For Diversity in the International Regulation of Financial Institutions:
Rethinking the Basel Architecture

Roberta Romano*

Yale Law School, NBER and ECGI

Draft: April 5, 2012

* Sterling Professor of Law and Director, Yale Law School Center for the Study of Corporate Law. Versions of this paper were presented as the Henry J. Miller Distinguished Lecture at Georgia State University College of Law, the Osler, Hoskin and Harcourt Business Law Lecture at Dalhousie University Schulich School of Law, and a lecture at the Chapman Tripp law firm in Auckland, New Zealand. In addition to audience comments at the lectures, I have benefitted from comments of participants in the Columbia Law School’s Corporate Law Reading Group and Law and Economics Workshop, the Paris/Sorbonne/ETH Zurich Paris Law & Finance Workshop and Lecture Series, and faculty workshops at the Duke, Fordham and Yale Law Schools and the University of Colorado at Boulder Leeds Business School, and Gary Gorton, Michael Klausner, Alvin Klevorick, Robert Litan, Jonathan Macey and Charles Whitehead.

Please do not quote, cite or circulate without permission of the author. Comments welcome.
Abstract

This paper challenges the prevailing view of the efficacy of harmonization of international financial regulation and provides a mechanism for facilitating regulatory diversity within the Basel Accords framework. Recent experience suggests that regulatory harmonization can increase, rather than decrease, systemic risk. By incentivizing financial institutions worldwide to follow broadly similar business strategies, regulatory error contributed to a global financial crisis. Furthermore, the fast-moving, dynamic nature of financial markets renders it improbable that regulators will be able to predict with confidence what optimal capital requirements or other regulatory policies are to reduce systemic risk, the objective of global harmonization efforts, nor what future categories of activities or institutions might generate systemic risk. As a consequence, there are bound to be regulatory mistakes, both large and small. Moreover, an internationally-harmonized regime impedes the acquisition of information concerning the comparative effectiveness of differing regulatory arrangements, lowering the quality of decisionmaking, as nations are discouraged from experimenting with alternative regulatory arrangements.

The paper contends, accordingly, that there is, on balance, value in increasing the flexibility of the international financial regulatory architecture and advocates, as a means of implementing that goal, permitting regulatory diversity and experimentation within the existing Basel framework. It proposes making the Basel architecture more adaptable by creating a procedural mechanism by which departures along multiple dimensions from Basel’s strictures would not only be permitted but would be encouraged, while providing safeguards, given the limited knowledge that we do possess, against the ratchetting up of systemic risk. The core of the proposal is peer review of proposed deviations from Basel, and ongoing monitoring of departures, for their impact on global systemic risk. If a departure were found to increase systemic risk, it would be disallowed. Such a mechanism would improve the quality of regulatory decisionmaking by providing both information on what regulation works best under what circumstances, and a safety valve against a regulatory error’s increasing systemic risk, by reducing the likelihood that international banks will all follow broadly similar flawed strategies in response to regulatory incentives.
# Table of Contents

I. Introduction

II. Rationale for Financial Regulation and the Financial Crisis of 2008-09
   A. Regulation to Avoid Systemic Risk
   B. International Regulatory Harmonization in the Basel I and II Accords
   C. The Basel Capital Requirements and the Financial Crisis of 2008: Contagion in the Shadow Banking Sector
      1. Overview of the Shadow Banking Sector and the Onset of the Crisis
      2. The Crisis in the Shadow Banking Sector as a Modern Day Banking Panic
      3. The Performance of Basel-Compliant Financial Institutions during the Financial Crisis versus Entities Operating Outside of Basel
      4. The International Regulatory Response to the Crisis: Basel III

III. Was the Basel Accord Effective in Meeting Its Stated Goals prior to the Financial Crisis?
   A. The Relation between Banking Regulation and Bank Performance and Financial System Stability
      1. Basel Committee Study Assessing the Effectiveness of Basel I’s Capital Requirements
      2. Assessing Basel I and II Using Bank Regulator Surveys
   B. The Relation between Banking Regulation and Bank Competitiveness

IV. Fostering Experimentation and Flexibility in International Financial Regulation
   A. Modifying the Basel Architecture to Increase Adaptability
      1. How Can International Financial Regulation that Is Amenable to Experimentation be Operationalized?
         a. Member State Initiation of the Review Process
         b. Peer Review Procedure
         c. Ongoing Oversight and Evaluation
      2. Illustrations of Possible Proposals
         a. Altering Basel Risk Weights
         b. Alternative Regime: Subordinated Debt
   B. Cross-Border Issues
      1. Cross-Border Coordination under Basel
      2. Cross-Border Coordination in a Regime with Regulatory Diversity
      3. Impact on International Banks
      4. Regulatory Arbitrage

V. Conclusion
I. Introduction

Central bankers and bank supervisors have spearheaded, for several decades, a cross-national effort to harmonize regulation of large internationally active banks under the aegis of the Basel Committee on Banking Supervision. Beginning in the 1980s, the Basel Committee sponsored the development of uniform capital requirements, that were agreed to in 1988 by central bankers of the G-10 countries in the Basel Capital Accord (Basel I) and modified with Basel II (2004) and Basel III (2010).\(^1\) Over 100 nations subscribe to the Basel accords, whose objectives are both to increase financial system stability (i.e., to reduce systemic risk, the risk that the failure of one financial institution leads to a cascading failure of other institutions, bringing down the entire financial system), and to equalize large international banks’ competitive positions by subjecting all such banks to the same capital requirements.\(^2\)

In the aftermath of the 2008 global financial crisis, the initiative for global harmonization of the regulation of financial institutions quickly moved up on the policy agenda as elected

\(^1\) The Basel Committee is a unit of the Bank for International Settlements, which was established in 1930 as a bank for central banks, and “fosters international monetary and financial cooperation” across central banks. See http://www.bis.org/about/index.htm (self-description). The Committee was created in 1974 by the central bankers of the G-10 nations to coordinate supervisory standards. It has no legal authority but it recommends best practices and has been the negotiating forum for capital measurement and standard accords of the member central banks. See its self description in History of the Basel Committee and Its Membership (August 2009), at: http://www.bis.org/bcbs/history.htm. The three Basel regimes are described in parts II.B and II.C.4, infra. The G-10 or Group of Ten consists of the eleven industrial nations that cooperate on international economic, monetary and financial issues, and whose finance ministers and central bankers meet once a year in connection with the annual meetings of the International Monetary Fund and World Bank.

\(^2\) As discussed in part II.C.4, Basel III states as its sole objective, the reduction of systemic risk, but the continued importance of leveling the playing field for international banks has been evident in the negotiations and substantive output.
officials and not solely central bankers emphasized the need for regulatory harmonization as a self-evident proposition. As a consequence, the scope of international regulatory harmonization efforts has expanded beyond the Basel capital adequacy framework. For example, the 2010 Dodd-Frank financial reform act requires federal regulators to promote international harmonization by coordinating with other nations’ regulators on standards for swap contracts, and by identifying areas in the regulation of swaps and clearing houses where U.S. regulations could be harmonized with Asian and European regulations.\(^3\) In addition, the G-20 and Financial Stability Board called for international harmonization of financial executives’ compensation, to be implemented through the Basel committee.\(^4\)

This paper offers a decidedly different perspective from that informing the Basel accords and other recent initiatives in the European Union and United States. It challenges the present-day enthusiasm for international regulatory harmonization and the view that harmonization is a panacea for reducing systemic risk. The focus is instead on the need for a more flexible financial

\(^3\) Sections 753, and 719(c) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (July 21, 2010) (hereafter Dodd-Frank). Swaps are contracts to exchange cash flows, which principally relate to interest rates, foreign exchange rates, credit defaults, and to a lesser extent, returns on equity securities. These contracts are traded off-exchange in institutional markets. As the Financial Times put it, “‘What we need is a co-ordinated regulatory response.’ In the aftermath of the financial crisis, barely a day goes by without a world leader somewhere chanting this mantra.” Fin. Times, Feb. 2, 2011, p. 14.

\(^4\) Financial Stability Board, FSB Principles for Sound Compensation Practices Implementation Standards 1 (2009). The Financial Stability Board brings together national bank regulators and international standard-setting organizations to “develop and promote the implementation of effective regulatory, supervisory and other financial sector policies.” Overview, [http://www.financialstabilityboard.org/about/overview.htm](http://www.financialstabilityboard.org/about/overview.htm). The G-20, or Group of Twenty, consists of the financial ministers and central bank governors of 19 industrial and emerging market countries plus the European Union, which represent 90 per cent of global gross national product, 80 percent of world trade and 2/3 of the world’s population. About the G-20, Membership, [http://www.g20.org/about_what_is_g20.aspx](http://www.g20.org/about_what_is_g20.aspx).
architecture that provides greater room for regulatory diversity, given the uncertain and dynamic environment in which financial institutions operate.5

It is not, of course, an altogether uncharted contention that efforts at international financial regulatory harmonization could be seriously misdirected and have the potential for causing far greater mischief, if not catastrophic error, than the posited financial concerns spurring the initiative. Over fifteen years ago, for instance, Richard Herring and Robert Litan recognized the potential problem created by international harmonization, and George Benston concluded, upon analyzing eight reasons that could support regulatory harmonization derived from public and private interest theories of banking regulation, that none provided a convincing rationale.6 As Herring and Litan succinctly and aptly put it, “While it is easy to be enthusiastic about harmonizing the right rules, in a rapidly changing financial system there is a very real danger that the wrong rules will be harmonized, or that rules that may be right for the moment will become

5 Two recent articles are also critical of financial regulation harmonization, although from somewhat different perspectives: Lawrence A. Cunningham and David Zaring, The Three or Four Approaches to Financial Regulation: A Cautionary Analysis Against Exuberance in Crisis Response, 78 Geo. Wash. L. Rev. 39 (2009-10) (critiquing U.S. financial regulation reforms that would consolidate existing multiple regulators and noting benefits of existing disaggregated regulatory regime); and Charles K. Whitehead, Destructive Coordination, 96 Cornell L. Rev. 323 (2011) (critiquing regulatory coordination for inducing portfolio managers to act in unison which is inconsistent with modern risk management principles premised on individual actors being independent and not affecting others’ decisions or the marketplace, and thereby renders use of risk management ineffective.) In an earlier conference comment I touched on the theme of this paper. Roberta Romano, Against Financial Regulation Harmonization: A Comment, in P. Nobel, K. Krehan and A. Tanner, eds., Law and Economics of Global Financial Institutions 27 (2010).

wrong after they are implemented.” More recently, Andrew Haldane of the Bank of England related the 2008 financial crisis to homogeneity in financial institutions’ business strategies and management of the resultant risks, which, he noted in passing, were harmonized by Basel II. Advocating a restructuring, and not a jettisoning, of the Basel regulatory approach, this paper draws on that skeptical literature, which has, regrettably, largely been overlooked in the contemporary discourse on international financial regulatory reform.

The paper proceeds by first providing an overview of the core rationale for the regulation of financial institutions – prevention of systemic risk, whose cost individual banks will not internalize – and the international accords (Basel I, II and III) that have been adopted to advance that goal through international regulatory harmonization with an emphasis on standardized minimum capital requirements. It then discusses the relation between the 2008-09 financial crisis and the international financial regulatory system, which incentivized international banks to follow broadly similar business strategies of holding assets at the epicenter of the crisis. To be clear, the contention is not that the Basel regime caused the financial crisis. Rather, the claim is

7 Herring and Litan, supra note 6, at 134.

8 Andrew Haldane, Rethinking the Financial Network, 53 BIS Review1, 10-11 (2009). In contrast to this paper’s analysis, Haldane does not advocate the need to rethink the harmonization of international financial regulation; rather, he advocates redirecting regulatory efforts at altering the organization of firms and markets to reduce the transmission of shocks in the financial network. But this paper’s solution is not inconsistent with his because financial institutions operating under different regulatory regimes will be incentivized to follow different business strategies, which will reduce financial network interconnections and contagion. This paper’s analysis and proposal are also in the spirit of Charles Sabel’s work advocating regulatory experimentalism and pragmatic organizational design. E.g., Charles F. Sabel, A Real-Time Revolution in Routines, in Charles Heckscher and Paul S. Adler, eds., Firm as a Collaborative Community: Reconstructing Trust in the Knowledge Economy (2006); Charles F. Sabel and William H. Simon, Minimalism and Experimentalism in the Administrative State, 100 Geo. L. J. 53 (2011).
that the international financial regulatory regime magnified the severity and global reach of the crisis, a role that has all too often been overlooked by those offering “fixes” of the regulation of financial institutions.

Empirical research examining how the international regulatory efforts stacked up in less turbulent times is thereafter reviewed. A fair reading of that literature suggests that Basel’s harmonized capital requirements have not measurably advanced its stated goals of increasing system stability and leveling the playing field. Given a history that can most accurately be characterized as one of repeated disappointment during “normal” times and, in the financial crisis, outright failure, by contributing to the crisis, the paper advocates opening up the harmonized regime to experimentation and develops a mechanism by which meaningful regulatory diversity could be introduced into the international financial regulatory architecture by means of a mechanism which would reject modifications that would increase systemic risk.

The paper’s contention is two-fold. First, regulatory diversity provides a safeguard against regulatory error: when regulation is globally harmonized, flawed policies can aggravate systemic risk, by putting banks in all nations at risk. Second, by enabling experimentation across nations regarding regulatory strategy, regulatory diversity will provide information concerning which approaches to financial regulation work best. The conventional objection to regulatory diversity, that it fosters regulatory arbitrage in which financial institutions will locate themselves or their transactions in the regime with the least stringent regulation with adverse consequences for the global financial system, is not applicable to the proposal. The proposed mechanism for approving national departures from Basel, would not permit regulatory diversity if there were a showing of anticipated increased systemic risk. Moreover, all nations would retain control over
banks operating within their jurisdiction, and therefore financial institutions’ operation under different regimes would be geographically-delimited, further cabining the possibility for hypothesized destructive regulatory arbitrage to take place.

In advocating the need for far greater flexibility in the international regulation of financial institutions, the contention is not that there is no role for international regulatory coordination or cooperation. Far from it, there is a self-evident need to share information and coordinate enforcement efforts among national financial authorities, whether or not international financial regulation is harmonized. Moreover, the paper’s contention is not that global systemic risk is of no concern. Rather the claim is that adherence to a globally-harmonized regime is less effective for addressing systemic risk than flexible international regulatory coordination that makes possible departures from a uniform approach.

The truth is that the current state of knowledge does not permit us to predict, with a satisfactory degree of confidence, what the optimal capital requirements or other regulatory policies are to reduce systemic risk, the objective of global harmonization efforts, nor, indeed, what future categories of activities or institutions might generate systemic risk. Moreover, notwithstanding considerable advances in knowledge, the fast-moving dynamic of financial markets renders it improbable that any future state of knowledge would enable us to make such predictions with confidence. History teaches that those who think otherwise will be sorely disappointed.

Risk management in today’s world of complex financial institutions and instruments must
grapple with unknown and unknowable, and not simply known, risks. 9 Yet the Basel approach mistakenly has focused the attention of the private sector, regulators and academic researchers on knowns, that is, on measuring capital adequacy through statistical probabilities of risks, disregarding the need for adaptivity to the challenge of unknown, and unknowable risks. 10 If globally harmonized regulation is mistaken regarding the calculation of risk and interaction of incentives – a meaningful possibility given experience – then harmonization may well exacerbate, rather than reduce, systemic risk. 11

9 Francis Diebold and colleagues identify these three constructs as comprising a conceptual framework for financial risk management. Defined from the point of view of knowledge as measurement, a “known” is “a situation where the probability distribution is completely specified” (e.g., Frank Knight’s definition of risk); an “unknown” is “a situation where probabilities cannot be assigned to at least some events” (e.g., Knight’s definition of uncertainty); and an “unknowable” is “a situation where even the events cannot be identified in advance–neither events nor probabilities are known.”) Francis X. Diebold, Neil A. Doherty and Richard J. Herring, Introduction in, Francis X. Diebold, Neil A. Doherty and Richard J. Herring eds., The Known, the Unknown, and the Unknowable in Financial Risk Management 1, 3 (2010). Moreover, knowledge of past relations across asset returns, used in risk management, can be misleading, for in times of financial stress, asset correlations not only change, id. at 25, but also increase significantly, e.g., Stefan Erdorf and Nicolas Heinrichs, Co-movement of Fundamentals: Structural Changes in the Business Cycle, Cologne Graduate School Working Paper 01-20 (2010), available at http://ssrn.com/abstract=1609570 (finding correlation of stock returns higher during crisis, and citing other studies with similar findings).

10 Diebold et al., supra note 9, at 5. As Diebold et al. put it, “many financial situations are often incorrectly diagnosed as known, [while] unknowns and unknowables are much more common than typically acknowledged,” noting, for example, the work of Nassim Taleb on “black swans,” and the failure of banks’ risk models in the current crisis, as they focused on certain known probability distributions of events, and did not account for long tail events. Id. at 25. Tim Harford also emphasizes the critical need for institutional adaptivity given the complexity of issues that need to be resolved in the modern world. Tim Harford, Adapt: Why Success Always Starts with Failure (2011).

11 Diebold, et. al, supra note 9, at 27 (“The ambitious new Basel II approach attempts to incorporate in capital regulation what is known about risk management, but it may generate unintended consequences that could shift the financial system into the domain of the unknown. The attempt to force all major firms to adopt one version of “best practice,” and especially the
Given our limited understanding of the impact of financial regulation, for we are operating, to a great extent, in the dark, this paper contends that the goal should be to design a far more flexible, adaptable financial regulatory architecture that generates better information than the Basel regime and has built-in safety valves for mitigating devastating regulatory missteps, while still fostering financial innovation and economic growth. Such a regulatory arrangement would thereby lower the probability of the occurrence of a catastrophic event. The contention advanced is that a more flexible international regulatory regime facilitating regulatory diversity with appropriate safeguards has a better chance of being resilient and meeting such an objective than a top-down harmonized system.

To facilitate regulatory diversity, the paper proposes making the Basel regime more adaptable by not only permitting, but encouraging, departures from Basel strictures along multiple dimensions, while providing safeguards, given the limited knowledge that we do possess, against the ratchetting up of systemic risk. By contrast, the current Basel regime is intended to create minimum standards, which nations can ratchet up, but from which they are otherwise not expected to deviate.12 Stark departures from the Basel regulatory approach could

imposition of a regulatory model of credit risk, may increase the likelihood of herding, producing system-wide contagion in response to shocks.

12 Bank for International Settlements, 81st Annual Report 75 (2011) (“Like all Basel Committee standards, Basel III sets out minimum requirements”) (emphasis in original); Basel Comm. on Banking Regulations and Supervisory Practices, “Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework” 3 (June 2004), available at: http://www.bis.org/publ/bcbs107.htm (hereafter Basel II Framework) (“It should be stressed that the revised Framework is designed to establish minimum levels of capital .... As under the 1988 Accord, national authorities will be free to adopt arrangements that set higher levels of minimum capital. Moreover they are free to put in place supplementary measures of capital adequacy”) (emphasis in original), combined with unchanged Basel I elements in Basel Comm. on Banking Supervision, “International Convergence of Capital Measurement and Capital

13 There are subtle means by which nations could deviate from Basel requirements, but the principal historical examples do not provide much evidence of substantive regulatory variation of the type envisioned by the paper’s proposal. Nations could, for example, alter accounting standards in order to facilitate banks’ meeting the Basel capital requirements, as did Japan in the 1990s as its economy experienced a prolonged state of sustained financial distress. Charles K. Whitehead, What’s Your Sign?—International Norms, Signals and Compliance, 27 Mich. J. Int’l L, 695, 729 (2006). Japan’s action was undertaken to preserve their banks’ ostensible compliance with Basel while postponing the inevitable, a government bailout. Id. at 731. In addition, U.S. banking regulators permitted U.S. banks to rely on external credit rating agencies to determine capital requirements for certain recourse obligations and securitized assets in 2001, shortly after a consultative paper advocating that approach was issued by the Basel Committee but years before the approach was formally adopted in Basel II. See U.S. Dep’t of Treasury, Risk-Base Capital Guidelines; Capital Adequacy Guidelines; Capital Maintenance: Capital Treatment of Recourse, Direct Credit Substitutes and Residual Interests in Asset Securitizations; Final Rule, 66 Fed. Reg. 59,614 (2001) (hereafter “Recourse Rule”). Finally, given the politics of the negotiations, some items accepted as capital under Basel are used by only a few national regulators: for instance, tax deferred assets are included as capital under the Basel accords, but national regulators – except Japanese regulators, who sought that treatment – do not accept them as such for domestic banks. Douglas J. Skinner, The Rise of Deferred Tax Assets in Japan: The Case of the Major Japanese Banks, 46 J. Acct. & Econ. 218, 219-220 (2008). But none of these deviations are dramatic departures from the Basel framework, nor do they apply different methodologies to control risk from Basel, in contrast to the types of proposals contemplated by this paper. See part IV.A.2, infra.
global regulatory harmonization efforts. A deviating nation could further run the risk of being perceived as non-cooperative and be subjected to sanctions by Basel committee members, ranging from mild and relatively trivial ones, such as diplomatic slights, to more consequential retaliation. A sense of the contemporary mindset toward harmonization is, perhaps, best conveyed by the EU’s proposed implementation of Basel III, which would not even permit member states from upward deviations in capital requirements.\textsuperscript{14}

Under the paper’s proposed framework, the disincentives to adopt a regulatory strategy that differs from Basel’s mandates would be considerably reduced because the proposal formalizes a procedural mechanism for approving departures, that would render Basel requirements “off the rack” defaults which could be altered in any direction, subject to a peer review. In short, upon presentation in writing of a detailed, reasoned analysis to a committee of peer regulators with expert technical support, nations would be able to adopt regulations that reconfigure or reject elements of the Basel regime, or even to replace it with an entirely different regulatory approach.\textsuperscript{15} The review committee would undertake an evaluation of a proposal’s impact on global systemic risk, with a presumption of approval, to be rebutted by convincing evidence that it would, on net, increase global systemic risk. To facilitate flexibility and hence

\footnotesize{\textsuperscript{14} Nikki Tait, EU Leads Pack on Bank Capital, Fin. Times, Jul. 21, 2011. Several members, including the United Kingdom, which wish to impose higher requirements, have objected to the proposal, advocating that the directive should only set minimum standards. Id.}

\footnotesize{\textsuperscript{15} One possibility, for instance, would be to replace the present-day Basel approach of risk-weighted capital requirements with a much higher capital leverage ratio requirement. Such an approach, discussed in part IV conjunction with a proposal to require subordinated debt, as an illustration of the proposed review process, could select a much higher minimum leverage ratio than the level included in Basel III as a supplement to risk-weights, noted in text and accompanying note 91, infra.}
diversity, of international financial regulation, the burden of proof to demonstrate an adverse impact on systemic risk -- theoretically or empirically -- would be placed on the review committee, and a decision to disapprove a deviation would require a well-reasoned written explanation.

To encourage experimentation, the proposed time frame in which the evaluation must be completed is short, but approved departures would be subject to ongoing, continuous monitoring, by the review committee or Bank for International Settlements staff providing assistance to the review committee. The process would also require a reassessment of approved deviations on a fixed periodic basis and on the occurrence of specific financial triggers, so as to be able to reverse an approval should changed circumstances, or new data, alter adversely the initial systemic risk assessment. In addition to increasing the flexibility of the international financial regulatory architecture, through fostering experimentation and diversity, the proposed procedure should have a decisive additional benefit of improving the quality of regulatory decisionmaking. It would generate information and formalize an ongoing testing of assumptions in the search for better regulatory solutions, as well as make the regulatory decisional process more transparent and therefore more open to independent evaluation. By transforming the Basel regulatory process into one that can gradually evolve through informed experimentation, rather than one in which fully-blown albeit largely untried proposals spring forth from the Committee, following extensive political horse-trading, for global adoption, it will increase not only the flexibility but

---

16 The Bank for International Settlements has a large economic, monetary, financial and legal staff whose research is supplemented by visiting researchers from central banks and the academic community, and its staff often assists the Basel Committee, which has no independent staff apart from that of the central banks and bank supervisors that are its members.
also the adaptability of the international regulatory architecture, to the changing dynamics of financial markets and products.

