ARCHITECTS OF STABILITY?
INTERNATIONAL COOPERATION AMONG FINANCIAL SUPERVISORS

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ABSTRACT

The objective of this paper is to provide a balanced assessment of international cooperation among financial regulators, with a focus on banking supervision. While recognizing the undeniable—and even unexpected—achievements of these regulators in building a cooperative framework for financial supervision, we also suggest that this remains a work in progress, given the contemporary financial risk environment. Briefly, we argue that the financial risk environment—to the extent we understand it, for it remains opaque in important respects—has an almost paradoxical quality, in that risk has become both more consolidated and more atomized at the same time. On the one hand, large and complex financial institutions (LCFIs) which may be "too big to fail," increasingly dominate the banking landscape; on the other, these same institutions have shifted at least a portion of their risks onto other firms and households, whose absorptive capacity has yet to be severely tested. It is the effectiveness of the international supervisory architecture in the face of this risk environment that we consider, and we provide some suggestions for future policy reforms.

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Speaking in May 1998, in the shadow of an Asian financial crisis that was spreading globally, International Monetary Fund Managing Director Michel Camdessus announced that "the leaders of the world want to embark on the design of a new (financial) architecture." Reflecting the position that industrial world governments would formally adopt at their forthcoming G-8 Summit in England, he asserted that the new architecture must be built atop several cornerstones, including a commitment to financial sector openness, good governance, and greater economic transparency. In addition, he suggested that international financial markets required the continuing elaboration of multilateral standards, codes, and best practices if future crises were to be avoided (Camdessus 1998).

It did not take long for skeptics of this G-8 proposal to rear their heads; after all, grandiose phrases like the "new financial architecture" naturally provoked them. In a speech before the World Affairs Council, for example, Berkeley professor and former U.S. Treasury official J. Bradford DeLong stated that "there is no world-wide political consensus" with respect to the systemic risks facing the global economy and that, as a consequence, "dreams of a rebuilt, reformed, and renewed international financial architecture will remain nothing but dreams" (DeLong 1999).

Beyond these skeptics lurked the critics who—whether coming from the left or the right of the political spectrum—curiously shared the conspiratorial view that

the new international financial architecture represented nothing more than another underhanded attempt by governments and international organizations to bail out reckless banks at taxpayer expense. Finance ministers were once again failing to confront the problem of moral hazard in a world with lenders of last resort. Far from strengthening global finance, the new international architecture would only make it more crisis-prone (Langley 2002).

The purpose of this paper is to provide a balanced assessment of international cooperation among financial regulators, with specific reference to banking supervision. While recognizing the undeniable—and even unexpected—achievement of these regulators in crafting a more robust financial system, we will also try to show that it remains a work in progress in significant respects, given the financial risk environment that now exists.

Briefly, we argue that the contemporary risk environment has an almost paradoxical quality to it, in that risk has become both more consolidated and more atomized at the same time. On the one hand, large and complex financial institutions (LCFIs), which may have become both "too big to fail" and "too hard to regulate," increasingly dominate the banking landscape; on the other, these same institutions have worked diligently to shift at least a portion of their risks onto other firms and households via the instruments and markets that exist for such purposes. It is the integrity of the international supervisory architecture in the face of this risk environment that we put into question.

The paper addresses these issues in the following sections. First, we briefly discuss the relationship between financial stability and international cooperation among financial supervisors, stressing that stabilization has been only one objective and that competitive concerns—specifically private sector pressures to "level the

playing field"—have also loomed large. Second, we seek to explain how financial supervisors managed to overcome numerous political barriers during the 1970s and 1980s to achieve greater international cooperation, in the process laying the cornerstones for the regulatory architecture that exists today; here we focus specifically on the events leading up to the Basel Accord of 1988. Third, we examine the role of the Mexican and Asian financial crises of the 1990s in catalyzing demands for a new financial architecture, and particularly on the need to extend the G-10 supervisory structure to emerging market economies, with particular emphasis on the globalization of the Basel Core Principles of banking supervision. Fourth, we address the major changes that have taken place in the financial risk environment in recent years, highlighting banking consolidation and asset securitization. This analysis leads us to ask whether the new financial architecture, and in particular the Basel II agreement which constitutes one of its regulatory anchors, is well suited to the changing risk environment that agents now face.

The paper concludes with some thoughts regarding the further institutional reforms that might be required in light of this new risk environment, including closer cooperation among not just financial supervisors within and across nations, but perhaps with elected officials as well—innovations that could prove particularly difficult to put into practice, given the highly "technocratic" and silo-like regime for supervision of financial markets that currently exists in most countries whose central banks are members of the Bank for International Settlements. Former U.S. Treasury Secretary Robert Rubin put the sentiments expressed in this paper succinctly when he wrote, "our politics may not be well suited to coping with the new risks of the global economy" (Rubin 2003). If that is the case, the question arises as to whether the politics of financial supervision can be reformed in a way that continues to promote

the benefits of globalization while minimizing its costs, particularly during periods of crisis.

Financial Stability and International Regulatory Cooperation

From a public interest perspective, the rationale for government-led financial supervision rests upon the fundamental assumption that the collapse of one or more financial intermediaries could ripple throughout the economy, producing social losses that are greater than the private losses. As Robert Litan of the Brookings Institution has explained, "Historically, perhaps the overriding reason for regulating financial institutions and markets has been the desire to avoid systemic risk—the possibility of a contagious spread of losses across financial institutions that threatens to harm the real economy" (Litan 1995).

Given the increasing diversity of intermediaries that are now providing households and firms with financial services, many central banks have, in recent years, developed a capacity to monitor the health of their nation's overall financial system, expanding their oversight and supervisory responsibilities well beyond commercial banks and payments systems. That broad function, in which systemic risks and interdependencies among financial agents are assessed, aims at trying to maintain domestic financial stability, and associated with it is a complex array of regulatory and supervisory arrangements with other government agencies—banking and securities regulators, treasury departments, and so forth—in the hope of ensuring cooperation among them should a crisis occur.

Has international cooperation among financial supervisors been motivated by similar concerns with systemic risk and financial stability? After all, one could posit that, in a global economy, the risks of international contagion have greatly increased,

and thus the need for collective action with respect to governing the financial system. Reflecting this view, Stanley Fischer once wrote that "the occurrence of major banking failures…has been a matter of great import for anyone concerned with the stability and prosperity of the world economy." He suggested that the Asian financial crisis, for example, was primarily caused by weakness in the banking sector, due to "bad lending practices and inadequate supervision and regulation" (Fischer 1998). This made the task of international cooperation among supervisors critically important from the financial stability standpoint.

Yet as seductive as that view appears, a shared concern with financial stability in the light of heightened interdependence has *not* been the sole motivation behind international cooperation. After all, if interdependence alone were the decisive factor, we would probably witness much more cooperation on such issues as climate change and fisheries management. The differences that we observe across issue-areas with respect to levels and types of international cooperation lead us to suspect that other factors beyond mere degrees of interdependence are at work in driving this policy project. In this paper, we focus on just one of those factors, and that is the role of the private sector in providing the decisive impetus for international cooperation among banking supervisors.

Just as students of domestic regulatory policy have found it useful to incorporate a public choice or private interest perspective in their work in order to understand public policy outcomes, so too we will highlight the utility of that approach when it comes to international cooperation. As Edward Kane writes of the public choice perspective, it "views regulation more realistically as the outcome of efforts of interest groups, politicians, and bureaucrats to direct the coercive powers of government to generating personal benefits…"(Kane 2001). He suggests that we can

usefully think of the financial sector and its associated regulators as making up a "financial-service production team," though this imagine leads us to conclude (incorrectly in my view) that the team has a single, shared objective, akin to "winning." Perhaps a better way to conceptualize financial intermediaries and financial regulators is as an old couple who stay married for a variety of reasons, despite all the tensions in their relationship.

