINCIPLES, *supra* note 56, No. 6.1. (6.1.1: “The responsibilities of the regulator should be clear and objectively stated”; . . . 6.1.4: “The regulator should adopt clear and consistent regulatory processes”; . . . 6.1.5: “The staff of the regulator should observe the highest professional standards, including appropriate standards of confidentiality.”).

106. States can either decide to impose an identical regulatory standard, or achieve a functionally similar result through agreements to mutually recognize standards when they diverge. For example if Jurisdiction A requires pleadings printed on blue paper, and Jurisdiction B requires pleadings on red paper, an agreement to recognize each other’s requirements in effect creates a single, common standard: “pleadings must be printed on red or blue paper.” Both forms of convergence can be considered steps towards regulatory harmonization. See Alan O. Sykes, *The (Limited) Role of Regulatory Harmonization in International Goods and Service Markets*, 2 J. INT’L ECON. L. 49 (1999) (arguing that mutual recognition is often a

therefore reduce transaction costs and facilitate cross-border exchange.¹⁰⁷ By broadening the relevant market, common standards may also allow firms to take greater advantage of economies of scale.¹⁰⁸ Thus, harmonization of standards potentially facilitates international financial integration and makes global financial markets more efficient.

Agreement on common standards will be easiest to achieve when harmonization takes the form of a pure coordination game, in which states do not have divergent preferences over which standard is used, as long as *some* common standard is chosen.¹⁰⁹ However, although negotiations over common standards do not typically involve widely differing assessments of optimal policy or direct conflicts of interest among the parties, disagreement may often arise because states will prefer that a common standard take the form that is least costly for their domestic industries to adopt. Negotiating parties' concerns over the relative distribution of these "switching costs,"¹¹⁰ means that harmonization of financial standards will not be a pure coordination game, but instead is best modeled as a "battle-of-the-sexes" coordination game.¹¹¹ In a battle-of-the-sexes game, coordi-

superior policy to convergence on a single, common standard). *But see* Eric A. Posner, *The Questionable Basis of the Common European Sales Law: The Role of an Optional Instrument in Jurisdictional Competition*, 50 COMMON MARKET L. REV. 261, 264, 267–69 (2013) (cautioning that creating a new, optional international standard while also preserving divergent domestic standards may only add complexity and increase transaction costs).

107. *See* DREZNER, *supra* note 7, at 43 ("Regulatory coordination reduces the transaction costs of cross-border exchange, leading to an increase in static efficiency, which increases economic benefits for all participating states.").

108. *See id.* ("There is reason to believe that regulatory coordination leads to dynamic gains from trade as well . . . If one allows for increasing returns to scale."); *cf.* Charles P. Kindleberger, *Standards as Public, Collective, and Private Goods*, 36 KYKLOS 377 (1983) (emphasizing the importance of economies of scale for the production of standards).

109. *See* McAdams, *supra* note 96, at 219 n.33.

110. *See* DREZNER, *supra* note 7, at 46 (referring to switching costs as the "costs of coordination"); Beth A. Simmons, *The International Politics of Harmonization: The Case of Capital Market Regulation*, 55 INT'L ORG. 589, 601 (2001) (emphasizing the importance of the preferences of the United States during the 1990s); Elliot Posner, *Making Rules for Global Finance: Transatlantic Regulatory Cooperation at the Turn of the Millennium*, 63 INT'L ORG. 665, 666, 670–76 (2009) (emphasizing the same with regard to jockeying between the United States and European Union).

111. *See* BAIRD, *supra* note 12, at 41–43 (explaining battle of sexes games); GOLDSMITH & POSNER, *supra* note 96, at 32–35 (discussing battle of the sexes games specifically in the context of international law). The name is derived from a hypothetical married couple that must decide whether to spend their evening going to the ballet, going to a sports event, or staying at home. The husband and wife each prefer the gender-stereotypical event, but both prefer attending either event together compared to not going out at all. A two-player, one period battle of the sexes game can be represented as follows:

Column (Husband):		Ballet	Basketball
Row (Wife):	Ballet	(4, 1)	(0,0)
	Basketball	(0,0)	(1, 4)

nation on a common standard benefits all parties, but preferences diverge over what form the standard should take.¹¹²

Coordination games, including battle-of-the-sexes games, have multiple equilibria, meaning that parties may converge on one of multiple strategies, or a mix of strategies.¹¹³ Whether parties can bargain towards a common equilibrium¹¹⁴ depends on a variety of factors, including the parties' switching costs, and whether one party can make its preferred equilibrium focal by acting as a first-mover or leveraging other forms of bargaining power.¹¹⁵ However, after the bargaining phase in which a common standard has been agreed upon, parties benefit from continuously adhering to that standard and do not face a strong incentive to defect during the compliance phase.¹¹⁶ Taking these considerations together, the prediction yielded by this model is that international agreements to harmonize financial standards will be forthcoming, although not inevitable, and that once an agreement is made lack of compliance should not be a critical issue.

2. Evaluating Harmonization of Standards

The historical experience is consistent with the basic game theoretic analysis above, and indicates that harmonization of financial standards is a relatively tractable problem of international regulatory cooperation on finance. Many of the international standard-setting bodies were formed or gained momentum during the NIFA period, and deeper harmonization is the main success of the NIFA.¹¹⁷ And going forward, increasing global capital flows will provide momentum for further harmonization efforts, because the volume of international financial transactions corresponds

112. See McAdams, *supra* note 96, at 222 (“The [battle of sexes] game also models standard setting, as where different firms or industries need to agree to certain technical standards to allow their products to interact.”); Robert B. Ahdieh, *The Strategy of Boilerplate*, 104 MICH. L. REV. 1033 (2005) (analyzing boilerplate—a form of contractual standardization—as a battle of the sexes game); Mattli & Bütte, *supra* note 60, at 10; Stephen D. Krasner, *Global Communications and National Power: Life on the Pareto Frontier*, 43 WORLD POL. 336 (1991).

113. See McAdams, *supra* note 96, at 212. As a simple example, in a coordination game concerning rules of the road, a convention of driving on either the left or right side of the road are both equilibrium results.

114. Because real world negotiation takes place over time, a single period battle-of-the-sexes matrix can be understood as the final period of an ongoing, multiple-period Rubinstein bargaining game in which the passage of time without agreement imposes a cost on both parties. See *id.*, at 236–37; BAIRD, *supra* note 12, at 219–41; Ariel Rubinstein, *Perfect Equilibrium in a Bargaining Model*, 50 ECONOMETRICA 97 (1982).

115. See DREZNER, *supra* note 7, at 51–55; SCHELLING, *supra* note 96, at 67–74; Ahdieh, *supra* note 112, at 1039–41; Maarten C.W. Janssen, *On the Strategic Use of Focal Points in Bargaining Situations*, 27 J. ECON. PSYCH. 622 (2006).

116. See James D. Fearon, *Bargaining, Enforcement, and International Cooperation*, 52 INT'L ORG. 269, 276–79 (1998) (arguing that international cooperation is best analyzed as including distinct “bargaining” and “enforcement” phases).

117. See *infra* Section I.C.

with returns to investment in reducing transaction costs.¹¹⁸ For these reasons, there is cause for optimism regarding post-2008 cooperation on harmonization of financial standards.

A variety of organizations and institutional forms have facilitated the harmonization of international financial standards, including private industry groups, networks of government regulators, and international organizations. At the same time, most standard setting is best understood as ultimately state-directed, with states delegating the process of drafting technical specifications to private trade organizations or networks of regulators.¹¹⁹ The regulatory documents produced by these entities are then subject to legislative approval and adoption by governments, which retain control over the substantive outcomes of the process. Many of the cases described below resemble public-private partnerships in this respect.

One example of harmonization led by a private industry group is the work of the International Swaps & Derivatives Association, Inc. (ISDA),¹²⁰ which was formed in 1985 with the mission of standardizing aspects of the markets for over-the-counter (OTC) derivatives.¹²¹ The organization's primary achievement is the *ISDA Master Agreement*, first produced in 1992 with an updated version appearing in 2002, which provides standardized form contracts for transactions in OTC derivatives.¹²² By developing widely used form contracts, the *Master Agreement* serves to minimize the costs of transacting in OTC derivatives and also helps to reduce counterparty risk.¹²³ Another ISDA initiative has been to formulate model laws on the netting and collateralization of OTC derivative transactions, which can then be given effect through domestic legislation.¹²⁴ The ISDA's Model Netting Acts have been widely adopted, and one commentator has gone so far as to state that, "the widespread adoption of the ISDA model laws is probably the most successful international harmonization achievement over the last two decades."¹²⁵

118. See DREZNER, *supra* note 7, at 32 ("Economic globalization increases the gross rewards to policy coordination.").

119. *Id.*, at 73–74 (arguing that the state-delegation model applies).

120. See *About ISDA*, *supra* note 44.

121. OTC derivative are financial instruments that are traded informally between parties rather than on any central exchange, such as the Chicago Mercantile Exchange or New York Stock Exchange.

122. INT'L SWAPS & DERIVATIVES ASS'N [ISDA], ISDA MASTER AGREEMENT (1992); ISDA, 2002 MASTER AGREEMENT (2002).

123. See generally Ahdieh, *supra* note 112 (analyzing the various uses and benefits of standard forms).

124. The original 1996 Model Netting Act has been updated twice, most recently in 2006. See ISDA, 2006 MODEL NETTING ACT AND MEMORANDUM ON THE IMPLEMENTATION OF NETTING LEGISLATION: A GUIDE FOR LEGISLATORS AND OTHER POLICY-MAKERS (2006), available at <http://www2.isda.org/functional-areas/legal-and-documentation/opinions/>.

125. Richard J. Herring, *The Central Role of Resolution Policy in Dealing with Systemically Important Financial Institutions* 42 (May 29, 2011) (unpublished paper), available at <http://fic.wharton.upenn.edu/fic/papers/11/11-71.pdf>.

Another area seemingly ripe for harmonization of standards is accounting. Accounting is essentially an exercise in measurement (of assets and liabilities) and standardization of measures is a classic area of harmonization.¹²⁶ If multinational financial institutions can function under a single set of global accounting principles regardless of the geographic location of their operations, the cost of complying with multiple domestic standards would be avoided.¹²⁷ Harmonization of accounting standards has been led by another private organization, the International Accounting Standards Board (IASB), which has been pursuing the goal for decades with some success.¹²⁸ The IASB's main project has been to formulate a set of "principle-based" accounting standards, known as the International Financial Reporting Standards (IFRS).¹²⁹ Harmonization of accounting coordinated around IFRS standards has made steady progress, beginning with the adoption of IFRS by the EU in 2005. In 2007, the SEC issued a Final Rule allowing foreign issuers to use IFRS accounting as an alternative to the previously required GAAP standard.¹³⁰ The U.K. is currently working to implement the IFRS in some form as well.¹³¹

Transgovernmental networks of regulators have also made progress at harmonization, notably IOSCO. One harmonization effort of IOSCO, completed in 1998, was to develop a standard non-financial disclosure document for firms to provide to securities regulators, with the aim of reducing the cost of cross-border offerings and listings.¹³² Standardization of securities disclosures based on IOSCO's form disclosure has been widespread.¹³³ The SEC revised its disclosure requirements to harmonize with the IOSCO in 1999, and the U.K. and EU took similar steps thereafter.¹³⁴

126. See Kindleberger, *supra* note 108, at 378–79; Hendrik Spruyt, *The Supply and Demand of Governance in Standard-Setting: Insights from the Past*, 8 J. EURO. PUB. POL'Y 371, 377–89 (2001).

127. See Clyde Stoltenberg et al., *The Past Decade of Regulatory Change in U.S. and EU Capital Market Regimes: An Evolution from National Interests toward International Harmonization with Emerging G-20 Leadership*, 29 BERK. J. INT'L L. 578, 601–02, 637 (2011); Christopher S. Armstrong et al., *Market Reaction to the Adoption of IFRS in Europe* 29–30 (Harv. Bus. Sch., Working Paper No. 09-032, 2008) (quantitative study finding that investors in European firms perceived net benefits associated with accounting harmonization).

128. See IAIS, *supra* 61.

129. See *id.*

130. 17 C.F.R. §§ 210, 228, 229, 230, 239, 240 & 249 (2010); Exchange Act Release Nos. 33-8831 & 34-56217 (Aug. 7, 2007); Marie Leone, *IFRS Returns to the Front Burner*, CFO.COM (Oct. 8, 2009), <http://www.cfo.com/printable/article.cfm/14445960>.

131. See ERNST & YOUNG, UK GAAP v. IFRS: THE BASICS 1 (2011), available at [http://www.ey.com/Publication/vwLUAssets/UK_GAAP_v_IFRS_-_The_basics_-_Spring_2011/\\$FILE/EY_UK_GAAP_vs_IFRS_-_The%20basics_-_Spring_2011%20.pdf](http://www.ey.com/Publication/vwLUAssets/UK_GAAP_v_IFRS_-_The_basics_-_Spring_2011/$FILE/EY_UK_GAAP_vs_IFRS_-_The%20basics_-_Spring_2011%20.pdf).

132. Communique, IOSCO, Final Communique of the 23rd Annual Conference of the International Organization of Securities Commissions (Sept. 18, 1998), available at <http://www.iosco.org/news/pdf/IOSCONEWS44-English.pdf>.

133. See generally, Samuel Wolff, *Implementation of International Disclosure Standards*, 22 U. PA. J. INT'L ECON. L. 91, (2001).

134. 15 U.S.C. § 78a-mm (1994); International Disclosure Standards, Exchange Act Release No. 33-7637, 1999 WL 44076 (S.E.C.) at *9 (Feb. 2, 1999).

As the game theoretic analysis suggests, harmonization will not be achievable in every context, particularly when the standards at issue represent substantive policy judgments, or when switching costs for powerful states are high. An area illustrating the latter difficulty is insurance, where coordination of standards has lagged. The International Association of Insurance Supervisors (IAIS) is a transgovernmental network of insurance regulators and the principal international body seeking to harmonize insurance standards.¹³⁵ To date, however, the IAIS has yet to achieve much concrete coordination of insurance regulation, and has only issued its high-level IAIS Solvency Principles. Failure to make progress on more ambitious efforts at convergence has in part been thwarted by the United States, which is reluctant to enter into proposed agreements regarding insurance.¹³⁶ Switching costs explain the United States's lack of enthusiasm in this area. There is no U.S. federal insurance law, and insurance is regulated under various sets of rules determined at the state level.¹³⁷ The cost to the United States of switching to a new international standard is therefore a strong barrier to harmonization, as it would require renovating not just one, but at least fifty separate insurance regimes.¹³⁸

In summary, consistent with the battle-of-the-sexes model, states have had considerable success in addressing the interdependence problem of harmonizing standards, during both the NIFA and post-2008 periods. In agreeing on common regulatory standards, states have been able to capture greater gains from international financial integration, by reducing the cost of cross-border transactions and enabling multinational firms to take advantage of economies of scale. That is not a trivial achievement. On the other hand, perhaps unjustifiably, discussion of international financial regulation often centers on the “big” challenges that relate to reducing systemic instability, rather than harmonization efforts that enhance the efficiency of cross-border financial markets.

135. See *About IAIS*, *supra* note 45 and accompanying text.

136. See SINGER, *supra* note 17, at 96–114; Brown, *supra* note 45, at 969–70.

137. Dodd-Frank's Title V makes a tentative first step towards federal insurance regulation, by creating a Federal Insurance Office. See Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 502, 124 Stat. 1376 (2010) [hereinafter Dodd-Frank]. However, substantive insurance regulation continues to be provided at the state level pursuant to the McCarran-Ferguson Act. See McCarran-Ferguson Act of 1945, ch. 20, 59 Stat. 33 (1945) (codified as amended 15 U.S.C. §§ 1011–1015 (2000)).

138. See SINGER, *supra* note 17, at 113 (“[T]here is an important institutional barrier to international harmonization in insurance that is not present in other financial industries: fifty separate state regulators in the united states. Regulatory harmonization is not complete *within* the country, and the international negotiating table is clearly not big enough for all fifty regulators to have a unified voice.”); DREZNER, *supra* note 7, at 44 (referring to switching costs for domestic firms as the “costs of coordination”); Brown, *supra* note 45, at 972–88.

B. Crisis Prevention: Maintaining Capital Adequacy

1. Defining the Interdependence Problem

As noted in this Article's historical overview, the trend of international financial market integration has been accompanied by an increasing incidence of financial crises.

Not surprisingly, this has prompted international regulatory initiatives aimed at mitigating systemic risks and promoting the stability of global financial markets.¹³⁹ Considered in the abstract, a stable cross-border financial system resembles a global public good in the economic sense of the term, and therefore would appear to provide an opportunity for states to achieve mutual gains through collective action.¹⁴⁰ Somewhat more concretely, effective crisis prevention would require crafting and enforcing international rules that restrain the financial risk-taking of sovereign states and globally interconnected firms, so as to prevent the market disruptions that would likely follow any default on their financial obligations. This Part B focuses on the interdependence problem of crisis prevention with respect to private financial institutions, while Part C.2 below considers the issue from the perspective of sovereign debt and currency crises.

The essential feature of private sector financial stability is the solvency of financial firms, which can be understood in a cash flow (ability to pay

139. "Systemic risk" and "financial stability" are amorphous concepts that can be defined various ways. *See, e.g.* BANK FOR INT'L SETTLEMENTS, FIN. STABILITY BD. & INT'L MONETARY FUND, REPORT TO G20 FINANCE MINISTERS AND GOVERNORS—GUIDANCE TO ASSESS THE SYSTEMIC IMPORTANCE OF FINANCIAL INSTITUTIONS, MARKETS AND INSTRUMENTS 2 (2009) (defining "systemic risk as a risk of disruption to financial services that is (i) caused by an impairment of all or parts of the financial system and (ii) has the potential to have serious negative consequences for the real economy"); Viral V. Acharya et al., *Systemic Risk and the Regulation of Insurance Companies*, in REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE 241, 261 (Viral V. Acharya et al. eds., 2011) ("Systemic risk can be conceived as the potential failure of a significant part of the financial sector—one large institution or many smaller ones—leading to reduction in the availability of credit and/or critical risk management products such as insurance, thereby adversely affecting the real economy."); *see generally*, Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193 (2008).