It is, of course, possible that financial institutions may unduly influence or even “capture” the regulatory process permitting deviations from Basel. If that were the case, it would be no different from what has been described as repeatedly transpiring in the Basel accord negotiations, in which attention has been directed at benefitting the competitive position of domestic constituents. But, following Justice Brandeis’s injunction that “sunshine is ... the best disinfectant,” by creating a more transparent process for shaping international financial regulation through the proposed mechanism than is true of Basel itself, the likelihood of such an outcome should be reduced.

II. Rationale for Financial Regulation and the Financial Crisis of 2008-09

This part provides a context for understanding international regulation of financial institutions. It first presents the rationale for the regulation of financial institutions, reducing systemic risk, and its incorporation in international agreements to harmonize financial regulation. It then provides a narrative of the financial crisis of 2008 and how financial institutions operating under the Basel capital requirements, in particular, had powerful incentives to hold assets that were at the epicenter of the ongoing crisis.

A. Regulation to Avoid Systemic Risk

The core rationale advanced for financial regulation, both domestically and on a global


18 Louis D. Brandeis, Other People’s Money 92 (1914).
basis, is to avoid systemic risk, the concern that a “contagious spread of losses across financial institutions ... threatens... the real economy (the production of goods and services).” This could occur in a number of scenarios, which are characterized by a common theme, the presence of negative externalities, which suggests the need for government intervention: a financial institution will not fully internalize the cost it imposes on the financial system (e.g., failure of other institutions or entities in the contagion scenario) when undertaking a cost-benefit calculation of the impact of its activities on the probability of its own success.

The paradigmatic scenario of contagion is a run of depositors on banks, which, having lent out the deposited funds cannot repay all depositors immediately and simultaneously. Why would depositors run on banks? The canonical explanation of bank runs is one of asymmetric information: at the peak of a business cycle, as macroeconomic data signal to investors an oncoming recession, they predict that some banks will fail but, not knowing which ones, they run on all banks to withdraw their funds. Investors, from this perspective, are rationally responding

19 Herring and Litan, supra note 6, at 50. Herring and Litan discuss two other rationales of banking regulation, consumer protection and “achieving broader social objectives.” Id. at 61-63. In the United States they identify among the latter, promoting home ownership (e.g., before interest rate ceilings were eliminated, housing lenders were permitted to pay out higher rates to their depositors), channeling credit to particular groups (e.g., the Community Reinvestment Act’s requirements of providing credit to lower income areas), and reducing concentration of power in banks (e.g., historical restrictions on interstate branching, and limits on nonbanking activities). Because, as they discuss, these two rationales do not implicate international harmonization concerns, and in fact, given differences in national preferences on these dimensions, harmonization may be counterproductive, id. at 85, I focus solely on the systemic risk objective.

20 Gary B. Gorton, Slapped by the Invisible Hand: The Panic of 2007, at 30-33, 45 (2010). The classic Diamond-Dybvig model of a bank as an efficient intermediary providing liquidity, has a bank run as a possible equilibrium. Douglas W. Diamond and Philip H. Dybvig, Bank Runs, Deposit Insurance, and Liquidity, 91 J. Pol. Econ. 401 (1983). In that model, individuals have privately observed risks of a need for liquidity, and bank demand deposit contracts provide individuals with liquidity or consumption “insurance” against those risks. Individuals deposit
funds with a bank despite a positive probability of a run, as long as the probability is small because they can do better under the good equilibrium than they would by holding directly the (bank’s) illiquid assets. The bad equilibrium (a bank run) occurs due to a shift in depositors’ expectations regarding the probability of a run (or regarding the bank’s creditworthiness); the change in expectation itself is not, however, modeled.

21 For example, during the period of the National Banking era, which is dated from 1864, following the 1863 enactment of the National Banking Act that established a system of national banks and a uniform national currency, to the creation of the Federal Reserve System in 1914, bank panics occurred in 1873, 1884, 1890, 1893, 1896, 1907 and 1914. Gorton, supra note 20, at 30.

22 See, e.g., Herring and Litan, supra note 6, at 55.
and banks with related financial or geographic characteristics). In any event, deposit insurance, by eliminating runs, would appear to obviate a need for harmonization to prevent runs. But there are other contagion scenarios that point more in the direction of a need for harmonization than the classic depositor bank run story, related to interlinkages between large financial institutions. In such explanations, the failure of a large financial institution leads to a domino-like failure of numerous other institutions.

There are at least two posited transmission channels of contagion, related to the interconnectedness of institutions, quite apart from runs by bank depositors. First, the initial failing entity could be a counterparty to many other institutions’ financial transactions; when its failure causes those transactions to fail, the transactions’ counterparties will default on other obligations to third parties, who may then default on their contractual obligations, setting off a catastrophic daisy chain reaction of failed transactions. Second, the initial failing entity could be critical to the payments system, whose disruption produces liquidity losses, causing credit to contract suddenly. Because in such cascading failure scenarios, a problem bank in one jurisdiction leads to bank failures in other locales, there is a perceived need for harmonized regulation to minimize the risk of any one bank’s failure.

A final scenario of contagion, by contrast, is initiated outside of the banking sector, but eventually impacts it, producing a similar outcome to those beginning within it. A sharp decline in stock prices, for instance, could lead to widespread stock and asset sales as investors receive


24 E.g., Herring and Litan, supra note 6, at 51.
margin calls, further pushing prices down, and if those losses cause a bank to fail, particularly one critical to the payment system, that failure could start a cascade of bank failures, constricting credit and consequently, depressing economic activity.\textsuperscript{25} In addition, investors subject to margin calls could withdraw funds deposited at banks en masse, creating a severe liquidity crisis for banks, and if banks respond defensively by restricting credit, that could push borrowers toward, if not into, insolvency and the economy further into free fall.\textsuperscript{26} As with the other scenarios, this too, could play out across national borders.

Two caveats regarding the sources of systemic risk, which complicate the policy implications of the up-to-now straightforward analysis, need to be noted. First, a national financial crisis could spread internationally through “real” economy contagion channels, such as linkages through trade, rather than from the financial channel discussed so far. For example, when countries have strong trade linkages, a financial crisis in one could cause the export trade of the other to decline substantially, propelling that nation into a crisis as well. The findings of research on the transmission channels – financial or trade – of the 2007-09 financial crisis, using aggregate data, are ambiguous, in part because it is difficult to separate out the channels because trade and financial openness are highly correlated.\textsuperscript{27} Mixed findings are also true of studies of

\textsuperscript{25} Id. Herring and Litan note that this sequence of events occurred in the stock market crash of 1929, but it is not the pattern of all stock market crashes, such as the October 1987 market break. Id.

\textsuperscript{26} Patrick Honohan and Luc Laeven, Introduction and Overview, in Patrick Honohan and Luc Laeven, eds., Systemic Financial Crises: Containment and Resolution 3, 8 (2005).

earlier financial crises. In addition, research examining stock market contagion during the present day crisis finds limited evidence of global or U.S.-related contagion, compared to domestic contagion (that is, increased correlation of stocks within individual countries, not across countries). Furthermore, one study of the recent crisis using micro-level data (performance of individual manufacturing firms) found that trade and domestic demand channels were more important economically than financial channels in causing the crisis to spill over national borders. When the source of contagion is real and not financial, as these studies suggest, international financial regulatory harmonization cannot be rationalized as preventing contagion (for bank interconnections are not the source).

Second, the transmission mechanism of a global financial crisis needs to be distinguished between cross-border linked contagion – international institution linkages transmitting one nation’s financial crisis to another – and common shocks (such as, changes in international


For a summary of studies of earlier crises see, e.g., Rose and Spiegel, supra note 27, at 342-346.


As contended in part II.C.3, infra, international regulatory harmonization can make matters worse when the source of contagion is financial, by magnifying losses at interconnected banks, due to correlated strategies.
interest rates or oil prices) to common fundamentals. In their comprehensive history of financial crises, Carmen Reinhart and Kenneth Rogoff suggest that global banking crises over the last century were a function of common factors, and not solely due to contagion from interlinked financial institutions. They characterize the 2009 financial crisis as a conjuncture of both mechanisms, cross-border contagion, as foreign banks had direct linkages to the U.S. subprime market, and common shocks affecting nations’ shared fundamentals of home-grown housing bubbles and large capital account deficits, with sizeable capital inflows that increased local leverage. For instance, in the contemporary crisis there were real estate bubbles in Iceland, Ireland, New Zealand and Spain as in the United States, and, paralleling the U.S. experience, simultaneous with current account deficits, there were large capital inflows into Bulgaria, Iceland, Ireland, Latvia, New Zealand, Spain and the United Kingdom.

__________________________

32 Common shocks need not be external; “countries may share common ‘domestic’ macroeconomic fundamentals, such as housing bubbles, capital inflow bonanzas, increasing private and (or) public leveraging, and so on.” Carmen M. Reinhart and Kenneth S. Rogoff, This Time is Different: Eight Centuries of Financial Folly 241 (2009).

33 Id. at 240-244. They provide a table entitled “Contagion or common fundamentals?,” that lists 10 global banking crises from 1890 to the present, alongside a column of “comments” describing the crises. The comments, in my judgment, depict, for a majority (6), common fundamentals as the crisis source. In addition, for several of the remaining crises where the comments seem to me ambiguous or suggest contagion as the source, others describe the crises differently and as due to common shocks. Larry Neal and Marc Weidenmier, Crises in the Global Economy from Tulips to Today: Contagion and Consequences, in Michael Bordo et al., eds., Globalization in Historical Perspective 473, 491, 504-506 (2010) (in their analysis, 1890-91 crisis data are inconsistent with contagion, and the 1997-99 Asian crisis was a function of a common shock, the rise in the value of the dollar, rendering nations’ currency pegs unsustainable).

34 Reinhart and Rogoff, supra note 32, at 242, 244-246.

35 Id. at 244.
Moreover, the stock market contagion findings for the ongoing crisis can be interpreted as evincing a “wake-up call” transmission scenario, in which a crisis in one market or nation provides new information prompting investors to reassess the vulnerability of other markets, spreading financial distress (i.e., common shock), and not a globalization scenario, where a crisis hits nations globally integrated through trade and financial linkages (i.e. cross-border linked contagion).\textsuperscript{36} Research on earlier financial crises similarly finds common factor shocks to be a key transmitter in the majority of instances.\textsuperscript{37}

Although observationally both transmission mechanisms, cross-border linkages contagion and common shocks to common fundamentals, can produce the same outcome – a global financial crisis – the policy implications differ between the two. For instance, one could isolate a nation or institutions at the heart of a crisis if contagion were the only concern, thereby disrupting cross-border linkages, but such an approach would not prevent a crisis from spreading if the source is a common shock.\textsuperscript{38} In addition, an international lender of last resort could be an appropriate policy response if contagion is the critical transmission source of global crises, as liquidity is then a key issue (as the distress of linked institutions is not due to their own fundamentals), but that would not be the case if the mechanism is common factor shocks, where the policy need is for reform of individual banking and currency systems.\textsuperscript{39} More important from

\textsuperscript{36} Bekaert, et al., supra note 29, at 2-4.

\textsuperscript{37} Neal and Weidenmier, supra note 33 (discussing crises from 17th century tulip mania through the Asian financial crisis of 1997).

\textsuperscript{38} Rose and Spiegel, supra note 27, at 341.

\textsuperscript{39} Neal and Weidenmier, supra note 33 at 474.
this paper’s perspective, if international financial institutions’ adoption of similar business strategies, due to regulatory incentives, increases the likelihood of common shocks, then a policy response to financial crises of increasing international regulatory harmonization would be, to put it gently, counterproductive.\footnote{For an analysis of the relation between banks’ regulatory incentives and the 2009 global financial crisis, see part II.C.3, infra.}

B. International Regulatory Harmonization in the Basel I and II Accords

Global harmonization of bank capital requirements and administrative supervision commenced with the adoption of the initial Basel Accord in 1988. Two rationales were provided for the Accord, which was an agreement to raise capital requirements.\footnote{E.g., Basel Comm. on Banking Regulations and Supervisory Practices, “Outcome of the Consultative Process on Proposals for International Convergence of Capital Measurement and Capital Standards” 1 (July 1988), available at \url{http://www.bis.org/publ/bcbs04b.pdf} (“These two fundamental considerations, which lie at the heart of the Committee’s work on regulatory convergence, are firstly, that the framework should serve to strengthen the soundness and stability of the international banking system, and, secondly, that the framework should be fair and consistent in its application to international banks in different countries so as to diminish one important source of competitive inequality.”)} The first rationale, to promote stability of the banking system, is the core rationale for banking regulation, containing systemic risk. The second rationale, to equalize banks’ competitive positions, is related to the first, core regulatory concern: the belief is that if all nations do not require the same level of capital, international banks could engage in regulatory arbitrage and undermine system stability.

National competitiveness concerns were, in fact, prominent in the negotiations over the formulation of the capital requirements through which the Accord is intended to promote stability. A notable instance of such maneuvering is the favoring of residential mortgages in the credit risk-weighting system, which is a function of some nations’ domestic policies to promote
housing. By preferencing residential mortgages over other types of loans in the risk weighting system, the Accord would not competitively disadvantage an international bank from financing housing, and thereby supported certain nations’ housing policies; this preference would prove to have devastating consequences decades later, in conjunction with other factors triggering the global financial crisis commencing in 2008.

It can, in practice, be quite difficult to disentangle Basel’s two rationales of systemic stability and competitive equality. The origins of Basel I can be located in a scenario in which the rationales were integrally intertwined: U.S. regulators sought to equalize international competition at least in part to be able to strengthen the U.S. financial system by raising capital requirements on domestic banks. Namely, in the 1970s, Japanese banks, subject to substantially lower capital requirements than U.S. banks, had vastly expanded their transnational activity, and their market share increased against that of U.S. banks both in the United States and internationally. Moreover, U.S. regulators were proposing to raise capital requirements to adjust for risk, having found that in response to the imposition of capital requirements, banks

42 Herring and Litan, supra note 6, at 109.

43 Dale puts the issue quite succinctly: “Concerns about competitive equality do not provide an independent justification for financial regulation, but they do often provide an important impetus to international regulatory co-ordination initiatives,” and contends that the original motivation for the Basel Accord was to “avoid competitive distortions.” Richard Dale, Regulating the New Financial Markets, in Malcolm L. Edey, ed., The Future of the Financial System 215, 217 (1996).

44 For a variety of perspectives on the causes of the international success of Japanese banks in the 1980s, the bulk of which are not attributable to lower regulatory costs, see George J Benston, U.S. Banking in an Increasingly Integrated and Competitive World, in Marvin H. Kosters and Allan H. Meltzer, eds., International Competitiveness in Financial Services 53 (1991); and the commentary in that volume by Robert Litan, id. at 83 and by Kathleen B. Cooper, id. at 87.
acquired assets with the highest risk within an asset class. To manage objections by domestic banks to increased capital requirements on national competitiveness grounds, the United States thereupon led an effort to raise international capital requirements to “level the playing field” for its banks, compared to Japanese banks. A decisive advance of this agenda was achieved in 1987, when the United States reached a bilateral accord with the United Kingdom on minimum capital requirements. The U.S.-U.K. agreement in turn accelerated negotiation of a multinational accord (Basel I), which adopted capital requirements based on specified credit risk categories, with a four-year time frame for implementation by the signatories.

Although Basel I was the product of negotiations among central banks of the G-10, it was widely adopted by emerging nations, which were encouraged to do so by the International Monetary Fund (IMF) and World Bank. The Basel I capital requirements were modified in succeeding years to take account of market risk, culminating in a revised Accord, known as Basel II, in 2004, which also added operational risk into the mix. Basel II sought to advance the same objectives as Basel I: system stability and competitive equalization. National regulators were given a somewhat shorter time frame -- until the end of 2006 or early 2007 – to implement the

45 James R. Barth, et al., Rethinking Bank Regulation Till Angels Govern 65 (2006). Moreover, following the 1997 Asian financial crisis, in 1999, the IMF and World Bank created a Financial Services Assessment Program in which they undertook assessments of countries’ compliance with the core Basel principles as well as other international standards. Id. at 66-67. Of course, only nations that are members of the Basel Committee need comply with the Committee’s requirements.

46 E.g., Basel II Framework, supra note 12, at 2 (“The fundamental objective of the Committee’s work to revise the 1988 Accord has been to develop a framework that would further strengthen the soundness and stability of the international banking system while maintaining sufficient consistency that capital adequacy regulation will not be a significant source of competitive inequality among internationally active banks.”)
new rules, compared to that for Basel I, but Basel II had been negotiated over a longer time span.

Basel II introduced what is referred to as a “three pillar” regulatory framework. The “first pillar,” which is the centerpiece of Basel II and a continuation of Basel I’s focus, is a minimum capital requirement. Recognizing that given differences in relative expertise, the private sector is invariably several steps ahead of regulators, Basel II enlisted banks’ more sophisticated internal risk management models than those possessed by regulators to measure capital at risk, in contrast to Basel I’s approach in which regulators fixed risk weights according to broad asset categories. The other two pillars, regulatory supervision and disclosure, also termed market discipline, are considered to be adjutants to the first pillar. That is because the supervisory review process is directed at assessing the adequacy of a bank’s capital, which is particularly important given Basel II’s reliance on banks’ internal risk measurements in determining their capital requirements. In addition, information disclosure regarding banks’ risk calculations is the mechanism by which market participants are able to ascertain the adequacy of banks’ capital and thereby bolster market discipline.

Basel II can, no doubt, be viewed as affording greater discretion to banks and regulators

---

47 Basel II also permitted regulators to choose to continue to apply a standardized risk weight approach, as an alternative to banks’ internal risk management models. The standardized approach was expected to be used by smaller banks, and developing nations, given the limited technical sophistication of such banks and the regulatory authorities of those nations. While following Basel I’s basic approach, the standardized weights of Basel II incorporate external ratings of assets’ risk by rating agencies or export credit agencies. Barth, et al., supra note 45, at 69-70. In contrast to Basel I, the consultative process on Basel II was extended to include developing nations, as well as the G-10 comprising the Basel Committee. Basel Comm. on Banking Supervision, Implementation of Basel II: Practical Considerations 1 (July 2004), available at: http://www.bis.org/publ/bcbs109.htm; Tarullo, supra note 17, at 207.

than Basel I, but it was no less directed at maintaining international harmonization. While individual banks’ internal risk management models could differ, the regulatory regime set parameters within which they had to operate and were backtested by national supervisors. In addition, while regulators’ supervisory discretion could produce variability in the regimes’ implementation, the fundamental approach to capital requirements, that it be risk-weighted, and the view of which assets would require greater capital, did not vary.

C. The Basel Capital Requirements and the Financial Crisis of 2008: Contagion in the Shadow Banking Sector

The financial crisis of 2008-09 would appear to have been triggered by a bank run occurring in what is conventionally referred to as the nonbank or shadow banking sector. The problem was asymmetric information concerning the quality of financial institutions’ securitized assets, assets for which Basel required a low capital provision. The contagion across financial

49 Basel II Framework, supra note 12.

50 As indicated in text and accompanying note 98, infra, Basel III aims at increasing supervisory uniformity, to ensure harmonized implementation.

51 The Basel preference for these assets is detailed in part II.C.3, infra. The explanation of the crisis trigger as a run in the shadow banking sector relies on Gorton, supra note 20. A more succinct version of Gorton’s thesis can be found in Gary Gorton and Andrew Metrick, Haircuts, Fed. Res. Bank of St. Louis Rev. 507 (2010). Gorton’s analysis of the panic has received widespread attention and is considered by many to be the dispositive explanation of the crisis, including the Federal Reserve Chairman. Michael Corkery, Ben Bernanke’s Reading List, Wall Street Journal, Sept. 3, 2010, C (Gorton’s paper, reprinted in the 2010 book, one of four suggested reading of Fed Chairman Bernanke’s reading list on the financial crisis and its aftermath); Sewell Chan, Bernanke Says He Failed to See Financial Flaws, N.Y. Times, Sept. 3, 2010, p. 3 (Bernanke “embraced the view of Gary Gorton” comparing the crisis to a classic bank run in the shadow banking system); Annie Lowrey, The Financial Crisis Reading List, Slate Magazine, Dec. 16, 2010 (“To understand the actual moment and mechanism of crisis, the definitive take is Yale economist Gary Gorton’s.”) Not everyone wholeheartedly concurs with Gorton’s explanation, however. For a somewhat skeptical view of Gorton’s thesis, see, for
institutions in the shadow banking sector and the ensuing global reach of the financial crisis refocused regulators’ attention on even further global regulatory harmonization. But there is much irony in that response, of which advocates of greater harmonization would appear to be either unaware or to purposely overlook, for globally harmonized capital requirements contributed to the making of the crisis. Moreover, although the shadow banking sector panic was at the epicenter of the crisis in the United States, as earlier noted, sources other than financial institutions’ linkages – common shocks to economies with similarly vulnerable economic fundamentals – were also contributors to the global spread of the crisis, a phenomenon further suggesting that regulatory harmonization would not be an appropriate response to what we have experienced.

1. Overview of the Shadow Banking Sector and the Onset of the Crisis. What is the shadow banking sector? It is an institutional banking market, matching borrowing financial institutions with lending institutional investors, that has grown dramatically over the past several decades as banking has been transformed by financial innovations impacting bank lending, such as

---

as loan sales, securitizations and financial derivatives.\textsuperscript{53} The loans are short term, and the key transactional form is a “sale and repurchase agreement” (repo).\textsuperscript{54}

How does the market for repos operate? Financial institutions, such as investment banks, borrow funds overnight from institutional investors (such as money market mutual funds, hedge funds, and pension funds), and secure the loans with investment grade securities. Loans are expected to be rolled over, but there is no requirement that the lending institutional investors do so. If the financial institution cannot repay the loan, the lender keeps the collateral. Gorton characterizes the repo market as a “real” banking system, analogizing the required collateral to deposit insurance: by entering into a repo with a shadow bank, institutions earn interest on their loaned funds and protect their principal, without having to investigate the creditworthiness of the borrowing “bank,” by the investment grade collateral they receive, replicating the position of depositors whose funds are in Federal Deposit Insurance Corporation (FDIC)-insured banks.\textsuperscript{55} A key reason why institutional investors use the shadow banking system is the funds they have available to deposit is far beyond the limited amount covered by the “real” banking system’s deposit insurance schema.

\textsuperscript{53} Gorton, supra note 20, at 27, 16.

\textsuperscript{54} The name “repo” comes from the terms of the transaction agreement, in which an institution sells a security and agrees to buy it back (i.e., to repurchase it), at a later date at a higher price, which reflects interest charged for having the use of the cash. The agreement is thus equivalent to a secured loan. From the perspective of the institutional investor who “purchases” the security, and then “sells” it back, the transaction is referred to as a “reverse” repo.

\textsuperscript{55} Gorton, supra note 20, at 45. The institutional investors in the repo market can obtain their cash on demand (by not renewing the overnight loan), paralleling depositors’ withdrawal rights for standard bank accounts. If the repo bank is insolvent, by selling the collateral, they obtain their otherwise lost investment, paralleling insured bank depositors’ repayment of funds housed in insolvent banks by the FDIC.
Much of the collateral in the repo market by the time of the financial crisis of 2008 was securitized assets, and in particular, mortgage-backed securities (MBSs) and collateralized debt obligations (CDOs) whose underlying assets were MBSs. Importantly, those instruments often contained subprime mortgages. When the U.S. housing bubble burst and plummeting housing prices caused the subprime mortgage default rate to skyrocket, the complexity and opacity of the securities used as repo collateral made it impossible for institutional investors to determine the extent to which mortgages underlying obligations they held consisted of defaulting subprime mortgages. It also made it impossible for them to determine the extent to which the financial institutions with which they were transacting held defaulting subprime mortgages in their loan portfolios and might therefore be financially impaired and unable to repay the loan. In other words, the housing, and more specifically subprime mortgage, macroeconomic shock created a situation of asymmetric information between shadow banks and their “depositors.”

