

Integrating Reform of Financial Regulation with Reform of the International Monetary System

Morris Goldstein

Abstract

This paper links reform of the international financial regulatory system with reform of the international monetary system because as this recent global crisis demonstrates so vividly, the root causes can come from both the financial and monetary spheres and they can interact in variety of dangerous ways. On the financial regulatory side, I highlight three problems: developing a better tool kit for pricking asset-price bubbles before they get too large; shooting for national minima for regulatory bank capital that are at least twice as high those recently agreed as part of Basel III; and implementing a comprehensive approach to “too-big-to-fail” financial institutions that will rein-in their past excessive risk-taking. On the international monetary side, I emphasize what needs to be done to discourage “beggar-thy-neighbor” exchange rate policies, including agreeing on a graduated set of penalties for countries that refuse persistently to honor their international obligations on exchange rate policy.

JEL Codes: F3, F33, G01, G28, G38

Keywords: financial regulation, IMF surveillance, too-big-to-fail, asset-price bubbles

Morris Goldstein has been a senior fellow at the Institute since 1994 and he was the initial holder of the Dennis Weatherstone Chair from 1995 to 2010. He has held several senior staff positions at the International Monetary Fund (1970–94), including deputy director of its Research Department (1987–94). He has written extensively on international economic policy and on international capital markets. He is the author of *Managed Floating Plus* (2002), *The Asian Financial Crisis: Causes, Cures, and Systemic Implications* (1998), *The Case for an International Banking Standard* (1997), *The Exchange Rate System and the IMF: A Modest Agenda* (1995), coeditor of *Debating China's Exchange Rate Policy* (2008), *Private Capital Flows to Emerging Markets after the Mexican Crisis* (1996), coauthor of *The Future of China's Exchange Rate Policy* (2009), *Controlling Currency Mismatches in Emerging Markets* (2004), *Assessing Financial Vulnerability: An Early Warning System for Emerging Markets* (2000), and project director of *Safeguarding Prosperity in a Global Financial System: The Future International Financial Architecture* (1999).

Notes: This paper was presented at the conference Reshaping Global Economic Governance and the Role of Asia in the G-20, which was organized by the Asian Development Bank and the Peterson Institute for International Economics. October 26–27, 2010, Seoul, Republic of Korea. The author is indebted to Ted Truman for comments on an earlier draft and to Allie Bagnall for excellent research assistance. The Peterson Institute for International Economics gratefully acknowledges financial assistance from the Asian Development Bank for this study as part of Research and Development Technical Assistance project (RDTA) 7501, Asia's Strategic Participation in the Group of Twenty for Global Economic Governance Reform. The views expressed here are the author's and do not necessarily reflect those of the Peterson Institute for International Economics or the Asian Development Bank, its board of governors, or the governments they represent.

Copyright © 2011 by Asian Development Bank. The views expressed in this report are those of the author and do not necessarily reflect the views and policies of the Asian Development Bank (ADB), its Board of Governors, or the governments they represent.

INTRODUCTION

It is challenging to lay out in a relatively short paper what can and should be done to reform the international financial and monetary system. I am reminded of the story of the woman who was drafting an obituary after her 80 year old husband passed away. In her draft, she mentioned all his major accomplishments, the surviving family members, and the time and place of the funeral. She then sent her draft to the local newspaper. They phoned her back and told her that because the obituary was 500 words long and because they charge \$3 per word, it would cost \$1,500. After some reflection, she opted for a shorter, three-word version: “Max Schwartz died.” The paper then informed her that they had a six-word minimum. She revised again. In the end, she chose: “Max Schwartz died. Hyundai for sale.” I will give you the six-word version of my reform suggestions.¹

When pondering desirable reforms, I prefer to link reform of the international financial regulatory system with reform of the international monetary system because as this global crisis demonstrates so vividly, the root causes can come from both the financial and the monetary spheres and they can interact in a variety of ways. On the financial regulatory side, I highlight three problems: pricking asset price bubbles before they get too large; going beyond Basel III to get minimum requirements for bank capital that will truly contribute to financial stability in the future;; and confronting “too big to fail (TBTF)” financial institutions. On the international monetary side, I emphasize what needs to be done to discourage “beggar-thy-neighbor” exchange rate policies; this is important, inter alia, to deter the buildup of extremely large current account surpluses in some emerging economies and to avoid a repetition of the case (in this global economic and financial crisis) where recycling of those surpluses (at the very least) exacerbated financial vulnerabilities in some large deficit countries, including excess liquidity, excessively low (long-term) real interest rates, and broader mispricing of risk.²

REFORMING THE INTERNATIONAL FINANCIAL REGULATORY SYSTEM

Bubble Busting

Any credible story about the origins of this crisis has to give a role to easy credit conditions and to a rapid and large run-up in housing and equity prices. Recall however that the precrisis orthodoxy, at least in central banks, was that it would be unwise and unnecessary to ask central banks to attempt to prick asset price bubbles—on at least three counts.³ First, it was said that central banks have no reliable methodology for, or comparative advantage in, identifying such bubbles. Second, even if they could identify such

1. This paper significantly extends and updates the arguments earlier laid out in Goldstein (2010b).

2. See Turner (2009) and Goldman Sachs (2009a).

3. See, for example, Greenspan (2002).

bubbles, the short-term interest rate was not a good instrument for pricking such bubbles: After all, small increases in rates would have little effect and large increases would generate too much collateral damage to the economy as a whole. Third, preemptive action was unnecessary because once such bubbles burst under their own weight, the mess could be cleaned up at relatively low cost by engineering a swift and sizeable decline in policy interest rates.

How has the crisis altered the precrisis orthodoxy on identifying and pricking such asset price bubbles? Clearly, the *we-can-clean-it-up-cheaply-after-the-bubble-bursts-with-low-interest-rates* argument can be discarded (at least for cases where the buildup of the bubble involves significant leverage).⁴ Challenges to the *we-can't-identify-bubbles-beforehand* argument have also been given some increased support from the crisis. Reflecting research done at both the Bank for International Settlements (BIS) and the International Monetary Fund, twin threshold early warning models of banking crises that identify tail observations on both excess credit growth and increases in housing and/or equity prices—as well as studies that examine the relationship between indices of financial stress and economic downturns—look more relevant and promising than before the crisis (see Borio and Drehmann 2009 and Lall, Cardarelli, and Elekdag 2008).⁵ If it remains difficult to identify bubbles before they get too large, the message now to both central banks and regulatory authorities is “I know, but try much harder.” Indeed, one of the tasks of the coming systemic risk oversight councils in both the United States and the European Union is to identify such asset price bubbles.

Last but not least, the crisis should prompt us to put together a better bubble busting tool kit. As my Peterson colleague Adam Posen (2009) put it in a recent paper, if one is faced with a leaky showerhead but has only a hammer, you are in a fix: small taps will do nothing, while a strong rap may break the pipe. What you need is duct tape for small leaks and a wrench for large ones. But what will serve as the duct tape and the wrench? I would say that the gathering consensus—which I share—is that the duct tape and the wrench should certainly include a countercyclical capital buffer and forward-looking provisioning for banks. It should also include countercyclical changes in loan-to-value ratios on residential and commercial mortgages, in lending standards, and in collateral and margin requirements for equities. In some cases, the central bank would also “lean against the wind” by raising interest rates; in other cases it might not.⁶ True, such macroprudential actions run the risk of killing off some expansions too soon, but they also hold the promise of avoiding severe collapses like the recent one.

4. See Gagnon 2010a on why leverage matters for the cost of collapsing asset price bubbles.

5. Borio and Drehmann (2009) find that their model of banking crises is fairly successful at signaling distress in several banking systems that underwent crises in 2007–09, including the United States.

6. If noninterest rate tools are employed to bust asset price bubbles, the central bank will likely need to “lean against the wind” less than otherwise.

Basel III

The current crisis has also highlighted the utter inadequacy of the previous international regime for bank capital (and liquidity) requirements. Banks in the United States and the euro area failed the ultimate stress test: following a long, secular decline in capital and liquidity ratios, more than a few major banks were able to survive this crisis only with extension of massive government support. Even with that support, loan growth went negative.⁷ Regulators now acknowledge that some of the principal innovations of Basel II—particularly the increased emphasis on credit ratings and on banks' internal models for risk weights—were deeply flawed, and that the (precrisis) decisions not to increase the level and quality of capital or to be tougher on capital requirements for the risk in banks' trading books, were mistaken.

As late as the end of 2009 (BCBS 2009), it looked like Basel III was going to be just what the doctor ordered.⁸ The quality of capital was going to be strongly upgraded by emphasizing common equity and by excluding from Tier 1 capital a set of dubious components with little loss absorbency for banks as a going concern. Two quantitative liquidity standards (the liquidity coverage ratio and the net stable funding ratio) were being added to address the bank liquidity problems that surfaced during the crisis. Not only were minimum capital ratios to be raised substantially, but two new buffers (the capital conservation buffer and the countercyclical buffer) and a new TBTF surcharge were going to be stacked on top of the minimums. The design of the capital conservation buffer would serve as an incentive for banks with relatively low levels of capital to refrain from using earnings to pay out dividends and/or to award overly generous compensation packages. The countercyclical buffer would guard against procyclicality by raising capital requirements during episodes of exceptionally high credit growth and promptly undoing those higher cyclical requirements in the face of downturns. The capital surcharge for TBTF banks would discourage excessive size by making such institutions internalize much of the externalities associated with their potential wind-down and/or failure. Moreover, an (unweighted) leverage requirement for bank capital would be added (like that already in use in the United States) to provide a safeguard against risk-weighting mistakes and to constrain leverage more broadly, including off-balance sheet exposures.

