For Diversity in the International Regulation of Financial Institutions: Critiquing and Recalibrating the Basel Architecture

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For Diversity in the International Regulation of Financial Institutions: Critiquing and Recalibrating the Basel Architecture

Roberta Romano†

This Article challenges the prevailing view of the efficacy of harmonized international financial regulation and provides a mechanism for facilitating regulatory diversity and experimentation within the existing global regulatory framework, the Basel Accords. Recent experience suggests that regulatory harmonization can increase, rather than decrease, systemic risk, an effect that is the precise opposite of the objective of harmonization. By incentivizing financial institutions worldwide to follow broadly similar business strategies, regulatory error contributed to a global financial crisis. Furthermore, the dynamic nature of financial markets renders it improbable that regulators will be able to predict with confidence what are the optimal capital requirements or what other regulatory policies would reduce systemic risk. Nor, as past experience suggests, is it likely that regulators will be able to predict which future financial innovations, activities or institutions might generate systemic risk. The Article contends, accordingly, that there would be value added from increasing the flexibility of the international financial regulatory architecture as a means of reducing systemic risk. It proposes making the Basel architecture more adaptable by creating a procedural mechanism to allow for departures along multiple dimensions from Basel while providing safeguards, given the limited knowledge that we do possess, against the ratcheting up of systemic risk from such departures. The core of the mechanism to introduce diversity into

† Sterling Professor of Law, Yale Law School, and Director, Yale Law School Center for the Study of Corporate Law. Drafts of this Article 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, the 11th Distinguished Public Lecture of the University of Hong Kong Faculty of Law Asian Institute of International Financial Law, the Copenhagen Business School and Forum for Company Law and Financial Market Law KU Seminar on Financial Regulation, the Keynote Address at the 20th Global Finance Conference and lectures at the Chapman Tripp law firm in Auckland, New Zealand, and the Shanghai Jiao Tong University Shanghai Advanced Institute of Finance. I have also benefitted from comments of participants in 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, the Notre Dame Law & Economics Symposium on Markets & Regulation in the 21st Century, the ETH Zurich Law & Finance Workshop, the University of Colorado Boulder Law School Business Law Colloquium, University of Pennsylvania ILE Spring 2014 Corporate Roundtable and in faculty workshops at the Duke, Fordham, Hofstra, Virginia and Yale Law Schools and University of Colorado at Boulder Leeds Business School, and Erik Gerding, Gary Gorton, Michael Klausner, Alvin Klevorick, Robert Litan, Jonathan Macey and Charles Whitehead.
Basel is a peer review of proposed departures from Basel, and, upon approval of such departures, ongoing monitoring for their impact on global systemic risk. If a departure were found to increase systemic risk, it would be disallowed. Such a diversity mechanism would improve the quality of regulatory decision-making by generating information on which regulations work best under which circumstances. It would also reduce the threat to financial stability posed by regulatory errors that increase systemic risk by reducing the likelihood that international banks worldwide will follow broadly similar, mistaken strategies in response to regulatory incentives.

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Introduction

Central bankers and bank supervisors have for decades spearheaded a
global effort to harmonize regulation of large, internationally active banks
under the aegis of the Basel Committee on Banking Supervision, a unit of the
Bank for International Settlements (BIS). 1 Beginning in the 1980s, the Basel
Committee sponsored the development of uniform capital requirements, which
were agreed to in 1988 by central bankers of the G-10 countries in the Basel
Capital Accord (Basel I) and modified as Basel II (2004) and Basel III (2010).
Non-binding agreements that Committee members pledge to implement
through domestic law, 2 the Accords are now subscribed to by over 100 nations.

1. The BIS, which was established in 1930 as a bank for central banks, fosters
international monetary and financial cooperation across central banks. About BIS, BIS.ORG,
http://www.bis.org/about/index.htm (last visited Feb. 14, 2014). The Basel Committee was created in
1975 by the central bankers of the G-10 nations (the Group of Ten, which refers to the eleven nations
that agreed in the 1960s to make resources available to the International Monetary Fund (IMF) for
drawings by participant and non-participant nations) to coordinate supervisory standards. History of the
Committee 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. Id. The three Basel regimes
are described in Section I.A and Subsection I.B.3, infra.

2. See Michael S. Barr & Geoffrey P. Miller, Global Administrative Law: The View
from Basel, 17 EUR. J. INT’L L. 15, 28 (2006). In the United States, the Basel Accords are implemented
through administrative rule-making, which 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 U.S.C. § 3901(b) (2012), and has engaged in direct
oversight, by, for example, holding hearings on Basel II. Barr & Miller, supra, at 33-35. Congress could,
of course, enact legislation modifying or repealing regulations adopted under Basel were it to find them
contrary to its objectives. Indeed, by prohibiting the use of credit agency ratings in any financial
regulation, the Dodd-Frank Wall Street Reform and Consumer Protection Act is in conflict with the
post-crisis revisions to Basel II, known as Basel 2.5. E.g., Half-cocked Basel, ECONOMIST, Jan. 7, 2012,
Their objectives—to increase financial system stability (i.e., to reduce systemic risk, which is the risk that the failure of one financial institution will lead to a cascading failure of other institutions, bringing down the entire financial system) and to equalize large international banks’ competitive positions by subjecting them to identical capital requirements—have garnered broad political support.3

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 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 U.S. regulators to promote global harmonization of the regulation of swaps (contracts to exchange cash flows, principally related to interest rates, foreign exchange rates, and credit defaults).4 In addition, the G-20 and Financial Stability Board (FSB) have called for international harmonization of financial executives’ compensation, to be implemented through the Basel committee.5 Further, the Basel committee redoubled its harmonizing efforts to emphasize consistency in both supervisory practices and capital requirements.6

3. As discussed in Subsection I.B.3, infra, although Basel III refers to a sole objective—the reduction of systemic risk—the continued relevance of leveling the playing field for international banks is evident in the Basel III negotiation and its substantive output. There has, however, been a shift in the means of implementing that objective in Basel III: the regulatory approach to systemic risk has been altered to include a macro- and not solely a micro-level perspective (i.e., regulatory concern is not directed solely at an individual institution’s financial solvency). See infra text accompanying note 52.


6. To achieve greater uniformity in supervisory practices, the Basel Committee published supervisory guidelines and established a Standards Implementation Group in 2009, with the aim of “promoting consistency” in the application of supervisory approaches to implementing the Basel standards. Basel Comm. on Banking Supervision, The Basel Committee’s Response to the Financial Crisis: Report to the G20, BANK FOR INT’L SETTLEMENTS 15 (Oct. 2010), http://www.bis.org/publ/bcbs179.pdf. In addition, the Basel Committee’s evaluations of nations’ implementation of Basel III include an assessment of compliance with supervisory practices as well as
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This Article advances a decidedly contrarian perspective from that informing the present-day Basel Accords and other recent harmonization initiatives led by the European Union and United States. The truth is that the current state of economic knowledge does not permit us to predict with confidence what the optimal capital requirements or other regulatory policies are to reduce systemic risk, the objective of global harmonization efforts. Nor does it permit us to predict what future categories of activities or institutions might generate systemic risk. Moreover, notwithstanding considerable advances in knowledge, the fast-moving and intricate dynamic of financial markets renders it improbable that any future state of knowledge would enable us to make such predictions with reasonable confidence. Proponents of regulatory harmonization do not acknowledge this reality.

Accordingly, this Article challenges the present-day enthusiasm for international regulatory harmonization and the notion that harmonization is a panacea for systemic risk. It is not 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 concerns spurring the initiative. Over fifteen years ago, Richard Herring and Robert Litan identified the nub of the problem created by international harmonization.7 As they 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 wrong after they are implemented.”8 More recently, Andrew Haldane, the Bank of England’s Executive Director for Financial Stability, connected the 2008 financial crisis to homogeneity in financial institutions’ business strategies and management of the resulting risks, which, he noted, were harmonized by Basel II.9 This Article offers a practical mechanism for incorporating into Basel the capital requirements. See, e.g., Basel Comm. on Banking Supervision, Report to G20 Leaders on Basel III Implementation, BANK FOR INT’L SETTLEMENTS (June 2012), http://www.bis.org/publ/bcbs220.pdf.

8. Id. at 134.
9. Andrew G. Haldane, Rethinking the Financial Network, 53 BIS REV. 1, 10-11 (2009). In contrast to this Article, Haldane does not advocate rethinking 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. Nevertheless, his analysis is consistent with this Article’s approach 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 Article is also in the spirit of Charles Sabel’s work advocating regulatory experimentalism and pragmatic organizational design, see, e.g., Charles F. Sabel, A Real-Time Revolution in Routines, in THE FIRM AS A COLLABORATIVE COMMUNITY: RECONSTRUCTING TRUST IN THE KNOWLEDGE ECONOMY (Charles Heckscher & Paul S. Adler eds., 2006); Charles F. Sabel & William H. Simon, Minimalism and Experimentalism in the Administrative State, 100 GEO. L.J. 53 (2011), and of Nassim Taleb’s advocacy of fostering “antifragile” systems, which are as robust to catastrophic failure as possible because there is variability in their parts, e.g., Nassim Nicholas Taleb, Antifragile 85 (2012) (“The more variability you observe in a system, the less Black Swan-prone it is.”).
learning of the literature skeptical of international regulatory harmonization.\textsuperscript{10} It advances a solution that would permit the introduction of regulatory diversity and experimentation, and hence greater flexibility, into the Basel architecture without having to tamper with the overall setup.

The Article proceeds by first providing an overview of the Basel Accords, whose aim is to harmonize international financial regulation through an emphasis on standardized minimum capital requirements. It then discusses the relationship 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 that were at the epicenter of the crisis. The contention is that the international financial regulatory regime magnified the severity and global reach of the crisis, a role that has all too often been minimized or ignored by those advancing reforms that further solidify as they refine the current centrally harmonized regulatory approach. The recent crisis was, moreover, not the first financial crisis with cross-national reach since the establishment of the Basel framework over three decades ago.\textsuperscript{11}

Accordingly, given Basel’s multiple failures at preventing financial crises, along with the academic literature indicating its ineffectiveness in meeting its objectives even in normal times,\textsuperscript{12} this Article advocates opening up the Accords to experimentation by grafting onto Basel a procedural mechanism for approving departures subject to review and monitoring. Such a mechanism could introduce diversity into international financial regulation while limiting the likelihood that regulatory departures would increase systemic risk.

Under this Article’s proposed framework for regulatory diversity, Basel requirements would operate as “off-the-rack” defaults from which nations could depart, following peer regulator approval, and reconfigure or reject elements of Basel, or even replace Basel with a qualitatively different regulatory approach. The proposed procedure for approving departures from the Accords consists of three components. First, a nation would present its contemplated departure to the Basel Committee for approval. Second, a committee of peer regulators would be formed to determine whether to approve the departure. Third, the Basel Committee would review and monitor the implementation of the departure.

\textsuperscript{10} Two recent articles are also critical of financial regulation harmonization, although from somewhat different perspectives. Lawrence A. Cunningham & 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) (critiquing U.S. financial regulation reforms that would consolidate existing multiple regulators and notes the benefits of the existing disaggregated regulatory regime); Charles K. Whitehead, Destructive Coordination, 96 CORNELL L. REV. 323 (2011) (criticizing regulatory coordination that induces portfolio managers to act in unison as inconsistent with modern risk management principles premised on individual actors’ decisions being independent). In an earlier conference comment, I touched on the theme informing this Article. Roberta Romano, Against Financial Regulation Harmonization: A Comment, in LAW AND ECONOMICS OF GLOBAL FINANCIAL INSTITUTIONS 27 (Peter Nobel, Katrin Krehan & Anne-Cathrine Tanner eds., 2010).


\textsuperscript{12} See infra Appendix.
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the proposed departure, based on an evaluation of the proposal’s impact on global systemic risk. Finally, approved departures would be subject to ongoing monitoring and periodic reassessment by a Basel Committee working group so that an approved departure could be reversed were there changed circumstances, or new data, to indicate that it was adversely affecting global systemic risk.

The diversity mechanism would have decisive benefits over the present-day Basel framework for improving the quality of financial regulatory decision-making. It would increase not only the flexibility but also the adaptability and, consequently, the resilience of the international financial regulatory architecture. It would generate information and formalize an ongoing testing of assumptions in the search for better regulatory solutions, as well as make the regulatory decision-making process more transparent and therefore more open to independent evaluation. It would thereby transform Basel’s regulatory setup from one which can best be characterized as mandates emerging full-blown, albeit largely untested, from the Basel Committee, following political horse-trading among larger and more influential nations, into one that evolves incrementally through informed experimentation.

I. Basel and the Financial Crisis of 2008-09

The harmonized international regulation of large financial institutions and the global financial crisis of 2008-09 are closely intertwined. This Part provides an overview of the international agreements harmonizing financial regulation, the Basel Accords. It then analyzes how Basel incentivized financial institutions to hold assets that proved to be at the epicenter of the crisis, leading to contagion, that is, runs on global financial institutions resulting in the financial system’s near collapse and a crisis in the real economy.13

13. 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, investors predict that some banks will fail but, not knowing which ones, run on all banks to withdraw their funds. See GARY B. GORTON, SLAPPED BY THE INVISIBLE HAND: THE PANIC OF 2007 30-33, 45 (2010); Douglas W. Diamond & Philip H. Dybvig, Bank Runs, Deposit Insurance, and Liquidity, 91 J. POL. ECON. 401 (1983). The introduction of deposit insurance essentially eliminated depositor bank runs. But there are at least two posited transmission channels of contagion, related to the interconnectedness of institutions, quite apart from runs by bank depositors, of present-day concern. First, the initial failing entity could be a counterparty to many other institutions’ financial transactions; when its failure causes those transactions to fail, 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. E.g., HERRING & LITAN, supra note 7, at 51. Two caveats regarding the sources of systemic risk, which complicate considerably the policy implications of this analysis of contagion, need to be noted. First, a national financial crisis could spread internationally through “real” economy contagion channels, such as linkages through trade, rather than through the financial channel. Studies of the recent crisis suggest that the source of contagion is real and not financial. See, e.g., Andrew K. Rose & Mark M. Spiegel, Cross-Country Causes and Consequences of the 2008 Crisis: International Linkages and American Exposure, 15 PAC. ECON. REV. 340 (2010) (stating that there is little evidence that cross-country linkages, financial or trade, affected crisis
Global harmonization of bank capital requirements and administrative supervision began with the adoption of the initial Basel Accord in 1988. An agreement to raise internationally active banks' capital requirements, Basel established a risk-weighted capital framework, requiring financial institutions to hold capital based upon their assets' credit risk, computed under a standardized weighting system. Two rationales were advanced for the Accord. The first rationale—promoting the stability of the international banking system by containing systemic risk—is at the core of banking regulation. The second rationale—equalizing international banks' competitive positions—is closely related to and, in practice, often intertwined with the first: regulators are concerned that differential capital requirements will enable international banks to engage in regulatory arbitrage, which will undermine outcomes); Geert Bekaert et al., Global Crises and Equity Market Contagion (Nat'l Bureau of Econ. Research, Working Paper No. 17121, 2012) (finding limited evidence of global or U.S.-related stock market contagion, compared to domestic contagion, that is, increased correlation of stocks was within individual countries, not across countries); Stijn Claessens, Hui Tong & Shang-Jin Wei, From the Financial Crisis to the Real Economy: Using Firm-Level Data to Identify Transmission Channels (Nat'l Bureau of Econ. Research, Working Paper No. 17360, 2011) (using micro-level data of performance of individual manufacturing firms and finding that trade and domestic demand channels were more important economically than financial channels were in causing the crisis to spill over national borders). But see Nicola Cetorelli & Linda S. Goldberg, Global Banks and International Shock Transmission: Evidence from the Crisis (Fed. Reserve Bank of N.Y., Working Paper No. 446, 2010) (finding that global banks played a significant transmission role). If this is the case, then international financial regulatory harmonization cannot be rationalized as preventing contagion because bank interconnections are not the source of the problem. 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 interest rates or oil prices) to common fundamentals. See, e.g., REINHART &. ROGOFF, supra note 11, at 240-46 (characterizing crises over the past century as well as the recent crisis as a conjugate of common shocks). 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 heightening international regulatory harmonization would be counterproductive, to put it gently.

14. Simplifying a bit, banks had to hold 8% total capital, 4% of which had to be "tier one" capital, against risk-adjusted assets where tier one capital consists of equity and certain preferred stock and the remainder, referred to as tier two capital, consists of everything else negotiated under the Accords to qualify as capital, such as hybrid securities and subordinated debt. The standardized risk weights for assets ranged from 100% for corporate loans to 0% for sovereign debt. Thus, a bank making a $10 million loan to a corporation would have to hold .08 x 1.00 x $10,000,000 (the risk-adjusted capital) = $800,000 in total capital, and $400,000 in equity, i.e., in tier one capital, against that loan.


16. See, e.g., HERRING & LITAN, supra note 7, at 50. Herring and Litan discuss two other rationales for banking regulation: consumer protection and "achieving broader social objectives." Id. at 61-63. I focus on systemic risk and not these additional possible objectives because, as they discuss, these two rationales do not implicate international harmonization concerns: there is, in fact, substantial variation in national preferences on those two objectives, which may render harmonization counterproductive. Id. at 85.
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system stability. Regulators may also believe that it is politically daunting to promote system stability through higher capital requirements if not all nations require the identical level. The thinking is that a proposed increase could be waylaid by domestic banks' rallying political actors, who oversee banking regulators, with the assertion that higher domestic capital requirements would place them at a serious competitive disadvantage.

National competitiveness concerns, in fact, permeate Basel Committee negotiations over the formulation of capital requirements. A key instance is Basel's preferring of the risk weights applied to residential mortgages, which is a function of some nations'—most notably the United States'—domestic policies to promote housing. By preferring residential mortgages over other types of loans, the intent was to ensure that the Accord would not competitively disadvantage an internationally active U.S. bank from financing housing and thereby supporting national housing policy. The residential mortgage risk weight preference would prove to have a devastating knock-on effect decades later, in conjunction with other factors triggering the global financial crisis.

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 IMF and World Bank. The Basel I capital requirements were modified in succeeding years to take account of market risk, culminating in 2004 in a revised Accord, known as Basel II, which also added operational risk—the "risk of loss from inadequate or failed internal processes, people and systems and external events," including legal risk—into the mix. Basel II

17. Richard Dale describes the issue 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 The Future of the Financial System* 215, 217 (Malcolm Edey ed., 1996). A thumbnail sketch of the history is as follows: The United States and United Kingdom crafted the basis for global requirements by adopting a bilateral accord that set minimum capital requirements, in order to protect their nations' banks from competition from Japanese banks. Japanese banks at the time were subject to lower capital requirements and their market share in global transactional activity had been dramatically increasing. Daniel K. Tarullo, *Banking on Basel: The Future of International Financial Regulation* 46-49 (2008). The U.S.-U.K. agreement would have prevented Japanese banks from doing business in either country or seeking to acquire an American or British bank unless they complied with the capital requirements. As a result, Japanese regulators agreed to raise their own capital requirements. *Id.* at 50-51.

18. How such concerns would play out with the introduction of a diversity mechanism into the Basel architecture, as proposed in this Article, is discussed in Subsection II.B.4, *infra.*


explicitly advanced 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 new rules, compared to Basel I’s four-year transition period, but Basel II had also been negotiated over a longer time span than Basel I.

Basel II introduced a “three pillar” regulatory framework. The first pillar, a minimum capital requirement, is the centerpiece of Basel II and a continuation of the focus of Basel I. 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 model to calculate risk weights, in contrast to regulators’ fixing risk weights according to broad asset categories under Basel I.

The other two pillars, regulatory supervision and disclosure (also referred to as market discipline), are considered to be adjutants to the first pillar. That is to say, the supervisory review process is directed at assessing the adequacy of a bank’s capital, a task taking on even greater importance than accorded in Basel I, given Basel II’s reliance on banks’ internal risk measurements in determining 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.”


The causes of the global financial crisis of 2008 will, no doubt, be analyzed and debated by economists for generations. But it appears to have been triggered by a bank run occurring in what is conventionally referred to as the nonbank or shadow banking sector, an institutional market in which financial institutions borrow outside of the regulated commercial banking

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23. Basel II’s reliance on private sector risk measurement is not as dramatic a break with Basel I as it may appear. Using banks’ internal risk models to establish capital requirements had been introduced into capital regulation under Basel I, in the 1996 amendments, to measure the capital required for market risk from trading activities. Basel Comm. on Banking Supervision, Overview of the Amendment to the Capital Accord to Incorporate Market Risks (Jan. 1996), http://www.bis.org/publ/bCBS23.htm. Basel II also permits regulators to continue to apply a standardized risk weight approach as an alternative to using banks’ internal risk management models. The standardized approach was expected to be used by smaller banks and emerging nations due to the limited technical sophistication of such banks and the regulatory authorities of those nations. While following Basel I’s approach, the standardized risk weights of Basel II incorporate external credit ratings of rating agencies or export credit agencies. BARTH ET AL., supra note 20, at 69-70.

24. The four “key” principles of supervisory review set out in Basel II all pertain to banks’ capital adequacy. See Basel II Framework, supra note 21, at 205-12.

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system. The panic in the shadow banking market and subsequent collapse of banks worldwide were integrally related to Basel capital requirements.

1. The Crisis in the Shadow Banking Sector

The shadow banking sector performs the same intermediation function as the regulated banking sector: long-term assets are financed by short-term debt, most commonly in the form of sale and repurchase (repo) agreements and asset backed commercial paper (ABCP). But instead of being backstopped by government deposit insurance, shadow banking market lending is secured by the long-term assets being financed, and investors require the assets to have AAA credit ratings so that if a loan is not repaid, they can recover the full amount of the loan by taking possession of the collateral.