The problem was that, even though institutional investors possessed collateral to protect themselves were the bank to whom they had lent funds to default, they could not determine what value they would be able to recover in a sale of the securitized assets they held as collateral. In response to this increasingly uncertain state of affairs, institutional investors required progressively larger haircuts to roll over loans (that is, they required the face value of the

---

56 A securitized asset is a financial instrument whose value and payout is derived from a pool of specified assets underlying it (i.e., its payout is collateralized or “backed” by the assets). When the underlying asset pool consists of mortgages, the instrument is referred to as a mortgage-backed security (MBS). In the securitization process, a financial institution creates a separate entity or conduit, referred to as a special purpose vehicle, which holds the pooled assets and sells securities to investors, which are divided into classes, referred to as tranches, which prioritize the receipt of the cash flows from, and bearing of losses on, the underlying assets. The prioritization enabled the senior-most securities to receive investment grade ratings, and thereby led to their use as collateral in the repo market.
securities posted to be significantly higher than the borrowed amount). Haircuts, as Gorton notes, are equivalent to withdrawals: the repo borrower now needs more funds, and indeed, other sources of funds, to finance its activities because of the haircut, as it cannot roll over the entire loan on the same collateral. The larger haircuts being required therefore created increasing liquidity difficulties for financial institutions that were financing their business in the repo market. Compounding financial institutions’ difficulties, haircuts rose not only on subprime-related assets used for repo collateral, but also on non-subprime-related assets.

2. *The Crisis in the Shadow Banking Sector as a Modern Day Banking Panic.* Investors’ sudden requirement of large repo haircuts was the functional equivalent of a banking panic: the rapid withdrawal of a tremendous amount of funds forced investment banks to delever on a massive scale, and the repo market consequently collapsed. Gorton and Metrick plot the path of repo haircuts from 2007-09, which demonstrates quite dramatically what occurred: while all repo haircuts were at zero in 2007, by the end of 2008, the haircut on subprime mortgage-related assets was 100 percent (i.e., they were not accepted as collateral), while the haircut on non-subprime assets was 20 percent, for a dramatic average repo market haircut increase of 40 percent.

---

57 Id. at 47-48. With larger haircuts or terminated debt, repo market borrowers had to find additional financing for the collateral (i.e., to make up for the reduced amount they could borrow on their existing securities). As they sold the securitized assets they held to raise cash, that further depressed the value of those assets, which made institutions even less willing to lend on the basis of such collateral. The situation therefore devolved quickly into a vicious cycle of downward spiraling prices and retrenchment of repo loans, in other words, massive deleveraging by the repo “banks.” Gorton and Metrick, supra note 51, at 512.

58 Id. at 512.

59 Id. at 513.
Gorton and Metrick provide a telling, back of the envelope calculation of the devastating impact of the sudden increase in haircuts: assuming the size of the repo market was $10 trillion (a fair estimate, equaling the size of the “real” banking sector), when the average haircut rose to 40 percent, the investment banks that had been using the repo market would have had to raise $4 trillion (40 percent of $10 trillion) in capital from other sources to continue to fund their businesses at the same level.\textsuperscript{60} As the calculation illustrates, the steep and sudden increase in haircuts rendered the shadow banking system insolvent. The fact that non-subprime assets were affected, Gorton maintains, is evidence that depositors were confused about which banks were at risk and therefore ran against all banks.\textsuperscript{61} This then, was the epicenter of the financial crisis.

As commercial banks held the same type of securitized assets of uncertain, and rapidly declining value, which were creating havoc in the repo market, used repos to finance their securitization activities, and were in intertwining relationships with investment banks, each other and third parties, the collapse of the repo market was a systemic event.\textsuperscript{62} Moreover, although nondepository institutions, such as investment banks, raised the bulk of their financing in the shadow banking system, commercial banks that sponsored securitizations also used the repo market to finance those transactions.\textsuperscript{63} Interbank loan rates (i.e., the interest rates at which banks lend to each other) similarly spiked as repo haircuts increased, because banks did not know

\textsuperscript{60} Id. at 514.

\textsuperscript{61} Gorton, supra note 20, at 52.

\textsuperscript{62} Id.

\textsuperscript{63} E.g., id., at 43.
the quality of the assets that other banks held.\textsuperscript{64}

A parallel problem emerged in the asset-backed commercial paper (\textquotedblleft ABCP\textquotedblright) market, a form of off-balance sheet, short-term debt financing of long-term assets (which included U.S. subprime mortgage securities) used particularly by large foreign commercial banks, but also by U.S. banks, as a source of low-cost funding. The ABCP market operates differently from the repo market, although the intermediation function is the same: banks create conduit entities, which finance holdings of long-term assets by issuing short-term securities (commercial paper), which are guaranteed by the sponsoring banks, if the conduit assets backing the paper prove to be insufficient. The financiers, mirroring those in the repo market, are institutional investors, who would view the paper as \textquotedblleft riskfree,\textquotedblright as the conduits are structured to receive the highest credit rating, given the banks\textquotesingle guarantees along with the assets\textquotesingle being investment grade. As the deterioration of subprime mortgages became apparent, there was a run on that market as well as the repo market: interest rates on ABCP rose, as investors became reluctant to rollover the securities. The market eventually froze and banks were unable to rollover the debt, just as financial institutions were unable to rollover repos, rendering the crisis truly international.\textsuperscript{65}

\textsuperscript{64} Gorton and Metrick, supra note 51, at 515. A proxy for counterparty risk in the interbank market is the spread between the London Interbank Offered Rate (LIBOR), the interest rate at which banks lend to each other, and the overnight index swap rate (OIS), which indexes the rates paid in interest rate swaps. This is because the two rates should be the same, by arbitrage, if there is no credit risk. See Gary Gorton and Andrew Metrick, Securitized Banking and the Run on the Repo, Yale ICF Working Paper No. 09-14, available at: ssrn.com/abstract id=1440752. The spread became positive, starting in the summer of 2007, and dramatically increased in the fall of 2008, when Lehman Brothers filed for bankruptcy, at the time when the repo market was imploding, indicating, as Gorton and Metrick put it, the \textquotedblleft near collapse of the interbank market.\textquotedblright Id. at 14.

\textsuperscript{65} For a characterization of the contraction in the ABCP market as a bank run, see Daniel Covitz, Nellie Liang and Gustavo Suarez, The Evolution of a Financial Crisis: Panic in the
Gorton and Metrick study haircuts in bilateral repo transactions, that is transactions in which the borrowing institution deals directly with the lender. In many repo transactions, however, an intermediary (in the U.S., a government securities clearing bank) provides operational services to facilitate the transactions; such repo transactions are referred to as “tri-party repos.” The presence of a third-party agent, although complicating the analysis, alters only somewhat the more straightforward asymmetric information problem that led to an investor run in bilateral repo transactions. There were also runs in the tri-party market, but given institutional differences, these runs took a somewhat different path from the run on the bilateral market.

There were dramatic fund withdrawals rather than progressive increases in haircuts, against the most vulnerable dealers.66

66 Adam Copeland, Antoine Martin and Michael Walker, Repo Runs: Evidence from the Tri-Party Repo Market, Federal Reserve Bank of New York Staff Report no. 506, at 33 (2011). In fact, weaknesses in the tri-party structure, exposed in the financial crisis, may have exacerbated runs on the most vulnerable dealers. In the tri-party repo structure, investors sign contracts in advance specifying the collateral and haircuts they are willing to accept. Because the
The explanation of the origin of the financial crisis in the United States that I have advanced (which draws on Gorton’s seminal work on bank panics and, with Metrick, on the run on the repo market) depicts an unfolding systemic event produced by a “classic” asymmetric information-caused “bank” run, transmitted across financial institutions active in the repo market, and their counterparties and other financial institutions holding similar informationally-problematic assets (subprime mortgage-related assets). Banking panics were at the time considered relics of a dimly recalled past in the “real” banking system, but the shadow banking system functioned analogously to a pre-FDIC (deposit insurance-less) banking system.

contracts are renegotiated with difficulty, when subprime problems arose, rather than try to renegotiate larger haircuts, investors simply pulled out of the market. In addition, in the tri-party repo market, all open repo positions were unwound in the morning, with the clearing bank returning the collateral to the securities dealer then, but not receiving cash back until the trade was “rewound” (rolled over) in the afternoon. That allowed dealers access to cash but exposed clearing banks to intraday credit risk, i.e., an intermediary was on the hook to investors for their cash if a dealer failed to produce collateral or cash at the end of the day. Given their role in funding unwinds, agreements gave clearing banks the right to decide whether they would unwind an agreement if it seemed likely that a dealer would default. That contractual feature further hastened investors’ exit from the market, as they feared that clearing banks might refuse to unwind their trades if there was a heightened default potential. BNY Mellon Asset Servicing, Evaluating the Post-Crisis Tri-Party Repo Market 2-3 (2011), available at http://www.bnymellon.com/foresight/pdf/tripartyrepomarket.pdf. Further compounding issues in the tri-party repo market, by the mid-2000s, there were only two clearing banks in the U.S. tri-party repo market. The concentration of trades could also have exacerbated runs because if, when a clearing bank observed a dealer in serious financial difficulty it responded by protecting its position, for instance, by requiring additional collateral or not clearing transactions, then the dealer’s financial demise would be accelerated as it would have limited remaining financing options. See Mike Spector and Susanne Craig, Lehman’s Bankruptcy Estate Sues J.P. Morgan, Wall St. J., May 27, 2010. (Lehman Bros. estate sued its clearing bank alleging the bank demanded additional protection, beyond its clearance exposure, using inside information about Lehman’s condition, and thereby contributed to the firm’s demise). In response to the weaknesses in the tri-party financing structure, an industry task force working under the aegis of the Federal Reserve Bank of New York recommended reforms, including essentially eliminating intraday credit, which currently are in the implementation process. BNY Mellon Asset Servicing, supra, at 3; Federal Reserve Bank of New York, Tri-Party Repo Infrastructure Reform, A White Paper 16-18 (May 17, 2010).
Yet banking regulators paid no heed to the repo market, and therefore had no notion that it could pose a systemic threat to the financial system. As Gorton notes, it was so “far off the radar screen,” that there was no measure of the size of the repo market when the crisis hit: not only had the Federal Reserve stopped publishing the monetary aggregate (referred to as M3), in which repo transactions were included in 2006, but also, the repos that had been included when the measure was collected were solely transactions of primary dealers in treasury securities, a sliver of the market.  

A comprehensive list of causes of the financial crisis would, of course, include many other plausible contributing factors, some long in the making and some not immediately related to subprime mortgages and the run on the repo market, which can be best characterized as the proximate cause of the crisis. Among quite plausible factors having been identified as contributing causes are: (i) government policies holding interest rates low, promoting subprime mortgage risk-taking by Fannie Mae and Freddie Mac and private financial institutions, and requiring or relying on the use of credit rating agencies, whose models turned out to be woefully inadequate, whether due to incompetence or problematic incentives or both, and the Basel capital requirements’ favorable treatment of MBSs;  

Gorton, supra note 20, at 176. The Fed collects data on the amount of money and its velocity in the economy to assist its formulation of monetary policy. Gorton explains the decision to eliminate collection of M3 as a function of central banks’ no longer using monetary aggregates to inform monetary policy deliberations (because economists do not consider them to be informative about inflation), and the fact that M3 was highly correlated with another, narrower monetary aggregate (M2), that the Fed also tracked. Id.

demand for dollars (driving down U.S. interest rates and making credit too easily available to U.S. consumers, thereby skewing investment decisionmaking),

and (iii) banks not being subject to adequate market discipline, due to a mix of ownership restrictions, deposit insurance, and ineffective prudential regulation, their use of internal risk models with unrealistic assumptions or that were otherwise inadequate for valuing complex instruments and measuring their risk, poorly-designed incentive compensation, and, at the core of the shadow-banking panic, a business model using highly leveraged short-term financing of long-term investments.

All of the enumerated factors, no doubt, had, in varying degree, an impact on the global financial crisis, and it will occupy a generation of economists to figure out how all of the pieces of this puzzle fit together. Moreover, as earlier mentioned, there were real as well as financial

(housing policy promoting subprime mortgages); Vince LaPietra, Wall Street Bilks Main Street, University of San Diego School of Law Advocate 18, 22 (Summer 2009) (quoting Frank Partnoy: “My greatest hope is that Congress will reform the credit rating agencies, which were a primary cause of the crisis...

Jablecki and Machaj, supra note 64 (Basel capital requirements).

E.g., Alan Greenspan, The Crisis (2010) (developing nations’ excess global savings one of several identified causes of the crisis).

transmission channels. My focus has been solely on the panic in the shadow banking sector because it triggered what became a global financial crisis and the international financial regulatory architecture has to be evaluated in that context. The key and striking factor highlighted by focusing on the financial panic in the repo and ABCP markets is the greater exposure of Basel-regulated institutions, when compared to other financial institutions, to the assets whose implosion set off the global financial panic or, under the common shocks hypothesis of contagion, whose implosion led investors worldwide to reassess national institutions’ vulnerabilities to common economic fundamentals from their U.S. experience.

3. The Performance of Basel-Compliant Financial Institutions during the Financial Crisis versus Entities Operating Outside of Basel. Although the repo market operated outside of the regulated banking system, it needs to be underscored that the market’s principal users (i.e., borrowers) were operating within the globally harmonized regime for banks: investment banks that experienced runs in the repo market were, in fact, operating under one of the key planks of that regime, the risk-based capital requirements of Basel II. And commercial banks using the repo market to finance their securitized products, were, of course, under the supervision of bank regulators and Basel’s strictures, as were the banks issuing ABCP and investing in securitized mortgages.

71 The U.S. Securities and Exchange Commission (SEC) agreed to permit investment banks to comply with Basel II for their capital requirements when it assumed a “consolidated” regulator role for those financial institutions, as was required for the firms to do business in the European Union (EU), under the financial conglomerates directive adopted by the EU in 2002. SEC, Supervised Investment Bank Holding Companies, 69 Fed. Reg. 34,472 (2004).

72 U.S. banking regulators approved final rules to implement Basel II for large internationally active financial institutions (“core” banks) in December 2007, requiring use of the accord’s most advanced methods to measure risk, such as the internal ratings-based credit risk
This all too often overlooked fact about the shadow banking sector – key participants’ being subject to globally harmonized capital requirements – is critical for understanding, from the perspective of the international regulation of financial institutions, the dynamics of the global financial crisis. That is because, during the financial crisis, large hedge funds, an important set of trading institutions not subject to the global Basel capital regulations nor any mandated capital requirements, by contrast to institutions operating under Basel, were not only by an order of magnitude less leveraged, but also less likely to be invested in MBSs (or if they were heavily

calculations (the same approaches adopted by the SEC for investment banks). Dep’t of Treas., et al., Risk-Based Capital Standards: Advanced Capital Adequacy Framework - Basel II; Final Rule, 72 Fed. Reg. 69,288 (2007). However, the rule contained a three-year transitional period to full reliance on the new standard, including an initial one-year test period in which a bank had to complete a “parallel run” meeting the old capital requirements while simultaneously calculating its Basel II capital requirement, so as to demonstrate to its supervisor the adequacy of its Basel II calculations. As a consequence, U.S. commercial banks were still operating under Basel I when they were engulfed in the financial crisis. By contrast, European banks were operating under Basel II: the EU adopted a capital requirements directive incorporating Basel II in 2006 (having agreed politically to do so in October 2005). “Commission Welcomes Adoption of Capital Requirements Directive,” available at http://europa.eu/rapid/pressReleasesAction.do?reference=IP/06/797&format=HTML&aged=0&language=EN&guiLanguage=en. However, the favorable treatment for securitized assets with investment grade credit ratings under Basel II was also applicable to U.S. banks operating under Basel I because of the recourse rule, see note 13, supra.

Andrew Ang and colleagues, for instance, estimate that over 2002-08, hedge fund leverage ranged between 1.5 and 2.5, compared to an average 14.2 for investment banks and 9.4 for the financial sector as a whole. Andrew Ang, Sergiy Gorovyy and Gregory B. van Inwegen, Hedge Fund Leverage, NBER Working Paper 16801, at 25 (2011). Hedge funds were far less leveraged than banks at least in part because, ever since the collapse of the hedge fund Long Term Capital Management in 1999, dealer-banks have required full collateralization of hedge fund transactions, an ironic contrast with the banks’ own positions. In addition, as Sebastian Mallaby puts it, because “hedge fund bosses mostly have their own money in their funds,” in contrast to bank managers and traders, who are “simply risking other people’s money,” they can be expected to be more conservative regarding risk (leverage ratios). Sebastian Mallaby, More Money Than God: Hedge Funds and the Making of a New Elite 12 (2010). In support of Mallaby’s thesis, Ang et al. explain their finding that hedge funds reduced their leverage levels during the financial crisis (in contrast to investment banks, whose leverage increased) as due to
invested in that sector, they tended to be on the short side of the market).

The differential investment behavior of hedge funds and regulated financial institutions regarding mortgage-backed securities can be explained, in large part, in terms of incentives created by Basel’s strictures, which treated those securities more favorably than other instruments. That is not to say that the only important difference between these classes of financial institutions was being subjected to the Basel capital regime. The structure of hedge fund managers’ compensation, for instance, is widely considered to be better aligned with their investors’ interests than that of other financial institutions’ executives. But Basel’s incentives to meet capital requirements by holding specified assets surely made a difference.

How did Basel’s preferencing of specific financial instruments work? Under the Basel credit risk weighting system, residential mortgages, and more importantly, securities based on them, were subject to lower capital requirements than other financial assets, such as corporate loans. Accordingly banks had a strong incentive to hold such preferred assets in order to minimize the capital they had to hold, which encouraged an increase in leverage, thereby increasing returns and, correlatively, risk of loss. ABCP vehicles also had favorable regulatory

---

**Note:**

hedge fund managers’ actively managing leverage to reduce their risk, and not due to curtailment of credit by brokers, because the drop occurred six to eight months before banks adjusted their own leverage in late 2008, and anecdotally, brokers were not increasing funding costs in 2007 when the decline in hedge fund leverage commenced. Ang, et al., supra, at 26-27.

---

*This point is made in the broad-ranging analysis of the causes leading to the financial crisis by Raghuram G. Rajan, Fault Lines 178 (2010).*

*Hedge fund compensation differs from that of Basel-regulated financial institutions in that, the bulk consists of performance fees (typically 20 percent of returns), which are subject to loss carryforward provisions, referred to as high water marks. Namely, hedge fund managers earn a performance fee only on increases in a fund’s net asset value above the highest net asset value the fund has achieved in the past (the high water mark).*
capital treatment.\textsuperscript{76}

A simple, but enlightening, numerical example, provided by Lawrence White, illustrates the powerful incentive the Basel capital requirements provided to banks to acquire securitized mortgage assets. Under the Basel risk weights, a bank had to hold only $4 in capital for every $100 in a residential mortgage, but it had to hold a far lower $1.60 for every $100 in an MBS with an investment grade equal to AA- or AAA. Consequently, a bank could use the $4 capital required for a directly-held mortgage to invest in $250 worth of securitized mortgages.\textsuperscript{77} The

\textsuperscript{76} Under Basel I, the ABCP structure required no capital provision: as off-balance sheet, the conduit assets accrued no capital charge, and Basel I did not require capital provision against liquidity guarantees (compared to credit guarantees), which was the classification accorded the ABCP conduit guarantees. It should be noted that after the Enron accounting scandal in 2001, accounting rules for off-balance sheet entities were altered, but most nations did not adjust capital requirements in line with the accounting changes. In the United States, for instance, in 2004, regulators issued a ruling in which assets in conduits required 90 percent less capital than assets on balance sheet, despite the revised accounting treatment that would have treated them as identical to on-balance sheet assets, and did not have to be consolidated onto the balance sheet despite the accounting rules. Acharya and Schnabl, supra note 65, at 50. Although nations’ accounting rules, and hence capital rules varied at the time, most maintained favored treatment for conduits, with the exception of Spain and Portugal and those two nations’ international banks did not use conduits. Id. at 51-53. Under Basel II’s standardized approach, implemented in some European nations, conduit assets (because of the guarantees) have an 80 percent lower capital charge compared to on-balance sheet assets, and the charge can be even less, depending on the quality of the assets in the conduit. Id. at 51, 53. On the eve of the crisis in 2007, conduits’ treatment under Basel II’s internal approach was still under discussion by regulators. Id. at 51. Basel II thus reduced, but did not eliminate the discrepancy between conduit and on-balance sheet assets. The capital requirements for securitizations and ABCP were enhanced after the financial crisis, eliminating much of the preference. E.g., Basel Comm. on Banking Supervision, Enhancements to the Basel II Framework (July 2009), available at: http://www.bis.org/publ/bcbs157.htm. The Basel II standardized weights favoring residential mortgages over corporate loans in direct holdings remain unchanged.

\textsuperscript{77} Lawrence J. White, The Credit-Rating Agencies and the Subprime Debate, in Friedman, supra note 64, 228, 234. The non-political (i.e. not furthering a domestic agenda) explanation for the lower risk weight for residential mortgages is that they are less risky than corporate loans. Of course, with the benefit of hindsight, such an assessment was misplaced. But even if, from a pre-crisis vantage point, it made sense to treat such mortgages as less risky, the
substantial leveraging of Basel-regulated financial institutions in the preferred assets is not a
startling outcome given the regulatory incentives.

Moreover, capital requirements created an incentive for banks to hold subprime
mortgages within the residential mortgage asset class, as those assets provided a higher return
(given their greater risk) than prime mortgages, but they required the same capital provision.
While Basel II modified Basel I risk weights within asset classes to adjust for an asset’s external
credit rating, it did not significantly impact this strategy. This is because subprime mortgage
securitizations were structured so that the tranches received investment grade ratings.
Accordingly, banks could hold subprime mortgage securitizations at the same capital charge as
would be applicable to securities issued on prime mortgages. Of course, the higher return on
implementation made no sense, which renders any non-political explanation unsatisfactory. First,
not all categories of residential mortgages are safer than all corporate loans. More important,
Basel II’s adjustments to the risk weights seem no less aimed at encouraging residential mortgage
lending: Although it did permit an adjustment for corporate loan risk weights in line with
external credit ratings, at the same time it lowered the risk weight for residential mortgages as a
class, adding a caveat that bank regulators could increase the weight for mortgages considered
risky. See Basel Comm. on Banking Supervision, Annexes to International Convergence of
Capital Measurement and Capital Standards: A Revised Framework 231 (June 2004), available
at: www.bis.org/publ/bcbs107d.pdf. As a result, only the very highest rated corporate loans were
treated as less risky than residential mortgages.

