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Essays on International Finance

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The New Global Financial Safety Net

Struggling for Coherent Governance in a Multipolar System

Beatrice Weder di Mauro and Jeromin Zettelmeyer

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Centre for International Governance Innovation

67 Erb Street West
Waterloo, Ontario N2L 6C2
Canada
tel +1 519 885 2444 fax +1 519 885 5450
www.cigionline.org

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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

Executive Summary

Since the late 1990s and in particular since the great financial crisis of 2007–2009, the global financial safety net has expanded from barely more than one institution — the International Monetary Fund (IMF) — to a much larger, although geographically patchy, web comprising the IMF, regional financing arrangements (RFAs) and central bank swap lines. This raises two issues. The first relates to the adequacy and reliability of the new safety net; the second, to the incentives that it creates for sovereign borrowers and private borrowers and lenders. This essay analyzes the second issue.

Financial crises typically involve some combination of liquidity and solvency problems. International crisis lending could, therefore, give rise to moral hazard at the expense of the international taxpayer who bears fiscal losses if the loans are not fully repaid. It could also hurt the domestic taxpayer, if the expectation of crisis lending facilitates excessive capital flows to poorly governed countries. Finally, it could hurt countries that suffer negative spillovers in a crisis. These problems do not necessarily imply that international rescues are a bad idea. But they do suggest that insolvent countries should not normally have access to crisis lending, and that the incentives created by crisis lending deserve to be taken seriously.

Since the early 2000s, the IMF has attempted to do this by becoming more selective in its large-scale lending, creating special facilities for countries with strong policies and fostering contractual debt restructuring mechanisms that make it easier to say no. But as the financial safety net has become both larger and more fragmented, these efforts have become less relevant for the system as a whole. Some RFAs — particularly in Europe — have emphasized co-lending with the IMF as a possible solution. However, the experience of the European RFAs and the IMF in Greece has demonstrated the limits of this approach. In the absence of strong RFA internal lending policies, pressures associated with regional rescues may put too much strain on the IMF as an "anchor" of the RFA. Furthermore, since the IMF is senior to the RFA, co-lending with the IMF does not prevent moral hazard at the expense of the RFA.

The essay makes two recommendations that would help to reconcile crisis lending with good incentives in the new multipolar environment.

First, access to central bank swap lines should be extended to major emerging markets and smaller industrial countries that pass the pre-qualification test associated with access to the IMF's "Flexible Credit Line" (FCL). This would both create good policy incentives and increase the attractiveness of the FCL as a key to unlocking access to emergency central bank liquidity, with IMF funding acting only as a backstop.

Second, RFA co-lending with the IMF is no substitute for RFA internal commitment devices that prevent lending in unsustainable debt cases unless there is a debt restructuring at the same time. The credibility of such commitments requires legal frameworks — bond contracts, but also changes to relevant international treaties — that make debt restructurings more manageable and less hazardous from the perspective of sovereign borrowers than has been the case in the past. RFAs should promote such frameworks at the regional level, with the euro area leading the way. RFAs whose main concern is private rather than sovereign debt crises may also want to condition large-scale support on the quality of domestic frameworks for financial sector supervision, regulation and crisis resolution. This step would go beyond current IMF lending policies, but it is appropriate given the junior status of RFAs.

Introduction

The international financial architecture of today bears little resemblance to the one that existed 10 years ago. Before the financial crisis, the global safety net consisted mostly of a single, imposing — although somewhat dated — structure: the IMF. While alternative structures for official financial support existed, they were small by comparison. Like an emerging market cityscape, the international financial architecture has since then experienced a construction boom involving sprawling suburbs and towering high-rises, in the form of an increased number and greater size of RFAs, unlimited and standing bilateral swap lines, and contingent reserves arrangements.

The new skyline certainly looks impressive. The question is whether this complex architecture is more solid and better able to withstand large "shocks" than the traditional one. An equally important question is whether the incentives created by this complex system are conducive to preventing such shocks — which, more often than not, are related to past policy mistakes — and if not, how they can be fixed. This is the question that this essay seeks to answer. It deserves to be taken seriously for two reasons. First, the expanded system may provide more and (to some borrowers) cheaper insurance. Second — and perhaps more importantly — policy incentives may be weaker because of the fragmented nature of the system. Lending policies may not align between different (competing) parts of the system by design or to avoid IMF stigma. This may result in facility shopping and inter-creditor disputes. The recent European experience in dealing with sovereign debt and banking crises, involving a complex political process and coordination among several crisis lenders, provides some important lessons for global governance.

This essay builds on a rich literature on the global financial safety net, which has grown in parallel with the financial safety net itself. This literature has focused mainly on four aspects: the rationale for and evolving demands on the safety net (see Obstfeld 2009; Truman 2010, 2011; and Scheubel and Stracca 2016 for a survey); the history of RFAs and their interactions with the IMF (Lombardi 2010; Eichengreen 2012; Rhee, Sumulong and Vallée 2013; Henning 2005, 2016); the evolution of central bank currency swap lines (Allen and Moessner 2010; Goldberg, Kennedy and Miu 2011; Papadia 2013; Truman 2013; Bordo, Humpage and Schwartz 2014; and Destais 2014); and, most recently, quantitative analysis of the adequacy and use of the safety net, and some of its crisis-mitigating effects (Denbee, Jung and Paternò 2016; IMF 2016a; and Scheubel and Stracca 2016). Some studies (notably Obstfeld 2009; Papadia 2013; Denbee, Jung and Paternò 2016; and IMF 2016a) also worry that the safety net (or some of its elements) could become a source of moral hazard, but this is not their main concern. In contrast, the focus of this essay is not only to explain how the evolution of the system could complicate the task of reconciling safety nets with good incentives but also to suggest ways in which this problem can be addressed.

The essay begins by briefly reviewing the history of the global financial system since the late 1990s. Next, it lays out in what sense and under what circumstances the presence of an international financial safety net can create moral hazard, how the IMF has attempted to address this problem in the past and how these solutions are potentially affected by the "entry" of the big new players — RFAs and central bank swap lines. The fourth section, "Lessons from Greece: Troika Troubles," puts one specific interaction between an RFA and the IMF — the Greek crisis — under the microscope and argues that it demonstrates the limits of a particular approach to creating consistency between IMF and RFA policies, namely, to require RFA policies to piggyback on the IMF. Finally, the fifth section, "Reforming the Architecture of the European RFA," discusses possible solutions in the context of the European RFA, and a concluding section

generalizes these solutions. Readers with less interest in Europe may want to skip the first part of the fourth section and the fifth section, but still skim the second part of the fourth section, "Lessons from Greece: Troika Troubles," which draws some general lessons from the experience of IMF-RFA cooperation in the Greek crisis.

The main conclusion is that establishing good incentives in the new global financial landscape requires (at a minimum) consistency between the frameworks of the IMF and those of the new sources of financing. Depending on what the source is, this can mean rather different things.

As far as reserve currency swap lines are concerned, the essay argues that the decisions of central banks to extend such swap lines should follow similar criteria as those governing access to the IMF's FCL — namely, criteria that pre-qualify borrowers based on the strength of their pre-crisis policies. Once this occurs, the IMF could in effect underwrite these swap lines by offering FCL access to borrowers that are still in need of liquidity after six months. This could encourage the reserve central banks to offer explicit swap lines to major emerging market countries, leading to a useful extension of the safety net. At the same time, it would reduce the moral hazard associated with constructive ambiguity by making a sharper distinction between countries that pre-qualify and those that do not, and encourage wider use of the FCL.

As far as RFAs are concerned, the European experience shows that tying one's hands to IMF policies is no substitute for RFA-internal commitment devices that prevent RFAs from lending in unsustainable debt cases without requiring a debt restructuring at the same time. In developing such policies, RFAs can learn from the IMF's attempt to create and improve such a commitment device for itself — namely, the IMF's exceptional access policy. At the same time, the credibility of such commitment devices in sovereign debt crises requires legal frameworks — bond contracts, but also changes to relevant international treaties — that make debt restructurings more manageable and less hazardous from the perspective of sovereign borrowers than has been the case in the past. RFAs should promote such frameworks at the regional level. RFAs whose main concern is private rather than sovereign debt crises may also want to take the step of conditioning large-scale support on the quality of domestic institutions for financial sector supervision, regulation and crisis resolution. This step would go beyond current IMF lending policies. However, because their more junior status compared to the IMF creates an even greater need to protect their resources, RFAs should, if anything, be more selective than the IMF when deciding who to lend to in large volumes.

Perhaps the most important lesson from the euro-area crisis is that creating frameworks that can both help to manage an ongoing crisis and preserve a degree of market discipline is particularly difficult in circumstances in which debt is already high and growth is fragile. Other RFAs, in particular in Asia, would be well advised to develop such frameworks while these can still contribute to preventing a crisis, rather than in reaction to one.

The Unplanned Growth of the International Financial Safety Net

In the last decade, the international financial safety net — defined as financial arrangements that can provide foreign exchange to official borrowers in the event of a crisis — has expanded explosively. Mutualized sources of support have grown about seven-fold, while self-insurance in the form of international reserves increased about six-fold (see Figure 1). The largest part of the growth has been in RFAs, that is, regional funds or reserve pooling arrangements whose purpose is to make reserve currencies available to their members in a crisis.[1] Their size has grown from almost negligible amounts in the early 2000s to more than US$1.5 trillion today. The highest increases have been in Europe and in Asia.

The oldest of the currently active RFAs originated in the demise of the Bretton Woods system and the oil crises of the 1970s.[2] They include the 1976 Arab Monetary Fund (AMF), the 1978 Latin American Reserve Fund (FLAR), the 1985 South Asian Association of Regional Cooperation (SAARC) and the 1988 European Balance of Payments Assistance Facility, which succeeded two European Economic Community facilities created in the early and mid-1970s.[3] The common theme of all these arrangements is to allow their members access to balance of payments support subject to lighter conditionality and/or less political stigma compared to a financial arrangement with the IMF. This was the main motivation for some of the facilities created by clubs of developing countries, but it arguably played a role even in the case of the European facilities, which enabled countries such as France, Ireland and Greece to borrow in substantial amounts in the 1970s and early 1980s without having to go to the IMF (Polak 1997).