Our particular focus is on the pressures that have been placed upon regulators by private institutions that seek to achieve a "level playing field" for their global business activities. Bankers have expressed the view that relatively high national regulatory standards, say with respect to capital adequacy, have placed them at a competitive disadvantage in the global marketplace as compared to banks coming from jurisdictions with relatively low standards. These "low standard" banks could charge smaller fees for their loans and services and, through greater leverage, still provide a satisfactory return on equity to their shareholders. In a global economy, these banks could win market share at the expense of high standard banks in competitive markets like wholesale banking. This could lead to a "race to the bottom," with regulations weakening everywhere. As a consequence, financial stability and a level playing field appear to be intimately related in the eyes of financial supervisors. *International cooperation among financial supervisors may therefore be defined as a multilateral effort to reconcile diverse demands for both a more level and more stable environment for global finance*.

This is not to argue that stabilizing and leveling are identical, although even supervisors sometimes seem to treat these two objectives as if they were one and the same thing. After all, one could easily imagine a more stable financial environment which tips the playing field against certain nations or types of intermediaries, for

example by making regulatory compliance very expensive and thus possible for only the largest and most profitable banks; in fact, some critics make this precise point about banking codes and standards, arguing that they are designed in part by the best capitalized firms as an instrument for eliminating their weaker competitors (Schneider 2001). Conversely, one could imagine a level playing field which was not terribly stable, say through the elimination everywhere of onerous banking regulations, and the acceptance of "free banking" globally.

This suggests that supervisors (and firms) from different countries could have very different ideas concerning what constitutes financial stability and competitive equity, reflecting their particular national circumstances; as Kane puts it, states might end up placing very different "net regulatory burdens" on financial intermediaries (Kane 2001). Further, to the extent that financial regulators are influenced by locally based financial interests, shaping the domestic environment in such a way as to ensure the competitiveness of their national champions, they will also be led to adopt policies that may conflict with those of their foreign supervisory colleagues. In addition, significant differences in legal and accounting regimes, and in allowable banking practices, could doom cooperative efforts among supervisors, even given a shared interest in "financial stability." Overall, then, the promise of international cooperation among financial supervisors would seem limited at best, even if one assumed that such cooperation was desirable or beneficial from a social welfare standpoint—an assumption that, admittedly, remains widely debated among scholars if not regulators, given the public choice perspective that is widely influential in this field of research (Oatley and Nabors 1998; Kane 2001; Holthausen and Ronde 2004).

So how does cooperation in international financial supervision arise? In previous work I argued that cooperation in this issue-area could be conceptualized as

the product of power and purpose; specifically, the combination of American (and to a lesser extent British) financial market power with the shared or convergent purpose of bank supervisors to provide their home markets with greater financial stability while also addressing the competitive concerns of their domestic firms (Kapstein 1994). Let us discuss each of these elements, power and purpose, in turn.

Power is important to international cooperation, because in its absence collective agreements may be harder to achieve as each state pursues its own domestic agenda. Even when actors share interests, they may fail to cooperate and pursue strategies that leave all parties worse off. The Prisoner's Dilemma game is the oft-used (and much abused) model of these sorts of perverse interactions.

But most of these game-theoretic models assume that the players are perfectly symmetric with respect to their capacities to strategize and to shape outcomes. In the world economy, however, actors are not symmetric in these respects, and particularly in their ability to generate desired outcomes, be it in trade or finance. Because of its market power, the United States, for example, has a greater capacity to influence global finance than do many smaller states. Still, that power is hardly unlimited, for several reasons.

First, despite "globalization," domestic banking systems and regulatory regimes around the world remain remarkably national. Canada, for example, basically denies foreign banks the right to acquire domestic financial institutions, and in Italy foreign entry has also been strictly curtailed (a policy that is only now changing). In both France and Germany, which are relatively "open" to foreign banks (at least in theory), the available data suggest that they have captured only a tiny fraction of either domestic loans or deposits. As a consequence, domestic financial institutions continue to control their home markets, at least in the industrial world.

This local domination, of course, reflects not only preferential regulatory arrangements, but also exists for good, institutional reasons. Once households and firms establish close relationships with particular banks, there must be extremely strong reasons for them to leave that firm for a competitor. Recognizing this, domestic banks continue to invest heavily in "bricks and mortar," despite the presence of the internet and electronic banking and the financial revolutions they have long promised. In finance, physical presence still seems to matter for market share.

Second, to the extent that the United States does not wish to act as the *sole* lender of last resort to the entire world, but instead prefers to lead others in a rescue attempt—as revealed, for example, during the major financial crises of the 1980s and 1990s—it must seek cooperation with other governments and their central banks. That desire for international cooperation, in turn, must usually come at a price in terms of respecting the preferences of other states, restraining Washington's behavior—at least when it comes to financial supervision—in important respects (Rubin 2003).

Third, American financial institutions are often deeply intertwined with the firms, households, banks, and governments of foreign nations, making it difficult to articulate policies—even if a regulator desired to do so—that will obviously benefit one at the expense of the others (see Figure 1 on the foreign exposure of U.S. banks). In short, while the United States may possess something akin to hegemonic power in financial markets, it is at best a *constrained hegemony* that we are describing.

Yet the exercise of even constrained hegemonic power must be directed towards some political purpose, and what that purpose has been with respect to finance (not to mention many other issue-areas) remains a topic of considerable debate, at least among academics. As already noted, some analysts have emphasized

the interest of supervisors in providing collective, public interest goods like financial stability—for example, by providing lender of last resort services—based on the assumption that they are rewarded by their political systems for delivering that good; or, more to the point, condemned for failing to do so. As Sir Andrew Large of the Bank of England has written, "If financial instability occurs, costs to society may be high. Damage to our reputation could be potentially high too" (Large 2005).

In contrast, other authors, building on regulatory capture models of the "public choice variety, have argued that financial supervisors act mainly at the behest of private interests, without regard to any broader public or collective interest (Oatley and Nabors 1998). In this model, the main interest of regulators is to advance private preferences, using state and market power for that purpose. Instead of stability, supervisors seek to make the world safe for their banks by influencing the regulatory environment.

As we will see in what follows, these approaches are not necessarily incompatible, to the extent that the concerns of public officials and peak business interests may converge around particular solutions to given policy problems; the Basel capital adequacy accords offering a case in point. Thus, the question of whether the United States has used its hegemonic power to promote global financial stability, or instead to promote the narrow, regulatory (or deregulatory) interests of its major financial institutions, like Citicorp and Goldman Sachs, could pose a false and unnecessarily stark choice. The answer might be both, to the extent that supervisors actually believe in the Wall Street equivalent of "What's good for General Motors is good for the United States."

Clearly, it's impossible to speak meaningfully of financial agreements like the Basel capital adequacy accords, and associated demands by banks and other

institutions for a "level playing field," without making reference to private sector preferences and interests. But adherence to a strict capture model may obscure our analysis of financial supervision rather than illuminate it. As Sam Peltzman reminds us, regulators are bureaucrats who attempt to resolve conflicting public and private sector interests in such as way as to maintain and enhance their positional power within their domestic political structures. Financial supervisors, for example, may be legitimately concerned with maintaining a safe and sound financial system, but they have also been forced by narrow interest groups to adopt policies that are at odds with that objective; prohibitions on interstate banking in the United States, for instance, were hardly stability enhancing. The success of financial supervisors in maintaining or enhancing their positional power within their domestic political systems will be a function of their ability to solve complex regulatory problems, given the various interests at stake; and judging from the relative growth of central bank authority in the field of financial supervision and financial stability over the past two decades, it appears that they have been reasonably successful (Peltzman 1976).

Our basic model of international cooperation among financial supervisors, then, is one that takes inspiration from Peltzman, as well as from Robert Putnam's concept of diplomacy as a "two-level game," in which negotiators must interact and strike multilateral deals not only with each other but also with their domestic constituencies; negotiators are thus "Janus-faced," looking out at other states and inward at their domestic polities (Putnam 1988). The globalization of financial markets has generated both higher levels of competition among financial intermediaries and greater risks of international spillovers from domestic banking crises, given the interdependencies that now exist (see Figures 2 on the exposure of UK banks to foreign banks); and to the extent that more competition leads to higher

levels of financial risk-taking, a possible relationship between these two phenomena. As a consequence of these developments, regulators have responded to widespread demands for both a *more level* and a *more stable* playing field for international finance.