Modification to the risk weights in relation to external credit ratings, as noted in the
Basel Committee’s first consultative document in which it was proposed, was intended to align
risk weights more closely with actual credit risk, and was directed at exposures to sovereigns,
banks and corporations, as well as securitizations, so that the weights for high quality corporate
loans, or high quality non-OECD sovereign debt, would be reduced, while those for low quality
exposures, such as non-investment grade corporate loans, would be raised. Basel Comm. on
Banking and Supervision, A New Capital Adequacy Framework 5,9 (June 1999), available at
http://www.bis.org/publ/bcbs50.htm; Tarullo, supra note 17, at 93-94. The same rationale applies
to the Fed’s recourse rule, supra note 13. It should be noted that residential mortgages were, no
doubt, not a focus of the Basel II negotiators because subprime mortgages were relatively rare at
the time.
Bear Stearns’s financial difficulties began (or more precisely became public) in June 2007 when it bailed out two sponsored hedge funds that had incurred substantial losses from subprime mortgage investments. Nine months later the federal government bailed out the investment bank by subsidizing its acquisition by J.P. Morgan; the government’s concern was apparently the possible contagion across financial institutions from the failure of the investment bank, with whom they had contractual relationships. There is disagreement over the necessity for the Bear Stearns bailout. E.g., John B. Taylor, Assessing the Federal Policy Response to the Economic Crisis, Testimony before the Senate Banking Comm. 6 (Sept. 22, 2010), available at: http://media.hoover.org/sites/default/files/documents/Assessing-the-Federal-Policy-Response-to-the-Financial-Crisis_0.pdf (“My assessment of the extraordinary monetary measures that were taken in the year before the panic is that they did not work, and that some were harmful....The extraordinary bailout measures, which began with Bear Stearns, were the most harmful in my view.”) Moreover, there is a critical difference in financial incentives between independent hedge funds and funds operated by financial institutions, such as the Bear Stearns’s funds: as noted by Mallaby, managers of independent hedge funds have mostly their own capital at risk, and therefore operate at a less leveraged and smaller-scale than hedge funds set up by banks, which rely on others’ capital and a federal government backstop, as they are considered “too-big-too-fail.” Mallaby, supra note 73, at 12-13.
contributed to the financial crisis, applies to more than just hedge funds, which are simply the most prominent comparison.⁸⁰

To be clear, the contention is not that the sole reason banks engaged in securitization or invested in MBSs was to avoid capital requirements. There are certainly other reasons to do so, including funding diversification and lower financing costs.⁸¹ Rather, the point is that the Basel regime provided banks with an additional incentive to hold such assets beyond their other advantages, which on the margin, rendered Basel-regulated institutions’ cost-benefit calculation of a securitized transaction decisively different from that of non-Basel-regulated institutions. And the key position of institutions subject to Basel capital regulations in the economy meant that when those institutions suffered distress they would be bailed out by governments. The U.S. government did provide guarantees to money market mutual funds (non-Basel regulated financial

---

⁸⁰ As Jeffrey Friedman put it:
Only [banking regulators’] errors can explain why the banks regulated by them proved, on the whole, to be so homogeneously susceptible to the lure of agency bonds, and high-rated PLMBSs [private label mortgage-backed securities] in comparison to other classes of investors. Agency MBSs and PLMBSs were bought in quantities by banks of every size, and in immense disproportion to their purchases by other institutions. Pension funds, hedge funds, general (as opposed to monoline) insurance companies – they, too, invested in MBSs, including PLMBSs, but their investment portfolios were sufficiently diversified that none of these financial sectors, as sectors, were wiped out. However, they were not subject to Basel I, the Recourse Rule, or Basel II. Jeffrey Friedman, Capitalism and the Crisis: Bankers, Bonuses, Ideology and Ignorance, in Friedman, supra note 64, 1, 48. The recourse rule is discussed in note 13, supra.

⁸¹ Basel Comm. on Banking Supervision, The Joint Forum Report on Asset Securitization Incentives 9-11 (July 2011), available at http://www.bis.org/publ/joint26.htm. In a post-crisis study of incentives to engage in private-label asset securitizations undertaken by the Basel Committee and the international organizations of securities and insurance regulators, many interviewed issuers contended that capital regulation was not a major motivation for asset securitization, but other interviewed firms and banking supervisors thought otherwise. Id. at 11-12.
institutions), but that was in the second stage of the rapidly moving crisis, when, following the
bankruptcy of Lehman Brothers, a money market fund holding its commercial paper “broke the
buck” – its net asset value fell below one dollar, the industry convention– leading the
government to fear that would precipitate a run on all such funds. The source of the cascade,
however, bears repeating, that it was in the short-term funding markets used by institutions
operating under Basel capital requirements.

Given the scale of the bailout needed by Basel-regulated firms, one might have expected
that the experience would have led financial regulators to view it, at minimum, as a cautionary
tale against the desirability of pursuing further international regulatory harmonization. For it
should have alerted them to the fact that international regulatory harmonization contributed, to be
sure unwittingly, to a catastrophic event: Basel rules generated an increase in systemic risk, due
to Basel-regulated financial institutions’ following broadly similar, flawed business strategies in
response to mistaken regulatory incentives. At the least, in the aftermath of the crisis, regulators
and public officials should have emerged humbled by their ex ante inability both to identify a
looming problem and to incentivize financial institutions properly. Instead, there has been a total
disconnect, as the call has been, to the contrary, not only to increase dramatically harmonization
of bank regulation, but also to increase the scope of harmonized regulation to include other
markets, instruments, and institutions, and in particular, hedge funds, financial institutions that
weathered the financial crisis relatively well, or when they failed, did so at no cost to the fisc.82

82 For example, section 403 of Dodd-Frank, supra note 3, requires hedge funds to register
with the SEC. The EU also enacted hedge fund regulation in the wake of the financial crisis.
Huw Jones, European Parliament Approves EU Hedge Fund Rules, Reuters, Nov. 11, 2010,
The disconnect is even more pronounced from the perspective of the present day financial crisis over the debt of members of the European Union, for it is another instance where the Basel framework created perverse incentives that have had a devastating impact of decreasing, rather than increasing, financial system stability. At the heart of the European Union’s ongoing financial crisis is the treatment of sovereign debt as riskless under the Basel standardized risk weights. That determination incentivized banks to hold public debt over private debt and, as with securitized mortgages, to hold riskier debt within the sovereign asset category, as banks thereby obtain higher returns without needing to hold greater capital. Basel II did not explicitly stipulate any parameters for sovereign debt to be used in the internal ratings’ approach, and the EU’s implementation of that approach assigned zero risk weights to all members states’.  

And, as previously noted, Dodd-Frank instructs U.S. regulators to harmonize its required new derivatives products’ regulation with that of other nations. See text and accompanying note 3, supra. For a conjecture why hedge funds were the subject of regulation, despite their lack of contribution to the financial crisis, see Romano, supra note 5.

83 Under Basel I, all OECD sovereign debt was accorded zero risk weight. The Basel I risk weights were amended in 1994 to remove from the zero-risk classification for OECD sovereign debt, debt of an OECD nation that rescheduled external sovereign debt in the prior five years; the provision was directed at Mexico, which had joined the OECD shortly before the peso crisis of 1994-95. Tarullo, supra note 17, at 61 n. 21. Basel II’s standardized risk weight adjustments did not reduce the preferencing of sovereign debt. Indeed, it maintained a preference for banks to hold their own sovereign’s debt, by permitting, at national discretion, a lower risk weight to be applied to banks’ holdings of the sovereign’s debt of their place of incorporation. Basel Comm. on Banking Supervision, supra note 47, at 29.

84 Hannoun, Sovereign Risk in Bank Regulation and Supervision: Where Do We Stand? 12 (2011), available at http://www.bis.org/speeches/sp111026.htm. The only stipulation was that the required 3-basis point probability of default floor for corporate and bank debt did not apply. Id.
The incentives Basel and its EU implementation provided to EU banks to hold sovereign debt provides perspective on why the EU sovereign debt crisis has been so difficult to manage. Many European banks, not only those in heavily indebted nations, hold large quantities of Greek sovereign debt, as well as the debt of other nations in the EU periphery. The concern is that, were Greece to default, then those banks would experience severe financial stress, if not insolvency, and, more importantly, that contagion could occur, in which investors run on banks along with the debt, of other financially-stressed EU nations.

---

85 The EU directive and annex adopting this approach are referred to as the “internal ratings-based permanent partial use” rules. Hannoun, supra note 84, at 13. In addition, consistent with that approach, the European Central Bank’s repo transactions with EU banks initially treated all EU sovereign debt equally, with eventual minor adjustments to reflect credit ratings, a policy that further promoted EU banks’ holding of periphery EU sovereign debt. Peter Boone and Simon Johnson, Europe on the Brink, Peterson Inst. for Int’l Econ. Policy Brief 2 (2011). Hannoun, an official at the Bank for International Settlements, critiques the EU’s implementation as inconsistent with the spirit of Basel II, and contends that banks should have been making granular risk assessments and applying differential risk ratings to EU sovereign exposures, and therefore contends that Basel requirements were not a cause of banks’ holding sovereign debt. Hannoun, supra note 84, at 13-14. The response to Hannoun’s defense of Basel, when allocating blame, is that Basel failed to provide meaningful guidance to regulators either by omission or commission on this issue.


87 Indeed, as the crisis over Greece’s sovereign debt has progressed, EU members such as Italy and Spain, and not just those already bailed out (Ireland and Portugal), have experienced considerable financial stress in their sovereign debt spreads. E.g., Boone and Johnson, supra note 85, at 2-3. As the scale of the requisite bailout funds has increased, the stress lines between debtor and creditor nations, and between the political elite and the populace, within the Eurozone have become more pronounced, and some observers have concluded that the crisis is jeopardizing the entire “Eurozone” project. E.g., Nouriel Roubini, The Eurozone Is Heading for
Capital regulation preferencing sovereign debt, as with the preferencing of residential mortgages, is best understood as a politically-informed decision, with the political interest in this case a more universal one, for it benefits all governments, as opposed to specific national agendas embodied in the mortgage preference. With no capital provision required, banks’ demand for sovereign debt rises, resulting in lower interest rates for the debt, regardless of its relative riskiness to other (non-government) investments. Such a rule facilitates governments’ ability to obtain low-cost funding for projects. An observer of the economic carnage on both sides of the Atlantic could not be faulted for having little confidence in a global financial regulatory architecture that has contributed importantly to financial crises the devastating effects of which are still unfolding.88

4. The International Regulatory Response to the Crisis: Basel III

In the wake of the 2008 global financial crisis, in which banks’ internal risk measurement and management systems – one of the mainstays of the approach to risk measurement differentiating Basel II from Basel I – proved inadequate to withstand a financial panic, the framework for capital measurement and standards was, not surprisingly, once again revamped in Basel III. Beginning in 2009, with updated capital requirements for securitization and

88 Basel capital requirements have been thought to have contributed to at least one other financial crisis affecting a large swath of the global financial system. Banks in the countries most affected by the Asian financial crisis in the late 1990s had considerable short term borrowing of foreign currencies from large internationally active banks, interbank transactions that had a favorable risk weight under Basel I compared to longer term lending or lending to nonbanks, and international banks that were capital-constrained had larger claims on faltering (due to their forex exposure) Asian banks. Shadow Fin. Reg. Comm., Reforming Bank Capital Regulation 7-8 (2000), available at: http://www.aei.org/article/16542.
proprietary trading (i.e., banks’ investment positions in MBSs and CDOs, instruments whose underlying mortgages’ uncertain value caused the collapse of the repo market), which were the source of severe losses during the financial crisis but had not been thought to be sources of significant risk in the prior regimes’ capital weights, a new framework was fashioned in a third accord.

Basel III, approved by the G-20 in 2010, adds to the Basel II risk-weighted capital requirements elements that take a different approach. In particular, Basel III adds a liquidity standard to supplement the risk-weighted capital provisions, and “macroprudential” capital regulations, which seek to take account of system-wide risk, in contrast to the prior focus on bank-level (“microprudential”) regulation, that is, on individual banks’ risk of failure. The new capital requirements include a leverage ratio independent of the core risk-based capital requirements, which is intended to capture risk from total assets; and countercyclical capital requirements, which will require higher capital in good times, that can be drawn down in bad times. By contrast, the Basel I and II capital requirements were procyclical, that is, they magnified the effect of the business cycle: as banks’ asset values declined in bad times, banks had to increase capital, leading to a contraction of credit, and aggravating the scope and depth of

---

89 In 2009, Basel Committee membership was expanded to include the G-20.


91 Id. While these are entirely new components for Basel, U.S. banking regulation has long employed a separate leverage ratio requirement and Spain has employed a countercyclical approach to loan loss reserves, known as dynamic provisioning, for a decade, although it works very differently from the Basel proposal, given the different target of adjustment, e.g., Bank of England, The Role of Macroprudential Policy: A Discussion Paper 7-8 (Nov. 2009).
economic distress.

The Basel III framework was agreed upon quickly in the aftermath of the financial crisis, compared to the earlier accords, but banks have a considerably longer window in which to meet the new requirements, with some components postponed for nearly a decade, and many of the increased capital requirements to be phased in gradually. For example, banks’ minimum common equity capital ratio is to rise in 2013, but to not hit the final target until 2015, and the requirement of a capital conservation budget will not commence its phase-in until 2016, nor reach its final target until 2019.\textsuperscript{92} The rationales advanced for the extended implementation include concern that the immediate imposition of significantly higher capital requirements could delay the global economy’s recovery from the financial crisis, along with the need to provide banks time to adjust to higher capital requirements through increased earnings retention and newly raised capital. In addition, some provisions, such as the new requirement of leverage ratios, are being phased in with observation periods, permitting the Committee to assess their efficacy and propose adjustments, given the absence of international experience with such regulation.\textsuperscript{93}

In stark contrast to the earlier accords, the rationale for Basel III is couched solely in terms of system stability (reducing systemic risk); there is no mention of a goal of maintaining


\textsuperscript{93} E.g., Walter, supra note 90.
domestic banks’ global competitiveness.\textsuperscript{94} It stands to reason that public animosity toward financial institutions, which are viewed by many citizens and the media as villains in a morality play following the severity of the financial crisis, suppressed any desire of officials to appear solicitous to their concerns by referencing competitive advantage in the proposals’ objectives.

However, competitiveness concerns are still very much evident in Basel III; they are simply not explicitly acknowledged. Starting with the negotiation of the initial Accord, considerable adjustments to capital definitions were made to meet the demands of national regulators, who sought to accommodate their banks. For example, under Basel I, Japanese negotiators obtained their desired capital treatment for deferred tax assets; U.S. negotiators, that for mortgage servicing rights, and European (French and German) negotiators, for minority interests in other financial institutions. Basel III retains the tripartite agreement, while simultaneously limiting each type of capital asset to 10 percent of tier one equity capital.\textsuperscript{95} In addition, the new capital regime’s extended phase-in has the effect of equalizing the “playing field” by providing nations’ weaker banks time to adjust to heightened capital requirements.\textsuperscript{96}

While relatively obscured from public view, regulators’ attentiveness to domestic banks’

\textsuperscript{94} E.g., Basel Comm. on Banking Supervision, supra note 92, at 1 (“The objective of the reforms is to improve the banking sector’s ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy.”)


\textsuperscript{96} The Committee considered large banks most in need of the transition period as the institutions that would have to raise significant capital to meet the new requirements. Basel Comm. on Banking Supervision, The Basel Committee’s Response to the Financial Crisis: Report to the G-20 12 (2010), available at http://www.bis.org/publ/bcbs179.pdf.
international competitiveness underscores the reality that Basel is to a great extent informed by national political priorities and banks’ rent-seeking activity.\(^{97}\) It would be an error to believe that the latest iteration, Basel III, is implementing a pristine new world financial order informed solely by the best available technical knowledge of experts, and it would equally strain credulity to believe that any future harmonized regulatory apparatus would do so. Experience teaches otherwise.

Despite the self-evident deficiencies in the Basel framework and its contribution to the financial crisis, the responses of bank regulators and public officials has been to double down on a failed, top-down regulatory strategy focused on harmonized capital requirements, while once again refining perceived flaws, Basel’s risk-weighted capital requirements, rather than comprehensively reexamining first principles of the regulatory architecture. For example, in response to the Accord’s risk weights’ not being correlated with losses experienced during the global financial crisis, the Basel committee introduced an additional layer of complexity by refining the weights and by adding new capital requirements, such as a minimum leverage ratio (that is, the new macroprudential regulatory components function as add-ons to the risk weighted capital requirements which are still the lynchpin of the regime). Moreover, in discussing Basel III’s new requirements, the Committee highlighted as a critical regime component, enhanced enforcement efforts to ensure their uniform, global adoption.\(^{98}\)

\(^{97}\) See, e.g., Tarullo, supra note 17, at 87 and ff. (describing Basel II negotiation process as a “trade negotiation, with extensive political and constituency involvement”).

\(^{98}\) As the Secretary-General of the Basel Committee put it, when discussing the “key elements” of Basel III, “[I]t is not enough to develop new regulations and standards. We also must put in place stronger mechanisms to ensure that our regulations and standards are fully implemented. In particular, we have established the Standards Implementation Group which will
It is, of course, altogether possible that the Basel Committee’s response to their contribution to a catastrophic policy failure, a rather quickly cobbled revision of harmonized capital requirements, could prove to be helpful. After all, the newer components are consistent with approaches to capital requirements and systemic risk advocated by distinguished financial economists,99 and those pieces might offset the continued perverse incentives of the failed risk-weight and internal risk calculation components of Basel II that are still at the core of Basel III.

However, there are inherent, systemic drawbacks with the overall Basel approach, quite apart from the uncertainty of whether a specific policy is a correct one, which are not acknowledged. In the dynamic and uncertain environment in which financial institutions operate, and in which the technical knowledge and resources of regulators invariably lags behind those of the regulated, a more nimble regulatory apparatus that can continually test, learn and adapt to changed circumstances and new information would have decisive advantages. Basel’s present day cumbersome top-down harmonized regulatory set-up, which requires multinational conduct follow up and thematic peer reviews. *All member nations need to fully implement all aspects of Basel II and III*” (emphasis added). Walter, supra note 90.

negotiation and political logrolling to obtain agreement in order to implement revisions, and which correspondingly limits the tailoring of national regulatory approaches, would seem to be the precise opposite of what is needed.

The extended phase-in, in some cases over nearly a decade, of Basel III’s novel features can, in my judgment, best be characterized as the Basel Committee’s implicit acknowledgment that the financial world is embarking on a global regulatory experiment whose impact is poorly understood: imposing a lengthy transition is a way to hedge one’s bets. This is not in itself a bad thing. But a superior strategy would have been to create a more nimble regulatory architecture that candidly acknowledges that there is much we do not know or that we will never know, and incorporates a trial and error, “muddling through” approach into the decisional process by facilitating experimentation with Basel regulatory requirements on a national basis, rather than undertaking a global experiment, whose risks and uncertainties are unknown and potentially catastrophic. ¹⁰⁰ Such an approach, with safeguarded experimentation undertaken at the nation-state level, would improve the quality of decisionmaking by generating far greater information

¹⁰⁰ On the benefits of a trial and error approach to policy analysis and decisionmaking in general, see Harford, supra note 10. Harford views such an approach as less well-suited to the financial system than other complex institutions because it is “tightly coupled,”” that is, one failed experiment could lead to domino-like contagion with catastrophic consequences, in contrast to “loosely coupled” sectors, where experimental failures produce valuable information and lead to successful innovation; he therefore contends that the appropriate strategies in this context are those that “decouple” institutions, and are at the “right scale” for experimentation, so that it can make a significant difference without being ruinous. Id. at 184, 220. Given the literature on transmission channels of the global crisis, see text and accompanying notes 27-37, supra, Harford’s rejection of experimentation in the financial setting due to financial institutions’ “tight coupling” seems to me to be inapt. In addition, if national regulatory regimes were truly diverse, then there would be a decoupling of institutions, as they would not be following as similar a set of regulatory-incentivized business strategies and, correspondingly, they would be less likely to fail simultaneously.
regarding the impact of regulation than Basel’s phased-in centralized directives. I would also contend that these benefits can be obtained at minimum risk, given appropriate procedural safeguards.

III. Was the Basel Accord Effective in Meeting Its Stated Goals prior to the Financial Crisis?

The financial crisis of 2008-09 has been plausibly characterized as a perfect storm: an event created by the confluence of factors in any one of whose absence the crisis would not have materialized or, at least, not with the same level of severity. In this characterization as the realization of a worst-case scenario, even a praiseworthy regulatory architecture would crack. After all, there is a cost-benefit tradeoff that must be made with any regulatory arrangement aimed at reducing risk, which entails a judgment whether the object of prevention should be the proverbial one hundred or thousand year flood. Accordingly, rather than evaluate the Basel accords solely by their contribution to the international financial regulatory architecture’s failure in the 2008-09 financial crisis, it would be appropriate to consider data regarding Basel’s effectiveness at meeting its explicit dual objectives of increasing system stability and equalizing banks’ competitive advantages in the pre-crisis environment of Basel I and II, an era in which the perfect storm metaphor is not applicable.

An extensive pre-crisis literature sought to evaluate whether regulatory compliance with the core Basel principles improves national banking systems’ performance and stability. This

---

101 E.g., Willem H. Buiter, Lessons from the 2007 Financial Crisis, CEPR Discussion Paper No. DP6596 (2007) (“Crisis was the product of a ‘perfect storm’ bringing together a number of microeconomic and macroeconomic pathologies”); George G. Kaufman, The Financial Turmoil of 2007-09: Sinners and Their Sins, Indiana State University Networks Financial Institute Policy Brief 2010-PB-01 (2010) (“the crisis may be viewed as the product of a perfect storm.”)
literature, although certainly not dispositive, is decidedly not encouraging for advocates of global harmonization. In addition, the Basel accords do not appear to have satisfied the second objective of equalizing competition.

A. The Relation between Banking Regulation and Bank Performance and Financial System Stability

This part provides an overview of research evaluating the impact of the Basel capital requirements with respect to the aim of improving system stability, as well as bank performance. The effect on both dimensions is analyzed because, while researchers typically treat them as separate concerns, in my judgment, they are related, in that, banks’ systematically poor performance can destabilize a financial system. The part first presents the findings of a comprehensive review of the literature on Basel I undertaken by a working group of the Basel Committee. Thereafter, it reviews the most comprehensive cross-country comparative research undertaken since the working group’s review, that of James Barth and colleagues, which draws on data from a series of large-scale surveys of national banking regulators with regard to their implementation of Basel I and II.

1. Basel Committee Study Assessing the Effectiveness of Basel I’s Capital Requirements. Ten years after the adoption of Basel I, in 1998, the Basel Committee established a working group (“group”) to study the effectiveness of the Accord. The group was, in particular, asked to examine the following questions: did Basel I increase bank capital and limit risk-taking as intended, or had banks been able to evade its capital requirements by shifting to riskier assets within a risk weight class or otherwise engaging in regulatory arbitrage?; and did Basel I have unintended consequences that adversely impacted the real economy, such as, a reduction in
lending?  

The group reviewed over 130 research papers and reached the following conclusions: (i) at first, Basel I induced weak banks to increase their capital; (ii) over time, banks learned how to exploit the requirements and increased their risk-taking; and (iii) in economic downturns it appeared to have limited lending, contributing to economic weakness. Although the group’s conclusions do not represent the views of the Basel Committee, given that the study was undertaken by experts affiliated with the Committee, it is instructive that the findings are at best equivocal regarding Basel I’s impact on banks and the financial system.

More specifically, as would be expected, capital ratios rose approximately 2 percent from the adoption of the accord in 1988 to 1996, from 9.3 to 11.2 percent, with countries that had been closest to the Basel I minimum experiencing larger increases. Similarly, within countries, at the individual bank level, banks with lower capital ratios increased their capital more than did banks with higher capital ratios. While the data are consistent with capital requirements causing banks to hold more capital than they otherwise would, as the group noted, the increase may also have been a function of market forces (i.e., weaker banks had to increase their capital in order to

\[102\] Patricia Jackson, et al., Capital Requirements and Bank Behaviour: The Impact of the Basle Accord, Basle Comm. on Banking Supervision Working Papers No. 1 (Apr. 1999), at 1-2, available at [http://www.bis.org/publ/bcbs_wp1.htm](http://www.bis.org/publ/bcbs_wp1.htm). Basel Committee working papers contain analysis by experts of the Committee, its working groups, and member institutions. The working group undertaking this study was led by Patricia Jackson, who was in charge of the Regulatory Policy Division of the Financial Stability Division of the Bank of England; she was assisted by staff of the Bank for International Settlements and the Bank of England.

\[103\] Id. at 2.

\[104\] Id. at 6. U.S. and U.K. regulators, among others, required capital ratios higher than the Basel minimum, on a bank by bank level. Id.
attract investors, independent of the level that was required under the accord.\textsuperscript{105} It is not possible, however, to isolate econometrically which factor – the Basel requirement or the market – induced banks to increase their capital.\textsuperscript{106} If the market, rather than the accord’s minimum capital requirements, was the impetus for banks’ increasing capital, then the seeming need for globally harmonized requirements would be undercut: for banks would have been beefing up their capital base in response to the demands of investors, quite apart from regulatory requirements.