140. *See* Marc Quintyn & Michael W. Taylor, *Regulatory and Supervisory Independence and Financial Stability* 8 (IMF, Working Paper WP/02/46, 2002) ("[T]he achievement of financial stability . . . is now generally considered a public good."). A plausible case can be made that systemic stability is both non-excludable and non-rivalrous, and therefore a pure public good. However, it may be more accurate to consider international financial stability closer to a common pool good, in which one state can "consume" the exhaustible resource of stability at the expense of all others by allowing its financial sector to take on greater risk. *See* Steven Schwarcz, *supra* note 139, at 206 (arguing that systemic risk arises from a "tragedy of the commons" problem, implying that stability is non-excludable but has an element of rivalrous consumption). Analogy can be made to the temperature of the earth's atmosphere as a common pool good, with a state's carbon emissions constituting consumption of the remaining space in the atmosphere for carbon-dioxide before climate change occurs. *See generally*, Gary Becker, *What Should a Carbon Tax Look Like?*, THE BECKER-POSNER BLOG, (July 7, 2013, 5:30 PM), <http://www.becker-posner-blog.com/2013/07/what-should-a-carbon-tax-look-like-becker.html>. *See also* Matthew L. Beville, *Financial Pollution: Systemic Risk and Market Stability*, 36 FLA. ST. U. L. REV. 245 (2009).

debts as they come due) or a balance sheet (owning assets in excess of liabilities) sense. Preventing widespread bank failures in turn implies a central role for capital adequacy.¹⁴¹ Financial institutions require capital in order to gain access to credit and maintain a buffer sufficient to survive substantial downward movements in asset prices or investor sentiment without becoming insolvent.¹⁴² There is a wide variety of financial regulations—relating to executive compensation, corporate governance, firm size, or other regulatory targets besides capitalization¹⁴³—but these measures will only contribute to the safety and soundness of banks to the extent that they indirectly serve to increase the capital cushion available to absorb unexpected losses.¹⁴⁴ Thus, with some simplification, the key regulatory mechanism for preventing crises *ex ante* is to require the robust capitalization of large, globally connected financial firms. At the domestic level, then, the need for capital adequacy creates a role for regulation.

This is because, although firms should in theory be indifferent to the mix of debt and capital that is used to finance their operations, in practice, foundational regulatory policies do not encourage financial firms to raise a socially optimal ratio of capital to risk-adjusted assets.¹⁴⁵ Specifically, a

141. See Alan Greenspan, *The Crisis*, BROOKINGS PAPERS ON ECON. ACTIVITY, Spring 2010, at 201, 244 (“If capital is adequate, then, by definition, no financial institution will default and serial contagion will be thwarted. Determining the proper level of risk-adjusted capital should be the central focus of reform going forward.”); Andrei Schleifer, *Comment on Gorton and Metrick: Regulating the Shadow Banking System*, BROOKINGS PAPER ON ECON. ACTIVITY, Fall 2010 at 298, 303 (“As long as market participants do not understand the risks of the securities they are buying, whether these securities are ABSs or prime money market fund shares or something that will be invented in the future, and see profit opportunities in places where there are none, the financial system will adjust to meet their demand. One implication of this is the standard point that providing the intermediaries with bigger cushions of capital and liquidity is desirable.”).

142. Firms finance their operations through a mix of equity and debt. In banking regulation, “capital” refers to equity, or equity-like forms of bank financing. “Regulatory capital” refers to the minimum capital required by a regulator. “Economic capital” is defined as the capital level that bank shareholders would choose in the absence of capital regulation. Abel Elizalde & Rafael Repullo, *Economic and Regulatory Capital in Banking: What is the Difference?*, 3 INT’L J. CENT. BANKING 87 (2007) (exploring the distinction in the context of Basel Accord requirements); see also TARULLO, *supra* note 36, at 16–18.

143. See generally KENNETH R. FRENCH ET AL., *THE SQUAM LAKE REPORT: FIXING THE FINANCIAL SYSTEM* (Princeton Univ. Press 2010) (providing an overview of many of these as existing and proposed in reforms).

144. Many commentators also emphasize the importance of liquidity management to systemic risk. This Article focuses on solvency because most capital requirements are now accompanied by parallel liquidity provisions, and both sets of rules present regulatory problems that are isomorphic. See Acharya et al., *supra* note 139, at 158–60 (noting that the imposition of “liquidity requirements on financial institutions [is] similar in spirit to the way that capital requirements are imposed” and that the “approach [to liquidity requirements has been] eerily similar to that of Basel I, II, and III for setting capital requirements.”).

145. The Modigliani-Miller theorem—which holds that, under certain conditions, a firm’s value is unaffected by the mix of debt and equity that is the source of its financing—arguably does not apply to banking because certain regulatory and tax treatments particular to banks make debt a more attractive source of financing than equity. Compare Franco Modigliani & Merton H. Miller, *The Cost of Capital, Corporation Finance, and the Theory of*

portion of the debt of financial institutions is subject to regulations that constitute explicit and/or implicit government guarantees. Explicit government guarantees are provided through the FDIC's insurance of bank deposits, as deposits are a form of debt that banks owe to depositors.¹⁴⁶ The government also implicitly guarantees the debts of banks and non-bank financial institutions when acting as a lender of last resort through ad hoc bailouts of firms deemed Too-Big-to-Fail. Government guarantees in finance, like any other form of insurance, create moral hazard and subsidize risk taking by financial firms.¹⁴⁷ Firms therefore react to both explicit and implicit government insurance by holding less capital than would otherwise be optimal in its absence, producing a need for regulators to impose capital requirements.¹⁴⁸

A rationale for international capital requirements also exists because the domestically optimal level of capital for a state's private financial sector to maintain is lower than the internationally optimal level. This international externality stems from the fact that the profits, jobs, tax revenue and other benefits of a booming financial industry are concentrated locally, while a portion of the downside risk is systemic and borne by foreign markets and counterparties.¹⁴⁹ Even if it is assumed that the distribution of costs and benefits from financial risk-taking falls evenly across states, the IMF's function as an international lender of last resort provides an implicit form of insurance that leads to private investor moral hazard, in the same manner that a national central bank subsidizes risk-taking by bailing out Too-Big-to-Fail firms.¹⁵⁰ Due to these dynamics, an interde-

Investment, 48 AM. ECON. REV. 261 (1958) (providing the original articulation of the Modigliani-Miller theorem), with Merton H. Miller, *Do the M & M Propositions Apply to Banks?*, 19 J. BANKING & FIN. 483 (1995) (analyzing the applicability of Modigliani-Miller to banks) and TARULLO, *supra* note 36, at 16–18 (same).

146. After Dodd-Frank, the FDIC nominally covers only \$250,000 in deposits. Dodd-Frank, *supra* note 137, at § 335. However, innovations such as deposit syndication through what is called “CDARS” (Certificate of Deposit Account Registry Service) allow for millions of dollars in deposits to be insured. Sherril Shaffer, *Reciprocal Brokered Deposits and Bank Risk 1–2* (Ctr. Applied Macroecon. Analysis [CAMA], Working Paper No. 15/2010, 2010).

147. Asli Demirgüç-Kunt & Harry Huizinga, *Market Discipline and Deposit Insurance*, 51 J. MONETARY ECON. 375, 392–96 (2004) (finding that banks that are subject to deposit insurance take greater risks).

148. See Allen N. Berger, Richard J. Herring, & Giorgio Szegö, *The Role of Capital in Financial Institutions*, 19 J. BANKING & FIN. 393, 400, 407 (1995).

149. See Ethan B. Kapstein, *Resolving the Regulator's Dilemma: International Coordination of Banking Regulations*, 43 INT'L ORG. 322, 324 (1989); Jeffrey Atik, *Basel II: A Post-Crisis Post-Mortem*, 19 TRANSNAT'L L. & CONTEMP. PROBS. 731, 737 (2011) (“[A]bsent some harmonizing imperatives, nations would implement levels with regard to local imperatives only, with the result that there would be inconsistent capital requirements, some low and others high, creating competitive distortions and externalization effects when viewed from an international perspective.”). See also van Zandt, *supra* note 101, at 74.

150. See Olivier Jeanne & Jeromin Zettelmeyer, *The Mussa Theorem (and Other Results on IMF-Induced Moral Hazard)* 3 (IMF, Working Paper No. WP/04/192, 2004) (“But what about international investors, which had contributed to the crises through their reckless lending behavior? They were let off the hook with the help of IMF crisis lending. There had to be ‘investor moral hazard.’”).

pendence problem manifests itself in the form of competitive deregulation or loosening of capital requirements. The need to counteract this race-to-the-bottom is often expressed as a desire to enforce a “level playing field,”¹⁵¹ and the various multilateral agreements on capital adequacy seek to do just that.¹⁵²

International capital adequacy agreements present a problem of cooperation rather than coordination and give rise to a strategic environment that can be modeled as a repeated, multilateral prisoner’s dilemma.¹⁵³ Consistent with the prisoner’s dilemma (and accompanying race-to-the-bottom metaphor), it is in each individual state’s interest to allow its domestic financial institutions to take on slightly more risk than the global optimum, but at the same time, each state shirking on capital adequacy leads to a collectively worse outcome.¹⁵⁴ That is to say, a more fragile global financial system than could otherwise be achieved if all parties cooperated. Although parties to a repeated prisoner’s dilemma may be able to maintain a cooperative equilibrium in some contexts, international capital adequacy agreements do not meet all of the conditions necessary for that to be the case.¹⁵⁵ Most notably, capital adequacy rules are

151. See Hal S. Scott, *The Competitive Implications of the Basle Capital Accord*, 39 ST. LOUIS U. L.J. 885, 891 (1995); Atik, *supra* note 149, at 741 (“[T]he specific concern of establishing and maintaining a level playing field among financial institutions competing in global markets might dominate the safety and soundness concerns that primarily motivate national banking regulators. That is, establishing even-handed conditions of competitiveness merely requires that equivalent capital standards be imposed; beyond this, competitiveness concerns fail to generate the target levels of minimum capital.”); ADMATI & HELLWIG, *supra* note 30, at 194–95.

152. See TARULLO, *supra* note 36, at 45–46 (“Basel I was motivated by two interacting concerns—the risk posed to the stability of the global financial system by low capital levels of internationally active banks and the competitive advantages accruing to banks subject to lower capital requirements.”); BASEL II, *supra* note 1, ¶ 4 (articulating the same principles in the official document).

153. The well-known result of the basic prisoner’s dilemma is that the dominant strategy is for both players to defect: for any decision of State A, State B maximizes its payoff by defecting, and vice versa. A simplified two-player, single period prisoner’s dilemma can be depicted as follows:

Column (State B)		Strict Capital Requirements	Loose Capital Requirements
Row (State A)	Strict Capital Requirements	(2, 2)	(0, 3)
	Loose Capital Requirements	(3, 0)	(1, 1)

154. See Kapstein, *supra* note 149, at 324 (arguing that the Basel Accords created a prisoner’s dilemma, which he refers to as a “regulators dilemma”); TARULLO, *supra* note 36, at 53, 200 (noting that “race to the bottom” concerns animated the Basel Committee’s capital adequacy agenda); Giovanni Dell’Ariccia & Robert Marquez, *Competition Among Regulators and Credit Market Integration*, 79 J. FIN. ECON. 401, 411 (2006).

155. See POSNER & SYKES, *supra* note 6, at 27; Telser, *supra* note 97, at 40. Cooperation may be self-enforcing if parties to multi-player games are capable of adopting punishment

extremely complex and leave ample room for discretion in their implementation, which makes compliance difficult to monitor. In addition, even assuming that states' non-compliance can be detected, compliance will not be enforced because of a free riding problem in the punishment phase. When one state allows the capital adequacy of its financial sector to slacken in order to gain a competitive advantage, the reduction in international financial stability is diffuse and systemic. Because there is no single state that bears a disproportionate amount of the harm, none will see a positive expected value in pursuing costly measures to retaliate against the non-cooperative party. With no state in a position to credibly threaten a cost for non-compliance, cooperation will tend to break down. The prediction under this analysis is that states will find it difficult to effectively address the interdependence problem of maintaining financial stability through capital adequacy requirements.

2. Evaluating International Capital Adequacy Agreements

International cooperation on capital adequacy has primarily been pursued through the Basel Committee, an intergovernmental network of banking regulators established in 1974. The Basel Committee quickly issued its Concordat of 1975, which outlined a set of best practices standards to be followed by domestic bank supervisors.¹⁵⁶ It has also subsequently developed three iterations of an agreement that provides quantitative benchmarks for the amount and quality of capital that banks must hold, the first of which was made in 1988 and is known as Basel I.¹⁵⁷ The basic structure of Basel I was to sort asset types by quality and then specify a risk-weighted capital-to-asset ratio that a covered financial institution must hold.¹⁵⁸ Importantly, Basel I did not attempt to measure asset quality

strategies similar to the "grim trigger" strategy or Axelrod's "tit-for-tat" solution in two player games. See ROBERT AXELROD, *The Success of TIT FOR TAT in Computer Tournaments*, in *THE EVOLUTION OF COOPERATION* 27 (1984). Cf. Paul G. Mahoney & Chris William Sanchirico, *Norms, Repeated Games, and the Role of Law*, 91 CAL. L. REV. 1281, 1285 (2003) (offering what they term a "defection from deviation" strategy, which they argue is more conducive to cooperative equilibria than tit-for-tat and may apply to games with more than two players). All of these strategies, however, rest on the ability of parties to monitor each others' compliance, as well as their willingness to incur the cost of imposing sanctions on counterparties once breaches of compliance have been detected.

156. See, e.g., BASEL CONCORDAT, *supra* note 36. See also Eric J. Pan, *Challenge of International Cooperation and Institutional Design in Financial Supervision: Beyond Trans-governmental Networks*, 11 CHI. J. INT'L L. 243, 270 (2011) ("More stringent capital adequacy requirements can be a substitute for additional supervision.").

157. See BASEL I, *supra* note 42; cf. Pan, *supra* 156.

158. Basel I's determinations of which assets were low-risk, a category that included home mortgages and sovereign debt, may sound quaint to the contemporary ear. Sovereign debt was given a risk weight of 0—meaning it was considered risk free—while secured mortgages of residential properties were risk-weighted at 50%. TARULLO, *supra* note 36, at 54–58 tbl.3.2.

within asset types.¹⁵⁹ This meant that under a Basel I assessment, a stated-income subprime mortgage or Greek sovereign bond would be considered as safe as a fully documented 20-20 mortgage or a U.S. treasury. Basel I, along with its later iterations, is an example of soft law, meaning that it is not technically binding international law in the same way that a formal treaty would be.

It is difficult to see how Basel I restrained the risk taking of financial institutions in a meaningful way. After risk-weighting, Basel I required banks to hold “Tier 2” capital at an eight percent level, a number that implied no increase in the capitalization of the banking system because it was the observed average level of capital in place at the time.¹⁶⁰ An immediate problem was that regulated banks could take on more risk while maintaining the required eight percent level, simply by moving up the risk curve within asset types: if all mortgages carry the same risk weight, hold riskier mortgages.¹⁶¹ In addition, compliance with prescribed capital ratios was self-reported by member countries and not verified through any monitoring mechanism. As a result, purported compliance by large portions of the international banking sector was never verified and largely “cosmetic” in nature.¹⁶² One unavoidable data point is Japan’s booming banking industry, which Basel I was arguably most intended to restrain. The collapse of the Japanese financial sector in the early 1990s, just a few years after Basel I was implemented, involved opportunistic accounting practices, blatant misreporting, incorrigibly generous lending, and a cleanup that eventually imposed a cost equal to twenty percent of Japan’s GDP.¹⁶³ In any case, Basel I is not widely touted as a success, and was eventually replaced

159. *Id.*, at 57 (“As can be seen by examining the Basel I risk categories . . . the assignment of assets was based principally on the generic nature of the borrower, rather than the borrower’s specific financial characteristics or credit history.”).

160. Atik, *supra* note 149, at 739. Tier 2 Capital provided the most capacious definition of which assets constituted capital, while Tier 1 Capital consisted only of common shares and retained earnings.

161. See Takeo Hoshi, *Implementation of Basel III in the US Will Bring Back the Regulatory Arbitrage Problems Under Basel I*, VOX, at 2, Dec. 23, 2012 (“Since the risk weights classification in the Basel I regulation was coarse, the same ‘bucket’ included the assets with very different risk levels. This led some banks to shift their portfolios to hold more risky (and hence higher return) assets within the same risk assets category, thereby increasing their risk without increasing regulatory capital.”).

162. Compare Daniel E. Ho, *Compliance and International Soft Law: Why Do Countries Implement the Basle Accord?*, 5 J. INT’L ECON. L. 647, 653 (2002) (attempting to explain the puzzle of widespread adoption of with Basel I), with ANDREW WALTER, GOVERNING FINANCE: EAST ASIA’S ADOPTION OF INTERNATIONAL STANDARDS (2008) (finding that large portions of the Asian banking sector engaged in “mock compliance” with capital adequacy standards).

163. Japan and the other Basel Committee members adopted implementing regulation in 1990, which was supposed to be effectively enforced as of December 31, 1992. See TARULLO, *supra* note 36, at 71–72; Joe Peek & Eric Rosengren, *Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan*, 95 AMER. ECON. REV. 1144, 1165 (2005); Takatoshi Ito & Yuri Nagataki Sasaki, *Impacts of the Basle Capital Standard on Japanese Banks’ Behavior*, 16 J. JAPANESE & INT’L ECON. 372 (2002).

by Basel II. Drafting for Basel II began in 1998 and concluded in 2004, setting the stage for a prolonged implementation process.

