

International Coordination of Financial Supervision: Why Has It Grown? Will It Be Sustained?

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Introduction

Over the past forty years, international cooperation in financial supervision¹ has expanded in depth and scope at a remarkable rate. Partly this reflects a growing realization of the potential costs of the negative externalities that can occur in the absence of coordination. The growth of global financial institutions means that actions taken by the home country supervisor can have a destabilizing impact on host countries, and actions taken by a host country supervisor may have adverse consequences for the home country. Moreover, discrepancies in supervisory policies and prudential regulation may undermine the effectiveness of national policies by providing opportunities for regulatory avoidance. Inevitably, these economic concerns are accompanied by concerns about “unfair” competition that may arise from differences in regulatory and supervisory policies across countries.²

To some extent, efforts to coordinate international supervisory policies are also motivated by the hope of achieving positive externalities. These may include an improvement in the international allocation of capital, enhanced diversification of risks, increased efficiency

^aI am grateful to Barbara Novick and Marc Saidenberg for comments on an earlier draft.

¹ It is often useful to distinguish regulation from supervision, but I will use the terms interchangeably in many cases. Usually supervisory coordination precedes regulatory coordination. This has clearly been the case with the Basel Committee, which progressed from attempts to coordinate supervisory policies to attempts to establish minimum capital standards for internationally active banks.

² Herring and Litan (1995) note that regulatory agencies will inevitably be responsive to national interest and often especially responsive to the interests of the institutions they regulate. They caution, however, that giving supervisory authorities the objective of creating a level international playing field projects them onto some very slippery slopes with the danger that international negotiations may slide away from the goal of enhancing the safety and soundness of the international financial system.

in the international payments, a reduction in compliance costs for internationally-active firms,³ and, most importantly, the establishment of an infrastructure to facilitate crisis management when problems occur.

Under what circumstances are sovereign nations likely to cooperate?

Although this paper focuses on international cooperation in financial supervision, insights can be drawn from efforts to achieve international cooperation in public health, the field in which international cooperation has been most successful and extensive. Even though the benefits from international cooperation to prevent the spread of contagious disease now seem obvious, Richard Cooper (1989) found cooperation took nearly a century to achieve.

Although all countries shared the objective of containment of epidemics, and the outbreak of disease often led to public calls for greater regulation, this shared objective was not enough to achieve international coordination. Rather, cooperation took place in incremental stages. It began with exchanges of information on the propagation of diseases and preventive measures and attempts to standardize quarantine regulations. At the same time, officials forged agreements on the classification of diseases and reporting systems to monitor outbreaks. But agreement on cooperative action in the event of an outbreak often proved elusive. So long as countries disagreed about the likely consequences of alternative courses of action, joint decision making was not feasible. Once countries agreed on how to act, however, the extent of cooperation advanced to the establishment of an international agency and joint financing of international action to control and attempt to eradicate contagious diseases. International cooperation in banking supervision has largely followed this pattern, with the

³ Whatever the intent of the negotiators, a reduction in compliance costs has yet to be realized. More generally, in his survey of cooperation in the wake of the crisis, Bayoumi (2014) has observed that a lesson for those interested in promoting cooperation seems to be “it may be more fruitful to focus on the potential for major costs from a lack of cooperation, rather than the minor gains from fuller coordination.”

important exception that cross-border institutions required that supervisors first achieve agreement on how to share responsibilities.

Assuming that supervisory cooperation could avoid significant negative externalities or achieve positive externalities, political scientists have attempted to identify the factors that facilitate international coordination.⁴ They have concluded that cooperation is more likely: (1) the smaller the group of countries that must agree, (2) the broader the international consensus on policy objectives and the potential gains from cooperation, (3) the deeper the international agreement on the probable consequences of policy alternatives, (4) the stronger the international institutional infrastructure for decision making, and (5) the greater the domestic influence of experts who share a common understanding of a problem and its solution.

These considerations help explain why international cooperation in financial regulation began first and has advanced furthest among bank supervisors. Banks in a relatively small group of countries—the Group of 10 (plus Luxembourg and Switzerland)—accounted for roughly 90 percent of international banking activity when the Basel Committee was formed. Second, bank supervisory authorities shared a concern with maintaining financial stability and a keen awareness that banks could be a major source of systemic risk. Third, although supervisory regimes varied widely across countries, each country regulated bank capital and regarded it as a crucial buffer against loss. Fourth, the Basel Committee on Banking Supervision (Basel Committee)⁵ could build from the institutional infrastructure developed by the central bank

⁴ What follows is a brief synthesis of some of the implications of work by Haas (1990), Haggard and Simmons (1987) Keohane (1984), and Milner (1992). Similar implications can be drawn from a game-theoretic perspective (Raman, Liu and Das, 2016).

⁵ Over the years, the committee has undergone several changes of name starting with the descriptive but awkward title the Standing Committee on Banking Regulations and Supervisory Practices. Although the name has changed, the fundamental role has not. For the definitive account of the early years of the Basel Committee from 1974 to 1997, see Goodhart (2011).

governors of the Group of Ten, who had met monthly in Basel for many decades. The ability of supervisors to share this infrastructure to convene regular, confidential, off-the-record exchanges of views to identify sound practices and draft policy papers helped supervisors find common ground without the glare of publicity. Fifth, banking supervision is a relatively arcane subject, which probably affords experts in bank supervision with more scope for autonomous decision making than other government agencies that take actions of more visible political consequence. Moreover, many of the early agreements of the Basel Committee could be implemented without amending domestic legislation.

International cooperation in securities regulation has tended to lag⁶ that in bank regulation in part because securities regulators are much more diverse with markedly differing traditions and cultures. The membership in the International Organization of Securities Commissions (IOSCO) is much larger and more heterogeneous than membership in the Basel Committee, including more than 115 jurisdictions, 75 percent of which are in emerging markets.

Moreover, its members come from a much broader range of regulatory cultures. The 125 “ordinary” IOSCO members are national securities commissions with significant authority over securities or derivatives markets. Another 65 “affiliate” members include self-regulatory organizations, securities exchanges, financial market infrastructures, and other governmental organizations with interests in securities regulation based on their responsibilities for investor protections or compensation funds. Finally, an additional 25 members include subnational

⁶ IOSCO began in 1983 as an inter-American regional association involving eleven regulatory agencies from North and South America. A year later, this group was joined by the first wave of non-American agencies, and the first IOSCO annual conference was held in 1986.

governmental regulators and other international standard-setting bodies.⁷

The International Association of Insurance Supervisors (IAIS) was established in 1994, about a decade after IOSCO and nearly two decades after the beginning of international supervisory cooperation in banking. The IAIS represents insurance regulators and supervisors of more than 200 jurisdictions in 140 countries⁸. This very diverse membership increases the difficulty of achieving international cooperation, which is also impeded by the lack of a consensus, particularly between the United States and the EU over whether the operations of insurance companies are a threat to international financial stability.

A brief history of international cooperation in bank supervision: Allocations of responsibility

Cooperation in international banking supervision began in response to the financial instability that erupted in the aftermath of the closure of the relatively small, privately held German bank, Bankhaus Herstatt, in June 1974. Herstatt was notorious for “overtrading” in foreign exchange markets. When the German authorities discovered that Herstatt had fraudulently concealed losses that exceeded half the book value of its assets, they closed the bank at the end of the business day in Germany on June 26, 1974, at 4 p.m. CET, which was the normal procedure for dealing with an insolvent domestic bank. But this was mid-morning in New York, before clearing and settlement of dollar transactions had been accomplished. On orders from the German authorities, the New York correspondent bank of Herstatt froze its accounts with the result that banks that had sold \$620 million in Asian and European currencies to Herstatt in the spot market and had expected to receive dollars at the close of business in New York suddenly became creditors in a bankruptcy proceeding, which ultimately took more than three

⁷ Information about IOSCO is drawn from its website: https://www.iosco.org/about/?subsection=about_iosco.

⁸ Information about IAIS is drawn from its website: <https://www.iaisweb.org/home>.

decades to conclude.