Much of the collateral in the shadow banking sector at the time of the financial crisis was comprised of mortgage-backed securities (MBSs) or collateralized debt obligations (CDOs) whose underlying assets were MBSs. The panic in the shadow banking sector followed an uptick in defaults on U.S. subprime mortgages in 2007. The fundamental problem was asymmetric information concerning the quality of the assets securing shadow banking market debt: the complexity of the securities made it difficult for investors to ascertain the extent of defaulting subprime mortgages held by borrowing institutions and comprising their collateral. As institutional investors became

26. The name "repo" comes from the terms of the transaction agreement, in which an institution sells a security and agrees to repurchase it at a later date at a higher price that reflects interest charged for the buyer's having the use of the cash. If the financial institution cannot repay the loan, the lender keeps the collateral. Gary Gorton analogizes the repo market to commercial banking. GORTON, supra note 13, at 44. The loans are expected to be rolled over but there is no requirement that the lenders do so, rendering their position analogous to that of a demand deposit. Lenders in the repo market typically charge a "haircut" such that the loan amount is less than the value of the collateral. The discount protects them from loss upon the event of default and a decline in asset value. Pre-crisis repo haircuts were quite small because both the short-term nature of the debt and the high quality of the secured assets were thought to make the probability of not recovering the loan in full extremely remote. The ABCP market operates similarly to the repo market in its intermediation function: banks create conduit entities, which finance long-term assets by issuing short-term securities (commercial paper), which are guaranteed by the sponsoring banks if the conduit's long-term assets backing the paper prove to be insufficient.

27. A mortgage-backed security (MBS) is a financial instrument whose value and payout is derived from an asset pool of mortgages (i.e., its payout is collateralized or "backed" by those assets). In the securitization process, a financial institution creates a separate entity—referred to as a special purpose vehicle or structured investment vehicle—which holds the pooled assets and sells securities to investors. The securities are divided into classes, or "tranches," that prioritize the receipt of the cash flows from, and bearing of losses on, assets in the pool. The prioritization enables the senior-most securities to receive investment grade ratings, and thereby led to their use as collateral in the repo market. The increased use of MBSs as collateral would appear to be a function of scarcity of AAA-rated government securities and investor demand for safe assets. See, e.g., Gary Gorton, Stefan Lewellen & Andrew Metrick, The Safe-Asset Share, 102 AM. ECON. REV. 101 (2012).

28. For a compelling characterization of the run in the shadow banking sector as the trigger of the financial crisis, see Gary Gorton's influential analysis, GORTON, supra note 13. For a characterization of the contraction in the ABCP market as a bank run, see Daniel Covitz, Nellie Liang & Gustavo Suarez, The Evolution of a Financial Crisis: Panic in the Asset-Backed Commercial Paper
increasingly apprehensive about the quality of the underlying assets, they refused to rollover debt. As a result, borrowing institutions were unable to replace withdrawn capital and were forced to deleverage on a massive scale. Caught in a downward spiral of assets being sold at fire sale prices and panicked investors withdrawing credit in response to declining asset valuations, short-term financing markets collapsed, and what was initially a liquidity crisis morphed into a solvency crisis.  

A comprehensive list of causes identified as contributing to the financial crisis would, of course, contain numerous plausible factors, not all related to subprime mortgages and the run on the shadow banking market. But the panic in the shadow banking market can be characterized as a proximate cause of the global crisis. The first failures were foreign banks operating in the shadow
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banking market, and appreciating that fact points to the close relationship between the financial crisis and the international financial regulatory architecture. This is because the key factor highlighted by the panic in the shadow banking sector is the greater exposure, on average, of institutions regulated by Basel to the assets whose implosion set off the global financial panic than of financial institutions not subject to Basel capital regulations, such as hedge funds and insurance companies. This striking phenomenon—a pattern of differential exposure—stands to reason as Basel’s preferencing of those assets through lower assigned risk weights incentivized Basel-regulated institutions to hold them.

2. Performance of Basel-Compliant Institutions During the Financial Crisis Versus Entities Operating Outside of Basel

How did Basel incentivize banks to hold particular financial instruments? Under the Basel credit risk-weighting system, residential mortgages, and more importantly, securities based on them (i.e., repo collateral), are subject to lower capital requirements than other financial assets, such as corporate loans. ABCP vehicles are also treated favorably. As a consequence, banks have a powerful incentive to hold the preferred assets in order to minimize their required capital, and the low level of capital required to hold such assets supports an increase in leverage, thereby increasing returns and, correlatively, risk of loss. An illustration of the incentive created by the preferential risk weighting of these assets and transaction structures is the fact that the only two EU nations, Spain and Portugal, whose regulators did not provide favorable treatment to conduits, were the only nations whose international banks did not use them.


32. For a discussion of the incentives Basel created for banks to hold ABCP, see Viral V. Acharya & Philipp Schnabl, How Banks Played the Leverage Game, in RESTORING FINANCIAL STABILITY: HOW TO REPAIR A FAILED SYSTEM 83 (Viral A. Acharya & Matthew Richardson eds., 2009). Basel I did not require banks to hold capital for the ABCP structure because there were no capital charges for off-balance sheet assets and liquidity guarantees. After the Enron accounting scandal in 2001, accounting rules for off-balance sheet entities were altered, but most nations did not adjust bank capital requirements in line with the accounting changes, maintaining the favorable treatment for ABCP conduits. Acharya & Schnabl, supra note 31, at 50-53. Under Basel II’s standardized approach, capital charges for conduit assets, because of the guarantees, were also favored over on-balance sheet assets. Id. at 51, 53. On the eve of the crisis in 2007, regulators were still discussing the appropriate treatment of conduits under Basel II’s internal ratings-based approach. Id. at 51. Basel II reduced, but did not eliminate, the discrepancy between conduit and on-balance sheet assets, compared to Basel I. The capital requirements for securitizations and ABCP were increased following the financial crisis, eliminating much of the preference. E.g., Basel Comm. on Banking Supervision, Enhancements to the Basel II Framework, BANK FOR INT’L SETTLEMENTS (July 2009), http://www.bis.org/publ/bcbs157.pdf. But Basel II’s preferential treatment of residential mortgages over corporate loans in direct holdings remains unaffected to this day.

A simple, but enlightening, numerical example, provided by Lawrence White, illustrates the incentive Basel capital requirements provided banks to acquire securitized mortgage assets and to lever that investment. Under the Basel risk weights, a bank had to hold only $4 in capital for every $100 in residential mortgages, but it had to hold an even lower $1.60 for every $100 in MBSs 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.\(^{34}\) Given such attractive incentives, the leveraging of Basel-regulated financial institutions in the favored mortgage-related assets is totally understandable and predictable.

Basel I’s capital requirements also 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 without requiring additional capital provision.\(^{35}\) While Basel II modified Basel I risk weights within asset classes to permit adjustment for an asset’s external credit rating, it did not significantly impact the inducement to hold subprime assets because subprime mortgage securitizations were structured so that the vast

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34. Lawrence J. White, The Credit-Rating Agencies and the Subprime Debacle, in WHAT CAUSED THE FINANCIAL CRISIS? 228, 234 (Jeffrey Friedman ed., 2011). The economically-grounded 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 entirely misplaced. But even if, from a pre-crisis vantage point, it made sense to treat such mortgages as less risky, the implementation made no sense, which renders a non-political explanation unpersuasive. First, not all categories of residential mortgages are safer than all corporate loans. Second and more important, Basel II’s adjustments to the risk weights were no less aimed at encouraging residential mortgage lending. Although it did permit an adjustment in risk weights for corporate loans in line with external credit ratings, thereby decreasing the capital required for some loans, at the same time it maintained the favored treatment for residential mortgages by lowering the risk weight for the asset class, albeit permitting regulators to require increased capital for mortgages considered risky. See Basel Comm. on Banking Supervision, Annexes to International Convergence of Capital Measurement and Capital Standards: A Revised Framework, BANK FOR INT’L SETTLEMENTS 231 (June 2004), www.bis.org/publ/bcbs107d.pdf. As a result, only the very highest rated corporate loans were classified as less risky than residential mortgages. Banks’ internal models typically called for lower levels of capital than were required under the standardized risk weights and did not, accordingly, treat MBSs more severely. Indeed, the internal value-at-risk model that banks used to determine capital levels under Basel II exacerbated systemic risk as it led banks to hold similar assets to minimize capital requirements. As a consequence, when the models proved wildly inaccurate, many international banks found themselves severely undercapitalized and simultaneously had to sell similar assets to shore up their balance sheets, putting even further downward pressure on prices. See, e.g., JAMES R. BARTH ET AL., GUARDIANS OF FINANCE: MAKING REGULATORS WORK FOR US 53 (2012); Whitehead, supra note 10, at 346-51.

35. Holding the assets with the highest risk within a risk class is often referred to as “reaching for yield,” and is observed in other contexts in which regulatory requirements are keyed to an asset’s risk. See Bo Becker & Victoria Ivashina, Reaching for Yield in the Bond Market 5 (Harvard Bus. Sch., Working Paper No. 12-103, 2012), http://ssrn.com/abstract=2065841. This is not to say that banks hold only the riskiest assets within an asset class. The point is rather, that Basel incentivized banks to hold such assets, and across the board they did so. Banks commonly hold more than the minimum required capital to create a buffer against an economic perturbation that would push them below the minimum capital requirement and thereby subject them to regulatory action. Similarly, banks would not hold solely the riskiest assets, in order to avoid the increased regulatory scrutiny that such positions might at some point entail.
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majority of tranches received investment grade ratings.36 Banks were therefore still incentivized to follow a strategy of holding subprime mortgages, albeit indirectly in securitizations, as those assets bore the same capital charges as securities issued on prime mortgages while providing the higher return accompanying subprime instruments.

Basel’s preference for MBSs affected the shadow banking market because, although the market operates beyond the regulated banking system, its principal users (i.e., borrowers) operate within the globally harmonized regime for banks. U.S. investment banks that experienced runs in the repo market were operating under the key pillar of Basel II, the risk-based capital requirements.37 And more important, commercial banks using the repo market to finance their securitized products, as well as issuing ABCP and investing in securitized mortgages, were, of course, operating under bank regulators’ supervision and Basel’s strictures.38

36. Modification to the risk weights in relation to external credit ratings was intended to align risk weights more closely with credit risk. It was directed at exposures to sovereigns, banks, corporations, as well as securitizations so that the weights for high quality corporate loans and non-OECD sovereign debt would be reduced, while those for low quality exposures, such as non-investment grade corporate loans, would be increased. TARULLO, supra note 17, at 93-94; Basel Comm. on Banking and Supervision, A New Capital Adequacy Framework, BANK FOR INT’L SETTLEMENTS 5, 9 (June 1999), http://www.bis.org/publ/bcbs50.htm. The same rationale applies to the Fed’s recourse rule, discussed infra note 38. It is also worth noting that residential mortgages do not appear to have been a focus of attention during the negotiations of Basel II. At that time subprime mortgages were rare. The disastrous, albeit unintended consequences of Basel’s approach to residential mortgages is a cautionary tale concerning the need for attentively updating financial regulation in response to financial innovation.

37. The European Union (EU)’s 2002 Financial Conglomerates Directive required financial institutions to be regulated by a “consolidated regulator” in order to do business in the EU, and when the U.S. Securities and Exchange Commission (SEC) assumed that role for U.S. investment banks (as it regulated their broker-dealer operations), so that they could continue to operate in the EU, it permitted the investment banks to comply with Basel II’s internal ratings-based method for their capital requirements. SEC, Supervised Investment Bank Holding Companies, 69 Fed. Reg. 34,472 (June 21, 2004). Supply side capital preferences for investment grade securitized assets could not have succeeded on the scale that it did, however, were there not a powerful demand side for that collateral as well. As long as MBSs received the highest credit ratings, institutional investors either desiring, or required by regulation or corporate documents, to hold investment grade securities were avid participants in the shadow banking market’s MBS financing, as they could obtain higher yields by purchasing MBSs compared to government securities.

38. U.S. banking regulators approved final rules to implement Basel II and its internal ratings-based system for large internationally active financial institutions in December 2007. Risk-Based Capital Standards: Advanced Capital Adequacy Framework—Basel II; Final Rule, 72 Fed. Reg. 69,288 (Dec. 7, 2007). However, the rules contained a three-year transition period, including an initial, one-year test period in which each bank had to meet the old capital requirements while simultaneously calculating its Basel II capital requirement in order 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, because the EU had adopted a capital requirements directive incorporating Basel II in 2006, European banks were operating under the new Accords. Commission Welcomes Adoption of Capital Requirements Directive, EUROPA. EU (JUNE 19, 2006), http://europa.eu/rapid/press-release_IP-06-797_en.htm?locale=en. Nevertheless, the favorable treatment for securitized assets with investment-grade credit ratings under Basel II applied to U.S. banks operating under Basel I because of a regulation known as the “recourse rule.” The recourse rule, which permitted banks to rely on external credit rating agencies to determine capital requirements for certain recourse obligations and securitized assets, was adopted by U.S. regulators two years after the Basel Committee had proposed to revise Basel I to include credit rating adjustments to risk weights but years before it was
This all too often neglected reality concerning the shadow banking sector—that key market participants were subject to globally harmonized capital requirements—is, to my mind, critical for appreciating the dynamics of the global financial crisis from the perspective of the international regulation of financial institutions. For by contrast, other financial institutions, such as large hedge funds, an important set of trading institutions not subject to Basel capital requirements and therefore lacking a regulatory-induced incentive to hold MBs, were not, as a sector, as intensively invested in those investments.  

That is not to say that the sole important structural difference between these financial institutions was whether they were subject to Basel’s capital requirements. The structure of hedge fund managers’ compensation, for instance, is thought by many to be better aligned with investor interest (and hence firm value maximization) than that of other financial institutions’ executives. But the incentives created by the Basel requirements provide the most compelling explanation of the divergence in investment behavior of hedge funds and Basel-regulated financial institutions with respect to MBs. The difference in compensation structure cannot be the critical distinction because hedge funds are not the only financial industry sector to which the key observation of differential investment behavior applies. The insurance industry, which also is not subject to Basel capital requirements, also did not, as a sector, hold MBs in investment portfolios, and consequently did not experience similar wide-spread institutional stress and failures during the crisis as did the banking sector. It stands to reason that the incentive to meet Basel’s


39. This is not to say that there was no variation in individual financial institutions’ behavior. Some banks did not suffer as great a loss as others during the financial crisis because they had taken on less MBS and CDO risk. See, e.g., GILLIAN TETT, FOOL’S GOLD (2009) (discussing J.P. Morgan’s more conservative approach to the sector). There was also variation in hedge fund outcomes. Some hedge funds heavily invested in CDOs that failed at the beginning of subprime troubles, e.g., Julie Creswell & Vikas Bajaj, $3.2 Billion Move by Bear Stearns to Rescue Fund, N.Y. TIMES, June 23, 2007, http://www.nytimes.com/2007/06/23/business/23bond.html, while a few funds profited handsomely during the crisis because they were heavily invested on the short side of the market, taking the opposite position to that of most financial institutions, e.g., GREGORY ZUCKERMAN, THE GREATEST TRADE EVER (2009).

40. In contrast to bank employees, 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. E.g., SEBASTIAN MALLABY, MORE MONEY THAN GOD: HEDGE FUNDS AND THE MAKING OF A NEW ELITE 12 (2010).

41. Among others making this point is Raghuram Rajan, in his broad-ranging analysis of the causes leading to the financial crisis. RAGHURAM G. RAJAN, FAULT LINES 178 (2010).

42. 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 PLMBS [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,
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capital requirements by holding risk-weight preferred assets had a significant impact on the behavior of financial institutions operating under Basel's strictures.

The fallout of Basel's preference for securitized residential mortgages was that the collapse of the U.S. subprime market jeopardized more than locally affected banks, as banks worldwide had been incentivized to follow a similar business strategy. The cross-border transmission would appear to be due not only to direct investment in U.S. subprime instruments by foreign banks, but also to a common shock to common fundamentals. Nations other than the United States similarly experienced real estate bubbles simultaneously with current account deficits and large capital inflows, leading worldwide to banks' financial distress along with investors' reassessments of financial institutions and conditions in light of the crisis besetting the United States.

This is not to say that, in the absence of Basel, banks' business strategies would have been completely dissimilar. Managers have incentives to herd, for instance, to shield themselves from being penalized by investors for underperformance, incentives that operate independently of Basel. The rationale for herding is that if managers follow a similar strategy to peers, then nearly all firms would be likely to do poorly simultaneously, rendering it difficult, if not impossible, for investors to attribute failure to a particular manager's low quality, thereby reducing the likelihood that the manager would experience a loss of compensation or employment upon poor performance (the same rationale would lead bank traders to herd to shield themselves from being penalized by their supervisors for underperformance). Some commentators further contend that herding allows banks to increase the probability that they will be bailed out: although a regulator might be willing to let one bank fail, it would not allow all (or nearly all) of its banks to go under.

While both of the hypothesized herding rationales help to explain bank holdings of MBSs, the more consequential point is that Basel facilitated herding, by establishing global standards and encouraged herding particularly on the type of asset that proved to be the most problematic to be holding during the financial crisis. It would seem quite plausible that in the absence of the focal point on securitized MBSs provided by the incentives ensconced in

and in immense disproportion to their purchases by other institutions. Pension funds, hedge funds, mutual 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 WHAT CAUSED THE FINANCIAL CRISIS?, supra note 34, at 48. The recourse rule is discussed earlier. See supra note 38.

43. REINHART & ROGOFF, supra note 11, at 244 (listing Iceland, Ireland, New Zealand and Spain as examples of countries experiencing all three factors).
internationally harmonized capital regulation, there would have been greater diversity in banks' business strategies, including their asset allocations.

To be clear, the contention is not that the sole reason that banks engaged in securitization or invested in MBSs was to avoid capital requirements. There were certainly legitimate reasons to do so, including funding diversification and lower financing costs. Rather, the point is that Basel provided banks with an additional incentive to hold such assets, rendering Basel-regulated institutions' cost-benefit calculations markedly different from those of financial institutions not subject to Basel. And the critical economic function of institutions subject to Basel capital requirements meant that they would be bailed out if they experienced acute distress.

The EU debt crisis, which followed the global crisis sparked by the panic in the U.S. shadow banking market, is a further instance where the Basel framework created powerful, perverse incentives that have had the devastating effect of decreasing, rather than increasing, financial system stability. A key factor in the EU crisis is Basel's treatment of sovereign debt as riskless for calculating capital requirements. And in implementing Basel II, the EU

45. See Basel Comm. on Banking Supervision, The Joint Forum Report on Asset Securitization Incentives, BANK FOR INT'L SETTLEMENTS 9-11 (July 2011), http://www.bis.org/publ/joint26.pdf. 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. Isil Erel and colleagues find that banks more active in securitization held more highly rated tranches. While this is consistent with regulatory arbitrage, they contend that the assets were held to convince investors of the securities' quality because banks holding MBSs did not have higher leverage ratios, which they interpret as being capital constrained, and hence needing to engage in arbitrage to reduce their capital requirements. Isil Erel, Taylor Nadauld & René M. Stulz, Why Did U.S. Banks Invest in Highly-Rated Securitization Tranches? (Nat’l Bureau of Econ. Research, Working Paper No. 17269, 2012), http://www.nber.org/papers/w17269. Yet they also find that banks more active in securitization do have a lower regulatory capital cushion, so that they can only support the claim that the data are inconsistent with an arbitrage motivation by further asserting that regulatory arbitrage requires capital at the regulatory boundary. However, this contention is unsatisfactory. Banks in such a position would be subject to heightened regulatory scrutiny, if not supervisory action, and accordingly, national bank management engaging in regulatory arbitrage would hold more than minimal capital requirements so as not to attract attention as well as to ensure that any small perturbation not set off supervisory action. More important, because Erel and colleagues only have on-balance sheet asset data, as they acknowledge, they cannot test for the core regulatory arbitrage strategy that used securitized assets in off-balance sheet ABCP conduits. In contrast to their study, Viral V. Acharya and colleagues provide evidence that regulatory arbitrage was the primary reason why banks set up ABCP conduits to securitize assets. Viral V. Acharya, Philipp Schnabl & Gustavo Suarez, Securitization Without Risk Transfer 16-17 (Nat’l Bureau of Econ. Research, Working Paper No. 15730, 2010).

46. Under Basel I, all OECD sovereign debt was assigned a risk weight of zero, with an exception, added in 1994, for nations that had rescheduled the repayment of their external sovereign debt. TARULLO, supra note 17, at 61 n.21. Basel II’s standardized risk weight adjustments maintained the preferencing of sovereign debt. Indeed, the risk weights remained at zero for the highest rated sovereigns, and maintained a further preference for lower rated sovereigns by permitting, at national discretion, banks to hold their own sovereign’s debt at a lower risk weight. Implementation of Basel II, supra note 21, at 29. Many jurisdictions applied zero weights to such exposures. Hervé Hannoun, Deputy Gen. Manager, Bank for Int'l Settlements, Speech at the Financial Stability Institute High-Level Meeting in Abu Dhabi, UAE: Sovereign Risk in Bank Regulation and Supervision: Where Do We Stand? 11 n.5 (Oct. 26, 2011), http://www.bis.org/speeches/sp111026.htm. Basel’s preferencing of
assigned risk weights of zero to the sovereign debt of all member states.\footnote{There was no stipulation in Basel II regarding sovereign debt under the internal ratings approach to credit risk except to render inapplicable the three-basis point probability of default floor required for corporate and bank debt. Hannoun, \textit{supra} note 46, at 12. Consistent with applying the same, zero-risk weight to all nations' debt, the European Central Bank's repo transactions with EU banks initially treated all EU sovereign debt equally, thereby incentivizing EU banks to hold peripheral EU sovereign debt. See Peter Boone & Simon Johnson, \textit{Policy Brief: Europe on the Brink}, PETERSON INST. FOR INT'L ECON. 2 (July 2011), http://www.iie.com/publications/pb/pb11-13.pdf. Hannoun, a BIS official, 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. Hannoun, \textit{supra} note 46, at 13-14. He therefore contends that Basel requirements were not a cause of banks' substantial holdings of sovereign debt. \textit{Id.} at 10-14. A straightforward response to Hannoun's claim is that Basel failed to provide any meaningful guidance to regulators on sovereign debt, making it entirely foreseeable that EU regulators would not—as they could not politically—require banks to distinguish across EU-member debt.} This approach incentivized banks to hold public debt over private debt and, as with securitized mortgages, to hold debt with greater risk within the sovereign asset category, as doing so allowed them to obtain higher returns without having to increase their capital.

