Essays on International Finance

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Stabilizing International Finance: Can the System Be Saved?

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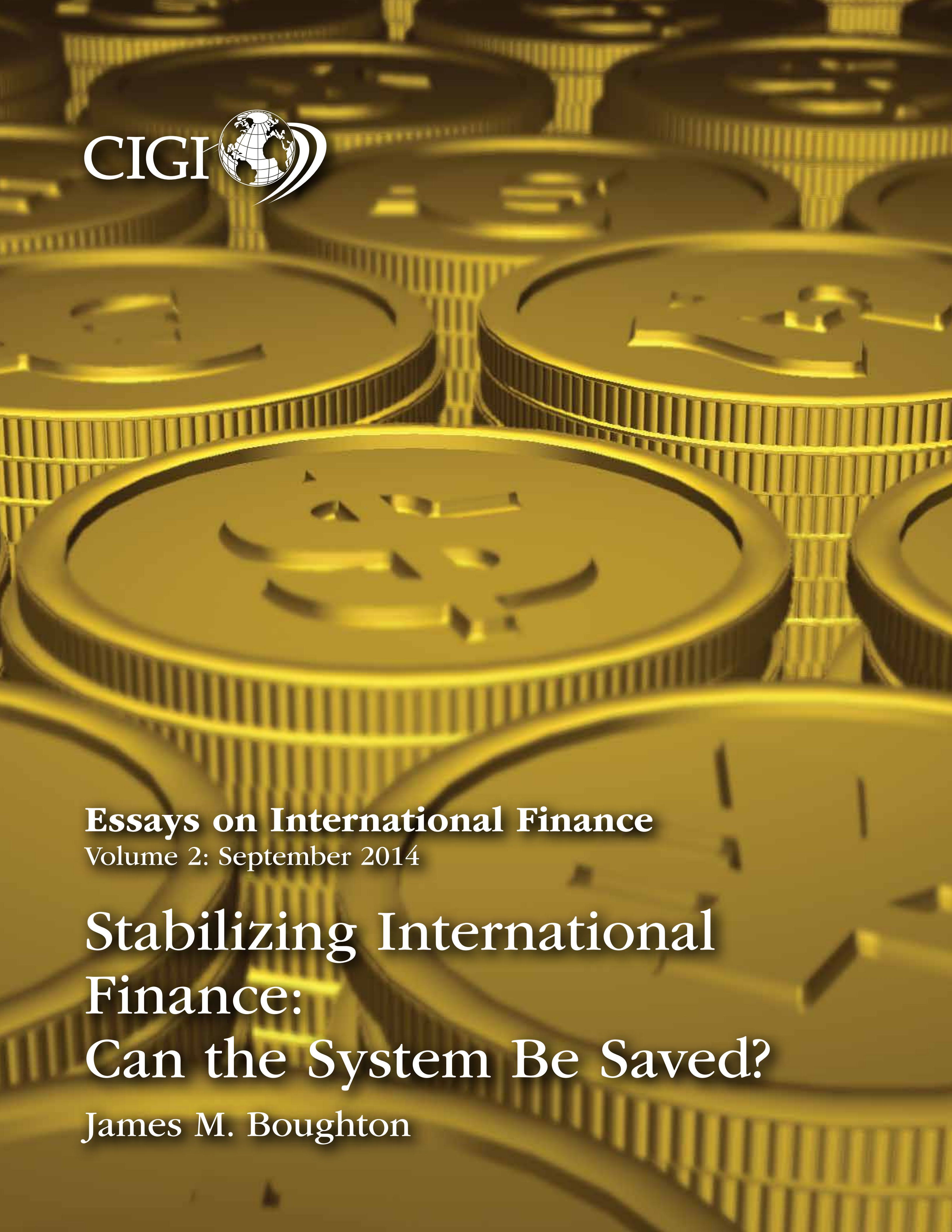

CIGI

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Foreword

The CIGI Essays on International Finance aim to promote and disseminate new scholarly and policy views about international monetary and financial issues from internationally recognized scholars. The essays are intended to foster multidisciplinary approaches by focusing on the interactions between international finance, global economic governance and public policy.

International finance cannot be properly understood without reference to the global governance arrangements that shape the regulatory environment in which financial actors operate. The rules and playing field of the global financial system — the organizations, regimes, principles, norms, regulations and decision-making procedures that govern everything from banking practices and accounting standards to monetary relations and official cross-border lending — have a profound impact on how that system operates. Even though international finance is commonly conceived of as a largely unregulated domain, it is generally held together by a commitment to a particular set of policy priorities on the part of key global governance actors. In other words, a lack of regulation does not imply a lack of governance.

The principles and practices that have underpinned particular global governance arrangements — such as the earlier classical gold standard, the subsequent Bretton Woods order and the current regime — reflect historically and socially contingent commitments to particular policy priorities. As power, interests and ideas evolve, the priorities that guide global governance do so as well. Changes in governance structures, in turn, result in changes to the functioning of financial markets. Understanding the social, political and historical forces that determine how global finance is governed is, thus, crucial to understanding why financial markets function as they do, and how global financial governance can be improved to become more effective.

In the setting of a highly globalized world economy, there is a temptation to view public policy as the outcome of technocratic decision making. It is important to note, however, that while technical expertise and sound analysis may inform policy, they do not supply or demand it. The supply and demand sides of policy making are essentially determined by a number of interacting social, political and economic factors: the state of ideas, interests and institutions; the distribution of information, financial resources and expertise; and major focusing events, such as crises.

As an area of study, international finance has no natural disciplinary home. Indeed, it is a social, political, historical, economic and even geographical phenomenon. Thus, there are distinct advantages to taking a multidisciplinary approach. By harnessing the comparative strengths of different disciplines — including the different conceptual tools, theoretical insights and methodological techniques on offer — such an approach provides richer, more diverse analytical troves from which to draw. Furthermore, breaking down disciplinary divides can help to establish common ground between different, sometimes competing, perspectives. The intent of the CIGI Essays on International Finance is to encourage productive dialogue and the building of common ground by providing a research-based, policy-relevant venue for high-level, cross-disciplinary contributions to the field of international finance and global financial governance.

Domenico Lombardi
Director of the Global Economy Program, CIGI

The Problem: Financial Volatility Threatens Economic Progress

> *…no country is immune from financial instability and the adverse effects on employment, economic activity, and price stability that financial crises cause.*
>
> — Janet L. Yellen, Chair, US Federal Reserve Board (2014)

Global economic performance in the second half of the twentieth century was arguably better than in any comparable period in history. Declines in the rate of extreme poverty, rising living standards throughout the advanced economies and the rise of emerging markets on every continent provided unprecedented evidence of raw economic success across the globe. One can readily find reasons for gloom amid the glories, but the broad picture was clearly bright. The challenge was always to sustain that progress, and on that score sheet success has been more elusive and uneven. Despite the remarkable growth of emerging markets and the potential spur to economic growth from the globalization of financial capital, the growth of world output has declined sharply since the Bretton Woods system of fixed but adjustable exchange rates ended in the early 1970s (5.2 percent a year from 1960 to 1972, and then three percent from 1973 to 2012). What has gone wrong?

Much happened after 1973 to cause a break in potential global growth: the end of stable exchange rates; the shift in economic power toward oil-exporting states with low absorptive capacity; and the tapering off of the rebound after the devastation of World War II. Forty years later, however, the depressive forces are still in place. A major continuing failing, and a major longer-term cause of declining economic performance, has been the susceptibility of the world economy to financial crisis. The global crisis that emerged in 2008 from the collapse of the subprime mortgage market in the United States and the European crisis that emerged from the collapse of government finance in Greece in 2009 are the most recent and the most spectacular examples, but the problem of financial volatility and its consequences has been growing for four decades.

The early postwar period, when the United States dominated economic trade and finance, and the Bretton Woods system provided a solid platform for the growth of international commerce, was an oasis of calm relative to the floating-rate eras that preceded and followed it. In the quarter century after the end of the Bretton Woods system (1973–1997), the frequency of financial crises more than tripled, and the average crisis was deeper and more prolonged (Bordo et al. 2001, Table 1). With the exception of a few quiet years after the turn of the century, that pattern has continued to the present day.[1] To take one dramatic example, as Timothy Geithner (2014, 494-95) has noted, the 16 percent decline in household wealth that precipitated the financial crisis in the United States in 2008 was more than five times the size of the decline in 1929 (three percent) that initiated the Great Depression.

The increase in volatility and vulnerability to crises since 1973 was not caused by the shift to floating exchange rates. That shift was necessitated by the growth of multiple centres of trade and finance as Western Europe, East Asia and other regions played increasingly large roles, while that of the United

1 The period from the mid-1980s up to the onset of the global financial crisis in 2008 was often referred to as the "Great Moderation" (Stock and Watson 2003), but it now appears that the benign view of economic performance was, to some extent, illusory because it ignored a major buildup of financial risks that eventually burst into the open (Bean 2010). Moreover, the assessment was based primarily on the relative stability of output growth in most of the large advanced economies. Results in emerging markets, transition economies and low-income developing countries were more volatile.

States correspondingly declined. As trade expanded, the need for financial capital outran the willingness or ability of central banks to provide it (Triffin 1959a; 1959b). The resulting "dollar shortage" led to a sharp growth in private capital flows. The increased vulnerability to crises was associated with, and resulted from, the globalization of finance, as documented by Kaminsky and Reinhart (1999) and Reinhart and Rogoff (2009).

The globalization of finance also means that a crisis in one country cannot be contained within its borders. Moreover, the risk of contagion has gradually widened from regional to worldwide. When Mexico was exposed as being on the brink of default in August 1982, international banks, which were Mexico's major creditors, began to withdraw from other Latin American countries, notably Argentina and Brazil. When Mexico stumbled again in December 1994, the list of countries that might be infected by contagion extended beyond Latin America to include such nascent emerging markets as South Africa. The East Asian crisis of 1997-1998 spread quickly to Russia and then to Brazil. The crisis of 2008 started with the collapse of the subprime mortgage market in the United States and spread throughout the world via a vast and little-documented network of financial interconnectivity.[2]

That financial crises have devastating real effects is indisputable. Hyman Minsky (1982) developed a theory of financial stability in the 1970s as a restatement of Keynesian macroeconomics in his book *Can It Happen Again?* Although long derided or ignored, his argument that financial stability is fragile, dependent on the existence of appropriate institutions and essential for a stable real economy has been repeatedly validated by the experience of the past 40 years. One reason is that financial instability undercuts the very premise of monetary policy as a tool for stabilizing prices (Dudley 2013). More fundamentally, every financial crisis has resulted in a sharp decline in output. In each of the three countries at the centre of the 1997 crisis (Indonesia, Korea and Thailand), the decline was severe enough to cause a national trauma, and recovery could begin only after a change in government. In many cases, including in much of southern Europe today, recovery has taken several years to take hold.