An innovation of Basel II was its new “three pillar” structure, which in a certain sense combined the approaches of Basel I and the Concordat: Pillar 1 provided revised quantitative requirements; Pillar 2 outlined supervisory best practices; and Pillar 3 contained disclosure requirements meant to increase market discipline.¹⁶⁴ A premise of Basel II was that the risk-weighting system of Basel I was too rudimentary for modern finance, and that the most sophisticated measurement of risk could be obtained by using banks’ own internal risk-metrics, through a so-called IRB (internal ratings-based) approach. Basel II therefore used banks’ internal value-at-risk metrics (known as VaR) as a starting point, to be modified by various departures seen as relevant for regulatory capital. At the time, Basel II was considered an impressively “long and detailed regulatory product” and the crowning achievement of the NIFA and transgovernmental networks.¹⁶⁵

Basel II did not have defects as glaring as those of Basel I, but nonetheless contained features that enabled states to nominally comply with its provisions while still encouraging their financial sectors to engage in competitive deleveraging. Most generally, the complexity and self-reporting nature of the IRB metrics facilitated regulatory arbitrage, and could easily be gamed by large banks with byzantine internal structures and access to off-balance sheet investment vehicles. One specific avenue for regulatory arbitrage was the decision to embed credit ratings into IRB calculations, so that banks holding AAA assets were scored as safer according to Basel II benchmarks. This created a buy-side demand—which the ratings agencies became willing to meet—for AAA securitized assets that allowed banks to take on risks that appeared riskless for regulatory purposes.¹⁶⁶ Another significant flaw of Basel II was its pro-cyclicality. Balance sheets look better at the height of an asset bubble than when it bursts, which means that holding capital requirements constant over the business cycle (as Basel II does) allows for over-lending during the boom and a credit

164. See Abel Elizalde, *From Basel I to Basel II: An Analysis of the Three Pillars*, (Center for Monetary & Fin. Studies [CEMFI], Working Paper No. 0704, 2007).

165. See *Informal Procedure*, *supra* note 19, at 547, 572–80 (2005) (“the contrast between the first Basel Accord on capital adequacy . . . which was concluded in secret by the Basel Committee in 1988 and released in a twelve-page document, and . . . [Basel II], which was put through most of a decade’s worth of comment by hundreds of interested individuals and institutions and resulted in a correspondingly long and detailed regulatory product.”); Pierre-Hugues Verdier, Book Review, 104 *AM. J. INT’L L.* 338, 341 (2010) (reviewing DANIEL K. TARULLO, *BANKING ON BASEL: THE FUTURE OF INTERNATIONAL FINANCIAL REGULATION* (2008)) (referring to the widespread perception that “[t]he Basel capital standards may be the crown jewel of network governance”); Michael S. Barr & Geoffrey P. Miller, *Global Administrative Law: The View from Basel*, 17 *EUR. J. INT’L L.* 15, 17 (2006).

166. See Charles W. Calomiris, *The Debasement of Ratings: What’s Wrong and How We Can Fix It*, 3 *ECONOMICS21.ORG*, Oct. 26, 2009, <http://www.economics21.org/content/2the-debasement-ratings-whats-wrong-and-how-we-can-fix-it>; Atik, *supra* note 149, at 750–51. Interestingly, the credit rating agencies were early opponents of the IRB approach, arguing that it would debase their standards and lead to “ratings shopping.” TARULLO, *supra* note 36, at 98.

contraction during the bust.¹⁶⁷ In addition, Basel II's definition of the highest-quality, Tier 1 capital was slowly loosened over time to cover assets, such as deferred tax assets, that did not provide a meaningful buffer against downside risks.¹⁶⁸ Finally, like Basel I, compliance with Basel II was self-reported and the agreement did not provide for any enforcement mechanism should a party fall short of its requirements.

As with Basel I, a compelling case can be made that Basel II had no positive effect on the capitalization of the banking sector or the stability of the global financial system.¹⁶⁹ As an initial matter, when the 2008 Crisis arrived, Basel II requirements did not cover significant portions of the global financial system: U.S. regulators continuously delayed applying the rules to traditional deposit-taking banks, and from the outset the requirements were never designed to include entities in the shadow banking system or to insurers selling credit default swaps.¹⁷⁰ To the extent that Basel II was imposed, regulatory arbitrage meant that even the most risk-seeking and fragile institutions—such as Northern Rock, Lehman Brothers and Bear Stearns—were able to meet its rigors without much trouble.¹⁷¹ And at the height of the crisis in fall of 2008, market actors ignored regulatory capital under the IRB metrics and Basel requirements altogether, retreating to a simple leverage ratio to evaluate firms' solvency. Ultimately, it

167. See George G. Pennacchi, *Risk-Based Capital Standards, Deposit Insurance, and Procyclicality*, 14 J. FIN. INTERMEDIATION 432, 437 (2005); Anil K. Kashyap & Jeremy C. Stein, *Cyclical Implications of the Basel II Capital Standards*, 28 ECON. PERSP. 18 (2004); Rafael Repullo & Javier Suarez, *The Procyclical Effects of Basel II*, (CEMFI, Working Paper No. 0809, 2008).

168. Deferred tax assets carry over deductible losses from previous years and therefore are only available in years when banks turn a profit. Some commentators argue that the watering down of what constitutes "capital" reflects that the Basel II process was subject to capture by the financial industry. See, e.g., Ranjit Lall, *Why Basel II Failed and Why Any Basel III Is Doomed* (Global Econ. Governance, Working Paper No. 2009/52, 2009) (making this point).

169. Some go so far as to argue that Basel II allowed banks to *decrease* their capital. See, e.g., ADMATI & HELLWIG, *supra* note 30, at 184–85; HAL SCOTT, INTERNATIONAL FINANCE: TRANSACTIONS, POLICY AND REGULATION, 437–38, 441 (Robert C. Clark et al. eds., 2010); Verdier, *supra* note 9, at 1452 ("Unsurprisingly, Basel II was strongly supported by the largest international banks, in the expectation that it would allow them to reduce their capital levels."); TARULLO, *supra* note 36, at 101–03.

170. These gaps give an irony to the Basel Committee sub-group responsible for overseeing implementation of Basel II, referred to as "AIG" (the Accord Implementation Group).

171. See *supra* note 2 (citing to government reports representing that these firms complied with Basel II at the time of their failure). See also Mishkin, *supra* note 77, at 5 ("[I]t was an open secret in the financial markets and among government officials that if any of the major investment banks would run into trouble, Lehman would be at the top of the list. Lehman was among the most leveraged of the major investment banks; it was unwilling to raise capital; it had a poor reputation for risk management; and it had a high exposure to losses on subprime mortgages."). The FDIC noted that as of summer of 2006, "more than 99 percent of all insured institutions met or exceeded the requirements of the highest regulatory capital standards." DIV. INS. & RES., FED. DEPOSIT INS. COMM'N, FDIC QUARTERLY BANKING PROFILE: SECOND QUARTER 2006, 3 (2006).

may suffice to observe that the Basel II-era coincided with a crisis in which “over-leveraged” became a household term and that, “[t]he capital required by Basel II (and the prior Basel Accord) simply proved inadequate to save many important banks (and large swaths of the international banking system) from destruction during the [2008] Crisis.”¹⁷²

In the wake of the 2008 Crisis, governments did not retreat from the capital adequacy aspirations of the NIFA and Basel II. Instead, at the behest of the G-20, the Basel Committee formulated a next generation of capital adequacy rules known as Basel III, which the G-20 approved in late 2010.¹⁷³ Basel III seeks to increase requisite capital ratios compared to Basel II, provide more stringent risk-weighting criteria, and address liquidity management in more depth.¹⁷⁴ In response to concerns over procyclicality, Basel III introduces a “capital conservation buffer.”¹⁷⁵ To address the critique that Basel II was overly complex, Basel III introduces a minimum non-risk-weighted leverage ratio.¹⁷⁶ In light of these more rigorous targets, Basel III has an extensive implementation period pursuant to which banks are not required to comply with the strictest requirements until 2018 or 2019.¹⁷⁷

If Basel III is complied with as planned, it could result in a modestly better capitalized global banking system.¹⁷⁸ However, Basel III has built-in loopholes that are symptomatic of the underlying prisoner’s dilemma dynamic that states face when agreeing to international capital requirements.¹⁷⁹ The most ominous sign is Basel III’s near decade-long phase-

172. Atik, *supra* note 149, at 733.

173. The Basel Committee announced Basel III on September 12, 2010; it was approved at the G-20 Seoul summit on November 12, 2010, and officially published on December 16, 2010. *See* BASEL III, *supra* note 87.

174. *See* Bernd P. Delahaye, *Basel III: Capital Adequacy and Liquidity after the Financial Crisis 7–9* (Apr. 22, 2011) (unpublished manuscript) (on file with Harvard Law School).

175. *See* BASEL III, *supra* note 87, at 54.

176. *Id.* at 61.

177. *Id.* at annex 4.

178. *See* BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT’L SETTLEMENTS, RESULTS OF THE COMPREHENSIVE QUANTITATIVE IMPACT STUDY 10 tbls.3 (2010) (estimating that banks would need to raise an additional \$602 billion in common equity to hit the 2019 Tier 1 capital targets), <http://www.bis.org/publ/bcbs186.htm>; *See also* Eric A. Posner & Alan O. Sykes, *International Law and the Limits of Macroeconomic Cooperation* 13 (Public L. & Legal Theory, Working Paper No. 396, 2012).

179. U.S. lawmakers are not unaware of the strategic implications involved. *See* WALTER W. EUBANKS, CONG. RESEARCH SERV., R41467, THE STATUS OF THE BASEL III CAPITAL ADEQUACY ACCORD 1 (2010) (“The new Basel Capital Adequacy Accord (Basel III) is of concern to Congress mainly because it could put U.S. financial institutions at a competitive disadvantage in world financial markets . . . Higher capital requirements constrain bank lending and profitability.”). A day after Basel Committee members approved the quantitative capital requirements of Basel III, Senate Banking Committee Chairman Christopher Dodd issued a statement warning of the potential for international regulatory arbitrage in implementing Basel III. *Id.*

in.¹⁸⁰ As with the implementation of Basel II, the lengthy phase-in will give the financial industry time to lobby for weaker restrictions, with governments eager to acquiesce after their economies have exited a crisis atmosphere.¹⁸¹ In addition, Basel III's attempt to counteract pro-cyclicality is not particularly credible: it provides bank supervisors the *option* of increasing the capital buffers of individual banks on a *confidential* basis, when regulators divine that the economy is entering a bubble. Basel III's scope is also primarily limited to deposit taking banks, and it does not attempt to cover the sprawling shadow banking system—including money market mutual funds, asset-backed commercial paper, and repo markets—that was at the heart of the 2008 meltdown. Finally and most basically, Basel III maintains Basel II's sprawling complexity, which is not substantially restrained by a meager three percent leverage requirement, and was fertile ground for regulatory arbitrage the first time around.¹⁸²

Basel III embodies the hope that if policymakers can just get the equations right, banks' risk-taking can be restrained and a level international playing field preserved. But international capital adequacy agreements have not been an effective means for providing the global public good of financial stability, and the current regime exhibits flaws shared by past attempts. This result is not surprising in light of an analysis of capital adequacy as a multilateral prisoner's dilemma, in which states receive the highest payoff from adopting a non-cooperative strategy of lax implementation and competitive deleveraging. The experience with cooperation on capital adequacy is thus less positive than is the case of harmonization of standards, and suggests that the international financial architecture will continue to have difficulty mitigating the instability that accompanies global financial integration.

C. Crisis Management

How the international financial architecture performs in managing crises after they appear presents complicated strategic problems and is a significant part of minimizing the losses that arise from global finance's instability. Getting crisis management policies right is especially important because forward-looking market actors will take risks and conduct business in light of what they perceive to be the endgame regulatory policies in

180. See generally Narissa Lyngen, Note, *Basel III: Dynamics of State Implementation*, 53 HARV. INT'L L.J. 519, 529 (2012) (“[T]he regulations provide for gradual implementation over the course of six years, starting in 2013.”).

181. Impressively, this process is already well underway, as reflected in the abandonment of Basel III's original liquidity management rules in January of 2013. See Brooke Masters, *Banks Win More Flexible Rules*, FIN. TIMES, Jan. 6, 2013 (“the final rule approved by the supervisors of the Basel Committee on Banking Supervision is significantly more flexible than the draft version put forward more than two years ago.”).

182. See ADMATI & HELLWIG, *supra* note 30, at 176–77 (“Basel III fixed th[e] minimum leverage level at 3 percent. If this number looks outrageously low, it is because this number is outrageously low.”).

the event that those risks materialize and large losses occur.¹⁸³ Part C.1 examines this problem with respect to firms, as it is manifested in the need for a cross-border resolution authority; Part C.2 looks at management of crises involving government finances, and the ability for states to provide a workable international lender of last resort.

The analysis below suggests that the international financial architecture, as constituted in the NIFA and augmented post-2008, is not in a position to successfully navigate the most substantial interdependence problems raised by crisis management. However, as Section III.A below explains, certain incremental solutions exist—such as scaling cooperation to the regional level and focusing on coordination problems within cooperation games—that are likely to be political feasible and make crisis management more efficient.

1. Cross-Border Bank Resolutions

a. Defining the Interdependence Problem

One form of crisis management takes place when one or more financial institutions approach cash flow insolvency (i.e. are “distressed”) and governments face a spectrum of choices concerning its resolution.¹⁸⁴ The interventionist extreme is to provide the distressed institution a direct injection of additional capital; in other words, a bailout. At the other extreme is breaking up or liquidating the institution in a process analogous to Chapter 7 bankruptcy. A middle ground approach is for regulators to broker and subsidize a merger of the failed financial institution into a willing buyer.¹⁸⁵

In the domestic context, governments struggle to develop optimal resolution rules, for reasons that interact with and foreshadow the international problem. In good economic times before a crisis hits, the best policy is to announce relatively stringent conditions under which a bank will be recapitalized. This reduces moral hazard and provides market discipline to the extent that bank creditors expect to suffer losses in the event of institutional failure and monitor banks’ risk-taking accordingly. During a period of crisis however, when gains from market discipline are less palpable,

183. See Stijn Claessens, How to Prevent and Better Handle the Failures of Global Systemically Important Financial Institutions, Presentation at the Financial Risk and Regulation Conference at Columbia University 1 (Mar. 27, 2013) (paper on file with Columbia University) (“Logic suggests starting from the endgame, [which] . . . strongly affects supervisory incentives and market behavior long before difficulties arise.”).

184. Use of the term “resolution” varies; here it’s meant in its broadest sense to include the entire menu of regulatory action available. See, e.g., Stijn Claessens, Conference: Financial Risk and Regulation: Unfinished Business, Columbia University, March 27, 2012 (“resolution [is] the process of how a weak financial institution is (in part) liquidated, closed, broken up, sold, or recapitalized.”).

185. The middle approach can be understood as a form of quasi-recapitalization because the government often ensures that the buyer makes the deal on favorable terms. See Herring, *supra* note 125, at 30. For example, the Federal Reserve took on certain “toxic” assets from Bear Stearns’s balance sheet as a condition of its acquisition by J.P. Morgan Chase. *Id.* at 35.

there is immense pressure to avoid the uncertainty and market disruptions caused by emergency liquidation of a firm that is perceived to be Too-Big-to-Fail (TBTF) and instead provide a direct injection of taxpayer-financed capital. In other words, there is always a temptation to declare an institution TBTF and provide a bailout at the time of its failure.¹⁸⁶ The lure of TBTF is an example of a general policy problem known as dynamic inconsistency, in which policies that are preferred *ex ante* are dis-preferred *ex post*.¹⁸⁷ Governments can overcome dynamic inconsistency problems if, like Ulysses, they can credibly commit to tying themselves to the mast of optimal *ex ante* policies. But reliable commitment devices are scarce.¹⁸⁸

At the international level, the impending failure of a Global-Systemically Important Financial Institution (G-SIFI)¹⁸⁹ presents somewhat distinct interdependence problems that appear at both the decision over whether to provide a bailout and, if not, how to proceed with resolution. The decision to recapitalize a G-SIFI creates an interdependence problem when multiple states benefit from the bailout but must negotiate over sharing costs after the fact. States will have an incentive to understate their share of the problem *ex post*, and because such free riding can be anticipated *ex ante*, there will be an under-provision of the public good of recapitalization.¹⁹⁰ However, the significance of the recapitalization question as an interdependence problem is indeterminate, because dynamic inconsistency creates a countervailing incentive at the domestic

186. History suggests that breaking up banks is not a simple solution to TBTF: thousands of Depression-era thrifts and 1980s S&Ls, each of which were very small, collectively became “too numerous to fail.” Cf. Viral Acharya & Tanju Yorulmazer, *Too Many to Fail—An Analysis of Time-Inconsistency in Bank Closure Policies*, 16 J. FIN. INTERMEDIATION 1 (2007).

187. Dynamic inconsistency can be understood as involving a single agent in a cooperation game with itself across time, where the goal is to achieve cooperation between past and future selves. Technically, dynamic inconsistency involves non-cooperation as a sub-game perfect equilibrium of this extensive form game. See Daniel B. Klein, *The Microfoundations of Rules vs. Discretion*, 1 CONST. POL. ECON., no. 3 1990, at 1; Finn. E. Kydland & Edward C. Prescott, *Rules Rather Than Discretion: The Inconsistency of Optimal Plans*, J. POL. ECON. 473, 475 (1977).

188. See SCHELLING, *supra* note 96, at 27–28.

189. See Stijn Claessens, Richard J. Herring, & Dirk Schoenmaker, *A Safer World Financial System: Improving the Resolution of Systemic Institutions*, VOX, July 8, 2010, at 1 (“On average, the thirty largest [G-SIFIs] have 53% of their assets abroad . . . have close to 1,000 subsidiaries, of which 68% operate abroad and 12% in offshore financial centers.”).