The incentive provided by Basel and its EU implementation for banks to hold sovereign debt yields insight into why the EU's financial crisis has been so intractable. As the crisis unfolded, many European banks, including those not in heavily indebted nations, were holding substantial quantities of Greek sovereign debt as well as debt of financially troubled nations in the EU periphery.\footnote{Foreign Banks Hold $236 Billion of All Greek Debt, \textit{INQUIRER.NET}, May 1, 2010, http://business.inquirer.net/money/breakingnews/view/20100501-267436/Foreign-banks-hold-236-billion-of-all-Greek-debt (reporting that French and German banks held $130 billion in Greek debt—over one half of all Greek debt held by foreign banks).} This led EU governments and regulators to worry that, were Greece to default, then not only would EU banks holding Greek debt experience severe financial stress, if not insolvency, but also that a run on Greek institutions could rapidly spread to other, economically-significant, financially-stressed EU nations and the banks of non-stressed EU nations which were holding the financially-stressed nations' debt (i.e., a contagion scenario).\footnote{Indeed, as the crisis over Greece's sovereign debt progressed, there was considerable financial stress in the sovereign debt spreads of other EU members, such as Italy and Spain, and not just those who had already been bailed out (Ireland and Portugal). E.g., Boone & Johnson, \textit{supra} note 47, at 2-3.} In keeping with these fears, there was a substantial flow of funds out of banks in the periphery (i.e., financially distressed) EU nations into German and French banks.\footnote{See, e.g., Bryan Noeth & Rajdeep Sengupta, \textit{Global European Banks and the Financial Crisis}, FED. RES. BANK ST. LOUIS REV., Nov/Dec, 2012, at 457, 472-75. Inter-bank claims followed a similar cross-border trend. See William A. Allen & Richild Moessner, \textit{The Liquidity Consequences of the Euro Area Sovereign Debt Crisis} 12-14 (BIS Working Paper No. 390, 2013).} Given the parallels between the two crises grounded in flawed
regulatory policy, an observer of the economic carnage over the past several years on both sides of the Atlantic could not be faulted for having little confidence in an international financial regulatory architecture that has notably contributed to a global financial crisis, the effects of which are still being played out.51

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

In the wake of the financial crisis, in which banks’ internal risk measurement and management systems proved inadequate to withstand a financial panic, the framework for capital measurement and standards was, not surprisingly, once again revised in a third Accord, Basel III. The principal components of the earlier Accords were not, however, abandoned; rather the risk weights were further refined and new capital requirements were added. Beginning in 2009, updated capital requirements, referred to as Basel 2.5, were approved for securitization and proprietary trading (i.e., investment positions in MBSs and CDOs), which had generated devastating losses during the financial crisis. Subsequently, in 2010, the G-20 approved Basel III, which added both a liquidity standard and “macroprudential” capital regulations, as well as increased the capital required under Basel II regulations. Macroprudential capital regulation seeks to take account of system-wide risk, in contrast to the earlier Accords’ focus on bank-level (“microprudential”) regulation, that is, on the risk of an individual bank’s failure.52

Highlighting the point, there is a strong correlation between sovereign debt stress and domestic bank stress. Id. at 2-3.

51. Whether Detroit’s bankruptcy filing in July 2013 portends a wider crisis in municipal debt is unknown at this time. But it provides yet another illustration, if one is needed, of the perverse incentives created by capital regulation preferences. A sizeable portion of the city’s unsecured debt is held by European banks because the EU, in its implementation of Basel, gave preferential risk-weight treatment to U.S. state and municipal debt. See Detroit’s European Aftershocks, WALL ST. J., July 25, 2013, http://online.wsj.com/article/SB1000142412788732361070457862558162548910.html. Basel capital requirements are thought to have contributed to at least one previous global financial crisis: the Asian financial crisis in the 1990s. In the countries most affected by this crisis, a “major source of vulnerability” was domestic banks’ short-term borrowing of foreign currencies from large, internationally-active banks. Basel I created incentives for those banks to make such loans by providing lower risk weights to short-term interbank loans than to longer-term lending or lending to nonbanks. See Reforming Bank Capital Regulation, SHADOW FIN. REG. COMM. (2000), http://www.aei.org/article/16542. The Asian banks re-loaned the borrowed funds to firms in the domestic currency, thereby assuming large foreign exchange rate risk, id., which materialized in the crisis when domestic firms failed to repay the loans. More to the point, the international banks with the “heaviest concentration of claims on faltering [due to foreign exchange exposure] Asian banks,” were banks that were capital-constrained, having been weakly capitalized throughout the 1990s, and hence had heightened incentives to hold assets with favorable risk weights. Id.

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The macroprudential requirements include a leverage ratio, which is independent of asset risk, and countercyclical capital requirements, which require the holding of higher capital in good times that can be drawn down in bad times. By contrast, the Basel I and II capital requirements were procyclical, in that they magnified the effect of the business cycle, by requiring banks to increase their capital as asset values declined in economic downturns, leading to a further contraction of credit and aggravating the scope and depth of economic distress.

The Basel III framework was agreed upon quickly in the aftermath of the financial crisis. However, banks have a considerably longer time frame in which to meet the new requirements than they did with Basel I and II. Some components have been postponed for nearly a decade, and many of the increased capital requirements will be phased in gradually. For example, the minimum common equity capital ratio requirement is scheduled to rise in 2013, but will not hit its final target until 2015, while the requirement of a capital conservation budget will not begin to be phased in until 2016, nor reach its final target until 2019.

Rationales advanced for the extended implementation include concern that the immediate imposition of significantly higher capital requirements could delay the global economy’s recovery and 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 leverage ratio requirements, are being phased in with observation periods, which, given the dearth of international experience with such regulation, will enable the Basel Committee to assess their efficacy and propose adjustments for “unintended consequences.”

In seeming contrast to the earlier Accords, the rationale for Basel III is couched in terms of system stability (reducing systemic risk), without mention

53.  Id. In contrast to the core risk-weighted capital requirement, the leverage ratio is intended to capture risk from total assets. While these are entirely new components for Basel regulation, they have figured in national regulation. 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 due to the different target of adjustment. E.g., The Role of Macroprudential Policy: A Discussion Paper, BANK OF ENG. 7-8 (Nov. 19, 2009), http://www.bankofengland.co.uk/publications/Documents/other/financialst ability/roleofmacroprudentialpolicy091121.pdf.

54.  The problematic procyclicality of the Basel regime was well-recognized before the global financial crisis and was the subject of much criticism and research during the consultative process for Basel II. See, e.g., Fabrizio Fabi, Sebastiano Laviola & Marullo Reedtz, Lending Decisions, Procyclicality and the New Basel Capital Accord 363, in 22 BANK FOR INT’L SETTLEMENTS PAPERS 361, 363 (2005) (referring to the “great debate” in economic literature in which “many papers” addressed the procyclicality of capital requirements).


56.  See, e.g., Walter, supra note 52.
of the goal of maintaining domestic banks’ global competitiveness. But despite appearances, competitiveness concerns are still very much in evidence throughout the documentation of Basel III and its implementation. For example, Basel III retains in the definition of core capital a tripartite agreement, dating back to the original Accord, in which U.S., European and Japanese regulators negotiated an adjustment to the definition of capital to include capital treatment for items not generally understood to constitute core (equity) capital but whose exclusion would, given domestic business practices, have required their banks to raise additional capital. In addition, the extended phase-in has the effect, even if not explicitly stated, of equalizing the “playing field” by providing weaker banks time to adjust to the heightened capital requirements.

Further and most important, the Basel Committee’s formal assessment of each nation’s implementation of Basel III, reported to the G-20 on a periodic basis, evaluates compliance by gauging the impact of any discrepancies on either “financial stability or the international level playing field.” Consistent with such a perspective, governments, banks and commentators have objected to other nations’ delays or deviations from specific requirements in implementing Basel III, contending that such postponements and deviations adversely affect their competitiveness. Thus, notwithstanding a stated single objective related to systemic risk, the level playing field rationale has been reintroduced in Basel III’s implementation. It would be most accurate to conclude that the Basel Committee has not abandoned the longstanding twin rationales for the Accords in their latest formulation. Although largely obscured from public view, regulators’ attentiveness to domestic banks’ international

57. E.g., Basel Comm. on Banking Supervision, supra note 55, 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.”). Basel III is also more explicitly focused on systemic risk, given its supplemental macroprudential requirements, in contrast to the prior Accords. See, e.g., TARULLO, supra note 17, at 22 (stating that Basel II is not explicitly concerned with systemic risk).

58. The negotiated items—deferred tax assets for Japanese banks, mortgage servicing rights for U.S. banks, and minority interests in other financial institutions for French and German banks—were retained in core capital but limited to an identical 10%. Basel Comm. on Banking Supervision, Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems, BANK FOR INT’L SETTLEMENTS 26 (June 2011), http://www.bis.org/publ/bcbs189.pdf. The only explanation for including these items in core capital and at an identical percentage is one of political economy; national regulators are seeking to accommodate the practices of their “national champions” within the new regime.

59. The Committee considered large banks most in need of the transition period as they 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, BANK FOR INT’L SETTLEMENTS 12 (Oct. 2010), http://www.bis.orgpubl/bcbs179.pdf.


61. See Tom Newton, Europe Goes its Own Way on CVA, RISK MAG., Mar. 28, 2013, http://www.risk.net/risk-magazine/feature/2256979/europe-goes-its-own-way-on-cva (quoting critics of the EU’s exemption of derivative trades with nonfinancial counterparties from Basel III’s required increased capital charges as expressing concern that the exemption undermines a level playing field).
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competitiveness underscores the reality that Basel is informed by the political priorities of the more influential nations who either explicitly or tacitly perceive their domestic banks as "national champions," as well as by banks' rent-seeking activity.62

4. Implications of Maintaining Basel as is Going Forward

Despite the self-evident deficiencies in the Basel architecture and its contribution to a global financial crisis, the post-crisis response of bank regulators and public officials has been to double down on a failed strategy of harmonized capital requirements, rather than revisiting first principles. Given the massive scale of the bailout required to rescue Basel-regulated firms, a rational observer might have expected financial regulators to react with heightened caution rather than to travel even further down the road of international regulatory harmonization. For this experience should have alerted regulators to the reality that international regulatory harmonization contributed importantly, albeit unwittingly, to a catastrophic global event by incentivizing financial institutions worldwide to follow similar business strategies under regulation that proved to be deeply mistaken.

One could quite reasonably inquire, however, whether it is altogether fair to conclude, as does this Article, from Basel's dismal performance in the global financial crisis, that its organizing premise—internationally harmonized standards—needs to be reconsidered? After all, the 2008-09 crisis has often been plausibly characterized by experts 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.63 With the realization of a worst-case scenario, even a praiseworthy regulatory architecture could crack. There is, moreover, 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. But such seemingly plausible assertions regarding Basel are simply not persuasive. As discussed in the Appendix, an extensive pre-crisis literature evaluating the impact of Basel I and Basel II on national banking systems' performance, stability and competitiveness finds that Basel was ineffective in meeting its objectives even prior to the perfect storm of the global financial crisis.

62. See, e.g., TARULLO, supra note 17, at 87 (describing Basel II's negotiation process as a "trade negotiation, with extensive political and constituency involvement").

It is, of course, possible that the Basel Committee’s response to the crisis—a rather quickly cobbled set of add-ons further complexifying the harmonized capital requirements—could prove to be helpful, despite past failures. After all, many of the newer components of Basel III are consistent with approaches to capital requirements and systemic risk advocated by distinguished financial economists.64 These provisions might mitigate the perverse incentives of the failed risk weight and internal risk calculation components of Basel II upon which Basel III is layered. And the claim could be made that only in Basel III has systemic risk been finally explicitly addressed as a regulatory concern.65 But it would be a serious error to conclude that the latest iteration of the Accords will create a pristine new world financial order that will prevent future crises. In fact, it would be misguided to believe that any future harmonized regulatory apparatus would do so, no matter how much the regulatory focus is shifted from micro- to macro-prudential approaches.

There are, in fact, inherent, systemic drawbacks with the overall Basel setup, quite apart from the uncertainty of whether a specific approach, risk weight, or measurement of systemic risk is appropriate. In the dynamic and uncertain environment in which financial institutions operate, the technical knowledge and resources of regulators invariably lag behind those of the regulated. In addition, regulatory requirements that may have made initial sense may become not only obsolete but fatally flawed in changed circumstances, such as the favoring of securitized MBSs and sovereign debt in Basel’s risk weights. In this kind of environment, a more nimble regulatory apparatus that can continually test, learn and adapt to changed circumstances and new information would have decisive advantages over Basel’s cumbersome, top-down, harmonized approach. That is because revision of the Accords requires time-consuming multinational negotiation and backroom political horse-trading. As a result, Basel as presently constituted is inhospitable to innovation and the tailoring of national regulatory approaches. The laborious revision process is the precise opposite of what is required. A mechanism that introduces regulatory diversity within the Basel framework would reduce the stakes over which parties are bargaining, and hence the hurdle to regulatory innovation. If a nation believed it had devised a better regulatory “mouse trap,” so to speak, there would be a mechanism for implementation available without requiring arduous multilateral negotiation of a revision to the Accord or the flouting of Basel’s strictures.


65. See supra note 57.
The unusually rapid agreement on Basel III due to a full-blown global financial crisis has, as noted earlier, been accompanied by an extended phase-in—in some instances over nearly a decade—which defeats the ostensibly quick regulatory response. A plausible motivation for Committee members agreeing to the long phase-in is not only their publically-stated justification that requiring banks to increase capital in a period of economic distress would adversely affect the real economy’s recovery, but also the perception that they are embarking on a global regulatory experiment whose impact is poorly understood. Imposing a lengthy transition is a way for the Basel Committee to hedge its bets. This is not in itself a bad thing. But a superior approach would be to acknowledge candidly that there is much we do not know or that we will never know, and to incorporate explicitly into Basel decision-making a trial and error, “muddling through” approach that fosters regulatory experimentation, on a national basis, rather than undertaking a global experiment whose risks and uncertainties are unknown or unknowable and potentially catastrophic. That is the approach of this Article.

Basel III may well introduce some diversity across national regulatory regimes through variation in the pace at which nations implement its requirements, but any such diversity is not intended to endure and will occur, if at all, by happenstance. Moreover, deviations produced in such a haphazard fashion have no built-in evaluation and oversight mechanism to minimize the likelihood that they will increase global systemic risk. By contrast, this Article’s proposed diversity mechanism of sanctioned national experimentation will introduce regulatory diversity through a transparent process in which there is a considered evaluation of the regulatory tradeoffs. Such an approach to

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66. I read an awareness of this predicament in the comments of the Basel Committee Secretary General that connected the fact that the new requirements would be “phased in gradually” to its “enable[ing the Committee] to address any unintended consequences.” Walter, supra note 52, at 4.

67. On the benefits of a trial and error approach to policy analysis and decision-making in general, see Tim Harford, Adapt: Why Success Always Starts with Failure (2011). Harford views such an approach as less well-suited to the financial system than other complex institutions because the financial system is “tightly coupled,” and, as a result, one failed experiment could lead to domino-like contagion with catastrophic consequences. Id. at 184-85. In contrast, in “loosely coupled” yet complex sectors, experimental failures produce valuable information and lead to successful innovation. Id. at 185. He therefore contends that the appropriate regulatory strategies are those that “decouple” institutions, rendering them the right scale for experimentation. Id. at 220. Given the substantial literature questioning the theory that financial institution linkages were responsible for transmitting the financial crisis across borders, Harford’s rejection of experimentation in the financial setting due to financial institutions’ “tight coupling” is, in my judgment, mistaken. See Reinhart & Rogoff, supra note 11, at 244 (characterizing the transmission of the current as a function not only of direct, cross-border financial institution linkages, but also common shocks to common fundamentals); Claessens, Tong & Wei, supra note 13 (contending that trade and domestic demand channels were more important than financial channels in causing the crisis to spill over national borders); Rose & Spiegel, supra note 13 (stating that there is little evidence of cross-country linkages, financial or otherwise, as affecting crisis outcomes). In addition, diversity in national regulatory regimes would lead to a decoupling of financial institutions because they would be less likely to be following as similar a set of regulatory-incentivized business strategies and would therefore be less likely to fail simultaneously.
regulatory innovation would pose far less risk to the global financial system than when mandated worldwide.

II. Fostering Experimentation and Flexibility in International Financial Regulation

This Part advances a procedural mechanism to introduce diversity and experimentation into the Basel architecture with minimum dislocation to the present-day regulatory setup. After fleshing out the proposed diversity mechanism, the Part examines three important cross-border issues for an international regime with regulatory diversity: the playing out of supervisory coordination across home and host regulatory authorities; the effect on international banks’ operations; and the potential for regulatory arbitrage.

A. Modifying the Basel Architecture to Increase Adaptability

The proposed procedural mechanism for introducing diversity into the Basel architecture has three components: (i) a member state proposes to adopt a regulatory approach or requirement(s) different from Basel; (ii) a committee of peers assesses the proposal; and (iii) a subcommittee monitors and periodically reassesses approved departures.

1. Member-State Proposal

A national regulator would initiate a deviation from Basel by submitting a written notice of a proposed departure to an office within the Basel Committee designated to receive proposals. Accompanying the notice would be the following documentation: (i) specification of the proposed departure from

68. In an extended critique of the core innovation of Basel II, retained in Basel III—the use of banks’ internal risk rating measures to set capital requirements—Daniel Tarullo, then a law professor and now a member of the Federal Reserve System’s Board of Governors, suggested that a “more manageable” international capital regime “might be structured” by replacing Basel II’s internal risk measurement rules with a general requirement that national regulators, in consultation with the Basel Committee, adopt some form of risk weights, whose details would be in their discretion, while simultaneously agreeing to adopt a detailed set of supervisory activities specified by the Committee TARULLO, supra note 17, at 273. The proposal advanced in this Article parallels the first part of Tarullo’s contemplated alternative—permitting national regulators to “opt out” of Basel risk-weight requirements—but goes considerably further by permitting regulators to opt-out of the risk-weight approach itself. The proposal also addresses an issue informing Tarullo’s position for not advocating shunting aside Basel II’s internal risk measurement approach for a set of proposals that had been advanced as alternatives: the alternatives were not “sufficiently developed regulatory model[s].” Id. at 263. Implementation of an alternative approach to Basel by individual nations under the mechanism proposed in this Article poses far less risk than implementing such an approach at the global level, as would have been true of implementation of any of the alternatives replacing Basel as envisaged by Tarullo. It would also reduce the risk of any such wider implementation because the experiences of nations departing from Basel would generate information about the potential impact of applying a departure more broadly.
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Basel; and (ii) an economic analysis, theoretical or empirical, of how the proposal would impact financial system stability.

The required analytical documentation should not pose an insurmountable obstacle to nations seeking to depart from Basel. Financial regulators’ technical staff routinely conduct economic analyses, using a variety of methodologies, including regression and simulation techniques, to forecast the impact of changes to capital requirements, among other regulatory policies. More important, an extensive set of analytical methods has been developed to measure systemic risk, including identifying early indicators for increases in systemic risk and models for understanding transmission channels of financial sector shocks. But as there is no strong consensus on the best measure of systemic risk and the methodologies have only quite recently been devised, it would be prudent for the requisite analysis to use a variety of measures. Such an approach has the benefit that where different methodologies provide similar predictions of a proposal’s impact, there would be greater confidence in that prediction.

Given the complexity of identifying and predicting systemic risk, besides the economic analyses, departure-proposing nations could be required to identify the impact of the proposed deviation on potential weak points in individual institutions or the financial system, by analogy to safety notification reviews in the energy and food and drug sectors. In the nuclear power context, for instance, a firm’s report to its regulator 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 a critical function elsewhere.

Specifying what must be examined as potential weak points, analogous to physical valves, in the more intangible plumbing of the financial system is not easy. Points of inquiry could include a proposal’s impact on institutions’ incentives to adopt specific investment strategies and the number of transactional connections between regulated financial institutions and nonbank

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71. For illustrations of these monitoring and review systems, see Sabel, supra note 9, at 137-38; and Sabel & Simon, supra note 9, at 84-86.

72. See Sabel & Simon, supra note 9, at 84.
(i.e., non-regulated) financial services firms. Network analyses of interbank exposures could also be undertaken to assess the effect of the failure of one institution on others, and of events of financial distress, such as a credit squeeze, on a financial system or across financial systems. 

There are, however, serious limitations to the use of network methodologies. The modeling assumes static institutional behavior and requires detailed information regarding inter-institutional exposures and holdings, including off-balance sheet items. Moreover, given the sheer difficulty in identifying potential weak links in a banking system in general, let alone before the implementation of a regulatory departure, this type of analysis would seem to be more appropriately undertaken when monitoring approved departures in the third component of the proposed review process, rather than when initially evaluating a proposal. By then, there will be information derived from experience regarding the deviating regime’s impact on institutional linkages and business strategies.