But after protests from the banking industry that the December 2009 proposal for Basel III was unfair and draconian and after several (largely self-serving) banking industry studies (IIF 2010a) appeared,

7. The IMF (2010a) documents that bank credit growth in the United States, the euro area, and the United Kingdom (combined) declined from an annual rate of about 12 percent just before the onset of the global economic and financial crisis to about -3 percent in the early part of 2009. Similarly, Cartas and McCongha (2010) show that by end-2009 real bank credit growth to the private sector had gone negative in the major mature economies and that by early 2010 such credit growth in the United States was falling at annual rate of almost 10 percent.

8. In July 2009, the Basel Committee on Banking Supervision announced higher capital requirements for trading-book and securitization exposures; also as part of Basel III, capital requirements were to be strengthened for counterparty credit risk exposures arising from derivatives, repos, and securities-financing activities; see Shin 2010.

claiming that the draft proposals would drive down G-3 GDP by more than 3 percent in 2011–15 (IIF 2010a), the Basel Committee on Banking Supervision (BCBS) buckled. It announced in July 2010 (Basel Committee on Banking Supervision 2010b) a watered-down agreement on some elements of Basel III. This weakening came despite the fact that the Basel Committee's own impact studies (BCBSFSB 2010a, 2010b), released in August 2010, showed persuasively that the net benefits of tougher capital and liquidity requirements were intact over a wide range of capital and liquidity increases and that the real GDP cost of the original Basel III proposal was (at most) one-eighth the size claimed in the industry studies. The revised Basel III proposal would, *inter alia*: allow banks to meet up to 15 percent of the common equity component of Tier 1 capital requirement with deferred tax assets, mortgage-servicing rights, and significant investments in the common shares of unconsolidated financial institutions; postpone the implementation of the proposed medium-run liquidity standard (the net stable funding ratio) until 2018, while softening considerably the definition of liquid assets in the short-run liquidity standard; and test a minimum Tier 1 leverage ratio of only 3 percent, with implementation scheduled only for 2018.

In mid-September 2010, the second (and most important) shoe dropped when the BCBS announced its agreement on the key parameters for minimum capital requirements and the capital conservation buffer, along with its treatment of the countercyclical capital buffer and the timing of phase-in arrangements for both the capital and liquidity standards (BCBS 2010a); the TBTF surcharge was not addressed, awaiting an October 2010 proposal from the Financial Stability Board. The bones of the agreement on parameters for the global minimum capital standards are shown in table 1. In brief, the common equity minimum is increased from the existing 2 percent to 4.5 percent; the Tier 1 minimum goes up from 4 to 6 percent, and the total capital minimum remains unchanged at 8 percent (with all ratios expressed as a share of risk-weighted assets, RWA). Since the capital conservation buffer is set at 2.5 percent, the effective common equity minimum becomes 7 percent, while the effective minimums for Tier 1 and total capital increase to 8.5 and 10.5 percent, respectively. Contrary to expectations (at least mine), the committee decided that the countercyclical buffer (which would carry a capital charge of 2.5 percent when tripped and 0 otherwise) would not be mandatory on an international basis; instead, it would be "...implemented according to national circumstances," (BCBS 2010a, p. 1).⁹ The new capital ratios would be phased in, beginning in 2010 and ending in 2019. The liquidity coverage ratio would not be implemented as a minimum standard until 2015.

There are two standards for judging the seriousness and/or contribution of the Basel III agreement: first, how it compares with the status quo (that is, with Basel II); and second, how Basel III stands up

9. If the countercyclical buffer were mandatory, it would still be triggered by national regulators (and/or systemic risk councils). As the BCBS recognizes, because the economic cycle is likely to differ across countries, the timing for activation of the buffer would also differ across countries.

relative to what was needed in light of the lessons learned during the recent global economic and financial crisis. By the first standard, Basel III is a significant step forward. But by the second standard—which I would submit, is the far more important one, Basel III is a big disappointment.

As hinted at earlier, there is by now widespread agreement that the quality and quantity of bank capital under Basel II were woefully inadequate; so too was the total lack of any quantitative liquidity standard. Thus, it is not surprising that the minimum capital requirements under Basel III are an unambiguous improvement; after all, the most meaningful measure of capital covered, namely, the minimum ratio for common equity was more than tripled from its Basel II level (if one includes the capital conservation buffer); in addition, the risk weights in the denominator (for RWA) have been improved—especially for assets in the trading book; and the capital conservation buffer offers sensible incentives for banks with relatively low capital (above the minimum) not to thwart capital rebuilding by using too much of earnings to pay dividends and/or to award excessive pay packages to executives.

But the real test of Basel III is whether it answers the near universal cry of this crisis to “never again” allow major banks to be so lean of capital that they can remain solvent after a mega shock to their credit and trading books only with massive government infusions of capital and only by depressing loan growth (with adverse effects on the real economy). On this more relevant test, Basel III comes up short because it didn’t raise the minimum for quality capital near enough and because it didn’t make the countercyclical buffer mandatory.¹⁰

In thinking about what would qualify as a suitable international minimum for high quality capital, two observations are instructive.

The first comes from recent academic studies of bank capital requirements (Hanson, Kashyap, and Stein 2010a, 2010b; Miles, Yang, and Marcheggiano, 2011), along with a recap of cumulative asset losses for banks during the recent crisis.

Hanson, Kashyap, and Stein (2010a, 2010b) note that as recently as the first quarter 2010, the four largest US banks—at the lower end of the cycle—were holding a common Tier 1 capital ratio of about 8 percent (of risk-weighted assets).¹¹ Such a common Tier 1 ratio was four times the regulatory minimum but these large US banks were presumably holding such an excess because markets (nervous about bank solvency after the near-death experience of this crisis) were pressuring them to do so. From this behavior,

10. As Martin Wolf of the *Financial Times* put it so well in a recent piece (Wolf 2010, p. 11), tripling the size of the minimum capital standard (for common equity) sounds tough, “...but only if one fails to realize that tripling almost nothing does not give one very much.”

11. The Institute for International Finance (IIF 2010a) reported that US banks had (an average) core Tier 1 capital ratio at the end of 2009 of 10.5 percent; it was 8.0 percent for euro area banks. It was much lower for Japanese banks but they accounted for only 5 percent of estimated total global bank write-downs over the 2007–10 period—versus roughly 40 percent for US banks, 30 percent for euro area banks, and 20 percent for UK banks; see IMF 2010a.

Hanson, Kashyap, and Stein (2010a) conclude that 8 percent is the market-induced minimum near the bottom of the cycle. According to the IMF's April 2010 Global Financial Stability Report (IMF 2010a), US banks lost about 7 percent of assets during this crisis (2007–10).¹² Hence if large US banks are to meet the market-imposed minimum at the bottom of the cycle after suffering a loss equal to 7 percent of assets, the regulatory minimum at the top of the cycle should be in the neighborhood of 15 percent; if one redid the same calculation using the 10 percent common Tier 1 ratio for all US banks and end-2009 reported by the IIF (2010a), the top-of-the-cycle minimum would be closer to 17 percent.¹³ The IMF reports that cumulative losses for UK banks during the 2007–10 period were 5.4 percent of assets, while the corresponding figure for euro area banks was 2.9 percent. The (weighted) average asset loss for global banks as a whole was about 4 percent. This would lower the estimate for the top-of-the-cycle minimum to roughly 12 percent. But a range of 12 to 17 percent is way beyond the Basel III minimum of 7 percent—and still considerably above the Basel III minimum even when the (voluntary) countercyclical buffer of 2.5 percent is added to the 7 percent minimum. If banks in the future were holding close to the 7 percent Basel III minimum and they suffered a loss equal to say, 5 percent of RWA, they would be close to insolvent. Indeed, under the Federal Deposit Insurance Corporation (FDIC)'s current prompt corrective action guidelines, regulators are supposed to close a bank when its net worth (as indicated by a simple leverage ratio) hits 2 percent. Also, with such a low capital ratio, the likelihood that banks could support the real economy by refraining from a sharp cutback in loans would be doubtful.

Miles, Yang, and Marcheggiano (2011, p. 4) conclude similarly that "... the amount of equity funding that is likely to be desirable for banks to use is very much larger than banks have had in recent years and higher than targets agreed under the Basel III framework." They argue, *inter alia*, that: (i) in both the UK and the US, there has been no obvious relationship between banks' use of equity funding and the overall performance of the economy; (ii) financial crises are more likely to be less frequent and less severe when banks have higher capital ratios and such financial crises—when they occur—are typically associated with reductions in GDP of 10 percent or more; (iii) if the ratio of Tier 1 capital to RWA were to double from 8.4 percent to 16.8 percent, banks' cost of funding would likely increase by only about

12. Representative of losses at individual large banks, a recent report by a Swiss Commission of Experts (Commission of Experts, 2010) indicates that between the third quarter of 2007 and the third quarter of 2009, UBS suffered losses equal to 12.2 percent of risk-weighted assets (RWA), while Credit Suisse's losses amounted to 4.2 percent of RWA; the corresponding loss figures for HBOS in the United Kingdom and Citigroup in the United States were 7.3 percent and 5.8 percent of RWA, respectively.