In evaluating whether the Accord had increased risk-taking, the group considered two possible mechanisms. First, economic theory would suggest that, in response to regulatory capital requirements, banks would increase the riskiness of their assets by shifting, within an asset category with the same capital charge, toward riskier assets in the category.\textsuperscript{107} The group reviewed two studies that sought to test whether that was so. Although the studies found banks’ level of risk increased after they became subject to capital requirements, banks that were well-capitalized before the regulation came into force increased their risk as much as did the poorly-capitalized ones. Such a finding would seem to be at odds with the theoretical analysis in which only banks with a new capital constraint respond by increasing risk. But it could still be consistent with theory if market discipline, upon the imposition of capital requirements, moved all banks’ target capital ratios to a new (higher) equilibrium, and not just those with previously 

\textsuperscript{105} These factors may also be interrelated, for example, a specific capital requirement that supervisors actively enforce might facilitate market monitoring of, and hence the exertion of pressure on banks to raise, capital ratios. Id. at 15.

\textsuperscript{106} Id.

\textsuperscript{107} Id. at 20.
low capital ratios. The group concluded that there is no reliable evidence that capital requirements increased risk-taking, given the inconclusiveness of the studies’ findings, along with methodological concerns.

Despite the group’s skepticism regarding studies finding banks’ risk-taking increased after the imposition of capital requirements, it did conclude that over time, banks were able to exploit the Basel requirements. This conclusion hinged on the group’s interpretation of data related to banks’ use of the alternative mechanism it considered by which banks could alter their risk profile: securitization. The group viewed the increasing use of securitization as a mechanism for engaging in regulatory capital arbitrage (by which it meant, banks’ efforts to minimize funding costs): securitization could make banks’ capital ratios look “artificially high” compared to the riskiness of the bank’s exposure.

---

108 Id.

109 Id. at 20-21. Specifically, neither study controlled for factors that could affect bank risk-taking besides the imposition of capital requirements, nor did they have bank-level data indicating the risk profile of lending within the Basel categories. Rather, they looked at banks’ overall risk, and hence could at best be suggestive of the risk-taking theory. In addition, the finding of increased risk-taking was not robust across countries.

110 Id. at 21. Securitization works as a means of regulatory capital arbitrage by which a bank “exploits the large divergences that can arise between a portfolio’s true economic risks and the Accord’s measure of risk (total risk-weighted) assets.” Id. at 22. Namely, securitizing a loan that had been directly held on a bank’s books increased the percentage of equity capital with which a bank was credited, although it did not change a bank’s mix of capital assets nor its risk, because the securitized loan could provide recourse to the buyers without requiring the addition of bank capital. The report’s appendix provides several helpful examples illustrating how securitization enabled banks to evade the capital requirements. Id. at 48. Part IV returns briefly to the issue of regulatory arbitrage, but of a different sort: regulatory arbitrage across different regimes (a concern of advocates of regulatory harmonization, that banks will choose to operate in the least stringent jurisdiction, leading all nations to adopt excessively lax rules), as distinguished from regulatory capital arbitrage as discussed by the working group, which is not related to jurisdictional competition, that banks are willing to incur costs to avoid regulation perceived to
There are a number of plausible non-regulatory-avoidance explanations for the explosive growth in securitizations in the 1990s (such as, a reduction in debt financing costs or better diversification of funding sources), which the working group readily acknowledged, but the group concluded that in many instances the objective was to inflate capital ratios, making them “more difficult to interpret” or “less meaningful.” It relied on estimates by Federal Reserve staff and market reports of institutions’ securitization activity, to reach the conclusion that, despite being nominally in compliance, banks were able to reduce the effectiveness of capital requirements by securitizing liabilities.

The group’s conclusion regarding Basel’s impact on banks’ use of securitization is a consequential one. Securitized mortgages were the assets that sparked the blow up of the repo and ABCP markets and triggered the financial crisis of 2008-09. To the extent that banks worldwide followed a broadly similar strategy, taking advantage of the Basel risk-weights by leveraging up on those preferenced assets, then global harmonization of financial regulation had the unintended consequence of increasing, rather than decreasing, systemic risk, the precise opposite of what Basel sought to accomplish. The inference to draw regarding the financial crisis from the report’s conclusion on securitization, in my judgment, is that Basel’s incentivizing of banks to use securitization extensively, and not characteristics of securitized assets themselves, was the source of the global blowup, and accordingly, regulatory solutions would be better addressed to revising the Basel regulatory architecture than the securitization process, as has been

be a tax (i.e., capital requirements higher than banks would voluntarily set).

\[111\] Id. at 26.
The finding of strategic behavior by Basel-regulated institutions to minimize their cost of capital underscores an iron law of financial regulation: even a most carefully constructed regulatory design, developed by technically skilled and well-intentioned experts, can, and quite often will, have unforeseen and undesirable consequences, as institutions will find legally permissible means of avoiding regulations perceived to be costly. Moreover, even if strategic behavior is foreseeable, the form it takes, and hence, the systemic impact, is often not predictable. We can further be confident that the greater the regulatory cost, the greater the effort that will be employed by those bearing the cost to devise work-arounds. The ever-present regulatory risk of the strategic response of those being regulated, I would maintain, argues for smaller scale, incremental experimentation, at a national rather than global level, to gauge better a regulatory schema’s true cost and impact on incentives. This critical consideration is one of the motivations for the paper’s proposed recrafting of the Basel architecture.

Finally, the group explored the macroeconomic impact of capital requirements, that is, whether there were adverse real economy effects. Motivating that inquiry was the concern that Basel I’s fixed minimum capital requirements could have had additional “unintended side effects” besides “encouraging regulatory capital arbitrage.”113 The issue was whether banks constrained by capital requirements would reduce lending, thereby causing a credit contraction

112 Subtitles C and D of Title IX of Dodd-Frank, supra note 3, for instance, are directed at the securitization process, respectively, regulation of credit rating agencies, and requiring issuers of securitized assets to retain an economic interest in the credit risk of the underlying assets.

113 Jackson, et al., supra note 102, at 2.
and harming the real economy. 114 Were that to be the case, regulators’ prudential goals would be at odds with economic growth, and the tradeoff between the two goals would have to be factored into any regulatory assessment, further complicating a regulator’s responsibility.

Although there is variation regarding how banks react to capital constraints (i.e., increasing capital by issuing equity or by curtailing lending), 115 studies find that, in some countries over some time frames, banks respond to binding capital requirements by reducing lending. Paralleling the interpretative challenge in assessing whether the Accord’s minimum capital requirements increased capital ratios, as the group noted, confounding factors make it daunting to determine econometrically if the reduction in lending was due to the Basel capital regulations or the market forcing a capital adjustment on banks. 116 The group therefore concluded that banks took the “least costly” approach to respond to binding capital constraints, which included adjusting “the composition or level of lending” when issuing equity was more expensive. 117

The data connecting bank responses to capital requirements with contraction in lending in some time frames present a genuine regulatory quandary. Credit contraction reduces economic

114 Id. Economic models developed at the time suggested that risk-based capital requirements, such as the Basel regime, could increase credit rationing or raise the cost of capital, which would harm economic growth. See Barth, et al., supra note 45, at 54.

115 Some variation is to be expected because capital adjustments should depend on a bank’s individual financial circumstances as well as economic conditions. Jackson, et al., supra note 102, at 19.

116 Id. Examples of confounding factors could be deposit outflows, equity-market induced capital shocks, and decreased loan demand.

117 Id.
growth\textsuperscript{118} and accordingly, prudential and growth goals can work at cross purposes. If banks respond to higher capital requirements by refraining from engaging in financial intermediation, then the regulators’ objective, to increase financial system stability, would be undercut, for a weakened real economy would not be conducive to financial stability. The studies’ ambiguous findings reenforce this paper’s contention that financial regulation is a complex and subtle art, in which, the occurrence of strategic interaction between regulation and the regulated is known, but the outcome from this interplay is often unknown, and in some instances, unknowable, thereby further reenforcing the contention that there are informational and cost-saving benefits to be had from smaller-scale regulatory experimentation.

2. Assessing Basel I and II Using Bank Regulator Surveys. The most comprehensive cross-country comparative analysis of bank regulation and performance was undertaken by James Barth and colleagues.\textsuperscript{119} Barth, et al. surveyed banking regulators and supervisors in over 100 nations over three intervals: 1998-99 (117 countries), 2002-03 (152 countries), and 2005-06 (142 countries). When they began their surveys, Basel II had just been proposed and an aim of the research was to illuminate whether the new framework would be effective. Accordingly, they constructed indices from the survey responses to measure nations’ regulatory quality regarding

\textsuperscript{118} Id. at 28. The group reviewed the theory and empirical studies linking reduction in bank lending to reduced output, as other financial sources do not make up fully for the banks’ retrenchment, with such adverse effects being identified in U.S. and Japanese data.

the three pillars that would be comprising the Basel II regulatory framework: capital
requirements, supervision and market discipline (disclosure requirements). The indices are
used to examine the impact on bank performance and financial system stability of the Basel II
pillars along with other features of national regulatory regimes, such as deposit insurance and
restrictions on banks’ activities.

The statistical analysis using data from the first survey finds that neither stronger capital

---

120 Each index is derived from regulators’ responses to survey questions. For instance, the
capital requirements index consists of responses to questions concerning whether Basel risk
weights are used and certain types of losses are deducted from capital to determine minimum
capital, and whether certain types of funds are permitted to initially capitalize a bank and are
officially verified. Barth, et al., supra note 45, at 337-338. The indices are constructed using a
principal components methodology, but the statistical results are the same when they are more
simply calculated as the sum of the responses. Barth, et al., Bank Regulations are Changing,
supra note 119, at 9, fn. 5.

121 The regulatory variables, along with other country-specific characteristics, such as the
quality of the legal system, are regressed on dependent variables measuring bank performance
and system stability, and findings are subjected to robustness tests, including instrumental
variables techniques to control for the endogeneity of regulatory systems. Bank performance is
measured by the development of a nation’s banking system (credit issued by banks to private
sector firms as a share of GDP), and by individual banks’ efficiency (net interest margin,
overhead costs, and an econometric model of the relative efficiency of intermediation). The
intermediation model is a two-stage regression model in which a bank’s relative efficiency score
is first derived from a nonparametric analytical method in which output (total loans and
securities) is a function of inputs (deposits, labor and physical capital), and then used in the
second stage to evaluate the relationship between regulation and bank efficiency. This approach
is used solely in Barth, et al., Enhance or Impede?, supra note 119, which analyzes data from all
three surveys. System stability is measured by the probability of a nation’s suffering a systemic
banking crisis, which is identified by: implementation of emergency measures, such as banking
holidays; large-scale nationalizations of banks; 10 percent of the banking sectors’ total assets are
nonperforming; or banking sector rescue costs of at least 2 percent of GDP. The crises occurred
in the 1990s, prior to the measure of the regulatory variables (1998), which is a methodological
shortcoming because the explanatory variables should be measured prior to the crises’
occurrences. But as Barth, et al. note, there are no earlier cross-country regulatory data available,
and mitigating the methodological concern, is the fact that there are data suggesting that bank
regulation has not changed much over time. Barth, et al., supra note 45, at 214.
requirements nor stronger supervision systematically affect bank performance or system stability. Strengthened market discipline (greater disclosure) is, however, associated with improved bank performance. Consequently, Barth, et al. consider the most important feature of financial regulatory regimes to be market discipline, Basel II’s third pillar. The analysis further indicates that more stringent capital requirements do not compensate for weaker supervision (interaction effects are insignificant). The absence of robust significance of capital requirement variables in the analysis should be particularly troublesome to central bankers and financial regulators, given its centrality in the international regulatory regime, for it suggests that harmonization of this regulatory instrument has not furthered the goal of reducing systemic risk.

However, as Barth, et al. note, it is possible that there is a relationship between capital requirements and systemic crises but the statistical analysis could not identify an effect because harmonization under Basel I reduced the variation in nations’ capital requirements. And, of course, econometric analysis cannot disprove a counterfactual, that in the absence of the Basel accord there would have been an even greater number of systemic crises. Still, Barth, et al. conclude that the “analyses do not provide much support for the view that capital regulations

---

122 Id. at 255. In addition, they find that more generous deposit insurance adversely affected stability (that is, it was associated with a higher probability of systemic crises). The generosity of the deposit insurance system is measured by a principal components analysis related to the presence of explicit deposit insurance, absence of coinsurance, coverage of foreign and interbank deposits, a government-funded system, non risk-based premiums, voluntary membership, large coverage limits, and government management of the insurance fund. Id. at 188.

123 Id. at 222. Nor do stricter capital requirements offset the “destabilizing effects” of generous deposit insurance. Id. at 221.

124 Id.
exert a reliably positive impact on either bank stability or performance.”  They further conclude that the “results question the merit and desirability of Basel II’s second pillar: increasing the authority of the official supervisory agency.”

Barth, et al. undertook panel regressions of the impact of the regulatory index variables on bank performance using all three surveys and difference-in-difference (d-i-d) regressions evaluating the impact of changes in regulation over the first and last surveys on performance.  There is only a minimal difference with the earlier analysis of the initial survey’s data. In both the panel and d-i-d analyses, which use banks’ relative efficiency scores as the performance measure, neither heightened capital requirements nor supervision robustly influence performance.

Strengthened capital requirements do not appear to significantly improve performance: the capital requirements index variable is only marginally statistically significant at 10 percent, and when the analysis also controls for supervisory and market discipline variables, then it is no longer even marginally significant. There is also a weak result regarding strengthened supervision. If the banking regulator is independent from the executive, compared to the

125 Id. at 256.

126 Id. at 255.

127 Barth, et al., Enhance or Impede?, supra note 119. They also undertake simulations of the impact of changes in regulatory variables between the first and last surveys on performance and system stability. Barth, et al., Bank Regulations Are Changing, supra note 119. But the simulations are performed only for regulatory variables that were statistically significant in the initial analysis, and hence the impact of the capital requirements and supervision are not analyzed. Because those are the core components of Basel’s harmonized regulation, and hence the subject of this paper’s analysis, the simulation results are not discussed in this paper.

128 Barth, et al., Enhance or Impede?, supra note 119, at 40 (Table 5 regression results).
legislative, branch, then greater supervision improves performance (the interaction term is significant). As in the analyses using only the initial survey data, only the market discipline (disclosure) regulatory variable is consistently statistically significant. Barth, et al. therefore emphasize the importance of market discipline as a regulatory tool, an instrument distinctly ignored by regulators and legislators not only in the implementation of Basel II but also in the Dodd-Frank legislation and EU directives enacted in the wake of the global financial crisis.

A fair conclusion from Barth, et al.’s research is that there is no robust evidence that the key Basel II regulatory pillars which are the focus of harmonization efforts, enhanced capital requirements and supervision, improve banking performance. Nor is there evidence that those regulatory pillars foster financial system stability (although this analysis is subject to fewer and less conclusive testing, given data limitations, than the performance analysis). It is noteworthy that Barth, et al.’s findings and conclusions parallel those of the Basel Committee working group reviewing an earlier literature on the limited effectiveness of Basel I.

Given the studies’ inability to find a positive relationship between Basel requirements and either banking performance or system stability, and the contribution of the Basel regime to the ongoing financial crisis, it would take, to my mind, an heroic leap of faith to think that, with the latest emendations to the Basel regime, things will be markedly different next time. There is, in my judgment, a need to rethink the mechanism by which international financial regulation is crafted instead and not simply to tinker with the Basel architecture. This paper’s proposal, by introducing regulatory diversity and experimentation into the Basel regulatory architecture, provides for a process that makes possible an ongoing exploration of alternative regulatory

129 Id. at 20.
arrangements and the generation of information that we presently do not possess, regarding which regulatory strategies work best under what circumstances.

B. The Relation between Banking Regulation and Bank Competitiveness

The Basel Committee working group also examined whether the 1988 Accord’s introduction of minimum capital requirements fulfilled the Accord’s second objective, equalizing international banks’ competitiveness. The most consistent reading of the data analyzed by the group is that the Accord did not “level the playing field,” as was intended.

For example, the group explored the hypothesis that, if Basel’s harmonization of capital requirements had leveled the playing field, then there should not be large discrepancies across banks’ cost of capital. Yet the studies reviewed by the group identified large differences across nations in banks’ cost of equity. In addition, the group found there was no long-term reduction in the dispersion of banks’ capital ratios over eight years following the adoption of the 1988 Accord. Dispersion of capital ratios indicates the presence of competitive differences, which

130 Jackson, et al, supra note 102, at 4. The group reviewed three competitiveness issues concerning the Accord’s introduction of fixed minimum capital requirements: whether it disadvantaged banks compared to securities firms, affected banks’ overall profitability, and leveled the playing field of internationally active banks. Id. at 35. This part reviews only the evaluation of the literature relevant to the focus of this paper, whether the Accord leveled the playing field, as that was an impetus for global harmonization.

131 The group reviewed a study of internationally active banks’ cost of equity (calculated in real terms, using expected profits) from 1984-90 that found a range from 3.2 percent for Japanese banks to 12.0 percent for U.S. banks. Id. at 41. The other nations’ banks in the study were Canada, Germany, Switzerland and the United Kingdom.

132 The group calculated the dispersion of capital ratios for all G-10 banks in three years, 1988, 1992 and 1996. From 1988 to 1992, the standard deviation of the banks’ capital ratio converged, narrowing from 1.6 to 0.8, which would suggest the Accord had the leveling effect it sought. But from 1992 to 1996, the standard deviation widened, returning to the starting point of 1.6. Id. at 42.
would be obscured by examining convergence of capital ratio averages. The group’s explanation of the lack of an impact of the Accord’s harmonization of capital requirements on the cost of equity and the dispersion of capital ratios, and, accordingly, the lack of an impact on the global playing field, is that the effect of other national differences dominates that of capital requirements on banks’ international competitiveness.  

The explanation for the Accord’s failure to level the playing field – a host of differences in national policies not within the Basel committee’s control – is noteworthy. If the Basel objective to level the playing field through harmonized capital requirements – which was explicit in Basel I and II and implicit in Basel III – is not an attainable objective, given divergent national policies, then a common objection to permitting deviations from the Basel regime, that non-uniformity will lead to regulatory arbitrage or a “race to the bottom,” as nations jockey to advantage domestic banks’ international position, is brought into serious question. For the data suggest, quite to the contrary, that a non-harmonized regulatory approach to Basel’s capital requirements would not be as consequential for banks’ comparative competitiveness as differences in national fiscal, monetary and other bank regulatory policies, such as deposit insurance, that have not been harmonized by the Basel accords, and are not even on regulators’ drawing board for global harmonization.

IV. Fostering Experimentation and Flexibility in International Financial Regulation

The case for opening up the international financial regulatory architecture to encourage

133 Capital ratios could be affected by national differences in the perceived magnitude of the safety net, as well as by firm-level factors unrelated to competitiveness, such as differences in banks’ activities (that is, some activities could lead banks to hold more capital than others because of their perceived risk). Id. National differences affecting the cost of equity include a nation’s macroeconomic stabilization policies, taxes, and citizens’ savings behavior. Id.
diversity and experimentation under the Basel accords gains traction when a clear-eyed assessment of Basel’s ineffectiveness and multiple failures is made. This part proposes a procedural mechanism by which diversity and experimentation could be implemented with minimum dislocation to the current international regulatory architecture. The proposal would permit nations to deviate from Basel requirements subject to regulatory review, affording experimentation and diversity in international regulatory approaches and thereby creating a more adaptable international financial regulatory architecture than present-day arrangements. After fleshing out the details of the proposed mechanism of review, how the key cross-border issue of home and host regulatory authorities’ supervisory coordination would play out in an international regime with regulatory diversity is considered, and the consequent impact on international banks’ operating costs, and the potential for regulatory arbitrage.

A. Modifying the Basel Architecture to Increase Adaptability

In an extended critique of the core innovation of Basel II, the use of bank’s internal risk rating measures to set capital requirements, Daniel Tarullo, then a law professor and presently a Federal Reserve Board Governor, suggests that had the Basel Committee not single-mindedly focused on that strategy and instead invested time and resources in seriously exploring alternative regulatory approaches, it might have reached a “better policy decision.”\textsuperscript{134} Despite his critique, Tarullo does not follow through by advocating replacing Basel II with one of several alternatives that he considers, but rather, he recommends that the Committee refine its definition of capital and add, as supplements to the risk weighted capital requirements, both a leverage and subordinated debt requirement (the latter being at the core of one of the contemplated alternative

\textsuperscript{134} Tarullo, supra note 17, at 257.
In addition to reluctant support of Basel II’s internal risk-weight approach, Tarullo floats, as a suggestion of how a “more manageable” international capital regime “might be structured,” the replacement of Basel II’s internal risk measurement rules with a general requirement that national regulators adopt some form of risk weights, in consultation with the Basel Committee, and in conjunction with adoption of a more detailed specification and expansion of supervisory activities. In other words, Basel II’s pillar 2 (supervision) would replace pillar 1 (capital requirements) as the centerpiece of a harmonized international regulatory architecture.

The proposal advanced in this paper parallels Tarullo’s inchoate suggestion – permitting national regulators to “opt out” of Basel requirements – but goes considerably further. It advocates permitting nations to adopt any approach to capital they deem appropriate, which need not employ risk weights, subject to a systemic risk assessment and ongoing monitoring. The paper’s approach also addresses Tarullo’s apprehension regarding alternatives to Basel II as not being sufficiently developed to replace it: individual nations’ adoption of regulatory alternatives has far lower risk than implementation at a global level, and their experiences would provide information for refining or replacing Basel’s regulatory approach more broadly, if it were to

---

135 Id. at 264-70. The alternative regimes he considered were: retaining a standardized risk weight approach; relying on market discipline by mandatory issuance of subordinated debt; and a precommitment approach that had been proposed by Federal Reserve economists, in which banks would determine how much capital they needed and if actual losses exceeded the allocated capital, regulators would impose a penalty. Id. at 226-252, 263. He rejected the first approach as inappropriate for large international banks and the latter two as “insufficiently developed” to be adopted by the international community in place of the more “fully” developed Basel II regime.