Unpopular IMF-sponsored adjustment programs during the 1997–1999 Asian financial crisis spurred a new, ambitious attempt to create a broad-based Asian RFA. The Chiang Mai Initiative (CMI) was created in 2000 in Chiang Mai, Thailand, based on a series of bilateral swap agreements between the Association of Southeast Asian Nations, China, Japan and South Korea (ASEAN+3). "Lingering stigma" associated with conditionality imposed by IMF programs continues to play a role in the development of the Asian regional arrangement today (Chang 2016).

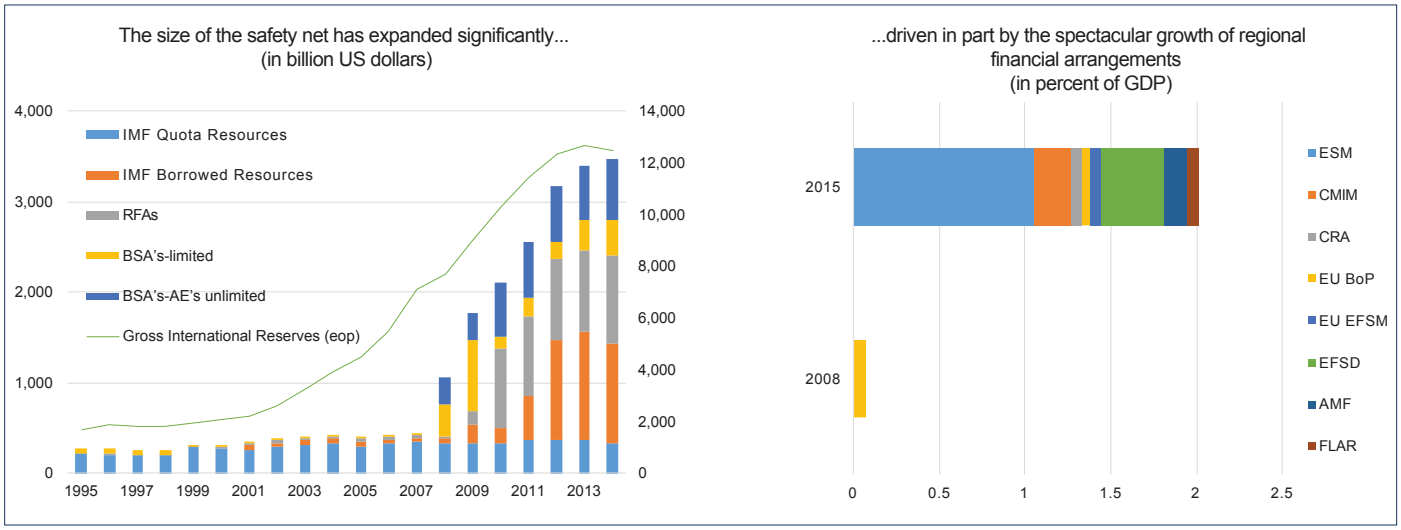
The global financial crisis of 2008 provided a first real-life stress test for the CMI, which it failed: none of the central banks in the region applied for liquidity assurances to the CMI. Instead, Singapore and South Korea secured swap arrangements with the US Federal Reserve, while Indonesia, which had been

1 In the case of the European Financial Stability Facility (EFSF) / European Stability Mechanism (ESM) (see the section "Lessons from Greece: Troika Troubles") the lending currency is the euro. In the remaining RFAs, the lending currency is typically the US dollar, based on pooling of international reserves. The latter was the core idea of the earliest RFAs in Latin America and Asia (FLAR, Chiang Mai) and lives on in the Asian arrangements today.

2 In addition, there are several historic RFAs that precede the 1970s. These include the 1950–1958 European Payments Union, and the 1961–1968 "Gold Pool," which included the United States, the United Kingdom and six continental European countries (Eichengreen 2012). In addition, the Communauté Financière Africaine franc zone, a French Treasury-backed regional currency union created in the 1940s that is still active today, shares some of the traits of RFAs (including a complicated relationship with the IMF after the end of the Bretton Wood system of fixed parities; see Eichengreen 2012).

3 Namely, the European Economic Communities' 1971 Medium Term Financial Assistance and the 1975 Community Loan Mechanism (see Heinen 2014). In 2002, the Balance of Payments Facility was refocused to serve only non-euro members.

Figure 1: The Evolution of the Global Financial Safety Net, 1995–2014



Data sources: Scheubel and Stracca (2016) dataset; IMF (2016a); Denbee, Jung and Paternò (2016); authors' calculations.

Notes: BSA = central bank swap arrangements, AEs = advanced economies, RFAs = regional financial arrangements, IMF = International Monetary Fund, ESM = European Stability Mechanism, CMIM = the Chiang Mai Initiative Multilateralization, CRA = the BRICS Contingent Reserve Arrangement, EU BoP = the EU Balance of Payments Assistance Facility, EU EFSM = the European Financial Stability Mechanism, EFSD = the Eurasian Fund for Stabilization and Development, AMF = the Arab Monetary Fund and FLAR = the Latin American Reserve Fund.

turned down by the Fed, sought support from China and Japan. This experience brought about a further enlargement and strengthening of the regional lending capacity: The Chiang Mai Initiative Multilateralization (CMIM), which came into effect in 2010 and now commands a lending capacity of US$240 billion, making it the second-largest RFA in the world. China and Japan are the biggest contributors to the CMIM, with US$38 billion and 28 percent of the votes each. Members of the CMIM can draw up to 30 percent of the maximum in an IMF-delinked portion. At the moment, for instance, Thailand, Indonesia, the Philippines and Malaysia could each draw about US$7 billion from the CMIM without simultaneously applying for an IMF program.[4]

A further sign of regional assertion in Asia was the decision to create an Asian surveillance institution, the ASEAN+3 Macroeconomic Research Office (AMRO).[5] This was initially established as a research unit in February of 2009, but in 2016 became an international organization with a mandate to assess members' macroeconomic policies and financial soundness. The AMRO is in the process of creating its own framework for conditionality and establishing the ground rules for interaction with the IMF. For instance, there is a debate whether the CMIM should increase the portion of IMF-delinked lending to 40 percent of maximum drawings (Chang 2016).

The desire to gain independence from the IMF also appears to have played a central role in the creation of the most recent multilateral crisis facility, the Contingent Reserve Arrangement (CRA) for the BRICS countries (Brazil, Russia, India, China and South Africa). Russian President Vladimir Putin has hailed this arrangement as a substitute for the IMF

4 See www.amro-asia.org/about-amro/cmim-contributions-and-maximum-swap-amount/.

5 The origins of regional surveillance in Asia go back to the 1998 "Manila Framework." See www.mof.go.jp/english/international_policy/financial_cooperation_in_asia/manila_framework/if000a.htm, and Sussangkarn (2011, 2012).

(see Steil and Walker 2014). The size of foreign reserves committed is indeed impressive: the CRA pools US$100 billion in international reserves of the five countries.

The largest of today's RFAs is the ESM, conceived in the middle of the escalating euro crisis, with a lending capacity of €560 billion. It is the permanent successor of the EFSF, which had been hastily drawn up in reaction to the looming default of Greece in May 2010. Europe has recently been at the epicentre of financial tremors and has invented a new model of cooperation between crisis lenders, the troika (the European Union, the IMF and the European Central Bank [ECB]), which it tasked with handling joint program implementation, and which has increasingly come under pressure. Some of its travails and motions are reviewed in more detail in the fourth section, "Lessons from Greece: Troika Troubles," below.

Table 1 lists the largest RFAs. Not shown are a number of smaller arrangements, including the AMF, FLAR, SAARC and the Eurasian Fund for Stabilization and Development (EFSD), all of which are below US$10 billion in lending capacity. Importantly, many countries — for instance, Sub-Saharan African countries and most Latin American countries — are not members of any RFA. This illustrates that the global safety net remains both fragmented and very uneven in its coverage (Denbee, Jung and Paternò 2016; IMF 2016a).

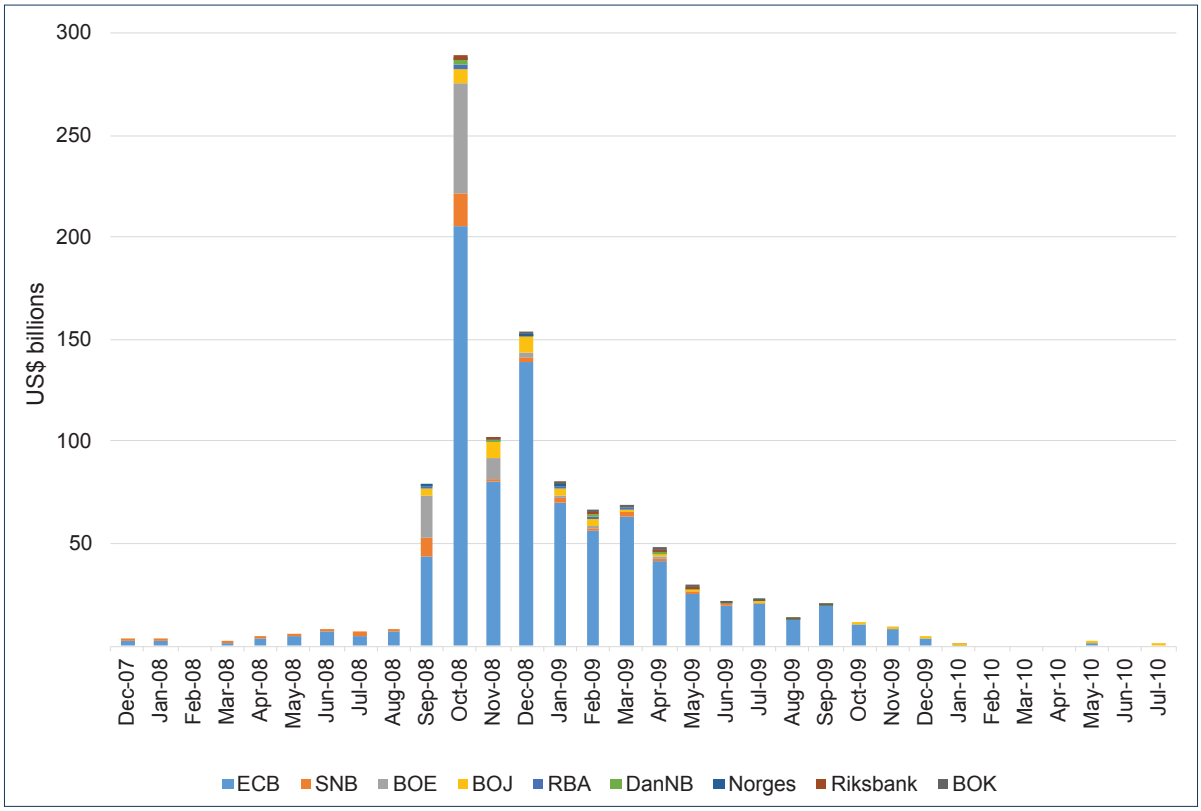
While the establishment of new RFAs was a very public and often controversial process, the emergence of central banks as major players in the global safety net has gone almost unnoticed. Yet, central bank currency swaps may have played a critical role in preventing further market dislocation during the 2007–2009 financial crisis. At its peak, the Fed expanded its balance sheet by almost US$600 billion by virtue of outstanding foreign currency swaps with various counterparts (see Figure 2).