2 Contagion effects in the 1980s and 1990s, and the efforts of the International Monetary Fund (IMF) to contain them, are described in Boughton (2001b; 2012). For a primer on contagion in the 2008 crisis, see Roubini and Mihm (2010). Semmler and Young (2010) and Helleiner (2011) analyze the political dimensions of recent global contagion, particularly the role and causes of regulatory failures.

Causes and Attempted Remedies

The challenge for the future is to retain the benefits of globalization while regaining at least some of the stability that characterized the Bretton Woods era. Obviously, financial globalization by itself is not the problem. It is the interaction between globalization and the shortcomings of policy making, market behaviour and institutions that causes crises to occur and recur. What are those shortcomings?

Poorly specified, weakly implemented and uncoordinated **macroeconomic policies** are one culprit. One of the great developments of the early postwar period was the emergence of a widespread consensus that national governments had a responsibility to use macroeconomic policies to satisfy a dual mandate for price stability and high employment. That dual mandate was explicit in the United States, through the passage of the Employment Act of 1946, but it was clearly expressed or implicit in many other countries as well. In the United Kingdom, for example, although the election of 1945 was fought over stark differences in *how* to achieve high employment, the goal was not in dispute. The election manifesto of the Conservative Party noted that the "Government accepts as one of its primary aims and responsibilities the maintenance of a high and stable level of employment" (Churchill 1945). The Labour Party manifesto acknowledged that "all parties are ready to promise to achieve [full employment]...by Government action" (Labour Party 1945).

The Keynesian consensus survived through the 1970s, evidenced by: the passage of the 1977 Humphrey-Hawkins Act in the United States, which updated the Employment Act; the Organisation for Economic Co-operation and Development (OECD)-sponsored report known as the McCracken report (McCracken and OECD 1977), which called on governments to take a list of actions to restore full employment with price stability; and the summit meeting of the Group of Seven (G7) in Bonn, Germany, the following year, at which heads of state and government agreed to carry out many of the recommendations of the McCracken report. Soon afterward, however, both professional and political views mutated sharply away from such activism.

The shift away from belief in the efficacy of macroeconomic policy responded in part to a litany of policy errors, especially those of the 1970s. The United States and most other oil-importing countries tried to mitigate the real effects of increased oil prices by running more expansionary monetary and fiscal policies. Although that response was necessary to combat the recessionary effects of the two great oil shocks, it was not sufficiently backed up by structural reforms aimed at reducing oil consumption and adjusting to the new reality of expensive fuels. The result was a decade of "stagflation" and a wave of financial innovation that rendered obsolete some of the basic relationships that had previously underpinned macroeconomic policy. Never again could a stable demand for money be relied upon as a guide for monetary policy.

Instead of generating momentum toward more effective policy implementation in service of the goals of full employment and economic growth, the policy failings of the 1970s led to a new focus on price stability and fiscal discipline as the primary objectives of macroeconomic policy. The short-run problem — counter-cyclical policies were an apparently unreliable tool — resulted in the effective abandonment or downplaying of the longer-run goals. Economic growth and job creation were, in this new consensus, to be residual effects of a stable policy environment that would enable and foster private sector activities. Beginning in 1979 with the Thatcher government's Medium-Term Monetary Strategy in the United Kingdom and the "Volcker Shock" in the United States,[3] what we might now call the "New Anglo-Saxon Consensus" quickly became entrenched in those two countries and spread through most advanced economies.[4]

The efforts of major industrial countries to restrain inflation by raising interest rates were an essential response to entrenched instability of prices, but they had the unfortunate side effect of causing a sudden outflow of financial capital from developing countries, especially but not only in Latin America, as yields rose elsewhere. While inflation ceased to be a major problem except in a few of the world's poorest countries, the speculative movement of capital across national borders in search of a yield advantage became an entrenched feature of the international financial system. Real effective exchange rates moved by unprecedented magnitudes, with the real effective value of the US dollar rising by more than 50 percent from a low in 1978 to a peak in 1985, and then falling below its 1978 level by the end of the 1980s. Correspondingly, current account imbalances became large and persistent, and contributed further to financial instability (Dunaway 2009; Obstfeld and Rogoff 2009).

By the 1990s, the continuation of relatively stable prices of goods and labour lulled policy makers into complacency as asset price bubbles developed in many markets. Commercial property in Japan and later in other East Asian markets, then equities in the United States and other markets, and finally US housing prices, all underwent bruising cycles that destabilized financial markets more generally. Whether monetary policy could or should have been used to pop those bubbles as they developed is not yet clear, but the choice of whether policies were impotent or were misapplied is only a secondary issue.[5]

A second culprit is the tendency of policy makers to use **exchange rate policy** as a symbol of national strength, rather than as an effective instrument of economic policy. Whether they formally peg the exchange rate to an anchor such as the US dollar or manage it within a formally floating regime, the danger is that they will either fail to recognize that the rate is becoming overvalued or will refuse to act to correct it. As Stanley Fischer (2003) noted, almost every emerging market financial crisis has followed a period of clear overvaluation, and has been characterized by a forced correction. Because financial inflows become shorter and shorter in maturity as overvaluation becomes more evident (Eichengreen and Hausmann 1999), the correction, when it finally comes, is bound to be swift and brutal.

A third culprit is the **inherent volatility** of financial markets. Banks and other investors naturally seek the highest returns that are consistent with their assessment of acceptable risk. They are not concerned with the overall stability or health of the system, except insofar as it dovetails with their own financial interests. At least in the short term, speculative investors may benefit from volatile markets, as volatility creates profit opportunities. The weakness of enforcement mechanisms for collecting sovereign debts and the absence of an established process for restructuring them amplify this volatility and exacerbate the effects of any shift in the evaluation of risks. The evidence is overwhelming that cross-border financial flows are unstable and that this instability contributes importantly to the onset of financial crises.[6]

3 The shift in primary goal from full employment to price stability began slightly earlier in Japan, under Prime Minister Masayoshi Ohira (1978–1980), but the adoption of similar policies in the United Kingdom and the United States had much wider and more lasting global influence.

4 What is meant here by the New Anglo-Saxon Consensus is broader than the Washington Consensus set out in Williamson (1990). The New Anglo-Saxon Consensus is that macroeconomic policies should be aimed primarily at financial discipline (low and stable price inflation, small and stable or declining fiscal deficits, and a moderate ratio of public sector debt to GDP) so as to establish an environment in which private sectors will generate high employment and economic growth. The Washington consensus describes the specific policies that are thought to be most likely to achieve those goals.

5 For two sides of that debate, see Bernanke and Gertler (2001) and Biggs and Mayer (2012).

6 For theory and evidence, see Dornbusch, Goldfajn and Valdés (1995) and Calvo (2005).

The fact that international capital flows have pernicious effects does not necessarily imply that they should be reined in. The issue is whether the costs outweigh the benefits. In the 1990s, most mainstream economists — perhaps more than ever before or since — viewed openness to capital flows as essential for strong and sustainable economic growth.[7] More recently, that view has been challenged by those who argue that the availability of foreign capital induces excessive economic expansion, creates asset price bubbles and inevitably collapses when those bubbles burst (Stiglitz et al. 2006; Semmler and Young 2010; Rodrik 2011). A synthesis of these views, discussed below, suggests that while a return to the Bretton Woods system in which capital accounts were tightly controlled is neither feasible nor desirable, some form of additional regulation is clearly needed.

Fourth, **weak oversight and regulation** of the financial sector in emerging markets has long been recognized as a systemic shortcoming. In the mid-1990s, before the East Asian crisis, staff at the IMF published a number of papers detailing the importance of a sound and well-developed financial sector as a prerequisite for opening domestic markets to capital inflows.[8] They also pointed to the need for stable macroeconomic policies in advanced economies as necessary for the avoidance of destabilizing flows into and out of emerging markets. Both the staff and executive board recognized the possibility that weak oversight could lead to unsustainable flows, although they did not recognize early enough that the problem was an imminent danger throughout East Asia. After the crisis, those concerns became much more focused.

Owing to the prevalence of the New Anglo-Saxon Consensus on the inherent beneficence of private markets, the danger of inadequate financial regulation in advanced economies was unaddressed, even as emerging markets came under greater scrutiny. Not until after the global crisis, a decade after the East Asian meltdown, was there a similar awakening regarding weak oversight in advanced economies. Failings in that domain are now known to have included a lack of attention to newly developed derivative and structured credit instruments, and to the roles of systemically important non-bank financial institutions.[9]

What can be done to alleviate the shortcomings?

Much of the recent emphasis in this literature has been on methods to improve **crisis prediction.** The IMF, along with many other forecasters, was widely criticized for its failure to predict the onset of the global financial crisis in 2008. Subsequently, the IMF conducted a post-mortem, publishing several papers that attempted to assess this alleged failure and propose ways to do better next time. The main messages that emerged from the review were that the Fund had taken a view that was too benign and optimistic of conditions in the main financial centres, especially the United States and the United Kingdom. The Fund's Independent Evaluation Office (IEO) concluded that the institution had been "hindered by a high degree of group-think, intellectual capture, a general mindset that a major financial crisis in large advanced economies was unlikely, and inadequate analytical approaches" (IMF IEO 2011, 1). Similar criticisms could have been made of the pre-crisis analyses of financial conditions by most other analysts.

Although the effort to improve crisis prediction is obviously a useful and even necessary exercise, it should not be expected that much will come from it. The underlying problem is not that forecasting methodologies are poor or that forecasters are blind, rather that financial crises are not predictable. As Andrew K. Rose (2000) lamented, "We don't currently have the ability to determine what causes crises.…If we can't understand the

7 See, for example, the papers by Stanley Fischer and Rudiger Dornbusch in Fischer et al. (1998). A few of the other authors of papers in that volume, especially Dani Rodrik, took a more skeptical view. For analyses of the evolution of thinking within the IMF on this issue, see Chwieroth (2010) and Boughton (2012,131–41, 616–21).