13. Even these common equity ratios understate the needed minimum capital ratio at the top of the cycle because the 7 percent asset loss for US banks is relative to total assets—not risk weighted assets (RWA), and RWA is only about 80 percent as large as total assets. In the euro area, the difference between the two is even larger, with RWA being roughly half as large as total assets; see IIF 2010a. Hence, if asset losses were expressed as a share of RWA, the loss rate would be higher and so too would be the capital cushion needed to absorb those losses.

18 basis points; (iv) this, in turn, would translate into an estimated fall in output of only about 15 basis points; and (v) considering both the benefits and costs of higher bank capital requirements, the optimal ratio of common equity to banks' RWA is in the neighborhood of 16-20 percent.

In short, the new Basel III 7 percent minimum hardly looks like what European Central Bank (ECB) President Trichet (2010) recently hailed as "...a fundamental strengthening of banking standards." Moreover, Hanson, Kashyap, and Stein (2010b) go on to show that so long as banks are given a reasonable transition period to meet these higher capital requirements, (where reasonable is certainly not longer than the nine-year phase-in period under Basel II), there is little likelihood that even very large increases in capital requirements (on the order of 10 percentage points) would lead to large increases in loan prices and large declines in loan volumes.

To those who nevertheless still argue that a core Tier 1 capital requirement in the neighborhood of 12 to 17 percent would be way too high, it is relevant to note that US and UK banks maintained much higher capital ratios (book assets to book equity) in the 1840–1900 period (Berger, Herring, and Szegö 1995 and Alessandri and Haldane 2009), that small US banks have Tier 1 capital ratios approximately double those of the largest US banks (Hanson, Kashyap, and Stein 2010a), and that empirical efforts (using US time-series data) to associate higher capital ratios with higher loan spreads (holding other factors constant), have generally not been successful (Hanson, Kashyap, and Stein 2010a, Miles, Yang, and Maarcheggiano 2011, and Elliott 2009). What the banking industry fails to acknowledge sufficiently is the Modigliani-Miller (1958) insight that raising the capital ratio makes equity and debt safer and thus reduces their required return. The industry also fails to appreciate that while lower capital ratios can temporarily raise the return on equity, they cannot do so permanently if the higher risk taking associated with higher leverage eventually produces large credit and trading losses—as has emphatically been the case during this recent crisis.¹⁴

The second observation comes from Switzerland's recent unilateral reform of bank capital requirements (BCBSFSB 2010b and Commission of Experts 2011). The Swiss regulatory authorities mandated in December 2008 that UBS and Credit Suisse would have to meet much tougher capital and liquidity standards by January 2013. In good times, the minimum revised Tier 1 capital ratio (to risk-weighted assets) would have to be 16 percent—more than 6 percentage points higher than the previous target; in addition, a minimum (unweighted) leverage ratio of 5 percent was introduced. Not only did the two large Swiss banks satisfy the tougher capital standard way ahead of schedule (in 2009), but the macroeconomic impact has been anything but calamitous. In October 2010, the committee of experts appointed by the Swiss Federal Council to examine ways of limiting economic risks posed by large companies—and particularly by Switzerland's two largest banks—published its final report (Committee of

14. See Haldane 2010.

Experts, 2011).¹⁵ As regards the risk-weighted capital ratio, the Committee recommended that:

(i) the total capital requirements for Credit Suisse and UBS be set at some 19 percent of their RWA; (ii) 10 percent of RWA must be held in the form of common equity; and (iii) for 9 percent of RWA, the two banks can issue contingent convertible bonds that automatically convert into common equity when a bank's common equity drops below a predefined level or trigger.¹⁶ These Swiss capital requirements are clearly substantially more rigorous than the minimum standards set out in Basel III.

The Swiss example torpedoed the notion that it is not feasible for any country with sizeable international banks to implement a minimum capital requirement (for the top of the cycle) that is tougher than that implemented by its G-20 counterparts.

In sum, promoting future financial stability would have required a much larger increase in minimum capital standards than emerged from the Basel III agreement and it could have been done without endangering prospects for healthy economic growth over the longer term.

Aside from the disappointment over the level for the minimum common equity requirement, the Basel III decision to make the countercyclical buffer optional according to national circumstance is also a serious setback. Given widespread press reports that some European countries were opposed to even the final Basel III common equity minimums (presumably on the grounds that adjusting to this minimum would be too costly for some of their banks), it seems unlikely that these countries will choose to implement a countercyclical buffer of 2.5 percent on top of the 7 percent minimum—even if excess credit growth argues otherwise. More broadly, making the countercyclical buffer voluntary may remove from the expanded bubble-busting tool kit one of its key new tools, with adverse consequences for financial stability. What does the supposed G-20 consensus on the need for more “macroprudential” supervision amount to if the essentially same cast of characters cannot agree on requiring its members to increase bank capital requirements during periods of extremely rapid credit growth and to reduce them promptly when evidence of the downturn is in hand?¹⁷ One cannot build bricks without straw.

It is regrettable that this historic opportunity to reform the international bank capital regime in the aftermath of the greatest financial crisis since the Great Depression has produced only a half a loaf. The only silver lining is that Basel III standards are meant to specify internationally agreed minima and it is fully within the prerogative of national governments to impose capital standards that substantially exceed those minima. It is hoped that those G-20 governments that reportedly regarded the final Basel

15. Both the Swiss Financial Market Supervisory Authority (FINMA) and the Swiss National Bank (SNB) were represented on the Committee of Experts and were involved in drawing up the recommendations.

16. When implemented, these new capital requirements for Switzerland's two largest banks would be phased-in under the same timetable as those in Basel III.

17. See Brunnermeier et al. 2009 for a good explanation of the “macroprudential” approach to financial regulation.

III minimum capital standards as too low (including the United States and the United Kingdom) will now (like Switzerland) use their discretion to upgrade them in their national banking legislation and not (once again) succumb to the narrow interest of the banking industry over the national and international public interest.

Confronting TBTF

Turning next to the TBTF problem, 145 global banks with assets exceeding \$100 billion each accounted for more than 90 percent of the government support during this crisis (Haldane 2010). Top-3 and top-5 concentration ratios (for bank assets relative to GDP) have increased sharply in large advanced economies over the past two decades and this despite scant evidence of either economies of scale or economies of scope in banking (and certainly not beyond \$100 billion in assets (Goldstein and Véron, 2011). Large and complex financial conglomerates now have hundreds—and sometimes thousands—of majority-owned subsidiaries, with a high percentage of those subsidiaries located in foreign locations (Carmassi and Herring 2010). Not only does much of this organizational complexity reflect in no small measure regulatory arbitrage and tax avoidance, but an orderly wind-down of such institutions would be severely hampered by the lack of international agreement on cross-border resolution (Turner 2009).

Because TBTF institutions know that the collateral damage from permitting them to fail would be more than the authorities can bear, they repeatedly take on excessive risk through a variety of channels (high leverage, loading up on risky assets, etc.)—while the market anticipation of government bailouts means that such firms do not have to pay the risk premium that would otherwise mute such increased risk taking (Stern and Feldman 2004 and Haldane 2010). Banking crises are a leading cause of sovereign debt crises (Reinhart and Rogoff 2009). It has been estimated that US banks with assets more than \$100 billion can fund themselves more than 70 basis points cheaper than smaller banks, and the difference between “stand alone” and “support” credit ratings is much bigger for large and complex banks than for smaller ones (BIS 2010). In some cases, the hidden subsidy to TBTF institutions amounts to a sizeable share of their annual profits. Government policy toward TBTF firms, which has frequently resulted in privatization of gains and socialization of losses—when combined with executive compensation at TBTF firms that bears little relation to relative performance—has also lowered public trust in the “fairness” of the financial and economic system (Herring 2010). No wonder that US Federal Chairman Bernanke, recently testifying before the US Financial Crisis Inquiry Commission, concluded that “...if the crisis has a single lesson, it is that the too big to fail problem must be solved” (Bernanke 2010). On the multilateral front, the Financial Stability Board has been tasked with developing concrete policy recommendations on how to address the TBTF problem by the time of the November 2010 G-20 leaders summit in Seoul.

But if more financial institutions are to be prevented from becoming “too big to fail,” if some existing TBTF financial institutions were to be shrunk, and if systemically important financial institutions are in the future to be allowed to fail in an orderly way, how is all this to be done? Here too, I think we are going to need a more extensive tool kit.

As noted earlier, one approach to discouraging TBTF and to internalizing the externalities associated with bigness and complexity is to impose higher capital and liquidity requirements on financial institutions deemed systemically important relative to those not so designated.¹⁸ Several objections have been made to such an assessment but none of them are persuasive.