136 Id. at 273. Among the specified supervisory practices he would require are increased attention to a bank’s internal risk measurement and regulatory intervention to forestall declines in capital below minimum required levels. Id. at 274-276.
prove desirable. Informing this perspective is the general notion that innovating nations are providing a public good rather than generating a social cost, the implicit premise of much of the advocacy of regulatory harmonization. The paper does not, however advocate adoption of harmonized enhanced supervisory regulation which Tarullo paired with his proposed increase in national discretion for capital standards, given the absence of data indicating that enhanced supervision improves bank performance or system stability and the likelihood that appropriate supervisory activities will vary with differences in capital regulation.¹³⁷

1. How Can International Financial Regulation that Is Amenable to Experimentation be Operationalized? Introducing diversity into international financial regulation requires reconfiguring the Basel architecture to permit and encourage, in a structured fashion, member experimentation that deviates from the Accord. The procedural mechanism for accomplishing the adaptation to the architecture that I advocate is a formal peer review process with a shifting burden of proof to permit departures from Basel requirements, that has three components: initiating action by a member state’s noticing a plan to adopt a rule or regulatory approach different from that taken by Basel; assessment of such proposals by a committee of peers; and ongoing monitoring and periodic reassessment of approved departures.

   a. Member State Initiation of the Review Process

¹³⁷ See text, pp. 62-64, supra (text following note 121 and ending after note 129), discussing the findings of Barth, et al’s research. A recent study provides further support for rejecting Tarullo’s coupling capital regulation diversity with enhanced harmonized bank supervision: using IMF and World Bank assessments of nations’ actual compliance with Basel (as opposed to the “law on the books” measured in Barth, et al.’s surveys) and a data set of 3,000 banks in 86 countries, it similarly found no relation between nations’ compliance with the Basel Core Principles for Effective Supervision and bank soundness or systemic risk. Asli Demirgüç-Kunt and Enrica Detragiache, Basel Core Principles and Bank Soundness: Does Compliance Matter?, 7 J. Fin. Stability 179 (2011).
The Basel Accords are non-binding regulatory agreements which all Committee members sign and, as such, pledge to implement the accord requirements in domestic law.\textsuperscript{138} Notwithstanding absence of an enforcement mechanism, because committee members have obliged themselves to comply, negotiations over changes to the accord have tended to be intense and protracted, as nations vie for provisions that will advantage or, at least not disadvantage, domestic financial institutions, and that are consistent with domestic policy. Basel’s understandably politically-infused process therefore makes revision cumbersome at the same time that it impedes experimentation.\textsuperscript{139} By permitting member states to depart from Basel requirements upon conforming with straightforward and transparent procedures, the proposed process will introduce greater flexibility into a regulatory apparatus forged by multiparty bargaining, which is inhospitable to subsequent innovation by individual nations without a further amended multilateral accord.

The process would be initiated by a national regulator’s submitting a notice of a proposed

\textsuperscript{138} The Basel accord standards are implemented through domestic legal processes, thereby incorporating them into domestically enforceable obligations. Michael S. Barr and Geoffrey P. Miller, Global Administrative Law: The View from Basel,” 17 European J. Int’l Law 15, 28 (2006). In the United States, this is done through administrative rule-making, which, of course, U.S. banking agencies can undertake without legislative action or endorsement. Congress has, however, authorized the federal banking agencies to “consult” and “reach understandings” on international banking “supervisory policies and practices,” in the International Lending Supervision Act of 1983, 12 USC § 3901(b), and has engaged in direct oversight, for example, by holding hearings on Basel II. Id. at 33-34. Congress could, no doubt, enact legislation modifying or repealing regulations that were adopted under Basel requirements, should it find them contrary to its objectives.

\textsuperscript{139} As noted in note 13, supra, sometimes nations have altered the rules prior to Basel adjustments: U.S. banking regulators adopted the recourse rule allowing banks to use external credit ratings to adjust asset risk-weights in a category, after the Basel committee released a consultative paper advocating that approach but several years before the committee adopted it in Basel II.
departure to an office within the Basel Committee designated to receive such proposals.

Accompanying the notice would be a three-part documentation consisting of (i) specification of the proposed departure from Basel requirement(s); (ii) the justification or objective sought to be accomplished; and (iii) an economic analysis, theoretical and empirical, of how the proposal would impact system stability. Economic analyses, which use a variety of methodologies including regression and simulation techniques, are routinely undertaken by financial regulators’ technical staff to forecast the impact of proposed changes in Basel capital requirements. The practicality of this requirement is, therefore, not a matter of concern, although the techniques are most certainly imperfect.

Given difficulty in predicting future sources of systemic risk, a supplemental analytical approach would be to require a proponent to identify the impact of a proposed deviation on what are deemed to be weak points in individual institutions or the financial system, based on learning from prior episodes of contagion, on the model of the safety notification review approach taken

---

140 E.g., Basel Comm. on Banking Supervision, An Assessment of the Long-term Economic Impact of Stronger Capital and Liquidity Requirements (Aug. 2010), available at [http://bis.org/publ/bcbs173.htm](http://bis.org/publ/bcbs173.htm) (Committee assessment of the net long-term economic impact of Basel III’s increase in capital and liquidity requirements); Macroeconomic Assessment Group, Interim Report: Assessing the Macroeconomic Impact of the Transition to Stronger Capital and Liquidity Requirements (Aug. 2010), available at [http://bis.org/publ/othp10.htm](http://bis.org/publ/othp10.htm) (Financial Stability Board and Basel Committee working group’s assessment of macroeconomic transition costs of Basel III’s increase in capital, comparing impact of different phase-in periods); Paul Kupiec, Is the New Basel Accord Incentive Compatible? (2001), available at [http://www.bis.org/bcbs/events/b2eaprog.htm](http://www.bis.org/bcbs/events/b2eaprog.htm) (IMF deputy division chief’s paper, presented at a Basel Committee-sponsored conference, develops an equilibrium model to compare banks’ optimal loan portfolio under Basel I and one of the preliminary proposals for Basel II). In the case of a highly novel regulatory approach, an empirical analysis might not be feasible. In such an instance, the proposal would be evaluated on the basis of a theoretical analysis, and the proponent nation would be expected to provide empirical analyses ex post, as data became available concerning performance under the new regulatory schema, in the ongoing review process, discussed in part IV.A.1.c, infra.
by firms and regulators in the energy and food and drug sector.\textsuperscript{141} In the nuclear power context, for instance, the regulatory report by a firm of a failure of a noncritical valve in one facility generates an alert to all other firms to check similar valves, some of which may be performing critical functions.\textsuperscript{142} It would, however, be considerably more challenging to identify elements analogous to physical valves in the more intangible plumbing of the financial system. Possible weak points could be a proposal’s impact on institutions’ incentives to adopt similar investment strategies or on the number of transactional connections between regulated financial institutions and nonbank (i.e. nonregulated) financial services firms.\textsuperscript{143} But as it would seem to be a daunting challenge to specify potential weak links in this context, this type of analysis might more easily be adopted for use in ongoing monitoring of approved departures rather than a proposal’s initial evaluation, as experience under the deviating regime would better reveal the impact on institutional linkages and business strategies.

Nations that are not members of the Basel committee need not comply with the accords, but, as earlier noted, over 100 nations have voluntarily adopted Basel’s requirements. Even though those nations are under no obligation to comply, they should be encouraged to participate in the proposed process to receive approval of departures from an accord requirement(s), just as if they were a member otherwise obliged to conform. Including non-members in the review

\textsuperscript{141} For examples of these monitoring and review systems, which Charles Sabel terms pragmatic or experimentalist, see Sabel, supra note 8, at 137-138; Sabel and Simon, supra note 8, at 84-86.

\textsuperscript{142} Sabel and Simon, supra note 8, at 84.

\textsuperscript{143} See, e.g., Haldane, supra note 8, at 12 (discussing lessons for financial system regulation from measures taken to reduce SARS epidemic transmission, including being able to identify connection between nodes – banks– in the financial network).
process would be of benefit to all concerned. Non-member nations would benefit from an improvement in the quality of their decisionmaking by having a second look at a policy proposal – the committee’s review – while Basel Committee members would benefit from the information gleaned from the experience of financial institutions operating under a regulatory variant.

A further benefit for non-Basel Committee members from the proposed review mechanism is a well-defined process by which they can participate in the international accords with greater tailoring to their specific needs. The financial sector development of non-member nations, in many instances, differs substantially from that of Basel members, and complying fully with Basel requirements may therefore be infeasible or even undesirable. ¹⁴⁴ Both empirical research and Basel II’s adoption of a two-track approach to capital requirements suggest a need for the accords’ adaptation to nations’ particular economic and political circumstances. Among Barth, et al’s more disconcerting findings, for example, is that enhanced regulatory supervision (Basel pillar II) -- which as previously discussed was not associated with a higher level of system stability or bank performance -- is associated with increased corruption in lending, the effect of which depends, in part, on other national characteristics identified in the academic literature, such as, the development of legal and political institutions. ¹⁴⁵

¹⁴⁴ There might need to be allowances in documentation required for those nations’ submissions, as they may lack the technical capacity and resources to provide an analysis of a proposed departure’s impact on systemic risk. But some emerging and developing nations’ banking sectors may be so small that a proposal might self-evidently have no adverse systemic impact, such that forgoing the analysis would not be a cause of grave concern. In instances where there might be concern, the review committee’s staff could take up the slack and analyze the proposal, as well as provide assistance in undertaking the requisite technical analyses for ongoing reviews.

¹⁴⁵ Barth, et al., supra note 45, at 240-245.
A departure from Basel requirements by an emerging nation for which complying fully with Basel is infeasible would not, in all likelihood, provide benefits from regulatory diversity in terms of reducing systemic risk due to regulatory errors, which is the core concern of developed nations and an objective of the proposed review process. But it should still contribute to a better financial system worldwide, by mitigating potentially adverse effects on emerging and developing nations from signing on to Basel standards which are a poor fit given vast differences in the political and economic environment.

b. Peer Review Procedure

After a notice of proposed departure from a Basel requirement(s) is filed, a peer review committee would be established to evaluate a proposal. Use of an ad hoc committee would follow the general approach taken to national financial regulation assessments by other international organizations, in which a team is formed to undertake a specific country’s review. 146 Given the likelihood, over time, of frequent recourse by nations to the review mechanism, it might seem sensible to establish a standing committee whose membership would rotate on a periodic basis, with designated alternates who could assume a position on the review committee in place of individuals needing to recuse themselves due to a possible conflict of interest for being affiliated with the nation submitting a proposal.

However, an offsetting benefit of using ad hoc committees, rather than a standing

__________________________________________________________________________

146 That would seem to be the approach of the reviews undertaken by the Financial Stability Board (FSB), and the International Monetary Fund’s (IMF) assessments of nations’ implementation of international banking standards, described in note 152, infra. FSB teams consist of individuals affiliated with its members (national central banks and international standard organizations). The IMF assessment teams are comprised of IMF staff (World bank staff where jointly undertaken) and individuals from other nations’ regulators. For both organizations, the assembled team members are not from the nation being reviewed.
committee, would be to render more difficult the possibility of committee member logrolling, in which members would approve one nation’s poorly-conceived proposal (such as a steep reduction in capital requirements without any compensating regulatory adjustment that would preserve system stability) on the understanding that their nations’ similarly poorly-conceived proposals would be approved, or other strategic positioning by committee members and nations desirous of regime adaptations. That is because with ad hoc committees, the individuals who would review a proposal would be unknown in advance, and the probability of obtaining the right combinatoric of multiple committee memberships would be low, rendering successful strategizing more difficult.

The review committee’s task would be to ascertain, as best can be determined given the state of knowledge, whether a proposed deviation could be anticipated to increase global systemic risk or adversely affect the stability of banks operating within the nation in question. The committee’s review would be delimited to a proposal’s impact on systemic risk and financial system stability, with an adverse impact its sole criterion for a proposal’s rejection, because, as elaborated earlier, the contemporary core justification of financial regulation, and of the Basel accords, is to promote global financial system stability by reducing systemic risk. Furthermore, that is also a central objective of having a mechanism to permit departures from Basel, to facilitate regulatory diversity in order to reduce the probability of regulatory errors increasing systemic risk and unleashing contagion across financial institutions worldwide. This evaluation would apply the same approaches described concerning the proposing nation’s analyses: theoretical and empirical economic analyses, including regression and simulation techniques, of how the proposal would impact system stability, and/or analyses of the impact on weak points in
individual institutions or the financial system.

In discharging its function, the committee could undertake its own de novo analysis of a proposal’s effect or have its technical staff evaluate the submitted analysis. It could also request additional information (factual or analytical) from the proposing nation. Because the Basel Committee itself does not have staff, technical support would have to be provided by committee members (i.e., by central bankers and banking regulators and their employees), as is the practice for the Committee’s undertakings. But it would also make sense to have economists working at the Bank for International Settlements, where the Basel Committee is housed, be tasked with providing technical support to the review committee, as they have done in the past for other Basel Committee projects. Were the same researcher(s) assigned to the reviews, it would offer the further benefit of evaluative continuity were review committees established on an ad hoc basis. A fee could be assessed on Basel Committee members and proposing nations that are not members, to defray the compensation of those individuals.\footnote{Charging a fee could have an additional signaling benefit regarding the quality of a proposal, by providing an incentive to nations to propose departures only sufficiently substantial to be worth the cost. However, the expense of putting together the analysis and documentation necessary for a proposal’s approval may well be sufficient to achieve such a purpose.} As the proposing nation’s submission would be expected to contain a comprehensive analysis of a proposal’s impact, much of the committee’s spadework will have been already undertaken, and its staffing needs should therefore not be unduly taxing.

An audit of a nation’s information system, to ascertain the accuracy of the data analysis submitted, could be required at the review committee’s discretion. For example, it might wish to do so if the committee staff’s analysis is markedly different from that of the proponent nation.
Because other international banking organizations audit nations for their compliance with Basel standards, the review committee could conserve time and resources by using that information.\textsuperscript{148}

In addition, where a proposed departure replicates a previously-approved one, the committee could, where relevant, rely on analyses undertaken in the prior review. Upon receipt of the review committee’s approval, the proponent nation could implement the proposed regulatory departure.

The standard of a proposal’s review is, naturally, key for the proposed procedural mechanism to work, and it needs to be crafted to account for committee member incentives or predispositions. It is most plausible to assume that, as crafters of the Basel Accords, review committee members might be predisposed to favor the status quo and reject proposed departures, particularly those that are distinctly different, and thereby squelch the aim of opening Basel up to diversity and experimentation. More to the point, it would only be acknowledging human nature to assume that the review committee would have strong priors regarding the appropriateness of the Basel regime. After all, Basel requirements are characterized by its proponents as best practices for banking regulation, and individuals involved in negotiating or implementing them would quite understandably be intellectually predisposed to perceive them as superior to alternatives and, in fact, to consider alternatives problematic.

Moreover, even a committee member who is open-minded to innovation could be expected to evaluate novel proposals uncharitably, albeit unintendedly, given mental shortcuts or cognitive biases, identified by psychologists and behavioral economists, by which

\begin{quote}
\textsuperscript{148} Such organizations’ reports are briefly discussed in text and accompanying notes 152-153, infra.
\end{quote}
decisionmakers tend to favor the status quo over alternatives. To help mitigate such possible, if not expected, bias in outlook, the review process should be structured with a presumption of approval, which is rebuttable upon a demonstration of the proposal’s substantial likelihood of having an adverse effect on system stability. This standard also mitigates a concern that the procedure would consist of a committee of central bankers tasked with picking “winners” (regulatory innovations likely to improve on the status quo), a task at which we would not necessarily expect them to excel, for they are tasked simply with evaluating proposals in terms of their impact on systemic risk.

Accordingly, in order to reject a proposal, the review committee should have the burden of proof, so to speak, in that it should need to find affirmatively that a proposal would be likely to increase systemic risk. Such a finding could be accomplished through quantitative analyses, using conventional econometric methods, by the committee staff. It is also possible that a proposal could be rebutted by a theoretical analysis, which indicates, under plausible assumptions, that a proposal is likely to increase systemic risk. A proposal that would significantly reduce or eliminate the Basel’s capital requirements, without more, for example, would on its face not meet this standard. To facilitate regulatory innovation, the standard of proof for rebuttal should be set higher than that used in a civil proceeding, a preponderance of the evidence standard, at something closer to a clear and convincing evidentiary standard; that is, the

---

149 In laboratory experiments, psychologists and behavioral economists find evidence of “status quo” and “framing” biases, by which decisionmakers tend to favor the current state or customary policy over new options, and are affected by the way a situation is presented or “framed.” See, e.g., William Samuelson and Richard Zeckhauser, Status Quo Bias in Decision Making, 1 J. Risk & Uncertainty 7 (1988) (in experiments requiring choices, “status quo framing” – one option is placed in the status quo position – results in subjects’ choosing that option more frequently, than if there is a neutral framing of all alternatives).
greater weight of the analysis should point to an adverse impact, rather than the evidence be somewhat close to equipoise.

Proposals solely to heighten an existing Basel requirement (such as, imposition of a higher minimum capital requirement or an increase in the risk-weight of an asset category) should also have to be presented to the review committee, despite nations’ ability to adopt such proposals under the present regime without consultation, if for no other reason than to prevent possible disputes over whether action by a national regulator is a departure requiring review. But the review process for this type of proposal could be automatic, or at least more expeditious than other proposals, to render the process more consonant with current practice. A further justification for a more expeditious process for proposals adopting stricter requirements than Basel is that the likelihood that such proposals would increase systemic risk is highly remote.

However, there is the possibility that higher capital requirements could induce banks perversely to increase their risk (as would seem to have occurred in Basel’s earlier incarnations). Because the strategic behavior would be localized to the Basel-departing nation’s banks, whether this type of proposal would be automatically or expeditiously approved could be made a function of the size or internationalization of the proposing nation’s banking sector. An approach that balances these two considerations would be a decision rule by which departures

\[\text{150}{\text{Changes in national accounting or tax rules that affect the calculation of capital, such as Japan’s accounting rule alterations in the 1990s mentioned in note 13, supra, are not departures from Basel (because it does not regulate accounting or tax practices), and would not, therefore, be considered departures requiring approval under the proposed mechanism.}}\]

\[\text{151}{\text{Part IV.B discusses how, under Basel cross-border supervisory principles, which would not be altered by the paper’s proposal, the foreign operations of banks chartered in Basel-departing nations would most likely be subject to Basel requirements by local incorporation requirements.}}\]
that self-evidently adopt a more stringent version of a Basel requirement would be automatically approved upon filing, without review, on the rationale that they were not expected to increase global systemic risk, but the risk of affected banks’ asset portfolios would be subjected to heightened scrutiny in the ongoing monitoring process.

Although the process envisioned consists solely of a technical review of written documentation concerning a proposed regulatory departure, the committee should be empowered to compel presentation of further documentation necessary to complete its analysis, as well as, interview officials and regulatory staff of the proponent nation. If, for example, the impact on systemic risk were ascertained to turn on the adequacy of a nation’s supervisory capacity, then the committee might require additional documentation on, or engage in an onsite inquiry into, a nation’s supervisory resources and technical capacity. In addition, as mentioned earlier, an audit of a nation’s information system might also be required. Where a proposing nation has been the subject of a review under the Financial Stability Board’s (FSB) peer review process, or the IMF-World Bank Financial Sector Assessment Program (FSAP), the committee could not only examine, as earlier suggested, the published FSB or FSAP reports, but also could seek to interview the FSB or FSAP team members, to gain insight into the effectiveness of the nation’s supervisory authorities from their assessments of its implementation of FSB and international standards and policies.\(^{152}\)

\(^{152}\) See Financial Stability Board, FSB Framework for Strengthening Adherence to International Standards 1 (Jan. 2010), available at http://www.financialstabilityboard.org/list/fsb_publications/tid_76/index.htm (FSB member jurisdictions committed to periodic peer reviews by the FSB and an FSAP assessment every five years, and non-members are encouraged to undergo similar evaluations). The FSAP was established by the IMF in 1999, after the Asian financial crisis, as its primary surveillance mechanism for the international financial system’s stability. Nations deemed systematically
A further concern, besides status quo bias, in the conduct of a peer review, is that a review committee, recognizing that it cannot sustain the burden of rebutting the presumption of approval, could engage in dilatory tactics and slowdown the review process, creating an impediment to nations’ ability to implement change. Such a concern could be addressed by setting a relatively short time frame for a review process of four to nine months, after which a proposal would be automatically approved. The length of the review interval should be a sliding scale, a function of the thoroughness or completeness of the analysis undertaken by the proponent nation: the more comprehensive the submitted documentation and analyses, the shorter the time frame the committee would need to review the application (less de novo analytical research would be required). The length of the review should also be a function of the extent of the regulatory departure proposed, with a shorter interval for proposals that are only modest alterations of existing regulation (again, a less extensive analytical inquiry would be required to evaluate such changes). Of course, the reviewing interval would also have to depend on the number of proposals before the committee, with the time frame extended accordingly were numerous departures proposed simultaneously.

Finally, proposal rejections would require a written decision, providing specific reasons, along with supporting technical analysis, explaining why the committee found that a proposed regulatory regime would increase systemic risk. A proponent nation should be given an opportunity to respond to a rejection, and be entitled to a second look, by either providing further

---

important are assessed every five years, and other nations are assessed on a voluntary basis. Developing and emerging market nations’ assessments are conducted jointly with the World Bank. Information about the FSAP can be found at IMF, Financial Sector Assessment Program, at http://www.imf.org/external/np/fsap/fsap.aspx; and IMF, Financial Sector Assessment Program: Frequently Asked Questions, at http://www.imf.org/external/np/fsap/faq/index.htm#q1.
analyses that address the issues raised in the analysis on which the committee relied to reject the proposal, or by modifying a proposal to mitigate concerns raised by the committee’s analysis. Moreover, where the committee staff’s analysis suggests that a modification to a proposal would reduce the possibility of its increasing systemic risk, then the committee should highlight that course of action to the proponent nation, along with its written rejection. Under such circumstances, the proponent nation should be permitted to resubmit a suitably revised proposal for expedited approval.

All of the official documentation (the proponent nation’s submission and the explanation of a proposal’s rejection by the review committee) should be publicly available, paralleling the availability of reviews of nations’ implementation of international financial standards undertaken by the FSB and IMF.\textsuperscript{153} Given an anticipated focus on technical analysis, it is to be hoped that committee decisions would most typically be unanimous. But were there to be disagreement, the dissenting members’ views, including any expert analysis on which they relied, should be made publicly available. The more transparent decision process that accompanies a public record should improve the quality of regulatory decisionmaking, as participants in the process will have an incentive to provide better-reasoned justifications, with analytical support, for their positions on changes to Basel requirements. The public, as well as parties to a review, would also have greater confidence in the outcomes of a review process that is transparent, as the justification for departures from Basel (or for their rejections), will be open to public scrutiny. This would be a meaningful ancillary benefit of the proposal, given the low level of trust, at present, in government decisionmaking worldwide, particularly with regard to bank bailouts.

\textsuperscript{153} Reports are available on the organizations’ websites. See note 152, supra.
An additional benefit of the required public documentation of the process is that nations considering departing from Basel regulations will be able to make better informed regulatory choices. The public record will assist their consideration of regulatory alternatives to Basel in two ways. They will have both the benefit of the analyses of a regulatory strategy’s impact, and also insight into how the review process works, by observing the thought processes and analytical approaches taken by review committees. That information should result over time in submission of higher quality proposals by nations deciding to pursue regulatory change, and in more proposals paralleling previously approved regulatory departures, which should reduce the time required for the committee to complete its assessment.

c. Ongoing Oversight and Evaluation

The short time frame and elevated standard for rejection in the proposed review process increase the possibility that, on occasion, there will be approval of regulatory departures whose impact cannot be ascertained a priori, and that turn out to have adverse consequences. Indeed, a premise motivating this paper’s proposal to encourage regulatory diversity is that the impact of many, if not most, proposed international financial regulations cannot be known with reasonable assurance, given the dynamic fluctuation of financial markets and the intricate interaction of regulatory incentives upon institutions’ and individuals’ behavior. That uncertainty is compounded by the fact that a fast-changing financial sector will inevitably render some regulations obsolete, or at odds with the initial objective, due to financial innovation and changing institutional behavior. Accordingly, for the proposed process to work it is critical that the review process itself be dynamic.

To incorporate dynamic evaluation into the review process, all approved regulatory
departures should be subjected to ongoing monitoring, along with periodic reassessments, in light of new information. This would enable the review committee to ascertain whether an approved departure’s impact on systemic risk has changed, in particular, increased, compared to the impact estimated at the time of the proposal’s initial assessment. As this component of the proposed process will add to the time and resources the review committee must expend, it should have discretion to prioritize and make exceptions to the monitoring requirement, if it determines that the estimated impact on systemic risk of a proposal is sufficiently insubstantial not to require ongoing oversight (as, for instance, in the case of a proposal of a small emerging nation to not fully comply with Basel requirements). The committee should also have the discretion to reverse a waiver of monitoring at a future point in time, if new developments would suggest that a risk has emerged where none earlier existed.