73. See, e.g., Haldane, supra note 9, at 12 (discussing lessons for financial system regulation from measures taken to reduce SARS epidemic transmission, including being able to identify connection between nodes, i.e., banks, in the financial network). In the wake of the financial crisis, economists have constructed a variety of measures of correlations across financial institutions and firms to identify systemic risk. See, e.g., Monica Billio et al., Econometric Measures of Connectedness and Systemic Risk in the Finance and Insurance Sectors, 104 J. FIN. ECON. 535 (2012); Viral V. Acharya et al., Measuring Systemic Risk (Am. Fin. Ass'n, 2011 Denver Meetings Paper, 2010), http://ssrn.com/abstract=1573171. Investigating a proposed policy’s effect on these measures could be undertaken as a systemic risk analysis. A weekly updated ranking of individual firms’ systemic risk, as measured by the metric outlined by Acharya et al., supra, is posted on the New York University Stern School of Business Volatility Laboratory’s website at http://vlab.stern.nyu.edu/welcome/risk. However, whether the number of connections between banks increases or decreases systemic risk is a point of disagreement: there are economic models that produce contrary conclusions on the relationship between interbank ties and system stability, as well as models in which the relationship shifts from increasing to decreasing stability, depending on the nature of the economic shocks to the system. Cf., e.g., Franklin Allen & Douglas Gale, Financial Contagion, 108 J. POL. ECON. 1 (2000) (providing a model in which a financial system with denser interbank connections is more stable); Daron Acemoglu, Asuman Ozdaglar & Alireza Tahbaz-Salehi, Systemic Risk and Stability in Financial Networks (Nat’l Bureau of Econ. Research, Working Paper No. 18727, 2013), http://www.nber.org/papers/w18727 (providing a model in which interconnectedness increases system stability for small shocks and decreases stability for large shocks); Sébastien Vivier-Lirimont, Contagion in Interbank Debt Networks (Feb. 2006) (unpublished manuscript), http://evenements.univ-lille3.fr/recherche/jemb/programme/papiers/vivierlirimont_lille06.pdf (providing a model in which a financial system with denser bank interconnections is destabilizing).


75. Id. at 63. 

76. Id. Although this information is not publicly available, central banks could obtain it. In a literature review, Martin Summer, an economist at the Austrian Central Bank, notes that at present there is no model combining network theory with finance and economic theory, and hence no model able to capture the dynamic of contagion in a financial crisis. Martin Summer, Financial Contagion and Network Analysis, 5 ANN. REV. FIN. ECON. 277, 293-94 (2013). Bolstering his view of the need for such a model is the fact that, as he notes, pre-crisis simulation studies of contagion applying network models found that contagion was likely to be rare, and all failed to predict the scope and depth of the global financial crisis. Id. at 287-88.
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The departure initiation process should be available to nations that are not Basel Committee members. Although those nations are under no obligation to comply with the Accords, they should be encouraged to enter into the review process should they wish to deviate from Accord requirements, just as if they were members obliged to conform. Including non-members would benefit all parties concerned. Non-member nation’s regulators would benefit from the improvement in decision-making from having a second look at a proposed innovation by regulators with greater expertise. Correlatively, Basel Committee members would benefit from the additional information gleaned from the experience of financial institutions in non-member nations operating under a regulatory variant.

A further benefit the review mechanism provides to non-Basel Committee members is their being able to participate in the international Accords with more attentive tailoring to their institutional and economic environment. The financial sector development of non-member nations, in many instances, differs markedly from that of Committee members, and complying fully with Basel may therefore be infeasible. It may even be undesirable: a comprehensive cross-country survey of Basel regulation, for instance, found that enhanced regulatory supervision (Basel II’s second pillar) is not associated with a higher level of financial system stability or bank performance but is associated with increased corruption of bank lending, a relationship explained by weaknesses in nations’ legal and political institutions. In addition, economic models suggest that the effectiveness of financial regulation in reducing systemic risk varies depending on the organization of the financial sector. By adopting a two-track approach to capital requirements, Basel II acknowledged the importance of adapting regulations to nations’ varying economic and political circumstances.

77. Standards for proposed deviations may need to be lowered for non-Basel Committee members, as they may lack the technical capacity and resources to conduct an analysis of a proposed departure’s impact on systemic risk. In such a situation, the review committee’s staff could perform the analysis for them. However, doing so might prove difficult if the data necessary for conducting the analysis is inaccessible to the review committee without an on-site visit. Some emerging nations' banking sectors may be sufficiently small that the review committee could conclude that a proposed departure will have no significant global impact, and be able to approve the departure without extensive documentation.

78. BARTH ET AL., supra note 20, at 240-45. Corruption was measured based on responses to the World Business Environment Survey, which asks firms whether bank officials were an obstacle to their business’ operations and growth. In nations with weak institutions, more powerful supervisory tools in line with Basel’s requirements were accompanied by perceived corruption in bank lending, presumably because supervisors pressured banks to lend to politically-favored firms. Id. at 236.

The diversity mechanism would go a step further by enabling even greater precision in the tailoring of regulation.

2. Peer Review

After a nation submits an application for departure from Basel, a peer review committee would be established to evaluate the proposal. Review committees should be appointed on an ad hoc basis and comprised of central bankers and banking regulators (i.e., members of the Basel Committee) and their senior staff, analogous to the composition of Basel Committee working groups and Basel III assessment teams, as well as committees used by other international organizations to assess nations’ financial sector stability and development and compliance with international banking standards.80

It might seem desirable to establish a standing review committee, given the likelihood that the diversity mechanism will be used with increasing frequency over time. However, the decisive advantage of an ad hoc committee is that it would render it more difficult for committee members to engage in logrolling, in which one nation’s poorly-conceived proposal is approved on the understanding that another nation would similarly have a poorly-conceived proposal approved, or obtain some other strategic advantage. With an ad hoc committee, the individuals who would review a nation’s proposal will not be known in advance of a submission, and the probability of obtaining the right combination of committee memberships over time to engage in successful strategizing would be low.

The review committee’s sole task would be to assess whether a proposed deviation could be expected to increase global systemic risk. The standard for approval would be focused on this single question to ensure that regulatory

80. The Basel III assessment program consists of peer reviews undertaken by ad hoc teams of five to seven individuals from member authorities and the Committee’s Secretariat, led by an individual with “seniority and/or experience equivalent” to that of a Committee member, who is either a central banker or bank regulator. Basel Comm. on Banking Supervision, Basel III Regulatory Consistency Assessment Programme, BANK FOR INT’L SETTLEMENTS 5 (Apr. 2012), http://www.bis.org/publ/bcbs216.pdf [hereinafter Basel Assessment Programme]. Given the demands on central bankers and bank regulators, the assessment teams typically consist of staff of the agencies represented on the Basel Committee. The FSB and IMF assess nations’ compliance with international banking standards. See FSB Framework for Strengthening Adherence to International Standards, FIN. STABILITY BOARD 1 (Jan. 2010), http://www.financialstabilityboard.org/publications/r_100109a.pdf (noting that FSB members are committed to periodic peer reviews by the FSB under the IMF-World Bank Financial Sector Assessment Program (FSAP) every five years). The IMF assesses systematically important nations every five years and other nations on a voluntary basis. It works with the World Bank to assess developing and emerging market nations. For information about the FSAP program, see Financial Sector Assessment Program, INT’L MONETARY FUND, http://www.imf.org/external/np/fsap/fsap.aspx (last updated Feb. 12, 2014); and Financial Sector Assessment Program: Frequently Asked Questions, INT’L MONETARY FUND, http://www.imf.org/external/np/fsap/faq/index.htm (last updated Aug. 5, 2013) [hereinafter FSAP FAQ]. The FSB and IMF reviews are similar to Basel III assessments in that teams are comprised of individuals affiliated with the organization’s members but not from the nation being reviewed.
innovations do not create negative externalities, in keeping with Basel’s objective of promoting the stability of the global financial system.81

In making its determination, in addition to evaluating the analysis of the nation proposing the departure, the review committee could conduct an independent analysis or request additional information and analyses. Because the Basel Committee does not have its own staff, committee members would have to use their own technical support staff, as is the Basel Committee’s operating practice. Economists employed by BIS could also provide additional technical support to the review committees, as they often do for Basel Committee projects. It might also make sense for BIS economists to be permanently assigned to review proposed departures. Such an approach would create an institutional memory otherwise lacking given the ad hoc nature of the review committees.

Given an absence of ready staff to assist in the reviews, Basel Committee members and non-member proposing nations could be charged a fee to defray the cost of diverting BIS employees to this function.82 But because nations proposing deviations would be required to submit both a comprehensive analysis of their proposal’s impact and the data informing that analysis, much of a review committee’s spadework will have been already undertaken. That should make the cost of the review process considerably less burdensome.

One evaluative approach increasingly used by regulators since the financial crisis which would seem particularly apt for the review process is a stress test. In a stress test, the hypothetical performance of a bank’s portfolio is evaluated by perturbing relevant economic variables under a variety of scenarios of plausible exogenous shocks, such as increases in interest rates or decreases in asset values.83 In the context of the diversity mechanism, a stress test would seek to ascertain how an applicant nation’s financial system, as opposed to an individual bank, would respond to severe shocks. The stress test methodology should be further combined with an analysis of the global interconnectedness of a nation’s banks to ascertain whether international contagion would be a concern were its financial system to come under stress.

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81. Impact on international competitiveness—the other stated objective of the Basel Accords—is excluded from consideration by review committees because, by retaining Basel’s cross-border consolidated supervisory principles, departures will not meaningfully increase the opportunity for regulatory arbitrage. See infra Section II.B.

82. Charging a fee would have the additional benefit of signaling a proposal’s expected quality (i.e., a nation’s seriousness of purpose to improve the caliber of its financial system) by incentivizing nations to propose departures only that are expected to produce benefits substantial enough to justify 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.

83. See, e.g., Basel Comm. on Bank Supervision, supra note 70, at 8-9. Nations proposing departures might naturally conduct stress tests to provide support for their proposals. To save Committee staff time, stress tests could be required as part of the submission process, particularly when far-reaching changes to Basel requirements are being proposed.
There is an important rationale for directing review committees to focus their evaluation on a stress test approach: it should mitigate an otherwise natural tendency for a committee’s evaluation to consist of merely comparing a nation’s hypothesized performance under its proposal with that under Basel. Given that the issue is a departure’s potential impact on global systemic risk, any adverse effect on the proposing nation’s financial system measured simply as compared to Basel is of no import; the relevant question is whether it would have a significant likelihood of spreading beyond a nation’s borders.

The review committee should also conduct an audit of an applicant nation’s information system to assess the accuracy of the data and analysis submitted. Because other international banking organizations audit nations for their compliance with Basel, among other international standards, the review committee could conserve time and resources by obtaining that information from those organizations. In addition, where an applicant’s proposed departure replicates a previously approved proposal, the committee could draw on the analyses undertaken in the prior review, although that might not eliminate the need for audit data, as varying factual circumstances could, no doubt, produce a different global impact.

The proposed process consists of a technical review of written documentation, but the review committee should be empowered to compel the production of additional documents necessary to complete its analysis, as well as to interview an applicant nation’s officials or regulatory staff. If, for example, the committee concluded that the impact of the departure on systemic risk hinges on the applicant nation’s supervisory capacity, it might require additional documentation, or conduct an on-site review, of the nation’s supervisory resources and technical capacity.

If an applicant nation has been the subject of an FSB or IMF-World Bank Financial Sector Assessment Program (FSAP) review, the committee could examine the FSB or FSAP reports and interview FSB or FSAP team members. Doing so would enable the committee to gain insight into the effectiveness of a nation’s supervisory authorities. Because those reports are confidential, applicants should be required to agree to share the reports’ contents with the review committee, while the review committee members

84. See supra note 80; infra notes 85-87. Basel III compliance assessments conducted by the Basel Committee could also be used.

85. The proposed process is quite similar to that of the Basel III regulatory assessment process in which the assessment team relies on a self-assessment survey and documents submitted by the assessed nation. Basel Assessment Programme, supra note 80, at 5. However, the Basel III assessment team is expected to engage in an on-site review. Id. at 6.

86. For a discussion of the FSB and FSAP program, see supra note 80. For a critical assessment of FSAP reviews as often devolving into a check-the-box inquiry, see BARTH ET AL., supra note 34, at 51. Their characterization of the FSAP program reviews suggests that diversity mechanism review committees may not be able to rely upon those assessments as a substitute for conducting their own audits.
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would be required to commit to maintain the reports' confidentiality. Information gleaned from a nation's Basel III assessment reports should also be made available to the review committee as a matter of course.

3. Standard of Review

Upon receipt of the review committee's approval, the applicant nation could immediately implement its proposed regulatory departure. The standard of proposal review is naturally key to implementing an effective diversity mechanism, and it must be crafted with an eye to committee members' incentives and intellectual predispositions. It is, for instance, most plausible to assume that, as guardians of Basel, review committee members would be predisposed to favor the status quo and reject proposed departures, thereby squelching the aim of opening the Accords up to experimentation. It would also only be acknowledging human nature as we know it to recognize that review committee members would have strong priors concerning the appropriateness of Basel's harmonized regime. After all, the negotiators of the Basel Accords who will populate review committees have historically been expressly committed to uniformity as a critical component of international regulation and, no doubt, sincerely believe that they have codified best practices. They would, as a consequence, invariably be working from the premise that alternative approaches are inherently problematic.

Moreover, even a committee member who is open to innovation in principle could be expected to view novel proposals uncharitably, albeit unintentionally, due to mental shortcuts and cognitive biases, identified by psychologists and behavioral economists, by which decision-makers tend to favor the status quo over alternatives. To minimize such a bias in outlook, the review process should be structured to start from a presumption of approval, which can be rebutted by a demonstration that the proposal would have a substantial likelihood of adversely impacting global financial system stability. Such a standard would have a further benefit of reducing the possibility that the process will devolve into one of "picking winners," in which committees seek to guess, as the criterion of approval, which regulatory innovations are most likely to improve on the status quo, a task at which there is no reason to expect the committee members to excel.


88. In laboratory experiments, psychologists and behavioral economists find evidence of "status quo" and "framing" biases by which decision-makers 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 & Richard Zeckhauser, Status Quo Bias in Decision Making, 1 J. RISK & UNCERTAINTY 7 (1988) (finding that when one option is placed in the status quo position, people choose that option more frequently than when there is a neutral framing of all options).
Accordingly, in order to reject a proposal, the review committee should have the burden of proof to show that a proposal would be substantially more likely than not to increase global systemic risk, and that the projected increase is non-trivial. Such a finding should be based on a quantitative analysis of the stress test variety, which indicates there would be a statistically significant increase in global systemic risk were the proposal to be adopted. The stress test analysis could be supplemented by a theoretical analysis (i.e., a model showing economic outcomes under plausible assumptions). To analogize to judicial proceedings, the standard should be set higher than the "preponderance of evidence" standard used in civil litigation, which requires only a slight weighting on the side of adverse impact beyond equipoise, and should therefore be similar to the higher "clear and convincing evidence" standard. The standard for rejection is necessarily a high one, not only because of status quo biases but also because, in most cases, it will not be possible to predict a proposal's effect conclusively and a high burden of proof on applicants would make it impossible to achieve the diversity mechanism's purpose, to permit regulatory experimentation. The operation of the evidentiary standard—what it takes to show by clear and convincing evidence that a proposal would adversely affect global systemic risk—will be articulated over time, through review committee decisions, analogous to how common law courts function.

Proposals that seek solely to heighten Basel requirements (such as impositions of higher minimum capital requirements) should also have to be presented for review, despite nations' ability at present to adopt such proposals without consultation given Basel capital requirements' formulation as mandatory minimums. Requiring procedural conformity for all Basel departures would be useful if for no other reason than to prevent a potential dispute over whether an action by a national regulator is a departure requiring review. Such proposals should, however, be subjected to a far more expeditious review than proposals for substantial departures (i.e., fundamentally different regulatory approaches from Basel's risk-weighted capital requirements), which could even be done pro forma. Expedited review or automatic approval would be more consonant with current arrangements, in which nations may act without seeking approval, as well as be consistent with the objective of the

89. The critical component of the diversity mechanism for protecting global financial stability is the ongoing monitoring of approved departures that is discussed infra Subsections II.A. 5-6.

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proposed mechanism, because the probability that proposals raising regulatory minimums would increase global systemic risk is relatively remote.\(^9\)

It is, however, possible that higher capital requirements could induce banks to increase their risk-taking, as there is some evidence of such an effect.\(^9\)

The prospect of such a strategic response by banks could be addressed by an expeditious review in which the committee considers the magnitude of the increase in capital in conjunction with the extent of the internationalization or global interconnectedness of the proposing nation's banking sector. Such an inquiry could indicate whether negative spillovers implicating global systemic risk would be a matter requiring further attention (i.e., a more extended review), were the nation's banks to increase their risk-taking in response to the proposal.\(^9\)

An alternative approach to the diversity mechanism that would more vigorously promote regulatory diversity would be a notice-filing system, in which all proposed deviations would be automatically approved, which would eliminate the need for special treatment of proposed tweaks of Basel that merely increased existing minimums. In this formulation, a nation would give notice of its proposal to the Basel Committee and the proposal could be implemented within a short specified time frame unless the review committee were to request a delay in order to undertake a more extensive review, out of concern that the proposal could adversely affect systemic risk.\(^9\)

All other features of the diversity mechanism—the standard of review for rejection, due process protections and ongoing monitoring and periodic reassessment as an

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91. Changes in national accounting or tax rules could impact the calculation of banks’ capital, and thereby possibly effect systemic risk. For instance, Japan altered accounting rules in the 1990s, when the stock market crashed, to enable banks to remain superficially compliant with Basel. Charles K. Whitehead, What’s Your Sign?—International Norms, Signals, and Compliance, 27 MICH. J. INT’L L. 695, 729 (2006). But changes to such rules would not require approval under the diversity mechanism, because they are neither regulated by Basel—they do not fall within the authority of banking regulators—nor otherwise internationally harmonized. There is, for example, no uniformity in national tax regimes. Financial accounting rules have been harmonized among the many nations that have adopted the rules of the International Accounting Standards Board. However, the United States follows its own standards, set by the Financial Accounting Standards Board, albeit in recent years the two standard-setters have engaged in efforts to harmonize their rules.

92. See Appendix Subsection A.1.i, infra. Banks' holding of the riskiest assets in a risk class, see supra note 35, is a similar phenomenon.

93. The asset portfolios of the nations' banks should be monitored carefully for increased risk-taking post-approval, to assist in the assessments of approved proposals' impact on global systemic risk, see infra Subsection II.A.5. But the concern over expeditious or automatic review of such proposals due to banks responding by increased risk-taking may not be as important as it appears. Section II.B, infra, discusses how, under Basel cross-border supervisory principles, which would not be altered by this Article’s proposal, the foreign operations of banks chartered in Basel-departing nations, when located in Basel-compliant nations, can be expected to be subject to Basel due to local incorporation requirements. Thus, even if firms predictably increase their risk-taking in response to higher minimum capital levels, the impact would be localized to the Basel-departing nation’s banks’ local operations, thereby limiting any global impact.

additional safeguard—would be applied without distinction between the full review proposal and this notice-filing variant.

4. Due Process Considerations

A further potentially troubling concern regarding the conduct of a peer review is that if a committee recognizes that it cannot rebut the presumption of approval, it might engage in dilatory tactics to impede a nation’s ability to implement a regulatory innovation. This issue could be addressed by requiring a short window of, say, three to four months, for a committee to complete its review, after which time frame a proposal would be automatically approved. In the hypothetical case of numerous proposals arriving simultaneously and preventing expeditious reviews because of inadequate technical support for all of the review committees, the fees charged applicants and committee members could be adjusted to a level that would meet staffing needs for decisions to be rendered within the requisite time frame.

In addition to requiring prompt consideration of proposals, a rejection should require a written decision, providing specific reasons why the review committee found that a proposal would increase systemic risk, along with supporting technical analyses. Where the review committee’s analysis suggests a modification that could reduce the probability of a proposal’s increasing systemic risk, the committee should highlight that course of action to the proponent nation in its written rejection and permit the nation to resubmit a suitably revised proposal for expedited approval.

A proponent nation should be given the opportunity to respond to a rejection, and be entitled to a second look, such as by providing further analyses to rebut the analysis on which the committee’s rejection was based or by modifying the proposal to mitigate concerns raised by the committee’s analysis. Such a procedural safeguard comports with a conventional understanding of due process and with the Basel III assessment procedure, which provides a nation with the opportunity to respond to an assessment team’s draft report and to present its view of a report’s findings to the Basel subcommittee that reviews the report.96

All documentation (the proponent nation’s submission and the explanation of rejection by the review committee) should be publicly available, with, of course, confidential, market-sensitive material excised. Such a transparency requirement matches that of other international organizations’ financial

95. The ongoing monitoring and periodic reassessment components of the diversity mechanism are discussed in Subsections II.A.5-6, infra.
96. Basel Assessment Programme, supra note 80, at 6. In contrast to this Article’s proposed review committee, the Basel III assessment team is tasked with drafting the report but not with approving it. The team’s report is forwarded to a broader set of peers on the Basel Committee’s Standards Implementation Group (SIG), and, after review by SIG, presented for approval to the full Basel Committee (excluding representatives of the assessed nation). Id. at 7.
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regulation assessments as well as that planned for Basel III compliance assessments, albeit with more extensive disclosures and without optionality.\textsuperscript{97} Given an anticipated focus on technical analysis, along with the review standard's presumption of approval, it is to be hoped that committee decisions would ordinarily be unanimous. But if there are dissenting members, an explanation of their reasoning, including any expert analysis upon which they relied, should also be made publicly available.\textsuperscript{98}

By making committee decisions and supporting rationales and data available for public scrutiny and critique, the transparency requirement would improve the quality of regulatory decision-making as participants would have an increased incentive to engage in carefully thought-out decisional processes. In addition, the public, as well as parties to a review, would have greater confidence in the outcomes of a transparent review process. This is an ancillary benefit of the proposal, given the abysmally low level of present-day confidence in financial regulatory decision-making.

A further benefit of requiring public documentation of proposals and review committee decisions is that nations considering departures from Basel would be able to make better informed regulatory choices. They would obtain information regarding a regulatory strategy's impact, as well as insight into how the review process functions, by being able to examine a proponent nation's analyses and observe the thought processes and analytical approach taken by review committees. This should raise the quality of submitted proposals, as nations will be informed by previously approved regulatory departures, and in turn, this will reduce the time and effort required for a review committee to complete its assessment.

In addition to transparency at the decisional stage, it would further be desirable to establish a separate entity to hear appeals of proposal rejections, rather than leave a second hearing to an original review committee, to ensure an independent and impartial appellate process.\textsuperscript{99} This would, of course, be

\textsuperscript{97} Components of IMF FSAP assessments are publicly available online on a voluntary basis at the option of the reviewed nation, while FSB final reports are made public with market-sensitive information deleted. See Standing Comm. on Standards Implementation, supra note 87; FSAP FAQ, supra note 80. The final reports of the Basel III assessment program will be published on the Committee's website, but underlying documents, such as the self-assessment questionnaire, will not. Basel Assessment Programme, supra note 80, at 7.