190. See Xavier Freixas, *Crisis Management in Europe*, in FINANCIAL SUPERVISION IN EUROPE 102 (Jeroen J.M. Kremers et al. eds., 2003) (providing a formal model illustrating recapitalization in Europe); Charles Goodhart & Dirk Schoenmaker, *Fiscal Burden Sharing in Cross-Border Banking Crises*, 5 INT’L J. CENT. BANKING 141 (2009); Ata Can Bertay, Asli Demirgüç-Kunt, & Harry Huizinga, *Is the Financial Safety Net a Barrier to Cross-Border Banking?*, 3 (World Bank Policy Research, Working Paper No. 5947, 2012) (“Recapitalizing a distressed international bank is taken to be costly relative to simply liquidating the bank. The benefits of recapitalizing the bank, however, are dispersed over the countries where the bank operates. For the bank to be recapitalized, the concerned countries have to collectively share the cost. Contributing to this cost is an international public good.”).

level to bailout institutions more often than is optimal. At least in theory, the balance of these forces is unclear¹⁹¹

A more clear-cut interdependence problem appears once a state decides to dissolve rather than bailout a bank. Given the decision to liquidate a financial institution, states face the option of pursuing either a territorial or universal approach. The territorial approach, sometimes referred to as ring-fencing, means that a government treats a G-SIFI's assets within its jurisdiction as the relevant fund against which domestic creditors can make claims with priority over foreign creditors.¹⁹² A universal approach implies coordination among jurisdictions in which the institution did business, so that liquidation proceeds against a common, cross-border pool of the institution's assets. The territorial approach is less globally efficient than the universal, because it creates an arbitrary risk to creditors based on where an asset is located.¹⁹³ The interdependence problem thus concerns whether, during the resolution process, states can successfully cooperate to treat domestic and foreign assets in their jurisdiction in a non-discriminatory manner that is globally efficient.

Applying a universal approach to cross-border resolution entails a cooperation problem that will be difficult for states to overcome. As with capital adequacy agreements, states face a multilateral prisoner's dilemma in which the dominant strategy is to defect from cooperative behavior that would maximize joint gains if adhered to by all: each state is better off ring-fencing domestic assets of a failed G-SIFI that are located in its jurisdiction, regardless of whether or not other states do the same. The preconditions for overcoming a prisoner's dilemma are also not met in this context, specifically the requirement that there be indefinite, repeated play. Global financial crises are not routine enough events for states to regularly engage in cross-border resolution and build trust through repeated cooperation and credible threats of reciprocal punishment in sub-

191. Compare Xavier Freixas, Systemic Risk and Prudential Regulation in the Global Economy, Speech at the Federal Reserve Bank of Chicago's 10th Annual International Banking and Finance Conference on Globalization and Systemic Risk 145, 156-57 (Sept. 27, 2007), in *GLOBALIZATION AND SYSTEMIC RISK* (Douglas Darrell Evanhoff ed., 2009) (arguing that governments will bailout G-SIFIs in their jurisdictions too often) with Edward J. Kane, *Incentive Conflict in Central-Bank Responses to Sectorial Turmoil in Financial Hub Countries* 6-7 (Nat'l Bureau Econ. Research, Working Paper No. 13593, 2007) (governments are under-incentivized to bailout G-SIFIs in their jurisdiction). As one example of the former point, the United States's unilateral bailout of AIG—which insured large quantities of RMBS and CDOs held by foreign institutions—arguably represents the provision of a global public good, and illustrates a case of domestic dynamic inconsistency trumping the difficulties of international collective action. William K. Sjostrom, Jr., *The AIG Bailout*, 66 *WASH. & LEE L. REV.* 943, 979 (2009).

192. See Kathleen A. Scott, *Cross-Border Resolution and International Banks*, 242 *N.Y. LAW. J.* 97, 97 (2009).

193. See Jonathan Fiechter et al., *Subsidiaries or Branches: Does One Size Fit All?* 24 (IMF, Staff Discussion Note, No. SDN/11/04, 2011). The existence of such a credit risk is reflected in the fact that a multinational bank's cost of funds raised through a foreign subsidiary is measurably higher than the cost of funds for a purely domestic bank. See Bertay et al., *supra* note 190, at 2.

sequent periods. As Bank of England governor Mervyn King remarked regarding the endgame mentality of governments and regulators during the 2008: “global banks are global in life but national in death.”¹⁹⁴ For this reason, the interdependence problem of cross-border resolution should be expected to remain substantially unsolved.

b. Evaluating Cooperation on a Cross-Border Bank Resolutions

Unlike the case of capital adequacy, no international agreement providing for the coordination of cross-border resolutions has been developed.¹⁹⁵ The only vaguely relevant agreements of the NIFA were the IOSCO Memoranda of Understanding, which call for information-sharing between regulatory during the normal course of bank supervision.¹⁹⁶ The lack of substantial progress on cross-border resolution was noted as a gap in the NIFA, but in retrospect seems to have been underappreciated and lost amid the proliferation of principles for prudential and supervisory best practices.

Consistent with the relative institutional void, the 2008 Crisis was characterized by little cross-border coordination of bank resolutions.¹⁹⁷ A leading example was the resolution of Lehman Brothers Holdings Inc. (LBHI)—the Lehman parent company that reportedly consisted of 2,985 legal entities in 50 countries—which was forced into liquidation bankruptcy on September 15, 2008, after last minute attempts at a government-brokered merger failed. While U.S. authorities let the parent company fail, the demise of its U.S. broker-dealer subsidiary, Lehman Brothers Inc., was managed much more generously. Lehman Brothers Inc. received liquidity support from the N.Y. Fed to keep its prime brokerage activities operational for a week while its sale to Barclays Capital was being negotiated.¹⁹⁸ The resolution of parent LBHI was less orderly. The holding company’s entrance into bankruptcy left foreign subsidiaries illiquid, accounting of where assets were located relative to where trades were booked became indeterminate, and even basic IT and data repository systems were so fragmented globally that many foreign subsidiaries became physically inoper-

194. Adair Turner, Chairman, Fin. Serv. Auth., Speech at the Turner Review Press Conference (Mar. 18, 2009) (quoting Mervyn King).

195. See Herring, *supra* note 125, at 38–42 (summarizing history of cross-border resolution pre-2008). The Basel Committee tentatively raised the idea during the early decades of financial integration but without concrete results. See Verdier, *supra* note 9, at 1455 (noting that the Basel Committee could not reach an agreement on the issue of international lending).

196. See IOSCO MMOU, *supra* 58 and accompanying text.

197. See BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT’L SETTLEMENTS, REPORT AND RECOMMENDATIONS OF THE CROSS-BORDER BANK RESOLUTION GROUP [hereinafter CBBRG REPORT], at 14 (2010) (“Coordination among [international resolution] proceedings has been limited, at best.”).

198. Herring, *supra* note 125, at 53. See also Kenneth Ayotte & David A. Skeel, Jr., *Bankruptcy or Bailouts?*, 35 J. CORP. L. 469, 481 (2010) (arguing that the handling of the subsidiary Lehman Brothers Inc. is an example of a relatively efficient and successful resolution).

able. As a result, “significant value was destroyed by the lack of cooperation in the unwinding of the Lehman Group which may continue for a decade.”¹⁹⁹

Lack of cross-border cooperation on bank resolution was not limited to the United States.²⁰⁰ When Iceland’s financial sector collapsed in fall of 2008, the U.K. took the aggressive step of using its anti-terrorism laws to freeze all local assets of Landsbanki, Iceland’s largest bank.²⁰¹ In response, Iceland resorted to unilateralism as well, passing legislation that nationalized Landsbanki (along with the nation’s second largest bank, Kaupthing) without providing any recourse to foreign depositors. The two countries’ lack of cooperation cannot be explained as the inevitable result of incompatible financial regulatory frameworks. As a member of the European Economic Union, Iceland was subject to the European Financial Conglomerates Directive, a regulatory umbrella that also covered the United Kingdom.

Another dysfunctional case involved the resolution of Fortis.²⁰² There, the governments of Belgium, Luxembourg, and the Netherlands fueled rather than calmed market turmoil when each provided independent capital injections to Fortis subsidiaries within their jurisdictions rather than to the multinational parent, Fortis Group. After the respective recapitalizations, local interests continued to create frictions: the Netherlands eventually nationalized Fortis’s Dutch entities, while the Belgian/Luxembourg entities were sold off to BNP Paribas only after lengthy battles in Belgian courts. The one mixed but arguably positive counterexample was the resolution of Dexia, where Belgium, France, and Luxembourg all coordinated to provide guarantees based on pro-rata ownership of the bank among the three countries.²⁰³ Taken together, these examples reflect a track record during the 2008 Crisis that is characterized by the predominance of a territorial, uncoordinated approach.

After 2008, the need for greater cooperation on cross-border resolution was widely recognized as an important part of global financial stability, but concrete progress towards a universal approach has been limited. Specifically, the Basel Committee’s Cross-Border Bank Resolution Group published a set of recommendations and the Financial Stability Board drafted its Key Attributes of Effective Resolution Regimes, both of which

199. Herring, *supra* note 125, at 56.

200. See CBBRG REPORT, *supra* note 196, at 10–14; Herring, *supra* note 125, at 38–57.

201. Herring, *supra* note 125, at 47–48.

202. Fortis was a financial conglomerate incorporated Belgium, that also had a large presence in the Netherlands and Luxembourg. It began to fail around September 28, 2008.

203. However, even this agreement was subject to considerable squabbling and renegotiation after the fact. In 2011, Dexia received a second bailout, had a branch nationalized by the Belgian government (Belfius), and did not have its resolution plan approved by the EU until four years after the fact. See Laurence Norman, *EU Approves Dexia’s Plan*, WALL ST. J., Dec. 28, 2012 (“Approval for the restructuring plan ends a year of wrangling over Dexia’s future, which had seen the Commission raise serious doubts about the original French and Belgian plans for the firm. Paris and Brussels have also frequently been at odds over how to divvy up the costs of the various government intervention.”).

were endorsed by the G20 heads-of-state.²⁰⁴ Although these documents recommend the idea of a universal approach, they also provide a range of other suggestions in recognition of the fact that states remain unwilling to agree on a truly international resolution mechanism at this time.²⁰⁵ Even the proposed EU “banking union,” upon inspection, does not provide for a common resolution mechanism, and instead only includes common supervisory procedures that cover a fraction of Europe’s banks.²⁰⁶ Thus, an international agreement embracing the universal approach to resolution does not appear to be politically feasible at present. Through backwards induction, states perceive that at the moment of crisis compliance with an agreement will break down, and therefore are hesitant to make binding commitments beforehand.

What the Basel Committee and FSB resolution reports *do* contain are the NIFA-era staple of abstractly stated best practices and unenforceable exhortations for states to work in a cooperative and non-discriminatory manner when engaging in resolution.²⁰⁷ There is reason to doubt the efficacy of this hortatory approach in light of the 2008 experience, which did not lack similar documents encouraging cooperation, and where, “[i]n no case [Lehman, Fortis, Dexia, Iceland], despite the numerous Memoranda of Understanding pledging the sharing of information, did the primary supervisor share information in advance of the collapse with their colleagues in other countries.”²⁰⁸ When the next crisis hits, it is likely that states will face the same strategic incentives as in 2008 and may once again not feel compelled by vaguely worded reports to refrain from pursuing a territorial approach to ring-fencing the assets of failed banks in their jurisdictions.²⁰⁹

In summary, attempts to coordinate the resolution of cross-border financial institutions were not a prominent part of the NIFA agenda, but are now considered an important piece of the regulatory response to the 2008

204. CBBRG REPORT, *supra* note 197, ¶ 1. See BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT’L SETTLEMENTS, RESOLUTION POLICIES AND FRAMEWORKS—PROGRESS SO FAR (2011). The IMF also made parallel proposals. See SEAN HAGAN & JOSÉ VINALS, RESOLUTION OF CROSS-BORDER BANKS—A PROPOSED FRAMEWORK FOR ENHANCED COORDINATION (2010).

205. See CBBRG REPORT, *supra* note 197, at 16–22.

206. See Wolfgang Münchau, *Politics Undermines Hope of Banking Union*, FIN. TIMES (Dec. 16, 2012) (“If you study the details of [the proposed banking union], the substance evaporates.”); see also Patrick Jenkins & Alex Barker, *Cyprus levy Plan ‘Bleak Day for Banking Union’*, FIN. TIMES (Mar. 18, 2013) (speculating that an emergency tax on bank deposits in Cyprus was a serious setback for progress on an E.U. banking union).

207. See, e.g., CBBRG REPORT, *supra* note 197, at 36 (“Recommendation 7: . . . Key home and host authorities should agree, consistent with national law and policy, on arrangements that ensure the timely production and sharing of the needed information, both for purposes of contingency planning during normal times and for crisis management and resolution during times of stress.”).

208. Herring, *supra* note 125, at 57.

209. See CBBRG REPORT, *supra* note 197, ¶ 102 (“[G]iven recent experience there are reasonable concerns that MoUs will not be followed in times of crisis as national authorities are accountable to national governing bodies with respect to how they take local interests into account.”).

Crisis. A basic game theoretic analysis indicates that resolving G-SIFIs in a manner consistent with universal resolution principles presents a problem of cooperation that will be difficult for states to resolve. The 2008 experience, in which states rushed to ring-fence local assets, is consistent with the rational choice model and does not provide a promising precedent. Recent efforts to agree on a binding commitment to universal resolution have not met with much success. Although less ambitious than a universal resolution mechanism, the following Section III.A will argue that international harmonization of living wills for G-SIFIs presents a more tractable reform and may be a useful tool for making cross-border resolutions more efficient going forward.

2. An International Lender of Last Resort

a. Defining the Interdependence Problem

As with private financial institutions, states may be subject to runs when investors lose confidence in their ability to maintain a currency peg or repay sovereign debt. There is therefore a theoretical case for having an “international lender of last resort” (I-LLR) entity that functions similar to a domestic central bank and provides emergency lending to states that are experiencing financial crises. The destabilizing effect of the 2008 Crisis on the Eurozone has shown that developed as well as developing economies may fall into crisis and require access to emergency loans, making the role of an I-LLR a central regulatory question facing the current international financial architecture. This Section identifies the underlying interdependence problems that an I-LLR mechanism raises, and evaluates the success of the IMF in addressing them. It concludes that strategic and information constraints tend to make I-LLR lending inefficient, but that these problems may be mitigated by scaling the LLR function to the regional level.

A lender of last resort (LLR) is any institution, but usually a central bank, that can provide emergency lending when panic sets in and financial markets become disrupted so that the ordinary means of accessing credit have disappeared.²¹⁰ At the domestic level, the standard theoretical justification for an LLR turns on the idea that bank runs are multiple equilibria events: a run may develop in which the expectation that some depositors will panic and withdraw funds makes it rational for every depositor to do so, despite a bank’s being fundamentally sound. A lender that can backstop the banking system will move it from the panicked (bad) equilibrium to the no-run (good) equilibrium.²¹¹ Nineteenth century Brit-

210. See KINDLEBERGER & ALIBER, *supra* note 34, at 110 (providing a definition of financial panics); *id.* at 133–35 (noting that J.P. Morgan playing the role of LLR in 1907, rather than a central bank).

211. See Douglas W. Diamond & Philip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity*, 91 J. POL. ECON. 401 (1983) (providing the seminal mathematical exposition of this model). A role for a LLR as a backstop for bank runs does not necessarily depend on a model that assumes “panicked” investors are irrational. See Jean-Charles Rochet & Xavier Vives, *Coordination Failures and the Lender of Last Resort: Was Bagehot Right After All?*, 2

ish financiers and theorists Henry Thornton and Walter Bagehot laid out principles to guide LLR lending, which continue to frame the debate today: a LLR should (1) lend on any collateral that is marketable under normal economic conditions; (2) at a penalty rate; and (3) these two preceding rules should be applied mechanically and announced beforehand.²¹² The Bagehot principles and modern variants are meant to have the cumulative effect of allowing merely illiquid banks to gain access to emergency credit while forcing insolvent banks to fail.²¹³

A LLR function is also theoretically justifiable at the international level.²¹⁴ As with individual banks, a state can be subject to runs when investors lose confidence in the state's ability to maintain a currency peg or repay sovereign debt. Therefore, it may be possible for an international lender of last resort (I-LLR) to provide emergency lending to backstop temporarily illiquid states facing currency or debt crises and shift international investors' expectations and behavior to the good, no-run equilibrium.

In practice, when states attempt to provide an I-LLR function, cooperation problems and information constraints abound. Specifically, they appear in three forms: (1) the difficulty of mitigating moral hazard for direct (states) or indirect (international investors) recipients of an I-LLR's loans; (2) incomplete information in determining whether and when emergency loans should be extended; and (3) free riding on contributions to fund the I-LLR's pool of available loans. This Section will focus on the first two points, as the latter free-riding issue raises fairly generic problems of collective action similar to those presented by providing a cross-border bailout fund for bank resolutions.²¹⁵

J. EUR. ECON. ASS'N 1116, 1116 (2004) (providing a model in which investors are rational Bayesians with incomplete information and run based only on firm fundamentals).

212. See WALTER BAGEHOT, *LOMBARD STREET: A DESCRIPTION OF THE MONEY MARKET* (1873); HENRY THORNTON, *AN ENQUIRY INTO THE NATURE AND EFFECTS OF THE PAPER CREDIT OF GREAT BRITAIN* (1802); Thomas M. Humphrey, *The Classical Concept of the Lender of Last Resort*, 61 FED. RES. BANK OF RICHMOND ECON. REV. 2 (1975) (summarizing the original rules as articulated by Thornton and Bagehot). *But see* Marvin Goodfriend & Robert G. King, *Financial Deregulation, Monetary Policy, and Central Banking*, 74 FED. RES. BANK RICHMOND ECON. REV. 3 (1988) (providing an influential argument that the LLR function can be folded into monetary policy, under an assumption of perfectly efficient interbank lending markets). The 2008 crisis appears to contradict Goodfriend & King's controlling assumption, as reflecting by TED-spreads for interbank lending. See Mishkin, *supra* note 77, at 51, 51 fig. 1 and accompanying text.