This event had a disproportionately large destabilizing effect on international interbank markets. Market participants had not expected the authorities would close an internationally active bank in the middle of the clearing and settlement cycle, thereby disrupting the market for the most actively traded currency at the time: the dollar/Deutsche mark market. Indeed, most banks had failed to comprehend that foreign exchange transactions could be subject to credit risk.⁹ While counterparties scrambled to protect themselves, trading in the Deutsche mark/dollar market nearly came to a halt for several weeks. In addition, participants were shocked the Bundesbank had acted unilaterally, without consulting its peers abroad and without extending liquidity support to Bankhaus Herstatt to facilitate an orderly wind down, a practice most central banks had followed in the postwar era.¹⁰

Finally, lack of information regarding the allocation of spot transaction losses and the anticipation of losses on forward transactions with Herstatt caused major dislocations in the eurodollar market. Market participants believed the magnitude of the defaulted foreign exchange contracts was large, but they did not know the identity of the counterparties who would sustain losses.¹¹ In the absence of reliable information, market participants took precautions against the worst-case outcomes. They withdrew lines of credit from banks they judged would be least able to sustain the losses. Many banks that had relied on their ability to borrow at the London Interbank Offer Rate had to pay substantial premiums above the

⁹ This risk became known as “Herstatt risk.” Nearly 30 years later, thirty-nine international financial institutions working together produced a way of eliminating this risk through the launch of the CLS bank, an instantaneous payment versus payment settlement service. This required the extension of central bank clearing hours in several major centers. Currently more than half of global foreign exchange transactions are settled through the CLS.

¹⁰ The Bundesbank defended its actions vigorously, noting that it could not lend to a bank involved in fraud and making it clear that as Germany’s central bank, its focus was conditions in Germany, not the rest of the world.

¹¹ This opacity of interbank connections and the allocation of losses that have not yet been recognized in financial statements remain a serious problem that surely exacerbated the crisis in 2008–09.

benchmark and some were unable to borrow at all. The plight of these banks was exacerbated as market participants raised the troubling question of which central bank, if any, might provide emergency liquidity assistance to these new banks that had located in London to participate in the international interbank market.

Market disruptions were quelled only after the Group of 10 central banks announced that liquidity was available and would be “used if and when necessary” (Johnson and Abrams (1983, p.34). This continued the longstanding preference of central bankers for “constructive ambiguity.” The rationale for this policy is that financial stability can be achieved in the short run through providing liquidity, but moral hazard can be curbed by asserting that there is uncertainty about when and if emergency liquidity assistance would be provided. The flaw in this policy is that market participants inevitably place greater reliance on what the authorities do than what they say. Constructive ambiguity swiftly becomes destructive ambiguity if officials do not behave as expected. This was especially apparent during September 2008, when Lehman Brothers was sent to the bankruptcy court even though six months earlier, the creditors of Bear Stearns, an investment bank half as large and much less complex, had benefited from a nearly \$30 billion government bailout. This inconsistency problem continues to challenge international regulatory and supervisory coordination.

The disproportionately large spillover effects from the closure of Herstatt highlighted the growing interdependence of the international banking system and made clear that prudential supervision had not kept pace with the growing internationalization of banking activity. As a result, they established the Basel Committee, made up of the supervisory authorities from the Group of 10 (plus Luxembourg and Switzerland). The first meeting of the Basel Committee in February 1975 was the watershed moment in international supervisory

cooperation. For most bank supervisors, this was the first opportunity to meet their foreign counterparts. Unlike central bank governors, who had been meeting informally in Basel for several decades, most bank supervisory authorities had an exclusively domestic focus even though many of their banks had become global.

The first official document of the Basel Committee (1975), which later became known as the Concordat, set out guidelines for allocating supervisory responsibilities between home and host governments. The original Concordat delineated three main principles that have informed all subsequent cooperative efforts: (1) no foreign banking establishment should escape supervision; (2) supervision is the joint responsibility of the host and parent authority, with the host assuming primary responsibility for supervision of liquidity and the parent assuming primary responsibility for the supervision of solvency; and (3) transfers of information between host and parent authorities should be facilitated, including both direct inspections by the home country authorities of foreign establishments and indirect inspections by the home country through the agency of host country authorities. In several jurisdictions, sharing of banking information across borders was prohibited by law, so new legislation was necessary to enable cross-border cooperation in banking supervision. Even though most of these at-the-border frictions have been removed, sharing of information regarding weak institutions remains a significant obstacle to effective cooperation.

In times of stress, agreements to share information often fray. Bad news tends to be withheld as long as possible. Often bank managers are often reluctant to share bad news with their regulators, in the optimistic belief that losses may diminish or even reverse before they need to be reported.¹² They fear that they will lose discretion for dealing with the problem

¹² The trading losses in Daiwa's New York branch in 1996 provide an example. A trader in the New York Daiwa office

(and, indeed, may lose their jobs). Similarly, the primary supervisor is likely to be reluctant to share bad news with other domestic supervisory authorities because they fear leakage of bad news could precipitate a liquidity crisis, or another supervisory authority might take action—or threaten to take action—that would constrain the primary supervisor’s discretion for dealing with the problem.¹³ Sharing this kind of sensitive information across borders is even more difficult, in part because different countries have different kinds of restrictions on safeguarding and using this sort of information and may feel compelled to take actions that exacerbate the problem for the home country supervisor.

The Concordat focused solely on supervisory responsibilities and made no mention of the allocation of lender of last resort responsibilities or coordination of deposit insurance and resolution policies.¹⁴ The lack of coordination of these policies aggravated the financial crisis¹⁵ at various stages. Moreover, policies of the lender of last resort, the deposit insurer, and the resolution authority must be coordinated with those of the prudential supervisors and may cause conflicts when they are not. This remains a challenge.

The Concordat was amended in 1979 to include the principle of consolidated supervision. This was viewed as essential to enabling the supervisors of the parent institution to fulfill their responsibilities for oversight of the solvency of the parent institution including

lost \$1.2 million by making unauthorized trades over an eleven-year period. When the trader finally confessed, there was some lag before the Japanese (home country) authorities were informed, but it was another, two-month lag before the Japanese authorities chose to share the information with the U.S. (host country) authorities even though both countries were founding members of the Basel committee.

¹³ Because supervisors are often judged on the basis whether firms fail rather than on the costs of resources misallocated by letting an insolvent institution continue operations and because they often wish to provide time for institution to take corrective action, supervisors frequently exercise their discretion to forbear.

¹⁴ In 1975, several member countries of the Basel Committee lacked deposit insurance and generally did not have a resolution regime for banks.

¹⁵ The phrase “financial crisis” is used to refer to the events from mid-2007 through 2009. The end date is subject to some controversy and arguably varies considerably from country to country.

foreign branches and controlled subsidiaries.¹⁶ Consolidated supervision rests on the implicit assumption that the parent institution can move capital and liquidity without friction from any entity with a surplus to another affiliate that has a shortfall. This is an appealing assumption because it would enable institutions to deploy their capital and liquidity most efficiently. Unfortunately, in times of stress, when this flexibility is most needed, it often turns out to be a delusion. Depositor preference laws, national bankruptcy procedures that often favor domestic creditors, and the possibility that countries will ring-fence local offices of foreign banks may limit the fungibility of capital and liquidity across national borders. This means the location of capital and liquidity does matter, and the supervisory authorities cannot rely on surpluses in one location to offset losses in another.¹⁷ Solvency must be monitored on *both* a stand-alone and a consolidated basis. As a consequence, solvency and liquidity supervision are likely to be duplicative to some extent, and internationally active banks will find it very difficult to exploit the full gains from diversification that might be achieved by managing an integrated, worldwide network of banking offices without the constraint that each foreign office may need to satisfy stand-alone capital and liquidity requirements.

The first real test of the Concordat occurred with the collapse of Banco Ambrosiano in 1982. Unfortunately, the incident revealed a failure in the application of the first principle of the Concordat—that no internationally active bank should escape supervision. The Italian authorities (along with a consortium of Italian banks) bailed out creditors of the parent bank,

¹⁶ The principle of consolidated supervision was intended to be part of the original Concordat, but the West Germans needed to enact new legislation to be able to implement the principle. It was officially announced in March 1979 (Basel Committee, 1979).

¹⁷ The local supervisory authority must assume that under some extreme circumstances the parent bank may choose to exercise the option of limited liability and walk away from a troubled affiliate. Thus, in the absence of legally enforceable guarantees from the parent bank, host country authorities can take only limited comfort in the assurance that a deficiency in the net worth of the local office could be offset by a capital surplus in another office in another country. This point also applies to branches if the local authorities believe that resident branches may not be treated equitably with home country branches.

but declined to bail out the creditors of the bank's Luxembourg subsidiary, Banco Ambrosiano Holdings. This entity was regarded as a nonbank holding company by the authorities in Luxembourg and therefore not subject to banking supervision even though it raised more than half a billion dollars in the interbank market and owned two banks: Banco Ambrosiano Overseas Ltd., the fourth-largest bank in Nassau, and Banco Ambrosiano Andino in Lima, Peru. Moreover, Luxembourg corporate secrecy laws protected Banco Ambrosiano Holdings from scrutiny by the Italian authorities. The Basel Committee responded to the incident with a revision to the Concordat (Basel Committee, 1983) that recommend measures that should be taken to prevent an internationally active bank from evading effective official oversight. This revision also strengthened the allocation of responsibilities between home and host countries by giving the home country authority explicit responsibility for oversight of the entire consolidated balance sheet of the parent institution including all foreign offices and controlled subsidiaries.