Table 1: The Largest Players in the New International Financial Safety Net

Arrangements / Participants	Size in Billions	Number of Members	Financing
Unlimited standing bilateral swap lines: Canada, euro zone, Japan, Switzerland, United Kingdom, United States	Unlimited	6	Reserve currency central banks
Limited bilateral swap lines (current)	about US$550	about 40	Mainly People's Bank of China, some Bank of Japan (BoJ)
Crisis-related limited bilateral swap lines (expired)	NA	about 10	Mainly Fed, some ECB, BoJ,
IMF	477 special drawing rights (SDR) (quotas) 182 SDR (New Arrangements to Borrow) 280 SDR (bilateral)	189	Permanent quotas and temporary resources (New Arrangements to Borrow and bilateral)
ESM, euro zone	€560	19	Member capital + leverage
EU BoP Assistance Facility, non-euro zone	€50	9	Member capital + leverage
EU EFSM, European Union	€60	28	Member capital + leverage
CMIM/AMRO, ASEAN+3	US$240	14	Foreign Exchange Reserves (US dollars)
BRICS CRA, BRIC	US$100	5	Foreign Exchange Reserves

Source: Authors.

Figure 2: US Dollar Swap Amounts Extended by the US Federal Reserve, by Recipient Central Bank, 2007–2010



Data source: US Federal Reserve.
Note: Abbreviations left to right refer to the European Central Bank and the central banks of Switzerland, the United Kingdom, Japan, Australia, Denmark, Norway, Sweden and Korea.

The underlying problem was the increasing foreign currency exposure, in particular in US dollars, by banks operating internationally in the years preceding the crisis. Foreign currency exposures of European banks were estimated to exceed US$8 trillion in 2008 before the crisis, funded by money market funds (about US$1 trillion), central banks ($US500 billion) and the foreign exchange swap market (US$800 billion), as well as through interbank borrowing and other sources (Goldberg, Kennedy and Miu 2011). Banks usually lack access to a stable source of foreign currency funding and thus the maturity of their foreign currency liabilities is much shorter than that of (non-deposit) domestic liabilities. For example, about 55 percent of Swedish banks' US dollar funding from securities had an original time to maturity of less than one year, while this was the case for only about six percent of funding in domestic currency (Destais 2014). After the disorderly failure of Lehman Brothers, spreads on the interbank market spiked, and money market funds and the foreign currency swap market closed completely for some banks (Papadia 2013; Bayoumi, forthcoming 2017). Central banks around the world could not address the excess demand for US dollar funding in their banking systems since they could not provide sufficient liquidity in US dollars.

Since the US dollar was the dominant reserve and funding currency (see Prasad 2014 for an account), it fell to the Fed to act as a main global lender of last resort to the US dollar-based international banking system. Beginning in December 2007, the Fed established or re-established and quickly expanded a network of bilateral swap lines with other central banks (Obstfeld 2009; Obstfeld, Shambaugh and Taylor 2009;

Goldberg, Kennedy and Miu 2011; and Papadia 2013). By mid-2010, 14 central banks had used this facility, with the largest amounts drawn by the ECB (cumulatively about US$8 trillion), the Bank of England (about US$900 billion), the Swiss National Bank (US$465 billion) and the Bank of Japan ($US390 billion). Smaller amounts (below US$100 billion) were drawn by the Danmarks Nationalbank, the Sveriges Riksbank, the Reserve Bank of Australia, the Bank of Korea, Norges Bank and the Banco de Mexico. In addition, the Fed established swap lines with the Bank of Canada, the Reserve Bank of New Zealand, the Banco do Brasil and the Monetary Authority of Singapore that were not drawn on (Goldberg, Kennedy and Miu 2011).

Pressures in funding markets were not limited to the US dollar (Allen and Moessner 2010). In a number of Central and Eastern European countries, credit booms were funded with euros and, to a lesser extent, Swiss francs, including by cross-border banks (for example, Swedish banks) that did not have a deposit base in these currencies. In addition, the Japanese yen had been used as a funding currency in some East Asian countries, and by some US and UK banks. In reaction, the ECB entered into swap agreements with the Swedish and Danish central banks and eventually with the central banks of Hungary and Poland; the Swiss National Bank entered into swaps with Hungary and Poland; and the Bank of Japan entered into swaps with Korea (Allen and Moessner 2010; Vallé 2010; Papadia 2013; ECB 2014).

Currency swaps between central banks were not new: the Fed has a long history of such arrangements (see Box 1). But the volume of swap operations during 2008-2009, as well as the wide range of countries involved — including six emerging market countries — was unprecedented.

After the crisis, swap arrangements between reserve currency and emerging market central banks expired. To the extent that central banks currency swaps involving emerging market countries have continued to be a growth sector, this has been mainly due to the efforts of the People's Bank of China (PBoC), which entered into about 40 new bilateral arrangements (Destais 2014). However, these have a nature very different from the ones described previously: the main purpose of the PBoC swap lines is to facilitate trade, investment and the international use of the renminbi. China still has capital account restrictions and the renminbi has only a limited role in international financial transactions. Therefore, these swap arrangements do not mainly serve financial stability purposes.

By contrast, while some swap lines between reserve currencies also expired in 2009 or early 2010, they were quickly revived after the onset of the euro-zone crisis in May 2010. This led to the creation, in November 2011, of a network of unlimited albeit still temporary swap lines between the Bank of Canada, the Bank of England, the Bank of Japan, the ECB, the Federal Reserve and the Swiss National Bank. In 2013, the six central banks announced that the arrangement would remain in place indefinitely to "continue to serve as a prudent liquidity backstop" (ECB 2013).

As a result, extending liquidity to commercial banks in foreign jurisdictions — via their respective central banks — became one of the most important and arguably most underestimated innovations in the global financial crisis. While there is (intended) uncertainty about reserve currency central banks' willingness to provide extensive liquidity support to their emerging market counterparts in a new crisis, the network of unlimited mutual swap lines among the six financial centre central banks has been confirmed as a permanent — and powerful — new layer of the global financial safety net.

In sum, there has been an astonishing evolution of the global financial safety net in recent years. New powerful regional players have emerged, in particular in Europe and Asia, and major reserve currency central banks agreed to make swap arrangements between their currencies unlimited and permanent. For both reasons, the formal limits of potential international crisis lending now extend far beyond what would have been deemed possible before the global financial crisis.

At the same time, there was no grand design behind this evolution, nor a uniform purpose for the creation of new institutions. For this reason, the network remains uneven. Major regions of the world are not covered by any regional arrangement, and central bank swap lines between reserve currencies and emerging market countries were allowed to

Box 1: Historical Background on US Dollar Swap Lines

US dollar currency swap lines have a long history, although their initial motivation was almost the opposite of that of the 2007–2009 vintage — namely, to help the Federal Reserve fund dollar liabilities within the constraints imposed by the Bretton Woods system. Michael D. Bordo, Owen F. Humpage and Anna J. Schwartz (2014) trace their origin back to the 1960s. At the time, the United States was running a sizable balance of payments deficit and dollar liabilities to foreigners were accumulating rapidly. They eventually exceeded the US gold stock, which meant that the United States would not be able to fulfill its Bretton Woods commitment to exchange dollars for gold at the official price. To fend off speculation of dollar devaluation and forestall gold outflows, in 1962 the Fed created a network of swap lines with Austria, Belgium, Canada, England, France, Germany, Italy, the Netherlands, Switzerland and the Bank for International Settlements (BIS).

Interestingly, the Federal Open Market Committee (FOMC) at the time rejected a request for swaps with Ireland and Venezuela, the former because it was too small a financial centre and the latter because it was not compliant with IMF Articles of Agreement (particularly article VIII on currency convertibility). The only emerging market country with which the Fed had a long-standing swap arrangement was Mexico. During the 1980s Mexico frequently drew on this swap line of US$700 million and during the height of the Mexican crisis the Fed offered a special additional line of US$325 million. The Mexican swap arrangement was repeatedly debated in the FOMC, with critics complaining about the possible quasi-fiscal nature of such intervention amid worries about the Fed's independence.

The original network of bilateral swap lines with developed markets survived the breakdown of the Bretton Woods system. In 1973 it was augmented by risk-sharing arrangements between the Fed and Belgium, France, Germany, the Netherlands and Switzerland. The Fed continued to use swaps chiefly to finance intervention in the foreign exchange market against the Deutschmark. Risk-sharing agreements meant that the Bundesbank shared equally in the losses of such interventions. Increasingly, the Bundesbank commented on the appropriateness of US monetary policy and demanded that the Fed should quickly finance its repayments under the swap line, for example, by drawing on the IMF. To diminish its dependence on the Bundesbank, at the end of the 1970s the Fed began to accumulate foreign exchange reserves.