213. The distinction is that illiquid banks are essentially sound and would have access to funding but-for temporary market panic and disruption, while insolvent banks would have liabilities in excess of assets even during normal economic times. Stanley Fischer, *On the Need for an International Lender of Last Resort*, 13 J. ECON. PERSP. 85, 87 (1999); Allan H. Meltzer, *What's Wrong with the IMF? What Would Be Better?* 22–23 (Tepper Sch. of Bus., Working Paper No. 8, 1998) [hereinafter *Meltzer Report*].

214. See Guillermo Calvo, *Lender of Last Resort: Put It on the Agenda!*, VOX, March 23, 2009; Fredric S. Mishkin, *Lessons from the Asian Crisis*, 18 J. INT'L MONEY & FIN. 709, 716–720 (1999); Fisher, *supra* note 212, at 100–02.

215. An I-LLR supplies a global public good, because it can potentially reduce systemic risk in global markets that are prone to destabilizing runs on currencies or sovereign debt. As

As is the case for a domestic LLR, an I-LLR provides a form of insurance against severe market downturns that leads to moral hazard: investors will pour money into countries that adopt riskier regulatory or economic policies, with both the investors and potential borrower country knowing that some of the downside may be borne by an I-LLR.²¹⁶ The domestic regulatory response to moral hazard is to limit banks' ability to take excessive risks *ex ante* by imposing capital requirements and authorizing supervisors to access banks' confidential financial information and take "prompt corrective action" to curb lending practices that are perceived as overly risky.²¹⁷ The moral hazard problem is more acute at the international level, however, where the equivalent regulatory tools are lacking. An I-LLR lacks the in-depth access to states' financial information relative to what domestic supervisors that monitor banks' safety and soundness enjoy. In addition, an I-LLR lacks the political authority to preemptively order potential borrowers—who are, after all, sovereign states—to pursue less risky macroeconomic policies. In practice, an I-LLR can attempt to impose regulatory reforms only *after* a crisis has developed, by conditioning loans on the borrower state's adoption of prudent policy going forward.²¹⁸ Even then, ensuring meaningful compliance with loan conditions runs into the same monitoring and enforcement difficulties that make preemptive supervision problematic in the first place.

While moral hazard kicks in as soon as there is an expectation that emergency lending may be available, a second problem of incomplete information appears once a crisis develops and an I-LLR is faced with a decision over whether to intervene and when.²¹⁹ For an I-LLR to intervene in an efficient manner, it must determine whether the potential bor-

a consequence of the systemic, non-excludable benefits that an I-LLR provides, each state will have an incentive to free ride off of the lending resources supplied by other states, with the result that the I-LLR is under-funded relative to the global optimum. The history of the IMF bears this out. Depending on the preferred measure, the NIFA-era IMF had a third or a ninth of the resources relative to what one would expect when extrapolating its funding forward from 1945. *See* Fisher, *supra* note 213, at 96. Although voting and quota reforms made during the heat of the 2008 Crisis substantially increased the IMF's resources, it declared further funding needs of \$500 billion in January of 2012. Christine Lagarde, Managing Dir., IMF, Global Challenges in 2012, Keynote Address at the German Council for Foreign Relations (Jan. 23, 2012). Perennial controversies over the magnitude and distribution of contributions required of IMF members also reflect the underlying cooperation problem that funding a global public good entails. *See, e.g.,* Robin Harding, *Pressure Mounts on U.S. over IMF Reform*, FIN. TIMES (Mar. 11, 2013).

216. Moral hazard is therefore two-sided: there is *private international investor moral hazard* and *borrower state moral hazard*. *See* Jeanne & Zettelmeyer, *supra* note 150, at 2.

217. *See* 12 U.S.C. § 1831(o) (2010) (providing bank supervisors prompt corrective action authority).

218. *But see* Olivier Jeanne, Jonathan D. Ostry, & Jeromin Zettelmeyer, *A Theory of International Crisis Lending and IMF Conditionality* (IMF, Working Paper No. WP/08/236, 2008) (advocating for a policy of "ex ante conditionality" in which the IMF screen countries for loan eligibility before a crisis hits).

219. Information is "imperfect" but "complete" when parties are simply unaware of all the actions chosen by other parties. Imperfect information includes knowledge of who the other parties are, as well as their possible strategies, preference, and payoffs (or, "type").

rower state is merely illiquid or instead “insolvent.”²²⁰ However, it must make such a decision with incomplete information concerning a state’s political willingness and financial ability to meet its obligations if provided adequate liquidity.²²¹ The opacity of potential borrower states’ financial status also creates an incentive for borrowers to distort or selectively reveal information to the I-LLR in order to indicate that they are illiquid rather than insolvent, need more aid rather than less, or require loans sooner rather than later.²²² As a result, an I-LLR with incomplete information will have difficulty consistently distinguishing interventions that are welfare-enhancing from those that are wasteful.²²³

The preceding analysis predicts that an I-LLR will perform more poorly than its domestic counterparts. An I-LLR will be less effective at mitigating moral hazard, and may intervene in an awkward or erratic manner due to the poor quality of information it has available. An I-LLR will also tend to face substantial resources constraints that leave it unable to lend heavily into large crises. The balance of these factors means that, in practice, provision of an I-LLR function may well be welfare reducing for states. As discussed in Section III.A below, an interesting intermediate institution that may be more effective than a global I-LLR is a regional LLR that only lends to a geographically limited group of states.

b. Evaluating the IMF as International Lender of Last Resort

Pursuant to its Articles of Agreement, the IMF is authorized to provide emergency loans to states experiencing financial instability, and it has been the central institution used to perform an I-LLR function. However, an evaluation of the IMF’s ability to deal with the strategic problems of moral hazard, incomplete information, and free riding on its funding reveals a mixed track record and substantial obstacles to better performance going forward.

Information is “incomplete” when parties do not necessarily know each other’s strategies, payoffs, or preferences.

220. Unlike firms, a sovereign cannot technically declare bankruptcy or be considered insolvent, but governments can still default on obligations to creditors and abandon commitments to a pegged exchange rate through currency devaluation. See REINHART & ROGOFF, *supra* note 29, at 3–20, 270–73 (detailing the varieties of sovereign crises).

221. See generally Hassan Naqvi, *Banking Crises and the Lender of Last Resort: How Crucial is the Role of Information?* (Feb. 27, 2006) (unpublished manuscript) (available through the National University of Singapore) (providing a formal model of an I-LLR with incomplete information); see also Se-Jik Kim, *Timing of International Bailouts* (IMF, Working Paper No. WP/04/09, 2004).

222. See Olivier Jeanne & Charles Wyplosz, *The International Lender of Last Resort: How Large is Large Enough?*, in *MANAGING CURRENCY CRISES IN EMERGING MARKETS* 89, 111–13 (Dooley & Frankel eds., 2003) (labeling this as an “agency problem” and characterizing borrowing states as agents and the IMF as principal).

223. See Naqvi, *supra* note 221, at 3; Cécile Bastidon, Philippe Gilles, & Nicolas Huchet, *A Selective Bail-Out International Lending of Last Resort Model*, 9 *ANNALS OF ECON. & FIN.* 103, 104–05 (2008).

Moral Hazard

Provision of an I-LLR function creates a moral hazard problem for both borrower states and their international investor creditors. The IMF addresses moral hazard through a combination of surveillance of member states' risk-taking and by attaching conditions to its loans that require the borrower to make macroeconomic and regulatory reforms.²²⁴ As wielded by the IMF, neither of these tools is particularly potent, especially when compared to similar measures employed by domestic financial supervisors.²²⁵ A review of the IMF's ability to mitigate moral hazard through its surveillance and conditionality programs finds that both policies have been relatively ineffective and, given the complexity of global finance and autonomy of sovereign states, cannot easily be improved.

The IMF vows to increase its surveillance efforts in the wake of each international financial crisis in order to predict and prevent the next disaster, but the track record for these projects is quite poor. After the 1994 Mexican crisis, the IMF announced that it would increase efforts at data collection, including the quality of data collected and the number of countries surveilled, with an emphasis on countries at risk.²²⁶ These reforms, however, did not enable the IMF to identify the risk factors that led to the 1997–98 Asian crisis, even though the causes of the Asian crisis closely paralleled factors at the root of the Mexican crisis just a few years earlier.²²⁷ Following the Asian crisis, the IMF redoubled efforts at surveillance by introducing new programs to monitor risk-taking at both the country-specific and global, systemic level.²²⁸ Yet here again, the IMF's surveillance programs failed to provide meaningful warnings over the

224. The latter process is commonly referred to as "conditionality." IMF conditionality is a perennial target for critics who argue that it amounts to neo-imperialism, is excessively detailed, or is premised on bad economics. See generally JOSEPH E. STIGLITZ, *GLOBALIZATION AND ITS DISCONTENTS* (2002) (providing a prominent presentation of many of these criticisms). The following analysis argues that conditionality remains ineffective, even when those concerns are assumed away.

225. Surveillance is a form of oversight analogous to domestic supervision of bank safety and soundness, while conditionality is roughly equivalent to direct interventions by bank supervisors, such as Prompt Corrective Action.

226. See Michael Camdessus, Managing Dir., IMF, *Drawing Lessons from the Mexican Crisis: Preventing and Resolving Financial Crises: The Role of the IMF*, Address at the 25th Washington Conference of the Council of the Americas (May 22, 1995), <http://www.imf.org/external/np/sec/mds/1995/mds9508.htm>.

227. See Tornell, *supra* note 47 (arguing that both crises took the same form and shared similar underlying causes).

228. The IMF's FSAP program evaluates specific country's compliance with NIFA-era best practices standards and produces its findings in reports known as RSOCs. The IMF also began publishing Global Financial Stability Reports twice a year starting in 2002, and launched a series of multilateral consultations on global imbalances in 2006. Press Release, IMF, *IMF to Begin Multilateral Consultations with Focus on Global Imbalances*, IMF Press Release No. 06/118 (June 5, 2006).

magnitude of risks that would eventually manifest themselves in the 2008 Crisis.²²⁹

The experience with Iceland, which was subject to annual IMF consultations and reports, is illustrative.²³⁰ Iceland had little experience as a financial center but, from 2003 to 2008, its banks lent freely into a domestic housing boom and its financial sector ballooned by entering global markets for securitized financial assets. By 2007, the U.S. sub-prime market had already begun to deteriorate, yet the IMF's 2007 Report failed to appreciate the risks to Iceland's financial sector; instead, it found that Iceland "appears well placed to withstand significant credit and market shocks," and that "Iceland's medium-term prospects remain enviable."²³¹ Fifteen months later, Iceland nationalized its three largest banks and was carrying a debt-to-GDP ratio of 800 percent.

In response to the 2008 Crisis, the IMF repeated its historical practice by rolling out two new surveillance programs, known as the Early Warning Exercise initiative and the Mutual Assessment Process. But these programs will once again run into the fact that it is very difficult, arguably inherently impossible, to predict market crises in advance. The fact that domestic supervisors, with nearly unlimited access to the books of the financial firms they regulated, were unable to appreciate the risks leading up to 2008 Crisis casts doubt on whether such a task is likely to succeed on an international scale. An I-LLR must not only process more information than any single domestic regulator, but must also do so in an environment where information-gathering requires the cooperation of sovereign states. And, in the words of a former IMF director: "Experience shows that while countries tend to be very eager for surveillance over others, they are less keen on surveillance over themselves."²³² If a lender is to take steps to mitigate moral hazard, it must have a means of effectively monitoring the risk-taking of potential borrowers, but the IMF as I-LLR has yet to achieve that goal.

Conditionality is the IMF's second tool for reducing moral hazard but it is also a weak instrument for two reasons. First, conditionality only serves to discipline state behavior *ex post* for purposes of repaying the IMF loan, because emergency loans are only offered after a borrower state

229. See, e.g., *Blanchard Sees Global Economy*, *supra* note 4 and accompanying text (quoting IMF President Olivier Blanchard providing an optimistic view of global financial stability, based on his expectations over oil price fluctuations, in September of 2008).

230. See Swaminathan S. Anklesaria Aiyar, *Crisis Prevention through Global Surveillance: A Task Beyond the IMF*, 30 *CATO J.* 491, 495-99 (2010).

231. IMF, ICELAND: STAFF REPORT FOR THE 2007 ARTICLE IV CONSULTATION, PREPARED BY THE STAFF REPRESENTATIVES FOR THE 2007 CONSULTATION WITH ICELAND 2, 17, IMF County Report 07/295 (Aug. 2007).

232. Camdessus, *supra* note 226. See also Roberto Marino & Ulrich Volz, *A Critical Review of the IMF's Tools for Crisis Prevention*, German Development Institute 3 (German Development Institute, Discussion Paper No.4/2012, 2012) (quoting Camdessus and characterizing his statement as "still valid more than fifteen years later").

has already taken the risks that led to a crisis.²³³ The fact that the IMF's conditional loans are typically extended at generously low rates and over terms of only a few years has the further effect that discipline during the repayment period itself may be minimal.²³⁴ It also precludes the ability to restrain moral hazard *ex ante*, which may theoretically be possible when applying the high, "penalty" rates recommended under Bagehot principles. Perhaps most importantly—to the extent that the borrower state's creditors are made whole with funds acquired through the IMF loan—conditionality does not address "investor moral hazard" at all.²³⁵

A second weakness of conditionality is that the IMF does not have the ability to actually enforce the conditions it purports to impose. For all its menace, it simply lacks the political capital to force sovereign states to make sweeping, fundamental changes to their domestic economic and regulatory policies. As the Meltzer Report bluntly states: "[The IMF] refused to learn a main lesson of its own past experience—sovereign governments cannot be compelled to implement programs that they do not favor."²³⁶ In seeking to coerce adherence to conditionality, basic strategic conflicts of interest between the IMF and borrower states are often compounded by high information costs to monitoring. Although simple, transparent changes to fiscal and tax policies can theoretically be made overnight, fixing a dysfunctional banking system is a protracted process that requires years of subtle institutional reform that is difficult to measure and evaluate.²³⁷ These general enforcement problems are confirmed by anecdotal accounts as well as quantitative empirical studies, both of which find that actual compliance with IMF conditionality is far from complete.²³⁸

Incomplete Information

The analysis of emergency lending as an interdependence problem predicts that an I-LLR will lack sufficient information to consistently intervene in sovereign crises of liquidity but not solvency, a distinction that

233. See Oliver Jeanne & Jeromin Zettelmeyer, *International Bailouts, Moral Hazard and Conditionality*, 16 *ECON. POL'Y* 407, 411 (2001).

234. See *id.* at 414–15.

235. See Jeanne & Zettelmeyer, *supra* note 150 and accompanying text.

236. See Meltzer Report, *supra* note 213, at 15 (continuing that, "[p]olicy changes will not be implemented unless they are supported by local political institutions and their leaders."). The threat of discontinuing emergency lending is not credible because it amounts to an admission by the IMF that it has imprudently lent its member states' money to a renegade. *Id.*, at 19 ("The IMF lacks adequate mechanisms for enforcing desirable change and avoiding retrograde actions"); *id.*, at 9 ("Cancellation is seen as a failure. Governments understand that the IMF is reluctant to withhold funds or cancel programs. Hence the threat loses force.").

237. See Charles W. Calomiris, *The IMF's Imprudent Role as Lender of Last Resort*, 17 *CATO J.* 275, 279 (1998).

238. See *id.* at 277; Meltzer Report, *supra* note 213, at 16–17, 19. See generally Martin C. Steinwand & Randall W. Stone, *The International Monetary Fund: A Review of the Recent Evidence*, 3 *REV. INT'L ORG.* 123 (2008) (providing a quantitative analysis); James R. Vreeland, *IMF Program Compliance: Aggregate Index Versus Policy Specific Research Strategies*, 1 *REV. INT'L ORG.* 359 (2006) (same).

is necessary for such interventions to be efficient. Information concerning the full scope of a state's liabilities and its political commitment to reform can be difficult to interpret, revealed in a partial and opportunistic manner, or outright fabricated. A review of IMF-administered bailouts indicates that the bulk of its lending has not been directed at temporary liquidity crises.²³⁹ This is evident as an initial matter, because cases in which investor panic leads to short-term liquidity shortfalls of otherwise economically healthy sovereigns should constitute a relatively rare subset of all sovereign financial crises.²⁴⁰ In contrast, the IMF has lent freely into nearly every sovereign debt or currency crisis since the 1980s.

An early example is Mexico's debt crisis of the 1980s. In December of 1982, when the IMF extended a \$3.9 billion loan to Mexico, the expectation that the funds would restore investor confidence and backstop a no-run equilibrium proved incorrect.²⁴¹ Instead, a "Lost Decade" ensued, in which multiple rounds of negotiation failed to cleanly resolve how to restructure the obligations to foreign investors that Mexico and other Latin American countries were simply unable to meet. Liquidity crises, almost by definition, do not last a decade.

A subsequent test came during the 1990s financial crises in Mexico and Asia. Both were classic "twin crises," in which a country's need to extend credit to distressed domestic banks is incompatible with its commitment to support a fixed or pegged exchange rate with higher domestic interest rates.²⁴² Incomplete information looms large in these cases, because official government statistics do not reflect the full financial difficulties facing borrower countries with off-balance sheet liabilities in the form of deeply insolvent banking sectors. Accordingly, the Asian and Mexican crises initially presented themselves as speculative runs on currency pegs, but recapitalization of their hopelessly insolvent financial sectors proved the deeper, less temporary problem. In 1995, Mexico received \$17.7 billion from the IMF in connection with efforts to support the peso, but ultimately had to recapitalize its banking sector at a cost of 10 to 15 percent of GDP.²⁴³ The depth of insolvency of the banking sectors involved in the 1997–98 Asian crises was arguably even worse.²⁴⁴

239. See generally Calomiris, *supra* note 237.

240. See Meltzer Report, *supra* note 213; Mishkin, *supra* note 214, at 718 ("[T]he lender-of-last-resort role will be more successful in promoting financial stability if it is implemented only very infrequently.").

241. See generally Geske Dijkstra & Niels Hermes, Debt Relief and Economic Recovery in Latin America: Lessons for HIPC's, Presentation at the XXII International Congress of the Latin American Studies Association (Sept. 6–8, 2011).