The next crisis involving an internationally active bank was the collapse of Bank of Credit and Commerce International (BCCI) in 1991. It revealed that the Basel Committee had still not succeeded in implementing the first principle of the Concordat, even within the original member countries of the Basel Committee. Like Banco Ambrosiano Holdings almost a decade earlier, BCCI had taken root in the gaps in the international supervisory network. Not only did BCCI manage to evade consolidated supervision by the home country authority, it also managed to evade consolidated external oversight altogether for most of its existence by hiring different external auditors for each of its two main subsidiaries.¹⁸ The Basel Committee responded to the BCCI affair with a restatement of the Concordat as a set of minimum standards for the

¹⁸ For a broader discussion of the rise and fall of BCCI and its implications for international supervision, see Herring (1993 and 2005).

supervision international banks (Basel Committee 1992). The new revision also placed responsibility on the host authority to act if not satisfied that a foreign bank is properly supervised on a consolidated basis by a competent home country authority. These actions could include the imposition of restrictive measures or the prohibition of operations.

The BCCI case highlighted the challenge of making consolidated supervision a reality when neither the home nor host authority was willing to take the lead. The “supervisory college” that was improvised as a substitute proved entirely inadequate.

Although motivated by the objective of enhancing international financial stability, most of the efforts of the Basel Committee have focused on how to supervise internationally active banks that are in sound condition. Many of these initiatives have sought to ensure that banks remain in sound condition, but surprisingly little had been done to harmonize supervisory practice and procedures when banks approach insolvency. Yet these banks pose the most serious threats to financial stability and may cause some of the most intractable conflicts between home and host supervisory authorities. BCCI revealed many of these conflicts in home and host country procedures, but the topic was not addressed by the Basel Committee until 2009, when the Group of 20 (G-20)¹⁹ directed the Financial Stability Board (FSB) to develop policies to ensure that every global systemically important bank could be resolved cooperatively without destabilizing spillovers.

A brief history of international cooperation in bank supervision: Harmonization efforts

In addition to the Concordat, the Basel Committee has made substantial efforts to reduce

¹⁹ The G-20 was founded in 1999 as a group of central bank governors and ministers of finance of 20 economies that account for more than 85 percent of world gross domestic product. Membership includes 19 individual countries as well as the European Commission and the European Central Bank. The importance of the G-20 was elevated in 2008, when the heads of state met. This practice continues.

conflicts between home and host country supervisors by harmonizing supervisory frameworks and regulations. Progress in this regard has been remarkable. When the Basel Committee was formed in 1975, not only did most supervisors not know their counterparts, even in neighboring countries, but they also approached their work with fundamentally different conceptual frameworks and remarkably different views on even the most basic concepts of supervision, such as how to define capital and whether onsite examination of banks was appropriate.

In a series of papers on supervisory concepts and sound practices, the Basel Committee has made considerable progress in reducing, if not eliminating, many of these differences. The first notable achievement was the Core Principles of Effective Banking Supervision (Basel Committee, 1997). Numerous white papers have followed on a wide variety of topics related to effective bank supervision.

The Basel Committee (1997, 2006) identified 25 core principles for effective banking supervision, organized under seven broad categories that included the preconditions for effective supervision, prudential regulations and requirements, methods of ongoing banking supervision, information requirements, and the formal powers of supervisors. These principles reflected a consensus among the members of the Basel Committee regarding good (if not best) practices in banking supervision and were intended to facilitate convergence in supervisory frameworks between home and host countries not only within the Basel Committee, but more broadly.

Although the principles were not intended to be enforceable, the Financial Sector Assessment Program conducted by the International Monetary Fund (IMF) and the World Bank uses the core principles as a benchmark against which the supervisory frameworks of individual countries are evaluated. This has had the practical consequence of obliging countries to justify

instances in which their approach to banking supervision diverges from the core principles and, in several instances, has probably accelerated international convergence in supervisory approaches. More recently, the Basel Committee and its governing body, the Group of Central Bank Governors and Heads of Supervision, have placed considerable emphasis on full and effective implementation of Basel standards within a globally agreed timeline. The adoption of Basel standards is monitored on a semiannual basis based on reports supplied by each jurisdiction. The Basel Committee also evaluates the consistency and completeness of the adopted standards and gaps are identified. Nonetheless, since the Basel Committee has no enforcement powers, its efforts to ensure consistent implementation are limited mainly to moral suasion or a “name and shame” approach.

During the 1980s, the Basel Committee moved beyond harmonization of supervisory concepts and frameworks to the more ambitious goal of forging a convergence in rules for minimum acceptable capital standards for internationally active banks. This initiative was motivated by the perception that internationally active banks lacked sufficient loss-absorbing capital for their risk exposures, particularly as an increasing number of developing countries were unable to service their bank loans. Moreover, as individual countries attempted to raise capital requirements unilaterally, they found their internationally active banks losing market share to foreign banks with lower capital requirements and concluded that efforts to strengthen bank capital must be internationally coordinated. Although concern for competitive equality²⁰ was secondary to the objective of enhancing the safety and soundness of the

²⁰ The motives of participants in international coordinating efforts are heterogeneous and change over time and from issue to issue. Some countries have sought to protect key domestic firms and special characteristics of the national financial system to the maximum extent possible. Sometimes negotiators have recognized the need for changes in national rules and regulations and find it convenient to agree to national standards that will strengthen domestic reform efforts.

international banking system, it has remained a preoccupation of the Basel Committee and coordinating efforts in other financial sectors and is the underlying reason for number of otherwise inexplicable exceptions and complications in policies.

The Basel Committee found it difficult to reach agreement until a meeting between the Chairman of the Federal Reserve Board, Paul Volcker, and the Governor of the Bank of England, Robin Leigh-Pemberton, led to a proposal for an Anglo-American Accord on Capital Adequacy.²¹ This spurred the Basel Committee to reach consensus on how to measure regulatory capital and how various exposures should be risk-weighted to form a risk-adjusted capital ratio that would be subject to a common minimum.²² The Basel Accord on capital adequacy, subsequently known as Basel I, (Basel Committee, 1988), defined two kinds of regulatory capital, set out fairly broad guidelines for assigning risk weights to exposures based on gross distinctions across borrowers or counterparties, and established minimum, risk-adjusted capital ratios that internationally active banks should meet.²³

In subsequent revisions—Basel II and Basel III—capital requirements have become geometrically more complex. The Basel Committee took pride in the simplicity of the Accord. The essentials could be written the back of a postcard²⁴ and any numerate clerk could compute a bank's capital requirements. In contrast Basel II was an order of magnitude longer and enormously more complex. Andrew Haldane (2011) found the computation of required capital for a large bank under Basel II might require 200,000 or more risk buckets and more than 200

²¹ As a practical matter, this is often how progress is made when a diverse group cannot reach agreement. More recently, a joint proposal by the Bank of England and the Federal Deposit Insurance Corporation program for a single point-of-entry strategy for the resolution of international banks has advanced efforts to implement resolution policies.

²² Since no attempt was made to harmonize accounting standards or enforcement procedures, the consistency of the application of rules was uneven at best.

²³ See Acharya (2003) for a dissenting view on the desirability of adopting harmonized capital requirements.

²⁴ The full document, including appendices, was 27 pages.

million calculations. Moreover, these calculations varied from bank to bank because each large bank relied on its own unique internal models for some of the inputs in the calculation. In addition, these calculations might vary over time for an individual bank because of changes in its internal models.

This eruption of complexity was in quest of more risk-sensitive risk weights that would discourage regulatory arbitrage. Implicitly the Basel Committee gave up its original goals of simplicity and transparency to adopt a more risk-sensitive standard. Serious doubts remain about whether the Basel Committee succeeded in making the system safer, but unquestionably they increased compliance costs by orders of magnitude. Moreover, the standards have become so opaque that market discipline has been impeded. Haldane (2011) summed up the problem well when he observed, “Regulatory capital ratios may have become too complex to verify, too error-prone to be reliably robust and too leaden-footed to enable prompt corrective action.”

The Basel III reforms have not reduced the complexity of Basel II. Indeed, complexity has increased with the identification of new kinds of regulatory add-ons, a new leverage ratio, and two new liquidity requirements. The magnitude of compliance costs raises concerns about the impact on the cost of credit and heightened incentives for moving financial transactions outside the banking system—and the regulatory framework.

Systemic risk and IOSCO

From its inception, members of IOSCO understood the benefits of international coordination in enforcement efforts to curb and punish securities fraud. The focus on systemic risk came much later, when the collapse of a bank, Barings PLC, spilled over into securities markets.