One objection is that higher self-insurance in the form of higher capital ratios has no link with the probability of bank failure. In this connection, Herring (2010) noted that of the five largest US financial institutions subject to Basel capital standards that either failed or were forced into government-assisted mergers in 2008—namely Bear Stearns, Washington Mutual, Lehman Brothers, Wachovia, and Merrill Lynch—each had regulatory capital ratios (at their last quarterly disclosure before they were shut down) that were much above the standard for “well-capitalized” institutions. Similarly, the IMF (2009b) found that during the 1998–2008 period, “intervened” financial institutions had better capital-adequacy ratios than the nonintervened institutions. But more recent studies—focusing on the most recent crisis period and using a larger sample of large financial institutions—yield more optimistic findings on the role of high bank capital in lowering the need for government intervention. The BIS (2010) recently reported that among 40 large international banks, those that had relatively high Tier 1 capital ratios in 2006 required low emergency support in 2007–09, and that only banks with low Tier 1 ratios needed extensive emergency support during the crisis. A recent McKinsey study (Buehler, Samandari, and Mazingo 2009) also found that, in a sample of 115 large global banks (accounting for approximately two-thirds of total global banking assets), the ratio of tangible common equity (TCE) to RWA was the best predictor of financial failure during the 2007–09 period; in addition, no firms with a TCE-RWA ratio of more than 10 percent failed during this crisis.

A second objection to a TBTF capital surcharge is that capital-based triggers in the FDIC’s prompt corrective action (PCA) regime for banks have hardly been operating according to plan during this crisis. Instead of a graduated corrective response followed by the closing of the bank when it still has positive net worth, some banks are seemingly descending from well-capitalized to insolvent in one blow—with unhappy consequences for the deposit insurance fund. Elliot (2009) estimates that the FDIC has lost as much as 30 percent of the value of assets in some bank closings. These observations hint strongly that the market does not place much confidence in some reported regulatory capital ratios, and that capital-

18. Ex ante bank taxes that carry higher tax rates for systemically important financial institutions embody the same general principle that TBTF institutions should be required to pay upfront for their possible failure.

based triggers for prompt corrective action (at least as presently defined) are not sufficient to carry out their intended functions. But these same observations do not address what the market's response to higher quality measures of bank capital (e.g., TCE and/or RWA) would be, or whether more market-oriented measures of a bank's financial condition would serve as superior triggers for the PCA regime than book measures of capital, or whether worries about contagion in this broad and deep recent crisis led the FDIC to modify its operation of the PCA regime. In any case, problems with the operation of the FDIC's PCA regime in this crisis do not invalidate the argument for higher self-insurance requirements for TBTF financial institutions—either as “going” or “gone” concerns.

Yet a third objection to a TBTF capital surcharge is that the financial firms paying such a surcharge will have their TBTF status further enhanced (from *de facto* to *de jure*) and that this official designation will provide them with a further unwarranted funding subsidy, thereby exacerbating the misallocation of resources. I don't buy it. I doubt whether the list of TBTF surcharge payers will be very different than the market's perceptions of who is and who is not TBTF. Moreover, there is no reason why the surcharge needs to be zero-one; it can be graduated depending on the official sector's evaluation of the size, interconnectivity, and complexity of the individual institution;¹⁹ it is conceptually similar to risk-based deposit insurance. Most important, there is no way to implement a “tax” on TBTF without identifying those who will be subject to the tax, and not having such a tax will inappropriately shift more of the burden of financing the failure of systemically important firms to the taxpayer.

A second tool for discouraging TBTF and for reducing the expected cost of the failure of TBTF firms is to require all systemically important institutions to have wind-down plans that will assure the primary supervisor (and the college of supervisors) that it can be resolved without creating unacceptable spillovers.²⁰ In cases where the institution is too large and complex to be wound down in a nonsystemic way, the supervisor would have the authority to require the institution to shrink and to become less complex.

Herring (2010) argues that such a mandatory wind-down plan should be designed to accomplish at least four objectives:

1. It should protect taxpayers from the necessity of bailing out systemically important financial institutions (SIFIs) by providing an alternative resolution method that will neither involve a taxpayer subsidy nor impose intolerable spillovers on the financial system.

19. See IMF 2010a for a discussion of various alternative approaches to estimating the capital surcharge for large and complex financial institutions.

20. In the United States, the Dodd-Frank Act of 2010 stipulates that all systemically important nonbank financial companies and large, interconnected bank companies will be required to prepare and maintain extensive rapid and orderly resolution plans, which must be approved by the Federal Reserve and the FDIC.

2. It will make clear to all observers that no SIFI need be bailed out.
3. It will force SIFIs to anticipate and internalize some of the spillover costs associated with their failure.
4. It will make the primary supervisor and the college of supervisors aware of what they need to do if a SIFI approaches bankruptcy.

According to Herring (2010), the wind-down plans themselves must:

- map lines of business into the corporate entities that would be taken through the resolution process;
- describe the resolution procedures for each entity, along with an estimate of how long each will take;
- identify key interconnections across affiliates (such as cross-guarantees, standby lines of credit, etc.), along with operational interdependencies (such as IT systems);
- contain provisions for developing and maintaining a virtual data room that contains information that the resolution authority would need to expeditiously resolve the entity;
- identify key information systems, where they are located, and the essential personnel to operate them;
- identify any activities or units it deems as systemically relevant and demonstrate how they operate during a wind-down; consider how its actions may affect exchanges, clearing houses, custodians, and other important elements of the infrastructure; and
- be updated annually or more often if a substantial merger or acquisition or restructuring adds extra complexity.

The big question about wind-down plans is whether supervisors will actually use their newly established authority to require large and complex financial conglomerates to shrink and/or to simplify significantly their organizational structure. Also, would reducing the number of majority-owned subsidiaries of such firms from say, a thousand to several hundred make a significant difference to the orderliness of resolution—or would the simplification have to be even more drastic (say, to 50)? This is uncharted territory.

A third key instrument—particularly relevant for reducing the expected cost of the failure of a SIFI—is to ensure that special resolution authority exists for all SIFIs—be they banks or nonbanks—so that there is a viable alternative to the over-the-weekend massive government bailout of the failing firm. As Rodgin Cohen and I show in a recent paper (Cohen and Goldstein 2009), corporate bankruptcy is not a good substitute for such resolution authority because bankruptcy pays little attention to third-party effects that are the essence of systemic risk, because creditor stays—and their potential adverse systemic effects—are part and parcel of the bankruptcy process, because bankruptcy proceedings move too slowly to protect the franchise value of the firm, and because bankruptcy does not permit pre-insolvency intervention.

Having resolution authority is not sufficient. Such resolution authority has to be designed in a way that supports market discipline. This means wiping out shareholders, changing management, and paying off creditors (promptly) at estimated recovery cost (not at par); whenever possible, it also means not selling the failing firm to one of the larger players in the field (what I call “opportunistic deconsolidation”); and it means funding the resolution authority in part with ex ante and/or ex post fees on other financial institutions so that the financial sector—not the taxpayer—pays the lion’s share of the costs.²¹

Policy instrument number four for discouraging TBTF would be to impose explicit size limits on systemically important financial institutions relative to GDP, as recommended by Johnson and Kwak (2010). When financial institutions become very large relative to the country’s GDP, they become very expensive to bail out—a lesson learned the hard way by Iceland, Ireland, Switzerland, the United Kingdom, and the United States. Even if the probability of failure were no higher for very large financial firms, the expected cost given failure is much higher for the large SIFIs. As noted earlier, a large and long-running literature on economies of scale and scope in banking fails to find such economies only for small banks—certainly less than \$100 billion in assets and far short of the trillion dollar-plus balance sheets of the world’s largest banks. Recent research finds that markets impose a “discount” on banks when they become more complex—not a diversification premium (Laeven and Levine 2005). Measures of bank size and bank diversification have been positively correlated with income volatility during the 2006–08 period, and larger and more diversified banks have shown greater write-downs of assets than smaller and less diversified ones (Haldane 2010)—lending support to the proposition put forward by Stern and Feldman (2004) that large banks “spend” any diversification cost saving on greater risk taking. Contrary to the arguments of Calomiris (2009) and others, large, complex financial institutions are not needed to service large, global nonfinancial businesses; the needs of those businesses can be handled adequately by a consortia of medium-sized banks, without the excess baggage of TBTF firms.

Johnson and Kwak (2010) propose that the size cap for US commercial banks be set at 4 percent of GDP and half that (2 percent of GDP) for investment banks. I could live with somewhat higher caps but Johnson and Kwak (2010) seem to be in the right ballpark—at least for US financial institutions. At present, only four US commercial banks and two US investment banks would be required to shrink because of the proposed Johnson-Kwak (2010) size limits: JPMorgan Chase, Bank of America, Citigroup, Wells Fargo, Goldman Sachs, and Morgan Stanley. The Dodd-Frank Act of 2010 specifies that any insured depository or systemically important nonbank be prohibited from merging or acquiring substantially all the assets or control of another company if the resulting company’s total consolidated liabilities would exceed 10 percent of the aggregate consolidated liabilities of all financial companies. This

21. In this connection, I regard the “financial crisis responsibility fee” proposed by President Obama, as a good idea; see Goldstein 2010a.

liability size cap would not require any existing US financial institutions to shrink, although it could limit their future growth. Thus, in contrast to the Johnson-Kwak (2010) proposal, the Dodd-Frank Act opts to leave intact the size of America's existing TBTF institutions. A proposed amendment (to the precursor) of the Dodd-Frank Act by Senators Brown and Kaufman that would have implemented more binding size caps was rejected by a comfortable margin in the US Senate.