The 2007–2009 mutation of foreign currency swap lines into a tool to stabilize the international financial system and substitute for a global lender of last resort was foreshadowed in the 1990s when the Fed board and staff recommended that swap lines might "provide a mechanism whereby the Fed could provide dollar liquidity…to foreign monetary authorities, who may in turn need to provide dollar liquidity to their banks in the event that dollar funding of their banks is suddenly (and expectantly) withdrawn" (Fisher, Kohn and Truman 1996).

expire. Most importantly perhaps, the policies and governance of the new multilayer order is ad hoc, and still evolving. As the next section argues, this could have costs in distorting domestic policy incentives, in particular in countries with weak political systems and institutions.

Reconciling International Crisis Lending with Good Incentives

Incentive Effects of International Rescues: Problems and Remedies

The stated purpose of international official lending arrangements is to minimize disruptions that arise in a balance of payments crisis or through an attempt to stave off an imminent crisis. According to article I(v) of the IMF's Articles of Agreement, for example, one of the purposes of the IMF is to make "the general resources of the Fund temporarily available to [members] under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity."[6] Hence, in effect, the IMF's lending capacity was created to offer countries a "third way" to address unsustainable current account deficits resulting from external shocks or domestic policies: one that required neither drastic curtailing of domestic demand (which would have been destructive of "national prosperity") nor measures such as protectionism, payments restrictions or a sharp depreciation of the exchange rate (which would reduce imports at the expense of other countries and "international prosperity").

International official lending arrangements are therefore concerned mostly with mitigating and correcting a balance of payments crisis after it has arisen — or in economist parlance, with welfare "*ex post*." As is well known, however, policies that achieve welfare *ex post* may not be optimal overall ("*ex ante*"), because they may affect the propensity of the crisis developing in the first place. For example, the smaller the cost of a crisis, the less a government may be willing to invest to prevent a crisis. This "moral hazard problem" does not necessarily imply that international rescues are a bad idea, but it may have implications for how international lending arrangements should be designed.

At the outset, it is important to underline that a rise in the frequency of bad outcomes triggered by a policy or device that reduces the cost of those outcomes is *not* necessarily inefficient (that is, welfare-reducing) *ex ante* (Mussa et al. 2000; Jeanne and Zettelmeyer 2005). For example, consider the installation of guard rail systems on mountain roads. These greatly reduce the costs of accidents, with cars less likely to careen over the edge. As a result, drivers may put less effort into "crisis prevention" on roads with guard rails, that is, they might drive faster, increasing the likelihood of accidents. But the end result — faster driving, with more frequent but less deadly accidents — will generally still be socially better than the situation prevailing before the installation of guard rails, when driving was slower and accidents less frequent but deadlier. Indeed, the express purpose of installing guard rails may be to allow driving at higher speeds.

The conclusion that guard rail systems are welfare improving could be reversed, however, in the presence of "innocent bystanders" who are not protected by the guard rails. Faced with the question of whether to install guard rails on a popular mountain road teeming with hikers and cyclists, the traffic authorities may well decide that guard rails should *not* be installed — unless, of course, they find other ways of reliably controlling car speed, for example, by imposing a speed limit and fining drivers who exceed it.

This example is meant to illustrate a general point. A device that mitigates a bad outcome after it has arisen will always be welfare improving overall (that is, *ex ante*) if the individuals or groups that might change their behaviour as a result of a device internalize the welfare of other parties. When this is not the case, deciding whether the device is a good idea becomes more complicated. It will depend on the extent to which the safety net

6 See www.imf.org/external/pubs/ft/aa/.

induces riskier behaviour by the protected party, whether this riskier behaviour causes unprotected parties to get hurt more, and whether there are policies that can ameliorate this trade-off.

How do these points translate into the context of international crisis lending? At the time when the IMF's Articles of Agreement were drafted — and for several decades thereafter — most countries did not have access to international capital markets. In this world of the 1950s and 1960s, the parties protected by the financial safety net were primarily the countries experiencing a balance of payments crisis. In addition, by lessening the chance that these countries would react to crises with "measures destructive of international prosperity," the safety net also benefited a class of innocent bystanders, namely other countries with trade ties to the crisis country. Innocent bystanders that stood to *lose* from the IMF's crisis lending during this era were mainly the community of IMF shareholder countries, which were exposed to credit risk.

This created the possibility of moral hazard at the expense of the international taxpayer. To deal with this problem — that is, to maximize the chances of getting repaid — starting in the 1950s the IMF began to require fiscal adjustment and other policy measures as a condition for lending. These policies appear to have worked in the sense that defaults to the IMF were few and far between. Hence, IMF-induced moral hazard — although a theoretical possibility — cannot have been a major problem in this period.

Beginning in the early 1970s, however, international finance began to experience a radical change. International capital flows substantially increased. Countries all over the world — initially governments, and increasingly the private sector — began to borrow from banks in advanced countries and, starting in the early 1990s, from dispersed bondholders. This had profound consequences for the role of international crisis lending and the channels through which it can affect welfare.

First, it created a new type of crises resulting from the sudden reversal of capital inflows. Crises of this type had been well-known in the nineteenth and early twentieth century, but disappeared after the closing of capital accounts in the 1930s. A special case of these crises, which received considerable attention, are financial panics, also known as rollover crises or pure liquidity crises (Sachs 1984). In a crisis of this type, a borrower loses access to capital markets not because it is insolvent, but because lenders *expect* that the borrower will lose access. Given this expectation, it makes sense for each lender to refuse lending, and the crisis becomes self-fulfilling. Pure liquidity crises can be stopped in their tracks if there is a "lender of last resort" that will lend to solvent countries when they are in danger of losing market access. A lender, such as the IMF, who assumes this role cannot be a source of moral hazard in these circumstances, because it will get its money back with certainty (by assumption, the country is solvent) and no party incurs any losses. The lender of last resort merely removes an (inefficient) coordination failure among creditors.

Second, financial integration changed the potential beneficiaries and losers of financial crises and rescues and the extent to which they stood to gain or lose. First, it created a new class of beneficiaries of IMF crisis lending, namely international creditors. Second, by creating new channels of financial contagion, it made IMF lending less effective in reducing the spillovers of crises across countries. While preventing contagion had previously been a matter of preventing (excessive) exchange rate depreciation and protectionist trade measures, crises now had spillovers via financial centres and confidence effects, which were much harder to contain (Weder and Van Rijckeghem 2003). Third, international capital flows greatly increased both the potential costs of crises and their within-country distributional effects. Particularly in emerging market countries, borrowing from external private sources often benefited a small elite, whereas the costs of the crisis (including the need to repay a crisis lender such as the IMF) were borne by the general population. Fourth, beginning in the mid-1990s, financial integration led to much larger volumes of IMF crisis lending — sometimes in conjunction with crisis lending from bilateral official sources — and hence higher risk exposure of the international taxpayer backing the IMF.

Thus, international financial integration increased both the potential for the international financial safety net to do good and the risk that it might do harm. On the one hand,

it created a new rationale for an international lender of last resort to deal with liquidity crises (Fischer 1999). On the other, it raised the potential for moral hazard at the expense of the international taxpayer in the event of large-scale crisis lending to countries with solvency problems (Barro 1998). In addition, financial integration gave rise to two new potential sources of moral hazard (Jeanne, Ostry and Zettelmeyer 2008): moral hazard at the expense of other countries, if the safety net both reduces crisis prevention efforts and does not fully protect other countries from contagion; and moral hazard at the expense of the *domestic* taxpayer that ultimately needs to repay the international lender. The latter could become an issue particularly if the crisis was preceded by capital inflows from which the average citizen did not benefit.

Is Moral Hazard Empirically Relevant?

Based on the discussion so far, should one worry about moral hazard associated with international financial safety nets? To answer the question, it is useful to start with two comparatively uncontroversial facts.

First, pure international liquidity crises of the type that would preclude any moral hazard are virtually non-existent — at least within the set of crises that involve actual lending by the IMF or other financing arrangements.[7] We know this for two reasons. First, if the IMF's role were solely to remedy a lack of liquidity, countries should regain market access immediately after IMF money has been committed. This never happens. Even after large-scale lending, it always takes time — often several years — for international capital flows to return. Second, in a pure liquidity crisis, no conditionality would be needed. However, the IMF has always attached great importance to conditionality, usually taking the view that larger lending volumes require more extensive conditionality rather than less. This view only makes sense if the IMF takes credit risk, and the presence of credit risk is inconsistent with pure liquidity crises.

This implies that moral hazard is always a possibility in IMF lending, because all IMF lending involves a mix between a liquidity and solvency problem. It is not correct to say that the IMF lends to solvent but illiquid countries. Rather, the IMF lends to *conditionally* solvent countries — solvent conditional on undertaking certain policy actions, such as fiscal adjustment or reforms that raise potential growth. The role of the IMF is to ensure that the policy actions happen (for example, by acting as a commitment device, see Jeanne, Ostry and Zettelmeyer 2008). In countries that normally have access to capital markets, the IMF's primary role after a crisis is that of a provider of conditionality. IMF financing can be an important complement to conditionality because it strengthens the signal to international capital markets (as the IMF is putting its money where its mouth is); and foreign creditors may want to hold back for a while to see if conditionality works. In the interim, the IMF needs to provide the financing. If conditionality is not successful, the IMF's money could be at risk.

Second, notwithstanding this risk, moral hazard at the expense of the international taxpayer turns out not to have been a big problem in practice in the context of IMF crisis lending, even in the era of international capital flows. This can be inferred from the fact that the IMF was almost always repaid in its lending to middle-income and advanced countries, and that the interest charged by the IMF has been broadly appropriate to the risk that it has taken (Jeanne and Zettelmeyer 2001). This may not necessarily be true, of course, for other official crisis lenders such as RFAs (see next section).