8 See Calvo, Leiderman and Reinhart (1993), Mathieson and Rojas-Suárez (1993), and the papers collected in Khan and Reinhart (1995).

9 For descriptions and analysis of this problem, see Tett (2009), Johnson and Kwak (2010) and Helleiner (2011).

determinants of crises, we can't predict them with mechanical early warning systems."

Instead of trying to predict when and where a crisis is going to occur, analysts try to identify vulnerabilities and policy weaknesses. Every national economy has weaknesses that make it vulnerable to a variety of shocks. Economists should be able to rank countries by the extent and depth of those shortcomings, and they should be able to conduct stress tests and other "early warning" exercises to assess how well a country would be expected to weather specified shocks. But it is not realistic to expect them to be able to draw a line between those that will succumb to a crisis and those that will sail through the storm, or to predict when the storm will hit. Which economies will be attacked and fail, and which ones will muddle through? The answers depend in part on the psychology of capital markets and the way market participants react to news, and partly on domestic politics and the way governments and central banks respond to pressures and to advice as pressures begin to mount.[10]

Because crises are inevitable, **crisis management** is an essential element of the international financial system. Prior to 1982, crisis management was essentially an ad hoc process, organized by whichever countries were most affected. A recurring wave of currency crises in the United Kingdom (in 1949, 1956, 1967 and 1976) required coordinated responses within the sterling area. More broadly, the emergence of a dollar shortage in the early 1960s induced the formation of the Group of Ten (G10), which then managed much of the response to the switch to a dollar glut later in that decade and the collapse of the par value exchange rate system in the early 1970s. In each case, the IMF played an important supporting role, but it was secondary to the principal participants.

This relationship changed dramatically when commercial bank creditors refused to roll over maturing loans to Mexico and Argentina in 1982. Neither country had the resources to repay those loans, the banks had no way to coordinate a negotiated settlement and the monetary authorities in the creditor countries had no mechanism to force a settlement. By default — and to prevent default — the IMF became the primary manager of that crisis and of all subsequent international financial crises. The initial mechanism was "concerted lending," in which the IMF would agree to lend to the indebted countries, subject to a requirement that a "critical mass" of bank creditors would agree to increase their loan exposure. That worked reasonably well as long as the banks cooperated, but by 1987 concerted lending was no longer viable.[11] Since then, the IMF has devised a series of alternative tactics to try to "involve" both private sector financial institutions and creditor countries in the management of each succeeding crisis. Although no single tactic has proved to be robust, the Fund's coordinating role has endured.

The most effective way to improve crisis management would be to refocus it toward preventive actions. To that end, the IMF has sought throughout its history to become a lender of *first* resort: an institution to which countries would turn for both policy advice and financial backup *before* their problems reached crisis proportions. For a number of reasons, it has had little success persuading member countries to request even precautionary assistance in advance of impending crisis conditions.

One reason this task has proven to be so hard is that crises are very difficult to predict, as discussed above. Another is that even when it should be perfectly obvious that current economic policies and conditions are unsustainable, policy makers are likely to suffer from denial syndrome. A universal and persistent tendency is for political leaders and economic authorities to believe that their economy is exceptional: that what appears

10 Several recent studies have found support for models that apparently could have predicted the onset of crises that occurred before the models were specified. See, for example, Manasse, Roubini and Schimmelpfennig (2003), which examines 54 crisis episodes ranging from 1976 to 2002; and Frankel and Saravelos (2010), on the global crisis of 2008-2009. The robustness of those models for predicting future crises remains to be determined. An earlier study, Berg, Borensztein and Pattillo (2005, 481), found that a few models were able to rank countries fairly well by the probability of being hit by a crisis, but concluded that "it is impossible to know until it is too late what the best cut-off probability to call crises is."

11 For a detailed history of the IMF's strategy to manage the debt crisis of the 1980s, see Boughton (2001b, Part II).

to others to be an iron law of economics does not apply to them. Almost always and everywhere, in the memorable phrase of Reinhart and Rogoff (2009), "this time is different" in the eyes of those with the power to avert a financial crisis before it develops.

Compounding this general problem is the IMF's reputation as both a strict taskmaster and a haven for the hopeless. No government wants to be forced to accept unpopular policy changes that are imposed by an external institution as conditions for a financial rescue. Moreover, no government wants to be perceived as needing help from the IMF, because that would imply that the country's leaders have failed to manage the economy properly. Even when the IMF offers precautionary lines of credit without advance requirements for policy revisions, countries are likely to refuse the offer to avoid the appearance of being vulnerable to a speculative attack. As a result, most of the IMF's crisis-related lending is arranged when it is too late to avert the crisis. Since 2009, the IMF has succeeded in establishing facilities that curtail the elements that scare off potential users, but the demand for them has so far been minimal.[12]

Currency stabilization is often touted as a cure for financial instability. Ever since the major countries abandoned fixed exchange rates in the early 1970s, hopes have been kept alive for a return to some degree of stability. Robert Mundell's perennial arguments for fixed rates are one prominent example (Mundell 2005); calls by certain nostalgically conservative politicians and their supporters for a restoration of the gold standard are another. Less extreme suggestions have surfaced occasionally from prominent economists and multilateral discussions among policy makers, notably as some variation on target zone proposals (Williamson 1983; Crockett and Goldstein 1987). A system of target zones — the use of fiscal or monetary policy cooperation, possibly along with direct intervention in exchange markets, to keep exchange rates tolerably close to estimated equilibrium levels — was heavily promoted in the 1980s, but such proposals have always foundered on the difficulty of achieving the required degree of cooperation. The closest that the leading countries came was in the period from 1985 to 1987, when a mutual desire by all of the major financial authorities to avoid a repeat of the huge swings in currency values of the preceding decade led to a series of cooperative agreements. Once the short-term goals were achieved, that process collapsed (Funabashi 1988; Boughton 2001b, chapter 4).

To summarize, predictive models hold little promise for warding off crises, all that crisis management can do is to clean up the mess after the fact and cooperation on stabilizing rates remains elusive. At the very least, the international financial system needs better oversight and better policy making. What can be done?

12 From the early 1970s through the 1990s, the IMF examined a number of proposals for precautionary facilities for well-performing but vulnerable countries, but it always shied away from approving them for fear of losing control over how the money might be used. In 1999, it finally established the first such facility, the Flexible Credit Line (FCL). No country ever requested an FCL arrangement, and the facility was terminated in 2003. Since 2009, the IMF has established three more facilities, with lower qualification standards and less conditionality. As of 2014, they have been used by five countries: Colombia, Mexico, Macedonia, Morocco and Poland. For a review through 1999, see Boughton (2012, 209–14). The more recent facilities are discussed in documents on www.imf.org.

Solutions: A Two-stage Action Plan

To create more stability in the international financial system will require attention to several issues, each of which has contributed to the problems that have plagued the system since the 1970s. To some extent, policy makers can reduce instability by taking steps within the current system. For greater and longer lasting benefits, the system itself will have to evolve.

The action plan sketched below derives from a few basic assumptions. First, whatever its limitations, the globalized and open financial system is both a positive advance over previous systems and an essential element of the modern world economy. It is here to stay. The goal is to improve it, not replace it. Second, a stable international financial system requires, at its core, an effective IMF — or something like it. Neither a reliance on private sector institutions nor unilateral official actions can substitute for a multilateral institutional process. Third, no international system is ever going to be perfect. Each one of these proposals tinkers at the margins without fundamentally altering the nature of the current system. The goal is incremental improvement, step-by-step, so that the system will be better able to dampen shocks and promote sustained economic growth.

Actions within the Current System

Improve Macroeconomic Policies

As an ever-increasing number of countries appear to enjoy the benefits of financing economic growth with capital inflows, avoiding the temptation becomes ever more important: not just for the recipients, but for the health of the system. This principle means that each country that raises capital in international markets must ensure that its macroeconomic policies are congruent with its exchange rate policy. A country with an overvalued currency (the most common problem for recipients of large and sustained capital inflows) will be vulnerable to sudden withdrawals of capital. A country with an undervalued currency will be vulnerable to destabilizing inflationary pressures. More fundamentally, this principle means that countries should conduct monetary and fiscal policies steadily and transparently, to reduce uncertainty and avoid both short-term volatility and longer-term instability. Otherwise, they will be vulnerable to sudden shifts in market preferences that will undermine every incipient success.

While the wisdom of this first rule is obvious, it is difficult to apply. One challenge is the absence of uniformity in, or even a general agreement about, what constitutes a sound exchange rate policy. Arguments for universal floating, for universal fixed rates or even a single world currency, or for a "bipolar" world in which each country either has a floating rate or one firmly fixed to another currency but never in between, have all been (or should have been) largely abandoned as unworkable.[13] Intermediate regimes — managed floats — are about as common as the extremes in emerging markets and are likely to remain so.[14] In those cases, pursuing sustainable macroeconomic policies is especially difficult but no less imperative.

The crucial role of congruence in policy design means that much of the recent analysis of global imbalances is misplaced. The root cause of China's large current account surplus, for example, is not fundamentally that China manages its exchange rate (Wang 2014). Switching to a floating regime would be unlikely to solve any problems, because — ipso facto — it could induce enough volatility to destabilize the economy,

13 On the case for floating, see Quirk et al. (1987) and Obstfeld and Rogoff (1995). On the case for a single world currency or universal fixed rates, see Mundell (1999; 2000; 2005). On the bipolar or "corner solution" argument, see Fischer (2001).

14 For a balanced assessment of the relative merits, see Ghosh, Ostry and Tsangarides (2011).

with adverse effects on China, other countries and the system as a whole. The root cause of the surplus is that China pursues an export-oriented policy regime, which contributes to global payments imbalances and induces policy reactions by China's major trading partners. An intensification of the ongoing reorientation of China's policies toward domestic expenditure would be far more likely to contribute both to the alleviation of imbalances (via an appreciation of the exchange rate) and to financial stability than a move toward greater exchange rate flexibility would per se.