\textsuperscript{98} Similarly, under the Basel III compliance assessment program, if the Basel Committee does not reach a consensus, the published report must provide the minority's views in a note. See Basel Assessment Programme, supra note 80, at 7.

\textsuperscript{99} A new working group under one of the Basel Committee's four existing subcommittees, or a separate subcommittee, should be created with the sole function of hearing appeals from a peer-review rejection. Alternatively, an existing working group or subcommittee could be tasked with the appeals function, to preserve Basel Committee resources. The appeals entity would fit best under the auspices of the existing Policy Development Group, whose portfolio includes "developing policies that promote a sound banking system." Basel Comm. on Banking Supervision, Main Expert Sub-Committees, BANK FOR INT'L SETTLEMENTS, http://www.bis.org/bcbs/mesc.htm#Policy
consistent with a conventional understanding of due process. It would also have the advantage of both conserving the time and resources expended by a review committee on its initial evaluation as well as incentivizing it to craft a rejection with care so as to withstand appellate review.

5. Ongoing Oversight and Evaluation

For the proposed mechanism for departures from Basel to work effectively, it is critical that regulatory review itself be dynamic. This is because the short time interval and the standard of review for proposed departures will increase the likelihood of approving regulatory departures whose impact cannot be ascertained at the outset and hence may turn out to have unintended, adverse consequences. It is, in fact, a premise of this Article’s proposal that the impact of many financial regulations cannot be known with reasonable assurance in advance of implementation, as the dynamic environment of financial markets inevitably renders some regulations obsolete or at odds with their initial objective, due to financial innovation and changing institutional behavior in response to regulation.

To incorporate dynamic evaluation into the diversity mechanism, approved regulatory departures should be subject to ongoing monitoring and periodic reassessments, which can take account of new information. This would enable the Basel committee to ascertain whether an approved departure’s impact on global systemic risk has significantly changed compared to the impact estimated at the time of initial assessment. A Basel subcommittee should be charged with this monitoring function. As this component of the diversity mechanism will add to the time and resources that must be expended, the initial review committee and the monitoring subcommittee should have discretion to prioritize and make exceptions to the monitoring requirement, if they determine a proposal’s estimated impact on systemic risk is sufficiently insubstantial not to require ongoing oversight (as, for instance, in the case of a proposal by a small emerging nation, with a small number of domestic banks that have little or no international bank linkages). The monitoring subcommittee should also have the authority to reverse a prior monitoring waiver if new developments suggest that a risk has emerged where none earlier existed.

Subsection II.A.9.i, infra, provides a possible example of such a proposal. In cases where a review committee does not consider an approved departure’s continuous monitoring warranted, the departure should still be subjected to the periodic post-approval review, discussed below, to ensure that changed circumstances have not rendered mistaken the initial assessment that systemic risk would be unaffected.
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In addition to granting the monitoring subcommittee discretion to fashion the parameters of its responsibilities to conserve resources, Basel-departing nations should be assessed a fee to defray monitoring expenses. A fee would enable the hiring of support staff for the monitoring subcommittee as well as alleviate a need to limit the number of departure applications due to capacity constraints at the monitoring subcommittee level. To the extent that a mistakenly-approved proposal could impose a negative externality on Basel Committee members by increasing systemic risk, it would be appropriate to require departing nations to defray most of the monitoring cost. However, Basel-departing nations should not be assessed the full cost of monitoring: the diversity mechanism is premised on the notion that regulatory diversity and experimentation provide a public good, and at least some of the expense should therefore be shared by all Basel participants. To assist in monitoring, the subcommittee should require timely sharing of information concerning the safety and soundness of a nation's financial sector, including, among others, bank capital levels, non-performing loan data, and failure rates.

Red flags raised in monitoring suggesting a possible increase in systemic risk should trigger a full review of an approved regulatory departure. Apart from what might be characterized as subjective warning signals identified by monitoring, the subcommittee should adopt quantitative triggers that would automatically initiate full reviews. These triggers would most plausibly be variables that are thought to measure systemic risk, set at levels substantially below that which the literature defines as indicating financial system stress. Measures of financial system stress in the literature include deviations of the ratio of credit to GDP or key asset prices from long-run trends; changes in bank-specific balance sheet information, such as capital and liquidity positions or estimated default probabilities; number or percentage of bank assets that are nonperforming; number or percentage of banks failing or receiving government assistance; and percentage of GDP spent on bank rescues (financial sector data). Other potential triggers could be increases in correlations across financial institutions, constructs newly being devised in the literature to measure systemic risk.

In addition, the monitoring subcommittee staff could seek to develop and apply an early warning system, similar to models developed by the IMF following the Asian crisis of the late 1990s to predict currency crises, but which

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101. 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 upfront but would receive a rebate if after a period of years the departure proved not to be destabilizing.

102. See, e.g., Barth et al., supra note 20, at 213 (outlining quantitative measures used to define systemic banking crises); Basel Comm. on Banking Supervision, supra note 70, at 18-19 (reviewing “early warning” indicators). The banking crisis definition measures used by Barth et al. are described in the Appendix at note 190, infra.

103. See, e.g., Acharya et al., supra note 73 (presenting a systemic risk correlation measure); sources cited supra note 73 (describing studies modeling systemic risk).
would combine systemic risk measures along with other economic parameters. It would not, however, be prudent to rely on early warning systems to trigger evaluations of the effect of approved departures on global financial system stability. IMF models developed to predict currency crises, for example, have scant predictive power, although they would appear to perform somewhat better than commercial sector models and market indicators, such as credit agency ratings and bond spreads. We have no reason to assume that systemic risk warning models will be any more effective. Thus, in addition to event-triggered reviews, scheduled full reassessments of approved departures, undertaken by a reassessment committee, should be incorporated into a monitoring protocol.

The reevaluation should include an audit of a nation’s information system. In addition, the reassessment committee should directly interview or obtain data from banking authorities of economically interconnected nations concerning a departure’s impact on their financial systems. Although such input could be solicited at the time a proposal is initially approved, it would seem most useful to solicit it in the post-approval review process, when it is more likely that information on cross-border impacts would exist. Indication of an adverse impact on the financial stability of another nation should be treated as a red flag triggering immediate review. After several full post-approval reviews, the reassessment committee should have the discretion to consider a regulatory departure sufficiently well-established to no longer warrant full review, or to reduce the frequency at which full reviews are conducted.

An integral component of the periodic (i.e., fixed-interval) reviews should be a self-assessment by a Basel-departing 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 should be the reviewing committee’s evaluative lodestar. In instances where the novelty of a proposed regulatory approach does not lend itself to empirical analysis during the initial review, such an analysis should be included in the post-approval reassessment as data should by then be available. Under these


105. The models are assessed for their ability to predict out-of-sample events using historical data. That is, models are designed using data prior to the Asian crises and implemented as if they had been in place in the 1990s. Their forecasts are then compared to actual outcomes. Id. at 466. Berg et al. find that the IMF models have some success in predicting crises out of sample but also have numerous false positives, and conclude that the models are "not accurate enough to be used as the sole method to anticipate crises." Id. at 491.

106. The FSAP program, for example, requires that an assessment of systemically important nations be undertaken every five years. See Financial Sector Assessment Program, supra note 80. The periodic post-approval reassessments could be undertaken either by the ad hoc committee that approved the departures, or by a newly-created ad hoc committee.

107. If the subcommittee does not initiate the review, the adversely affected nation should be permitted to bring the issue to the monitoring subcommittee’s attention and request a review.
circumstances, where an initial analysis is likely to have consisted of simulations, the analysis should compare the simulations to actual outcomes. As with the original application, the self-assessment of a departure's efficacy should be publicly available (with exceptions solely to retain the confidentiality of market-sensitive information).

In a trigger-initiated review, the reassessment committee should determine whether the flagged significant adverse financial sector changes are attributable to the regulatory departure from Basel or economic conditions unrelated to the regulatory environment. One relevant inquiry would be to ascertain whether the triggering events have also been experienced by other nations that are operating under Basel and proximate by geography or development level. If the committee determines that the trigger was due to the regulatory departure, then the committee could withdraw approval for the departure entirely, or in part (for instance, if its analysis indicates that financial stress could be alleviated with modification, rather than elimination, of the approved departure). Finally, nations should be required to consent, as a condition for participating in the departure approval process, to revert to Basel in the event of a revocation decision. Needless to say, were the adverse impacts to be felt locally, a rational nation would abort the regulatory departure on its own initiative.

6. Appeals Mechanism

Paralleling the requirement for a written decision if a proposal is initially rejected, a decision to revoke a previously approved departure would require a written explanation supported by technical analysis that would be publicly available. In the case of a perceived emergency, the explanation and technical analysis could follow the decision. When the post-approval review has been initiated by a trigger, rather than by a scheduled review, the burden on the committee for revocation should be less stringent than that for an initial rejection. For instance, where analysis indicates that it is more likely than not that a regulatory departure has substantially increased systemic risk, such a demonstration should be considered sufficient for the committee to act. A shift in the standard of review is warranted in such circumstances because the trigger indicates that a discernible risk has materialized, suggesting an increased likelihood of a threat to financial system stability and, accordingly, a greater need for a rapid remedial response.

Given the disruption that revoking an implemented regulatory departure could create, there should be an appeals mechanism, informed by conventional notions of due process, by which a nation whose regulatory departure is revoked could obtain an expedited review of that decision. 108 An expedited

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108. Given their expected small number, appeals of revocations could be heard by a different panel than the original reviewing panel, created ad hoc for each appeal. But it would seem to be
appeal would afford a nation the 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 more than would maintaining or modifying it.

Whether a revoked departure should be enjoined prior to completion of the appeal process would best be ascertained by a balancing approach following the standard for injunctive relief in civil litigation. That is, a committee would enjoin a revocation if it determined that the threat to global financial system stability was sufficiently severe and irreversible that it outweighed the disruption costs to the appellant nation as a result of having to reverse regulatory course pending appeal. But if a committee were to determine that an injunction-like remedy is in order, the decision should trigger an expedited appeal to minimize disruption costs.

7. Will the Diversity Mechanism Increase Systemic Risk?

Is there still a risk that, notwithstanding the procedural safeguards of initial assessment by peer review and subsequent ongoing monitoring of performance, a nation 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 adhering to Basel? Yes. But risk can never be totally eliminated; it can only be better or more poorly managed. Basel’s harmonized regulation does not eliminate risk either and, more important, has a history of repeated failure.

Furthermore, common factor shocks, and not solely interbank linkages, were an important transmission source of the recent financial crisis’ global reach beyond the United States, the epicenter of the troubled subprime mortgages initiating the crisis. Cross-border contagion that is transmitted by common factor shocks is less likely to occur when failed institutions are in a nation following a different regulatory regime from other nations, than when under a globally harmonized system that induces financial institutions across borders to follow broadly similar business strategies. Moreover, because a principal consideration in review committees’ assessments of proposals under the diversity mechanism will be the extent of an applicant nations’ banks’ global connections, financial contagion through interbank linkages will be quite limited, if not a remote event, were the Basel-departing nation to undergo systemic stress.

a better use of resources to task the entity established for appeals of initial proposal rejections with hearing appeals of approved proposal revocations as well.

109. REINHART & ROGOFF, supra note 11, at 242-45.
110. This scenario is consistent with the observation in the ecological literature that diverse ecosystems are more likely to survive than homogeneous ones. See JAMES C. SCOTT, SEEING LIKE A STATE: HOW CERTAIN SCHEMES TO IMPROVE THE HUMAN CONDITION HAVE FAILED 11-22 (1998). This scenario also is consistent with the discussion of network failures in Haldane, supra note 9.
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The ongoing review process and the public availability of findings offer an additional decisive benefit that should, in the long-run, lower global systemic risk compared to Basel in its present manifestation: they provide a practical means of comparing the efficacy of Basel with regulatory alternatives, regarding systemic risk. Such comparisons should facilitate higher quality reassessments of Basel, including suggested emendations to Basel in response to the new information.

There is a caveat to advocating the incorporation into Basel of successful departures: a policy that works on a national basis could conceivably have adverse systemic effects if adopted globally. It could, for example, prove to operate poorly under dramatically changed economic, legal and technological circumstances, and thereby increase systemic risk. Such a possibility cannot be entirely ruled out. But such a rationalization in defense of maintaining Basel as currently constituted and against permitting experimentation would also prove too much. No system is foolproof and by testing innovations on a national scale first, through a carefully calibrated diversity mechanism, we will have done the best we can, given the knowledge we possess, to devise regulatory policy in an empirically informed manner. It is far more plausible that incorporating into international regulatory standards the experience gleaned from one or a few nations’ regulatory departures will provide a superior means of controlling systemic regulatory error than the current set-up in which there is a wholesale adoption of entirely untested regulatory arrangements.

8. Sunsetting Basel Rules

An analogue to the periodic review of approved deviations from Basel as a key component of this Article’s proposed diversity mechanism can be found in sunset legislation—statutes that must be reviewed and reapproved as a condition of their continued legal force. Sunsetting is a time-honored legislative tool, which has been used by the U.S. Congress and state legislatures since the nation’s founding.111 It is a procedural forcing mechanism well suited to the evaluation of Basel requirements because, as earlier discussed, the dynamic uncertainty of financial markets renders it impossible to foresee what financial innovations and correlative systemic risks will develop. Regulation initially appropriate may therefore be rendered inapt as financial and technological conditions change. Under a sunsetting regime, at a fixed interval of, say, six or seven years, all Basel requirements would be subject to review and withdrawn if not reapproved or revised by the Basel Committee (or, for a more manageable process, sunset reviews could be staggered across subsets of Basel requirements).

111. For an overview of the use of sunsetting and other forms of temporary legislation, see generally Jacob Gersen, Temporary Legislation, 24 U. Chi. L. REV. 247 (2007).
Assessments of deviations from Basel would provide information useful in undertaking sunset reviews of Basel requirements, and, consequently, the two approaches would work hand in glove to improve the quality of international financial regulation. The benefits of sunset have much in common with benefits the Basel Committee anticipates to obtain from Basel III's phased implementation and compliance assessment program. For instance, the gradual phase-in of new capital requirements, such as liquidity and leverage ratios, provides an observation period in which those requirements can be assessed and adjusted. In addition, the Basel Committee has suggested that the Basel III national compliance assessment program will provide a subsidiary benefit of revealing gaps in the Basel architecture that could lead to "updating the rules." The Basel Committee would therefore appear to be aware of the need for information-gathering and regulatory updating, although unwilling to recognize the need explicitly by formally incorporating procedures that facilitate such activity into its rulemaking process, or, at the least, by affording an observation period for all of Basel III's new regulatory pieces.

Combining the diversity mechanism with sunsetting would more effectively generate information for regulatory updating than Basel III's transition periods and national compliance reviews. The transition periods and reviews only hold out the potential for the Basel Committee to reassess and update the Accords, as they impose no requirement that the Committee do so, as would sunsetting. The review-forcing mechanism of sunsetting could be incorporated into Basel without permitting deviations. But there is a self-evident advantage of combining regulatory strategies: the experience under diverse regulatory regimes would provide valuable information for the periodic reassessment of Basel requirements called for in a sunset review.

9. Illustrations of Possible Departures from Basel

To convey a sense of the scope of regulatory experimentation that would be made available by the diversity mechanism, this Subsection sketches two quite different possible departures: one that works within the existing Basel framework and one that would replace it with an altogether different approach.

112. For a discussion of the ability of regulatory experimentation and sunsetting to address problems arising from emergency-driven financial legislation, see Roberta Romano, Regulating in the Dark, in REGULATORY BREAKDOWN: THE CRISIS OF CONFIDENCE IN U.S. REGULATION 86, 95-103 (Cary Coglianese ed., 2012).

113. See supra note 66 and accompanying text. This is also the view of the FSB. Identifying the Effects, supra note 79, at 17.

114. Basel III Regulatory Consistency Assessment Programme, supra note 80, at 7.

115. E.g., Walter, supra note 52 ("[O]ne of the key lessons of the crisis [is that] we must do a much better job ensuring that we understand these system-wide developments [shifts in the perimeter of regulation, such as growth of the shadow banking sector] and that regulation keeps up.").
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i. Altering Basel Risk Weights

An example of a modest departure would be a proposal by an emerging nation to alter Basel’s standardized risk weights. Under Basel III (unchanged from Basel II), banks can rely on external credit ratings to reduce the standardized risk weight, and thus capital requirement, for corporate loans. However, such external ratings are often not available for firms in emerging nations: their debt may be privately held and not rated by a credit rating agency, or not being exporters, the debt may not be rated by an export credit agency. In such circumstances, an emerging nation seeking to increase business development, might propose to decrease the risk weight applied to corporate loans below Basel’s 100% weight. Out of prudential concerns, such as the possibility of correlated corporate defaults, it might couple the decrease in risk weight with a cap on the total value of corporate loans that a bank could provide at the reduced weight, such that loans exceeding a pre-determined dollar value or percentage of total assets would be subject to higher capital requirements.

The risk weight and cap could further be varied in relation to the predicted likelihood that the borrower will default (a component of the internal ratings approach in Basel II and retained in Basel III). Calculating loan default is a feasible undertaking for banks: models of corporate default risk have reasonably good predictive power. Indeed, loan default analysis is a key component of a bank’s core business and something that even relatively unsophisticated banks in emerging nations should be able to perform. Supervision of such a system would also be feasible for emerging market regulators: bank examiners would be able to review and backtest (statistically analyze using historical data to simulate how the model would have performed had it been employed in the past) banks’ decisions on weights, and require banks to update their loan default analyses on a periodic basis.

The technical analysis needed to support such a proposed departure altering corporate loan risk weights would not be too demanding for an emerging nation to provide to a review committee. A nation could undertake an analysis of how banks’ existing level of capital would be affected by lower risk weights, and how they would hold up under a variety of stress scenarios. It

116. See, e.g., Richard Cantor & Frank Packer, The Credit Rating Industry, 19 FRBNY Q. REV., Summer-Fall 1994, at 10-12 (summarizing the literature on the reliability of corporate bond ratings done by credit agencies). The most commonly used measure is the Altman Z-score, which was introduced in Edward I. Altman, Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy, 23 J. FIN. 589 (1968). For tests comparing the Z-score with other bankruptcy prediction models, see Vineet Agarwal & Richard Taffler, Comparing the Performance of Market-Based and Accounting-Based Bankruptcy Prediction Models, 32 J. BANKING & FIN. 1541 (2008) (finding that the Altman Z-score outperforms the Merton structural distance-to-default model); and Sattar A. Mansi et al., Bankruptcy Prediction Models and the Cost of Debt, 21 J. FIXED INCOME, Spring 2012, at 25 (finding that the Z-score had less explanatory power than the Merton model and than a reduced form model by Campbell, Hilscher and Szilagyi).
could also provide an analysis of how banks’ behavior might change in response to lower capital requirements, such as by increasing their loan portfolios.

ii. Subordinated Debt

Rather than propose tinkering with existing Basel provisions, a nation could advance an entirely different regulatory approach. One such proposal, originally advocated as an alternative to the then newly proposed Basel II regime by the Shadow Financial Regulatory Committee (Shadow Committee), is the use of subordinated debt in conjunction with a leverage ratio.\textsuperscript{117} Under the Shadow Committee’s proposal, there is a mandatory requirement for large banks to issue a minimum amount of long-term subordinated debt—debt that is subordinated to all other liabilities, and that can neither be prematurely redeemed nor exchanged (except for a new subordinated debt issue of equal size), nor bailed out by the government.\textsuperscript{118} The requirement to hold a minimum amount of capital in the form of subordinated debt would operate in tandem with a leverage ratio (which, as in Basel III’s new leverage ratio component, is calculated independently of the risk of a bank’s assets and liabilities, but is set at a level higher than Basel’s total—risk-weighted and leverage ratio—capital requirement).

The key idea motivating the Shadow Committee’s proposal is that yields on subordinated debt instruments would provide market information concerning bank risk-taking and creditworthiness. Because, in contrast to present-day bank creditors, the subordinated debt-holders could not be bailed out, they would be expected to monitor bank management attentively, thereby reducing their incentive to take inappropriate risks. The yield on subordinated debt would rise if a bank were perceived to be engaged in inappropriate risk-

\textsuperscript{117} Statement No. 160: Reforming Bank Capital Regulation, SHADOW FIN. REG. COMM. (Mar. 2, 2000), http://fic.wharton.upenn.edu/fic/Policy\%20page/160.pdf \textit{[hereinafter Statement No. 160]}. The Shadow Financial Regulatory Committee (Shadow Committee) is a group of independent experts (most of whom are affiliated with academic institutions) on financial institutions and their regulation that analyzes regulatory and policy issues related to the financial sector and issues policy statements based on its analyses. I was a member of the Committee from 1999-2001; the analysis underlying the subordinated debt proposal was, however, completed before I became a member. In response to Basel III, the Shadow Committee proposed a contingent capital requirement, known as “cocos,” which has replaced its earlier preference for subordinated debt, and alternative liquidity ratios to that required by Basel, and is intended to supplement, rather than replace, Basel. See Charles W. Calomiris & Richard J. Herring, Statement No. 317: The Basel Proposed Rules on Liquidity Regulation and a Suggestion for a Better Approach, SHADOW FIN. REG. COMM. (Sept. 12, 2011), http://www.aei.org/files/2011/11/17/-statementno317_134640473279.pdf; Richard J. Herring, Statement No. 303: The Case for a Properly Structured Contingent Capital Requirement, SHADOW FIN. REG. COMM. (Dec. 13, 2010), http://www.aei.org/files/2010/12/13/Statement\%20No.\%20303.pdf. Requiring the issuance of cocos in conjunction with an increased liquidity ratio is another example of a departure that could be put forth under the diversity mechanism.