The collapse of Barings PLC revealed serious failures of coordination and lapses in information sharing among functional regulators in the United Kingdom, home regulatory authorities in the United Kingdom, host regulatory authorities in Singapore, and market regulators in Asia. A rogue trader at Barings Futures Singapore, whose mandate was to arbitrage futures prices on the Nikkei Index between the Osaka and Singapore exchanges, managed to conceal losses over a two-year period. When the Great Hanshin earthquake in January 1995 destroyed Japan's southern port in Kobe, the Nikkei Index dropped abruptly, inflicting losses on the trader's positions that were too large to conceal. The trader fled Singapore in an attempt to evade prosecution, but damage was so large that Barings PLC was forced to enter bankruptcy administration. Securities regulators became involved when losses at Baring Securities threatened to spill over to the exchanges on which it traded. This highlighted the potential for the contagious transmission of losses across exchanges. Concerns that procedures for loss sharing on various securities exchanges would be activated led some firms to prepare to abandon exchange membership rather than share in Barings's losses. This posed a direct threat to the infrastructure for trading futures.

National securities regulators attempted to organize a coordinated response but encountered serious difficulties, including the inability to locate the responsible authorities in some jurisdictions. The sale of Barings to ING averted the feared contagious collapse in derivatives trading, but the securities regulators realized they had experienced a near brush with disaster and took steps to facilitate cooperative action if a similar event should occur in the future. Regulatory authorities from sixteen countries who have oversight of the major futures and in May 1995 options markets met in Windsor, England, to discuss ways to

strengthen supervision. The resulting Windsor Declaration²⁵ announced a consensus on measures to strengthen cooperation between market authorities and coordinate action in emergencies; protect customer positions, funds and assets; and improve procedures for dealing with a default on a securities exchange.

The bankruptcy of Lehman Brothers also heightened the awareness of weaknesses in the prudential oversight of securities firms. The EU had long been concerned about oversight of the activities of large American investment banks in Europe. Authorities in the EU threatened to force these big five investment banks to form holding companies in Europe if they did not submit to consolidated supervision by a competent authority. Although the Securities and Exchange Commission had no prior experience, it somehow convinced the EU that it was a competent supervisory authority, and in 2004 the five largest investment banks became voluntary Consolidated Supervised Entities (CSE) and subject to Basel II–like capital regulation. When these banks measured their required capital under Basel-like rules, the five CSEs found they had considerable excess regulatory capital and quickly increased their leverage, which was surely not what the EU had intended.²⁶ The subsequent bankruptcy of Lehman Brothers, forced merger of Bear Stearns and Merrill Lynch, and emergency conversions of Morgan Stanley and Goldman Sachs to bank holding company charters provided ample evidence that prudential supervision had not been adequate and elevated these issues on the IOSCO agenda.

IOSCO was largely an international forum for the exchange of ideas until 2001, when the

²⁵ Although leaders of IOSCO were present, this was not an official IOSCO meeting. The sixteen countries that convened the meeting were hosts to derivatives exchanges, nonetheless, the principles agreed in the Declaration were later incorporated in IOSCO documents.

²⁶ See Lo (2012, p.34) for an analysis of the regulatory change, emphasizing that before 2004, the holding companies of the broker/dealers had not been subject to any oversight or leverage constraint. Lo also raises doubts about the magnitude of the impact of the change in rules on leverage. Kwak (2012), however, notes that Lo's analysis fails to emphasize a key point: the SEC's intent was to permit the large broker/dealers to substitute mathematical models for traditional risk weights so that the net-capital calculation would "probably be lower."

market disruption in the wake of the 9/11 attacks and a series of spectacular collapses of firms involved in securities fraud on a global scale—Enron, Worldcom, Parmalat, and Vivendi—motivated the members of IOSCO to adopt a more ambitious agenda to strengthen securities regulation in all member countries. In addition, they adopted an assessment methodology to evaluate each jurisdiction’s implementation of IOSCO standards.²⁷ In the wake of the financial crisis, IOSCO adopted eight new principles, bringing the total to thirty-eight.²⁸ These new principles were a response to lessons drawn from the crisis and are intended to strengthen the global regulatory system. They include principles aimed at specific entities such as hedge funds, credit rating agencies, and auditor independence and broader principles addressing how to monitor, mitigate, and manage systemic risk,²⁹ reviews of the scope of securities regulation, measures to avoid, eliminate, or disclose conflicts of interest and misalignments of incentives. These global standards play a key role in the IMF/World Bank periodic assessments of country’s securities sectors. But, like other global coordinating entities, IOSCO has no enforcement powers.

Systemic risk and IAIS

In the absence of experience with contagious, cross-border transmission of shocks among insurance companies, the coordination of international regulation and supervision of insurance companies has seemed less urgent. Indeed, the general practice of requiring life insurers to maintain ring-fenced funds in each jurisdiction provides considerable insulation from the possibility of cross-border contagion even though many insurance companies have subsidiaries in multiple countries. Moreover, in the absence of federal regulation of insurance in the United

²⁷ See Romano (2010) for an argument against harmonized regulation.

²⁸ For the Objectives and Principles of Securities Regulation, see <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD323.pdf> (May 2, 2017).

²⁹ See Tucker (2014) for a discussion of the inadequacy of the current IOSCO approach to guarding against systemic risk and maintaining financial stability.

States, the insurance supervisor in each state is the relevant authority and generally state insurance supervisors do not take a global view. As a result, the agenda of the IAIS has been largely driven by the European Union, which is forging an integrated EU market for insurance as part of its single markets initiative. To facilitate the development of a single market for insurance the EU has set minimum solvency standards that all member countries must adopt. IAIS principles have usually followed the EU initiatives.

The IAIS has developed a set of Insurance Core Principles (ICP)³⁰ beginning in 2003 and revised it several times to reflect evolving views of sound practices, deal with changes in the insurance sector, and align them to the standards set by the Basel Committee and IOSCO. The most recent amendments to the ICP in 2015 updated several principles including those related to corporate governance, risk management and internal controls, and supervisory cooperation and coordination. In addition, the IAIS has set standards linked to specific ICPs and set general requirements for each national supervisory authority to demonstrate compliance with the ICPs. The assessment methodology was included in the 2011 edition of the ICP document and has been modified in 2012 and 2013. This methodology guides the IMF/World bank assessments of each country's insurance sector in the Financial Sector Assessment Program (FSAP).

At the request of the FSB in 2010, the IAIS developed a process for identifying “globally active insurance-dominated financial conglomerates whose distress or disorderly failure, because of their size, complexity and interconnectedness would cause significant disruption to the global financial system and economic activity” (IAIS, 2016). The methodology was published in 2013 along with the first of global systemically important insurers (G-SIIs). The

³⁰ *Insurance Core Principles, Standards, Guidance and Assessment Methodology* may be found at www.iaisweb.org/modules/icp/assets/files/Insurance_Core_Principles__Standards__Guidance_and_Assessment_Methodology__October_2011__revised_October_2013_.pdf.pdf

methodology is similar to that developed by the Basel Committee to identify G-SIBs. The methodology has been revised several times, and the list of G-SIBs is updated each November in parallel with the list of G-SIBs.³¹

The G-20 and the FSB

The magnitude of the global macroeconomic downturn, the enormous commitment of government funds to sustain the financial sector in the United States and Europe and the perception that a root cause was inadequate regulation and supervision of some of the world's largest international financial institutions demanded a global response.³² The G-20, which had been a relatively low-profile organization for meetings of central bank governors and ministers of finance, was the agreed forum to oversee development of a new financial architecture to enhance the stability of the world economy. In November 2008, the visibility (and implicit political legitimacy) of the G-20 soared when the heads of state met for the first time to address the financial crisis and reforms to ensure that we would “never again” suffer a financial crisis of comparable magnitude.³³ This was an implicit recognition the crisis had become so grave that it required the attention of the heads of state, not just ministers of finance and central bank governors. The first communique promised closer economic policy coordination and laid out a

³¹ The list in 2016 includes eight insurance companies: Aegon N.V., Allianz SE, American International Group Inc., Aviva PLC, AXA S.A., MetLife Inc., Ping An Insurance (Group) Company of China Ltd., Prudential Financial Inc., and Prudential PLC. This differs from the 2013 list in two respects: Aegon, N.V. has been added and Assicurazioni Generali S.p.A. has been subtracted from the list.

³² The FSB (2016, p. 6) observes that “The cumulative loss of output since the crisis, compared to pre-crisis trend is of the order of the 25% of one year’s world gross domestic product (GDP). The global economy is still recovering from the effects of the crisis, nine years after its onset. These costs include much higher public debt, increased unemployment and substantial output losses, particularly for advanced economies.”