While I favor explicit size caps on SIFIs, it is very doubtful that such size caps could be harmonized internationally.²² This is because the size of the largest financial institutions relative to home-country GDP differs so much across countries. As shown in Goldstein and Véron (2011), if we relate the combined assets of a country's three largest banks to GDP, Switzerland, Belgium, and the Netherlands all have ratios (in 2009) that exceed 400 percent, whereas the US ratio is just above 40 percent. Japan is the only other advanced economy with a (three-firm concentration) ratio less than 100 percent (of GDP). But just because the size-to-GDP ratios are widely different across countries does not mean that countries could not—or should not—impose their own size caps. And if economies of scale and scope are absent beyond say, \$100 billion in assets, little will be lost if national size caps result in some countries having their largest banks be much smaller than other countries. In fact, such absolute cross-country size disparities already exist. By end-2009, only 4 of the largest 25 banks in the world (ranked by total assets) were US banks, whereas the 7 largest and 16 of the top 25 all hailed from the European Union (Goldstein and Véron, 2011).²³ The two largest global banks, BNP Paribas and Royal Bank of Scotland—each with more than \$2.7 trillion in assets—were 67 to 80 percent larger than the largest US bank (JPMorgan Chase).

Some have argued that it is preferable to discourage excessive size in financial institutions by price rather than quantity incentives. For example, if there is a size-related capital surcharge and if the schedule of surcharges is steep enough, higher capital charges can limit size without specifying an explicit size cap—much in the same way as import tariffs are traditionally preferred to import quotas. But if the schedule of size-related capital charges is set so as to strongly discourage size beyond a specified range, then the two measures are not so different.

This list of regulatory measures needed to discourage growth in TBTF institutions, and/or to break them up into smaller entities, and/or to make their resolution less costly to taxpayers, is not complete. Three other measures—each of which I support—are worth mentioning, if only briefly. One is mandatory requirements to convert a portion of debt (of SIFIs) into common equity under prespecified stress conditions (Goldman Sachs 2009a and Herring 2010); if Basel III had produced a higher minimum

22. In Goldstein and Véron (2011), we emphasize that size is only one of several factors that determine whether a financial institution is “systemically important.”

23. If we were to measure the size of banks by market capitalization rather than total assets, the country rankings change quite markedly. More specifically, 4 of the top 10 (and all of the top 3) would then be Chinese banks, three would be US banks, and only two would be banks from the euro area.

level of common equity capital, we could perhaps get by without such a contingent capital supplement, but, as outlined in the previous section, this has not happened. A second measure is the Turner Review (2009) proposal to give host-country banking supervisors greater powers to impose tougher local liquidity requirements on branches and subsidiaries of foreign banks operating in their country if the host-country supervisor has concerns about the quality of information available to them or about the ability of the home country to provide sufficient deposit protection or fiscal support in case of a failure. The unhappy recent experience with Icesave, the internet deposit business of the UK branch of the Icelandic bank, Landsbanki Islands, illustrates vividly why such a proposal is needed (FSA 2009). Finally, there is the Volcker Rule. The Dodd-Frank Act of 2010 stipulates that (subject to some exceptions and to a transition period) any “banking entity” will be prohibited from engaging in proprietary trading or sponsoring and investing in a hedge fund or private equity fund (beyond 3 percent of its Tier 1 capital); see Davis Polk 2010. The basic intent is to ensure that “banks” do not use their preferred access to the official safety net to undertake risky activities that are not at the behest of their clients and that could put the bank’s solvency in question, with adverse spillover effects on the wider economy and on the liability of taxpayers. While there are legitimate concerns about how well such “proprietary activities” can be identified and monitored, I don’t see why moving such activities to a large nonbank financial sector that already engages heavily in them (without the implicit subsidy available to banks) should be very costly for the US economy as a whole. As noted by Mallaby (2010), while there have been failures of hedge funds in this crisis, these failures have taken place without the extension of funds from the public sector. Also, to the extent that banks become TBTF partly because of rapid growth in those activities now constrained by the Volcker Rule, the rule will help to curb that excessive growth.

I prefer such a “belt and braces” approach to confronting too big to fail because not one of the individual policy prescriptions by itself is likely to be effective enough (or perhaps saleable enough) on its own to solve the problem. When you put them all together, however, you have a workable plan for confronting too big to fail. Yes, this comprehensive approach to confronting too big to fail is more interventionist than has been customary and it will mean that asset growth and probably profits in the larger firms will be lower than in the run-up to the crisis. But it will also mean that when there is a collapse in a set of systemically important institutions, you and I will pay less to clean up the mess.

It is disappointing that the recent G-20 leaders summit in Seoul put off until mid-2011 determining the list of global systemically important financial institutions and—until end-2011, agreeing on the measures to deal with these institutions.

REFORMING THE EXCHANGE RATE SYSTEM

Let me move next to the international monetary system. Here, I want to focus on one issue: what approaches are available to induce large, surplus economies to abandon now—and to avoid in the future—beggar-thy-neighbor exchange rate policies. As argued earlier, if such exchange rate policies are not ended, it is likely that we will recreate over time the kind of credit conditions in large deficit countries that served as one of the underlying vulnerabilities in this crisis. The exchange rate issue is also highly relevant for three other related reasons.

First, one of the lessons that emerging economies will take away from this global financial and economic crisis is that the world is an even riskier place than they thought and that they need more “insurance” to cope with it—including much higher levels of international reserves. If there are no international rules or guidelines on how they acquire those additional reserves, some countries will be tempted to acquire them by maintaining highly undervalued real exchange rates. Occasional special drawing rights (SDR) allocations, easier IMF conditionality, larger IMF quotas, and even new IMF global safety net lending windows are not likely to be sufficient to dissuade them from building reserves in the wrong way.

Second, if the budding global recovery is to be sustained, it will be necessary to engineer not only shifts in demand between the public and private sectors within countries, but also shifts in demand across countries. But if large economies now in surplus refuse to allow their real effective exchange rates to appreciate by any significant degree—or even worse, allow those rates to depreciate, external adjustment will be handicapped and prospects for a sustainable and balanced expansion will diminish. In this connection, it is worth noting that my Peterson colleagues Bill Cline and John Williamson (Cline and Williamson 2010) reckon that the renminbi remains undervalued by about 15 percent in real effective terms. This undervaluation would increase substantially to levels of 25 percent or more if the People’s Republic of China’s global current account surplus climbs over the next two to three years to 8 to 9 percent of GDP range (Goldstein and Lardy 2009), as some analysts (Gagnon 2010b) expect.

Third, the past half dozen years have witnessed at least one highly significant case of beggar-thy-neighbor exchange rate policy and a marked failure of Fund surveillance to confront it effectively. I speak of course of China’s exchange rate policy. Since I have written frequently and at length on this topic over the past half dozen years (see for example Goldstein 2004, 2006, 2007a, 2007b, Goldstein and Lardy 2003, 2005, 2006, 2008, 2009, and Goldstein and Mussa 2005), I can be relatively brief.

Between 2003 and 2007, China’s global current account surplus rose without interruption—from roughly 3 percent of GDP to almost 11 percent. At the same time, China was engaged in massive, prolonged, one-way intervention in the exchange market and large-scale sterilization of those reserve increases as well. From February 2002 through the end of 2007, the cumulative real effective appreciation

of the renminbi was zero (JPMorgan index). The Chinese economy was growing briskly throughout this period (10 percent or more in each year) and was frequently overheated, with growth peaking at 14 percent in the second quarter of 2007. After that, there was some notable progress, but this progress looks to be short lived. Between November 2007 and March 2009, the real effective exchange rate of the renminbi fluctuated considerably but nevertheless appreciated on a cumulative basis by about 15 percent, before depreciating again by 4 percent (on a cumulative basis) between March 2009 and August 2010. China's global current account surplus fell to about 5 percent of GDP in 2009–2010. The rub is that much of the 2007–10 decline in China's external imbalance reflects the contractionary effect of the global crisis on China's exports as well as the expansionary effect of China's stimulus policies on its imports. Both of these effects are likely to reverse or subside if the global recovery continues. Indeed, many analysts see China's current account surplus rising to roughly 8 to 9 percent of GDP over the 2011–15 period (Gagnon 2010b). Were that to occur, the undervaluation of the renminbi would rise sharply along with the growing current account surplus—once again hitting (misalignment) levels well above 25 percent (Goldstein and Lardy 2009).²⁴ The announcement made by China's central bank on June 19, 2010—just before the Toronto G-20 leaders summit—to “...enhance the renminbi exchange rate flexibility...” has so far yielded meager returns, with the renminbi-dollar exchange rate appreciating by only 3.5 percent.

Martin Wolf (2009) of the *Financial Times* emphasizes both that a policy of keeping the exchange rate down is analytically equivalent to trade protectionism and that, judging by its reserve accumulation, China has “...kept its exchange rate down to a degree unmatched in economic history.” Paul Krugman (2010), writing in the *New York Times*, concludes that “...with the economy still in a precarious state, beggar-thy-neighbor policies can't be tolerated. Something must be done about China's currency.”

While all this was going on, the Fund's surveillance of China's exchange rate policy has been abysmal. The Fund staff was very slow to acknowledge that the renminbi was undervalued, it was very late in recognizing the size of this misalignment, and its forecast of China's global current account imbalance has consistently been way off the mark—especially when that imbalance was increasing sharply. The Fund board and management rejected the role of being a global umpire for the exchange rate system just when the international community needed that role the most. In my view, the Fund has been intimidated by the extreme sensitivity of the Chinese authorities to external criticism of their exchange rate policy, with the consequence that there has been no finding of manipulation despite strong evidence to the contrary. There have been no ad hoc consultations to China, and China blocked publication of its Article IV reports for 2007–09.