\textsuperscript{118} 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. Statement No. 160, supra note 117.
taking, and at some point as risk-taking increased, the bank would be unable to replace maturing subordinated debt, rather than just be subjected to higher interest rates. Inability to rollover the debt would place the bank in violation of the subordinated debt capital requirement, requiring additional actions, such as selling assets, to return to the requisite subordinated debt level and thereby avoid regulatory sanctions.

In contrast to stockholders, who share in profits and thus obtain the upside of increased risk-taking, subordinated debt-holders earn a fixed return and can only lose from such a business strategy. Subordinated debt should therefore price bank risk more cleanly than stock. Empirical research indicates that does, in fact, occur: subordinated debt prices fall as bank risk increases, whereas stock prices do not. The market signals from subordinated debt issues would therefore provide management with an incentive to manage risk more astutely, to avoid being capital constrained. Those signals should equally importantly alert regulators that a bank has been taking on potentially excessive risk, facilitating their ability to engage in early corrective intervention.

The second feature of the Shadow Committee’s proposal, replacing risk-weighted capital with a simple leverage ratio, would complement the signaling value of subordinate debt, in informing investors and regulators concerning a bank’s vulnerability. Empirical research indicates that during the financial crisis, banks’ leverage ratios were a superior measure of risk than their risk-weighted capital (i.e., the leverage ratios were more highly correlated with stock performance than their capital as defined by Basel). Although a subordinated debt regime that does not rely on risk-weighted capital would be a dramatic departure from Basel, it would be well suited to undergo regulatory review. Because numerous banks in many nations have issued subordinated debt securities for decades and the instruments have been the subject of academic studies, it would not be difficult for a nation to generate a technical analysis in support of such a proposal.

A subordinated debt regime with a well-thought-out structure is an example of the type of comprehensive regulatory innovation that nations could explore under the diversity mechanism. The point of this example is not to advance the subordinated debt regime as an inherently superior alternative to Basel, but rather, to illustrate how a procedural mechanism such as the one advocated in this Article could encourage comprehensive regulatory innovation

119. Id. at nn.35-36. More specifically, stock prices do not provide a clean signal of bank risk because bank equity prices increase when risk increases when a bank’s net worth is low but not when it is high. See Elijah Brewer III, The Impact of Deposit Insurance on S&L Shareholders’ Risk/Return Trade-offs, 9 J. FIN. SERVS. RES. 65 (1995).


and diversity through plausible alternatives that, by eliminating risk weights as the lodestar for measuring capital, are at present beyond the realm of the possible under Basel.

10. Does Basel Already Permit Meaningful Diversity to Render the Proposed Mechanism Superfluous?

Some might contend that the diversity mechanism is unnecessary because there is already meaningful diversity under Basel. Compared to Basel I, both Basel II and Basel III afford increased discretion to banks and regulators, which could create diversity at the firm and regime level because individual banks' internal risk-weighting models may differ and regulators are deliberately given flexibility to implement that methodology. But the discretion is quite constrained, operating within a mandated risk-weight framework for capital, and as a consequence, any resulting regulatory diversity is rather trivial and not by design.

For instance, the Basel requirements set parameters within which banks' internal models must operate and specify the types of models considered appropriate, such as the value-at-risk methodology for measuring market risk. In addition, the requirement for regulatory approval of banks' internal models and documented backtesting further limits meaningful divergence in approach across banks and nations. More important, when regulators use their discretion in approving internal models, it has been, as instructed by the Accord, to increase bank capital by applying a higher multiplier than the minimum multiplier that banks must apply to their internal models' capital computation. Such discretion does not alter the fundamental character of diversity.

122. The Basel committee recently asked a sample of large international banks to apply their internal models to a series of hypothetical portfolios of trading assets and found considerable variation in results, at least 25% of which could be attributed to supervisors' discretionary application of higher multipliers than the regulatory minimum. Basel Comm. on Banking Supervision, Regulatory Consistency Assessment Programme (RCAP) – Analysis of Risk-Weighted Assets for Market Risk, BANK FOR INT'L SETTLEMENTS 26 (Feb. 2013), http://www.bis.org/publ/bcbs240.pdf [hereinafter Market Risk Analysis]. In addition, most of the differences related to bank modeling choices were attributable not to disparate risk weights, but to variation in the number of years used to calculate a “look-back” period from historical data and the number of days used to calculate value-at-risk. E.g., id. at 27-28, 38, 45 & 49. In response to the study’s findings, the current chairman of the Basel Committee predictably stressed that “inconsistencies” in measurement across banks and nations had to be “stamped out.” Patrick Jenkins & Tom Braithwaite, Supervisor Takes Tough Line, FIN. TIMES, Feb. 1, 2013, at 6. The chairman’s statements bolster this Article’s contention that diversity under the present regime is by happenstance, and perceived by regulators as a problem to be eliminated.


124. Id. at 28, 44, 118.

125. Market Risk Analysis, supra note 122, at 9. Because internal models have to be approved and regulators can adjust a model’s required capital upward beyond the minimum multiplier, supervisors could, if they deemed it desirable, equalize banks’ required capital despite divergences in models. There appears to be variation in the multiplier supervisors apply, but the rationale for such variation—whether motivated by dissatisfaction with a bank’s model or fundamentals of the bank’s own portfolio—is unknown, because information about supervisory adjustments is not typically publicly disclosed. Id. at 26.
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Basel’s approach to risk measurement in a meaningful sense, as would, say, applying a non-risk-weighted approach to capital or relying on a policy instrument other than capital requirements, alternatives that would be in the realm of the possible under the diversity mechanism. Genuine regulatory diversity in the current framework is, accordingly, a chimera.

Moreover, despite Basel’s non-binding authority, which might seem to enable nations to adopt different regulatory regimes whenever they so desired, noncompliance is rare. One notable instance can be identified under Basel I where supervisors used, for lack of a better word, subterfuge to relax requirements while maintaining adherence to Basel. When Japan’s economy was experiencing sustained financial distress in the 1990s, it altered accounting standards in order to make it easier for its banks to meet Basel’s capital requirements.126 This action preserved ostensible compliance with Basel while postponing an inevitable government bailout. Another example of legal contrivance, paralleling the Japanese example, is Spain’s recent tax regime change permitting banks to reclassify deferred tax assets—which no longer qualify as core equity capital under Basel III—as tax credits—which do qualify. This sleight of hand significantly reduced the banks' need to raise capital in order to be in compliance.127

Discretionary deviations along these lines will, no doubt, continue to occur under Basel III as nations experience difficulty implementing the new standards, given the continuing after effects of the global financial crisis.128 But

126. Whitehead, supra note 91, at 729.
127. See Tobias Buck, Spain Allows Banks to Reclassify Assets, FIN. TIMES, Dec. 1, 2013, at 10. Non-qualifying deferred tax assets equaled 40% of core capital of Spanish banks, given their accumulation of heavy losses in the financial crisis. Id.
128. Danish regulators, for instance, have instructed their banks to ignore Basel III restrictions on what qualifies as capital to satisfy liquidity buffer requirements and are seeking to have the EU, in its implementation of Basel III, alter the Basel Committee’s definition of qualifying assets to include the type of residual mortgage securities that are held in large numbers by Danish banks. See infra note 172. I consider the Danish example to be a minor deviation, as it is operating entirely within the existing risk framework, and, as explained in note 172, infra, the assets in question have higher credit ratings than some assets included in the Basel Committee’s definition. In response to Denmark’s lobbying, the EU agreed to treat certain covered bonds as assets in the highest liquidity class along with sovereign debt in the 2013 capital requirements directive (CRD IV) implementing Basel III. In the category of minor discretionary deviations, I would also include Swiss regulators’ adoption of a capital ratio above the Basel III minimum, see supra note 90. Raising a Basel minimum is no more than a tweaking of Basel, although it can be of significance to banks that do not wish to be constrained to hold capital above what they would otherwise hold. CRD IV also altered the capital treatment of over-the-counter derivatives for non-financial institution counterparties, so as to reduce the Basel requirements, which do not distinguish requirements by counterparty. Again, this is not a significant deviation, because all of the core elements of Basel III—all other risk weights and the macro tools of leverage ratios and capital buffers—are included in the directive. A rationale offered by the EU for the deviation from Basel counterparty capital requirements is that while Basel III is intended to apply to only the largest “internationally active” banks, the directive applies to all 8,000-plus EU banks and investment firms. Capital Requirements – CRD IV/CRR – Frequently Asked Questions, EUR. COM’M’N (July 16, 2013), http://europa.eu/rapid/press-release_MEMO-13-690_en.htm. Under the diversity mechanism, the EU would not have to engage in intellectual gymnastics for deviant implementation, nor encounter objections by competitor nations that are fully implementing the regime. This would come at the cost of
such instances of evasion of regulatory constraints are not fundamental reconceptualizations of the regulatory setup. They are, in fact, cosmetic exercises, to permit banks to be characterized as compliant with Basel, with no real effect on a bank’s financial position. Moreover, these are not intended to be deviations from Basel’s fundamental requirements; rather, nations altered tax and accounting rules that operate beyond Basel to be able to claim that their banks were in compliance.

Although there have, then, been deviations in a guise of maintaining an appearance of compliance, there have not been departures from Basel’s risk-weighted capital approach. Indeed, when U.S. banking authorities proposed regulations to implement Basel III for public notice and comment, FDIC Vice Chairman, then a Director, Thomas Hoenig, added a statement soliciting broad public comments on capital requirements, as he differed from his colleagues, being of the view that a simple minimum leverage (non-risk-based) capital ratio is superior to Basel’s “overly complex and opaque” risk-weighted approach. But he softened the discord by phrasing the issue as one of “a greater emphasis on leverage ratios . . . stricter than what is agreed to in the international accords” but consistent with past “precedent.” Having to invoke regulatory precedent and phrase differences as a mere matter of stress to move regulatory policy in a desirable direction would not be necessary under the diversity mechanism.

There is a straightforward explanation for the FDIC Vice Chairman’s attempt to shoehorn his proposal into Basel precedents and the historical pattern of global conformity. Deviating conduct would doubtless be frowned upon by Basel Committee members and other conforming nations, given their shared commitment to Basel’s harmonization objective and belief that it embodies best practices. It would also undoubtedly attract criticism from media and commentators who have nearly universally applauded global regulatory harmonization efforts without much regard to data, such as a track record of having to engage in the review process under the diversity mechanism, but there would be a concomitant benefit of a better-informed departure due to the analyses undertaken in such a process.

129. I could identify no example of a major deviation from Basel I or II. The earlier adoption by the United States of the recourse rule, see supra note 38, appears to be a unique instance of a nation adopting a significant refinement to Basel prior to its official enactment. But it was undertaken within the structure of Basel I as a refinement of the standardized risk weights, and, more importantly, had already been included in the consultation documents as a component of Basel I’s intended replacement.


131. Id. Congressional bills have been introduced to mandate leverage ratios, similar to Vice Chairman Hoenig’s preferred approach, and like him, they would not repeal Basel’s risk-weighted capital approach but rather layer the leverage ratio onto it. E.g., S. 798, 113 Cong. (2013). However, there is little reason to believe such legislation would be enacted soon given the small number of co-sponsors, lack of progress in the legislative process following introduction, and the probable opposition by virtually all other U.S. banking regulators, who would not want to be seen as not fulfilling their Basel obligations. The proposed diversity mechanism would render such an approach fully compatible with participating in Basel, and eliminate compliance as a rationale for opposition.
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multiple failures. Moreover, a deviating nation runs the risk of being perceived as non-cooperative and being subjected to sanctions ranging from diplomatic slights to more consequential retaliation. This prospect of peer sanction is not idle speculation. In describing the “regulatory consistency” assessment program put in place to ensure uniform implementation of Basel III across nations, the Basel Committee states that its review process will “promote full and consistent implementation of Basel III . . . and provide peer pressure if needed.”

B. Cross-Border Considerations

Cross-border coordination among international bank regulators has been a persistent regulatory concern, predating by at least a decade efforts to harmonize international capital requirements. There is without doubt an inherent tension and tradeoff between the greater ease of operation for both regulators and international banking groups afforded by harmonized rules and the increased costs they will incur, simultaneous with the systemic benefits that this Article contends would follow, from regulatory diversity. Under regulatory diversity, the work of supervisors and managements of international banks would be more challenging not only because different units would be subject to differing regulatory regimes but also because there could be increased uncertainty of outcomes when not all units are operating under identical regulatory parameters. But the challenge would not be different in kind from present coordination demands. Moreover, while regulatory diversity will increase the operating cost of international banks, that cost will ultimately be borne, and hence the regulatory deviation internalized, by the nation departing from Basel, not banks.

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 the parent bank’s home country (the country in which it is chartered), and a cross-border operation is expected to be approved prior to the opening of the foreign banking establishment by both the parent’s home country and the host

132. There is an extensive literature seeking to explain why nations comply with international financial regulations. For a recent account, see CHRIS BRUMMER, SOFT LAW AND THE GLOBAL FINANCIAL SYSTEM: RULE MAKING IN THE 21ST CENTURY 115-76 (2012).

133. Basel Assessment Programme, supra note 80, at 2 (emphasis added).

country in which the operating unit is located. Consolidated supervision refers to the principle that a bank’s international operations, solvency and capital adequacy under Basel should be monitored on a worldwide (i.e., consolidated) basis by the parent bank’s home regulator, and not unit-by-unit by host country regulators. This consolidated supervisory approach is thought to improve the quality of information regulators receive regarding a bank’s international activities, and hence to make supervision more effective.

While the home country has primary regulatory authority over an international banking group, host countries are responsible for supervising the banking establishments within their borders. The extent of host country regulation is a function of legal form. If a foreign bank’s operations are housed in a separately incorporated subsidiary, the host country directly regulates the local establishment on all regulatory matters, whereas if foreign operations are undertaken through a branch (i.e., an office that is not a separate legal entity from the parent), then the host country is responsible for supervising the entity’s liquidity, while its solvency 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 under Basel’s best practice supervisory principles, the host can impose additional “restrictive measures” on the local entity, including requiring incorporation, which subjects it to the host’s direct regulation.

The consolidated supervisory approach is not without challenges. Host countries, for instance, must often pay attention to the solvency of foreign


136. See id. at 105; Basel Comm. on Banking Supervision, Minimum Standards for the Supervision of International Banking Groups and Their Cross-Border Establishments, BANK FOR INT’L SETTLEMENTS (July 1992), http://www.bis.org/publ/bcbsc314.pdf. Under the Basel cross-border principles, if a host country permits an entity to operate in its jurisdiction when it has determined that the home country supervision is inadequate, then it must assume direct supervisory responsibility for the local entity “on a ‘stand-alone’ consolidated basis.” Basel Comm. on Banking Supervision, supra, at II.4. Herring and Litan provide examples of restrictive measures a host authority can apply besides a local incorporation requirement, such as imposing a deadline on the bank or its home supervisor to “meet acceptable standards,” or closing down the entity. HERRING & LITAN, supra note 7, at 105. This authority-allocating principle was an amendment to the concordat on cross-border authority adopted 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 104-05. While BCCI’s failure impacted over 500,000 depositors, most of whom were 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 transact with BCCI because of its “unsavory reputation,” and hence there was no spillover effect. Id. at 105.
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banking establishments, as parent banks are not liable for subsidiaries’ claims, and although they are liable for claims on branches, a home regulator might not be attentively monitoring the solvency of a parent or group.138 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.139

Basel’s supervisory principles allocating authority across home and host supervisors are, moreover, thought to be insufficient to coordinate cross-border regulation because home and host supervisors need to exchange information about related entities if they are to carry out their supervisory functions. Information sharing is typically accomplished by bilateral memoranda of understanding (MOUs), which operate outside of Basel, in which regulators specify information that they will share, such as “information about developments or supervisory concerns, [and] administrative penalties,” and identify grounds, such as national security, on which they will refuse to provide information.140

Home-host bilateral agreements are, however, thought to be inadequate for effective supervision of international banking groups because activity in multiple countries requires information to be shared and supervision coordinated across all host and home supervisors. To advance that objective, the Basel Committee and the G-20 have fostered the establishment of “supervisory colleges,” which are working groups made up of all the national regulators of an international banking group’s units (e.g., holding companies, branches and subsidiaries) that meet regularly to coordinate supervisory efforts and information exchange.141 The colleges are intended to supplement, not substitute for bilateral and multilateral MOUs.142

138. HERRING & LITAN, supra note 7, at 100.
139. Id. at 101.
140. Michael Krimminger, Banking in a Changing World: Issues and Questions in the Resolution of Cross-Border Banks, in INTERNATIONAL FINANCIAL INSTABILITY: GLOBAL BANKING AND NATIONAL REGULATION 257, 264 (Douglas D. Evanoff, George G. Kaufman & John Raymond LaBrosse eds., 2007). Of course, MOUs to share information are not a panacea. Particularly in times of stress, they break down, as regulators tend to conceal adverse information regarding entities within their jurisdiction to forestall either potential leakage that could result in a liquidity crisis or other regulators’ actions that could conflict with their preferred course. Richard Herring & Jacopo Carmassi, The Corporate Structure of International Financial Conglomerates: Complexity and its Implications for Safety and Soundness, in THE OXFORD HANDBOOK OF BANKING 195, 217 (Allen N. Berger, Philip Molyneux & John O.S. Wilson eds., 2010). One reason for the breakdown may well be that MOUs appear to be drafted with ordinary times in mind and “usually do not address the special information needs in a crisis.” Krimminger, supra, at 264.
142. Id. at 1.
2. Cross-Border Coordination in a Regime with Regulatory Diversity

Adoption of a diversity mechanism need have no impact on Basel’s cross-border policies and initiatives. As proposed, all existing coordination arrangements (e.g., MOUs and supervisory colleges) and Basel’s organizing principles for cross-border supervision would function precisely as they do at present and no new arrangements or institutions would be required. Were a diversity mechanism highly successful in facilitating departures from Basel, coordination and information-sharing among regulators would be even more critical than they are under present-day arrangements. That is because the cross-border operations of international banks could be subject to greater variety of regulatory requirements, which would make consolidated supervision more complex and demanding. But in this context regulators would also have heightened incentives to improve upon existing means of coordination as they could not rely on foreign regulators’ monitoring local banking establishments’ compliance with identical regulatory parameters and would therefore need more intensive information-sharing to ascertain the adequacy of a banking group’s capital from their differing regulatory perspectives.

The Basel II principles allocating supervisory authority across home and host countries would also function equivalently were the diversity mechanism in place. Under these principles, the home country has the “final determination” for issues related to a banking group on a consolidated basis.\textsuperscript{143} Nations that have chosen to deviate from Basel could quite plausibly conclude that, for the stability of their financial systems, all banking entities operating within their jurisdictions should comply with their regulatory requirements. Thus, if the local banking entity is the parent of an international banking group, under Basel’s consolidated supervisory principles, the nation would require the bank to meet its distinctive capital requirements and other regulations on the basis of its worldwide operations. It could further exercise regulatory control over local entities that are foreign banking establishments. The Basel principles permit a host supervisor that has “legitimate interests” to apply an approach different from that approved by the home regulator at a sub-consolidation level (i.e., to the foreign unit operating within its borders) regardless of the allocation of supervisory authority related to groups.\textsuperscript{144}

Basel grants host countries latitude to regulate foreign-owned local banking establishments because, even under a harmonized regime, there can be


\textsuperscript{144} \textit{Id.} The Committee provides two illustrations of “legitimate interests” enabling a host supervisor to override home regulations: “legal obligations” and “situations where the home country supervisor does not perform effective comprehensive consolidated supervision.” \textit{Id.} at 6. To adapt this cross-border allocation of authority to a Basel regime that included the diversity mechanism, this document should be amended to add a third illustration of a legitimate interest: conformance with key components of a Basel-departing regime.
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conflicts of interest between host and home countries when applying consolidated regulatory policies, such as the allocation of capital across a parent and subsidiary or branch. For instance, home country supervisors, being most concerned with the safety and soundness of their own financial systems, may seek to enhance the solvency or liquidity of the parent at a branch’s expense.145 Host countries have therefore devised, within the latitude provided by Basel’s consolidated supervisory principles, a variety of strategies that seek to minimize conflicts of interest. The principal one—which is also well suited for the regulatory diversity context—is requiring foreign banking establishments to incorporate locally. Other techniques include ring-fencing the assets of local entities and imposing similar requirements on branches to those on subsidiaries.146

Under regulatory diversity, accordingly, a Basel-departing nation could protect the integrity of its regulatory regime by requiring all local banking establishments to be incorporated and thereby comply with its regulations, even if they were part of a group whose parent’s home country operates under Basel. An informative illustration of how local incorporation works is the case of New Zealand, whose financial system is dominated by Australian banks. New Zealand requires all “systemically important” local banks to incorporate (i.e., foreign banks must operate through subsidiaries not branches).147 This requirement enables New Zealand to exercise direct supervisory authority over foreign banking establishments and impose minimum capital requirements and

145. 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 INTERNATIONAL FINANCIAL INSTABILITY: GLOBAL BANKING AND NATIONAL REGULATION 201 (Douglas D. Evanoff, George G. Kaufman & John R. LaBrosse eds., 2007).

146. Jonathan Fiechter et al., Subsidiaries or Branches: Does One Size Fit All? 7 (Int’l Monetary Fund, Staff Discussion Note No. 11/04, 2011), http://www.imf.org/external/pubs/ft/sdn/2011/sdn1104.pdf. For a discussion of requirements that the United States imposes on foreign branches, see John C. Dugan et al., Forms of Entry, Operation, Expansion, and Supervision of Foreign Banks in the United States, in REGULATION OF FOREIGN BANKS AND AFFILIATES IN THE UNITED STATES 1 (Randall Guynn ed., 7th ed. 2013). Some countries even impose stricter regulatory requirements on branches to render the use of the subsidiary form more attractive. Herring & Carmassi, supra note 140, at 216. It should be noted that there are numerous forms in which a foreign bank can conduct local operations, several of which, available in the United States, are highly specialized with respect to the entity’s permissible range of activity. Dugan et al., supra, at 49-71. I focus on the most common choices, which also offer the greatest regulatory contrast: branches and subsidiaries.