Private actors have called for more leveling (although each actor really wants the field tipped to *its* advantage) because of the possibility that regulatory arbitrage could provide certain firms with a competitive advantage. Public sector actors have sought stability because of the economic and political costs associated with financial crises; crises that could, for instance, turn governments (or at least financial regulators!) out of office. It is the ongoing effort to satisfy these twin demands for leveling and for stabilizing that lies at the heart of international cooperation among financial supervisors.

How, then, have these twin objectives of greater financial stability and a level playing field been advanced on the international level? In seeking to answer that question, we need to return to the early 1970s following the collapse of the Bretton Woods system. Then, as during the late 1990s, financial supervisors recognized the need for a new architecture, and the model they built, which combined a commitment to necessary liquidity provision with common, minimum regulations on financial institutions—and in particular, higher capital levels—continues to play a significant role in shaping the terms of international cooperation today.

Basel Politics

While the demand for a "new international financial architecture" is normally associated with the Asian crisis of 1997-98, at least from a regulatory perspective many of that structure's significant multilateral building blocks, like the Basel

Committee of Bank Supervisors and several of its associated codes, standards, and best practices, like the Basel Concordat and the 1988 Basel capital adequacy accord, had already been in place for many years prior to that shock. Indeed, the international community has expressed a shared and near constant concern with global financial stability since the collapse of the Bretton Woods system in the early 1970s, coupled with the oil shocks of 1973-74. These events created systemic and seemingly rampant financial instability, as flexible exchange rates replaced fixed ones, as interest and inflation rates diverged sharply across countries, and as the "old economy" sectors of the "advanced" industrial nations—steel, automobiles, textiles, and other manufactures—began to implode, leaving only unemployment and a demand for government intervention in their wake. As a consequence of these developments, would-be financial architects devoted much of the 1970s to devising ways to prop up the post-Bretton Woods monetary system, which lacked the firm anchors that gold or the dollar peg had once provided.

Financial intermediaries, and especially banks, were also uncertain about how to operate in this new environment, and several of them—including some relatively big (at least big for that time, as they would be considered much smaller today) American institutions whose names we only dimly remember, like Franklin National, First Chicago, Continental Illinois, and Republic Bank—failed in their process of adjustment. Many of these failures were the result of bad and excessive bets by bank managers, particularly with respect to currency movements and the future direction of real estate and energy prices. But with increasing financial integration across borders, the effects of these collapses were not so neatly contained by national banking authorities.

The cooperation that was achieved in the 1970s and 1980s in the face of these

macroeconomic and institutional challenges, notably in the Basel Committee of Bank Supervisors but in other multilateral venues as well, took many observers by surprise. If we return to June 1974, when the G-10 central bankers gathered in Basel for one of their regular meetings at the Bank for International Settlements (BIS), the health of the international financial system was poor, and the prospects for international cooperation to revive it seemed negligible. Financial markets were reeling under the strain of the oil price shock, the collapse of Bankhaus Herstatt, and the implosion of Franklin National. In Britain, a number of "fringe" banks had fallen, requiring a Bank of England lifeboat operation. Financial intermediation in the Euromarkets was grinding to a halt as banks sought to reduce their risk profiles, and many banks were now squeezed out of the inter-bank lending market altogether, threatening credit availability worldwide.

The question of how the central bankers ought to respond to this financial instability was the topic of the day. And vociferous disagreements were expressed around the table. The United States argued that the central bankers should send an explicit signal that they were prepared to provide lender-of-last-resort service to banks operating in the Euromarkets. The Germans refused to make such an explicit statement, for several reasons. First, they said that they had no mandate to announce such a policy. Second, they thought that banks that had failed due to managerial incompetence ought to collapse and not be bailed out. Finally, they said that any blanket assurances would create severe moral hazard problems for the financial community. The meeting thus broke up without a G-10 agreement, suggesting the limits of models of international cooperation among financial supervisors that parsimoniously emphasize only collective concerns with stability.

But the central bankers were not let off the hook by their domestic financial

intermediaries. As word spread of the disagreement, small banks were now shut out of the interbank markets, leading them to place strong political pressure on their financial supervisors. Influenced by these domestic actors for a stronger statement, the central bankers returned in September for another gathering. This time, their views converged and they were able to make a formal announcement about their market intentions: "The governors," they said, "had an exchange of views on the problem of lender of last resort in the Euromarket. They recognized that it would not be practical to lay down in advance detailed rules and procedures for the provision of temporary liquidity. But they were satisfied that means are available for that purpose and will be used if and when necessary." With this statement, central bankers had seemingly indicated their willingness to intervene in the financial markets in the event of an international crisis.

Having given this assurance, the central bankers now expressed concern that international banking was inadequately supervised, particularly in light of the moral hazard problems that these new lender-of-last-resort assurances might engender. As a consequence, in the autumn of 1974 the Bank of England began to conceptualize the formation of a G-10 group of bank supervisors. This idea was approved at the December 1974 meeting of the central bankers, when the Standing Committee on Banking Regulations and Supervisory Practices, or the Basel Committee, was established. This Committee held its first meeting in February 1975 (We use the English rather than Swiss spelling of the BIS hometown throughout for the sake of consistency).

At this time, the objectives of the Basel Committee were appropriately modest. The central bank governors emphasized that the Committee's objective "should *not* be to make far-fetched attempts to harmonize the twelve countries'

individual systems of supervision, but should be to enable its members to learn from each other and to apply the knowledge so acquired to improving their own systems of supervision, so indirectly enhancing the likelihood of overall stability in the international banking system" (cited in Kapstein 1994; emphasis added). Thus, the Basel Committee was charged with the tasks of education about bank supervision; information sharing about banking practices; the establishment of an "early warning system"—how often that idea has been repeated by financial supervisors ever since!—to detect problems within international banks; research on international bank supervision; and finally, policy coordination in supervising international and consortium banks. In sum, as the first head of the Basel Committee, George Blunden, once stated, "there is agreement that the basic aim of international cooperation in this field is to ensure that no foreign banking establishment escapes supervision." We think it's fair to say that the level and scope of regulatory harmonization that this cooperative process has subsequently induced was unimaginable when the Committee first began to meet.

The supervisory arrangement for international banks that emerged out of the Basel process was not based on multilateral surveillance but rather on the cornerstone of home country control; that is, the idea that every financial institution should have a "home supervisor," and that, as Blunden suggested, that no institution should escape supervision. This philosophy of home country control was built on the principle that national central banks and national financial supervisors must take primary responsibility for the international operations of their domestic financial institutions. Looking at the evolution of international financial supervision, from the time of the first Basel Concordat of 1975 to the present day, the increasing influence of domestic financial authorities becomes apparent, a trend that is now spreading far beyond G-10

borders (ironically, their influence may be growing at a time when the presence of many domestic banks is receding, particularly in the emerging market economies; this situation is creating new supervisory headaches of its own, as we discuss in a later section). It is notable in this context that despite having a single central bank, and despite the influence of European Commission directives on Europe's financial landscape, the members of the Euro-zone still retain national financial supervisors, though this structure may be adapted to changing market circumstances in coming years, a process that would likely be catalyzed by a European-wide banking crisis.

As a first step towards home country control, the Basel Committee in 1978 recommended that international bank supervision be carried out on the basis of a set of consolidated financial statements. While consolidated banking statements were the norm in the United States and a few other countries, it was not the case in much of Europe, and Germany even placed strict limits on the ability of its supervisors to collect information about the foreign activities of their banks. By the early 1980s, however, consolidated reporting was widespread, providing the accounting framework on which home country control could be built.

But ongoing events in the financial markets would demonstrate that the Basel Committee had much work to do in institutionalizing this regulatory concept. The collapse of Banco Ambrosiano—the "Pope's bank—in 1982, had painfully demonstrated the many holes that remained in this nascent supervisory architecture. Who was responsible for providing the lender-of-last-resort function when the subsidiary of a bank collapsed? Was it the home or the host authority? What information were home and host supervisors expected to share across borders; indeed, what were they permitted by law to share? Today, as European and American banks assume a major presence in the financial markets of developing and transition

economies, these questions about the appropriate dividing line between supervisory and liquidity functions remains a crucial topic. Still, the trend towards home country control of consolidated financial institutions would continue, pushed on by the shadow of the largest crisis the global economy has faced since the end of the Second World War, the debt crisis that erupted in August 1982.