³³ The heads of state met semi-annually at G-20 summits through 2010. Since 2011 they have been meeting annually. See Tucker (2016) for a thoughtful discussion of how to provide democratic oversight of supervisory and regulatory issues.

detailed plan for financial regulatory reform.³⁴ The plan had four key components (FSB, 2016): making financial institutions more resilient, ending too-big-to-fail, making derivatives markets safer, and transforming shadow banking into resilient market-based finance.

The G-20 faced an awkward problem in assigning responsibility for developing and implementing these reforms. The magnitude of the crisis had undermined public confidence in the existing financial architecture including coordinating entities. Supervisors, regulators, conduct-of-business authorities, accountants, the ratings agencies, and corporate governance and expert practitioners were viewed as having failed to safeguard the financial system. As Green (2006, p. 223) observes, “Politicians were ... forced to answer to their taxpayers as to how they could have allowed this state of affairs to arise.” Moreover, no existing international coordinating body had the scope (or credibility) to oversee such a broad reform agenda and so the G-20 established a new entity, the Financial Stability Board (FSB), to manage the financial regulatory and supervisory reform agenda.³⁵ The FSB makes reports at each G-20 summit describing progress made in fulfilling the G-20’s reform agenda and identifying remaining gaps. This enables the G-20 to maintain broad oversight of financial reforms and strengthens the political legitimacy of actions designed and implemented largely by unelected central banks and supervisory agencies.

The FSB was designed to serve mainly a coordinating function, with the substantive work to be undertaken by standing committees on (1) assessment of vulnerabilities, (2)

³⁴ This first declaration, *Summit on Financial Markets and the World Economy*, November 15, 2008, can be found at: https://www.g20.org/Content/DE/StatischeSeiten/Breg/G7G20/Anlagen/G20-erklaerung-washington-2008-en.pdf?_blob=publicationFile&v=3, accessed May 2, 2017.

³⁵ The FSB was technically a repurposing of an earlier organization, the Financial Stability Forum, which had been established by the Group of 7 in 1999. Significantly, the FSB represented the G-20, not just the G-7, in recognition of the remarkable shift in economic and financial power to emerging markets over the preceding decades.

supervisory and regulatory cooperation, and (3) standards Implementation.³⁶ (See figure 1 for an organizational chart of the FSB.) These standing committees are staffed by representatives of the members of the FSB. In addition, the FSB reports to the G-20 on progress made by the Basel Committee, IOSCO, IAIS, and other standard-setting organizations in implementing the reform agenda. Each year's report to the G-20 includes a table on the implementation of reforms in priority areas in FSB jurisdictions.³⁷

The FSB coordinates the work of 15 entities that develop standards for international regulation and supervision.³⁸ These entities produce an enormous number of standards that the FSB has organized in a Compendium of Standards,³⁹ which indexes standards by policy area and the relevant standard-setting entity and links them to the appropriate websites. I was unable to find an official count of the number of “work streams” overseen by the FSB, but the number seems likely to be more than 100, which portends that still more standards are likely to emerge. Clearly the task of coordinating the coordinators is large and complex. But so is the task of monitoring and complying with these standards, a topic to which we will return in the concluding section.

Resolution policy, the most innovative initiative undertaken by the FSB⁴⁰

³⁶ A fourth standing committee on Budget and Resources is focused on the needs of the FSB secretariat.

³⁷ The underlying Mutual Assessment Process has become an important supplement to the less frequent IMF/World Bank FSAPs.

³⁸ This complicated alphabet soup of organizations include the Basel Committee on Banking Supervision (BCBS), the Committee on the Global Financial System (CGFS), the Committee on Payments and Market Infrastructures (CPMI), the Financial Action Task Force on Money Laundering (FATF), the Financial Stability Board (FSB), the International Association of Deposit Insurers (IADI), the International Association of Insurance Supervisors (IAIS), the International Accounting Standards Board (IASB), the International Auditing and Assurance Standards Board (IAASB), the International Monetary Fund (IMF), International Organization of Pension Supervisors (IOPS), International Organization of Securities Commissions (IOSCO), the Joint Forum (JF), the Organization for Economic Cooperation and Development (OECD), and the World Bank (WB).

³⁹ The compendium may be found at: <http://www.fsb.org/what-we-do/about-the-compendium-of-standards/browse/> (accessed May 2, 2017).

⁴⁰ This section draws heavily from Herring and Carmassi (2016).

Many of the postcrisis reforms simply strengthened earlier policies and procedures. Numerous changes were implemented with the intention of making prudential policies more effective, but they were all focused on how to reduce the likelihood that a G-SIB would become insolvent. They did not address the problem of what should be done if, despite these stronger prudential safeguards, a G-SIB should nonetheless face insolvency.⁴¹

The chaotic bankruptcy of Lehman Brothers, however, convinced political leaders that it was necessary to establish a way of resolving any G-SIB without causing disorderly spillovers to other financial institutions and the real economy. The task of ending too big to fail and protecting taxpayers would be incomplete without filling this policy gap. The G20 was keenly aware that when policymakers were confronted with the magnitude of the challenge of devising an orderly resolution for a large, complex, global financial institution, they believed they had no good choices.

A bailout would avoid the anticipated short-term costs of a disorderly resolution that might inflict significant harm on other financial institutions, financial markets, and, most importantly, the real economy.⁴² But a bailout could impose huge fiscal costs and increase the likelihood that even larger and more costly bailouts might be necessary in the future. When faced with the choice between immediate and possibly uncontrollable damage to the economy and possible future harm and fiscal costs that could be delayed, the authorities almost always chose to organize a bailout. The magnitude of these bailouts was so great⁴³ that they could not be convincingly justified on political or economic grounds. Leaders of the G-20 reached a

⁴¹ Tucker (2014) refers to the combination of emphasis on prudential safeguards and resolution policies a “bookends” strategy.

⁴² The Lehman exception to the implicit bailout rule seemed to confirm this assumption.

⁴³ Haldane (2009) estimated that at the height of the crisis more than \$14 trillion (about one-quarter of world GDP) had been committed by the United States, the United Kingdom, and the euro area to support their banking systems.

consensus neatly summarized by Huertas (2010) as “too big to fail is too costly to continue.”

Formulating a credible resolution policy for G-SIBs faces two major problems. First, G-SIBs had grown in size (with balance sheets of \$1 trillion or more), corporate complexity (with a thousand or more subsidiaries), geographic reach (with offices in scores of different countries), and diversity of business models (with lines of business in several different sectors of the financial services industry) in ways that seem to defy an orderly approach to resolution.⁴⁴ Moreover, they are generally managed as an integrated unit with only minimal attention to legal entities. But, as Mervyn King (2010) observed, although these entities are global in life, they are local in death.⁴⁵ An integrated G-SIB’s lines of business would first need to be mapped into the legal entities that would need to be taken through a bankruptcy or administrative process.

The more numerous the legal entities, the greater the likely number of regulatory entities that must be consulted in planning and implementing a resolution. Because G-SIBs conduct a wide variety of businesses beyond banking and securities activities, this may involve a broad range of specialized, functional regulatory authorities, including insurance commissioners and, in the case of energy trading units, possibly even very specialized regulators such as the Environmental Protection Agency.⁴⁶ Assuming that all of these parties have the legal ability and willingness to cooperate—and that their rules and procedures do not conflict—coordination costs will be high. Of equal importance, the greater the number of regulatory authorities that need to be consulted to start an orderly resolution process, the

⁴⁴ See Carmassi and Herring (2016) for additional details.

⁴⁵ Huertas (2009) made the point more precisely, “The Lehman bankruptcy demonstrates that financial institutions may be global in life, but they are national in death. They become a series of local legal entities when they become subject to administration and/or liquidation.”

⁴⁶ For additional details regarding the activities of U.S. G-SIBs in physical commodity and energy markets, see Omarova (2013).

greater the likely number needing to be convinced to provide licenses and permissions in order for the bridge institution to continue critical operations on the Monday following the resolution weekend. Moreover, these operating entities must receive authorization to continue using critical elements of the financial infrastructure (such as payments systems, clearing, and custody services) and to continue trading on exchanges.

The second major problem is the conflicting approaches to bankruptcy and resolution across regulators and countries and, sometimes, even within countries. There are likely to be disputes over which law and which set of bankruptcy or administrative procedures should apply. Some authorities may attempt to ring-fence the parts of the G-SIB within their reach to satisfy their regulatory objectives without necessarily taking into account some broader objective such as the preservation of going-concern value or financial stability. At a minimum, authorities will face formidable challenges in coordination and information-sharing across jurisdictions. Losses that spill across national borders will intensify conflicts between home and host authorities and make it difficult to achieve a cooperative resolution of an insolvent financial group.