It follows that one should worry about moral hazard associated with IMF lending if and only if one believes that moral hazard of the second or third variety — at the expense of domestic taxpayers or other countries — could be a serious problem. These brands of moral hazard could exist even with a perfect repayment record to the international crisis lender. The question is whether they are empirically relevant. For this to be the case, two conditions must hold: domestic policy makers must not internalize (or sufficiently internalize) the welfare of innocent bystanders (citizens or countries) hurt by crises and adjustment; and the presence of international financial safety nets must create incentives for policy makers to be less careful about avoiding crises.

7 It is impossible to know how many liquidity crises were prevented merely by virtue of the IMF's existence.

The relevance of the first condition is rarely disputed: crises have international spillovers, and domestic policy failures abound. The second condition, however, is controversial, particularly among practitioners of financial crisis management, who often argue that moral hazard fears are overblown (see, for example, Geithner 2014). The argument is typically that whatever difference the IMF or other crisis lenders might make to how a government gets through a crisis, this will be small potatoes, at least *ex ante,* compared to other powerful forces — electoral concerns, pressures from interest groups or simply private interests — that guide the actions of domestic policy makers. This could be because the crises have high costs, even in the presence of a safety net, or simply because policy makers heavily discount crisis costs, compared to everything else that is on their minds.

These assertions might well be true in many cases. However, they do not invalidate the argument that a blanket financial safety net could have a detrimental impact on welfare, for two reasons.

First, a far more relevant channel through which the safety net can impact policies is through the financial conditions that it creates *ex ante*. There is plenty of both anecdotal and rigorous empirical evidence that suggests that policy mistakes happen the most, and reforms the least, at times of financial *largesse*, whether this results from foreign aid (Casella and Eichengreen 1996; Drazen and Easterly 2001), or capital inflows and easy borrowing conditions (Vamvakidis 2007; Fernández-Villaverde, Garicano and Santos 2013). Massive, cheap capital inflows to Latin America in the 1970s allowed unsustainable public borrowing and prolonged poor structural policies. Capital inflows to Southeast Asian countries and Eastern Europe in the 1990s did a lot of good to accelerate development in some countries, but also fuelled oligarchic and "crony capitalist" governments in others, with large costs for their general populations when the crisis struck. Easy borrowing conditions related to the adoption of the euro fuelled an "infernal triangle of local governments, developers, and *Cajas*" in Spain in the 2000s (Fernández-Villaverde, Garicano and Santos 2013), and created similar problems in Ireland and other European "peripheral" countries.

Several mechanisms could explain the link between cheap money and poor policies. Popular among economists are variants of Alberto Alesina and Allan Drazen's (1991) war of attrition story: debt buys time that can be used to postpone reforms. Another class of explanations are "institutional Dutch disease" stories transplanted from the natural resources literature: booms in the non-tradables sector create corruption opportunities and reduce incentives to worry about growth-friendly policies, since the latter tend to boost sectors in which margins tend to be thinner and rents more scarce (Sonin 2003). A further very general argument is that during a financial boom period, accountability suffers because the consequences of mistakes are not directly observable. Hence, weakening market discipline can lead to weakening political discipline (Fernández-Villaverde, Garicano and Santos 2013).

All of these stories are of course relevant to the international financial safety nets only to the extent that the latter have a tangible impact on borrowing conditions. But while many aspects of the impact of IMF lending on its borrowers are controversial, this particular impact is not: IMF lending (or the expectation of it) reduces borrowing costs (Dell'Ariccia, Schnabel and Zettelmeyer 2006; Eichengreen, Kletzer and Mody 2006; Mody and Saravia 2006: see also Jorra 2012). Indeed, reducing borrowing costs and improving the international capital market access of developing countries is one of the intended effects of IMF programs. It is also usually welfare enhancing, since many developing countries receive too little, rather than too much, international capital. However, this might turn into the opposite if global safety nets allow generous access to finance by countries with weak policies and institutions.

A further point worth emphasizing is that reducing financial access to countries with poor policies might be welfare improving even if this has no impact whatsoever on policies. Even if the threat of losing access to the punchbowl is ineffective in inducing improved behaviour, at some point it makes sense to simply take away the punchbowl.[8] Fewer capital inflows and

8 Strictly speaking, this is not about reducing moral hazard anymore but about reducing the costs of irresponsible behaviour, regardless of why this arises.

quicker loss of market access will imply smaller imbalances, smaller capital account reversals and less debt that has to be repaid, in one way or the other, by the average taxpayer or other segments of the population that stand to suffer from austerity when it finally comes.

Remedies against Moral Hazard

Assuming that safety nets can be a problem in the presence of weak political institutions and/or contagion, what are potential remedies? Banning or limiting official crisis lending across the board would clearly not be a good idea. Crises happen even with solid institutions and policies, and their impact on innocent bystanders can be disastrous. Furthermore, safety nets do not always undercut policy incentives: indeed, they can even strengthen incentives if they make it more likely that crisis prevention policies (or *ex ante* policies that lower the costs of crises) will actually work (Corsetti, Guimarães and Roubini 2006). Hence, the answer is not to dispense with crisis lending altogether but rather to design it or complement it in ways that make it incentives-friendly.

A literature and policy debate after the Asian financial crisis has focused mainly on two ideas.

First, moral hazard can be reduced, and possibly eliminated, by subjecting official crisis lending to conditionality *ex ante* — that is, reducing crisis lending to countries that undertake bad policies in normal times. This differs from the standard approach, which is to make official lending conditional on policies *ex post* — that is, after the event that requires crisis lending has already happened. The purpose of standard (*ex post*) conditionality is to ensure that the borrower will regain solvency and allow the official lender to be repaid. However, conditionality of this kind at best eliminates only one type of moral hazard, namely, moral hazard at the expense of the international taxpayer (assuming conditionality works and countries are not overly indebted). It does little to address moral hazard at the expense of third countries and/or domestic taxpayers. By the time that *ex post* conditionality is applied, the costs of the crisis on third countries, as well as on possibly innocent bystanders within the country, may already have been sunk. Furthermore, restoring the solvency of the borrowing country may involve policies with strongly redistributive consequences. To protect the international taxpayer, institutions such as the IMF — even if they try very hard to soften the social impact of adjustment — may have no choice but to require large-scale fiscal adjustment that hurts the domestic taxpayer.

A solution to this problem is to move away from lending policies that focus exclusively on conditionality *ex post* to policies that combine some conditionality *ex post* with conditionality (or "selectivity") *ex ante* (Jeanne and Zettelmeyer 2001; Jeanne, Ostry and Zettelmeyer 2008; Truman 2010). To put it technically, the moral hazard problem can, in principle, be solved by conditioning official assistance on crisis prevention policies that maximize social welfare, given the expectation that official assistance will be forthcoming if a crisis nonetheless were to occur. To put it less technically, countries that fail to take appropriate pre-crisis risk mitigation policies in the interests of the general population should have no recourse, or at least less recourse, to official crisis lending.

How far the policy should go in reducing support to countries with poor pre-crisis policies depends on the effectiveness of the lending policy in encouraging good domestic policies *ex ante* and the social costs of reducing support *ex post*. For example, if *ex ante* conditionality can be assumed to lead to the implementation of the domestic policies on which support is conditioned, there is no trade-off between incentives and insurance, since countries would receive full support in a crisis. Hence, *ex ante* conditionality can afford to be "strict" (no support for countries that fail to meet the conditions). If, however, *ex ante* conditionality is only partly effective — or indeed ineffective — in influencing policy-maker behaviour, then there is a trade-off, which means that some support should be extended even to countries that implemented poor policies, albeit in smaller amounts and perhaps with tougher *ex post* conditions. For example, the IMF could limit large-scale lending (exceptional access) to countries with very sound crisis prevention policies, while most other countries would have standard access, except for countries with very poor governance and pre-crisis policies, which would only have minimal access (Ostry and Zettelmeyer 2005). As argued above, a policy of this type would be optimal even in the extreme case in

which governments do not respond at all to the lending policies, because it would reduce the macroeconomic imbalances that these countries would be able to accumulate.

A second related — but conceptually distinct — approach is to seek alternative ways of resolving crises that do not require large-scale official lending or offset some of the incentives effects of such lending. Chief among these are legal frameworks that facilitate debt restructuring — corporate but also sovereign. These include domestic statutes (such as domestic bankruptcy laws, but also legislation that limits the power of creditors to attach sovereign assets in a particular jurisdiction), international treaties, and contractual provisions in lending contracts (see Eichengreen and Portes 1995; Sachs 1995; Rogoff and Zettelmeyer 2002; Committee on International Economic Policy and Reform [CIEPR] 2013).

As a crisis resolution instrument, sovereign debt restructuring differs from official crisis lending in three main ways. First, it is not just a mechanism for financing but can address the underlying solvency problem in situations where this cannot be remedied by the *ex post* conditionality accompanying crisis lending. Second, it has very different distributional consequences, as losses are borne by foreign and domestic creditors rather than domestic taxpayers. Third, it may involve "collateral damage" in the form of a banking crisis, capital flight and reputational costs, which do not arise in the presence of official lending. This is one of the reasons why debtor governments are typically reluctant to resort to debt restructuring in a crisis, and why a successful debt restructuring framework needs to encompass additional tools, including crisis lending to restructuring governments *ex post* and regulating sovereign exposures of banks *ex ante*.

The two approaches to limiting moral hazard arising from large-scale official lending are not mutually exclusive. Indeed, they are complementary in the sense that it is difficult to envisage one without the other. Taking a more selective approach to large-scale crisis lending may not be feasible and credible unless there is a viable crisis resolution approach for the countries that are denied large-scale official assistance. Conversely, debtor country governments — in particular governments that weight reputational concerns and short-term losses of asset holders above the medium-term costs borne by the average taxpayer — may only contemplate a debt restructuring if large-scale official crisis lending is not on the table.