242. See REINHARDT & ROGOFF, *supra* note 29, at 270–73.

243. Gerard Caprio, Jr. & Daniela Klingebiel, *Bank Insolvency: Cross-Country Experience* 15 (World Bank Policy Research Dep't, Working Paper No. 1620, 1996).

244. The costs as a percentage of GDP of recapitalizing Asia's banking sectors has been estimated at 56.7% for Indonesia, 31.2% for Korea, and 43.8% for Thailand. Luc Laeven & Fabian Valencia, *Systemic Banking Crises: A New Database* 32 tbl.1 (IMF, Working Paper No. 08/224, 2008).

Other episodes underline the IMF's trouble interpreting the complicated financial and political environment in borrower countries. For example, the IMF extended a \$22.6 billion loan to Russia in 1998 that was premised on an exchange rate policy that it expected to remain "broadly unchanged during the remainder of 1998."²⁴⁵ This quickly proved to be a miscalculation. Three days after receiving the loan, Russia devalued the ruble by 34 percent and declared a ninety-day moratorium on its debt payments. Another misstep was the series of billion-dollar loans that the IMF extended to Argentina over the course of 2000–2001, which were followed by the collapse of the Argentine peso. In retrospect, the IMF admitted that it had failed to appreciate the inevitability of Argentina's devaluation and should not have extended loans in the first place.²⁴⁶

The 2008 Crisis primarily involved runs on sovereign debt, rather than on currency pegs. But here again, there have been instances of massive IMF lending that was unrelated to temporary liquidity shortfalls. Most notably, in 2010 Greece was extended two loans by the IMF in coordination with EU entities, but nevertheless defaulted on its sovereign debt in 2012.²⁴⁷ Greece is a paradigmatic example of incomplete information, in which a borrower country can feign solvency through opaque or outright fraudulent public accounting: the Greek government's official projection for its 2009 budget deficit as of September 2009 was 3.7 percent, a figure disappointingly short of the eventual 15.4 percent deficit.²⁴⁸ Thus, record of interventions over the past three decades does not reflect a willingness or ability on the part of the IMF to discriminate between crises of liquidity and cases where states will inevitably lapse on sovereign debt or exchange rate commitments.

Summary

A sound theoretical case can be made that, if states can cooperate to pool resources and establish an I-LLR entity, liquidity crises in currency and sovereign debt markets may be contained. However, the experience with the IMF illustrates many of the problems facing an I-LLR in practice. The IMF has not been able to effectively monitor risk taking in global financial markets or impose conditionality sufficient to curtail moral hazard; neither has it skillfully distinguished between cases when emergency lending is warranted and those when it is not. The profound informational

245. Press Release, IMF, IMF Approves Augmentation of Russia Extended Arrangement and Credit under CCF, IMF Press Release No. 98/31 (July 20, 1998).

246. POL'Y DEV. & REV. DEP'T, IMF, LESSONS FROM THE CRISIS IN ARGENTINA ¶ 89 (2003) ("An important consideration that has to guide the Fund's decision-making process and that was clearly underscored by the Argentine experience is that, in a situation in which the debt dynamics are clearly unsustainable, the IMF should not provide its financing. To the extent that such financing helps stave off a needed debt restructuring, it only compounds the ultimate cost of such a restructuring.")

247. See *Greece's Default: The Wait is Over*, ECONOMIST (May 17, 2012).

248. See EUR. ECON. ADVISORY GRP. [EEAG], THE EEAG REPORT ON THE EUROPEAN ECONOMY, GOVERNING EUROPE 97, 111 (2011).

constraints and incentives for opportunistic state behavior in the I-LRR context caution skepticism over whether the international architecture for emergency lending at the global level can be substantially improved in the near future. The partial displacement of the IMF by European institutions during the Eurozone debt crisis reflects these difficulties, as well as the advantages of regional LLRs where there is already a deep history of regional cooperation.

III. IMPLICATIONS

This Article's argument carries implications for practical policy discussion as well as the theoretical literature on international financial regulation and public international law. Part A of this Section evaluates policy options for further modifying the international financial architecture; Part B addresses the theoretical literature.

A. *Policy: Implications for the Design of International Financial Regulation*

1. A World Financial Organization

The weaknesses of the NIFA, in its original and post-2008 forms, raise the question of whether some alternative architecture may work better. Several commentators have called for a "new Bretton Woods,"²⁴⁹ which would centralize and legalize international regulation of finance in a World Financial Organization (WFO) similar in structure to the World Trade Organization (WTO). That position implies that the interdependence problems posed by international finance can be overcome by choosing a bolder institutional structure. This Article's analysis cautions against such an approach, and contends that advocates for a WFO work off of a false analogy to the WTO that relies on two mistaken premises.

The first premise mischaracterizes the development of international trade law, and holds that the WTO represents a story of previously unsuccessful attempts at decentralized cooperation that were corrected by an international body capable of binding states to their commitments. The problem with this assertion is that it overlooks considerable pre-WTO developments. Prior to the establishment of the WTO in 1994, international trade was not a chaotic free-for-all conducted in a legal vacuum. Rather, pursuant to the GATT treaty, the international law of trade provided detailed, binding rules as well as an informal mediation procedure that served as a forum for states to dispute alleged breaches of those rules. In the event that a party was engaged in illegal protectionism and breached its obligations under the GATT, the customary international law of state responsibility provided remedies for aggrieved trading partners, including authorization of retaliatory self-help measures.²⁵⁰ As with the GATT, the

249. See *supra* note 13. See also Carlos Mauricio S. Mirandola, *Solving Global Financial Imbalances: A Plan for a World Financial Authority*, 31 Nw. J. INT'L L. & BUS. 535 (2011).

250. As a matter of public international law, retaliatory countermeasures may be taken against states in breach of international law until compliance is resumed by the breaching

WTO and its Dispute Settlement Body (DSB) does not have independent enforcement authority and does not directly compel states to reduce barriers to trade.²⁵¹ Instead, when the WTO DSB finds a violation of trading rules, it asks the respondent state to desist from the practice at issue and authorizes the complainant state to take action if the respondent does not comply.²⁵² Thus, aggrieved states possess no new remedies or greater powers of enforcement than they did under the previous GATT regime. The value added by the WTO, then, is in its information and reputation producing function, whereby it acts as an impartial third party that verifies and publicizes legal violations between trading partners.²⁵³ In short, the GATT was successful, and the WTO's dispute settlement function augments that success, because certain features of international trade make it amendable to decentralized enforcement in the first instance.²⁵⁴

The second premise of the WFO proposal mischaracterizes international finance, and holds that it is sufficiently similar to international trade for the WTO to be emulated by a new body regulating finance. But as the interdependence problem analysis of this Article suggests, the conditions for cooperation present in trade are less prevalent in finance, and constructing a WFO will not change that fact. With international trade, rules are simple, monitoring violations is straightforward, and reciprocal enforcement is possible because the relevant externalities are bilateral and imposed repeatedly over time.²⁵⁵ State A's import tariff raises the cost of State B's exports by a measurable dollar amount that is imposed on a continuous basis. In response, State B is often willing and able to take tit-for-tat retaliatory measures against State A—under the auspices of the GATT, with the WTO's authorization, or otherwise.

state. See Rep. of the Int'l Law Comm'n, 53d Sess., arts. 49–53, UN Doc A/56/10; GAOR, 56th Sess., Supp. No. 10 (2001).

251. Cf. Judith Hippler Bello, *The WTO Dispute Settlement Understanding: Less is More.*, 90 AM. J. INT'L L. 416, 417 (1996) (observing that, like the GATT, the WTO has “no jailhouse, no bail bondsmen, no blue helmets, no truncheons or tear gas”).

252. Understanding on Rules and Procedures Governing the Settlement of Disputes art. 22.2, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401 (allowing complaining parties to “request authorization from the DSB to suspend the application to the Member concerned of concessions or other obligations under the covered agreements”).

253. See Andrew Guzman, *International Tribunals: A Rational Choice Analysis*, 157 U. PA. L. REV. 171, 179 (2008) (“[The WTO's] sole contribution to the dispute is information concerning what happened, what law governs, and how the law applies to the facts. Whatever impact international tribunals have, then, must be the result of the ruling itself and the information in that ruling.”); Matthew C. Turk, *Why Does the Complainant Always Win at the WTO?: A Reputation-Based Theory of Litigation at the World Trade Organization*, 31 Nw. J. INT'L L. & BUS. 385, 385 (2011) (explaining the WTO DSB complainants' surprising, 90 percent “win-rate” as a product of the WTO's information-producing function).

254. Cf. Arvind Subramanian & Shang-Jin Wei, *The WTO Promotes Trade, Strongly But Unevenly*, 72 J. INT'L ECON. 151 (2007); Andrew K. Rose, *Do We Really Know that the WTO Increases Trade?*, 94 AM. ECON. REV. 98 (2004).

255. See Posner & Sykes, *supra* note 178, at 46.

However, none of these features apply to finance. Global financial stability is affected by spillovers between states that are systemic and diffuse, rather than bilateral.²⁵⁶ Monitoring breaches of international financial agreements is extremely complicated. Regulatory laxness on capital adequacy, for example, means that one state's banking sector can take on risks that subtly undermine the stability of counterparties across the globe. An international lender of last resort is also subject to substantial information constraints that make it difficult to determine the timing, magnitude, and necessity of emergency lending interventions. Finally, cooperation on cross-border bank resolution differs from that on trade in that it cannot be reinforced by indefinitely repeated interactions, because crises are sporadic and present a strategic endgame for governments when they occur.

The distinction between international trade and finance is best illustrated by an agreement that is already part of the WTO itself, the General Agreement on Trade in Services (GATS).²⁵⁷ The GATS Financial Services Agreement covers finance and banking services, but in contrast to the WTO's success in areas such as trade in goods or intellectual property, WTO members have yet to implement the GATS provisions that relate to finance in any concrete manner.²⁵⁸ The fate of GATS provisions relating to finance is consistent with the analysis above: despite being embedded in the legal apparatus of the WTO, the underlying economic features of the financial industry make it less amenable to international regulatory cooperation than is the case for trade.

Problems of monitoring and enforcement aside, what stability-enhancing rules would a hypothetical WFO apply? While the underlying interdependence problems of global finance are identifiable, formulating optimal policy with respect to them is not easy.²⁵⁹ Three generations of Basel Accords have tinkered with complex capital adequacy rules, with mixed results. IMF bailouts have been subject to serious criticism, and implementing a policy that captures the conditions under which an international lender of last resort can successfully intervene is a daunting task. Specifying how a universal cross-border resolution mechanism would identify, prioritize, and adjudicate claims against a failing G-SIFI would be a controversial process as well. Uncertainty over how to get the details of these policies right would not necessarily be reduced by creating a new international organization.

256. See Eichengreen, *supra* note 13, at 19 (“[I]n the case of finance, injury is likely to be more diffuse [than in trade]; the adverse financial repercussions are likely to be more widespread.”).

257. General Agreement on Trade in Services, Apr. 15, 1995, Marrakesh Agreement Establishing the World Trade Organization, Annex 1B, *THE LEGAL TEXTS: THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS* 284 (1999), 1869 U.N.T.S. 183, 33 I.L.M. 1167 (1994).

258. See Pan, *supra* note 156, at 251–52.

259. This is yet another feature of finance that contrasts with trade, where there is a rough consensus that the globally optimal rule is to reduce tariff and non-tariff barriers to trade as close to zero as possible. See Richard Alston, J.R. Keurl & Michael B. Vaughan, *Is There a Consensus Among Economists in the 1990's?*, 82 *AM. ECON. REV.* 203, 204 (1992).

Despite these difficulties, proposals for a WFO are not surprising and exemplify a general way of thinking about international law that is common in the scholarship. The typical argument proceeds by three steps: (1) identifying an international policy problem or a global public good that is under-produced;²⁶⁰ (2) admitting that a decentralized approach to solving the problem is failing or will fail;²⁶¹ and (3) recommending a new global body possessing plenary enforcement power that will compel states to adopt optimal policies for production of the global public good at issue.²⁶² The analytical mistake undermining the WFO proposal is forgetting that in many contexts, including finance, accepting Step 2 implies that executing Step 3 will be very difficult to do in practice.²⁶³

What should be concluded from the NIFA experience, and from the analysis of this Article, is that international agreements and institutions are largely endogenous products of the political-economic realities of the international state system, rather than external variables that can be dialed up or down to mollify the political and strategic conflicts that states face. For the time being, then, a radical overhaul of the international financial architecture is neither feasible nor—given the uncertainty over optimal policy described above—likely desirable.

From an even broader view, achieving financial stability may depend on a balanced expansion of the global economy, rather than feats of inter-

260. See, e.g., Eichengreen, *supra* note 13, at 18 (providing, “multiple examples of how problems arising in connection with supervision and regulation in one country can infect financial systems in other countries.”); Pan, *supra* note 156, at 264–69, 273 (arguing that the “problem of cross-border supervision” must be addressed at the international level).

261. See, e.g., Eichengreen, *supra* note 13, at 18 (“[M]echanisms for ensuring that national decisions regarding [financial] regulation are taken with external as well as domestic consequences in mind remain inadequate.”); Pan, *supra* note 156, at 246 (“[T]he limitations of the international financial architecture Falseleft unresolved the problems of prudential supervision of cross-border financial institutions and systemic risk regulation.”).

262. See, e.g., Eichengreen, *supra* note 13, at 19 (“The WFO would define obligations for its members . . . appoint independent panels of experts to determine whether countries were in compliance with those obligations . . . [and] authorize the imposition of sanctions against countries that failed to comply.”); Pan, *supra* note 156, at 246–47 (advocating “the creation of an international body that has the power and resources to supervise cross-border financial institutions, demand action by national supervisors, promulgate supervisory standards, conduct inspections, and initiate enforcement proceedings.”).

263. Ironically, the desire for an apolitical, technocratic policymaking that is embodied in Step 3 seems to be what animated the NIFA in the first place, and the lackluster results have frustrated some of its more sophisticated advocates. Compare Walter Mattli & Anne-Marie Slaughter, *Law and Politics in the European Union: A Reply to Garrett*, 49 INT’L ORG. 183, 189 (1995) (“It is entirely rational for individuals to decide to be governed by a set of rules, applicable and ascertainable to all on the basis of logic, consistency, and ordinary meaning. To so decide is to hive off a domain from pure political struggle. It is also to empower lawyers and judges, whose power derives from their special expertise.”), with *Institutional Performance*, *supra* note 55, at 500 (“Bureaucratization [through trans-governmental networks] has had little to say about the crisis. It has not provided a response through the usual international vehicles, and the cosmopolitan comparative (and, of course, harmonizing) mission of the networks has been found to be wanting. Instead, the response to that crisis has been politicized through the G20.”).

national regulatory engineering or institutional design.²⁶⁴ For example, some econometric studies find that growing current account imbalances are close predictors of banking crises.²⁶⁵ Others argue that imbalances in net capital flows between the U.S. and China (abetted by both) caused the former to be flooded with cheap credit that fueled financial risk taking.²⁶⁶ Another potential ongoing risk is the extreme indebtedness of several Eurozone states and the continued fragility of their banking sectors, which the ECB has encouraged to hold large amounts of risky European sovereign debt.²⁶⁷ China's increasingly apparent internal misallocation of capital could pose a threat as well. And, any of the above²⁶⁸ may be triggered or compounded by dramatic fluctuations in global markets for important assets or commodities that are difficult to predict. Unfortunately, it is hard to imagine concerted policies that could correct these imbalances, which to a certain degree depend on the vagaries of the historical development of capitalism that are in part beyond any state or multilateral organization's control.²⁶⁹

264. See generally MICHAEL PETTIS, *THE GREAT REBALANCING: TRADE, CONFLICT, AND THE PERILOUS ROAD AHEAD FOR THE WORLD ECONOMY* (2013); RAGHURAM G. RAJAN, *FAULT LINES: HOW HIDDEN FRACTURES STILL THREATEN THE WORLD ECONOMY* (2010).

265. See R. Barrell, E.P. Davis, D. Karim & I. Liadze, *The Impact of Global Imbalances: Does the Current Account Balance Help to Predict Banking Crises in OECD Countries?* (Nat'l Inst. of Econ. & Soc. Research, Discussion Paper No. 351, 2010); REINHART & ROGOFF, *supra* note 29, at 218–19 Fig.13.5; Carmen Reinhart & Vincent Reinhart, *Capital Flow Bonanzas, an Encompassing View of the Past and Present* (Nat'l Bureau Econ. Res., Working Paper No. 14321, 2008); Carmen Reinhart & Kenneth Rogoff, *Is the 2007 US Sub-Prime Financial Crisis So Different? An International Historical Comparison*, 98 AM. ECON. REV. 339 (2008).

266. This is Bernanke and Greenspan's "savings glut" hypothesis, with "China" serving as a metonym for Asian countries with high savings rates and large dollar-denominated reserves. Ben Bernanke, Chairman, Fed. Reserve, *The Global Savings Glut and the U.S. Current Account Deficit*, Speech to the Virginia Association of Economics (Mar. 10, 2005); Greenspan, *supra* note 141, at 202–04. See also EICHENGREEN, *supra* note 31, at 112–18; Harm Bandholz, Joerg Clostermann & Frank Seitz, *Explaining the US Bond Yield Conundrum*, 19 APPLIED FIN. ECON. 539 (2009) (attempting to quantify the savings glut's effect on interest rates); Francis E. Warnock & Veronica Cacadac Warnock, *International Capital Flows and U.S. Interest Rates*, 28 J. INT'L MONEY & FIN. 903 (2009) (same).

267. E.g., Hans-Werner Sinn & Akos Valentinyi, *European Imbalances*, VOX, Mar. 9, 2013 (arguing that "a credible strategy for getting the Eurozone back on track needs to address the problem of its large internal imbalances").

268. This list is meant to be illustrative of the kinds of risks that can lead to international financial disruption, rather than serve as a specific set of prognoses.