In addition to granting the committee discretion to fashion the parameters of its monitoring responsibilities, Basel-departing nations should be assessed a fee to defray the expense of staff needed to undertake the monitoring process. That would enable the committee’s support staff to expand with the number of approved departures, alleviating the possibility of a need to impose a cap on the number of nations who could seek a departure due to a capacity constraint on the part of the committee to fulfill its monitoring responsibilities. Basel-departing nations should not be assessed an amount equal to the full cost of the process, and not simply in order to encourage proposal submissions: the proposal is premised on regulatory diversity and experimentation providing a public good, and at least part of the expense should therefore be shared by all Basel Committee members. But to the extent a mistakenly-approved proposal could impose a significant negative externality on Basel Committee members by increasing
systemic risk, at least temporarily until reversed, it would be reasonable to require a Basel-departing nation to defray the greater portion of the monitoring costs.\textsuperscript{154}

To assist the committee’s monitoring, the sharing of information, on a timely periodic basis, concerning the safety and soundness of a nation’s financial sector, including information on banks’ capital levels, failure rates, and so forth, should be required. If the monitoring were to raise any red flags, then a full review by the committee of the approved regulatory departure would be triggered. Apart from what might be characterized as subjective warning signals identified in the monitoring process as red flags, specified quantitative triggers should also be adopted that would automatically initiate full reviews. These triggers would most plausibly be crafted in terms of a specific number or percentage of bank assets being nonperforming or of banks failing or receiving government assistance, or a specific percentage of GDP being spent on bank rescues, measures considered indicia of, but set at a quantitative level substantially below that which would define, a potential systemic problem.\textsuperscript{155}

Finally, in addition to event-triggered reviews, a full reassessment on a fixed periodic schedule, every few years after the initial approval, should be incorporated into the process.\textsuperscript{156} The reevaluation process could include an audit of the nation’s information system, if the committee thinks it necessary. After a few such full post-approval reviews, however, the

\textsuperscript{154} In this regard, the fee could be structured to have an incentive component, determined ex post rather than ex ante, such that, a nation would pay the full monitoring cost at the outset but would receive a rebate if after a period of years the departure proved not to be destabilizing.

\textsuperscript{155} See, for example, the quantitative definitions used by researchers to define systemic banking crises in note 121, supra.

\textsuperscript{156} The FSAP program, for instance, requires an assessment of systemically important nations be undertaken every five years. IMF, supra note 152.
regulatory departure should be considered sufficiently well-established to either no longer warrant subjecting the nation to any subsequent full review, or to extend the interval between reviews. In cases where continuous monitoring is not considered warranted upon an initial review, a nation should still be subject to review under a fixed periodic review schedule, to ensure that changed circumstances have not rendered incorrect the initial assessment that systemic risk would be unaffected.

An integral component of the fixed interval reviews should be a self-assessment by the Basel-deviating nation of the effectiveness of the regulatory departure, with supporting analyses of the impact on stability and systemic risk of the financial sector over the interval – an assessment which, as noted, should be the review committee’s evaluative lodestar. In instances where the initial review did not include much empirical analysis given the novelty of the proposed regulatory approach, such an analysis should be included in the reassessment documentation when sufficient data have accumulated to be able to do so. If the initial analysis consisted, as is likely, of simulations, then a comparison of that data to the actual outcomes should be performed. As with a nation’s documented application for approval of a regulatory departure, the self-assessment of a departure’s efficacy should be publicly available.

In a trigger-initiated review, the committee would investigate whether the financial sector changes could be attributed to the regulatory departure from Basel or economic conditions unrelated to the regulatory environment. For example, one relevant inquiry to disentangle whether the regulatory departure was the source of the financial sector difficulties would be to ascertain whether the triggers have also been met by similar nations (by, for instance, geography and development level) operating under an unaltered Basel regime. If the committee determined
that the triggering was due to the regulatory departure and the increase in systemic risk was
significant, then the committee could withdraw its approval of the regulatory departure entirely,
or in part (for instance, if its analysis indicated that financial stress could be alleviated with
modification, rather than elimination, of the approved departure). Although no new enforcement
mechanism is contemplated with the proposed regulatory departure review process that could
force compliance with such a policy reversal, as a condition for participating in the departure
approval process, a nation would have to agree to revert to the Basel regime upon a revocation
decision. Of course, were the adverse impact felt locally, the nation would, in all likelihood,
abort the regulatory change on its own.

Paralleling the requirement for an initial decision rejecting a proposed departure, a
decision to revoke a previously approved departure would require a written explanation that is
supported by technical analysis, and would be publicly available. In the case of a perceived
emergency, the explanation and technical analysis can follow the decision. But when the post-
approval review has been initiated by an automatic quantitative trigger, then the standard for
revocation should be a less stringent one than that required for an initial rejection: for instance,
where the data analysis indicates it is more likely than not that the regulatory departure has
substantially increased systemic risk, such a demonstration, which is closer to a preponderance
rather than clear and convincing evidentiary standard, should be considered sufficient for the
committee to act. A shift in standard is justified because the trigger indicates a discernible risk
has materialized which suggests that there is an increased likelihood of a threat to financial
system stability and, accordingly, a greater need for a quick remedial response.

Given the disruption that revoking an implemented regulatory departure could create,
were the committee to apply a lower evidentiary standard for revocation than for an initial rejection, then it should, correlatively, provide a mechanism by which a nation whose regulatory departure is revoked could have an expedited appeal of the decision. The appeal would afford it an opportunity to rebut the committee’s analysis of the departure’s impact, with its own analysis of the situation or of the committee’s work, or to document that reversing the departure would disrupt or destabilize the financial system far more than would maintaining or slightly modifying it. It would be reasonable to have the appeal heard by another panel of peers. Such a panel could be created ad hoc on the occurrence of an appeal, rather than be a standing entity, given an anticipated small number of appeals of revocations, with the mechanism by which members would be selected determined by the Basel Committee upon the establishment of the process to permit departures.

Whether a revoked departure should be enjoined prior to completion of the appeal process would best be ascertained by a balancing approach similar to the standard for injunctive relief in civil litigation: a determination by the review committee that the threat to systemic risk was sufficiently severe and irreversible, that it outweighed the disruption costs to the appellant nation’s having to reverse regulatory course pending the appeal. But if the review committee determines that an injunction-like remedy is in order, that should trigger an expedited appeal process to minimize disruption costs.

Is there a risk that a national regime that departs substantially from Basel could damage the global financial system were that nation’s financial system to collapse and lead to a cascading global crisis, affecting nations operating under Basel, even with the peer review process and ongoing monitoring of performance? Yes, there is such a risk, as we do not live in a risk-free
world. But the harmonized Basel regime does not eliminate such a risk either. Moreover, the hypothesized contagion crisis scenario, given the historical record, is highly improbable: the pattern of financial crises suggests that one nation’s systemic financial problems do not typically result in a globally cascading crisis. For instance, Reinhart and Rogoff’s comprehensive history of financial crises indicates that global financial crises have been far more infrequent than national or regional ones.\textsuperscript{157} More important, the earlier-discussed cross-border transmission channel of a financial crisis through common factor shocks would suggest that this is less likely to occur when failed institutions are in a nation following a different regulatory regime, as the commonality of fundamentals and thus a shock to fundamentals would be lower than in the case of the harmonized regulation, which induces cross-border financial institutions to follow broadly similar business strategies.\textsuperscript{158}

The ongoing review process and, in particular, the public availability of its documentation, offers an additional decisive benefit to that of the initial review procedure: it provides a means of comparing the efficacy of the Basel regime to departures from it. Because reassessments will provide data on the effectiveness of alternative regulation, it could also lead to a better informed reevaluation of Basel requirements by other nations, and even emendations to Basel itself. But there is a caveat to advocating incorporation into the Basel regime of successful

\textsuperscript{157} Reinhart and Rogoff, supra note 32, at 248-73.

\textsuperscript{158} See text and accompanying notes 32-37, supra. This scenario is consistent with the ecological literature, that indicates that diverse ecosystems are more likely to survive than homogeneous ones, James C. Scott, Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed (1998) 11-22 (discussing how scientific forestry that, by eliminating biodiversity in favor of uniformly planted, single tree forests, resulted in severe damage to those forests), as well as the discussion of network failures in Haldane, supra note 8.
departures as requirements to be followed by all nations: a policy that works on a national basis could have adverse systemic effects if adopted globally. It could prove to operate poorly under dramatically changed economic, legal and technological circumstances, and thereby vastly increase systemic risk. Such a likelihood cannot be ruled out. However, this claim also would prove too much, as there is no foolproof system. Rather, it stands to reason that incorporating into international regulatory standards the experience gleaned from one nation’s regulatory departure would provide a superior mechanism of controlling the introduction of systemic regulatory error than the wholesale adoption of an untested regulatory system, as occurs in the present harmonized Basel approach.

2. Illustrations of Possible Proposals. To provide a sense of the possibilities for regulatory experimentation that the proposed review mechanism affords, two very different potential regulatory departures will be sketched: one that works within the existing framework, and one that would replace it with an altogether different approach, which is more along the lines of the type of departure that the proposed mechanism seeks to encourage.

a. Altering Basel Risk Weights

An example of a modest departure from the accords would be a proposal to alter the Basel II standardized risk weights by an emerging market nation that did not adopt the internal risk ratings approach. Motivating the illustration is the fact that external credit ratings, on which banks can rely under the standardized version of Basel II to reduce the required risk weight, may not be available for most businesses in emerging nations. The debt, for instance, will be privately held and not rated by a credit rating agency or, firms not being exporters, the debt will

____________________

159 Haldane, supra note 8; Whitehead, supra note 5.
not be rated by an export credit agency. In these circumstances, a nation might wish to decrease the risk weight applied to corporate loans below the Basel risk weight of 100 percent, with a goal of increasing business development. But, out of prudential concern, such as concern over correlated corporate defaults, the proposed decrease in risk weight could be coupled with a cap on the total value of corporate loans that a bank could provision at the reduced risk weight, such that over a specified dollar value or percentage of total assets, higher capital provisioning would apply.

The cap and risk weight could vary in relation to the bank’s predicted default analysis of the borrower (a component of the internal ratings approach in Basel II). This calculation is a feasible undertaking: in contrast to the track record of models of the default probabilities of complex mortgage-backed derivative securities, there are fairly good models of corporate default risk, developed by credit rating agencies and financial economists, such as the Altman Z-scores.\textsuperscript{160} Indeed, such an analysis is a key component of a bank’s core business, something that even small or unsophisticated domestic banks in emerging nations would be able to perform. Bank examiners would be able to review and backtest banks’ decisions on loan weights, and require banks to update periodically the loans’ default analyses. Providing the requisite technical

analysis to support such a proposal would not appear to be that burdensome for an emerging nation. It could provide an analysis of how banks’ existing level of capital would be affected by the proposal, and how they would hold up under a variety of stress scenarios, including predicted behavioral change (i.e., increases in the loan portfolio) in response to the proposal.

b. Alternative Regime: Subordinated Debt

Rather than simply propose to modify existing Basel provisions, a nation could propose to substitute an entirely different regime for the Basel requirements. One such proposal, originally advanced as an alternative to the then newly proposed Basel II regime by the Shadow Financial Regulatory Committee (“Shadow Committee”) is a subordinated debt regime, supported by a leverage ratio unrelated to the riskiness of a bank’s assets. Under the Shadow Committee’s proposal, a bank’s risk would be more directly informed by the market than under the Basel regime: a mandatory minimum capital requirement for large banks in the form of

---

issuance of long-term subordinated debt – debt that is subordinated to all other liabilities, and that can neither be prematurely redeemed or exchanged (except for a new subordinated debt issue of equal size) nor bailed out by the government. The subordinated debt requirement would operate in conjunction with a capital requirement of a minimum leverage ratio (independent of the riskiness of the bank’s assets and liabilities but higher than the risk-weighted capital requirement under Basel).

The key idea motivating the proposal is that yields on subordinated debt instruments would provide information concerning a bank’s risktaking and creditworthiness. Because the subordinated debtholders could not be bailed out, they would be expected to monitor a bank’s management (in contrast to present-day creditors), thereby reducing managers’ incentive to take on inappropriate risks. Yields on the instruments would rise if a bank were perceived to be taking on inappropriate risk, or the bank would not be able to issue new subordinated debt as the old debt matured.

In contrast to stockholders, subordinated debtholders can only lose from risky activities: with a fixed return, they do not share in the profits on the upside as does equity, they only bear the downside cost. Subordinated debt will therefore price a bank’s risk more cleanly than stock. Empirical research, moreover, indicates that is, in fact, the case: stock prices increase as bank risk increases, particularly when bank net worth is low or negative and there is deposit insurance, whereas subordinated debt prices do provide useful information about bank risk. Market

162 The Shadow Committee suggested that debt could be prevented from being bailed out by prohibiting the deposit insurance fund by law from providing any financial support to holders of the instruments. Shadow Comm., supra note 161, at 12.

163 Id. at 11 nn.35-36.
signals from subordinated debt issues would thus provide bank managers with an incentive to manage risk more astutely, to avoid being capital constrained. Equally importantly, those market signals would alert regulators to a bank in potential difficulty, facilitating their ability to engage in early corrective intervention.\textsuperscript{164}

Notwithstanding its being a dramatic departure from the Basel regime that it would replace, a subordinated debt regime with a simple leverage ratio would be well suited to undergo the proposed review process. Because numerous banks in many nations have issued such securities for decades, and those securities have been a subject of considerable academic attention, it would not be difficult for a nation to generate a technical analysis in support of such a proposal.\textsuperscript{165} The proponent nation could also adapt the proposal to contain an even more explicit experimental cast, by proposing to apply it to only a subset of domestic banks, such as the very largest banks, whose cost to issue subordinated debt would be expected to be lowest.\textsuperscript{166} Or, in a true policy experiment, it could propose to apply the rule to a random subset of the largest banks, with the aim of reassessing the efficacy of the proposal after a fixed interval.\textsuperscript{167}

\textsuperscript{164} The proposal would thus better realize the supervisory process envisioned by the Federal Deposit Insurance Corporation Improvement Act, which introduced the regulatory concepts of early intervention and prompt corrective action to prevent a reprise of a common policy of regulatory forbearance toward failing financial institutions that exacerbated the savings and loan crisis of the 1980s.


\textsuperscript{166} Shadow Comm., supra note 161, at 13-14, 17

\textsuperscript{167} Such an approach is consistent with a contemporary trend in economics to introduce experimentation into policymaking, as a gold standard for policy evaluation, e.g., Michael Greenstone, Toward a Culture of Persistent Regulatory Experimentation and Evaluation, in
Such innovative strategies would provide a more focused and cautious means of testing a new regulatory strategy, and accordingly, a mechanism for generating higher quality information for use in evaluating whether to adopt the approach whole hog.

A subordinated debt regime has a well-thought out structure with practical experience, and is therefore exemplary of the type of potential regulatory innovations that a nation could explore under the proposed emendation to the Basel regime. The point of the example is not to advocate its superiority to Basel (although its proponents maintained that is so), but rather, to illustrate how a process such as one advocated in this paper could facilitate the implementation of significant regulatory innovation and diversity.

B. Cross-Border Issues

Cross-border coordination among regulators of international banks has been a central, and constant focus of the Basel Committee’s attention from its establishment, predating by a decade its efforts on harmonizing international capital requirements.168 There is, without doubt, a

David Moss and John Cisternino, eds., New Perspectives on Regulation (2009); Michael Abrmowicz, Ian Ayres and Yair Listokin, Randomizing Law, 159 U. Penn. L. Rev. 929 (2011), and one which has, in fact, been applied in varying government settings, such as, expansion of government-funded health insurance options in Oregon, Amy Finkelstein, et al., The Oregon Health Insurance Experiment: Evidence from the First Year, NBER Working Paper no. w17190 (2011), and relaxation on restrictions on short selling by the Securities and Exchange Commission, Office of Economic Analysis, U.S. Securities and Exchange Comm’n, Economic Analysis of the Short Sale Price Restrictions under the Regulation SHO Pilot (2007), available at: http://www.sec.gov/news/studies/2007/regshopilot020607.pdf. However, applying a randomized experimental approach in the bank regulation context could be problematic because it could seriously interfere with market competition, were operating costs of otherwise similar institutions to differ starkly under the experimental regime compared to Basel. In such a scenario, conducting an experiment would, in all likelihood, not be politically feasible.

168 E.g., Basle Comm. on Banking Supervision, Consolidated Supervision of Banks’ International Activities (March 1979), available at: http://www.bis.org/publ/bcbsc112.htm; Basle Comm. on Banking Supervision, Principles for the Supervision of Banks’ Foreign
tradeoff between the greater ease of operation for both regulators and international banking groups afforded by harmonized rules and the systemic benefits that, this paper contends, would follow from regulatory diversity, given the cross-border character of such institutions. The work of international bank groups’ supervisors, as well as bank managements, would most likely be more difficult not only because different units could be subject to differing regulatory regimes, but also because there could be greater uncertainty of outcomes when not all units are operating under the same regulatory parameters. Although the introduction of regulatory diversity and experimentation into the Basel regime may well increase the challenge confronting regulators in coordinating bank supervision across borders, the task is not different in kind from current practice. In addition, while it is likely to increase international banks’ operating costs, the cost would be internalized by nations departing from Basel requirements.

1. Cross-Border Coordination under Basel. Under the Basel Committee’s best practice supervisory principles, international banks and banking groups are regulated on a consolidated basis by a parent bank’s home country, and a cross-border operation is expected to be approved prior to the opening of a banking establishment by both the home and host country. Consolidated supervision refers to the principle that a bank’s international operations, and hence its solvency, and the adequacy of its capital under Basel, should be monitored on a worldwide (i.e., consolidated) basis by the parent’s regulator, and not solely on a unit-by-unit basis by host

regulators. The consolidated supervisory approach is thought to improve the quality of information a regulator receives regarding a bank’s international activities, and hence to make supervision more effective.\footnote{Id. at 100.}

However, Basel’s consolidated supervisory approach is not without problems. Host countries, for instance, must often pay attention to the solvency of foreign establishments, as parent banks are not liable for subsidiaries’ claims, and although they are liable for claims on branches, the home regulator might not be monitoring effectively a parent or group’s solvency.\footnote{Id.} Similarly, because of the differential impact of national bankruptcy laws, which can restrict access to local assets to local creditors, home countries must often measure a parent’s solvency on a stand-alone, rather than consolidated, basis.\footnote{Id. at 101.}

While the Basel principles allocate primary regulatory authority over an international banking group to the home country (i.e., the country in which the parent bank is chartered), the country where a bank’s operations are located, referred to as the host country, is responsible for supervising individual entities located within its borders.\footnote{Basel Comm. on Banking Supervision, Core Principles Methodology 41 (Oct. 2006), available at \url{http://www.bis.org/publ/bcbs130.htm}; Basel Comm. on Banking Supervision, Home-host Information Sharing for Effective Basel II Implementation 7 (June 2006), available at \url{http://www.bis.org/publ/bcbs125.htm}.} The extent of host country regulation is a function of legal form: if the foreign bank’s operations are housed in a corporate subsidiary, then the host country directly regulates the establishment on all regulatory matters, whereas, if
the foreign bank’s operations are undertaken through a branch (an office that is not a legally independent entity from the parent), then the host country is responsible for supervising liquidity, but not solvency, which remains the responsibility of the parent’s home country. But if a host country authority determines that the home country authority is not adequately supervising a foreign banking entity, then the host has the authority under Basel’s best practice supervisory principles to impose additional “restrictive measures” on the entity, such as, requiring it to incorporate as a subsidiary, which would subject it directly to the host’s regulation.\footnote{Basle Comm., Minimum Standards for the Supervision of International Banking Groups and Their Cross-Border Establishments (July 1992), available at http://www.bis.org/publ/bcbsc314.htm; Herring and Litan, supra note 6, at 105. Under the Basel principles, if a host country permits an entity to operate in its jurisdiction when it has determined the home country supervision is inadequate, then it must assume direct supervisory responsibility for the entity, on a “stand-alone” consolidated basis. Basle Comm., supra. Herring and Litan provide additional examples of restrictive measures the host authority can apply, such as, imposing a deadline on the bank or its home supervisor to “meet acceptable standards,” or closing down the entity. Herring and Litan, supra note 6, at 105. This amendment to the concordat on the subject was in response to the failure of BCCI, whose owners had created a complicated corporate structure that enabled them to avoid consolidated supervision by a competent regulator. Id. at 104-105. While BCCI’s failure impacted over 500,000 depositors, mainly in emerging markets, it did not affect the international financial system: as Herring and Litan note, the “critical” institutions in the interbank market would not deal with BCCI because of its “unsavory reputation,” and hence there was no spillover effect. Id. at 105.}

Basel’s supervisory principles allocating authority across home and host supervisors are, however, thought to be insufficient on their own to coordinate adequately cross-border regulation because home and host supervisors need to exchange information about related entities within their jurisdictions to be able to carry out their supervisory functions. The coordination of information sharing is typically accomplished by bilateral memoranda of understanding (MOUs), in which regulators specify information that they will share, for instance, supervisory developments or areas of concern and imposition of administrative penalties, and also identify

\footnote{Basle Comm., Minimum Standards for the Supervision of International Banking Groups and Their Cross-Border Establishments (July 1992), available at http://www.bis.org/publ/bcbsc314.htm; Herring and Litan, supra note 6, at 105. Under the Basel principles, if a host country permits an entity to operate in its jurisdiction when it has determined the home country supervision is inadequate, then it must assume direct supervisory responsibility for the entity, on a “stand-alone” consolidated basis. Basle Comm., supra. Herring and Litan provide additional examples of restrictive measures the host authority can apply, such as, imposing a deadline on the bank or its home supervisor to “meet acceptable standards,” or closing down the entity. Herring and Litan, supra note 6, at 105. This amendment to the concordat on the subject was in response to the failure of BCCI, whose owners had created a complicated corporate structure that enabled them to avoid consolidated supervision by a competent regulator. Id. at 104-105. While BCCI’s failure impacted over 500,000 depositors, mainly in emerging markets, it did not affect the international financial system: as Herring and Litan note, the “critical” institutions in the interbank market would not deal with BCCI because of its “unsavory reputation,” and hence there was no spillover effect. Id. at 105.}
grounds for refusing to provide information, such as national security.\textsuperscript{174}

In addition, home-host bilateral agreements are thought to be insufficient for effective supervision of a group because international banks are active in many countries: information needs to be shared and supervision coordinated across all host and home supervisors. To further this objective, the Basel Committee and G-20 have fostered the establishment of “supervisory colleges,” that are working groups consisting of all the national regulators of an international banking group’s units (e.g., holding companies, branches and subsidiaries), and that meet on a regular basis to coordinate supervisory efforts and information exchange.\textsuperscript{175} The colleges are intended as supplements, not substitutes, to bilateral and multilateral MOUs.\textsuperscript{176}

2. Cross-Border Coordination in a Regime with Regulatory Diversity. Coordination and information-sharing among regulators would be even more crucial under this paper’s proposed revision to the Basel architecture, for international banks’ cross-border operations would be subject to more diverse regulatory requirements, rendering consolidated supervision more complex and thereby more demanding. But it would be equally true that, were the paper’s proposal incorporated into the Basel regime, all existing coordination arrangements (e.g., supervisory colleges, MOUs) and Basel’s organizing principles for cross-border supervision


\textsuperscript{175} Basel Comm. on Banking Supervision, Good Practice Principles on Supervisory Colleges (Oct. 2010), available at http://www.bis.org/publ/bcbs177.htm.