The FSB coordinated an intensive effort to encourage G-SIBs to reorganize in ways that would make them easier to resolve (the requirement for living wills) and to reach agreement among national authorities about how to resolve a G-SIB. Relative to the usual time required to reach international agreement on difficult issues, the FSB moved quickly to forge a consensus on a set of key attributes of effective resolution regimes for financial institutions that each member country should implement (FSB 2011, 2012, 2013a, 2013b, 2013c, 2014). The FSB has concluded that an effective resolution regime should:

1. Ensure continuity of systemically important functions

2. Protect insured depositors and ensure rapid return of segregated client assets
3. Allocate losses to shareholders and to unsecured and uninsured creditors in a way that respects payment priorities in bankruptcy
4. Deter reliance on public support for solvency and discourage any expectation that it will be available
5. Avoid unnecessary destruction of value
6. Provide for speed, transparency, and as much predictability as possible based on legal and procedural clarity and advanced planning for orderly resolution
7. Establish a legal mandate for cooperation, information exchange, and coordination with foreign resolution authorities
8. Ensure that nonviable firms can exit the market in an orderly fashion
9. Achieve and maintain credibility to enhance market discipline and provide incentives for market solutions

Many of these attributes can be read as attempts to establish a new regime that would prevent another disorderly, Lehman-like bankruptcy. The emphasis is on planning, sharing of information, cross-border cooperation, the protection of systemically important functions, and avoidance of any unnecessary destruction of value. All of these goals will be difficult to achieve, especially because some of the G20 countries have not yet established special resolution regimes for complex, international financial institutions.

Perhaps the greatest challenge, however, is to achieve credibility. The authorities tend to be judged by what they do, not by what they say, and most of the interventions and resolutions that occurred during the crisis were chaotic, without the benefit of careful planning for an orderly liquidation or restructuring process. They failed to allocate losses to unsecured and uninsured creditors, involved major commitments of public funds, and showed little evidence of substantial cross-border cooperation. None of these interventions could be described as speedy, transparent, or predictable.

The FSB's effort to enhance credibility, however, is not advanced by the vague way in which it describes the point at which resolution should take place (FSB 2011, p.7): "Resolution

should be initiated when a firm is no longer viable or likely to be no longer viable, and has no reasonable prospect of becoming so.” Although the clear intent is for the authorities to intervene before equity is wiped out, the clause “has no reasonable prospect of becoming so” affords wide latitude to delay. Given the demonstrated tendency of managers, accountants, and supervisors to take an overly optimistic view of a firm’s prospects for recovery, this clause seems to provide scope for delaying intervention until long after a firm’s equity has been destroyed. Deep insolvencies increase the likelihood of an ad hoc improvised resolution to offset the market reaction to the realization that early intervention has not worked.

The fundamental challenge to a cooperative resolution sets in bold relief the issue that all coordination efforts must address. National authorities will inevitably place a heavier weight on domestic objectives in the event of a conflict between home and host authorities. Three asymmetries (Herring, 2007) between the home and host country may create problems even if procedures could be harmonized to conform to the FSB’s KeyAttributes. First is asymmetry of resources: supervisory and resolution authorities may differ greatly in terms of human capital and financial resources, implying that the home supervisory authority may not be able to rely on the host supervisory authority (or vice versa) simply because it may lack the capacity to conduct effective supervisory oversight and an effective resolution. Second, asymmetries of financial infrastructure may give rise to discrepancies in the quality of supervision across countries. Weaknesses in accounting standards and the quality of external audits may impede the efforts of supervisors just as informed, institutional creditors and an aggressive and responsible financial press may aid them. The legal infrastructure matters as well. Inefficient or corrupt judicial procedures may undermine even the highest-quality supervisory efforts.

Perhaps the most important conflict, however, arises from asymmetries of exposures:

what are the consequences for the host country and the home country if the entity should fail? Perspectives may differ with regard to whether a specific entity jeopardizes financial stability. This will depend on whether the entity is systemically important in either or both countries and whether the foreign entity is economically significant within the parent group.

In order to enhance prospects for a cooperative resolution, the leading resolution authorities have joined Crisis Management Groups organized by the Basel Committee and FSB and have signed several memoranda of understanding with their counterparts. But it remains to be seen how effective these measures will be under the stress of an actual crisis.⁴⁷

While harmonizing resolution regimes with regard to the FSB's Key Attributes approach is a important first step,⁴⁸ when the question of allocating losses arises few people have confidence that this approach would hold up. Countries are understandably reluctant to allocate losses ex ante—no country is willing to make an open-ended fiscal commitment. And cross-border losses will be even more difficult to allocate ex post since it will always be possible to argue that the losses would not have occurred if home country supervision had been more effective.⁴⁹

Even if the FSB's Key Attributes were implemented in all of the major banking centers, the FSB document does not have the status (or enforceability) of a multilateral international treaty. The key attributes cannot solve the basic problem: if the top-tier entity in a group were to go into default, its branches, subsidiaries, and affiliates in host jurisdictions around the world might

⁴⁷ The FSB's 2016 report to the G-20 indicates substantial shortfalls in the implementation of bank resolution regimes. Fewer than 40 percent of FSB members have adopted resolution powers.

⁴⁸ The step is only a modest one because the document leaves considerable room for variation across countries to accommodate differences in institutional structure and regulatory traditions.

⁴⁹ There is probably no better example of this problem than the reluctance of the European Union to adopt a common deposit insurance fund even though it is widely recognized that the link between the safety of bank deposits and country risk can pose a major threat to the integrity of the euro area. So long as the safety of a deposit in the eurozone depends on the strength of the deposit insurance system and the creditworthiness of the country where the deposit was placed, the lethal link between bank risk and country risk cannot be broken (Herring 2013).

all be called into default, either immediately or upon a consequent run by creditors and counterparties.⁵⁰ Courts in these host countries might be asked to ring-fence assets, freeze payments, and set aside rulings by the home country authorities. The problem, of course, is that legal procedures—and, indeed, the objectives of an insolvency system—differ across countries. Moreover, it would not be possible for the authorities in such proceedings to be bound by ex ante commitments between the home and host countries because, in many cases, it may not be possible to know in advance which authority will be asked to rule.

In the absence of a robust cross-border agreement for resolving G-SIBs, countries are taking precautions that will enable them to ring-fence the parts of a banking group within their borders. The United States, for example, has required that foreign banks with substantial operations in the United States establish an intermediate U.S. holding company that would be subject to prudential rules in the United States, including capital adequacy requirements, and could, in principle, be resolved in the United States if the home country's resolution procedures did not seem to treat U.S. interests fairly. The UK is implementing ring-fencing around domestic activities as part of the Vickers Commission reforms. And the EU has announced that it will institute an intermediate holding company requirement parallel to that in the United States. Other countries are requiring that G-SIBs “pre-position” capital and liquidity in the entities operating within their borders (often including branches). This has the effect of providing an additional buffer against losses in the host country and facilitates a host country resolution if

⁵⁰ These may be precipitated by ipso facto clauses that permit contracts to be terminated based on a change of control, bankruptcy proceedings, or agency credit ratings. Under pressure from the authorities, the International Swaps and Derivatives Association (ISDA) has adopted a protocol to permit a limited stay in implementing the close-out netting clauses with the eighteen major dealer banks (ISDA 2014). This brief stay provides additional time for the authorities to arrange an orderly transfer of these contracts. Until this agreement takes effect, however, counterparties may liquidate, terminate, or accelerate qualified financial contracts of the debtor and offset or net them under a variety of circumstances. This can result in a sudden loss of liquidity and, potentially, the forced sale of illiquid assets in illiquid markets that might drive down prices and transmit the shock to other institutions holding the same asset.

necessary. All of these measures, however, raise the cost of operating a G-SIB.

Concluding comment: Prospects for international cooperation in financial supervision

The flood of new financial regulation is beginning to slow. This is a welcome relief to practitioners. Indeed, the latest publication from the FSB, the hub of a considerable amount of regulatory activity, is titled *Proposed Framework for Post-Implementation Evaluation of the Effects of the G20 Financial Regulatory Reforms*. At present, this is merely a proposal to adopt a framework for evaluating the reforms, but it is a marked change in emphasis.

The velocity of regulatory change has been so great that it has been costly for both the regulated and their regulators to keep up. It is surely time to take stock and take a critical look at whether the regulations are fit for purpose and whether the same outcomes could be achieved at lower cost. It may also be useful to ask whether we have attempted to coordinate too many details of financial regulation and supervision. Equally important, have we attempted to coordinate the wrong things? For example, would it have been more useful to standardize data definitions and regulatory reports rather than negotiate details of the Net Stable Funding Ratio? Ideally, supervisory coordination should reduce costs for institutions doing cross-border business, but that has not yet happened.