Essentially, the debt crisis threatened the international payments system in two ways. First, it threatened to stifle financial and investment flows between the industrial and developing worlds, choking the world economy. Second, it threatened the solvency of not just a handful of money center banks, but of many regional banks as well which had joined in the syndicated loans. Many of these banks did not appear to have sufficient capital to absorb the losses from unpaid debts of this magnitude. If depositors became aware of the shortfall a run on the banks might begin, which only massive government intervention could stem.

During the summer and autumn of 1982, the United States took the lead in shaping a response to the debt crisis. That response was two-pronged, consisting of short-term crisis management and longer-term stabilization measures. The short-term solution was to inject sufficient liquidity into the payments system to ensure its uninterrupted operation. The longer-term plan, more relevant for our purposes, was to strengthen and recapitalize the international banks, as well as to restructure the economies of the debtor nations, with the help of the International Monetary Fund. Indeed, it was the heightened demand for the IMF's services in the 1980s that provided policy-makers with an instrument for encouraging banks to undertake balance sheet recapitalization; at the same time, that demand would lead to international cooperation with respect to bank capital adequacy.

The story unfolded in the following way. In early 1983, the Reagan

Administration went to Congress to seek an IMF funding increase. But Congress insisted that the price of that increase would be a new set of banking regulations. In particular, Congress demanded that minimum capital levels be placed on large commercial banks, in order to force those with equity positions to share the pain of the debt crisis bailout with American taxpayers.

For their part, the bankers responded that any unilateral increase in their capital requirement would make them uncompetitive with foreign banks, particularly Japanese banks, which held relatively low levels of capital. The solution that Congress hit upon was to demand international convergence of bank capital standards, and in fact the legislation that contained the IMF funding increase also included a demand that American financial supervisors pursue such convergence at the international level. This provides a perfect example of the dual pursuit of leveling and stabilizing that lies at the heart of international financial supervision.

The institutional vehicle for pursuing multilateral talks on bank capital adequacy would be the Basel Committee, and the talks proved difficult from the outset. Different countries had adopted different methods for calculating capital and different capital adequacy standards, reflecting in part the peculiarities of their national financial institutions. It seemed absurd to impose on Germany's universal banks the same capital standards as America used for its commercial banks, and of course the risk profiles of these institutions differed.

Given this initial rebuff, in 1987 the United States joined the United Kingdom in announcing a bilateral agreement on bank capital adequacy. This bilateral agreement joined the two largest financial markets in a common undertaking and threatened other nations with a zone of exclusion. For Britain, the bilateral agreement had the added benefit of heading off at the pass any European Community directive

on bank capital adequacy, which would naturally reflect the views on the EC's other leading powers. Soon thereafter the Japanese signed on, buoyed by a booming Tokyo Stock Exchange that made it seemingly painless for Japanese banks to meet any new capital requirements. Finally, on 10 December 1987, the Basel Committee announced that its members had reached agreement on a proposal for "international convergence of capital measures and capital standards." This agreement, now known as "Basel I" but then called the "Basel Accord," promoted the globalization of risk-based capital standards.

Given current controversies over Basel II, it is useful to recall that Basel I was hardly greeted with universal acclaim when it was first announced. Critics held, *inter alia*, that it would reallocate assets in banking portfolios and lead to a credit crunch, particularly for small business; that it was unfair to non-OECD governments whose bonds were assessed higher risk weightings; and perversely, that it would actually make bank balance sheets riskier, in order to compensate for the higher capital requirements. Even if one rejected these criticisms, it was almost universally recognized that the Basel Accord's approach to risk management was crude at best and hardly reflected best practice, at least for the leading money-center banks. As a consequence, it would not take long for calls to revise the Basel Accord to emerge (Greenspan 2004).

Yet it would not take long for this "strengthened" post-Basel financial architecture, with its higher capital standards, to meet new challenges. By the 1990s, the banks were once again confident enough in their capital base and risk-management techniques to renew their global expansion. They were assisted in the process by the lifting of capital controls that made it easier to access new markets, particularly in East Asia. But in short order, imbalances in East Asia and in many

other parts of the developing world would place renewed strains on the international financial system.

Mexico, Asia and the International Financial Architecture

This is not the place for a detailed review of the financial crises of the 1990s, particularly the Mexican Peso Crisis of 1994-95 and the Asian financial crisis of 1997-98 and its global spread. As with the 1982 debt crisis, these shocks incorporated both macro- and micro-economic features. While each crisis had its unique attributes, what they shared in common were domestic policies that encouraged macroeconomic imbalances to accumulate and domestic asset bubbles to form. At the same time, lax banking regulation, and political-economic systems of "crony capitalism," allowed questionable loans to pile up in weakly capitalized banks. These pathologies went unrecognized for too long by financial agents.

Further, common to banking markets in Mexico and Asia were lending mismatches in term of both currencies (borrowing in dollars and lending in local currencies) and assets and liabilities (borrowing short and lending long). These mismatches were hardly problematic so long as economies boomed, but as economic growth slowed, the various risks emerged in sharp relief and investors pulled the plug, although not without significant losses.

Both these financial crises, of course, ultimately led to emergency responses of aid and assistance by the U.S. Treasury, the G-10 central banks, and the International Monetary Fund. Accompanying this lender of last resort function, however, were calls, notably from the U.S. Government, for the design of a "new international financial architecture." What was it about the Mexican and Asian crises that led the U.S. Treasury, and particularly its Secretary Robert Rubin, to consider a

new financial architecture as a matter of political urgency?

Part of the answer would seem to lie in Rubin's deep-seated concern with excessive dependence by the global financial system on U.S. financial leadership for its stability. During the Mexican crisis, Rubin and President Bill Clinton had to battle a U.S. Congress that was ultimately unwilling to countenance emergency loans to Mexico, and eventually the Treasury had to act unilaterally by drawing on its Emergency Stabilization Fund (ESF), which of course existed as a kitty to protect the value of the greenback. Rubin came away from the peso crisis—which, after all, occurred quite literally "next door" to the United States—with a grim view of "how little the public understands" of "how critical U.S. leadership is on these international economic matters. The result…is that public support—and thus political support—for…international financial-crisis response…is at best very difficult to obtain." The "lesson" Rubin drew from this was that the United States had no choice but to work closely with other countries, "which often meant making accommodations on our part." (Rubin 2003). At bottom, Rubin felt that financial stability could not rest on American shoulders alone, and that a more durable if more complex architecture was needed, requiring the broader shoulders of the international community (or at least the industrial nations) as a whole.

It was in response to the Asian financial crisis that the finance ministers and central bank governors of twenty-two leading economies met in Washington in April 1998 to promote greater international cooperation with respect to financial market oversight. As one step towards building the new architecture, they created three working groups which were charged with examining (1) transparency and accountability; (2) strengthening financial systems; and (3) prevention and resolution of international financial crises. Here we focus on the second project, that of

strengthening financial systems (for a review of the work in the other areas, see Goldstein 2000).

The core belief of the financial systems working group was that "Weak banking systems and poorly developed capital markets contributed to the misallocation of resources that led to the (Asian financial) crisis. Key to the strengthening of domestic financial systems is the implementation of sound practices for supervision, settlement, accounting and disclosure. This involves close international cooperation and collaboration among those in the official sector who are involved in the supervision of financial systems" (Working Group on Strengthening Financial Systems 1998).

The mission of the working group, in short, was to suggest that something like a set of "best practices" existed with respect to financial market oversight and that building a soundly regulated financial system was essential to reducing the likelihood of financial crises. It is notable in this respect that one of the working group's recommendations was the creation of a "Financial Sector Policy Forum" which would bring together actors across ministries to discuss financial sector issues; this was a driver behind the establishment in 1999 of the Financial Stability Forum, whose secretariat is currently housed at the Bank for International Settlements.