24. See the evidence assembled in Goldstein and Lardy (2008) and in Cline (2010) that large renminbi undervaluation has an empirically significant effect on China's global current account position. For an opposing view, see Park 2005.

The argument that the Fund could not do more on bilateral surveillance because the 1977 surveillance guidelines (IMF 1977) were outdated seems even weaker today than when it was advanced in 2007 as a motivation for a new bilateral surveillance decision (see IMF 2007a). Branding an exchange rate “fundamentally misaligned” has proved to be no easier to implement for the Fund than identifying “manipulation,” and in June 2009 the IMF management had to reverse course and withdraw not only the proposal to make increased use of ad hoc consultations but also the de facto application of the concept of fundamental misalignment itself (see IMF 2009a).²⁵ Truman (2010) concluded that the 2007 surveillance decision produced no tangible results affecting members’ exchange rate policies; how a June 2009 staff guidance note (IMF, 2009a) could characterize the 2007 decision as “...a landmark for the Fund”—rather than a landmine—is beyond me. Michael Mussa (2008, p. 281), a former economic counselor at the Fund, has analyzed in considerable detail the Fund’s exchange rate surveillance toward China’s exchange rate policies. His conclusion, offered in late 2007, was as follows: “In my view, the IMF’s approach to the application of surveillance to China’s exchange rate policy constitutes gross misfeasance, malfeasance, and nonfeasance by the managing director and the IMF more generally.” Speaking at the same conference and published in the same conference volume (Goldstein and Lardy 2008), Larry Summers (2008 p. 351) offers the following assessment: “...it is possible that Michael Mussa may have understated the case against the IMF in recent years. If one is to take seriously the notion that there is a global, multilateral agency tasked with the preservation of international financial stability...the job that the Fund has done over the past four years is indefensible, and the culture of the Fund, with respect to these things, needs to be radically altered.” The 2007 report by the Fund Independent Evaluation Office (IEO-IMF 2007) on IMF exchange rate surveillance—going beyond the China case—was only slightly less scathing. The IMF staff’s most recent appraisal of Chinese exchange rate policy—contained in the just published 2010 Article IV Consultation Report (IMF 2010b—hardly conveys any sense of urgency: “The central bank’s recent decision to return to the managed floating regime that was in place prior to the global financial crisis is extremely welcome” (p. 26), and “...a broad agenda remains ahead and includes...using the flexibility in the current exchange rate regime to allow for an appreciation of the renminbi in real effective terms.” (p. 3), In short: Houston, we have a problem.

Three dimensions of the problem seem to me to warrant particular attention.

First, we need to find a way to make the Fund’s engagement with members who have emerging exchange rate problems less subject to politicization and long delays. If it’s going to take a year a two to negotiate the acceptance of an ad hoc consultation, that’s not going to be a useful instrument.

25. Harking back to the introduction of this paper, the six-word version of this saga should be “surveillance decision for sale: never used.”

Second, there needs to be a workable framework for the Fund's exchange rate surveillance that is capable of sending the message that the Fund staff and management not only view the country's exchange rate policy as ill-advised but also that this policy is inconsistent with the country's obligations as a member of the Fund and hence, that the policy has to be changed. I think the failure to implement the 2007 bilateral surveillance decision and the de facto "defanging" in June 2009 means there is now no such framework. All the Fund staff can convey now is an opinion on a country's exchange rate policy that carries no more opprobrium than anybody else's opinion. It's as if the jury in a trial provided a summary of its deliberations but declined in the end—because the defendant might become too upset—to issue a verdict. Some hoped that the Framework for Strong, Sustainable, and Balanced Growth—agreed after the Pittsburgh G-20 leaders summit in September 2009 and with action plans unveiled at the Seoul G-20 leaders summit in November 2010—would provide a superior framework for addressing global imbalances and the sustainability of the global expansion and that exchange rate problems could be better tackled within that broader context. I would argue that those hopes have now been dashed. Indeed, the Seoul summit represented a step backward on the global imbalance problem. Despite forecasts of rising global imbalances over the medium term, little was agreed or achieved on reining in Chinese currency manipulation; Germany appeared to take the position that its large current account surplus should not be regarded as a problem—either within the eurozone or globally; some participants (mistakenly) characterized the most recent episode of quantitative easing in the United States (so-called QE2) as a form of currency manipulation that was just as harmful as China's manipulation—despite the many significant distinctions between them; and—as an alternative to taking corrective policy actions now, the IMF was sent off on yet another scavenger hunt—this time to identify a new set of "indicative guidelines" that could facilitate "...timely identification of large imbalances." (G-20 2010).

Problem number three probably represents the biggest existing hole. Currently, there is no workable, graduated set of penalties for countries that refuse persistently to honor their international obligations on exchange rate policy—particularly if they are large economies in current account surplus. There has to be some credible penalty in the middle between the Fund's opinion on exchange rate policy (easily dismissed), and expulsion from the Fund for not honoring obligations under Article IV (too drastic to be useful). This problem has been recognized since the founding of the Fund but recent experience doesn't suggest that we are any closer to a solution.

If those are the problems, what could be the flavor of the solutions? Let me indicate the direction of my thinking.

Fund management should press the membership to agree that any country that runs a global current account imbalance equal to or greater than say, 4 percent of GDP (over a one-year period) will automatically be receiving an ad hoc consultation from the Fund to discuss its exchange rate policy. Perhaps the threshold for systemically important economies should be set lower than that for nonsystemic

ones under the argument that adverse potential international spillovers are greater for the first group. I have been skeptical of these kinds of mechanical triggers in the past, but the seemingly endless negotiations and politicization on this issue in recent years has persuaded me that even a highly imperfect trigger is better than a discretionary process that yields no official action at all. Also, an objective indicator would make it harder for individual countries to claim that they were unfairly being singled out for special attention.

Turning to the framework for the Fund's bilateral surveillance over exchange rate policies, I see no alternative to going back to rulings and/or verdicts by the Fund on whether or not a country is meeting its international obligations on exchange rate policy. Unlike the Fund staff and management, I don't see such rulings and/or verdicts as "labels" that get in the way of a useful dialogue with members but rather as the very essence of what the Fund's responsibilities are as the designated international umpire for exchange rate policy. In broad terms, the test should be whether the country's real effective exchange rate is seriously misaligned, whether the country's policies—intentionally or not—contribute materially to that misalignment, and whether the misalignment harms significantly the country's trading partners. I don't much care what name one puts on this ruling, but the ruling should carry the message that the country's exchange rate policy has been found to be at variance with its Fund membership obligations, that this noncompliance must be eliminated in a timely way, and that, failing such a correction, the international community will have no choice but to impose penalties so as to protect the stability of the international monetary and trading system as a whole.

Finally, on the structure of the penalties or "teeth," I think they need to be graduated according to the extent and duration of the misalignment; they should also encompass a range of actions by the Fund and its members.

Consider, for example, the following three broad ranges of real exchange rate misalignment: category A would cover misalignments up to 10 percent and up to a year's duration; category B would address misalignments of 10 to 25 percent and 12 to 24 months' duration; and category C would pertain to misalignments greater than 25 percent and lasting longer than two years.

Category A misalignments would generate intensive but private consultations with the Fund. Once an exchange rate misalignment entered category B, the Fund would go public in naming the country as not meeting its obligations on exchange rate policy as a member of the Fund and it would ask the member to offer a specific plan for reducing the misalignment.²⁶ Category B countries would also not be able to delay the publication of Fund reports on their exchange rate policy. Finally, if a currency entered category C, a more severe set of penalties would be on the table. If the country was not willing to commit

26. Some will argue that such a "naming and shaming" operation will not work because the Fund's Executive Board will never be able to agree to identify the countries in noncompliance with their obligations. To address this problem, I suggest that the Fund board agree that the "naming and shaming" will be done by the Fund's managing director—acting on his own authority, after informing the board beforehand of his decision and after conducting an informal survey of board members.

to a credible plan of action that would reduce significantly the size of the misalignment within a year's time, the WTO would approve trade policy retaliation based on an exchange rate policy finding from the Fund. Bergsten (2009) and (Subramanian and Mattoo 2009) have made some useful, specific suggestions on how such IMF and WTO collaboration might take place.²⁷ Category C countries would also forfeit (temporarily) their eligibility for SDR allocations and for increases in their quota in the Fund.

Many will no doubt say that such a plan for reform of the Fund surveillance over exchange rate policies is both impractical and undesirable: impractical because less ambitious plans for a strengthening of Fund surveillance could not garner the requisite support of the membership, and undesirable because a purpose of the Fund is to open markets—not to authorize policies that would close markets. To them, I offer two replies.