Although it does not appear to be within the scope of the FSB review, officials should be encouraged to take a more fundamental look at the cumulative stock of regulations and supervisory procedures and ask whether they have taken on too great a burden. The trend toward increasingly prescriptive policies and procedures did not help prevent the crisis and continues to raise concerns that the compliance costs are shifting an increasing amount of traditional bank business off the books of banks and into capital-market based entities (or to use

the pejorative term, shadow banks). It is possible to enlist market discipline in the cause of prudential regulation and permit the authorities to pull back. Although Basel II and Basel III adopt the rhetoric of market discipline, they do nothing to enhance its effectiveness.⁵¹

As memory of the financial crisis recedes, the pace of regulatory and supervisory reform will undoubtedly slow, but is it likely to be reversed? Many of the factors that help explain why supervisory cooperation in banking advanced so rapidly suggest that it may be more difficult to achieve cooperation in the future. First, the group of countries that must agree to achieve meaningful cooperation has grown. In 1975 it was possible to convene just 12 countries that controlled 90 percent of cross-border transactions, but that is no longer true. The size of the Basel Committee has expanded to include 28 jurisdictions. Moreover, the Committee faces continuing pressures to expand its membership because its policies often have worldwide impact. Most global institutions are experiencing legitimate pressures to be more inclusive, but inevitably the difficulty of reaching a consensus will increase as the number and heterogeneity of members grow.

Second, the broader the consensus on potential gains from cooperation and policy objectives, the easier it is to achieve international agreement. This factor undoubtedly helps explain why international cooperation took a quantum leap after the financial crisis. The most urgent policy objective was to restore stability to the global financial system, and most observers believed that a lack of international coordination had contributed to the depth of the crisis and impeded recovery. Undoubtedly a future shock that causes international financial instability will engender another round of cooperative agreements, but in the meanwhile, the urgency of

⁵¹ For a much simpler and arguably more effective way to enhance the safety and soundness of banks, see Calomiris and Herring (2013), which employs market discipline to encourage banks to recapitalize pre-emptively, before they experience distress.

cooperation seems less strong.

Third, we are beginning to see disagreements about the benefits of additional tightening of current prudential policies. Indeed, some experts take the view that these cooperative agreements, particularly Basel III, have slowed the recovery and contributed to stagnation in economic growth.

Fourth, although the infrastructure for international coordination has never been stronger, national support for these efforts is beginning to erode in some important jurisdictions.⁵² The fifth consideration is closely related. The domestic influence of experts in financial regulation is beginning to wane. In part, this is because members of the public view them as having failed to perform in the events leading up to and during the crisis. But it is also a result of a growing contempt for experts associated with the rise of populism. Equally importantly, bank supervisors and regulators no longer have the scope for exercising discretion that they enjoyed in the early years of the Basel Committee. Banking regulations are no longer regarded as purely technical issues that can be relegated to specialists. Instead they have become highly politicized, with virtually every proposed change interpreted as a covert way to redistribute income or power or a hidden subsidy to Wall Street.

These concerns currently focus on the new Administration and Congress. President Trump has promised to “do a number” on the Dodd-Frank reforms and his executive order on principles for regulating the U.S. financial system contains two “core principles” that may have implications for U.S. participation in agreements to coordinate international supervision: (1) they enable American companies to be competitive with foreign firms in domestic and foreign markets, and (2) they advance American interests in international financial regulatory

⁵² Brexit may be interpreted as a pulling back from one of the most ambitious efforts to harmonize financial regulation and supervision across countries.

negotiations and meetings.⁵³ At least one member of Congress has issued a more direct challenge to the continuation of U.S. participation in international coordination agreements. He wrote to Federal Reserve Board Chair Janet Yellen regarding the Federal Reserve's continued participation in international forums on financial regulation: "Despite the clear message delivered by President Donald Trump in prioritizing American's interest in international negotiations, it appears that the Federal Reserve continue negotiating international regulation standards for financial institutions among global bureaucrats in foreign lands without transparency, accountability or the authority to do so. This is unacceptable."⁵⁴

The Financial Choice Act—the GOP proposal to replace the Dodd-Frank Act—contains many features that would require that the United States diverge from several Basel standards and agreements. One that has received special attention abroad is the proposal to repeal Title II of the Dodd-Frank Act and remove the administrative alternative to bankruptcy for resolution of a U.S. bank holding company. The Choice Act limits the flexibility in the Dodd-Frank Act to ensure that bankruptcy is the only option. This presents a fundamental challenge to international coordination in resolution because it is not possible for foreign resolution authorities to form contingent agreements with the United States. No one can predict which bankruptcy judge might be assigned to a case and the judge will have, at best, a weekend to be brought up to speed on the complexities of an international resolution and reach a decision by Monday morning to continue systemically important services.

The Basel Committee is also subject to considerable strains. The completion date for the

⁵³ Executive Order: Core Principles for Regulating the United States Financial System available at <https://www.whitehouse.gov/the-press-office/2017/02/03/presidential-executive-order-core-principles-regulating-united-states> (accessed May 1, 2017).

⁵⁴ Letter from Congressman Patrick McHenry, Vice Chairman, Committee on Financial Services, to Janet Yellen, January 31, 2017, available at <https://ftalphaville-cdn.ft.com/wp-content/uploads/2017/02/02104940/McHenry-letter-to-Yellen.pdf> (accessed May 1, 2017).

Basel III reforms has had to be postponed because the EU and Japan have objected that the revisions would increase capital requirements for their banks too much. The aim of the revisions is to reduce wide discrepancies across regarding capital requirements for similar risk exposures. The proposed revision is to impose an “output” floor that would limit the amount of required capital even if the banks own internal model suggests that a much lower amount is appropriate. Members of the Basel Committee hope that the proposed revision would help reduce investor skepticism about reported regulatory capital ratios and improve market valuations of bank stock. Aside from the usual jockeying to protect national champions, an important structural difference underlies the debate. European banks have warned that restricting their use of models to assess loan books will disproportionately increase their capital requirements because they customarily hold most mortgages on their balance sheets and U.S. banks typically sell them on to the government sponsored enterprises (GSEs). They contend the role of the GSEs in the United States creates a major distortion in the competitive landscape. This suggest an important limit to the adoption of international standards. In the absence of harmonization of the structures of the financial sectors across countries, international standards may not lead to comparable results.⁵⁵

For all of these reasons, the future of international cooperation is uncertain. As in other spheres of economic policy, we appear to have entered an era in which economies will be more inward looking and less interested in building multi-lateral institutions to facilitate cooperation. Let us hope that this turning away from international cooperation does not lead to an international shock that once again demonstrates the costs of failing to cooperate.

⁵⁵ See Tucker (2016) for a discussion of how differences in economic structure impede agreement on global standards.

References

- Acharya, Viral. 2003. "Is the International Convergence of Capital Adequacy Regulation Desirable?" *Journal of Finance* 58, number 6 (December), pp. 2745-81.
- Bayoumi, Tamin. 2014. *After the Fall: Lessons for Policy Cooperation from the Global Crisis*, IMF Working Paper WP/14/97, June.
- Calomiris, Charles and Richard Herring. 2013. "How to Design a Contingent Convertible Debt Requirement That Solves our Too-Big-to-Fail Problem," *Journal of Applied Corporate Finance*, volume 25, number 2, spring 2013, pp. 39-62, republished in Geoffrey P. Miller, ed., *Economics of Financial Law*, Edward Elgar, 2016.
- Carmassi, Jacopo and Richard Herring. 2016. "The Corporate Complexity of Global, Systemically Important Banks," *Journal of Financial Services Research*, volume 49, numbers 2-3, June 2016, pp. 175-201.
- Cooper, Richard N. 1989. "International Cooperation in Public Health as a Prologue to Macroeconomic Cooperation," in *Can Nations Agree: Issues in International Cooperation*, edited by R. N. Cooper and others, 178-254, Brookings.
- Financial Stability Board. 2011. *Key Attributes of Effective Resolution Regimes for Financial Institutions*, October.
- Financial Stability Board. 2012. *Resolution of Systemically Important Financial Institutions—Progress Report*, November.
- Financial Stability Board. 2013a. *Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Developing Effective Resolution Strategies*, July 16.
- Financial Stability Board. 2013b. *Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Identification of Critical Functions and Critical Shared Services*, July 16.
- Financial Stability Board. 2013c. *Recovery and Resolution Planning for Systemically Important Financial Institutions: Guidance on Recovery Triggers and Stress Scenarios*, July 16.
- Financial Stability Board. 2014. *Key Attributes of Effective Resolution Regimes for Financial Institutions*, October.
- Financial Stability Board. 2016. *Implementation and Effects of the G20 Financial Regulatory Reforms*, 2nd Annual Report, August 31.
- Goodhart, C. 2011. *The Basel Committee on Banking Supervision: A History of the Early Years 1974-1997*, Cambridge University Press.