It is difficult to overemphasize the central place that public officials and analysts gave to financial regulatory failure as a casual driver of the Asian crisis. Noted economist Barry Eichengreen has asserted "If the Asian crisis has taught us one thing, it is that countries cannot restore exchange rate and balance of payments stability without rectifying deficiencies in their domestic financial systems" (Eichengreen 2000). Yet regulatory failures are normally endogenous; they reflect the exigencies of the domestic political economy. Given that situation, the international

community (or at least the members of the Group of Ten nations) had to weigh in and place external pressure on the relevant domestic actors, both firms and government agencies, if reforms were to be carried out. Not surprisingly, those on the receiving end of these pressures were ambivalent about them at best.

That does not mean that financial regulators in emerging markets did not recognize the need for reform. After all, as Morris Goldstein reports, since 1985, "there have been more than 65 episodes where banking problems in emerging economies got so bad that the entire banking system was rendered insolvent. In the Asian countries, we are now looking at fiscal costs of bank recapitalization that range from 10 to 60 percent of GDP" (Goldstein 2000). The implementation of global standards, which emerging economies had little choice but to adopt if they wished to remain plugged into the global economy, therefore became one of the cornerstones of the new international financial architecture.

As Goldstein among others has noted, public officials can use several instruments for promoting the implementation of new standards, including market pressures on the one hand and rules and regulations on the other. With respect to market pressures, once a new standard is published, economic agents may adopt it as the basis for forming their own judgments about the behavior of particular institutions. Regulatory instruments can similarly be used both as carrot and stick. As carrot in that regulators can use standards, like capital adequacy standards, as a minimum requirement that must be met if banks (or other financial intermediaries) wish to operate, acquire, expand or diversify. And of course they can also serve as a stick for meting out punishment in the form of fines or limitations on their license to operate.

Regulators in powerful countries like the United States and United Kingdom

can also use their standards to shape the terms of market access. To the extent that foreign banks seek access to international money centers like New York and London, they must meet the criteria that these regulators set for host institutions, even in a world where home country control provides the overall supervisory framework. That ultimate authority over market access offers a major inducement for accepting "global" standards.

In the wake of the Asian financial crisis, G-10 supervisors and regulators developed a long list of codes and standards—many of which constitute the Basel Core Principles (BCP)—that they thought should be adopted on a global basis, again in the interests of both creating both a more stable and a more level financial environment. These standards referred to principles of corporate governance and the regulation of banking, insurance, and securities markets. Notably, among these reforms the Working Group expressed its strong support for Basel II, which was already under study by the Banking Supervisors' Committee; we will have more to say about Basel II in a later section.

Advancing the BCP's globally became a major charge of the IMF and the World Bank, which along with the BIS played a significant role in strengthening the regulatory systems of many emerging market economies. Local officials became convinced of the need to accept these principles if they were to become part of the global economy and avoid financial marginalization. Given the high costs associated with adoption of the BCPs, and given the weaknesses in many domestic banking institutions, governments called for financial consolidation in order to create intermediaries that could compete at the international level. At the same time, they opened their markets to direct investment by foreign financial firms, placing fresh competitive pressures on local operators. Whether the resulting financial structure has

indeed produced both greater stability and a level playing field remain topics of controversy.

In sum, at least since 1974, financial supervisors have been struggling with the design of a new architecture to meet the dramatic changes in markets that have occurred. That architecture incorporates formal institutions like the Bank for International Settlements, the International Monetary Fund and the World Bank; other international supervisory bodies like IOSCO; and informal institutions like the G-8 Summits and associated meetings of finance ministers and central bankers. These organizations have, in turn, sought to create a new set of regulatory norms for financial markets, or a set of best practices that ought to be followed in the interest of financial stability and a level playing field. These norms have been codified through various principles and practices, notably the adoption of risk-based capital standards. Banks and other financial intermediaries have contributed to this architecture by expressing their own interests and preferences with respect to its design, which supervisors have clearly taken into account. How well that architecture is suited to the new risk environment is the topic of the following section.

Charting the New Risk Environment

To the best of our knowledge, there is no broad overview available of the changes that have occurred in the financial risk environment over the past decade or so, even though a number of monographs treat various pieces of that puzzle. In this section we highlight a paradox that we believe lies at the heart of the contemporary risk environment, the combination—whether poison or elixir—of increasing bank consolidation on the one hand and risk atomization on the other. The question we raise is whether the supervisory architecture, and in particular the Basel II accord, is

well suited to govern or regulate—in the engineering sense of these terms—this structure of risk. And the answer is that we are unconvinced, given the opacity of the risks that we face; an opacity that is especially troubling given all the calls since the Asian crisis for greater financial transparency. We begin the section by addressing the issue of banking consolidation, before turning to the manner in which these large institutions manage their risk profiles. We then ask whether Basel II provides a solid supervisory anchor for this risk environment (recognizing, of course, that Basel II hardly stands alone, but is supplemented by other regulatory instruments).

The 1990s saw a wave of banking consolidation across industrial world banking markets, and indeed in many emerging markets as well. Interestingly, most of this activity has occurred domestically; cross-border mergers of banking institutions remain exceptional. In the United States, for example, the relaxation of interstate banking regulations in the late 1990s generated a sharp spike in banking consolidation. Indeed, large bank mergers peaked the year after passage of the Riegle-Neal Act in 1997, which allowed interstate bank branching to take place (Group of Ten 2001; Kwan 2004). As a result of this wave of consolidation, the United States now has three banking organizations with over $1 trillion in assets, and the top five banks hold over 20 percent of the nation's deposits (see Figure 3). The rationale for these banking mergers and their consequences for competition and efficiency have been assessed in detail elsewhere; here our primary concern is with their effects on the financial risk environment.

No less an authority than Alan Greenspan has viewed this evolution in banking markets as wholly salutary. Speaking before the American Bankers Association in 2004, Greenspan stated that bank consolidation had "greatly strengthened the stability of our financial system. Diversified banking

organizations…have been able to absorb substantial losses in some lines or weak demand for some products without significant hits to capital" (Greenspan 2004).

Yet has consolidation really limited systemic risk? The answer is not so clear-cut. To begin with, as Figure 4 makes clear, the consolidation trend has certainly not limited the loan losses of American banks. Indeed, consolidation may have led banks to develop higher appetites for risk.

Why would consolidation promote rather than mitigate risk-taking by bank managers? There are several reasons that can be provided. The first pathway to higher risk in large consolidated institutions is through the belief that mangers may have that their firms are simply "too big to fail." As two leading academic students of modern banking, Roy Smith and Ingo Walter, have put it: "Not only are these banks 'too big to fail,' they have become 'too big to monitor' and perhaps 'too big to regulate'" (Smith and Walter, nd). As bank size increases, the likelihood that central bankers will enforce market discipline on poorly managed institutions decreases. If financial stability is a primary concern of regulators, then bank managers may feel confident that public officials will bail them out of crises, even those of their own making. Evidence from bank stock prices indicates that large firms may, in fact, enjoy a "too big to fail" premium.

Second, bank consolidation can create diseconomies of scale, as opposed to the promised efficiencies that normally accompany such mergers and acquisitions. As a consequence, managers may become less rather than more capable of providing their institutions with appropriate governance structures. The breakdown in principal-agent relations could encourage poor or unethical managers to go undetected until substantial damage is already done. Hints of this kind of problem have already appeared in several banking institutions around the world.

Third, when regulators or analysts assert that consolidation will promote stability, they must be equating consolidation with diversification. Yet consolidation need not lead to a greater diversification of risks. Take, for example, the Basel II accord, which adopts a lower risk weighting for mortgages then for many other types of loans. Imagine that a "Basel II" bank decides to specialize in mortgage lending and it acquires other firms in this market segment; it would then be greatly exposed to a generalized collapse of housing prices. As Figure 5 shows, many banks are placing a greater percentage of their assets in loans as opposed to other securities, and this despite a generalized move on the part of banks to securitize a portion of their loan portfolios.