A second challenge arises from the lack of consensus on what constitutes a sound and sustainable set of macroeconomic policies. As noted above, one of the great apparent successes of the early postwar period was a general agreement (the Keynesian consensus) that governments had a responsibility to aim to ensure high employment along with price stability. By the end of the 1970s, the track record for meeting that responsibility was neither encouraging nor improving, and macroeconomic analysis was becoming more skeptical of its own logical underpinnings. Consequently, the international consensus weakened, and the goals of macroeconomic policy in many countries were reduced to price stability and deficit reduction (the New Anglo-Saxon Consensus). That pullback has left global growth vulnerable to the vagaries of market expectations.[15] Even the severity of the global recession failed to regenerate the consensus, as stimulus actions in a few places (the US government for a while, the Federal Reserve more persistently and eventually the European Central Bank) were strongly resisted elsewhere (especially in the United Kingdom and most northern European capitals).

15 Because economic growth has been both lower and more susceptible to crisis, the increased emphasis on stable policy formulation has not led to more stable implementation or outcomes. To take one simple aggregate measure, in the 20 years before the New Anglo-Saxon Consensus took hold (1960–1980), the standard deviation of annual general government balances in advanced economies was approximately one percent of GDP. For the subsequent period, 1981–2013, the standard deviation rose to 1.8 percent of GDP.

The main avenue for improving economic policies within the current system is the Group of Twenty (G20). Through its regular meetings at ministerial and leader levels, the G20 can promote sound policy making aimed at employment and growth. The IMF also can play a dual supporting role in this effort by providing advice (bilaterally and multilaterally) and by assessing policy implementation. Without a more settled and productive consensus on policy goals, however, policy cooperation and advice will have only limited benefits.

Improve Financial Sector Oversight

Each country must ensure that its financial sector is sound and subject to adequate prudential regulation. For much of recent history, prudential regulation was increasingly undervalued, denied and undermined (Johnson and Kwak 2010). Based on a belief that financial markets were self-disciplining and inherently stable, many countries gradually weakened the regulation of financial activity. The poster child for this shift was the repeal of key provisions of the 1933 Glass-Steagall Act in 1999, which dismantled the legal firewall between commercial banking and riskier activities such as investment banking and securities trading. The trend, however, was longer, wider and deeper.

In the United States, financial deregulation effectively began in the early 1980s, with the phasing out of caps on interest rates that banks could offer on savings accounts and other time deposits. Intended to enable US financial institutions to compete in markets characterized by innovative instruments, this deregulation — in combination with the continued presence of government-backed insurance on deposits — ended up encouraging the risk-taking that caused the collapse of the savings and loan industry later that decade, and the implosion of the market for home mortgage loans in 2007. Similar deregulatory policies were introduced in numerous other countries, notably Australia as early as 1973, Japan since 1984 and the United Kingdom through the "big bang" that deregulated banking institutions in 1986.

The dangers of inadequate prudential regulation became apparent when the US savings and loan crisis erupted in 1987, but that event was widely viewed as idiosyncratic and without systemic implications. Not until the East Asian crises of 1997-1998 did it become abundantly clear that the interaction of weak regulatory oversight and open financial flows made for a deadly cocktail that was almost certain to blow up sooner or later. Throughout the region, financial institutions were allowed to — and did — finance local-currency longer-term loans with short-term dollar-denominated capital inflows. The financial and economic meltdown that ensued was inevitable.

More generally, inadequate oversight and control of financial risk-taking was a major contributing factor in almost every financial crisis of the past quarter century, from the saving and loan collapse through the series of emerging market crises that began with the Mexican peso crisis of 1994-1995, and on to the global crisis of 2008-2009. Fortunately, the global crisis has induced a reassessment of deregulation. The passage in the United States of the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010 was aimed at restoring some of the oversight that had been abandoned in 1999. Internationally, the expansion of the role of the Financial Stability Forum and its conversion into the Financial Stability Board in 2009 is helping to identify and disseminate standards for stable financial systems. In a few countries, such as Australia and New Zealand, the preference for light regulation is undimmed, but the global trend has clearly shifted.

The world does not need a return to the competition-stifling controls that were introduced during the Great Depression and abandoned in the last quarter of the twentieth century. What the world does need is the adoption of prudent standards for capital adequacy, limits on exposure to maturity and currency mismatches, full reporting of risk exposures and adequate monitoring to ensure that transactions are at arm's length. Measures of those types are being promoted by the multilateral institutions and should be more widely encouraged and adopted.

Regulate International Capital Flows

The third imperative for stability within the current system is for emerging market countries to regulate the inflow and outflow of international capital. The evidence is now overwhelming that international capital markets can be seized by sudden and major shifts in preferences. The most common shifts are "sudden stops," in which recipient countries find the inflows that they have been profiting from abruptly cease, and are offset by outflows large enough to cause a macrofinancial crisis.[16] Averting such crises requires both moderating the inflows and slowing down the outflows.

The political economy of international capital flows has come nearly full circle since World War II. At the time of the Bretton Woods conference in 1944, private sector capital flows other than short-term trade credits were negligible. One lesson from the 1930s seemed to be that portfolio flows ("hot money") would destabilize economic activity and, therefore, should be strictly controlled. The IMF Articles of Agreement, drafted at that conference, prohibited the Fund from lending to finance a large and sustained outflow of capital from the borrowing country, and it authorized the Fund to require member countries to impose capital controls as a condition for borrowing.[17] Over the next three decades, most of the IMF's larger members gradually restored convertibility of their currencies for current account transactions while retaining controls on capital transactions.

After the system of universally fixed exchange rates broke down in the early 1970s, the idea took hold that private capital was an essential fuel for international trade, which in turn was an indispensable spur for economic growth. Initial efforts by major central banks to control the growth of the "Eurodollar" market proved ineffective and soon appeared to be counterproductive. Although most countries, including those with advanced economies, maintained some form of capital control at least into the 1990s, receptiveness to capital inflows gradually rose (Mathieson and Rojas-Suárez 1993). Throughout the 1980s and most of the 1990s, cross-border financial flows grew

16 The term "sudden stops" was first used in this context by Dornbusch, Goldfajn and Valdés (1995). It was subsequently popularized by Calvo (1998; 2005).

17 The IMF has never invoked this provision. Since 1956, it has lent to countries facing large and sustained capital outflows on the grounds that such outflows would otherwise destabilize the current account (Boughton 2001a).

exponentially. Because those flows, in the aggregate, were helping to finance trade and economic growth, many analysts and policy makers concluded that opening capital markets was an important goal for emerging and advanced market economies. That shift in thinking culminated in 1997, when the IMF's ministerial body (then known as the interim committee) endorsed a proposal to amend the Articles of Agreement to give the Fund authority to oversee members' capital account liberalization policies (Boughton 2012, 134–39).

At the political level, interest in promoting capital account liberalization dissipated quickly in the wake of the East Asian crisis. Analytically, views have evolved more gradually and less completely. Is receptivity to international financial capital an ideal to which all countries should aspire, when only some are currently ready? Or, are capital markets inherently a destabilizing force against which most countries should take protective actions? Should policy advice primarily emphasize the need for improvements in domestic policies, or should the regulation of international flows be considered alongside macroeconomic stability? Views on these questions are not yet settled.[18]

Much has been made of the official shift in view that took place at the IMF in 2010. The IMF phrased the shift in stark terms: "Until [2010], capital controls were not seen as part of the policy toolkit; now they are" (IMF 2011c). In fact, for some two decades before 2010, the IMF had been receptive to requests to approve, or at least to not disapprove, capital controls in countries that were deemed to have an overall sound mix of macroeconomic policies. The most prominent case was Chile, which put selective controls in place in 1991 to encourage investors to avoid short-term speculative inflows. Although views in the IMF were mixed and shifted over time (IMF IEO 2005, 28), Fund staff occasionally used Chile's experience as a positive example of what could reasonably be done. What the new policy did in 2010 was establish a more proactive stance in which the IMF could advise countries to put capital controls in place, and not just react on a case-by-case basis when countries chose to do so on their own.

So far, the IMF's view is not that controls are necessary to counter the inherent volatility and uncertainty of international capital flows. Rather, the view is that many countries do not yet have financial markets that are advanced enough, nor macroeconomic policies that are strong enough, to attract financial capital in a predictable and sustainable way. The end game is still supposed to lead to open capital markets. Controls "may be needed to mitigate macroeconomic and financial-stability risks related to inflows *under certain conditions*" (IMF 2011b, 44, emphasis added). IMF staff have also expressed the fear that "widespread adoption of controls could have a chilling longer-term impact on financial integration and globalization, with significant output and welfare losses" (Ostry et al. 2010, 5).

Actions to Improve the System

Reform the IMF

The aftermath of the East Asian crisis was a reputational nadir for the IMF. Some of the criticism was misguided or overstated. After all, each of the affected countries made necessary policy changes and eventually recovered well from the crisis. The sudden and massive withdrawals and outflows of financial capital did not result from IMF advice or actions, and the recoveries could not have begun without the Fund's leadership in organizing both the policy reversals and the massive official financial assistance. On the other hand, some of the criticism was valid and had important implications for how the IMF should operate. The Indonesia program was overladen with reforms that had little to do with the financial crisis and obscured and delayed the necessary reform of the banking system. The Thailand program was underfinanced and insufficient to restore investor confidence. Although the Korea program was a great success, and led to the quickest and most dramatic recovery in the region, the initial program in December 1997

18 See, for example, the variety of papers in Edwards (2007a). Conclusive empirical evidence is also hard to generate on either side. Dani Rodrik found "no evidence that countries without capital controls have grown faster, invested more, or experienced lower inflation" (in Fischer et al. 1998, 61). Edwards (2007b, 108) found "no systematic evidence suggesting that countries with higher capital mobility tend to have a higher incidence of crises."

included excessive fiscal tightening and lacked a mechanism for involving bank creditors in the workout. In Malaysia, the IMF's outspoken opposition to the imposition of capital controls led to a breakdown in relations that took many years to overcome.[19]

The overwhelming impression in the late 1990s was that the IMF had been reduced to doing the bidding of the large advanced economies and had little independence to promote global welfare. That perception had always been present, from the founding of the institution in 1944 under the watchful eye of an almost totally dominant United States. The effect of the East Asian crisis was to bring the issue to the fore and galvanize the Fund into action. Since that time, the IMF has taken a number of steps to strengthen both its operations and its relations with its member countries.