This historic crisis presents an opportunity—for the first time in many years—for wholesale reform of the international financial architecture. IMF management has been bold in seeking real change in some dimensions of IMF operations but they have been a mouse on reform of exchange rate surveillance at the very time that the temptations for countries to follow beggar-thy-neighbor policies are growing. Yes they have obtained agreement on the current set of watered-down bilateral surveillance guidelines and they have avoided antagonizing further some large members by dropping any “labels” on exchange rate policy from their reports. But what has been agreed has all the utility of a nonabsorbent dish towel. It offers no guide to what is and what is not internationally acceptable exchange rate policy, it finds no country guilty of misbehaving when the evidence to the contrary is by now overwhelming, it offers no incentives and/or penalties designed to change errant behavior, and it removes the one institution (the Fund) that could plausibly serve as a credible international umpire from a policy arena that is rife with opportunities for breaking the rules and gaining market share at your neighbor's expense.

On encouraging versus discouraging open markets, it is time to recognize three realities. First, a policy of persistent, large-scale, one-way, intervention in exchange markets—paired with large-scale sterilization of reserve increases—aimed principally at preventing the real exchange rate from appreciating, is protectionism. Second, relying exclusively on open-mouth operations and peer pressure to dissuade countries from continuing beggar-thy-neighbor exchange rate policies has shown itself to be ineffective. And third, when countries are faced with both persistent exchange rate protectionism on the part of their trading partners and an unwillingness and/or inability of the relevant international authority to take strong action to correct such behavior, the likely response will be the adoption of “vigilante” protectionist trade policies at the national level—particularly during a period of high unemployment rates.²⁸ Far better

27. See also Hufbauer and Brunel 2008 for a more skeptical view of bringing the WTO into currency disputes.

28. In this connection, Krugman (2010) offers the following assessment: “The bottom line is that Chinese mercantilism is a growing problem, and that the victims of that mercantilism have little to lose from a trade confrontation. So I'd urge China's government to reconsider its stubbornness. Otherwise, the very mild protectionism it's currently complaining about will be the start of something much bigger.”

in that situation to have any such trade policy retaliation or compensation authorized by the IMF and WTO at the international level, where its duration, scope, magnitude, and rationale can be appropriately controlled—much in the same way that WTO members are presently permitted to undertake compensating trade policy actions for trade policy abuses abroad under the current WTO regime.

Last but not least, if the Fund membership could be convinced to take action to discourage countries from employing beggar-thy-neighbor exchange rate policies, then I would be much more comfortable in supporting various proposals for an expanded global safety net, including those recently put forward by the managing director of the Fund and by the Korean authorities (Strauss-Kahn 2010 and SaKong 2010) for a new precautionary credit line and for liquidity assistance to regional financing arrangements. There is a win-win “Grand Bargain” to be struck between the advanced and emerging economies (Goldstein 2009). Under such a bargain, the advanced economies would agree to push for more generous “insurance” facilities and for yet a further shift in “chairs and shares” to the emerging world—in exchange for a pledge by the latter to adhere to strengthened international “rules of the game” on exchange rate policy.

Table 1 Basel III minimal global capital requirements (in percent of risk-weighted assets)

	Common equity (after deductions)	Tier 1 capital	Total capital
Minimum	4.5	6.0	8.0
Conservation buffer	2.5		
Minimum plus conservation buffer	7.0	8.5	10.5
Countercyclical buffer range ²⁹	0–2.5		

29. Not mandatory; instead, to be implemented according to national circumstances.

Source: BCBS 2010a.

REFERENCES

- Alessandri, Piergiorgio, and Andrew Haldane. 2009. *Banking on the State*. London: Bank of England (November).
- BIS (Bank for International Settlements). 2010. *80th Annual Report*. Basel: Bank for International Settlements (June).
- BCBS (Basel Committee on Banking Supervision). 2009. *Strengthening the Resilience of the Banking Sector*. Basel: Bank for International Settlements (December). Available at www.bis.org/bcbs.
- BCBS (Basel Committee on Banking Supervision). 2010a. *Group of Governors and Heads of Supervision Announces Higher Global Minimum Capital Standards*. Basel: Bank for International Settlements (September 12). Available at www.bis.org/bcbs.
- BCBS (Basel Committee on Banking Supervision). 2010b. *Progress on Regulatory Reform Package*. Basel Committee Press Release. Basel: Bank for International Settlements (July 16). Available at www.bis.org/bcbs.

- BCBSFSB (Basel Committee on Banking Supervision and Financial Stability Board). 2010a. *An Assessment of the Long-Term Impact of the Stronger Capital and Liquidity Requirements*. Basel: Bank for International Settlements (August). Available at www.bis.org/bcbs.
- CBSFSB (Basel Committee on Banking Supervision and Financial Stability Board) 2010b. *Assessing the Macroeconomic Impact of the Transition to Stronger Capital and Liquidity Standards*. Basel: Bank for International Settlements (August). Available at www.bis.org/bcbs.
- Berger, A., R. Herring, and G. Szegö. 1995. The Role of Capital in Financial Institutions. *Journal of Banking and Finance* 23: 135–194.
- Bernanke, Benjamin. 2010. Testimony before the US Financial Crisis Inquiry Commission. Washington DC.
- Bergsten, C. Fred. 2009. *A Blueprint for Global Leadership in the 21st Century*. Keynote speech at the Global Human Resources Forum, Seoul, Korea, November 4. Available at www.piie.com.
- Borio, Claudio, and Mathias Drehmann. 2009. *Assessing the Risk of Banking Crises—Revisited*. Bank for International Settlements Quarterly Review (March).
- Brunnermeier, Markus, Andrew Crockett, Charles Goodhart, Avinash Persaud, and Hyun Shin. 2009. *The Fundamental Principles of Financial Regulation*. Geneva Reports on the World Economy. London: Center for Economic Policy Research.
- Buehler, Kevin, Hamid Samandari, and Christopher Mazingo. 2009. *Capital Ratios and Financial Distress: Lessons from the Crisis*. Working Paper no. 15. McKinsey & Company (December).
- Calomiris, Charles. 2009. In the World of Banks, Bigger Can Be Better. *Wall Street Journal* (October 19).
- Cartas, José, and Martin McCongha. 2010. Credit to the Private Sector Remains Weak. *Finance and Development* 47, 2 (June).
- Carmassi, Jacopo, and Richard J. Herring. 2010. The Corporate Structure of International Financial Conglomerates: Complexity and its Implications for Safety and Soundness. In *The Oxford Handbook of Banking*, eds. Allen Berger, Philip Molyneux, and John Wilson. Oxford: Oxford University Press.
- Cline, William. 2010. Renminbi Undervaluation, China's Surplus, and the US Trade Deficit. Peterson Institute for International Economics Policy Brief 10-20. Washington: Peterson Institute for International Economics (August).
- Cline, William, and John Williamson. 2010. Estimates of Fundamental Equilibrium Exchange Rates. Peterson Institute for International Economics Policy Brief 10-2. Washington: Peterson Institute for International Economics (May).
- Cohen, Rodgin, and Morris Goldstein. 2009. The Case for an Orderly Resolution Regime for Systemically Important Financial Institutions. Pew Financial Reform Project Briefing Paper No. 13. Washington: Pew Charitable Trusts (October).
- Commission of Experts, 2010, Final Report of the Commission of Experts for Limiting the Economic Risks Posed by Large Companies, Swiss Financial Market Supervisory Authority and Swiss National Bank, Berne/ Zurich, October.
- Davis Polk, 2010. Summary of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Passed by the House of Representatives on June 30, 2010. Washington: Davis Polk (July).
- DiLeo, Luca. 2010. Fed's Hoenig Warns on Too Big To Fail, Backs Glass-Steagall. *Wall Street Journal Blog Real Economic Time* (January 5).

- Elliot, Douglas. 2009. Quantifying the Effects on Lending of Increased Capital Requirements. Brookings Institution Working Paper. Washington: Brookings Institution.
- FSA (Financial Services Authority). 2009. A Regulatory Response to the Global Banking Crisis. FSA Discussion Paper 09/2. London: FSA (March).
- G-20 (Group of 20). *The G-20 Seoul Summit Leaders' Declaration*. Communiqué (November 12).
- Gagnon, Joseph. 2010a. *Current Account Imbalances in the Global Recovery: Major Policy Changes Needed*. Paper prepared for conference on Reshaping Global Economic Governance and the Role of Asia, Seoul, October 26–27.
- Gagnon, Joseph. 2010b. Monetary Policy and Asset Bubbles. Real Time Economic Issues Watch. Washington: Peterson Institute for International Economics (January 4).
- Goldman Sachs. 2009a. *Avoiding Another Meltdown. Effective Regulation: Part 1. Global Markets Institute*. New York: Goldman Sachs (March). Available at www.gs.com.
- Goldman Sachs. 2009b. Ending Too big to fail. *Effective Regulation: Part 5. Global Markets Institute*. New York: Goldman Sachs (December). Available at www.gs.com.
- Goldstein, Morris. 2004. *Adjusting China's Exchange Rate Policies*. Peterson Institute for International Economics Working Paper 04-1. Washington: Peterson Institute for International Economics.
- Goldstein, Morris. 2006. Renminbi Controversies. *Cato Journal* 26, no. 2 (Spring). Washington: Cato.
- Goldstein, Morris. 2007a. *A (Lack of) Progress Report on China's Exchange Rate Policies*. Peterson Institute for International Economics Working Paper 07-5. Washington: Peterson Institute for International Economics (June).
- Goldstein, Morris. 2007b. The IMF as Global Umpire for Exchange Rate Policies. In *C. Fred Bergsten and the World Economy*, ed. Michael Mussa. Washington: Peterson Institute for International Economics (December).
- Goldstein, Morris. 2009. *A Grand Bargain for the London G-20 Summit: Insurance and Obeying the Rules*. Op-ed in VoxEU.org (February 19). Available at www.piie.com.
- Goldstein, Morris. 2010a. *Large US Banks Still Don't Get It*. Real Time Economic Issues Watch. Washington: Peterson Institute for International Economics (January 19).
- Goldstein, Morris. 2010b. *Confronting Asset Bubbles, Too big to fail, and Beggar-thy-Neighbor Exchange Rate Policies*. Peterson Institute for International Economics Policy Brief 10-3. Washington: Peterson Institute for International Economics (February).
- Goldstein, Morris, and Nicholas Lardy. 2003. Two-Stage Currency Reform for China. *Asian Wall Street Journal* (September 12).
- Goldstein, Morris, and Nicholas Lardy. 2005. China's Revaluation Shows Why Size Really Matters. *Financial Times* (July 22).
- Goldstein, Morris, and Nicholas Lardy. 2006. China's Exchange Rate Policy Dilemma. *American Economic Review* (May).
- Goldstein, Morris, and Nicholas Lardy. 2008. China's Exchange Rate Policy: An Overview of Some Key Policy Issues. In *Debating China's Exchange Rate Policy*, eds. Morris Goldstein and Nicholas Lardy. Washington: Peterson Institute for International Economics (April).
- Goldstein, Morris, and Nicholas Lardy. 2009. *The Future of China's Exchange Rate Policy*. Washington: Peterson Institute for International Economics (July).