IMF Policies to Mitigate Moral Hazard, 1999–2016

Selectivity in Large-scale Crisis Lending

Following the 1997-1998 Asian financial crisis and again after the 2007-2008 international financial crisis, the IMF undertook a number of reforms to its lending instruments and policies that placed a greater emphasis on *ex ante* conditionality. Two strands can be distinguished: lending facilities allowing relatively quick and high access to IMF resources for pre-qualified countries; and policies placing restrictions on high ("exceptional") access, regardless of the lending facility providing the conduit for such access.

Credit Lines with Pre-qualification

Beginning with the 1999 Contingent Credit Line (CCL) and culminating in the 2009 FCL, the IMF introduced a number of lending facilities that allowed countries to pre-qualify for large-scale IMF loans by meeting a number of criteria. The CCL was pitched to potential "innocent bystanders" of capital account crises in emerging markets: to qualify, a country "must have been pursuing policies that were considered unlikely to bring about a need for IMF financing — except because of contagion," and show a "positive assessment of policies and progress toward adherence to internationally accepted standards, [and] a satisfactory macroeconomic and financial program and a commitment to adjust policies" (IMF 2004a). For the 2009 FCL, qualification criteria were spelled out in more detail and included: "a sustainable external position; a capital account position dominated by private flows; a track record of steady sovereign access to international capital markets at favorable terms; a reserve position that is relatively comfortable…; sound public finances, including a sustainable public debt position; low and stable inflation…; the absence of bank solvency problems…; effective financial sector supervision; and data transparency and integrity" (IMF 2016d).

Other important differences between the CCL and the FCL included the fact that under the CCL, *ex post* conditionality continued to apply (only the first drawing was made somewhat automatic) while this was abolished for the FCL, and that the CCL had pre-specified access limits whereas the FCL does not. In the event, no country applied for the CCL, and it was allowed to expire in late 2003. In contrast, there was more (if still limited) interest in the FCL, for which three countries qualified (Colombia, Mexico and Poland), although none have drawn on it so far.

On the surface, the list of conditions for access to the FCL looks a lot like the *ex ante* conditionality that one would want to impose to prevent official crisis lending from leading to moral hazard of any kind: countries with a sustainable external position, sound public finances, effective financial supervision and integrity and transparency in data publication are very likely to be solvent, very unlikely to become a source of crisis and contagion, and unlikely to accumulate liabilities that in the event of a crisis would trigger large-scale redistribution at the expense of the domestic taxpayer. However, the FCL was introduced *at the margin*, on top of existing facilities, which allow potentially very large access to Fund resources without any preconditions save the "exceptional access criteria" discussed below. To implement the main recommendation of the literature on *ex ante* conditionality, the FCL and other facilities requiring pre-qualification would have had to become the *only* channels of IMF lending or at least of large-scale crisis lending. This was never contemplated. Hence, while the FCL and similar facilities may improve incentives — by linking good policies to easier access to IMF crisis lending — they do not sever the link between poor policies and access to large-scale bailouts.

Exceptional Access Criteria

Unlike the CCL and FCL, criteria restricting borrower access to large-scale IMF support were motivated primarily by the desire to limit risk to IMF resources and prevent (or reduce) moral hazard. While these criteria do not explicitly refer to the quality of pre-crisis policies, they seek to limit crisis lending in situations that are likely to have been the result of weak pre-crisis policies and institutions, namely, deep solvency crises that may not be remedied in the context of standard policy adjustment. These are precisely the settings in which crisis lending is likely to have large distributional effects — be it because the loan cannot be repaid, or because it can only be repaid after exceptionally harsh adjustment efforts — and hence lead to moral hazard.

The IMF's exceptional access policy was created in 2002-2003 and has since undergone two main stages of transformation.[9] The original policy, approved by the board in late February of 2003 based on IMF staff papers dated July 29, 2002, and January 14, 2003, envisaged four criteria that all needed to be met for access beyond the normal limits. First, the member had to be experiencing exceptional balance of payments pressures that could not be met within the normal limits. Second, the member's debt had to be sustainable with high probability. Third, the member needed to have good prospects of regaining market access, so that the IMF financing would (merely) provide a bridge. Fourth, the policy program of the member country had to provide a reasonably strong prospect of success, based not only on the member's adjustment plans but also on its institutional and political capacity to deliver that adjustment.

In late March of 2010, in conjunction with board approval of exceptional access by Greece, the criteria were amended to allow exceptional access even to members whose debt was not necessarily sustainable "with high probability" (taken to imply that merely the standard debt sustainability threshold, applicable to all Fund programs, had to be met), provided that withholding exceptional access to these members carried a "high risk of international systemic spillover effects" (IMF 2010). This became known as the "systemic exemption."

Finally, under the current exceptional access policy — approved in January of 2016 together with other IMF reforms in the context

9 See Schadler (2016) for details. The policy was preceded by the Prague Framework for Private Sector Involvement endorsed by shareholders at the IMF's 2000 Annual Meeting. This followed several years of discussion on the creation of a formal framework regulating IMF lending in capital account crises triggered by IMF large-scale lending in the late 1990s, and, in particular, its December 1997 loan to Korea, which went along with the creation of the Supplemental Reserve Facility for capital account crises. The latter did not have any pre-set access limit.

of the IMF 14th General Quota increase, and developed in a set of papers written between 2013 and 2015 — the systemic exemption was again removed, and replaced by the following language: "Where the member's debt is considered sustainable but not with high probability, exceptional access would be justified if financing provided from sources other than the Fund, although it may not restore sustainability with high probability, improves debt sustainability and sufficiently enhances the safeguards for Fund resources. For purposes of this criterion, financing provided from sources other than the Fund may include, *inter alia*, financing obtained through any intended debt restructuring" (IMF 2015a).

Table 2 summarizes the evolution of the IMF's exceptional access policy. Two facts are especially noteworthy.

First, beginning in 2010, the creation of the category "sustainable, but not with high probability" when assessing a country's debt. The original motivation for this was to create a grey area, which, in conjunction with the "systemic exemption," would allow the IMF to lend to Greece in spite of IMF staff's doubts about Greece's debt sustainability (see next section, "Central Bank Swap Lines and Policy Incentives"). However, the category continues to play a key role even after the removal of the systemic exemption following the most recent reform of the framework. This acknowledges the fact that in many potential access cases, debt sustainability may be uncertain, while it may at the same time not be credible (that is, politically feasible) to always refuse exceptional access in such cases, as the 2003 policy stipulated. Acknowledging "grey zones" and outlining a procedure on how to deal with them can increase the credibility of the policy as a whole.

At the same time, if anything, acknowledging such a grey area places even higher demands on debt sustainability analysis, since this is now asked to distinguish between three settings — safe, unsafe and uncertain — rather than just to divide the world between the safe (a rare occurrence in a capital account crisis) and the unsafe. In recognition of this, the Fund put considerable effort into developing a better set of tools to assess debt sustainability, publishing separate frameworks for countries with market access and for low-income countries in 2013 (IMF 2013a; 2013b).[10] As a result, the debt sustainability verdict of the IMF has become more transparent, and the amount of discretion exercised by the Fund in reaching its verdict was significantly reduced. This should make the policy more effective as a commitment device both vis-à-vis the IMF staff and vis-à-vis the IMF's shareholders.

Second, there was a major shift in the criteria for allowing exceptional access even when debt is not deemed sustainable

Table 2: Evolution of the IMF's Framework for Exceptional Access

Extent of debt problem	Exceptional Access?		
	2003 policy	2010 policy	2016 policy
Debt deemed sustainable with high probability	Yes	Yes	Yes
Debt deemed sustainable, but not with high probability	No, except possibly in conjunction with a debt restructuring	No, except in cases or high risk of international systemic spillover effects OR possibly in conjunction with a debt restructuring	No, unless non-IMF creditor exposure is maintained through a maturity extension of private claims and/or via additional official financing
Debt deemed unsustainable		No, except possibly in conjunction with a debt restructuring	No, except in conjunction with a "definitive" debt restructuring and/or sufficiently concessional official financing

Data sources: For the 2003 policy, IMF (2002a; 2003a; 2003e; and 2004b). For the 2010 policy, IMF (2010). For the 2016 policy, IMF (2014a; 2015a; 2016b; and 2016c). See also Schadler (2016).

10 The new framework uses a signal approach, which maps indicators of unsustainable debt into a probability of debt sustainability. For instance, if the current or stressed level debt-to-GDP ratio is higher than 85 percent in a country with market access then it would qualify as under risk of debt distress (see Schumacher and Weder di Mauro 2016). The indicators, in turn, are based on publicly available data, making it harder to "fudge" the sustainability analysis.

with high probability. According to the 2003 policy, in these circumstances restructuring the debt was a necessary but not sufficient condition for exceptional access, as the staff and a majority of the board were of the view that even when a debt restructuring could be expected to restore debt sustainability with high probability, the remaining exceptional access policy criteria (such as good prospects of regaining market access) were unlikely to hold.[11] The possibility of a "systemic exemption" was discussed at length during 2002-2003, but rejected on the grounds that it would create an unequal playing field between big and small countries without being very effective in reducing contagion. The 2010 policy, in contrast, adopted the "systemic exception" — provided that the country's debt was found to be in the grey zone, in which its debt is considered sustainable but not with high probability. Finally, the 2016 policy again ditched the systemic exemption — with rather similar arguments as the 2003 paper — and replaced it with the requirement that the country obtain "new financing from sources other than the Fund."

The papers underlying the 2016 policy explain that this requirement refers mainly to a soft restructuring of debts held by private creditors, namely a maturity extension ("reprofiling") that maintains the option of a "more definitive debt restructuring" in the future, should the debt not turn out to be sustainable after all. In effect, this revives and formalizes a policy that the IMF had used vis-à-vis bank creditors during the debt crisis of the 1980s and again during the 1997-1998 Korea crisis.[12] However, the papers also point to a possible alternative, namely, that "even in the absence of a debt restructuring, sufficient private *or non-Fund official sector exposure* is maintained during the period of the program to mitigate the type of risks being addressed" (IMF 2015a, emphasis added). In particular, financing from non-IMF official sources could substitute for a reprofiling or even a more definitive restructuring of privately held debts "in very rare cases when the official sector may wish to avoid any form of debt restructuring because of contagion concerns" (ibid.).