One important measure was the adoption of new conditionality guidelines in 2002. Compared with the previous (1979) guidelines, the new instructions to staff limited structural policy conditions in lending arrangements to those that are "critical" (not merely important) for achieving specified macroeconomic goals or were necessary to safeguard IMF resources or to comply with the Articles of Agreement. More fundamentally, the 2002 guidelines specified for the first time that borrowing countries had primary responsibility for the design of adjustment and reform programs, and were expected to take "ownership" of the program. That symbolic transfer of responsibility away from IMF staff has had observable effects in streamlining and focusing the workout from financial crises, and enhancing relations between the IMF and its member countries.[20]

A second reform was the adoption of a new surveillance decision in 2007, replacing a decision that had been adopted in 1977 and maintained for 30 years, with numerous but small amendments over the years. A major problem with the old decision was that it made it very difficult for the IMF to determine and state that a member country was manipulating its exchange rate inconsistently with its obligations under the Articles of Agreement. The new decision shifted the emphasis toward an assessment of whether a country's exchange rate was "fundamentally misaligned," meaning that the rate was inconsistent with an equilibrium current account position. That emphasis proved equally difficult to apply in practice, and the IMF subsequently replaced it in favour of more nuanced assessments of sustainability (IMF 2011a). More generally, the new guidelines aimed to encourage and enable the IMF to make more pointed and relevant analysis of policies and economic conditions, and to convey those assessments more clearly to members and to the public. Reviews of the implementation of the new policies suggest that some progress has been made, but that much work remains for surveillance to be fully effective.[21]

Reforms from within the institution can only go so far to reduce the IMF's subservience to a small group of major powers. In 2010, after years of negotiation, the IMF's board of governors approved a somewhat more comprehensive and far-reaching package of reforms. One aim of the package is to make permanent the large increase in the IMF's financial resources that was cobbled together quickly in 2009 in response to the global financial crisis. The initial increase was secured primarily by raising the borrowing agreements known as the New Arrangements to Borrow (NAB). Prior to 2009, the IMF could borrow up to approximately US$51 billion (Special Drawing Right [SDR] 34 billion) from 25 countries and central banks when it needed to supplement its basic resources for a large lending operation. The limit was then increased, effective in 2011, to some US$564 billion (SDR 370 billion), and an additional 13 countries and central banks joined the list of potential lenders.

Although the original, smaller NAB was activated only once, to finance a stand-by arrangement with Brazil in 1998, the IMF

19 Each of these issues is covered in detail in Boughton (2012, chapters 11-12).

20 See the conditionality guidelines at www.imf.org/External/np/pdr/cond/2002/eng/guid/092302.htm. The most recent review of implementation and effects is at www.imf.org/external/pp/longres.aspx?id=4692.

21 For the 2007 decision, see www.imf.org/external/np/sec/pn/2007/pn0769.htm#decision. The 2007 decision was later incorporated into an integrated decision on bilateral and multilateral surveillance, but its principles remained intact. For the most recent review, see www.imf.org/external/ns/cs.aspx?id=279.

has activated the expanded arrangements repeatedly since 2011, for amounts of more than US$300 billion. However, the NAB is not a reliable source of funding for a long period because some of the arrangements with creditors, including the United States, are subject to periodic renewal and, thus, are not assured to be available when needed. Nor does it provide an equitable distribution of the burden across the membership in the same way as the IMF's subscription-based permanent resources. The reform package, therefore, would essentially replace the increase in the NAB with a general quota increase for all member countries.

A second aim of the 2010 reform package is to redistribute voting power away from relatively slow-growing economies toward the more dynamic emerging markets, and to rearrange representation on the IMF executive board to make more room for emerging market countries. This goal would be achieved partly by changing the formula that underpins quota calculations, and partly by amending the Articles of Agreement to eliminate the requirement that the largest economies appoint their representatives rather than participate in a general election. Because of that requirement, two of the countries that use the euro as their common currency — France and Germany — cannot combine with the other members of the euro area to elect a single director at the IMF. The proposed amendment would not force them to do so, but it would permit a consolidation that would simultaneously strengthen the voice of the euro area in policy debates and make room for other countries to gain representation on the 24-seat executive board.

Unfortunately, the reform package has not yet been implemented, owing entirely to indifference and outright opposition by some in the US Congress. There have been enough other countries that have ratified the reform package so that it will take effect as soon as Congress acts, but the necessary legislation has been stalled for years.

History is encouraging for ultimate passage by Congress. On eight occasions, from 1959 through 1998, the board of governors approved an increase in IMF quotas, and every time the US Congress eventually approved the proposed legislation to put it into effect. The problem is that it often takes a crisis to galvanize Congress into action. In 1978 (the fifth time an increase was proposed), the US dollar was in free fall in foreign exchange markets. In 1983, IMF lending in Latin America was essential for recovery from the crisis that had nearly caused a collapse in international banking. In 1990, the impending dissolution of the Soviet Union was raising demands for IMF lending. In 1998, financial crises in East Asia and Russia had severely strained IMF resources. In the spring of 2014, the political crisis in Ukraine again raised the possibility that political support for international lending would enable the administration to persuade Congress to act.

Quantitatively, the reform package is not large and does not represent a major shift in voting power or representation. The share of voting power of the advanced economies, including the United States and the European Union, would fall from 57.9 percent to 55.3. The share of emerging markets and developing countries would rise from 42.1 percent to 44.7 (Truman 2014). Qualitatively, however, it represents a major change in the history of the IMF, away from the inertia that has defined its governing structure since the early postwar years toward a recognition that the world economy is dynamic and changing more rapidly. Implementation of the 2010 reforms will not immediately change the nature of international crisis management, but it will make it possible for the IMF to restore its credibility as the rightful leader in that domain.

Reconstitute the G20

Leadership from the large economically advanced countries is essential for financial stability. The 1944 Bretton Woods conference was planned and led by the two dominant economic powers of the time — the United States and the United Kingdom. When the dollar-based Bretton Woods system came under stress in the early 1960s, 10 countries banded together to form the G10 group of central banks. A decade later, the largest five of those countries — the United States, Germany, Japan, the United Kingdom and France — began meeting at the level of finance ministers and became known as the Group of Five (G5). Soon afterward, with the addition of Canada and Italy, the G7 began holding annual summit meetings that dealt as much with economic cooperation as national security. Russia's emergence as a nascent democracy in the 1990s induced the G7 to invite Russia and expand into the Group of Eight. In 1999, the much larger G20 was formed as a partnership between the traditional economic powers and the large newly emerging market countries, including the BRICS (Brazil, Russia, India, China and South Africa).[22]

At every critical juncture since the early 1960s, the "Gs" have played a key role in guiding the negotiations over how to respond to evolving challenges. The G10 organized the IMF's original borrowing arrangements as a way to overcome a shortage of financial resources, led the discussions on the creation of SDRs and oversaw the transition away from fixed exchange rates in the 1970s. In the 1980s, the G5 organized the response to extreme swings in currency values that had plagued international finance for years. In the late 1980s and the 1990s, the G7 took the lead in proposing responses to a host of challenges, including excessive sovereign debts, the collapse of the Soviet Union and emerging market financial crises. For the past 15 years, the G20 has assumed responsibility for proposing policy changes to the IMF on those and other issues.

The replacement of the G7 by the G20 as the main external force on the IMF and other multilateral organizations was fundamentally different from the earlier evolution of these ad hoc self-appointed groups. It brought a sea change in the relationship between the official institutions and their member countries. Previously, whichever group was in the lead would develop a policy position and present it as a proposal, for instance, to the IMF. Other groups, most notably the Group of Twenty-Four developing countries (G24), would usually develop their own counterproposals, and the executive board of the IMF — essentially an amalgamation of all interested parties — would hash out a consensus decision on how to move forward. Although the large advanced economies always had the upper hand, they could not generally force a decision without going through the additional process of negotiation within the established institution. That has now ended.

22 The origin and evolution of the G20 are discussed in Kharas and Lombardi (2012).

The G20 controls 77 percent of the voting power in the IMF.[23] Once the G20 reaches an internal consensus and issues a communiqué with a policy recommendation, it is a foregone conclusion that the IMF will implement it. The influence of the 155 countries that are members of the IMF, but are not represented either directly or indirectly in the G20, has been effectively marginalized. The IMF's ministerial body, the International Monetary and Financial Committee (IMFC), which is supposed to provide overall guidance on the IMF's policy decisions, has been reduced to little more than a rubber stamp for the G20. The IMFC meets twice a year, and each time the G20 meets a few days earlier and issues a communiqué expressing its views on the policy issues on the IMFC agenda. All that remains to be done is ratification and implementation.

Does it matter? Two reasons suggest that it does.

First, the issues that matter most to the smaller countries are different from those that matter to the large countries that comprise the G20. Specifically, Africa — one of the fastest-growing regions in the world — is represented in the G20 only by South Africa, a sizeable emerging market that has little in common with its equatorial neighbours. G20 communiqués typically pay no more than lip service to the problems facing small, low-income developing countries. Many African countries have established democratic and market-oriented practices in the past quarter century, and many have strengthened their macroeconomic policies and attempted to get on a sustainable path of economic growth. Encouraging and supporting those efforts is systemically important, but the G20 typically has its focus elsewhere.

Because the G20 pays little attention to the problems of small countries, these issues receive less attention in IMFC communiqués as well. In October 2013, for example, the IMFC limited its comments on non-G20 issues to a few sentences that

23 The G20 has 19 member states plus the European Union. As of July 2014, the 19 member countries hold 63.4 percent of the vote in the IMF board of governors. The countries that are members of the European Union but are not otherwise members of the G20 hold another 13.6 percent.

noted that not enough was being done, without recommending any specific policy actions: "We welcome the Fund's strengthened engagement with small states and look forward to the implementation of the work program in their support.…We welcome the receipt of assurances needed for making the Fund's concessional lending to low-income countries self-sustaining, and urge members now to make good on their pledges" (IMF 2013).

Second, the G20 is not an established multilateral entity with globally negotiated and accepted rules. It is a self-appointed and self-selected body without the legitimacy that comes with formality. Even fairly large and economically important countries such as Egypt, Nigeria and Sudan — each of which, despite the risks associated with weak governance and infrastructure, receives large inflows of direct investment from foreign private investors — lack a seat at the table of G20 meetings.[24]

Members of the G20 account for more than 80 percent of global output and international trade. Without question, the gravitational shift from the G7 to the G20 has been a positive development, and a continuing role for such a group is needed to provide both leadership and flexibility to the management of international financial issues. Still, a large gap separates 80 percent from 100 percent, which is approximately what the IMF and other multilaterals such as the United Nations and the World Bank represent. Diminishing the role of formal institutions does have costs.