269. Cf. GREGORY CLARK, *A FAREWELL TO ALMS: A BRIEF ECONOMIC HISTORY OF THE WORLD*, 212–14 (2007) (espousing a strong form of such a historical-materialist view); MANCUR OLSON, *THE RISE AND DECLINE OF NATIONS: ECONOMIC GROWTH, STAGFLATION, AND SOCIAL RIGIDITIES*, 36–74 (1982) (same); Karl Marx, *Preface to A Contribution to the Critique of Political Economy*, in KARL MARX: *SELECTED WRITINGS*, ED. LAWRENCE H. SIMON 209, 211 (1994) (same).

2. Incremental Policy Solutions

Given the impracticality of fundamental reform on the scale of a WFO, what can be done to provide better prospects for global financial stability? Two generic kinds of incremental policies, which are less ambitious than attempts to directly solve cooperation problems on a global scale, may be promising. The first is to find solutions to coordination games that are embedded in larger cooperation problems. Typically, this will involve agreements that stipulate the form that cooperative action should take.²⁷⁰ A second kind of intermediate reform is to scale cooperation projects from the global to the regional level, where information constraints are less severe, incentives to free ride are reduced, and states often have a richer history of interaction. Both of these regulatory strategies can be applied across a variety of policy areas, but a prominent example of each follows.

a. Harmonization of Bank Resolution Plans

Embedded within the daunting cooperation problem presented by a universal approach to liquidating the assets of failed, cross-border banks is a more manageable harmonization problem relating to resolution. The staggering complexity of G-SIFIs bewildered regulators during the 2008 Crisis and impeded efforts to identify and execute the most efficient means of resolution. In response, domestic financial reforms have included requirements that firms develop “living wills” or “resolution plans,” which specify the institution’s corporate structure, identify counterparties, and provide a rough roadmap for the unwinding of assets.²⁷¹ If states can coordinate to standardize the form that resolution plans take, they may thereby streamline the complexity of regulatory compliance across borders, and reduce the transaction costs of engaging in international finance. In addition, international harmonization of living wills would facilitate cooperation during emergency cross-border resolutions by allowing regulators in different countries to operate from a common factual understanding.²⁷²

Resolution Plans are truly standards in the narrow sense defined in Section II.A, and an analogy can be made to harmonization of accounting standards: resolution plans are documents that essentially “measure” a firm’s structure and interconnection with other firms, just as accounting rules measure corporate assets and liabilities. As is the case with harmonization of other standards, negotiations to develop a common international resolution plan should take the form of a battle-of-the-sexes game, with no

270. See generally SCHELLING, *supra* note 96.

271. See, e.g., Dodd-Frank, § 165(d).

272. See Emiliios Avgouleas, Charles Goodhart, & Dirk Schoenmaker, *Bank Resolution Plans as Catalyst for Global Financial Reform*, 9 J. FIN. STABILITY 210, 211–12 (2013) (arguing for the importance of international resolution plans, and contending that they can serve as an impetus for more ambitious regulatory reforms). The claim here is only that cooperation will be more efficient *ceteris paribus*, for any given political appetite for cooperation—not that harmonized living wills can remove strategic conflicts of interest between states.

party facing an incentive for opportunistic non-cooperation once an agreement has been made. In addition, because resolution plans are an essentially novel regulatory tool, negotiations over a common standard should not be impeded by the presence of parties with high switching costs, as is the case in other harmonization contexts such as insurance.²⁷³ These considerations suggest optimism over the ability for states to coordinate on international resolution plans.

Since the 2008 Crisis, institutional groundwork has been laid that may serve as a basis for harmonizing resolution plans. The G20, at its Pittsburgh summit, explicitly noted the importance of resolution plans for its agenda on further cooperation on cross-border resolution. And although the development of such plans has initially taken place at the domestic level, the Basel Committee and the BIS are actively monitoring the structure of domestic plans with an eye toward later harmonization.²⁷⁴ Admittedly, it is too early to know for certain whether these efforts will result in concrete action or meaningful coordination. However, harmonized resolution plans do not appear to be plagued by the strategic issues facing a universal resolution mechanism, and could serve to make the regulation and potential liquidation of G-SIFIs substantially more manageable.²⁷⁵

b. Regional Lenders of Last Resort

An interesting intermediate institution is a regional LLR that only lends to a geographically limited group of states. A regional LLR would face the same interdependence problems as an I-LLR, but potentially to a lesser degree. Information and enforcement costs could be lower, as monitoring compliance and policing moral hazard would take place among a smaller group of states that likely have more homogenous economies and deeper political-economic ties. Concern with free riding could also be reduced, due to the lower number of parties and possible presence of a state that is powerful enough relative to its regional counterparts to assume the costs of supplying local public goods. As a result, under some conditions, scaling a LLR function to the regional level may tip the balance of costs and benefits into net positive territory for participating states.²⁷⁶

273. While the United States has already implemented resolution plans under Dodd-Frank, those requirements were crafted in the context of international reports on the same topic and do not vary widely from other proposals. See FIN. STABILITY BD., RESOLUTION OF SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTIONS: PROGRESS REPORT 9 (2012), available at http://www.financialstabilityboard.org/publications/r_121031aa.pdf. At the same time, states with globally interconnected financial sectors stand to gain the most from standardization of resolution plans, because their domestic firms engage in relatively higher volumes of transactions with cross-border counterparties. See DREZNER, *supra* note 7, at 32 (“Economic globalization increases the gross rewards to policy coordination.”).

274. See CBBRG REPORT, *supra* note 197, at 35–38.

275. Herring, *supra* note 125, at 14–17 (describing seven guiding principles for effective resolution plans); see generally, Avgouleas et al., *supra* note 272.

276. For similar reasons, regionalism may be an increasing trend in the area of international trade as well. See Stephen J. Powell, *Is the WTO Quietly Fading Away?: The New Regionalism of Global Trade Rules*, 9 GEO. J. L. & PUB. POL’Y 261 (2011).

Efforts of the European Commission (EC) and European Central Bank (ECB) during the European sovereign debt crisis provide the clearest example of the potential advantages of a regional LLR. The EC is capable of closely monitoring Eurozone borrower countries, which share a common institutional and regulatory structure. It also has a substantial capacity to curb moral hazard through threats of ejection from the Eurozone or other drastic measures.²⁷⁷ In a feat that IMF conditionality could never aspire to, the prime ministers of Greece and Italy, whom Brussels did not perceive to be reliable partners in lending, were pressured out of power in 2011.²⁷⁸ The two EU entities have also been able to draw on several decades of deep legal integration to pool a greater amount of emergency aid than would otherwise be achievable by the IMF acting alone.²⁷⁹ In part, this is due to the fact that the Eurozone arguably now contains a dominant economy, Germany, which has the capacity to supply regional public goods regardless of the incentive for smaller Eurozone countries to free ride. Indeed, after a series of ineffective bailouts co-funded by the IMF, yields on Spanish and Italian sovereign bonds only began to fall when the ECB—with what amounted to a de facto guarantee of Eurozone debts by Germany—announced that it would buy up sovereign Eurozone debt in unlimited quantities.²⁸⁰

Outside of Europe, other regional LLR initiatives have been established in recent years as well. These include the Chiang Mai Initiative (CMI) in East Asia, the Fondo Latinoamericano de Reservas (FLAR) in Latin America, and the Arab Monetary Fund (AMF).²⁸¹ The FLAR and AMF pool too few resources (\$3 billion and \$2 billion, respectively) to be meaningful substitutes to the IMF at this stage, but the CMI has a non-trivial \$120 billion available.²⁸² The CMI was not heavily relied on by its members during the 2008 Crisis, however, and its significance remains uncertain.²⁸³ While it is likely too early to provide a conclusive evaluation of

277. See, e.g., Michelle Martin & Paul Carrel, *Greek Exit Manageable but Not Preferable: ECB's Asmussen*, REUTERS (Aug. 20, 2012, 12:05 PM), <http://www.reuters.com/article/2012/08/20/us-ecb-asmussen-idUSBRE87I0CV20120820>.

278. *Europe Against the People?*, ECONOMIST, Nov. 12, 2011 (“First George Papandreou, the Greek prime minister, promised to resign, and then Italy’s Silvio Berlusconi did the same. Both leaders have been in trouble for some time, but the immediate cause of their downfall is plain: the ultimatum they received from euro-zone leaders at the G20 summit in Cannes.”).

279. See Franz Seitz & Thomas Jost, *The Role of the IMF in the European Debt Crisis* 4, 8–9 (Univ. of Applied Sci. (FH), Discussion Paper No. 32, 2012).

280. See Jones & Steen, *supra* note 82 (quoting the ECB Chairman Draghi declaring it will “do ‘whatever it takes’” to save the euro).

281. See Barry Eichengreen, *Regional Funds: Paper Tigers or Tigers with Teeth?*, in REGIONAL AND GLOBAL LIQUIDITY ARRANGEMENTS, 39, 39 (2010).

282. See *id.*

283. Obstacles to its future relevance include key members such as China, Japan, and South Korea holding large amounts of foreign reserves as a form of self-insurance, and limited efforts to establish surveillance and conditionality policies that would accompany potential CMI lending. See *id.*, at 47.

such programs, these regional arrangements may be less susceptible to information and cooperation constraints than a truly global LLR. On the other hand, it should not be surprising if the non-European LLR programs remain marginal for the time being. The theoretical advantages of regionalism discussed above only apply to the extent that there is significantly deeper economic integration and institutional cooperation at the regional rather than international level. Europe provides just such a case, most importantly due to its common currency, but those features are present to a lesser degree among countries in Latin America or East Asia.

B. *Theory: Implications for the International Law Literature*

1. Response to Critiques of the Rational State Approach

In addition to policy considerations, this Article also carries implications for the theoretical literature on international financial regulation and public international law generally, some of which have already been suggested in the WFO discussion above. The primary lesson is the usefulness of the basic state-centered, rational choice approach, which has been criticized from several quarters as lacking explanatory power. Recent work on international financial regulation [IFR] has argued that “rational choice theory on its own provides an unsatisfactory account of IFR,” and that the putatively rationalist “assumption that IFR is optimally designed [‘to maximize joint gains for states’] predisposes scholars to neglect issues of compliance and effectiveness.”²⁸⁴ As a result, the argument proceeds, rationalist accounts need to be replaced, or at least supplemented with other theoretical paradigms.²⁸⁵

However, this Article employs a rational choice approach that is centrally concerned with compliance and seeks to specify when attempts at international cooperation will be effective at solving interdependence problems in finance and when they will not. The criticism of the rational choice framework misses the mark because it misunderstands the theory to claim or entail that rational actors will always maximize joint gains. But a corollary of the Coase Theorem is that rational actors will not exhaust available gains from trade whenever transaction costs are positive.²⁸⁶ There is a body of economic theory, dedicated to specifying the conditions for market failure, that is concerned with this exact result.²⁸⁷ Indeed, the central lesson of the prisoner’s dilemma is that individually rational actors

284. Verdier, *supra* note 9, at 1424–25 (continuing: “Therefore, a satisfactory theory of IFR cannot avoid asking to what extent it actually requires states to depart from what they would otherwise do, and whether they comply when faced with competing pressures.”).

285. *See id.* at 1424.

286. Ronald Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1, 16 (1960); *see also* Avinash Dixit & Mancur Olson, *Does Voluntary Participation Undermine the Coase Theorem?*, 76 J. PUB. ECON. 309, 310 (2000).

287. *See, e.g.*, George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q. J. ECON. 488 (1970); A. Michael Spence, *Job Market Signaling*, 87 Q. J. ECON. 355 (1973); Joseph E. Stiglitz, *Incentives and Risk Sharing in Sharecropping*, 41 REV. ECON. STUD. 219 (1974); Joseph E. Stiglitz, *Credit Rationing in Markets with Imper-*

will sometimes not achieve collectively rational (i.e. joint gains maximizing) outcomes.²⁸⁸ Moreover, the problem of cooperating to maximize joint gains is more acute at the international level than it is domestically, because there is no world government that can enforce contracts (treaties) between states, or levy taxes to spend on international public goods, or redistribute joint gains from cooperation in a manner that is Pareto-improving.²⁸⁹

Failure to appreciate the fact that rational states will not necessarily exhaust opportunities for international cooperation often leads to forays in theoretically alternatives that have less explanatory power. One alternative approach uses the concept of historical path dependence. While difficult to rigorously define,²⁹⁰ path dependence refers to a process whereby certain self-reinforcing features of initial conditions or early sequences of events, such as increasing returns to scale, can have a lasting effect on the distribution of potential future outcomes, or “historical paths.”²⁹¹ Theories of path dependence have been used to argue that the bargain struck at Bretton Woods, in which no international institution was created specifically to regulate private international finance, triggered an inefficient path dependence dynamic that explains why there is currently no formal international financial organization that administers globally optimal regulation.²⁹²

A historical path dependence theory of post-Bretton Woods “lock-in” implies that the institutional structure established at that meeting in the aftermath of WWII would stubbornly resist change. This, however, is contradicted by parallel developments in the cognate areas of trade and mon-

fect Information, 71 AM. ECON. REV. 3939 (1981); Joseph E. Stiglitz, *Externalities in Economies with Imperfect Information and Incomplete Markets*, 101 J. ECON. 229 (1986).

288. Cf. THOMAS C. SCHELLING, MICROMOTIVES AND MACROBEHAVIOR, 140 (1978) (“Economist are familiar with systems that lead to aggregate results that the individual neither intends nor needs to be aware of, results that sometimes have no recognizable counterpart at the level of the individual.”).

289. Since cooperation under anarchy is voluntary, states cannot form cooperative ventures that improve the aggregate welfare of the group unless each state—or at least each relatively powerful state—in the group is made better off by its participation in the venture. Cf. Shepsle, *supra* note 6, at 9 (“A feature of all collective action from a purely rational perspective is that outcome are not Pareto optimal.”).

290. The fuzziness of path dependence is often taken to extremes and used to stand for the truism that historical events affect one another. Scott E. Page, *Essay: Path Dependence*, 1 Q. J. POL. SCI. 87, 87 (2006) (“Th[e] wider application of path dependence has dulled its value. In becoming a trendy way to say that history matters, path dependence no longer provides any analytic leverage.”).

291. See *id.*; Orfeo Fioretos, *Historical Institutionalism in International Relations*, 65 INT’L ORG. 367 (2011) (providing an application of path dependence to international relations); Paul Pierson, *Increasing Returns, Path Dependence, and the Study of Politics*, 94 AM. POL. SCI. REV. 251 (2000) (providing the seminal theoretical exposition); Jacob Hacker, *The Historical Logic of National Health Insurance: Structure and Sequence in the Development of British, Canadian, and U.S. Medical Policy*, 12 STUD. AM. POL. DEV. 57 (1998) (providing the seminal case study).

292. See Verdier, *supra* note 9, at 1424–27.

etary coordination, where international regimes have evolved dramatically in responses to changes in the global economy since Bretton Woods.²⁹³ Path dependence is also inapposite for explaining the current financial architecture. This is because the theory implies that small details in initial conditions can be surprisingly persistent, but does not suggest that large shocks to a system *cannot* shift the course of institutional development; and, the 2008 Crisis was the largest shock to global finance in eighty years.²⁹⁴ The response to the 2008 Crisis produced Dodd-Frank, for example, which is commonly seen as most expansive piece of financial regulation since the New Deal legislation that established modern U.S. banking and securities law. As shown in the discussion of proposals for a WFO above, the rational choice analysis provided in this Article can explain why states have not developed institutions capable of facilitating optimal cooperation on finance—despite the historic, path-breaking events of 2008—without stumbling into the evidentiary problems facing the path dependence hypothesis.

Another common alternative approach looks to the incentives of sub-state actors, such as interest groups, to explain patterns of international cooperation that are claimed to be otherwise inexplicably irrational from the perspective of states.²⁹⁵ Interest group level analyses are potentially valuable supplements to a rational-state approach, because they can provide specifics concerning the terms that states prefer be incorporated into international agreements. For example, an interest group analysis can be useful in determining which standards are likely to be harmonized as part of a coordination game, or which definitions of regulatory capital are pursued during the negotiation of capital adequacy agreements.²⁹⁶

At the same time, interest group or other sub-state explanations may flounder when they seek to displace the unitary state assumption by claiming, for instance, that in the “decentralized regulatory space [of international finance], the national–international dichotomies associated with public international law do not apply.”²⁹⁷ Many of these studies seek to

293. Trade law moved from substantially non-existent at Bretton Woods, to treaty-based with the GATT, to being administered through an international organization, the WTO. International monetary coordination was initially administered through a formal international organization, the IMF, but was abandoned completely in 1973 with the switch to floating exchange rates. *See supra* Sections I.A, B.

294. In path dependence jargon, one would say that both the 2008 Crisis and Bretton Woods represent “critical junctures” with lasting effects. *See Pierson, supra* note 289, at 251.

295. *See Gadinis, supra* note 9, at 449 (“Existing theories cannot explain why states have agreed to coordinate in some areas of financial regulation but have maintained divergent laws in others.”); *Simmons, supra* note 17, at 590 (“Nor are prevalent theories of cooperation very useful in explaining the variance we see in the role and strength of international institutions in this area . . . why are they much less developed in the regulation of financial markets than in trade?”); *see also SINGER, supra* note 17, at 2–3; *Verdier, supra* note 9, at 1422–24.

296. *See, e.g., SINGER, supra* note 17; *TARULLO, supra* note 36.

297. *See How International Financial Law Works, supra* note 9, at 273. Analogy can be made to a model in which firms seek to maximize profits. Such a model will not be able to predict in great detail which products firms will produce in seeking profits, or which firms will

demonstrate such a point by giving a detailed description of a handful of cases, finding some common characteristics across the cases, and back-fitting these characteristics as explanatory variables in a theory that predicts the case studies. This type of exercise runs into two problems: (1) because the variables identified are custom fit to explain the case studies, they are contradicted by many cases not examined by the author; or (2) factually rich explanations of the cases yield so many subjective and qualitative variables (and caveats as to when they apply) that they have no observable implications, and amount to descriptions of unique events.²⁹⁸

The safer and simpler approach used in this Article proceeds by assuming that “[d]omestic factors account for [state] preference formation, but not the outcomes of international bargaining.”²⁹⁹ By applying this framework to the four most pressing financial interdependence problems, this Article seeks to demonstrate that “national-international dichotomies” remain critical for explaining the most important features of international cooperation on finance.