In summary, the IMF has gone from a policy that (on paper) provided a strong commitment against large-scale IMF bailouts in cases of doubtful debt sustainability, to one that explicitly allowed such bailouts in the presence of "systemic" contagion fears, and finally to one that again bars IMF bailouts unless *either* accompanied by a private sector bail-in (in the form of an extension of existing exposures) *or* a non-IMF official sector bailout with similar effects on financing and debt sustainability. Under the new policy, the IMF will not bail out countries with doubtful debt sustainability unless another party relieves it of the associated risk — be it private sector creditors or the non-IMF official sector. As the IMF paper admits, the latter could of course be a source of moral hazard, albeit as a result of non-IMF official financing, rather than IMF financing: "Though it, too, would create moral hazard, this approach would be more effective than the systemic exemption in helping members address their problems, mitigating contagion, and safeguarding Fund resources" (IMF 2015a, 3).

Improving the Legal Framework for Orderly Sovereign Debt Restructuring

At about the same time as it began developing its exceptional access policy, the IMF staff and management undertook a major push to develop a statutory, treaty-based international framework for orderly debt restructuring, known as the Sovereign Debt Restructuring Mechanism (see Krueger 2001; IMF 2003b; and Hagan 2005). As it became clear that this effort would have to be abandoned due to opposition from the United States and major emerging market issuers, the IMF began to promote a contractual alternative, namely CACs in sovereign bond contracts, and, specifically, majority restructuring provisions that allow sovereign bonds to be restructured against the opposition of a minority of creditors (IMF 2002b; 2002c; 2003c). In March 2003, Mexico became the first

11 "Directors also had an initial exchange of views about the implementation of the Fund's access policy in situations where a debt restructuring is needed. They stressed that… the substantive criteria for exceptional access in capital account crises will generally not be met. Directors generally agreed that access in such cases would normally be expected to be within the access limits, although there could be rare circumstances warranting exceptional access" (IMF 2003e).

12 See Sturzenegger and Zettelmeyer (2007, chapter 1) and Roubini and Setser (2004). One important difference is that the policy now applies to any private creditors, including dispersed bondholders, for whom a maturity extension is generally more difficult to coordinate. This is one of the reasons why collective action clauses (CACs) in bond contracts have received new attention (see next section).

country to issue a New York law bond that included a provision allowing the bond to be restructured with the agreement of 75 percent of the outstanding principal (prior to this, only English law bonds had contained provisions of this type, while New York law bonds required unanimous agreement of all bondholders). Since then, majority restructuring provisions have become standard in emerging market sovereign bonds.

At the same time, it was clear from the outset that bond-by-bond restructuring provisions would not be very effective in helping to achieve a deep debt restructuring. As IMF staff argued in a September 2003 paper, restructuring provisions suffered from the problem that in a debt crisis, when distressed debt was cheap, creditors opposing a restructuring could easily buy blocking minorities of individual bond issues (IMF 2003d). This problem did in fact arise in several debt restructurings in the decade that followed, in particular the famous Greek 2012 restructuring (Zettelmeyer, Trebesch and Gulati 2013). Out of 35 English law bonds, 16 could not be restructured because the requisite threshold of bondholder support was not reached.

To address this problem, a legal device had to be found that allowed majority decisions on debt restructuring to be taken *across* all bonds, i.e., in the aggregate, rather than just for each bond individually. On August 29, 2014, the International Capital Market Association (ICMA) released a new "model CAC," drafted by a small expert group convened by the US Treasury, that would allow all affected bondholders to be treated like a single class of voters ("one-limb aggregation," see Gelpern 2014). Prior to this, few emerging market countries had included clauses taking the voting behaviour in other bond series into account in sovereign bond contracts. Even when they were included, they envisaged a "two-limb" procedure, which continued to require a qualified majority at the level of the individual bond, albeit at a somewhat lower threshold (for example, two-thirds rather than 75 percent) if the restructuring was supported by 75 percent of the outstanding face value across all bonds. In contrast, the one-limb procedure in effect mimicked successful statutory restructuring frameworks such as the procedure enacted by the Greek Parliament to restructure Greek government bonds issued under domestic law (Zettelmeyer, Trebesch and Gulati 2013). This enhanced CAC was endorsed by the IMF in a September 2014 paper. In the same paper, the IMF also endorsed a new formulation of the "*pari passu*" clause proposed by ICMA, which was written to forestall judicial interpretation of the standard *pari passu* language, which — following court decisions related to Argentina's 2001 default and 2005 restructuring — threatened to become an obstacle to future restructurings of emerging market bonds.[13]

The IMF's promotion of one-limb aggregation appears to have had a significant effect on emerging market issuers. According to (IMF 2015b), in the 12 months following the IMF's recommendation, 85 percent of new international sovereign bonds issued under New York and English law included the "enhanced CAC" proposed by ICMA, as well as the modified *pari passu* clause (IMF 2015b).[14] With the exception of the United Kingdom, however, which included enhanced CACs in its US dollar-denominated bonds issued by the Bank of England, advanced countries have so far not opted for CACs allowing single-limb aggregation. In the case of the euro area, adoption of a single-limb restructuring provision is made more difficult by the fact that the ESM treaty requires a specific CAC in euro-area issues involving two-limb aggregation agreed by the Economic and Financial Committee of the European Union in 2011.

13 In February 2013, a New York judge had ruled that the *pari passu* clause contained in bonds on which Argentina had defaulted in December of 2001 required Argentina to pay the holders of these bonds in full so long as it paid its new bondholders in full ("ratable payments interpretation," see Gelpern 2013). This decision, which was later upheld on appeal, threatened to rule out restructurings of any bonds containing a similar *pari passu* clause, as it would have made it illegal to service any new debts so long as holders of the restructured debt were not repaid according to the original terms (see CIEPR 2013, chapter 3). The new *pari passu* clauses proposed by ICMA model explicitly rule out this "ratable payments interpretation."

14 The issuers included: Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Indonesia, Jamaica, Mexico, Panama, Turkey and Vietnam (under New York law); and Armenia, Bulgaria, Croatia, Egypt, Ethiopia, Gabon, Kazakhstan, Montenegro, Tunisia, and Zambia (under English law). Countries that did issue international sovereign bonds without enhanced CACs during the same period included Côte d'Ivoire, Pakistan and Poland (English law) and Mongolia, the Philippines and Sri Lanka (New York law). Recently issued *sukuk* (sharia-compliant bonds), such as those issued by Malaysia, Hong Kong and Turkey, also did not include the enhanced CAC.

To summarize, the IMF has, over several decades, struggled with the issue of how to reconcile its crisis lending with creating incentives for crisis prevention. Lending policies have been developed, tested and redesigned. By early 2016, the result was a reasonable set of policies, which includes: privileged access to crisis lending for borrowers with strong policy track records; a revamped and arguably more credible exceptional access policy; and the promotion of debt contracts that are easier to restructure, as a complement — or sometimes substitute — for official crisis lending. Notably absent from this set is a policy that would explicitly cap lending volumes to countries with poor pre-crisis policies. This said, the current exceptional access policy implicitly creates such a link, at least for sovereign debt crises, since countries with poor policies are more likely to develop unsustainable sovereign debts, which under the current policy would preclude the IMF from lending unless accompanied by some form of bail-in.

Central Bank Swap Lines and Policy Incentives

In principle, the emergence of a standing network of reserve currency issuers described in the second section, "The Unplanned Growth of the International Financial Safety Net," is a welcome leap toward securing the stability of the international financial system. It closes a gap that the IMF (or any other international institution) will not be able to fill in the foreseeable future, due to limited financial resources. Only central banks, with their unlimited capacity to create money, will be able to genuinely backstop the global financial system, which has proven not only to be highly volatile but increasingly driven by a common cycle (Rey 2013). Furthermore, central bank swap lines provide a solution to a somewhat different problem than the IMF was designed to solve, namely, the lack of an international last resort arrangement for banks borrowing in US dollars or euros. While sudden stops and capital flow reversals in emerging markets were well known, and could be addressed with the help of the IMF, the abrupt closing of funding markets for large parts of the globally active financial institutions during 2007-2008 was a new phenomenon. Swap lines that allow central banks to quickly and unconditionally draw on foreign currency liquidity to pass it on to resident banks experiencing funding pressures in that currency are a much faster, more flexible way to address liquidity crises in the financial system than is borrowing through the IMF.

At the same time, there is clearly a danger that these international liquidity lines will create moral hazard. As with any guarantee, the expectation that foreign currency risk will be mitigated by central banks may induce risk-taking behaviour. In particular, it might increase the danger of credit booms financed by short-term lending in a low interest rate foreign currency. It could also foster currency mismatches on the balance sheets of households and firms indebted in foreign currency, resulting in mass bankruptcies if the domestic currency depreciates — even if central banks stand ready to provide liquidity in foreign exchange. The problems experienced by several central and Eastern European countries during the 2008-2009 financial crisis are a case in point (European Bank for Reconstruction and Development 2009). Lastly, it of course exposes the reserve currency central bank that provides the liquidity to credit risk. And unlike standard official crisis lending, there is no conditionality *ex post* that would ensure that it gets repaid.

In the case of the present standing network of central bank swap lines, these dangers are mitigated for several reasons. First, they tend to be highly selective *ex ante*. At present, they all go to the central banks of countries that would, in general, pass the test that the IMF requires as a condition for access to its flexible credit line. Second, central banks have increasingly become (re-)involved in banking supervision (for example, the ECB has recently received the mandate for banking supervision within the euro area). This means that the primary lender of last resort has the information about banks' asset quality and, more importantly, the micro- as well as the macroprudential tools to deal with imbalances. Third, central bankers constitute a small, closely knit community, which regularly meets in various fora (bimonthly meetings of governors at the BIS, working groups of the Basel committee, and so on). Transparency and peer pressure are higher than usual in such settings. Although this did not help foresee, much less prevent, the global financial crisis, it probably contributed to overcoming coordination problems once it had erupted. Fourth, central bankers tend to be conservative and concerned about protecting the independence of their respective monetary authorities. They will, therefore, be reluctant to take on risky assets and keen to avoid accusations of "mandate overreach" that may become politically charged. This latter concern may explain why the ECB was very reluctant to extend swap lines to Central and Eastern European countries during the 2008-2009 crisis (Papadia 2013).