\textsuperscript{176} Id. at 1.
would function in precisely the same manner as they do at present. New arrangements or institutions would not be necessary to facilitate information sharing by the appropriate bank supervisors in an international regime permitting regulatory diversity; rather, present arrangements would continue, albeit, no doubt, more intensively. Under regulatory diversity, regulators would have heightened incentives to exchange information and supervise foreign operations in their borders when regulations differ, as they cannot rely on the other nation to monitor the bank for the same regulatory items of concern.

In addition, the Basel II principles for supervisory authority where home and host countries follow different approaches – that, the home country has the “final determination” for issues related to the group on a consolidated basis but host supervisors have “legitimate interests” to use an approach at a sub-consolidation level (i.e., the foreign unit operating in its borders) different from that approved for the group by the home regulator\(^\text{177}\) – are readily transferrable to regulatory differences due to deviations from Basel under the paper’s proposed review mechanism. Nations that have chosen to deviate from the Basel regime could quite plausibly conclude that, for the stability of their financial system, all banking entities operating in their jurisdiction should have to comply with their regulatory requirements. For a local banking entity that is an international bank or an international banking group’s parent, that is not an issue, for under Basel’s consolidated supervisory principle, the Basel-deviating nation will be able to

\(^{177}\) Basel Comm. on Banking Supervision, High-level Principles for the Cross-Border Implementation of the New Accord 5 (Aug. 2003) (Principles 2 and 3), available at: [http://www.bis.org/publ/bcbs100.htm](http://www.bis.org/publ/bcbs100.htm) (hereafter “Basel Cross-Border Principles”). The Committee provides two illustrations of host “legitimate interests” to override home regulations, legal obligations and “situations where the home country supervisor does not perform effective comprehensive consolidated supervision.” Id. at 6.
require that bank to meet its capital and other regulations on the basis of its worldwide operations. For foreign banking establishments, this requirement could also be accomplished without difficulty under Basel’s home-host supervisory principles because they permit host countries to exercise full regulatory control over local banks, regardless of the supervisory allocation of authority principles related to groups.

There is a well-recognized need to provide host countries with the latitude to regulate foreign banking establishments even in a harmonized regulatory regime because home countries, being concerned with the safety and soundness of their financial systems, could have conflicts of interest with host countries in applying consolidated regulatory policies, such as the allocation of capital across a parent and subsidiary or branch. For instance, the home supervisor may seek to enhance the solvency or liquidity of the parent at the branch’s expense.\textsuperscript{178} Host countries have therefore devised a variety of mechanisms to minimize conflicts of interest, the principal one -- which is also best suited for use in the regulatory diversity context -- being a requirement that foreign banking entities incorporate locally.\textsuperscript{179}

\textsuperscript{178} For a discussion of incentive problems between home and host nations, which are greatest when a bank’s position is weak or deteriorating, see, for example, Richard J. Herring, Conflicts Between Home and Host Country Prudential Supervisors, in Douglas D. Evanoff, George G. Kaufman and John Raymond LaBrosse, eds., International Financial Instability: Global Banking and National Regulation 201 (2007) (ebook), available at: http://site.ebrary.com/lib/yale/docDetail.action?docID=10255668.

\textsuperscript{179} Related techniques host countries use to manage this issue are requiring ring-fencing of local entities’ assets and imposing similar requirements on branches to those on subsidiaries. See Jonathan Fiechter, et al., Subsidiaries or Branches: Does One Size Fit All?, IMF Staff Discussion Note 11/04, at 7 (2011). A local incorporation strategy cannot, however, be applied by European host nations to a banking entity with a European parent because under the EU “passport” regime, banks chartered in any member state may open up a branch in any other member state. Herring, supra note 179, at 216. For an analysis indicating the limited legal authority of an EU host country to regulate local banking establishments, and the applicability of


Id. at 9. Edward Kane notes that New Zealand imposes a more stringent disclosure obligation on bank directors than Australia, through which its banking regulator can obtain more up-to-date information about a bank’s financial condition than can Australian supervisors, information that would not be available were it not to require local incorporation. Edward J. Kane, Confronting Divergent Interests in Cross-Country Regulatory Arrangements, in Gerard Caprio, Jr., Douglas D. Evanoff and George G. Kaufman, eds., Cross-Border Banking: Regulatory Challenges 265, 276 (2006) (online book), available at http://site.ebrary.com/lib/yale/docDetail.action?docID=10201336.
Requiring local incorporation of foreign banking establishments is well-suited to address regulatory concerns of a nation that has departed from Basel requirements regarding local establishments with foreign home regulators. It ensures that a Basel-departing nation can protect the integrity of its regulatory approach by requiring, as does New Zealand, all local banks to comply with its regulations, despite their having a parent or being affiliated with a group whose home country authority is operating under Basel. Information sharing through an MOU would be implemented no differently from current practice under the paper’s proposed framework, and, no doubt, the home country supervisor would have a stronger incentive to enter into a comprehensive agreement as jurisdictional differences in capital requirements, or other regulations, would increase the importance of sharing information to ascertain the adequacy of a group’s capital.

The foreign-bank incorporation approach might entail a dynamic implementation process by the host country, as relations within international banking groups evolve. New Zealand, for instance, found it necessary to implement additional policies beyond local incorporation as the outsourcing of local banks’ functions to foreign parents became a widespread practice, rendering it difficult for New Zealand to supervise the subsidiaries effectively. In response, it restricted the outsourcing of critical bank functions, such as risk management.¹⁸² Still, requiring incorporation of foreign bank entities addresses the core compliance concern of a host nation whose regulatory regime diverges from Basel requirements, without necessitating extensive further tinkering with the Basel regulatory architecture. Such an approach could well be expected to apply in both directions: namely, Basel-conforming nations may also insist on local incorporation of foreign

¹⁸² Bollard, supra note 180, at 9-10.
banking entities whose home country departs from Basel, paralleling the requirement of Basel-departing nations that local banks comply with their regulatory regime, were they to determine that the capital of a local institution operating under a Basel-departing regime was insufficient.183

3. Impact on International Banks. An increase in the number of jurisdictions requiring local incorporation of foreign financial entities would, no doubt, make regulatory compliance more challenging for international banks. For example, consider the situation of an international bank chartered in a nation whose regime departs from Basel by implementing a straight leverage ratio in relation to all assets independent of risk, with a subsidiary in a nation conforming to Basel’s risk weighted capital requirement. Under the consolidated supervisory principle, the subsidiary’s assets are included with the parent’s assets in computing how much capital the

183 Although the most straightforward mechanism to accomplish this is by requiring local incorporation of all foreign banking establishments, a nation could impose incorporation on only a particular local entity by claiming that the home supervision was inadequate. Such an approach would be at odds with the spirit of the paper’s proposal were such a determination rendered solely on the basis of the nation’s deviation from Basel. To avoid such a means of circumventing the proposed mechanism, the Basel Committee’s explanation of the home-host supervisory principle permitting a host country authority to impose restrictive measures should be refined to indicate that a home country’s approved deviation from Basel is not grounds for a host to find inadequate supervisory capacity, without further justification, such as, the home country’s permitting the foreign entity to be significantly undercapitalized compared to what it would be under local requirements without offsetting regulatory approaches, such as, a subordinated debt requirement, as discussed in part IV.A.2.b, or enhanced prudential supervision. Local incorporation is also a mechanism for protecting local citizens, as it means that the foreign entity has to participate in the local deposit insurance fund. Although I have not focused on consumer protection as an aim of bank regulation because it is not an objective of international regulation, which is this paper’s focus, see note 19, supra, to the extent that it is a domestic regulatory objective, local incorporation addresses any concern on the consumer protection dimension that could be raised against regulatory diversity. In the recent crisis, for example, the deposits of U.K. citizens that Iceland refused to cover when its banks failed were held in branches. Had Icelandic banks’ U.K. operations been locally incorporated, then those banks would have paid premiums into the U.K. deposit insurance fund and their depositors would have been covered without need for extraordinary government action as occurred.
banking group must hold to meet the home country’s leverage ratio. But the subsidiary would also have separately to hold the level of capital necessary to meet the Basel risk-weighted capital requirements of its host regulator. These requirements might not be the same, and the group might therefore need to hold additional capital (in the subsidiary or as a whole) than it would have were the home country following Basel.\textsuperscript{184} Of course, the situation is symmetrical in terms of a group’s potentially higher capital requirements if the supervisory roles are reversed, that is, a Basel-departing host regulator requiring local incorporation and a Basel-conforming home regulator.

Regulatory diversity would impose further costs on international bank operations were it to increase substantially the number of nations applying local incorporation requirements. That is because, from a banking group’s perspective, the choice of organizational form – subsidiary or branch – has operational, and hence real economic, consequences. The two forms differ with regard to the degree to which a group’s decisionmaking can be centralized, affecting the ability to engage in intra-group transfers, and hence, the transaction costs of a group’s overall operations. For example, the centralized decision model using branches permits a group to integrate operations, raising funds in the cheapest location and redeploying them in the location with the highest return.\textsuperscript{185} When a group incorporates a foreign operation, however, the unit, under local

\textsuperscript{184} As the pertinent Basel cross-border principle recognizes, there is an interest in hosts’ “accepting the [consolidated] methods and processes” as applied to the subsidiary to “reduce the compliance burden.” Basel Cross-Border Principles, supra note 177, at 5. The additional cost burden from the Basel principle’s grant of authority to hosts can be expected to rise under regulatory diversity, because, if the proposed process is successful, there would be more instances of home-host differences, and they would be differences in substantive regulation rather than supervisory practices.

\textsuperscript{185} Fiechter, et al., supra note 179, at 7.
law, must be managed independently (i.e., have a board of directors) and finance its own operations, and consequently, the parent’s ability to exercise control over the unit is necessarily attenuated, because inter-group transfers are more restricted.\textsuperscript{186}

While some of the benefits of organizational form are independent of a bank’s business model, such as, whether it engages principally in retail or universal (investment or wholesale) banking, others are not. For instance, use of subsidiaries would tend to fit a global retail bank better than a universal bank, because to attract retail customers, a foreign bank establishment needs access to local deposit insurance and a local management team’s knowledge.\textsuperscript{187} By contrast, a universal bank tends to benefit more from a branch structure, as that permits greater flexibility in transferring funds and managing liquidity needs, to meet corporate clients’ shifting geographic funding requirements.\textsuperscript{188}

In addition, the economics of bank groups’ preferred choice of organizational form might also depend on host country’s characteristics. For example, branching might be preferred “when local financial markets are less developed and less able to support a subsidiary” (i.e., local

\begin{small}
\begin{itemize}
\item \textsuperscript{186} The distinction is not as clear-cut as the legalities might imply, in that, depending on the organization, branches may be allowed to operate quite independently and subsidiaries may be tightly controlled. But the legal restrictions on inter-group transfers and additional organizational costs, such as establishing a board, cannot be avoided.

\item \textsuperscript{187} Fiechter, et al., supra note 179, at 9.

\item \textsuperscript{188} Id. Additional advantages to the organization of using a subsidiary over a branch are limited liability regarding the entity (also referred to as the ability to ring-fence assets) and greater flexibility in terms of international corporate taxation and ease in selling the unit. Dirk Schoenmaker and Sander Oosterloo, Cross-Border Issues in European Financial Supervision, in David Mayes and Geoffrey Wood, eds., The Structure of Financial Regulation (2005) (available at \url{http://staff.feweb.vu.nl/dschoenmaker/Cross-border} issues (BoF 21-2-2005).pdf, at 11)
\end{itemize}
\end{small}
funding is limited so credit is provided on the basis of the parent’s strength). 189 Hence, when a host country requires incorporation, it may be imposing a suboptimal organizational form on an international bank, reducing the profitability of its business model.

Of course, the inefficiency of compelling a foreign branches’ incorporation is no different when both nations comply with Basel than when only one does. The issue is the incremental impact on international banking organizations were more nations to do so. Many nations presently impose the same requirements on branches as on subsidiaries, such as local representation on a board of directors or local capital requirements. 190 If applying the same regulation to a local banking establishment regardless of legal form could be employed to address the regulatory needs of a Basel-departing nation, then there could be less of an operating efficiency loss, as the international bank group could continue to operate through a branch. In any event, in my judgment, the tradeoff between incrementally increasing international banks’ operating costs (because more nations require local incorporation) and introducing regulatory diversity into Basel would, on balance, be worthwhile, as it is not different in kind from the tradeoff in the present system. The tradeoff under the existing regime is international banks’ operating in a more inefficient organization in a host country as a subsidiary against a host country’s being better able to protect the stability and soundness of its financial system. The corresponding tradeoff of banks’ organizational efficiency under the paper’s proposal is the stability and soundness of the international financial architecture.

An international banking group might well be more concerned about differential capital

189 Fiechter, et al., supra note 179, at 10.

190 Id. at 7.
charges being applied to its various units under regulatory diversity than the impact on internal operational efficiencies from an increase in how many of those units must take the form of subsidiaries rather than branches. Uniform capital requirements are less costly for international banks, as they render accounting, capital calculation and risk measurement easier to conduct on a consolidated basis. One could expect, therefore, that such banks would, all other things being equal, consider the contemplated regime permitting regulatory diversity to be far less desirable than the present harmonized system, and lobby against its adoption.

However, it should be emphasized that the burden of increased complexity in compliance from nonuniformity would be borne by the Basel-deviating nation, and not the banks. If a large international bank can operate a foreign establishment more efficiently, or provide better service, than domestic banks, then the international bank would be able to pass on the increased cost of doing business to customers in the Basel-departing nation. If, at the opposite extreme, the increased cost of operating in a Basel-deviating jurisdiction is greater than the expected return on investment, then the bank need not open an establishment in that jurisdiction. In either event, the cost of regulatory diversity would be internalized by a nation choosing to depart from Basel (i.e., the cost of credit in a nation would rise if fewer foreign banks enter or charge more for their services upon entry). To put the issue a bit differently, if there is a concern over the impact of the paper’s proposal on international banks’ operating costs, it would be a factor working against a nation’s likelihood of experimenting, as banks are not compelled to operate at a competitive disadvantage by doing business in Basel-deviating jurisdictions, and the potential reduced access to credit would work to make nations attentive to the cost-benefit calculation when considering adoption of a different regime.
4. Regulatory Arbitrage. The analysis suggesting that host nations would, in all likelihood, adopt local incorporation requirements in response to regulatory diversity is particularly helpful for understanding the relation between the paper’s proposal and an argument frequently invoked to support regulatory harmonization, a need to prevent regulatory arbitrage. For it makes plain why such an ostensible concern would be greatly circumscribed under the paper’s proposal. With a local incorporation requirement, which is the expected outcome, all banking establishments operating within a jurisdiction, whether domestic or foreign-owned, are subject to similar regulation. Given such common conditions -- all banking establishments operating under the same rules in a jurisdiction -- there would be no differential benefit from a parent’s being subject to distinctive home regulation, and hence no arbitrage opportunity.

The possibility of regulatory arbitrage would, as a consequence, be limited to cases in which a host country permits banks’ foreign operations to be undertaken through branches, without restriction. Such an approach would not be expected to be widespread among Basel-conforming nations, particularly if the departure from Basel were substantial, and at the outset, when there would be no experience with the working of a divergent regime. If experience is a guide, the pattern has been for nations to require uniformity, or compliance with minimum standards, to enter into mutual reciprocity arrangements. Moreover, it is plausible to assume

---

191 For instance, this is a predominant feature of the EU’s passport system, that has been adopted across financial sectors. E.g., Council Directive 93/22/EEC, 1993 OJ (L 141) (investment services firms); Council Directive 2001/34/EC, 2001 OJ (L. 184) (stock listing Information). A further illustration is the U.S. Securities and Exchange Commission’s adoption of a system of mutual recognition for foreign registrants’ disclosure requirements. The Multijurisdictional Disclosure System was adopted for only one country, Canada, whose disclosure requirements were virtually identical to those of the SEC. Multijurisdictional Disclosure and Modifications in the Current Registration and Reporting System for Canadian Issuers, Exchange Act Release No. 6902, 56 Fed. Reg. 30,036 (July 1, 1991).
that Basel committee members would have a status quo bias, and would therefore, in their role as host-country regulators, not readily accept non-Basel conforming entities to operate as such within their borders.

But it is surely possible that some nations would not require local incorporation of units of banks chartered in Basel-departing nations. In those jurisdictions, an international bank chartered in a Basel-departing nation could have a competitive advantage over one that was not, if the home regime’s deviation from Basel significantly reduced its cost of capital (if say, a Basel-departing regulatory scheme, such as that illustrated earlier of subordinated debt and a leverage ratio, proved less costly for bank groups than operating under Basel III). In that scenario, international banks chartered in Basel-conforming nations might seek to relocate.

However, such a reorganization would entail significant transaction costs, as a bank must move or create a new parent entity outside of its home base (e.g., a physical relocation would be necessary). For a move to be financially advantageous, the host jurisdictions permitting unrestricted foreign branch operation would not only have to be numerous, but also large, so that the cost-savings from being chartered in the non-Basel nation would offset the relocation cost. As earlier indicated, the gain would be limited to operating in those nations because rechartering a parent would, in all likelihood, not alter capital requirements for operations left behind or in any other Basel-conforming nation requiring local incorporation. Accordingly, the proposed regime would not create the bugaboo of rampant arbitrage opportunities because firms would have substantial impediments to obtaining the benefit of divergent regulation for all of their operations by relocating.

Territorial jurisdiction similarly blunts a parallel and often invoked objection to
regulatory diversity that is phrased in terms of regulators’, rather than banks’ responses to arbitrage possibilities. The contention is that, with regulatory diversity, banks would exert political pressure on domestic regulators to adapt their regime to the one with the lowest capital provisioning, on international competitiveness grounds, leading to seriously undercapitalized banks and a destabilized financial system. Such a claim is a serious misunderstanding of the proposal. The peer review and ongoing monitoring structure has been crafted to safeguard precisely against the possibility of that type of regulatory departure, as proposals solely lowering Basel capital requirements without more, will not meet the standard of review. The point of the proposed mechanism is to permit carefully considered experimentation by a regulator that believes it can improve the performance of its banks and the soundness of its financial system by implementing a program different from what Basel dictates. The much more plausible concern is that regulators will be risk averse and shy away from innovation, in order to not distinguish themselves from the crowd, as the personal consequences from bank failures would be far greater than the case of no bank failures.

A corollary of the fact that regulatory arbitrage would be quite limited in scope by local

\[192\] This is the motivation of regulators embracing the “level-playing field” rationale which, as earlier discussed, has, from the outset, characterized the Basel Accords. E.g., p. 20 (text around notes 41-42, supra). To this day, banks still are phrasing objections under the flag of national competitiveness against differential national regulation that would impose higher capital costs, as well as the harmonized increased capital requirements of Basel III. E.g., Dawn Kopecki, Dimon Kicks Off Wall Street Pressure on Global Competitiveness, Bloomberg.com, Mar. 30, 2011 (Stating that CEO of JPMorgan Chase, discussing implementation of Dodd-Frank, told investors that “If America adopts a lot of things very different than the rest of the world,” U.S. competitiveness will be damaged”); Brook Masters and Tom Braithwaite, Bankers versus Basel, Financial Times, Oct. 3, 2011, at 9 (JPMorgan Chase CEO criticized Basel committee’s proposed higher capital requirements for largest banks as discriminating against U.S. banks, and noting that European bankers have been complaining to their regulators that Basel rules unfairly penalize European model of universal banking).
incorporation requirements is that the reach of regulatory diversity would also be delimited. If
the international activities of banks chartered in Basel-departing nations are in many, if not nearly
all, instances subjected to Basel requirements, then regulatory diversity will be localized, that is,
the effects would be realized primarily, if not exclusively, within the Basel-deviating nation.
There is nothing troubling with such an outcome, for a nation’s principal goal in undertaking an
alternative regulatory approach should be to obtain better financial outcomes at home. If,
however, a nation’s international banks’ operations are burdened by dealing with numerous
subconsolidation capital requirements such that it impacts the effectiveness of consolidated
supervision, then a nation would not be able to reap all of the expected benefits of a regulatory
derparture, and that would reduce the incentive to experiment in the first place. This suggests that
a nation’s likelihood of initiating a departure from Basel would be a function of whether its
internal market is sufficiently large to capture the anticipated gain from improved regulation.
This may also further limit the extent of departures, as nations with the largest markets are likely
to exert considerable influence in the Basel process and thereby obtain their preferred regulatory
regime within its strictures.

The crimping of the advantages to be had from regulatory diversity from absence of
mutual recognition should be mitigated over time, however. It can be expected that mutual
recognition accords would gradually be adopted (or restrictions on foreign operations gradually
relaxed) between Basel-conforming and Basel-departing nations, as greater experience informed
decisionmaking and demonstrated that the regulatory innovations in fact strengthened the
affected banks and financial systems.
V. Conclusion

This paper has challenged the prevailing view of the efficacy of harmonization of international financial regulation in the Basel Accords, contending that, contrary to its expressed objective, experience indicates that harmonization increased, rather than decreased, systemic risk. By incentivizing financial institutions worldwide to follow broadly similar business strategies, harmonized regulatory error can propel a local problem into a global institutional crisis. The paper contends, accordingly, that there is both value in and a need to increase the flexibility of the international financial regulatory architecture to foster regulatory diversity and experimentation within the existing Basel framework. The fast-moving, dynamic nature of financial markets renders it improbable that regulators can predict with confidence optimal regulatory policies to reduce systemic risk, or what future categories of activities or institutions might generate systemic risk. At the same time, the requirement of internationally-harmonized regulation has impeded the acquisition of knowledge concerning the comparative effectiveness of differing regulatory arrangements, lowering the quality of decisionmaking, as nations are discouraged from experimenting with alternative regulatory arrangements.

The paper proposes making the Basel regime more adaptable to confront regulatory challenges better by creating a procedural mechanism by which departures along multiple directions and dimensions from Basel’s strictures would not only be permitted but would be encouraged. At the same time it would provide safeguards, given the limited knowledge that we do possess, against the ratchetting up of systemic risk. The core of the proposal is peer review of proposed deviations from Basel, and ongoing monitoring of approved departures, for their impact on global systemic risk. If a departure were found to increase systemic risk, it would be
disallowed. Such an approach would both improve the quality of regulatory decisionmaking by providing information on what regulation works best under what circumstances and a safety valve against regulatory errors’ increasing systemic risk, by reducing the likelihood that international banks will all be following broadly similar flawed strategies.

Cross-border regulatory coordination becomes even more important when diversity is permitted under the international financial architecture than it is today. But the difference is one of degree, rather than kind. Existing coordinating mechanisms of supervisory colleges, memoranda of understanding, and local incorporation policies can readily accommodate the demands of regulatory diversity and circumscribe any potential opportunity for regulatory arbitrage. In fact, their effectiveness might be improved, as home and host authorities will have stronger incentives to be attentive to information sharing and coordinated supervision when regulations differ, as they will be more acutely aware that they matter.

There are tradeoffs that must be made with any regulatory scheme, and the paper’s proposal to increase regulatory diversity is not an exception. There would be a cost to firms and regulators from having to operate in a world of heightened regulatory complexity and uncertainty with multiple regulatory regimes. But those costs would not be large as the number of different regimes can be expected to be limited, at least at the outset, given regulators’ incentives and the need of a market of sufficient size for a nation to be able to internalize the cost to large banks of operating under diverse regimes. Most important, the failed experience with the harmonized Basel regime evidences the substantial costs of retaining the status quo: the fundamentals of that regulatory architecture are still in place, and we do not know whether Basel III’s add-ons will make the situation better, although it is to be hoped they will. The proposed procedural
mechanism would permit the international financial regulatory system to evolve through
informed experimentation, rather than the current state of affairs, which, given the dynamic
uncertainty of financial markets, consists to an extent much greater than is admitted of regulating
in the dark. That alone would be worth the cost.