The shortcomings of the G20 could be alleviated by expanding its membership, but that development could weaken the group's effectiveness. Meetings consisting of 20 countries already lack the intimacy and esprit de corps that induced leaders to form informal groups. Some 2,000 people, including journalists and representatives of non-governmental organizations, surround the ministerial meetings of the G20, and as many as 7,000 people go to the summit meetings. If ministers and heads of government find the logistics overwhelming, then a contraction of the group becomes more likely than an expansion.

24 For background and a review of this issue, see Donnelly and Ford (2008).

A more effective response would be to expand the G20's minimal constituency structure. At present, because the European Union is a member of the G20, the 24 relatively small countries that are in the European Union, but not directly in the G20, have a mechanism to influence the discussions through their representative at the table.[25] That process could be duplicated for other regions, and will become more viable as regional institutions evolve beyond their current functions. The G20 currently invites representatives of several regional organizations to attend its meetings, including the 54-member African Union and the 10-member Association of Southeast Asian Nations. Being included in an outreach program is not the same as being a member of the group. The seeds exist, though, for these relationships to evolve into more formal and permanent associations.

In addition to engaging further with regional groups, the G20 could introduce a constituency process directly. The IMF and the World Bank, with more than 180 member countries, function by grouping most of their members into formal constituencies. Brazil, for example, has had a permanent seat on the IMF executive board since the board's creation in 1946. At the outset, it represented eight Latin American countries. As the IMF membership has grown, Brazil's constituency has expanded and shifted, and it now comprises 11 countries. At the G20, however, Brazil represents only itself. Informally, of course, Brazil can raise issues that are important for any country that it considers to be important for its own interests, including, but not limited to, those in its IMF constituency. Formalizing that function, so that many G20 members would be expected to speak for a specific group of smaller countries as well as for themselves, could go a long way toward ensuring that small-country interests were appropriately represented at the table.

Ultimately, a constituency structure within the G20 would make it very much like the IMF, with two differences. First, the structure of the G20 would be unbound by history or inertia. As

25 In addition, Spain is a "permanent invitee" to G20 meetings. See www.g20.org/g20_priorities/g20_and_world. For a discussion of the differences between representation practices in the IMF and the G20, see Kharas and Lombardi (2012).

such, it would be more likely to represent current economic and diplomatic realities. Second, G20 members could more readily adapt to changes in the world economy. Instead of electing representatives on a set schedule every two years, with a need to satisfy institutional rules on relative constituency size and with a tendency to maintain existing distributions, G20 members could shift allegiances whenever they deemed it appropriate. These advantages would give rise to a productive tension that would also help the IMF become more responsive to an ever-accelerating pattern of global change.

Stabilize Currency Relationships

For a century, key currencies have been subject to recurring bouts of speculative pressure. While the effects of those pressures have been most obvious when currency values have been floating against one another, they have been no less intense during periods of fixed rates. Floating the exchange rate is feasible only until markets and official holders change their preferences enough to cause movements that are large enough to destabilize the economy. Pegging exchange rates works only so long as economic policies and conditions remain in sync between countries. Even when currencies have been firmly linked through formal relationships, as in the Bretton Woods era and in the subsequent intra-European arrangements, speculation that those arrangements will become unsustainable has fuelled pressures for change that — more often than not — have ultimately been fulfilled.

Reining in market expectations or the effects of such expectations requires action within the system, which has been discussed above: stabilize and rationalize macroeconomic policies; improve the congruence of policies between countries; strengthen oversight of financial sectors; and improve regulation of cross-border financial flows. Even if these actions are implemented, the risk of destabilizing shifts in *official* preferences would remain a systemic challenge. This risk has received relatively little attention lately, partly because it has not manifested itself for quite some time, and partly because it has been overshadowed by the more immediate risks associated with volatile private financial markets. The potential, however, has not diminished and may have increased.

In the data most recently reported to the IMF (third quarter of 2013), 61 percent of reported and allocated foreign exchange reserves was held in US dollars, 24 percent was held in euros, the Japanese yen and the pound sterling each accounted for four percent, and the remaining seven percent was spread across several other currencies.[26] This distribution implies that official currency holdings are still not very diversified, despite the rise in the financial importance of China and other Asian economies over the past quarter century. One reason for this is that Japan was slow to accept the international use of the yen, and China even more so. Another is that most national authorities seem reluctant to shift the currency composition of their holdings, except very gradually.

As long as inertia and a commitment to systemic stability continue to be dominant forces in official policy toward international reserves, that policy will continue to exert a stabilizing force that helps to offset the inherent volatility of private markets. Stability, however, is far from assured. The pound sterling was subjected to several waves of speculative attack from the late 1940s through the 1970s, at a time when sterling was also falling out of favour in official holdings (Schenk 2010). In the 1960s, the French government shifted reserves out of US dollars into gold, both as a hedge against a dollar devaluation and as a way of pressuring the United States to stop exploiting the "exorbitant privilege" that came with the dollar's central place in international finance. In the 1970s, doubts about the dollar's stability induced both private and official holders to shun it until well after the US authorities engineered a turnaround in November 1978.

From a peak share of almost 80 percent of reported foreign exchange reserves in the late 1970s, the US dollar's share fell to about 46 percent at the end of the 1980s before recovering to its recent range above 60 percent (Eichengreen 2011, 64).

26 Of the others, only the Swiss franc and the Australian and Canadian dollars were separately reported. These data are as reported to the IMF by 145 countries. That leaves more than 40 non-reporting countries, and only 54 percent of total reported reserves were allocated by currency. The actual distribution, therefore, could be quite different. See www.imf.org/external/np/sta/cofer/eng/.

In the early 1980s, both the pound sterling and the Japanese yen fell out of favour as the dollar's market value appreciated dramatically. The recent relative stability, dominated by the dollar and the euro, thus seems more of an anomaly than a likely permanent feature of the system. The fragility of the euro area since 2009 and the rise in financial importance of the Chinese renminbi offer further reasons for concern about how long the current pattern will persist.

In the 1970s, two efforts were made to stabilize the official sector of the international financial system by establishing a substitution account for US dollars held in foreign exchange reserves. The first effort began in 1972, under the auspices of the Committee of Twenty, the forerunner of the interim committee and the IMFC. Germany, Italy, the United Kingdom and the United States each submitted proposals to establish an account at the IMF into which countries could deposit part of their dollar reserves and have them converted into SDRs. At the time, the value of the SDR was equivalent to the nominal gold content of the US dollar. Thus, depositors in the account would gain protection against a devaluation, with the IMF serving as a guarantor of the value of the account. How this guarantee would work was never resolved, because the debate foundered on questions of whether substitution of SDRs for dollars would be mandatory or voluntary, and whether countries could choose when to shift and by how much.[27]

A second effort began in 1978, when the dollar was under attack from all sides. In normal times, US officials might be expected to be hostile to the idea of an account that makes it easier for other countries to reduce their official holdings of dollars. In times when countries are already eager to reduce their dollar balances, however, the possibility arises that such an account would reduce the existing downward pressure. A few high-level officials in the US Treasury, the most important of whom was Anthony M. Solomon, under secretary for monetary affairs, were receptive to the idea when it was raised in the IMF. That acceptance, coupled with enthusiasm from some European countries, gave the proposed substitution account enough momentum to carry the principle through the executive board and up to the interim committee for approval in the spring of 1980. By then, however, the dollar crisis was over, Solomon had left the Treasury, and other US officials had lost all interest in the proposal. The interim committee included a bland statement about it in its communiqué, but the substitution account was stillborn and was never officially revived.[28]

Could a substitution account play a role in stabilizing international finance today? The possibility was raised in 2009 in an oft-cited speech by Governor of the People's Bank of China Zhou Xiaochuan (2009). Zhou called for broadening the scope and the role of the SDR to make it a "super-sovereign reserve currency." As part of that expansion, the IMF would create "an open-ended SDR-denominated fund based on the market practice, allowing subscription and redemption in the existing reserve currencies by various investors as desired." As C. Fred Bergsten (2009) noted approvingly, that suggestion was essentially similar to the earlier substitution account proposals.

Although the Chinese suggestion was received warmly in a number of world capitals, it received a cold shoulder from the US Treasury. As in the past, whenever the dollar is not facing an imminent threat of speculative attack or secular decline, US officials have taken the view that no realistic threat is even on the horizon. Only China holds US dollar reserves in such great magnitude (probably in excess of US$2.5 trillion in 2014)[29] that it alone could destabilize the international value of the dollar. A large shift of dollar securities out of China's official portfolios (either reserves or sovereign wealth funds) would certainly depress the value of the dollar and could induce panic selling by others. Many analysts take comfort in the knowledge that such a shift would not be in China's economic interests (Eichengreen 2009). Circumstances could arise, however, in

27 The 1972–1974 proposals are discussed in de Vries (1985, 180–86, 248-49). See also McCauley and Schenk (2014, 5–7).

28 For accounts, see Boughton (2001b, 936–43) and McCauley and Schenk (2014).

29 China does not report the currency composition of its foreign exchange reserves. Most analysts assume that about two-thirds of China's total reserves of close to US$4 trillion is held in US dollar securities.

which China might want to use its leverage to pursue non-economic — political or security — interests. Or, a combination of coordinated or even uncoordinated actions by other countries with sizeable dollar holdings could snowball into a destabilizing influence. One does not have to have the foresight of Cassandra to conclude that early action to avert the possibility, however remote, of a loss of confidence in the dollar before it becomes imminent would be wise.

Countries with excess dollar reserves will eventually reduce their holdings. The question is whether they will do so gradually, and in a predictable manner, so that their actions will not destabilize currency markets. A substitution account would help ensure that outcome by providing a transparent off-market mechanism and an agreed composition of the currency shares into which those excess balances were to be converted. But agreement on establishing such an account depends on winning the support of the United States.