- Goldstein, Morris, and Michael Mussa. 2005. The Fund Appears to be Sleeping at the Wheel. *Financial Times* (October 3).
- Goldstein, Morris, and Nicholas Véron. 2011. Too big to fail: The Transatlantic Debate. Peterson Institute for International Economics Working Paper 11-2. Washington: Peterson Institute for International Economics (January).
- Greenspan, Alan. 2002. Opening Remarks. In *Federal Reserve Bank of Kansas City, Rethinking Stabilization Policy*. Kansas City: Federal Reserve Bank of Kansas City.
- G-20 (Group of Twenty). Leaders' Statement at the Pittsburgh Summit, Pittsburgh, September 24-25. Available at www.g20.org.
- Haldane, Andrew. 2010. The \$100 Billion Question. Speech to Institute of Regulation and Risk, Hong Kong, March.
- Hanson, Samuel, Anil Kashyap, and Jeremy Stein. 2010a. A Macroprudential Approach to Financial Regulation. *Journal of Economic Perspectives* (forthcoming).
- Hanson, Samuel, Anil Kashyap, and Jeremy Stein. 2010b. *An Analysis of the Impact of "Substantially Heightened" Capital Requirements for Large Financial Institutions*. Harvard University and University of Chicago, unpublished (May).
- Herring, R. J. 2010. *Wind-Down Plans as an Alternative to Bailouts*, Pew Financial Reform Project Briefing Paper. Washington: Pew Charitable Trusts.
- Hufbauer, Gary, and Claire Brunel. 2008. The US Congress and the Chinese Renminbi. In *Debating China's Exchange Rate Policy*, ed. Morris Goldstein and Nicholas Lardy. Washington: Peterson Institute for International Economics.
- IEO-IMF (Independent Evaluation Office, International Monetary Fund). 2007. An IEO Evaluation of IMF Exchange Rate Policy Advice, 1999–2005. Available at www.ieso-imf.org.
- IIF (Institute for International Finance). 2010a. *Interim Report on the Cumulative Impact on the Global Economy of Changes in the Banking Regulatory Framework*. Washington: Institute for International Finance (June). Available at www.iif.com.
- IIF (Institute for International Finance). 2010b. Systemic Risk and Systemically important Firms: An Integrated Approach. Washington: Institute for International Finance (May). Available at www.iif.com.
- IMF (International Monetary Fund). 1977. *Surveillance over Exchange Rate Policies*. Washington: International Monetary Fund. Available at www.imf.org.
- IMF (International Monetary Fund). 2007a. *IMF Executive Board Adopts New Decision on Bilateral Surveillance over Members' Policies*. Public Information Notice 07/69 (June 21). Washington: International Monetary Fund. Available at www.imf.org.
- IMF (International Monetary Fund). 2007b. *IMF's International Monetary and Financial Committee Reviews Multilateral Consultation* (April 14). Washington: International Monetary Fund. Available at www.imf.org.
- IMF (International Monetary Fund). 2009a. *The 2007 Surveillance Decision: Revised Operational Guidance*. Washington: International Monetary Fund. Available at www.imf.org.
- IMF (International Monetary Fund). 2009b. *Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systemic Risk*. Washington: International Monetary Fund (April).

- IMF (International Monetary Fund). 2010a, *Global Financial Stability Report: Meeting New Challenges to Stability and Building A Safer System*. Washington: International Monetary Fund. (April).
- IMF (International Monetary Fund). 2010b. *People's Republic of China: 2010 Article IV Consultation—Staff Report; Staff Statement; Public Information Notice on the Executive Board Discussion*. IMF Country Report No. 10/238 (July). Washington: International Monetary Fund. Available at www.imf.org.
- Johnson, Simon. 2010. *Timely Message from Paul Volcker: "Wake Up, Gentlemen."*
- Real Time Economic Issues Watch. Washington: Peterson Institute for International Economics (December 15).
- Johnson, Simon, and James Kwak. 2010. *13 Bankers: The Wall Street Takeover and the Next Financial Meltdown*. New York: Pantheon.
- Krugman, Paul. 2009. The Chinese Disconnect. *New York Times* (October 23).
- Krugman, Paul. 2010. Chinese New Year. *New York Times* (January 1).
- Laeven, Luc, and Ross Levine. 2005. *Is There a Diversification Discount in Financial Conglomerates?* Washington: World Bank (June).
- Lall, Subir, Roberto Cardarelli, and Selim Elekdag. 2008. Financial Stress and Economic Downturns. Chapter 4 in *World Economic Outlook*. Washington: International Monetary Fund (October).
- Mallaby, Sebastian. 2010. *More Money Than God: Hedge Funds and the Making of a New Elite*. New York: Penguin Press.
- Miles, David, Jing Yang, and Gilberto Marcheggiano, 2011, "Optimal Bank Capital," Discussion Paper No. 31, Bank of England, London, January.
- Modigliani, Franco, and Merton Miller. 1958. The Cost of Capital, Corporation Finance and Theory of Investment. *American Economic Review* 48: 261–297.
- Mussa, Michael. 2008. IMF Surveillance Over China's Exchange Rate Policy. In *Debating China's Exchange Rate Policy*, eds. Morris Goldstein and Nicholas Lardy. Washington: Peterson Institute for International Economics (April).
- Park, Cyn-Young. 2005. *Coping with Global Imbalances and Asian Currencies*. Asian Development Bank Economics and Research Department Policy Brief No. 37. Manila: Asian Development Bank (May).
- Pew Financial Reform Project. 2009. *Principles on Financial Reform: A Bipartisan Statement*. Pew Financial Reform Task Force. Washington: Pew Charitable Trusts (December).
- Posen, Adam. 2009. Finding the Right Tool for Dealing with Asset Price Booms. Speech to the MPR Monetary Policy and Markets Conference, London, December 1.
- Reinhart, Carmen, and Kenneth Rogoff. 2009. *This Time is Different: Eight Centuries of Financial Folly*. Princeton: Princeton University Press.
- SaKong, Il. 2010. The G-20 Summit: Looking Back at Toronto and Forward to Seoul. Speech at the Peterson Institute for International Economics on behalf of the Korean Presidential Committee for the G-20 Summit, Washington, June 30.
- Shin, Hyun Song. 2010. *Financial Regulatory Reform: What Has Been Done and What Should Be Done*. Discussion Paper for Peterson Institute for International Economics–Korea Joint Conference, Peterson Institute for International Economics, Washington, September 13.

- Strauss-Kahn, Dominique. 2010. Crisis and Beyond—The Next Phase of IMF Reform. Prepared remarks delivered at the event The IMF in a Transformed World Economy held at the Peterson Institute for International Economics, Washington, June 29.
- Stern, Gary, and Ron Feldman. 2004. *Too Big To Fail: The Hazards of Bank Bailouts*. Washington: Brookings Institution.
- Subramanian, Arvind, and Aaditya Mattoo. 2009. From Doha to the Next Bretton Woods: A New Multilateral Trade Agenda. *Foreign Affairs* (January/February).
- Summers, Lawrence. 2008. Commentary. In *Debating China's Exchange Rate Policy*, eds. Morris Goldstein and Nicholas Lardy. Washington: Peterson Institute for International Economics (April).
- Trichet, Jean Claude. 2010. Comments on Higher Global Minimum Capital Standards. In Basel Committee on Banking Standards (2010a).
- Truman, Edwin. 2010. The International Monetary Fund and Regulatory Challenges. *The International Spectator* 45, no. 1 (March): 37–58.
- Turner, Lord. 2009. *The Turner Review*. London: Financial Services Authority (March).
- Wolf, Martin. 2009. Why China's Exchange Rate Policy Concerns Us. *Financial Times* (December 8).
- Wolf, Martin. 2010. Basel: The Mouse That Did Not Roar. *Financial Times* (September 15).