Fourth, and finally, we assume that as banks consolidate, the interdependencies between them will increase as well. The failure of one bank is therefore likely to have serious consequences for others (again see Figure 2 for the exposure of UK banks to foreign banks). Analysis of bank stock performance already suggests that markets perceive a high degree of interdependency. Thus, as is the case in "classic" bank runs, rumors of poor performance by one big bank could lead to deposit withdrawals from others (see De Nicolo and Kwast 2001). But given the size of these institutions, the lender of last resort function might not be adequately performed by the central bank, and fiscal policy instruments would be required instead. As we will discuss in our concluding section, this leads to one of our suggestions for possible changes in supervisory structures.

Associated with banking consolidation has been a trend towards asset securitization, though the actual importance of this trend for financial risk diversification remains a topic of inquiry, particularly given the paucity of reliable data. Again, Chairman Greenspan believes that securitization has been a great boon to

financial stability. He claims that "not only have individual financial institutions become less vulnerable to shocks from underlying risk factors but also the financial system as a whole has become more resilient" (Greenspan 2004).

In truth, given our knowledge of the markets for these derivatives it is very hard to accept Greenspan's statement as anything more than an article of faith. And curiously, Sir Andrew Large of the Bank of England has referred to the "new series of hazards" posed by these instruments. He notes that "Credit risk transfer has introduced new holders of credit risk, such as hedge funds and insurance companies, at a time when market depth is untested. Systemically significant issues could increasingly arise from market related risks, or from single point of failure risks…as ever greater volumes of transactions pass through (Large 2005).

One obvious problem with these instruments and the associated markets is that it is difficult for analysts to get their brains around them conceptually, even with respect to such basic questions as to how large they are and how even to measure their size accurately, to say nothing of risk assessment. As John Plender of the *Financial Times* has written, "Where Mr. Greenspan sees dispersion of risk, others see obfuscation" (*Financial Times*, 15 May 2005*)*. Adam Posen of the Institute of International Economics is certainly correct when he asserts that "The increasing use of derivatives makes ascertaining the true exposure of banks to risk even more challenging," not to mention the exposure of many other financial intermediaries (Posen 2002). If consolidation makes banks "too big to fail," securitization may make them "too hard" to monitor adequately.

To be sure, derivatives play a useful role in financial markets. A credit derivative, for example, is basically a contract purchased by a bank or another financial intermediary to protect itself if a borrower cannot repay a loan or fulfill a

lease obligation. There are two major product categories in the credit derivatives market: first, credit default swaps that bear credit risk that is similar, but not necessarily identical, to that of a bond; and second, collateralized debt obligations (CDOs), where the credit risk of a portfolio of underlying exposures is 'tranched' into different segments, with differing risk–return characteristics. Clearly, the balanced use of such instruments is helpful to bankers in managing risk exposures.

The increasing demand for credit derivatives that began in the 1990s is understandable for two reasons: first, the environment of falling interest rates, and the resulting quest for higher yields (which of course meant accepting higher risks); and second, the capital adequacy rules that were mandated by Basel I, which required banks to set aside more capital against their commercial loans (although it would probably be an exaggeration to call Basel I a primary *cause* of the growth behind the derivatives market). The use of credit derivatives meant that banks, by passing on the credit risk to other players, could free capital that could be profitably used elsewhere. *It must be emphasized that this shift, which has certainly freed bank capital and thus allowed greater lending activity to take place, has not necessarily reduced systemic risk*.

This securitization and credit transfer trend has only intensified in recent years. Since 2000, Deutsche Bank has reportedly reduced the loans on its books by over 40 percent from 281 billion euros to 165 billion euros. Other European banks such as ABN Amro, Credit Suisse, and UBS have similarly shrunk the size of their balance sheets. The exposure to risk has been hedged by purchasing credit derivatives. Thus, credit risk has been transferred from banks to the buyers of securities and loans, and to the sellers of credit insurance.

Given this changing financial environment, it was obvious that reforms to

Basel I would eventually have to be made, as a tighter linkage between risks—including off-balance sheet risks—and capital had become necessary. Indeed, the main complaint from the banking community that helped launch the Basel II process was that big banks were being forced to hold an inefficient amount of economic capital, given the sophisticated risk-analyses they were performing internally. While the 1988 Basel Accord represented an important first step toward recognizing the relationship between the capital that banks held and the risks they took, the risk-weightings were presented in a very crude form; for example, a loan to a top rated company carried the same risk weights as the loan to a start-up enterprise. The major "money center" banks therefore urged members of the Basel Committee to accept their internal models as the basis for a new capital adequacy agreement.

Basel II has undoubtedly gone much further in matching capital and risk, and it has encouraged the continuing development of advanced risk management practices within banks, while making the risks that banks take more transparent to the investing community. This represents a significant advance and should be recognized as such. Still, we reiterate that these risks remain quite opaque in important respects, especially those that remain off-balance sheet. While the spring of 2005 witnessed bold efforts by the Basel Committee—in collaboration with IOSCO—to close some of the analytical gaps with respect to securitization, most analysts agree that the risks sitting out in the derivatives market cannot be calculated with any great precision, at least at the present time. Philip Coggan has rightly said, "The banks say they have sophisticated models that control their risk exposure. But when it comes to more complex instruments, they have yet to be tested" (*Financial Times*, 15 May 2005).

A second area in which Basel II may fall somewhat short of its promise to promote greater financial stability is on the macroeconomic side. As many analysts

have already noted, Basel II may have a pro-cyclical bias that could complicate the task of macroeconomic policy during recessions. While some analysts believe this concern to be overblown (Gordy and Howells 2004), others argue that evidence from the recession in the United States during the early 1990s suggests that the original Basel accord may have provoked a credit crunch in some regions, and that small and medium size enterprises in particular were hurt as a result (Jackson, n.d.). Along these lines, complicating the task of encouraging banks to hold, for example, greater loan loss reserves as a rainy day fund against future downturns is the very different legal and accounting regimes that still characterize the G-10 states. In two domains that are central to financial stability then—the risks inherent in increasing financial securitization, and the risks associated with economic downturns—it appears that Basel II still represents a work in progress.

Finally, we note that there are ongoing debates with respect to the effects of bank capital regulations on financial stability. While no less an authority than Tommaso Padoa-Schioppa has declared that "Capital adequacy regulation remains *the most important piece of regulation to safeguard financial stability,*" empirical support for that assertion is lacking (Padoa-Schioppa 2004). A study by a team from the International Monetary Fund, for example, has concluded that "credit risk and bank soundness are primarily influenced by macroeconomic and macroprudential factors and that direct influence of…Basel Core Principles on credit risk and soundness is insignificant" (V. Sundarajan et.al. 2001). Does this mean we should abandon or loosen bank capital standards? The answer must be no, as there are few regulatory instruments that provide managers with stronger inducements for focusing their minds on their risk-taking activities.

Does Basel II make a significant difference in terms of leveling the

international playing field? Diverse opinions have also been expressed on this issue. In some respects, it would appear that Basel II may result in a less level playing field than Basel I for the simple reason that countries are adopting very different approaches to the incorporation of these principles within their domestic banks (see Figure 6). In the United States, only the ten or twenty largest banks will become Basel II compliant, while the remainder will retain Basel I standards. Further, in many jurisdictions some banks will adopt the "advanced" approach to Basel II while others will adopt the "foundation" approach. Both within and across nations, then, the competitive effects of Basel II are unclear. While the importance of these differences in capital-adequacy approaches can be exaggerated—banks compete on the basis of much more than their capital levels—it is still likely that this issue will continue to resonate for many years to come, as we learn more about the effects of Basel II on both the domestic and international playing fields (for the domestic effects of the new accord may be even more significant from the competitive standpoint than they are internationally).

Another area in which Basel II may fail to level the playing field to the satisfaction of some financial intermediaries is with respect to the costs of its incorporation into banking systems, which are judged to be substantial. Again, authorities will respond that these costs must only be borne by the largest financial institutions. Still, it is unlikely that these institutions would accept those costs unless they thought there were competitive benefits associated with the investment. If Basel II ends up driving some smaller players out of business because of the relatively higher capital requirements they might face as compared to the largest banks that adopt the advanced approach—which is perhaps a far-fetched fear—it will have only tilted the playing field in ways that damage financial competition.