US support for a substitution account is essential for three reasons. First, as a practical matter, no scheme for diversifying official holdings of US dollars could ever gain the support of other major countries without the endorsement of the United States. Second, establishing a substitution account within the IMF would require an amendment of the Articles of Agreement, which would require approval by members with 85 percent of the voting power. The United States, with approximately 17 percent, holds a veto over such decisions. Third, any substitution account, whether in or out of the IMF, incurs an exchange risk because it would hold primarily dollar-denominated assets, while its liabilities would be denominated in SDRs or some similar composite. Without the participation of the major creditor country, the burden of risk on depositing countries would negate the value of having the account.[30]

To secure US support for a substitution account would require three steps. First, the US authorities would have to become convinced that the risk of a disorderly move away from dollar reserves is real and substantial. Second, the authorities would have to convince the US Congress to approve contingent financing to cover at least part of any shortfall in the net valuation of the account. Third, the United States and other creditor countries would have to agree to dedicate a portion of the IMF gold stock to cover whatever part of a potential shortfall would not be otherwise covered. The IMF is still the second-largest holder of monetary gold in the world (after the United States), but its stock is partly dedicated to other purposes, including backing for low-interest loans to poor countries, and a substantial portion must be retained in the IMF to maintain the financial integrity of the institution. The portion that could be used to support a substitution account would not be sufficient to cover all potential shortfalls.

These steps are not likely to be feasible until the next crisis is already upon us. A more realistic, possibly intermediate, step would be to follow up the 2009 allocation of SDRs (182.6 billion, worth about US$284 billion) with an agreement to allocate additional amounts on a regular basis. Ever since the East Asian crisis of 1997-1998, emerging market countries have been amassing foreign exchange reserves at an unprecedented pace. While that accumulation might protect each individual country from the worst effects of market instability, the aggregate effect is to contribute to the potential instability of the system. As the total volume of key currencies held as reserves increases, the instability that would result from a shift in composition rises commensurately. If a larger portion of reserves were held as SDRs, that risk would diminish.

The Committee of 20 recognized this danger in the 1970s, and ministers sought to devise a system in which the SDR would play an increasingly prominent role, displacing that of the US dollar. The resulting amendments to the IMF Articles of Agreement, which took effect in 1978, committed every member country to "the objective of making the [SDR] the principal reserve asset in the international monetary system" (IMF 2011d, Article XXII). Subsequently, the leaders of most creditor countries lost interest in pursuing that objective. It remains on the books, but

30 If the proposed substitution account had been established in 1980, as planned, it likely would have been viable at least until the early 1990s, as the appreciation of the dollar from 1980 to 1985 would have generated enough of a cushion to cover several years of subsequent depreciation. See Boughton (2001b, 942-43) and McCauley and Schenk (2014).

at present it has no practical effect. Fears (mostly unfounded) that a larger role for the SDR could cause inflation or weaken the incentive for deficit countries to reform have kept support for regular allocations below the 85 percent threshold that is required for approval.[31]

For the SDR to become the principal reserve asset, or even to play a substantial role in enhancing financial stability, the stock of SDRs would have to be raised to a reasonable portion of total reserves and then increased regularly to keep pace with the demand for reserves. Without any need for further amendments to the Articles of Agreement, the IMF could set a target percentage and request periodic allocations to meet and then maintain it. Political support for such action does not presently exist, but that could change once instability in currency values again becomes a reality.

One way to help overcome the political opposition to allocations would be to revive the "reconstitution" requirement that was embodied in the original design of the SDR, but was dropped in 1981. Prior to that date, a country that used its allocation to settle a payments deficit would have to restore its holdings within a few years. The SDR could thus be used to meet a temporary payments need, but essentially it would have to be retained as reserves. The abrogation of the requirement has enabled many countries to use their SDRs as a permanent source of credit. As helpful as that might be, it has weakened the ability of the SDR to satisfy its basic purpose.

Over time, if the SDR is to remain relevant, the IMF would have to expand the SDR basket to include other currencies for which the demand as a reserve is substantial. Today, the only country not in the SDR that has a significant role in official reserves is the Swiss franc, which is widely viewed as a haven currency. Although the market is relatively small, if the Swiss authorities were interested in promoting its use, inclusion in the SDR basket would be a logical component of the strategy. On a much more important level, the renminbi will become another obvious candidate as its international use grows. The SDR has evolved greatly since its inception and will have to continue to evolve if it is to become a major reserve asset.

31 For a variety of views on this issue, see Mussa, Boughton and Isard (1996).

Conclusions

The financial history of the last 140 years can be divided roughly into four periods. First came the classical gold standard era, which lasted from the 1870s until the onset of World War I. That period was characterized by a remarkable long-term stability, but also large price movements in both directions in response to the vagaries of the market for gold. The interwar period was one of financial chaos, as countries tried, with varying degrees of failure, to move back to gold. The quarter century after World War II — the Bretton Woods era — was one of steady but uneven progress toward restoring multilateral trade and finance, anchored by a well-defined system of exchange rates pegged to the US dollar, which in turn was pegged to gold.

The fourth period — the one in which we are living — has been marked by volatile exchange rate movements, nearly unimaginable growth in international financial flows and recurring financial crises in every region of the world. Nostalgia for one of the more stable periods of the past, whether the classical gold standard or the gold exchange standard of Bretton Woods, cannot and will not change the fact that the world economy has become more complex, interactive and dynamic. If we want to enjoy the benefits of a dynamic economy while getting back to more stable international finance, the current system will have to be made to work better than it has since the 1970s.

To some extent, the challenge is simply to get better policy formulation and implementation within the system as it now exists. Much progress has been made since the early 1990s toward more stable macroeconomic policy making. With a few exceptions in developing countries, inflation has been conquered. What is needed now is more congruence between countries, so that the conflicts between countries aiming for export-led growth and the more mature, advanced economies can be better managed, with more attention to the requirements for building on a stable-prices platform to achieve more lasting growth and high employment. In addition, progress needs to continue toward developing and implementing best practices on macroprudential policies, including both regulation of financial sectors and control over cross-border financial flows.

To move beyond those modest improvements will require actions to strengthen the system. The key institutions are the IMF and the G20, both of which play important roles in managing financial imbalances and crises. The relationship between the two is currently out of balance, because the smaller and informal 20-country group dominates the large and formal 188-member institution. To correct this imbalance will require reform of the governance of the IMF and a reorganization of the G20, both of which would increase the roles of smaller and more dynamic economies. Finally, the IMF's international asset, the SDR, needs to be updated and given an expanded role, to reduce the risk of a catastrophic shift in the exchange values of major currencies.

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Acronyms

FCL	Flexible Credit Line
G5	Group of Five (United States, Germany, Japan, the United Kingdom and France)
G7	Group of Seven (G5 plus Canada and Italy)
G10	Group of Ten
G20	Group of Twenty
IEO	Independent Evaluation Office (IMF)
IMF	International Monetary Fund
IMFC	International Monetary and Financial Committee
NAB	New Arrangements to Borrow
OECD	Organisation for Economic Co-operation and Development
SDR	Special Drawing Right

Bibliography

Bean, Charles. 2010."The Great Moderation, the Great Panic and the Great Contraction." Joseph Schumpeter Lecture. *Journal of the European Economic Association* 8: 289–325.

Berg, Andrew, Eduardo Borensztein and Catherine Pattillo. 2005. "Assessing Early Warning Systems: How Have They Worked in Practice?" *IMF Staff Papers* 52 (3): 462–502.

Bergsten, C. Fred. 2009. "We Should Listen to Beijing's Currency Idea." *Financial Times,* April 8. www.ft.com/intl/cms/s/0/7372bbd0-2470-11de-9a01-00144feabdc0.html.

Bernanke, Ben and Mark Gertler. 2001. "Should Central Banks Respond to Movements in Asset Prices?" *American Economic Review* 91 (May): 253–57.

Biggs, Michael and Thomas Mayer. 2012. "How Central Banks Contributed to the Financial Crisis." Voxeu.org (Centre for Economic Policy Research). www.voxeu.org/article/how-central-banks-contributed-financial-crisis.

Bordo, Michael, Barry Eichengreen, Daniela Klingebiel and Maria Soledad Martinez-Peria. 2001. "Is the Crisis Problem Growing More Severe?" *Economic Policy* 32: 51–82.

Boughton, James M. 2001a. "Northwest of Suez: The 1956 Crisis and the International Monetary Fund." *IMF Staff Papers* 48 (3): 425–46.

———. 2001b. *Silent Revolution: The International Monetary Fund 1979-1989*. Washington, DC: IMF.

———. 2012. *Tearing Down Walls: The International Monetary Fund 1990-1999.* Washington, DC: IMF.

Calvo, Guillermo A. 1998. "Capital Flows and Capital-Market Crises: The Simple Economics of Sudden Stops." *Journal of Applied Economics* 1 (1): 35–54.

———. 2005. *Emerging Markets in Turmoil: Bad Luck or Bad Policy?* Cambridge, MA: MIT Press.

Calvo, Guillermo A., Leonardo Leiderman and Carmen M. Reinhart. 1993. "Capital Inflows and Real Exchange Rate Appreciation in Latin America: The Role of External Factors." *IMF Staff Papers* 40 (March): 108–51.

Churchill, Winston. 1945. "Winston Churchill's Declaration of Policy to the Electors." Conservative Party General Election Manifesto. www.conservative-party.net/manifestos/1945/1945-conservative-manifesto.shtml.

Chwieroth, Jeffrey M. 2010. *Capital Ideas: The IMF and the Rise of Financial Liberalization.* Princeton, NJ: Princeton University Press.

Crockett, Andrew and Morris Goldstein. 1987. "Strengthening the International Monetary System: Exchange Rates, Surveillance, and Objective Indicators." IMF Occasional Paper No. 50. Washington, DC: IMF.

De Vries, Margaret Garritsen. 1985. *The International Monetary Fund 1972-1978: Cooperation on Trial.* Washington, DC: IMF.

Donnelly, Roger and Benjamin Ford. 2008. *Into Africa: How the Resource Boom is Making Sub-Saharan Africa More Important for Australia.* Sidney: Lowy Institute for International Policy.

Dornbusch, Rudiger, Ilan Goldfajn and Rodrigo O. Valdés. 1995. "Currency Crises and Collapses." *Brookings Papers on Economic Activity* 26 (2): 219–94.

Dudley, William C. 2013. "Why Financial Stability is a Necessary Prerequisite for an Effective Monetary Policy." Remarks at the Andrew Crockett Memorial Lecture, Bank for International Settlements 2013 Annual General Meeting, Basel, Switzerland, June 23.

Dunaway, Steven. 2009. *Global Imbalances and the Financial Crisis.* Council Special Report No. 44 (March). New York: Council on Foreign Relations.