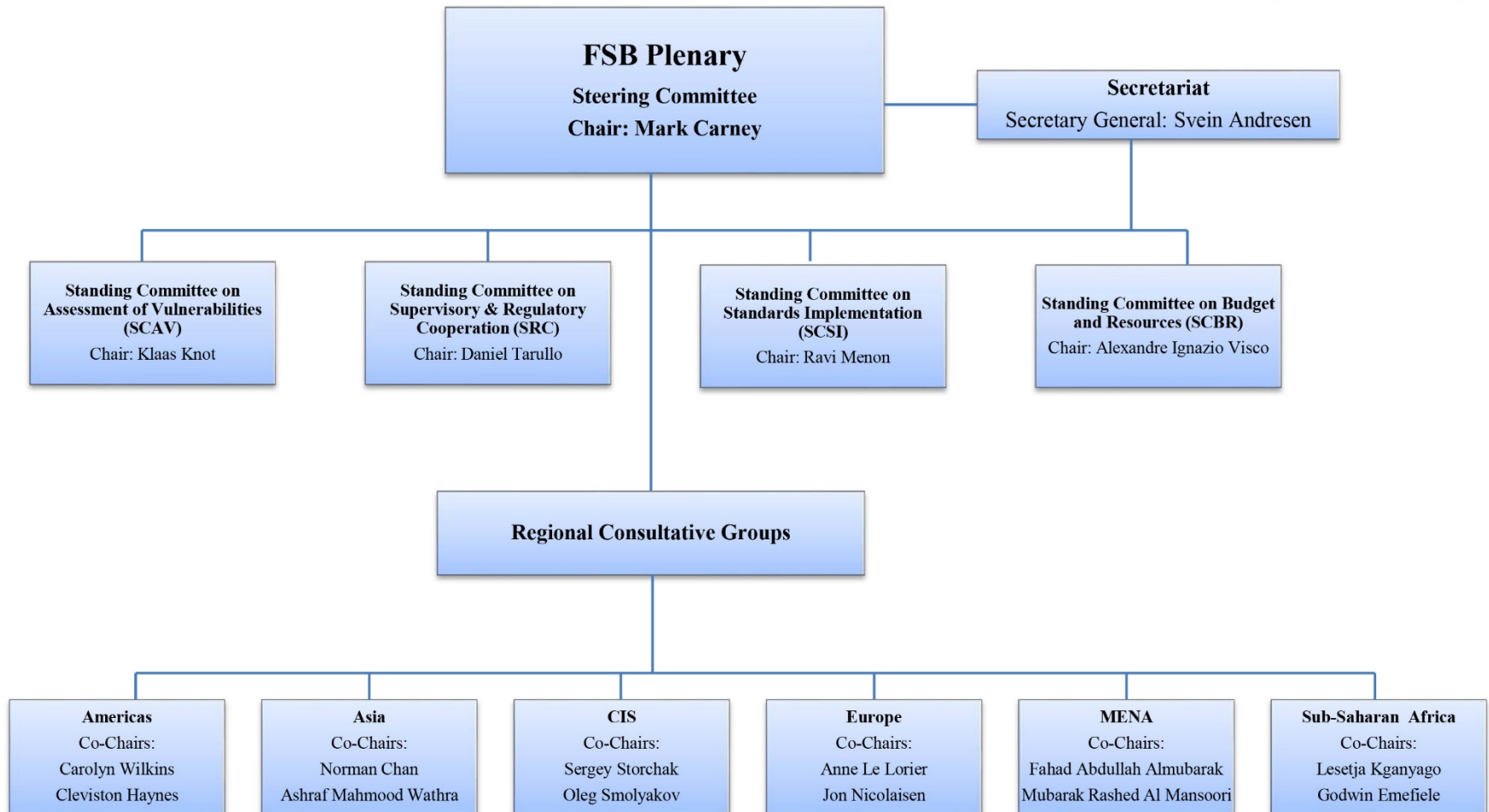
- Green, David. 2016. "Regulation and International Standards," in *Managing Complexity, Economic Policy Cooperation after the Crisis*, edited by T. Bayoumi, S. Pickford, and P. Subacchi, Brookings Institution Press.
- Haas, Peter. 1990. *Saving the Mediterranean: The Politics of international Environmental Cooperation*, Columbia University Press.
- Haggard, Stephan and Beth Simmons. 1987. "Theories of International Regimes," *International Organization*, 41 (summer), 491-517.
- Haldane, Andrew. 2009. "Banking on the State," paper based on presentation delivered at the Federal Reserve of Chicago International Banking Conference, *The International Financial Crisis: Have the Rules of Finance Changed?*, September 25.
- Haldane, Andrew. 2011. "Capital Discipline," Speech delivered at the American Economic Association annual meeting, Denver, Colorado, January 9.
- Herring, Richard J. 1993. "BCCI: Lessons for International Bank Supervision," *Contemporary Policy Issues*, volume 11, April 1993, pp. 1-11.
- Herring, Richard J. and Robert E. Litan. 1995. *Financial Regulation in the Global Economy*, Brookings Institution Press.
- Herring, Richard J. 2005. "BCCI & Barings: Bank Resolutions Complicated by Fraud and Global Corporate Structure," in *Systemic Financial Crises: Resolving Large Bank Insolvencies*, edited by Doug Evanoff and George Kaufman, pp. 321-45.
- Herring, Richard J. 2007. "Conflicts between Home & Host Country Prudential Supervisors," in Douglas D. Evanoff, John Raymond LaBrosse, and George Kaufman (editors), *International Financial Instability: Global Banking & National Regulation*, Singapore: World Scientific Publishing Company, pp. 201-20.
- Herring, Richard J. 2013. "The Danger of Building a Banking Union on a One-Legged Stool," Chapter 2 in *Political, Fiscal and Banking Union in the Eurozone?* edited by F. Allen, E. Carletti and J. Gray, FIC Press, pp. 9-28.
- Herring, Richard and Jacopo Carmassi. 2016. "The Cross-Border Challenge in Resolving Global Systemically Important Banks," Chapter 9 in *Making Failure Feasible*, edited by K. Scott and J. Taylor, Stanford University Press.
- International Association of Insurance Supervisors. 2016. *Global Systemically Important Insurers: Updated Assessment Methodology*, June 16.

- Johnson, G.G. and Richard K. Abrams. 1983. *Aspects of the International Banking Safety Net*, Washington: International Monetary Fund, March.
- Keohane, Robert. 1984. *After Hegemony: Cooperation and Discord in the World Political Economy*, Princeton University Press.
- Kwak, J. 2012. *What Did the SEC Really Do in 2004?*, The Baseline Scenario, January 30, <http://baselinescenario.com/2012/01/30/what-did-the-sec-really-do-in-2004/>.
- Lo, Andrew. 2012. "Reading About the Financial Crisis: A 21-Book Review", *Journal of Economic Literature*, 50(1), pp. 151-78.
- Milner, Helen. 1992. "Review Article, International Theories of Cooperation Among National: Strengths and Weaknesses," *World Politics* 44 (April): 466-96.
- Omarova, S. 2013. Large U.S. Banking Organizations' Activities in Physical Commodity and Energy Markets: Legal and Policy Considerations, Written Testimony Before the Senate Committee on Banking, Housing, and Urban Affairs, Subcommittee on Financial Institutions and Consumer Protection, July 23.
- Raman, Narayanan, Luck Quinn Liu, and Sonali Das. 2016. "Regulation and International Standards," in *Managing Complexity, Economic Policy Cooperation after the Crisis*, edited by T. Bayoumi, S. Pickford, and P. Subacchi, Brookings Institution Press.
- Romano, Roberta. 2010. "Against Financial Regulation Harmonization: A Comment," *Yale Law and Economics Research Paper* 414, November.
- Tucker, Paul. 2014. *Regulatory Reform, Stability and Central Banking*, Hutchins Center on Fiscal and Monetary Policy at Brookings, January 16.
- Tucker, Paul. 2016. "The Design and Governance of Financial Stability Regimes: A Common-resource Problem That Challenges Technical Know-How, Democratic Accountability and International Coordination," *Essays on International Finance*, Volume 3, September.

Figure 1

FSB FINANCIAL STABILITY BOARD **Organisation Chart**

(as of 13 March 2017)



Source: FSB website <http://www.fsb.org/about/organisation-and-governance/> (accessed May 4, 2017)