Basel II, then, exemplifies the continuing challenges that financial supervisors face in delivering greater stability while trying at the same time to level the competitive playing field. It would be unfairly harsh, and indeed patently incorrect, to assert that because Basel II could fall short in important respects, it shows that the supervisors have failed to make important advances with respect to the financial architecture. To the contrary, when examined from an historical perspective, the advances they have made against long odds are nothing short of breath-taking. The work of these officials has contributed to a more risk-oriented financial system, and one in which regulatory arbitrage across capital regimes has been greatly reduced. These are impressive accomplishments which should not be minimized, especially in light of the competing pressures that they have faced.

Still, the extent to which a more resilient and stable financial system has been engineered by humans with imperfect knowledge of the contemporary risk environment remains the great unknown. If history tells us anything about financial markets, it is surely that we have not seen the last crisis, and thus any architecture, as stated earlier, should rightly be conceptualized as a work in progress rather than a polished edifice. Given the strong possibility of future shocks, we turn in the final section to possible innovations that supervisors may wish to contemplate with respect to the financial architecture.

Conclusions: The Future of the Financial Architecture

Adam Posen once wrote that "banks are inherently fragile and their supervision is inherently inadequate, making dependence upon banks dangerous" (Posen 2002). One needn't agree with that assessment to appreciate that systemic financial risk remains of significant concern, and that many of the contemporary

changes in banking, including consolidation and securitization, have probably done less than we think to reduce it. The emergence of banks with over $1 trillion in assets and a large share of national deposits, coupled with an increasingly opaque market for securities, could be creating a new environment with the capacity to overwhelm the clubby approach to financial regulation that has been built at Basel and elsewhere. The problem is simply that the collapse of a trillion dollar institution, with myriad tentacles of complex financial engagements reaching deeply into firms, markets, and households, will be larger than any central bank can handle, and its negative effects on markets and households will inevitably lead to the politicization of the bailout.

If that is the case, it raises the issue of whether the time has come for financial regulators—who are no doubt fatigued from their Basel II labors—to begin contemplating the possible institutional fixes that someday might have to be made under more stressful circumstances. In particular, we suggest that during future crises it is highly likely that there will be a demand by financial agents for closer cooperation not just between central bankers and financial supervisors, but perhaps with elected officials as well. To the extent that future bailouts may have to draw on treasuries and demand a fiscal policy response, legislators and executives will be intimately involved, for better or for worse.

In some sense, the evolution towards a closer linkage between regulators and legislators is already apparent in the Basel process. After all, the search for international capital adequacy standards was in some respects mandated by the U.S. Congress, and while Basel I itself was not highly politicized there was certainly a much deeper engagement of elected officials with Basel II. In a world of LCFIs on the one hand and a greater atomization of risk on the other, this sort of political involvement in financial regulation seems almost inevitable.

At the same time, how to build a closer working relationship between "independent" central banks and quasi-independent financial regulators, and between them and elected officials within and across governments, is hardly a straightforward task. This effort must involve not just international institutions like the BIS and IMF, but also foundations, universities, think tanks, and other organizations that bring people together for informal discussions of contemporary political-economic problems. As a starting point, there are several modest steps that can be taken in this direction.

First, central bankers and financial supervisors must speak more openly about the contemporary risk environment, and make clear what it is they do not know or understand. This educative task is essential not just for elected officials, but for all financial intermediaries and agents, including households which are now facing a dizzying array of financial choices for everything from mortgages to investments to pension plans. While our economic models usually assume rational behavior in the face of more or less perfect information, the history of financial markets suggests that a more nuanced understanding of agent behavior is required.

Second, central bankers and financial supervisors should contemplate playing "war games" or engaging in crisis simulation exercises with not only other government agencies, but with parliamentarians, members of the banking community, and other financial intermediaries as well. While shocks of the September 11 variety suggest, for example, the critical importance of having in place sound continuity plans and procedures, there are many other types of crisis that could be "gamed" in advance, an exercise that could help in revealing systemic strengths and weaknesses. Such games could usefully be played at the international level, perhaps based at the Bank for International Settlements.

Third, and in a related vein, while central bankers and financial regulators meet regularly in places like Basel, there is no similar gathering for elected officials, particularly parliamentarians, who are concerned with financial stability. Creating venues for such activities would make a positive contribution to greater appreciation of financial interdependencies, of risks, and of the need for collective action during crises. These officials, in turn, must be encouraged to educate their own publics about the costs and benefits associated with deepening financial globalization; again, we are reminded of Robert Rubin's admonition that our domestic politics are not "well suited" to the global economy.

Fourth, central bankers and financial regulators must continue to work with elected officials on the sorts of institutional reforms within their home countries that could contribute to greater stability. Over-dependence on banks, for example, could be sharply curtailed in this era of competing financial intermediaries. As Posen suggests, if banks represent a significant systemic risk, then limiting their influence may represent a potentially sound regulatory strategy (Posen 2002).

Finally, central bankers and financial supervisors should now consider the "Basel III" changes in regulation that will be needed in light of the potential risks posed by new market developments. In thinking about these changes, the Bank of England has made a useful start with its "matrix approach" that seeks to provide a framework for modeling the sources of threat and the associated supervisory activities that are required in light of them. It is notable, however, that the Bank does not include macroeconomic risks in its matrix, which could be considered a significant oversight (Large 2005).

With respect to individual financial intermediaries, a Basel III might consider, *inter alia*, forcing banks to issue subordinated debt, as several analysts have recently

proposed (Walter 2005). As with Basel II, any of these Basel III changes will likely involve significant input from a variety of agents, who will work with and through their elected officials (the strong interest that elected officials took in Basel II is reflective of this widespread politicization of banking regulation). Again, the important question of the appropriate relationship between legislators and supervisors as the financial architecture gets refurbished is one that requires more sustained analysis.

In important respects, our conclusions build on remarks made back in 1996 by a prescient William White, who observed that central bankers and financial regulators around the world may have "more in common" with each other than they do "with various parts of their national governments. This has a clear advantage in obtaining results. However, it also has dangers in that it can lead to public concerns about the existence of a 'democratic deficit'; that is; important international decisions being made by technocrats rather than politicians" (White 1996).

As these comments suggest, one of the great "successes" of financial supervisors over the past thirty years has been to de-politicize the systemic risk environment and to transform crisis management into a technocratic exercise, thereby making financial shocks somewhat easier to manage, by reducing the number and type of players involved in decision-making. During future crises, however, there may be greater demands for highly political responses that would involve active intervention by national legislatures and parliaments, alongside financial supervisors and central bank governors, and this could greatly complicate the task of international cooperation; the Mexican peso crisis, for example, may have heralded political problems of this type, and it is for this reason that Robert Rubin believed so deeply in the need for a new international financial architecture. He saw clearly that the

legislative process, at least in the United States, might not yield optimal outcomes for dealing with financial crises. A stronger system against crises therefore had to be built.

In crucial respects, central bankers and financial supervisors have met Rubin's challenge. The proliferation of standards and codes, and the emphasis placed on safe and sound banking around the world, has undoubtedly led to a more resilient financial system. But it is not yet "shockproof," particularly in the face of the sorts of crises that might reasonably confront us in future, including either the collapse of very large financial institutions on the one hand, or the widespread distress that could affect markets and households as the assets and financial instruments they hold lose value.

To be sure, central bankers might assume that the atomization of risk means that its holders will face overwhelming collective action problems in responding to a future crisis, thereby reducing political pressures for fiscal responses or major bailouts from the lender of last resort. But such an assumption would form the basis of public policy only at tremendous political peril. It is therefore critical that legislators and publics be educated about the contemporary risk environment, before the next crisis occurs. As economic globalization progresses, the fundamental role of domestic politics in stabilizing financial markets becomes increasingly apparent.

Figure 1

Foreign Exposure of US Banks, 1982 and 2000

(Billions of 1996 USD)

Total Foreign Exposure of U.S. Banks, 1982 and 2000

	1982	2000
Cross-border claims (excluding derivatives)	531	382
Derivative exposure	0	82
Subtotal	531	464
Local country claims including derivative exposure	119	318
All Foreign Exposure	650	782
Ratio of Banks' Total Foreign Exposure to Capital	6	2
Percentage of Total Foreign Exposure in Emerging-Markets	39	23
Percentage of Total Foreign Exposure, Money Center Banks	58	80
Percentage of Cross-Border Claims on Private Sector	28	43

SOURCE: Congressional Budget Office based on year-end data from Federal Financial Institutions Examination Council, *Country Exposure Lending Survey*, Statistical Release E.16 (1982 and 2000).