A local incorporation strategy cannot be applied by European host nations to a foreign banking entity with a European parent because under the EU “passport” system, banks chartered in any member state may open up a branch in any other member state. Katharina Pistor, Host’s Dilemma: Rethinking EU Banking Regulation in Light of the Global Crisis (Columbia Law & Econ. Paper No. 378, 2010). To the extent that the ban on requiring incorporations applies to non-EU chartered banking establishments as well, see id., it would render infeasible the approach discussed infra notes 149-51 and accompanying text that would ease the acceptability of departures, through which Basel-conforming nations require local incorporation of branches of banks whose home nations had deviated from Basel.

risk limits that might not be imposed on branches by Australian regulators making calculations on a consolidated basis. The incorporation requirement has additional benefits for maintaining the safety and soundness of New Zealand’s financial system, such as making it more difficult to shift assets from a New Zealand entity to its foreign parent (because as a separate legal entity, its assets and liabilities are distinguishable from those of the parent, in contrast to a branch that has no separate existence), and creating a separate board of directors that is obligated to act in the interest of the local entity, not the parent.148

The host country strategy of requiring incorporation of foreign banking establishments will likely entail dynamic implementation as relations within international banking groups tend to evolve over time. Again the case of New Zealand is instructive. When outsourcing of local banks’ functions to foreign parents became widespread, weakening its ability to supervise subsidiaries effectively, it added substantive regulation to the incorporation requirement and restricted outsourcing of critical bank functions, such as risk management.149 But while local incorporation is an approach that may need attentive updating, this requirement is still the best strategy for addressing compliance concerns of a host nation whose regime deviates from Basel, without necessitating extensive further tinkering with Basel’s regulatory architecture.

The local incorporation approach would, no doubt, be applied symmetrically: Basel-conforming nations would, in all likelihood, insist on local incorporation of foreign banking entities whose home country departs from Basel. Although the most straightforward mechanism to accomplish this is by requiring local incorporation of all foreign banking establishments, a nation might seek to impose incorporation only on local entities of non-Basel compliant nations, by asserting that their home supervision is inadequate.150 Such a discriminatory incorporation approach would be at odds with the objective of furthering regulatory diversity. To avoid such outcomes, the explanation of the supervisory principle permitting host country authorities to

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148. Id. at 9. Edward Kane notes further 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 concerning a bank’s financial condition than can Australian supervisors—information that would not be available were it not to require local incorporation. See Edward J. Kane, Confronting Divergent Interests in Cross-Country Regulatory Arrangements, in CROSS-BORDER BANKING: REGULATORY CHALLENGES 265, 276 (Gerard Caprio, Jr., Douglas D. Evanoff & George G. Kaufman eds., 2006).

149. Bollard, supra note 147, at 9-10.

150. Local incorporation is also a mechanism for protecting local citizens, because under this approach, a foreign entity has to participate in the local deposit insurance fund. I have not focused on consumer protection because it is not an objective of international regulation. See supra note 16. But to the extent that it is a domestic regulatory objective, local incorporation addresses consumer protection concerns that could be raised against regulatory diversity. During the recent crisis, for example, the deposits of U.K. citizens that Iceland refused to refund when its banks failed were held in branches. Had Icelandic banks’ U.K. operations been locally incorporated, the banks would have paid premiums into the U.K. deposit insurance fund and the deposits would have been insured without need for the extraordinary government action that was taken and the ensuing inter-government litigation.
impose restrictive measures should be refined to indicate that if a nation
generally does not require incorporation of local banking establishments, an
approved deviation from Basel alone is not grounds to find inadequate
supervisory capacity.\(^{151}\)

Even a nondiscriminatory implementation of a local incorporation
requirement would crimp the regulatory experimentation the diversity
mechanism seeks to foster, as the impact of a new regime would thereby be
limited to banking operations within the Basel-departing nation, reducing the
performance benefits that a novel regulatory approach might produce for
consolidated bank groups. Nevertheless, such a limitation is worth incurring.

Permitting Basel-compliant nations to require local incorporation of
establishments otherwise subject to a Basel-departing regime should lower
resistance to approval of departures under the diversity mechanism in the first
place, particularly where resistance is founded in fears over adverse spillover
effects. It can also be expected that over time, as experience accumulates with
Basel-departing financial systems, Basel-conforming nations will become more
accepting of deviations and relax incorporation requirements, or even
experiment with departures themselves.

3. Impact on International Banks

An increase in the number of jurisdictions requiring local incorporation of
foreign financial entities would make regulatory compliance more complex for
international banks. Consider, for instance, an international bank chartered in a
nation that departs from Basel by implementing a straight leverage ratio in
relation to all assets independent of risk, and that has a unit operating in a
nation that conforms to Basel’s risk-weighted capital requirement. Under the
consolidated supervisory principle, the foreign unit’s assets are included with
the parent’s assets in computing how much capital the group must hold to meet
the home country’s leverage ratio. But the foreign unit would also be separately
required to hold the level of capital necessary to meet the Basel risk-weighted

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151. It should, for instance, have to be accompanied by plausible concerns of
supervisory, or capital level, inadequacy. This suggested standard differs from the Federal Reserve’s
practice for approving entry applications or financial holding company (FHC) status of foreign banking
organizations whose home-country supervisor has not adopted the Basel standards. For entry applicants,
the Federal Reserve conducts a capital ratio equivalency analysis (i.e., the foreign banks’ capital ratios
should be equivalent to that of a well-capitalized U.S. bank under U.S. capital standards). For FHC
status, the Federal Reserve requires the foreign banking organization’s U.S. operations to hold capital
compparable to that required of a U.S. bank owned by an FHC. Under proposed rules the largest foreign
banks will have to operate through new U.S. intermediate holding entities subject to the same capital
requirements as U.S. institutions, which have been strengthened post-crisis. See Mark J. Welshimer &
Andrew R. Gladin, *U.S. Capital and Liquidity Regulation of Foreign Banking Organizations, in
REGULATION OF FOREIGN BANKS AND AFFILIATES IN THE UNITED STATES*, supra note 146, at 203, 207,
275-77; Randall D. Guynn et al., *Foreign Banks as U.S. Financial Holding Companies, in REGULATION
OF FOREIGN BANKS AND AFFILIATES IN THE UNITED STATES*, supra note 146, at 951, 967-69. As a
consequence, the U.S. approach would similarly need to be reworked to take into account possible
compensating regime differences for lower or non-risk-based capital ratios.
capital requirements of its host regulator, assuming, quite reasonably, that a local incorporation requirement prevents the unit from operating as a branch. As a result, the group might be required to hold more capital (in the subsidiary or as a whole) than it would were the home country following Basel or were it allowed to operate as a branch in the host country. Similarly higher capital requirements could arise if the supervisory roles are reversed, that is, if a Basel-departing host regulator required local incorporation of a unit of an entity with a Basel-conforming home regulator.

Operating costs of international banking groups would be expected to rise under regulatory diversity because there would be home-host differences in substantive regulation, rather than the smaller present-day differences of supervisory practices implementing the same rules. However, the cost of compliance for a large organization to operate under multiple regimes does not loom as large as a hindrance to regulatory diversity as would have been the situation several decades ago. Advances in information technology have not only dramatically reduced the computational costs of calculating the risk of very large and complex portfolios but also have enabled real-time tracking of transactions at a highly granular level, to an extent unimaginable at the time of the initial Basel Accord.153

Equally important, while large international banks have hundreds, if not thousands, of subsidiaries and other affiliates, the vast majority of assets and foreign activities of the largest U.S. financial institutions are located in only a few jurisdictions.154 For each of the top five U.S. systemically important financial institutions (SIFIs), for instance, over 90% of reported foreign activity is located in no more than three foreign jurisdictions, and over 80% of that activity comes from operations located in just the United Kingdom.155 This suggests that for many large international banks, the cost of regulatory diversity would be quite manageable, and not at all alarming as harmonization advocates would have it.

The anticipated increase in the number of nations requiring local incorporation poses a more serious source of increased operating costs for international banking groups than the issue of multiple regime compliance.

152. 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 143, at 5.

153. Cost savings from technological advances can be undercut by the complex organization of many large banks that have grown by mergers and acquisitions but have failed to integrate fully the information technology systems of the component parts. Were regulatory diversity to be widespread, increased compliance costs would provide an incentive for such entities to focus greater effort on fully integrating units. This would have the ancillary benefit of improving bank operational efficiency and risk management, and thus of increasing financial system stability.


155. Id.
This is because the choice of organizational form—subsidiary or branch—has both operational and real economic consequences. The organizational forms differ with regard to the degree to which a group's decision-making can be centralized, affecting the ability to engage in intra-group transfers and hence, the transaction costs of overall operations.

The centralized decision model using branches, for instance, permits a group to integrate operations, raising funds in the cheapest location and redeploying them in the location with the highest return. When a group incorporates a foreign operation, however, the unit must be managed independently, have its own board of directors, and finance its own operations, and consequently, a parent's ability to exercise control over the unit is attenuated as intra-group transfers are more circumscribed. The organizational distinction is not necessarily as clear-cut as the legal formalities might imply, for, depending on the organization, branches may be allowed to operate quite independently and subsidiaries may be tightly controlled. But restrictions on intra-group transfers and additional transaction costs, such as establishing a local board due to a local incorporation requirement, cannot be averted whether or not the organization's operations blur the legal distinctions.

Furthermore, while some benefits of organizational form are independent of a bank's business model, such as whether it engages principally in retail or universal (i.e., 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 banking establishment typically needs access to local deposit insurance and a local management team's knowledge. 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.

Finally, in some cases, a banking group's preferred organizational form is a function of the characteristics of the host country. For instance, branching might be preferred "when local financial markets are less developed and less able to support a subsidiary" (i.e., when local funding is limited so credit is provided on the basis of the parent's strength). In such instances, a host country requirement for incorporation may impose a suboptimal form on an international bank, reducing the profitability of its business model. But inefficiency generated by requiring incorporation of a foreign branch is no

156. Fiechter et al., supra note 146, at 7.
157. Id. at 10.
158. 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. See Dirk Schoenmaker & Sander Oosterloo, Cross-Border Issues in European Financial Supervision, in THE STRUCTURE OF FINANCIAL REGULATION 264, 276 (David G. Mayes & Geoffrey E. Wood eds., 2007).
159. Fiechter et al., supra note 146, at 10.
different when both nations comply with Basel than when only one does; the issue is the incremental impact were more nations to require incorporation.

In practice, many nations currently impose identical requirements on branches and subsidiaries, such as local representation on a board of directors or local capital requirements.\textsuperscript{160} If a Basel-departing nation were to apply identical regulation to local banking establishments regardless of legal form rather than adopt a local incorporation requirement, there might be a smaller efficiency loss, as international bank groups could continue to operate through branches, although some of the economic benefits of branch operations would undoubtedly be lost if branches had to replicate the organization of subsidiaries.

The tradeoff between increasing international banks' operating costs (because of the increased use of local incorporation as well as having foreign units operating under different regulatory regimes) and introducing regulatory diversity into Basel would, in my judgment, on balance be decisively worthwhile. It should be recalled that the current harmonized regime has deemed as an accepted tradeoff the cost to international banks of local incorporation requirements versus the benefit to host countries of being better able to protect the stability and soundness of their financial systems. The diversity mechanism tracks the same tradeoff, albeit on a larger scale. The costs to banks from operating under more than one regulatory system will be incrementally higher, but the benefits to system stability will correlatively be greater, because they relate to improving the stability of the global financial system and not solely that of one nation.\textsuperscript{61}

International banking groups may nevertheless be expected to disfavor regulatory diversity and even to lobby against its introduction into international regulation. For even if the incremental cost from complying with multiple regimes and local incorporation requirements is low, operating under uniform capital requirements will still be less expensive as they render accounting, capital calculation and risk measurement easier to compute on a consolidated basis. But it is important to recognize that the ultimate bearer of all or nearly all of the cost from increased complexity in compliance due to non-uniformity in regulation would be the Basel-departing nation, 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 incremental cost of doing business to customers in the Basel-departing nation (although the return on its foreign investment would be reduced as some customers will be deterred by the higher cost of doing business with the bank). If, alternatively, the increased cost of operating in a Basel-departing jurisdiction is greater than the expected return on investment, then the bank will not undertake activity in that jurisdiction. In either event, any

\textsuperscript{160} Id. at 7.

\textsuperscript{161} The benefits from regulatory diversity of enhanced global financial stability are discussed in Subsections I.B.2 and I.B.4, \textit{supra}.
incremental cost due to 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 were to enter or such banks were to charge more for their services upon entry).

To put the issue a bit differently, any possible impact of regulatory diversity on international bank operating costs would discourage nations from experimenting. Banks are not compelled to operate at a competitive disadvantage by doing business in Basel-departing jurisdictions. But the reduced access to credit from foreign banks’ potential withdrawal would doubtless feed back into nations’ initial cost-benefit calculations when considering the adoption of an alternative regulatory regime.

4. Regulatory Arbitrage

Because host nations would, as a rule, adopt local incorporation requirements in response to regulatory diversity, a conventional claim made in defense of regulatory harmonization—prevention of regulatory arbitrage—loses force. With a local incorporation requirement, all banks operating within a jurisdiction, whether domestic- or foreign-owned, would be subject to identical regulation.

Regulatory arbitrage under the diversity mechanism would consequently be limited to instances in which a host country permits foreign operations to be undertaken through branches, without restriction. Among Basel-conforming nations, such an approach would seem quite implausible, at least at the outset, particularly if the departure from Basel were substantial. If the past is an appropriate guide, nations would require uniformity, or compliance with minimum standards, to relinquish a local incorporation requirement, as this is the condition on which they have entered into mutual reciprocity arrangements.162 Moreover, Basel Committee members, as the decision-making literature suggests, could be expected to have a status quo bias, and would therefore, in their role as host-country regulators, not be inclined, at least

162. This is a feature of the EU’s passport system, which has been adopted across financial sectors. See, e.g., Council Directive 2001/34/EC, 2001 OJ (L 184) (stock listing requirements); Council Directive 93/22/EEC, 1993 OJ (L 141) (regulations for investment services firms). Canada has also adopted a passport system for securities regulation, which is generally a matter of provincial law, under which the provinces have harmonized their regulation as a condition of reciprocity, with only Ontario not participating. E.g., A Provincial/Territorial Memorandum of Understanding Regarding Securities Regulation, CAN. SEC. ADMIN. (2004), http://www.securities-administrators.ca/uploadedFiles/General/pdfs/2004_0930_mou_english.pdf. 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 indistinguishable from those of the SEC. See 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); Pierre Lortie, Securities Regulation in Canada at a Crossroads, UNIV. OF CALGARY SCH. OF PUB. POLICY SPP RESEARCH PAPERS, Oct. 2010, at 3.
initially, to accept non-Basel conforming entities operating within their borders.\footnote{163}

It is possible, though improbable, 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 conceivably have a competitive advantage over one that was not, if the home regime's deviation from Basel enabled more efficient operation by applying a different approach to capital regulation. In such a scenario, international banks chartered in Basel-conforming nations might seek to relocate.

However, reorganization into a non-Basel jurisdiction as a home base would entail the transaction costs of moving or creating a new parent entity outside of the existing home base. For such a move to be financially advantageous, jurisdictions permitting unrestricted foreign branch operation would have to be not only numerous, but also relatively large, so that the cost savings from being chartered in the non-Basel nation would offset the relocation cost. Gains would, however, still be limited because rechartering the parent would not alter capital requirements for operations remaining in the home country or in other Basel-conforming nations requiring local incorporation.

A less expensive strategy a banking group could potentially employ than relocating the parent would be to shift transactions to an affiliate operating in the Basel-departing jurisdiction.\footnote{164} But even in this scenario, the benefits would be quite constrained. Under the Basel consolidated supervisory principles, a parent's Basel-conforming home regulator computes capital requirements on a group basis, which would include transactions shifted to affiliates in non-Basel jurisdictions.\footnote{165}

\footnote{163. \textit{See supra} note 88 and accompanying text.}
\footnote{164. Joel Houston and colleagues find that banks in countries with stricter bank regulation have greater capital flows. Joel F. Houston, Chen Lin & Yue Ma, \textit{Regulatory Arbitrage and International Bank Flows}, 67 J. FIN. 1845 (2012). There are, however, analytical problems with this study. The capital flow data are of poor quality because they do not match actual banking unit capital flows. The study uses a database that identifies capital flows by the nationality of the reporting bank, which is an international group's parent, and not by the location of the affiliate bank that is the source of the capital outflow. \textit{See id.} at 1849. It is therefore not possible to determine whether cross-border capital flows are under- or overestimated, rendering problematic confidence in the findings. In addition, the analysis does not control for tax laws and foreign exchange, which are important factors in a group's location of a transaction, and if correlated with the quality of bank regulation, the statistical significance of the latter could be spurious. The statistical significance is also unaffected by whether the definition of the source country unit combines branches and subsidiaries or is limited to subsidiaries. \textit{See id.} at 1888-90 & tbl.7. This finding is at odds with regulatory arbitrage: to benefit by moving capital from a strict home to a lax host country, a banking group should not use the branch form in the host because such units are consolidated with the parent and typically subject to the home, not host, nation's capital requirements.}
\footnote{165. This is another reason why the findings in Houston et al., \textit{supra} note 164, are difficult to interpret: although capital flows move within the group, a banking group cannot avoid being subject to consolidated capital requirements for foreign assets even if units are locally regulated as subsidiaries. The need to identify the location of transactions within a multinational banking group}
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Accordingly, the diversity mechanism would not facilitate the often invoked parade of horribles of banks being able to take advantage of rampant, pernicious arbitrage opportunities, given local incorporation strategies, consolidated entity capital accounting, and the cost of relocation. Arbitrage opportunities would not be meaningfully greater than those available under present-day harmonized capital regulation. It is further critical to appreciate that Basel’s harmonized capital requirements have not in fact leveled the international regulatory playing field: banks’ cost of capital is affected by numerous national policies and practices, such as taxation, deposit insurance and personal savings patterns, which are not regulated by Basel and diverge dramatically. Indeed, Basel has differential effects on the cost of capital across countries. Finally, it must be remembered that harmonization of international financial regulations does not eliminate arbitrage opportunities; the activity is simply undertaken across products and risk weights without a cross-border dimension. As underscored by the financial crisis, banks arbitraged Basel’s harmonized risk weights by holding securitized assets.

Territorial jurisdiction also blunts another often-invoked objection to regulatory diversity that is framed in terms of regulators’ rather than banks’ responses to arbitrage possibilities. The contention is that with regulatory diversity banks would exert political influence on domestic legislators and regulators to adopt regulations with inadequate capital requirements, on competitiveness grounds, resulting in undercapitalized banks and a destabilized financial system. Such an assertion is a misunderstanding of the operation of
the diversity mechanism. It has been designed to safeguard as best as possible against precisely that type of regulatory departure by including peer review and ongoing monitoring.

A proposal consisting solely of lowered capital requirements (i.e., with no compensating strengthening of other regulatory instruments) would be unlikely to meet the review threshold unless the nation’s financial sector was small and insular and therefore not likely to pose a global systemic risk. But were international banking groups subsequently to flock to relocate there, ongoing monitoring would trigger a full review. In addition, were such a proposal approved for a small nation with an insular banking system, without doubt, it would not be approved in identical form for a large economy whose banks were highly interconnected with banks in other nations, as it would be more likely to have an adverse impact on global systemic risk. Hence even if large international banks were able to persuade their home regulators to propose replicates of an approved departure that solely lowered capital requirements, the end result would not be a cascade of approved copycat deviations.

In short, the objective of the diversity mechanism is to encourage 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 qualitatively different from Basel’s regulatory approach. Given the diversity mechanism’s setup, the hypothesized threat of a “race to the bottom” in capital requirements from approved departures is not well-founded, as such proposals will be rejected. Rather, the greater concern is that there will be an absence of proposed departures in the first place. Regulators are inherently risk averse and shy away from innovation for fear of standing out from the crowd. The personal consequences to a regulator from bank failures, particularly should the failures happen when following a unique strategy, could be substantial (i.e., loss of reputation, if not employment).\(^\text{170}\)

The rationale for “herding” by managers of financial institutions regarding business strategies, applies equally well to government officials in this context.\(^\text{171}\)

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\(^\text{170}\) With the safety in numbers of the global financial crisis, so to speak, no U.S. regulators were fired, although the chairman of the SEC at the time, Christopher Cox, was excoriated by media, as the investment banks failed under his watch. See, e.g., Amit R. Paley & David S. Hilzenrath, SEC Chief Defends His Restraint: Cox Rebuffs Criticism of Leadership During the Crisis, WASH. POST, Dec. 24, 2008, http://www.washingtonpost.com/wp-dyn/content/article/2008/12/23/AR2008122302765.html. But in the extreme case of Iceland, whose financial system collapsed, the head of its financial regulator was fired for negligence. See Silla Sigurgeirsdóttir & Robert H. Wade, The Strange Case of Iceland: How to Discredit a Financial Regulator, LE MONDE DIPLOMATIQUE, Mar. 2012, http://mondediplom.com/blogs/the-strange-case-of-iceland-how-to-discredit-a.

\(^\text{171}\) See supra note 44 and accompanying text.
Local incorporation strategies will feed back into regulators’ tendency to shrink from innovation, as they limit the reach of regulatory diversity, and hence the benefits to be gained from innovation. For if the international activities of banks chartered in Basel-departing nations are in many, if not most, instances subject to Basel, then regulatory diversity will be highly localized. That is, the impact will be realized primarily, if not exclusively, within the Basel-departing nation, and then even only partially experienced by international bank groups for which it is the home regulator. Such an outcome should not be troubling for a nation’s principal goal in undertaking an alternative regulatory approach should be to achieve better outcomes for its own financial system, and there would still be the benefits, from a global perspective, of gaining information regarding the effect of alternative regulations and lessening contagion due to regulatory error in harmonized regimes.