2. A Critique of Transgovernmental Networks and Soft Law Literatures

A prominent strand in the international law literature that tries to “unpack the state” focuses on the emergence of transgovernmental networks (TGNs, or networks) of domestic regulatory agencies and their increasing role in global governance.³⁰⁰ A growing, related literature emphasizes the distinction between “hard” international treaty law and the “soft” (informal, non-binding) law that is generated by networks.³⁰¹ For case studies and evidence to support their claims, both groups of scholars naturally gravitate towards finance, where soft law-producing networks are prominent.³⁰² This Article provides a critique of the networks and soft law literatures and reveals that their conclusions are weak on two

be profitable. Adding in these details requires additional factual investigation. However, when close descriptions of individual cases leads to an argument that the profit maximization assumption should be dropped, the explanatory power of the original model is lost.

298. See *id.*, at 295–302 (picking four cases studies, including one on money laundering, without explaining why they were chosen, and fitting them into a 2x2 matrix defined by binary variables of “adjustment costs” (high/low) and “disciplinary power” (strong/weak). The “disciplinary power” variable is in turn determined by the “kinds of tools employed” and the “effectiveness with which they operate.”); Gadinis, *supra* note 9, at 452–54 (creating a 2x2 matrix based on the binary variables of “market dominance” (strong/contested) and geographic “market centralization” (centralized/dispersed) and providing four cases studies, which were selected because they “illustrate” each quadrant.); Simmons, *supra* note 17, at 601–15 (creating a 2x2 matrix based on the binary variables of “negative externalities” (significant/insignificant) and “incentives to emulate” (high/low), and providing four supportive cases studies, including money laundering).

299. DREZNER, *supra* note 7, at 6. See generally, Putnam, *supra* note 7.

300. See Slaughter & Zaring, *supra* note 18, at 212 (citing to the networks literature).

301. See *supra* 19 (citing to the soft law literature).

302. *Informal Procedure*, *supra* note 19, at 549 (“Nowhere is internationalization of administration more clear than in the area of financial regulation.”).

levels: (1) as evaluations of the concrete, welfare-enhancing cooperative outcomes that networks and soft law mechanisms actually produce; and (2) as purely descriptive assessments of the volume and proportion of international cooperation on finance that is provided through networks and soft law.

Transgovernmental networks have been defined a variety of ways, but they share three core features: first, they are informal, multilateral bodies that are not established pursuant to treaties; second, their membership consists of domestic regulatory agencies rather than diplomats or heads-of-state;³⁰³ and third, networks formulate rules and agreements that are made by consensus and do not constitute formally binding international law (thus, “soft law”).³⁰⁴ As a result of this structure, networks are seen as essentially technocratic organizations that pool expertise rather than political bargaining tables of high diplomacy.³⁰⁵ Several of the most high profile networks—including the Basel Committee, IOSCO, and the Financial Stability Board—are concerned with the regulation of finance. Crucially for networks theorists, networks are not merely the instruments of states. Instead, networks “allow domestic officials to interact with their foreign counterparts directly, without much supervision by foreign offices or senior executive branch officials”³⁰⁶ and thereby achieve a degree of autonomy from states which enables them “act independently on the world stage.”³⁰⁷

International “soft law” is a vague, residual term that is used to describe international rules and agreements that do not rise to the level of formally binding international law, yet retain some of the trappings of le-

303. In contrast to formal international organizations established pursuant to treaties, such as the United Nations, IMF, WTO, or EU, networks do not possess an independent international legal personality. See Raustiala, *supra* note 18, at 5 (“[TGNs] are ‘transgovernmental’ because they involve specialized domestic officials directly interacting with each other, often with minimal supervision by foreign ministries. They are ‘networks’ because this cooperation is based on loosely-structured, peer-to-peer ties developed through frequent interaction rather than formal negotiation.”).

304. See Verdier, *supra* note 67 at 118 (“TRNs tend to operate by consensus without formal voting procedures . . . [m]ost importantly, the guidelines and other documents they promulgate have no international legal status, meaning that they do not create international legal obligations and do not require the same cumbersome domestic ratification procedures as treaties.”).

305. See *International Law by Other Means*, *supra* note 18, at 317 (“[TGNs] are task-specific international organizations of financial bureaucrats. They engage in the sort of technical rulemaking in which politics are theoretically downplayed and expertise is valued.”); Raustiala, *supra* note 18, at 24 (“The rise of networks is aided by the perception that many regulatory issues are technocratic.”); Pan, *supra* note 156, at 255 (“[T]ransnational governmental networks serve as aggregators of information and clearinghouses for the sharing of technical expertise.”).

306. Slaughter & Zaring, *supra* note 18, at 215.

307. Anne-Marie Slaughter, *A Grand Strategy of Network Centrality*, *Center for New American Security*, in CENTER FOR NEW AMERICAN SECURITY 43–57, (Richard Fontaine & Kristin M. Lord eds., 2012).

gality and are not purely political agreements.³⁰⁸ Examples of financial regulation through soft law include the Basel Accords, IOSCO's *Multilateral Memorandum of Understanding*, and codes of best practices such as the IAIS's *Insurance Core Principles and Methodology*. Soft law's non-binding character is said to provide certain advantages relative to hard law, namely ease of agreement and amendment, and therefore flexibility. At the same time, soft law allows states to spell out commitments more precisely than is usually the case with high-level political or diplomatic understandings.³⁰⁹ The soft law literature is connected to and overlaps with scholarship on networks, because the outputs of financial networks are non-binding and take the legal form of soft law.

A central thrust of the networks and soft law literature is that, as a descriptive matter, "the 'soft law' character of international financial regulation [i]n contrast to areas like international trade," is an essential feature of international cooperation on finance—or "how international financial law works."³¹⁰ Importantly, this scholarship does not simply maintain that soft law is a notable or non-trivial component of international financial regulation, but rather concludes that the field is "dominated" by networks and their soft law products; as Chris Brummer states:

[H]ard law institutions and instruments play a very limited role in the regulation of finance, especially at the global multilateral level . . . Instead, most of the sources of international financial law are informal, intergovernmental institutions that set agendas and standards not grounded by treaty, but instead usually operate according to consensus and non-binding by-laws. Furthermore, coordination is not dominated and led by heads of state, but instead by central banks, regulatory agencies and supervisors, and finance ministries.³¹¹

David Zaring also echoes the claim that finance is the exclusive domain of networks, arguing that, "it is only networks that are used to regulate international finance."³¹² In a book length treatment of the subject, Andrew Singer makes the somewhat more qualified assertion that "[i]nternational financial regulatory agreements are a prime example of

308. See Abbott & Snidal, *supra* note 19, at 422 ("We use the shorthand term soft law to distinguish this broad class of deviations from hard law—and, at the other extreme, from purely political arrangements in which legalization is largely absent."); Andrew T. Guzman, *The Design of International Agreements*, 16 EUR. J. INT'L L. 579, 583 n.18 (2005) ("There is no single agreed-upon definition of soft law. One approach is to identify what soft law is not. It is not 'hard law', by which is meant treaties or custom, nor is it a purely political understanding without a legal component. Rather, soft law is what lies between these two alternatives.").

309. See Abbott & Snidal, *supra* note 19, at 423.

310. *How International Financial Law Works*, *supra* note 9, at 261.

311. Brummer, *supra* note 19, at 627.

312. *Finding Legal Principle*, *supra* note 19, at 713.

‘soft law’ . . . At a descriptive level, the international activity of financial regulation is consistent with the rise of ‘transgovernmentalism.’”³¹³

Networks, and the soft law instruments that they promulgate, are not only considered the most active participants in the international regulation of finance, they are also held to produce results. The literature has attributed a strong role to networks in effectively facilitating international cooperation, both before and after the 2008 Crisis. In her seminal work on the subject, Anne-Marie Slaughter argues that networks “solve the globalization paradox . . . [by] expanding our global governance capacity without centralizing policy-making power,”³¹⁴ and in doing so, can “improv[e] the quality and depth of cooperation across nations.”³¹⁵ For example, “[n]etworks offer an alternative to the paradigm of a regulatory race to the top or bottom . . . network regulation avoids the race.”³¹⁶ This positive assessment has not been substantively revised in light of the 2008 Crisis. In 2011, Chris Brummer wrote that financial soft law can “help ‘nudge’ actors into accounting for the negative macroeconomic externalities of certain forms of business conduct,” and hailed soft law best practices codes as “legislative achievements.”³¹⁷ And in 2012, David Zaring made equally strong claims on behalf of networks, declaring that they are the organizations leading “the international financial regulatory process, a process that is likely to be the foremost achievement of international cooperation in the twenty-first century.”³¹⁸

Much of the networks and soft law literature, including the examples quoted above, substantially overstates the concrete cooperative outcomes that have been generated by these mechanisms. This becomes clear when the output of networks is measured against the externalities posed by international finance, as delineated by the four interdependence problems presented in this Article.

First, the harmonization of standards has been handled at least as successfully by purely private industry organizations, such as the ISDA and IASB, as it has been by networks of regulators such as IOSCO or the IAIS.³¹⁹ In fact—although the networks literature distinguishes private industry groups from networks and argues that the former are inferior policy-making bodies³²⁰—one financial economist has hailed the ISDA’s efforts as “the most successful international harmonization achievement over the last two decades.”³²¹

313. SINGER, *supra* note 17, at 9–10.

314. SLAUGHTER, *supra* note 18, at 167.

315. Slaughter & Zaring, *supra* note 18, at 225.

316. *Id.*, at 217.

317. *How International Financial Law Works*, *supra* note 9, at 263, 279 (referring in particular to IOSCO’s Core Principles).

318. *Finding Legal Principle*, *supra* note 19, at 686.

319. *See supra* Section II.A.

320. *See, e.g.*, SLAUGHTER, *supra* note 18, at 9–10.

321. Herring, *supra* note 125, at 41–42 (quoting Richard Herring regarding the ISDA); *see generally* Gabriel V. Rauterberg & Andrew Verstein, *Assessing Transnational Private*

Second, in what is likely the most ambitious regulatory project pursued by a network, the Basel Committee has taken the lead on ex ante efforts to maintain financial stability through its capital adequacy requirements.³²² But the first two iterations of the Basel Accords did not have a discernible, positive impact on the risk-taking of financial institutions, and Basel III pursues a roughly similar approach.³²³ The Basel Accords provide no support for Slaughter's claim that network regulations present an "alternative paradigm" that "avoids the race [to the bottom]," nor for Brummer's assertion that networks can successfully nudge private actors into internalizing the costs of negative macroeconomic externalities arising from their business conduct.

Third, networks simply did not address coordination of cross-border bank resolutions before the 2008 Crisis, and early post-2008 efforts in the area appear to have stalled.³²⁴

Fourth, networks have not been involved in the provision of an international lender of last resort function. That role has been handled exclusively by the treaty-based IMF, at times in concert with regional treaty-based entities such as the ECB and European Community.³²⁵

And lastly, with respect to any of the four financial interdependence problems, it is a challenge to identify what concrete progress has resulted from the panoply of hortatory standards and principles documents issued by networks such as the Basel Committee, IOSCO, IAIS, and the FSF.³²⁶ There is a marked disconnect, then, between the track record described above and the achievements that much of the networks literature attributes to those organizations and their soft law products.

Putting aside questions of efficacy, this Article also shows that claims regarding the centrality of networks and soft law to international financial regulation provide an inaccurate description of the form that international cooperation on finance takes. Far from being "dominated" by networks and soft law, important aspects of international financial cooperation either lack any legal dimension, or involve traditional hard law international organizations. A clear example of non-legal cooperation is the prevalence of private industry groups, such as the aforementioned ISDA and IASB which are as numerous and active in harmonizing financial standards as

Regulation of the OTC Derivatives Market: ISDA, the BBA, and the Future of Financial Reform, 54 VA. J. INT'L L. 9 (2013) (arguing that the ISDA's effectiveness as a regulatory body has been largely overlooked).

322. See Barr & Miller, *supra* note 164, at 17 ("Basel Committee is perhaps the most important example of a transgovernmental regulatory network that exercises vast powers").

323. See *supra* Section II.B. Several distinguished commentators go so far as to claim that Basel II actually *increased* the risk taking of financial firms, and that its "end result has been a disaster." ACHARYA ET AL., *supra* note 139, at 18. See also Lall, *supra* note 168 (citing ADMATI & HELLWIG, *supra* note 30, for their argument to the same effect).

324. See *supra* Section II.C.1.

325. See *supra* Section II.C.2.

326. See *supra* note 105 and accompanying text (quoting certain provisions from these documents as examples in support of Drezner's argument that they are "sham" standards).

are networks.³²⁷ Another is the central role of the G20, a purely political forum led by heads of states.³²⁸ The G20 was the focal point of international cooperation in the immediate aftermath of the 2008 Crisis, and set the crisis management agenda.³²⁹ Importantly, much of the soft law that has been generated by networks following the 2008 Crisis, including Basel III, has been: (a) an elaboration of policies that were formulated by the G20; (b) subject to the G20's approval, and (c) drafted by organizations, such as the FSB, that were established pursuant to G20 directives.³³⁰ Networks have therefore played an essentially ancillary role to the G20 in post-2008 international cooperation on finance.

With respect to hard law, the IMF provides surveillance of the global financial system and monitors the implementation of soft law principles that have been drafted by networks and approved by the G20.³³¹ Over the past thirty years, the IMF has also regularly intervened in international financial markets in its capacity as an international lender of last resort. It seems fair to say that the IMF's billion-dollar emergency loans—extended during financial crises in Latin America, Europe, Asia, and Russia—constitute an effort at international cooperation on finance that is greater in scale than all of the networks's standards-and-principles documents combined. Furthermore, since the 2008 Crisis, the potential breakup of the Eurozone is widely considered to be the gravest threat to global financial stability, yet the euro-crisis has been exclusively managed by a “troika” of entities established pursuant to hard law treaties: the IMF, the ECB, and the European Community. It is therefore inaccurate to claim that the landscape of international cooperation on finance is “dominated” by networks and soft law mechanisms. In truth, networks and soft law are but one piece of a complex patchwork of institutional forms that states use to address the interdependence problems raised by global finance.

327. See *supra* Section II.A.2. Industry associations are simply groups of corporations and by definition cannot formulate law of any kind. To the extent that they work with domestic governments that implement their recommendations through statutes, they are a hard law phenomenon. See SLAUGHTER, *supra* note 18, at 18–19 (citing to Slaughter's distinction between private industry groups and networks of regulators).

328. See *Institutional Performance*, *supra* note 55, at 477, 485 (“[T]he G20 is not a legal or technocratic institution at all; it is a modern-day Concert of Europe . . . [and is] antithetical to the technocratic expertise that networks try to represent.”).

329. See *supra* Section I.D; Eernisse, *supra* note 84; *Institutional Performance*, *supra* note 55 (arguing that this was the case).

330. Basel III was drafted at the behest of the G20 and subject to its approval. See *supra* notes 87 & 173 and accompanying text. The G20 also established the Financial Stability Board, defined its mandate, and requires the submission of its products—such as the FSB Bank Resolution Principles—for G20 approval. See *supra* notes 85 & 86 and accompanying text.

331. See *supra* notes 65 & 66 and accompanying text (describing the IMF's many surveillance programs).

CONCLUSION

The law of international financial regulation was, until recently, a relatively obscure area consisting of arcane agreements and acronym-laden organizations. The New International Financial Architecture, a label given to the cluster of rules and institutions assembled in response to the 1990s crises in Mexico and Asia, embodied a technocratic ideal and for a time appeared to be a regulatory success. But the global financial crisis of 2008 revealed the frailty of the NIFA framework in dramatic fashion, and gave impetus to a new round of international institution building and regulatory reform. In the wake of the 2008 Crisis, the question of how to ensure the efficiency and stability of global finance has become a central issue for international law, and the future of the world economy.

This Article has provided a framework that simplifies how this increasingly complicated field can be understood. It has done so by identifying the specific externalities that are a byproduct of cross-border finance: the four interdependence problems relating to harmonization of standards, capital adequacy, cross-border resolution of failed institutions, and an international lender of last resort function. Using a game theoretic approach that assumes states are the rational protagonists of international law-making, it then analyzes whether or not international regulatory projects—such as the Basel Accords, IMF surveillance and emergency lending, or the G20 economic summits—have been or will be effective at addressing the interdependence problems at issue. The mixed conclusion is that post-2008 reforms will struggle to reduce the growing instability of globally integrated finance, but will have more success with regulatory harmonization aimed at capturing the efficiency gains that integration makes possible.

Although skepticism over the effectiveness of the current financial architecture may appear to justify a more ambitious regulatory approach, this Article's analysis has cautioned against calls for radical reform, such as proposals for a World Financial Organization. Attempts to centralize and legalize the regulation of global finance will suffer from the same problems of incentive-incompatibility and information constraints that afflicted the pre-2008 architecture. A more effective approach is to pursue incremental policies that focus on scaling regulatory cooperation from the global to the regional level, or that harmonize regulatory standards in areas that present strategic problems of coordination rather than prisoner's dilemma-type cooperation problems. Two regulatory projects that illustrate the promise of an incremental approach are efforts to harmonize resolution plans for multinational financial firms and the development of regional lenders of last resort.

Most fundamentally, this Article has sought to demonstrate that the literature on international financial regulation and public international law could benefit from an occasional retreat to the broader view, at the expense of close descriptions of recent or small-scale institutional trends. Contrary to common critiques that make a straw man of rational choice analysis, a bird's eye, rational-state approach gets the big explanatory

questions about compliance and effectiveness in international financial regulation roughly right. At the same time, analyses that focus on fine-grained descriptions or introduce more complex variables, the most important of which are the networks and soft law literatures, can lead one seriously astray. In comparison, the framework presented here has provided a more accurate and parsimonious story of how international cooperation on financial regulation works.