Adapted from: Congressional Budget Office, *U.S. Banks' Exposure to Foreign Financial Losses* (May 2002).

Figure 2

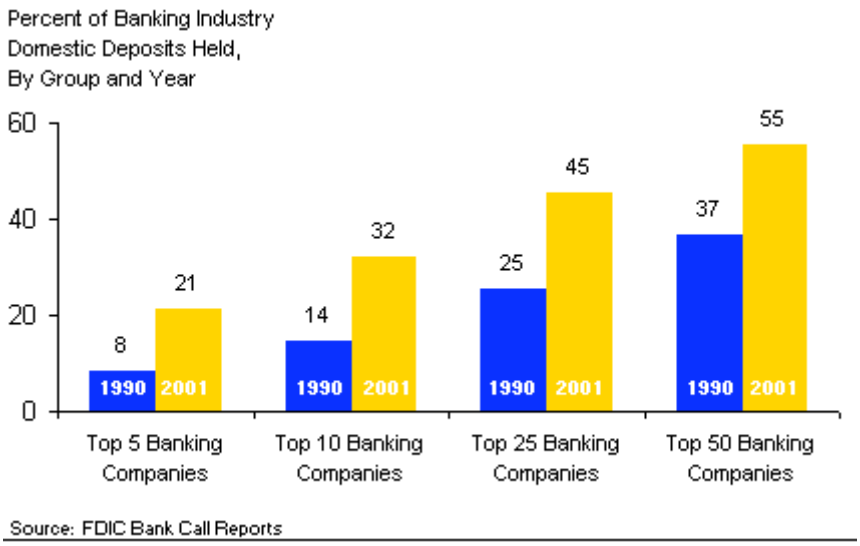
Exposure of UK Banks to Non-UK Banks, 2001
(billions of pounds sterling)

EU	135
Swiss	16
US	37
Japan	10
Other	7
Total	204
UK Tier 1 Capital	89
Tot/Cap	2.3

Source: Jackson, "International Financial Regulation and Stability."

Figure 3

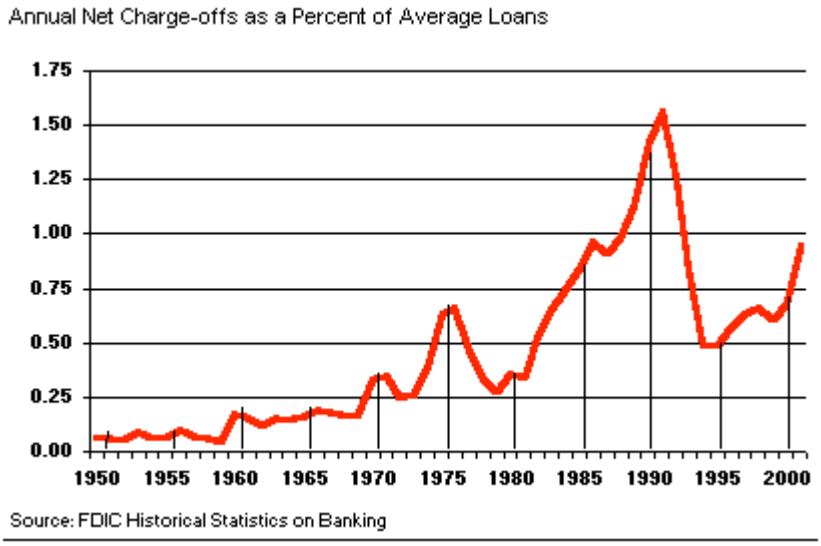
Consolidation in US Banks



Source: FDIC

Figure 4

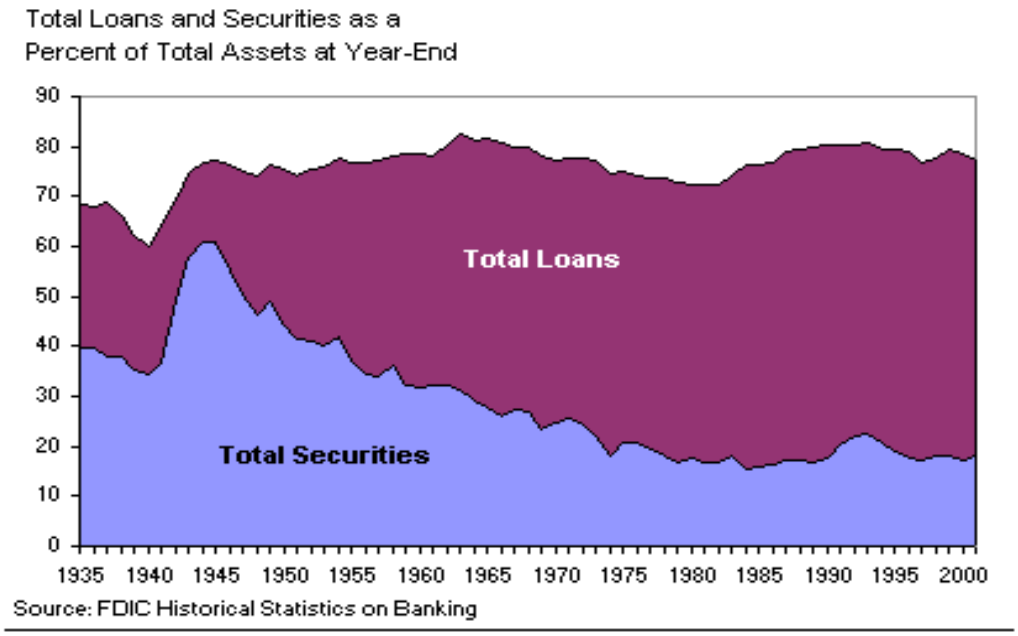
Loan Losses in US Banks



Source: FDIC

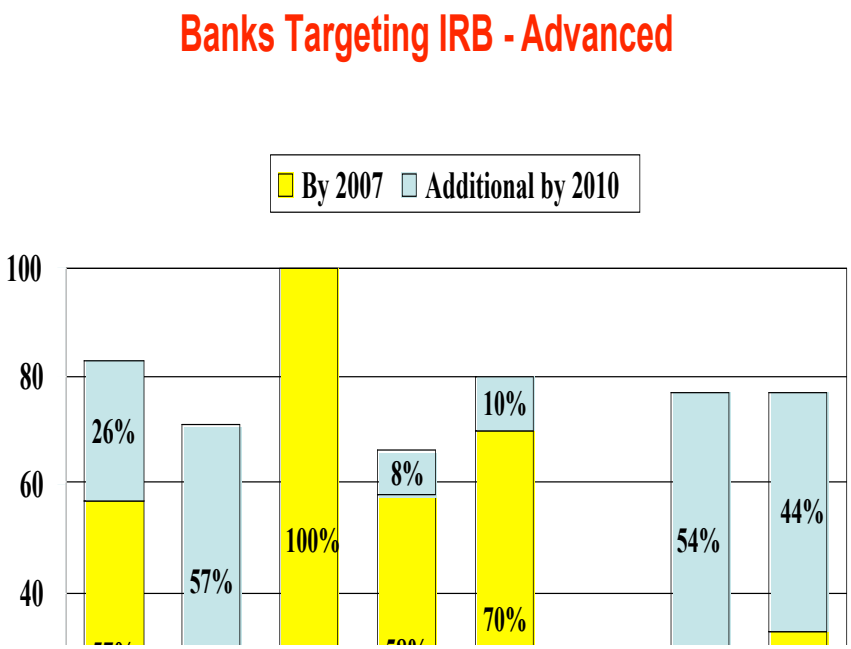
Figure 5

The Changing Composition of Bank Assets



Source: FDIC

Figure 6



I thank Prof. Ingo Walter for bringing this chart to my attention.

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