Edwards, Sebastian, ed. 2007a. *Capital Controls and Capital Flows in Emerging Economies: Policies, Practices, and Consequences.* Chicago: University of Chicago Press.

Edwards, Sebastian. 2007b. "Capital Controls, Sudden Stops, and Current Account Reversals." In *Capital Controls and Capital Flows in Emerging Economies: Policies, Practices, and Consequences,* edited by Sebastian Edwards. Chicago: University of Chicago Press.

Eichengreen, Barry. 2009. "The Dollar Dilemma: The World's Top Currency Faces Competition." *Foreign Affairs* (September/October).

———. 2011. *Exorbitant Privilege: The Rise and Fall of the Dollar and the Future of the International Monetary System.* Oxford: Oxford University Press.

Eichengreen, Barry and Ricardo Hausmann. 1999. "Exchange Rates and Financial Fragility." NBER Working Paper No. 7418 (November).

Fischer, Stanley. 2001. "Exchange Rate Regimes: Is the Bipolar View Correct?" *Journal of Economic Perspectives* XV (2): 3–24.

———. 2003. "Globalization and Its Challenges." Richard T. Ely lecture. *American Economic Review* 93 (May): 1–30.

Fischer, Stanley, Richard Cooper, Rudiger Dornbusch, Peter Garber, Carlos Masssad, Jacques Polak, Dani Rodrik and Savak Tarapore. 1998. "Should the IMF Pursue Capital-Account Convertibility?" Essays in International Finance No. 207 (May). Princeton University Department of Economics, International Finance Section.

Frankel, Jeffrey A. and George Sarvelos. 2010. "Are Leading Indicators of Financial Crises Useful for Assessing Country Vulnerability? Evidence from the 2008-09 Global Crisis." NBER Working Paper 16047 (June). www.nber.org/papers/w16047.

Funabashi, Yoichi. 1988. *Managing the Dollar: From the Plaza to the Louvre.* Washington, DC: Peterson Institute for International Finance.

Geithner, Timothy F. 2014. *Stress Test: Reflections on Financial Crises.* New York: Crown Publishers.

Ghosh, Atish, Jonathan Ostry and Charalambos Tsangardies. 2011. "Exchange Rate Regimes and the Stability of the International Monetary System." IMF Occasional Paper 270 (March). Washington, DC: IMF.

Helleiner, Eric. 2011. "Understanding the 2007-2008 Global Financial Crisis: Lessons for Scholars of International Political Economy." *Annual Review of Political Science* 14: 67–87.

Johnson, Simon and James Kwak. 2010. *13 Bankers.* New York: Pantheon Books.

Kaminsky, Graciela L. and Carmen M. Reinhart. 1999. "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems." *American Economic Review* 89 (3): 473–500.

Khan, Mohsin S. and Carmen M. Reinhart. 1995. *Capital Flows in the APEC Region*. Occasional Paper No. 122 (March). Washington, DC: IMF.

Kharas, Homi and Domenico Lombardi. 2012. *The Group of Twenty: Origins, Prospects and Challenges for Global Governance*. Washington, DC: The Brookings Institution.

IMF. 2011a. "2011 Triennial Surveillance Review — Staff Background Studies." August 26. IMF: Strategy, Policy and Review Department. www.imf.org/external/np/pp/eng/2011/082611a.pdf.

———. 2011b. "IMF Develops Framework to Manage Capital Inflows." IMF Survey online. April 5. www.imf.org/external/pubs/ft/survey/so/2011/NEW040511B.htm.

———. 2011c. "Recent Experiences in Managing Capital Inflows: Cross-Cutting Themes and Possible Policy Framework." February 11. IMF: Strategy, Policy and Review Department. www.imf.org/external/pp/longres.aspx?id=4542.

———. 2011d. *Articles of Agreement of the International Monetary Fund*. Washington, DC: IMF. www.imf.org/external/pubs/ft/aa/index.htm.

———. 2013. "Communiqué of the Twenty-Eighth Meeting of the International Monetary and Financial Committee, Chaired by Mr. Tharman Shanmugaratnam, Deputy Prime Minister of Singapore and Minister for Finance." Press Release No. 13/401, October 12. www.imf.org/external/np/cm/2013/101213.htm.

IMF IEO. 2005. *The IMF's Approach to Capital Account Liberalization*. Washington, DC: IMF.

———. 2011. *IMF Performance in the Run-Up to the Financial and Economic Crisis: IMF Surveillance in 2004-07*. Washington, DC: IMF.

Labour Party. 1945. "Let Us Face the Future: A Declaration of Labour Policy for the Consideration of the Nation." Labour Party Election Manifesto. www.labour-party.org.uk/manifestos/1945/1945-labour-manifesto.shtml.

Manasse, Paolo, Nouriel Roubini and Axel Schimmelpfennig. 2003. "Predicting Sovereign Debt Crises." IMF Working Paper WP/03/221 (November). Washington, DC: IMF. www.imf.org/external/pubs/cat/longres.aspx?sk=16951.0.

Mathieson, Donald J. and Liliana Rojas-Suárez. 1993. "Liberalization of the Capital Account: Experiences and Issues." Occasional Paper No. 103 (March). Washington, DC: IMF.

McCracken, Paul and OECD. 1977. *Towards Full Employment and Price Stability: Summary of a Report to the OECD by a Group of Independent Experts*. Paris: OECD.

McCauley, Robert N. and Catherine Schenk. 2014. "Reforming the International Monetary System in the 1970s and 2000s: Would an SDR Substitution Account Have Worked?" The BRICS and Asia, Currency Internationalization and International Monetary Reform Paper Series No. 9 (February). www.cigionline.org/publications/2014/2/reforming-international-monetary-system-1970s-and-2000s-would-sdr-substitution-a.

Minsky, Hyman P. 1982. *Can It Happen Again?* Armonk, NY: ME Sharpe.

Mundell, Robert. 1999. "A Reconsideration of the Twentieth Century." Revised draft of Nobel lecture delivered in Stockholm, December 10. www.columbia.edu/~ram15/.

———. 2000. "Currency Areas, Exchange Rate Systems and International Monetary Reform." Speech delivered at Universidad del CEMA, Buenos Aires, Argentina, April 17. www.columbia.edu/~ram15/.

———. 2005. “The Case for a World Currency.” *Journal of Policy Modeling* 27: 465–75.

Mussa, Michael, James M. Boughton and Peter Isard, eds. 1996. *The Future of the SDR in Light of Changes in the International Financial System*. Washington, DC: IMF.

Obstfeld, Maurice and Kenneth Rogoff. 1995. “The Mirage of Fixed Exchange Rates.” *Journal of Economic Perspectives* 9 (4): 73–96.

———. 2009. “Global Imbalances and the Financial Crisis: Products of Common Causes.” Proceedings of the Asia Economic Policy Conference, Federal Reserve Bank of San Francisco, October 18–20.

Ostry, Jonathan D., Atish R. Ghosh, Karl Habermeier, Marcos Chamon, Mahvash S. Qureshi and Dennis B.S. Reinhardt. 2010. “Capital Inflows: The Role of Controls.” IMF Staff Position Note SPN/10/04, February 19. Washington, DC: IMF.

Quirk, Peter J., Benedicte Vibe Christensen, Kyung-Mo Huh and Toshihiko Sasaki. 1987. “Floating Exchange Rates in Developing Countries.” IMF Occasional Paper No. 53. Washington, DC: IMF.

Reinhart, Carmen M. and Kenneth S. Rogoff. 2009. *This Time is Different: Eight Centuries of Financial Folly*. Princeton, NJ: Princeton University Press.

Rodrik, Dani. 2011. *The Globalization Paradox: Democracy and the Future of the World Economy*. New York: W. W. Norton & Company.

Rose, Andrew K. 2000. “Comments on ‘Is the Crisis Problem Growing More Severe?’” Preliminary, September 26. http://faculty.haas.berkeley.edu/arose/BEKSc.pdf.

Roubini, Nouriel and Stephen Mihm. 2011. *Crisis Economics: A Crash Course in the Future of Finance*. New York: Penguin.

Schenk, Catherine. 2010. *The Decline of Sterling: Managing he Retreat of an International Currency, 1945-1992*. Cambridge, MA: University of Cambridge Press.

Semmler, Willi and Brigitte Young. 2010. “Lost in Temptation of Risk: Financial Market Liberalization, Financial Market Meltdown and Regulatory Reforms.” *Comparative European Politics* 8 (3): 327–53.

Stiglitz, Joseph E., José Antonio Ocampo, Shari Spiegel, Ricardo French-Davis and Deepak Nayyar. 2006. *Stability with Growth: Macroeconomics, Liberalization and Development.* Oxford: Oxford University Press.

Stock, James H. and Mark W. Watson. 2003. “Has the Business Cycle Changed? Evidence and Explanations.” In Monetary Policy and Uncertainty: Adapting to a Changing Economy, symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 28–30.

Tett, Gillian. 2009. *Fool’s Gold.* New York: Free Press.

Triffin, Robert. 1959a. “The Return to Convertibility: 1926-1931 and 1958-? or Convertibility and the Morning After.” *Banca Nazionale del Lavoro Quarterly Review* 48 (March): 3–57.

———. 1959b. “Tomorrow’s Convertibility: Aims and Means of National Monetary Policy.” *Banca Nazionale del Lavoro Quarterly Review* 48 (June): 131–200.

Truman, Edwin M. 2014. “IMF Reform is Waiting on the United States.” Peterson Institute of International Economics Policy Brief PB14-9 (March).

Wang, Hongying. 2014. "China's Long March Toward Economic Rebalancing." CIGI Policy Brief No. 38 (April). Waterloo, Ontario: Centre for International Governance Innovation.

Williamson, John. 1983. *The Exchange Rate System*. Washington, DC: Peterson Institute for International Finance.

———. 1990. *Latin American Adjustment: How Much Has Happened?* Washington, DC: Peterson Institute for International Economics.

Yellen, Janet L. 2014. "Monetary Policy and Financial Stability." Inaugural Michel Camdessus Central Banking Lecture, IMF, July 2. www.federalreserve.gov/newsevents/speech/yellen20140702a.htm.

Zhou, Xiaochuan. 2009. "Reform the International Monetary System." Speech, March 23. www.pbc.gov.cn/publish/english/956/2009/20091229104425550619706/20091229104425550619706_html.

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