But were a nation’s international banks’ operations so burdened by numerous subconsolidation capital requirements that bank profitability suffered and the nation’s exercise of consolidated supervisory authority was rendered ineffective, then the benefits the nation (and its banks) would reap from innovating would be severely diminished, and the incentive to experiment in the first place would be reduced. This suggests that the likelihood of a nation initiating a departure from Basel would depend on whether its internal market is sufficiently large (or sufficiently isolated from global markets) to capture the expected gains from alternative regulatory arrangements. This scale effect could further limit the extent of departures, as nations with the largest markets are likely to exert greater influence over Basel and thus likely to have their preferred regulatory regime implemented within it.172

The crimping of advantages to be had from regulatory diversity from the absence of mutual recognition should, however, be mitigated over time. It can

172. A good illustration of differential political influence is the Basel Committee’s recent determination of which assets will count to fulfill Basel III’s impending requirement of a liquidity buffer, see Frances Schwarzkopff, Basel Seen Rotten in Denmark as Banks Bypassed, BLOOMBERG (Feb. 6, 2013, 8:59 AM), http://www.bloomberg.com/news/2013-02-05/basel-seen-rotten-in-denmark-as -banks-bypassed.html. In response to a survey of banks that indicated that many would have difficulty meeting the requirements, the Committee expanded the range of assets that could qualify to include several non-government securities, such as corporate debt and equities, but not covered bonds, which are a form of MBS. Id. Covered bonds are held extensively by Danish banks, both because they are used to fund the Danish housing market and because Danish government bond issuance is quite small. Id.; see also Frances Schwarzkopff, Denmark is Biggest Loser in Basel Plan Redefining Assets, BLOOMBERG (Sept. 25, 2012, 4:09 AM), http://www.bloomberg.com/news/2012-09-24/denmark-is-biggest-loser-in -basel-plan-redefining-trading-assets.html. Moreover, with AAA ratings, Danish covered bonds are, ironically, more highly rated than the sovereign debt of some Basel Committee members, which are qualifying assets. See, e.g., Tony Boyd, Leaps and Bounds in Demand for Dollar, AUSTL. FIN. REV., Nov. 28, 2012, http://www.afr.com/p/business/chanticleer/leaps_and_bounds_in_demand_for_dollar_si PemblIRs2pe3EaZHka2O (listing AAA-rated sovereigns and excluding many EU members, such as France, Greece, Italy, Spain, and Portugal). But covered bonds are not held in substantial amounts by banks in the nations represented on the Committee. See Schwarzkopff, Basel Seen Rotten in Denmark as Banks Bypassed, supra. Denmark is unsurprisingly not on the Committee.
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 informs decision-making and demonstrates that regulatory innovation has strengthened the affected banks and financial systems. Moreover, as Basel requirements become outmoded with technological innovations and changing economic circumstances, even the larger, more financially developed and influential nations might find it advantageous to pursue departures through the review process because doing so would be far more expeditious than seeking to amend the Accords.

III. Conclusion

This Article challenges the prevailing view of the efficacy of harmonization of international financial regulation in the Basel Accords, contending that, contrary to its expressed objective, Basel has repeatedly failed and harmonization has increased, rather than decreased, systemic risk with devastating consequences. By incentivizing financial institutions worldwide to follow broadly similar business strategies, harmonized regulatory error contributed to the unleashing of a global financial crisis. The Article contends, accordingly, that there is value to be had in increasing the flexibility of the Basel architecture to foster diversity and experimentation in international financial regulation.

The fast-moving, dynamic nature of financial markets renders it improbable that regulators can predict with confidence the regulatory policies optimal for reducing systemic risk, or what future categories of activities or institutions might generate systemic risk. At the same time, internationally-harmonized regulation has impeded the acquisition of knowledge about the comparative effectiveness of differing regulatory arrangements, thereby lowering the quality of decision-making, as nations are constrained from experimenting with alternative regulatory arrangements. Basel needs to be made more adaptable and resilient for confronting regulatory challenges by incorporating a procedural mechanism through which departures along multiple directions and dimensions from Basel’s strictures are not only permitted but encouraged.

The core of the proposed diversity mechanism is a system of peer review that would allow nations to depart from Basel with approval keyed to whether a proposal would significantly increase global systemic risk. The proposed mechanism provides safeguards, given the limited knowledge that we do possess, against the racheting up of systemic risk, by requiring ongoing monitoring along with periodic reassessments of approved departures for their impact on global systemic risk. If a departure were found to increase global systemic risk, then its approval would be withdrawn and the departing nation would have to revert to Basel or recalibrate its regulatory approach so as to no
longer adversely impact the global financial system. Adoption of the diversity mechanism should improve the quality of international regulatory decision-making, by providing valuable information on what regulation works best under what circumstances. It would also supply a safety valve against regulatory errors increasing global systemic risk by reducing the likelihood that international banks will all be following broadly similar, flawed strategies.

Cross-border regulatory coordination would be even more pressing when diversity is introduced into international financial regulation than it is at present. But the difference is one of degree, rather than kind. Existing coordination mechanisms of supervisory colleges, memoranda of understanding and local incorporation policies could accommodate regulatory diversity and would circumscribe any potential opportunity for regulatory arbitrage. In fact, those mechanisms’ effectiveness in cross-border coordination might well be enhanced under the diversity mechanism, as home and host authorities would have a powerful incentive to be attentive to information sharing and coordinated supervision when regulations differ, as regulators would be keenly aware that they are no longer focused on monitoring identical matters.

There are trade-offs that must be made with any regulatory scheme, and the diversity mechanism is not an exception. There would be an increased cost to firms and regulators from having to operate in an environment of increased regulatory complexity that multiple regulatory regimes would, no doubt, produce. However, such costs would be constrained as the number of Basel-departing nations can be expected to be quite limited, at least at the outset, given regulators’ incentives tending to favor the status quo and the need for a market of sufficient size for a nation to be able to internalize the cost to large banks of operating under diverse regimes. Moreover, international banks can avoid increased costs by choosing not to operate within Basel-departing jurisdictions. And of course, the costs will be offset by expected benefits of improved decision-making and lowered risk of regulatory error leading to a global crisis because banks worldwide are following similarly flawed regulatory-induced strategies.

Finally, and perhaps most important in any assessment of regulatory diversity, it must be noted that while in existence for over a quarter of a century, harmonization under Basel has failed repeatedly to fulfill its objectives. Indeed, experience teaches that retaining the regulatory status quo can come at a considerable cost. Yet the fundamentals of Basel’s failed regulatory architecture are still in place, and Basel III’s add-ons are largely untested. The proposed diversity mechanism would permit international financial regulation to be empirically informed by experimentation and to evolve gradually, rather than the current state of affairs which consists, to a much greater extent than is candidly admitted, of regulating in the dark.
Appendix. Was Basel Effective in Meeting its Stated Goals Prior to the Financial Crisis?

Given the confluence of factors contributing to the global financial crisis, it could plausibly be maintained that any international regulatory system would have failed. This Appendix responds to such a contention by providing an overview of the literature assessing the efficacy of Basel in meeting its objectives in more normal times. An extensive pre-crisis literature sought to evaluate whether regulatory compliance with core Basel principles improved national banking systems' performance and stability, the first of Basel's two objectives. This research is decidedly less than encouraging for advocates of global harmonization and Basel as currently constituted, because it does not identify a significant or lasting positive impact on system performance or stability from the Accords. Although there has been far less research effort directed at Basel's second objective of equalizing competition, the literature indicates that Basel has not successfully met that objective either.

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

This Section summarizes research evaluating the impact of Basel capital requirements in advancing the goal of improving system stability, as well as bank performance. The effect of regulation on both dimensions is reviewed because, while researchers typically treat them as distinct concerns, they are quite related: banks' systematic poor performance can destabilize a financial system. The findings of a comprehensive review of the literature on Basel I undertaken by a working group of the Basel Committee are presented first. There follows a summary of the findings of the most comprehensive cross-country comparative research undertaken since the working group's review, which draws on data from a series of large-scale surveys of national banking regulators concerning the implementation of Basel I and II.

1. Basel Committee Working Group Study of the Effectiveness of Basel I Capital Requirements

In 1998, ten years after the adoption of Basel I, the Basel Committee established a working group (the Group) to study the effectiveness of the Accord. The Group considered three questions. First, did Basel I's fixed minimum capital requirements increase bank capital and, if so, was the increase achieved by increasing capital or reducing lending? Second, did Basel I's fixed capital requirements limit risk-taking as intended, or had banks been able to avoid the requirements by shifting to riskier assets within a risk-weight class or otherwise engaging in regulatory arbitrage? And, third, did Basel I have
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unintended consequences (apart from regulatory arbitrage), such as an adverse impact on the real economy by reducing lending.\textsuperscript{173}

The Group reviewed over 130 research papers and reached the following conclusions: (i) initially, 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, Basel I appeared to have limited lending, contributing to economic weakness.\textsuperscript{174} Although the Group’s conclusions are not the view of the Basel Committee, given that the study was conducted under the Basel Committee’s auspices, it is instructive that the assessment was at best equivocal regarding the efficacy of Basel I’s impact on banks and the financial system.

i. Impact of Capital Requirements on Bank Behavior

As to be expected, the literature shows that capital ratios rose, approximately 2%, from 9.3% to 11.2%, from the adoption of the Accord in 1988 to 1996, with countries that had been closest to the Basel I minimum experiencing larger increases.\textsuperscript{175} 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 the contention that capital requirements cause 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 attract investors, independent of the level that was required under the Accord).\textsuperscript{176} It is not possible, however, to determine econometrically which factor—Basel requirements or market forces—induced banks to increase their capital.\textsuperscript{177} If the market, rather than the Accord’s minimum capital requirements, was the impetus for banks’ increasing capital, then the perceived need for globally harmonized requirements would be undercut, as banks would have been beefing up their capital in response to the demands of investors even in the absence of Basel.

In evaluating whether the Accord had increased risk-taking, the Group considered two possible mechanisms. First, theory suggests that in response to regulatory capital requirements, banks would increase the risk of their assets by shifting to riskier assets within each asset category with the same capital

\textsuperscript{174} Id. at 2.
\textsuperscript{175} Id. at 6. Some regulators, including those in the U.S. and U.K., required capital ratios higher than the Basel minimum on a bank-by-bank basis. Id.
\textsuperscript{176} The regulatory and market factors may be interrelated. For example, the Group suggests that enforcement of a clear capital requirement might facilitate investor pressure on banks to raise capital ratios. Id. at 15.
\textsuperscript{177} See id.
The Group reviewed two studies that sought to test this hypothesis. The studies found that although bank risk levels increased after they became subject to capital requirements, banks that had been well capitalized prior to the regulation increased their risk as much as did poorly capitalized ones. Such a finding would seem to be at odds with the theory that only banks subject to a new capital constraint respond by increasing risk. However, the findings could be reconciled if, upon the imposition of capital requirements, market discipline moved all banks’ target capital ratios to a new, higher equilibrium, rather than only those with previously low capital ratios. Based on the inconclusive findings and methodological concerns, the Group concluded that there is no reliable evidence that capital requirements increased risk-taking.

When the Group turned to the second mechanism by which it hypothesized bank risk-taking could have increased, securitization, it did conclude that, over time, banks were able to exploit the Accord’s capital requirements. The Group viewed securitization as a means of engaging in regulatory capital arbitrage, by enabling a bank’s capital ratio to look “artificially high” relative to the riskiness of its exposure. There are a number of plausible explanations for the explosive growth in securitizations that are unrelated to regulatory avoidance, such as, reducing debt financing costs or obtaining better diversification of funding sources, which the 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,” and that banks were able to reduce the effectiveness of capital requirements by securitizing liabilities.

In reaching this conclusion, the Group relied on estimates by Federal Reserve staff and market reports of institutions’ securitization activity.

178. Id. at 20.
179. Id.
180. Id. at 20-21. 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 Basel categories. Rather, both examined banks’ overall risk, and hence could at best be suggestive of the risk-taking theory. In addition, the studies’ findings were not robust across countries.
181. 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 under Basel, although it did not change a bank’s mix of capital assets nor its risk, because the bank, through the securitized loan, could provide recourse to the buyers without having to add capital. Id. at 23. The report’s appendix provides several numerical examples illustrating how securitization enabled banks to circumvent Basel capital requirements. Id. at 48. The regulatory arbitrage analyzed by the Group differs from the regulatory arbitrage discussed in Subsection II.B.4 of this Article, supra, which addresses regulatory arbitrage across different regimes. The Group’s focus is on regulatory capital arbitrage within a single regulatory regime due to banks’ willingness to incur costs to avoid regulation perceived to be a tax (i.e., capital requirements higher than the amount banks would voluntarily hold).
182. Id. at 26.
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The Group's conclusion regarding Basel's impact on banks' use of securitization is a consequential one. Securitized mortgages were to spark the blow-up of the repo and ABCP markets and trigger the financial crisis of 2008-09. To the extent that banks worldwide followed a broadly similar strategy of taking advantage of Basel risk weights by leveraging up on preferred assets, as the text of this Article asserts occurred in the global financial crisis, international harmonization of financial regulation had the unintended consequence of increasing, rather than decreasing, systemic risk. The inference to draw regarding the financial crisis from the Group's conclusion on securitization is that Basel's incentivizing banks to use securitization extensively, and not the inherent characteristics of securitized assets, was the source of the global blowup.

ii. Impact on the Real Economy

In addition to studying the impact of Basel's capital requirements on banks' decision-making, the Group examined the Accord's macroeconomic effect. Motivating that inquiry was the concern that banks constrained by capital requirements would reduce lending, thereby causing a credit contraction and harming the real economy. Were that to be the case, prudential goals would become quite difficult to achieve as they could be working at cross-purposes to economic growth, and the tradeoff between those goals would have to be factored into a regulatory assessment, greatly complicating a regulator's decision-making.

Although there is variation in banks' reactions to capital constraints—some increase capital by issuing equity while others do so by curtailing lending—the Group reported that studies find that, in some countries over some time frames, banks respond to binding capital requirements by reducing lending. However, paralleling the interpretive challenge in assessing whether the Accord's minimum capital requirements increased capital ratios, as the Group noted, confounding factors make it difficult to determine econometrically if the reduction in lending was due to Basel capital requirements or the market forcing a capital adjustment on banks. The Group concluded that banks took the "least costly" approach in response to binding

183. Id. Economic models developed at the time suggested that risk-based capital requirements, which are at the core of Basel, could increase credit rationing or raise the cost of capital, which would harm economic growth. See BARTH ET AL., supra note 20, at 54.


185. Jackson et al., supra note 173. Examples of confounding factors include deposit outflows, equity-market induced capital shocks, and decreased loan demand.
capital constraints, which included adjusting "the composition or level of lending" when issuing equity was more expensive.\textsuperscript{186}

The data connecting bank responses to capital requirements with contraction in lending present a genuine regulatory quandary. Because credit contraction reduces economic growth,\textsuperscript{187} prudential and growth goals are in conflict. 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 is not conducive to financial stability. The studies' ambiguous findings reinforce this Article's contention that financial regulation is a highly 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. They further reinforce this Article's contention of the benefit—generation of information relevant to regulatory decision-making—that could be had from the smaller-scale regulatory experimentation that the proposed diversity mechanism would foster.

2. Assessing Basel I and II Using Bank Regulator Surveys

The most comprehensive cross-country comparative analysis of bank regulation and performance, which was completed after the Group's literature review, was undertaken by James Barth and colleagues.\textsuperscript{188} They 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, Basel II had just been proposed, and an aim of their research was to investigate whether the new framework would be effective. Accordingly, they constructed indices to measure nations' regulatory quality regarding the three pillars that would comprise Basel II: capital requirements,

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supervision and market discipline (disclosure requirements). They use the indices 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.

Conducting a statistical analysis using data from the first survey, Barth et al. find that neither stronger capital 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 regulation to be market discipline, Basel II's third pillar. Their analysis further indicates that more stringent capital requirements do not compensate for weaker supervision (interaction effects are insignificant). Given the centrality of capital requirements to international regulation, the absence of robust significance of the capital requirement variables should be particularly troublesome for central bankers and financial regulators because it

189. The indices are 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, whether 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. See BARTH ET AL., supra note 20, at 337-38. 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. See Barth et al., Bank Regulations are Changing, supra note 188, at 9 n.5.

190. The regulatory variables and other country-specific characteristics, such as the quality of the legal system, are regressed on dependent variables measuring bank performance and system stability. Findings are subjected to robustness tests, including the use of instrumental variables 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 188, which analyzes data from all three surveys. System stability is measured by the probability of a nation suffering a systemic banking crisis, which is identified by the following: implementation of emergency measures, such as banking holidays; large-scale nationalizations of banks; 10% of the banking sectors' total assets being nonperforming; or banking sector rescue costs of at least 2% 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. But, as Barth et al. note, there are no earlier cross-country regulatory data and, mitigating the methodological concern, there are data suggesting that bank regulation has not changed substantially over the time frame. BARTH ET AL., supra note 20, at 214.

191. BARTH ET AL., supra note 20, at 12, 224, 228, 255-56.
192. Id. at 229, 255.
193. Id. at 255. In addition, Barth et al. 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.
194. Id. at 222. Nor do stricter capital requirements offset the "destabilizing effects" of generous deposit insurance. Id. at 221.

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suggests that the harmonization of capital requirements has not advanced 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, which the statistical analysis could not identify because harmonization under Basel I reduced the variation in nations' capital requirements.\textsuperscript{195} And, of course, econometric analysis cannot disprove a counterfactual; that in the absence of the Basel Accords, there would have been an even greater number of systemic crises. Still, Barth, et al.'s conclusion is that the "analyses do not provide much support for the view that capital regulations exert a reliably positive impact on either bank stability or performance."\textsuperscript{196} They further add that their "results question the merit and desirability of Basel II's second pillar: increasing the authority of the official supervisory agency."\textsuperscript{197}

Barth et al. undertook panel regressions to measure the impact of the regulatory index variables on bank performance using all three surveys, and difference-in-difference regressions to evaluate the impact of changes in regulation over the first and last surveys on bank performance.\textsuperscript{198} There is only a minimal difference between these analyses and the analysis of the initial survey's data. In both the panel and difference-in-difference analyses, which use banks' relative efficiency scores as the performance measure, neither heightened capital requirements nor supervision robustly influence performance.

More specifically, strengthened capital requirements do not appear to improve bank performance significantly. The capital requirements index variable is only marginally statistically significant at 10%, and when the analysis also controls for the supervisory and market discipline variables, then it is no longer even marginally significant.\textsuperscript{199} There is also a weak result regarding strengthened supervision. If the banking regulator is independent from the executive (as opposed to the legislative) branch, then greater supervision improves performance (the interaction term is significant).\textsuperscript{200} 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 overlooked, if not ignored, by most regulators and legislators not only in the implementation of Basel III but also in the Dodd-Frank legislation and EU directives enacted in the wake of the global financial crisis.

\textsuperscript{195} Id. at 222.
\textsuperscript{196} Id. at 256.
\textsuperscript{197} Id. at 255.
\textsuperscript{198} Barth et al., \textit{Enhance or Impede?}, supra note 188.
\textsuperscript{199} Id. at 2889 tbl.5.
\textsuperscript{200} Id. at 2888.
Recalibrating the Basel Architecture

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 still a mainstay of Basel III and 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, due to data limitations, is subject to fewer and less conclusive tests than the performance analysis). It is noteworthy that Barth et al.'s findings and conclusions parallel those made by the Group in reviewing the earlier literature on the limited effectiveness of Basel I. It is also noteworthy that despite relying on data covering "rules on the books," Barth et al.'s findings are consistent with a large-scale study of implementation of the rules, which found that better compliance with core Basel principles did not result in sounder banks. The pre-crisis literature's inability to identify a positive relationship between Basel requirements and either banking performance or system stability bolsters the contention that there is value to be had in rethinking the overall approach to international financial regulation rather than merely tinkering at the edges with Basel's requirements.

B. The Relationship Between Banking Regulation and Bank Competitiveness

The Group also examined whether the introduction of minimum capital requirements in 1988 fulfilled the Accord's second objective of equalizing international banks' competitiveness. The most consistent reading of the data is that the Accord has failed to level the playing field.

For example, the Group examined the hypothesis that, if Basel's harmonization of capital requirements had leveled the playing field, then there would not be large discrepancies across banks' cost of capital. Yet there were large differences across nations in banks' cost of equity. The Group also undertook its own data analysis of the dispersion of capital ratios across nations, as the dispersion of capital ratios would indicate the presence of competitive differences that would be obscured by examining convergence of average capital ratios. It found that there was no reduction in the dispersion of

201. In post-crisis work, Barth et al. identify the regulatory capture by large banks or regulators' subscribing to simplistic ideologies as a principal contributor to the financial crisis. BARTH ET AL., supra note 34. They do not relate these theories of regulatory behavior to their prior empirical research discussed in this Appendix, but the two are not inconsistent: regulatory capture or regulators' mistaken ideologies could explain why any financial regulation, including Basel, would not, or could not, prevent financial crises.


204. Id. at 41.
capital ratios over eight years following the adoption of Basel I.\textsuperscript{205} The Group’s explanation of these findings of the Accord’s lack of an impact on the global playing field was that the effect of other national differences dominates that of capital requirements on banks’ international competitiveness.\textsuperscript{206}

The explanation for the Accord’s failure to level the playing field—a host of differences in national policies not within Basel’s control—has critical policy implications that are rarely acknowledged by advocates of globally harmonized financial regulation. If Basel’s objective to level the playing field through harmonized capital requirements (explicit in Basel I and II and implicit in Basel III) is unrealistic, given divergences in other national policies, then a commonly invoked objection to permitting deviations from Basel—that non-uniformity will lead to regulatory arbitrage or a “race to the bottom” as nations jockey to advantage domestic banks’ international position—is not well-founded. 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, which are neither harmonized by Basel nor even a glimmer in regulators’ eyes with regard to further global harmonization efforts.

\begin{footnotesize}
\begin{enumerate}
\item \textit{Id.} at 42.
\item 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 (i.e., some activities could lead banks to hold more capital than others because of their perceived risk). \textit{Id.} National differences affecting the cost of equity include a nation’s macroeconomic stabilization policies, taxes, and savings of its citizens. \textit{Id.}
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