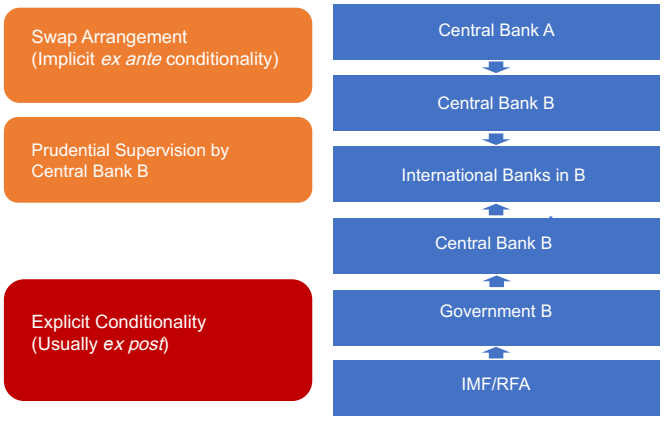
More problematic, in terms of moral hazard, are central bank swaps between reserve currency central banks and central banks in emerging market countries. After all, currency mismatch in private and public balance sheets has been the hallmark of emerging markets' so-called "original sin." During the global financial crisis, core central banks did in fact extend swap lines to some emerging markets. Although these have all expired, past experience may foster the expectation that, under stress, this channel of foreign liquidity assistance would again become available. It is worth reiterating that central bank currency swaps constitute a radical departure from the traditional model of international crisis lending. While the traditional model channels temporary liquidity (from the IMF or RFAs) to the local banking system via an agreement with the debtor government (which would typically include policy conditionality), central bank swaps have bypassed policy conditionality imposed on national governments (see Figure 3).

There are factors that may lessen concerns about moral hazard in this case as well. First, the new international lenders of last resort have left a "constructive ambiguity" about their willingness to extend credit lines beyond the existing ones. They have essentially said nothing; hence, it is hard to form firm expectations. Second, central banks may require collateral with deep haircuts in cases in which they extend lines to lower-quality foreign borrowers (as in the case of the ECB swap line with Hungary during the crisis; see Laeven et al. 2011). Such a policy would protect central banks' balance sheets and prevent moral hazard at the expense of the reserve currency central bank.

However, it may not prevent other types of moral hazard (for example, at the expense of national taxpayers forced to rescue banks after a credit boom that benefited only a few). At the same time, central bank swaps avoid IMF stigma, policy conditionality and all the political costs that tend to be associated with these. This makes central bank swap arrangements a very attractive alternative to IMF lending. And even if no reserve currency central bank has entered a commitment to extend such swaps to emerging market countries, financial markets could reasonably expect requests for emergency swap lines to be successful when these come from politically important countries. This suggests that moral hazard associated with expected access to reserve currency central bank liquidity deserves to be taken seriously.

Worries of this nature, as well as a desire for greater consistency and predictability in the use of swap lines in a future financial crisis, have motivated several reform proposals that would require central banks to be more transparent about the creation and conditions of swap lines, and for anchoring central bank swap arrangements more firmly in the international financial architecture. Christophe Destais (2014) calls for: a repository of central bank swaps at the IMF or at the BIS to create transparency about the swap networks; provisions to prevent the unfair exclusion of countries from the benefits of these swaps; stability of swap agreements over longer times; and provisions to check banks' liquidity risks in foreign currency. Edwin M. Truman (2011; 2013) proposes both an enlarged network of central bank swap arrangements and a formal process, involving the IMF, for unlocking the central bank liquidity that this network can potentially provide to foreign banks. According to Truman (2011, 9), the IMF would play two roles. First, it would "declare a need for global liquidity to support the international financial system and recommend that central banks consider providing liquidity to private financial institutions in other countries via their central banks." Central banks could only draw on swap lines once the IMF has declared such a global liquidity emergency. Second, the IMF would help select potential recipient central banks by applying a pre-qualification framework along the lines of that used to qualify countries for its FCL.

Figure 3: Liquidity Provision to the International Banking System through Central Bank Swaps vs. IMF/RFAs



Source: Authors based on Destais (2014).

Truman's first proposal, if implemented, is unlikely to have much practical impact, since it is not clear that the IMF would be more conservative in identifying a global liquidity need than the central banks themselves. For example, it is hard to see that the IMF would have opposed any of the swap lines that were created during the 2007–2009 period. Hence, the main argument for it is not that it would discipline central banks, but rather that it would help legitimize their new role as de facto international lenders of last resort. However, reserve currency central banks are not currently under pressure to justify this role. While this may change at a time when governments in the United States and elsewhere are becoming more domestically focused and populist, increasing domestic awareness of the international commitments of central bank networks is very unlikely to lead to calls to put the IMF in charge of deciding when these networks should be used. Rather, it would probably lead to parliaments wanting a bigger say — possibly a veto.

There is greater merit in the second part of Truman's proposal. Moral hazard associated with central bank swap lines to emerging markets is currently kept in check through "constructive ambiguity" — that is, by not maintaining any standing swap line, while at the same time retaining the option (a plausible option, given the precedents created during 2008-2009) of (re-)creating such lines very quickly. It would be better to remove this ambiguity for countries whose policies deserve it. In effect, this would create a two-tier system: emerging market countries with good policies that have standing facilities (or at least receive a clear signal that swap lines would be created if needed), and all others, to whom constructive ambiguity is applied — which given the conservative approach that central banks have applied in the past, can only mean that these countries can*not* count on swap lines to ride to the rescue in a crisis. Both from an insurance and an incentives perspective, such an approach would seem preferable to the status quo. As Truman suggests, the FCL criteria are a reasonable framework for selecting countries that obtain (or can expect) a swap line, possibly with some modifications that put greater emphasis on the regulatory and supervisory institutions and policies that are critical for mitigating moral hazard in the financial sector.

Combining central bank swap lines to emerging markets and the FCL within the same framework might also lead to an extended set of countries that seek to pre-qualify. At present, the FCL is limited to just three countries. However, the set of potential beneficiaries is surely wider — albeit in some cases after policy adjustments or institutional reforms, which is one intended effect of pre-qualification. There could be two reasons why the FCL is not sought by more countries: first, a remaining "stigma" associated with asking the IMF for assistance (even if the latter is purely contingent); second, the fact that stronger emerging market countries may be counting on ad hoc arrangements — including central bank swap lines — to rescue them in a crisis. Linking access to central bank swap lines to qualification for the FCL criteria could dispense with both of these reasons.

This leaves the question of whether central banks would have any interest in announcing a policy that requires FCL pre-qualification as a condition for accessing a swap line. Presently, the answer is likely to be no. Central banks may not want to tie their hands. More importantly, they may want to let sleeping dogs lie. Announcing a formal policy on emerging market swap lines could create a public debate, which may well end with a loss in central bank autonomy in deciding who receives swap lines.

However, while central bankers may not want to raise the issue, it may surface anyway. In this case, requiring FCL qualification from future recipients of swap lines might be not only a desirable but also a politically plausible outcome, both because it would provide a meaningful constraint on the use of swap lines, and because it could be structured so that the IMF could largely eliminate the credit risk that is taken by reserve currency central banks. Swap lines could be the first, short-term line of defence in the event that a pre-qualified country experiences a shock to its financial system requiring foreign currency funding. In the event that foreign exchange liquidity continues to be required after the initial period — say, six months — central bank liquidity could then be replaced by IMF lending via the FCL for a further six months and eventually — for crises that cannot be resolved within one year — by a standard stand-by arrangement. This only works, of course, to the extent that FCL and central bank pre-qualification criteria are consistent, but this is precisely the proposal.

Regional Lending Arrangements and Moral Hazard

As was shown in the section "IMF Policies to Mitigate Moral Hazard, 1999–2016," the IMF has made significant efforts over the years (albeit with mixed success) to define and follow policies that prevent it from lending to countries with unsustainable debts, extend privileged financial access to countries with particularly good crisis prevention policies and promote workable debt restructuring regimes. Similar efforts have so far been largely absent at the regional level (see Table 3). The main exception has been the ESM, whose statutes, in principle, prohibit lending to countries with unsustainable debts and require CACs in all new bond issues of its members. This said, ESM statutes and policies to prevent moral hazard do not go as far as those of the IMF (in particular, they do not have an access policy for high-debt countries comparable to the IMF's exceptional access policy). Furthermore, the credibility of the ESM's commitment not to lend to members with unsustainable debts has been undermined by its ongoing lending program to Greece — a country whose debt is likely unsustainable — without a firm commitment that the country's existing debts would be restructured (see next section, "Lessons from Greece: Troika Troubles").

Given the proliferation of regional crisis lending facilities, this lack of congruence undermines the IMF's efforts to contain the moral hazard embedded in crisis lending. Even if the IMF were to refuse to lend, it is increasingly possible — and perhaps likely — that regional arrangements will fill the gap. After all, the express purpose of most arrangements is to make its members less dependent on IMF financing in the event of a crisis. The main exception is arguably the ESM, which is also the RFA with the strongest lending policies. At the same time, ironically, the ESM is currently doing precisely what was just described: lending to a member to which the IMF is refusing to lend because it does not consider its debts to be sustainable, among other reasons.

In principle, there are two ways out of this dilemma:

- A strong commitment, on the side of regional lending arrangements, to tie its lending policies to those of the

Table 3: RFAs — Conditionality and Debt Restructuring Requirements

RFA	Country Programs	Ex ante Conditionality /Precautionary Programs?	IMF Involvement in ex post Conditionality	Ex post Debt Restructuring Instruments	Debt Restructuring as Condition for Access?
ESM	Greece Portugal Ireland Spain (bank recap)	Yes	Not necessary but expected, (Troika: IMF, ESM, European Commission and ECB)	For debts issued after January 1, 2013, euro-area CAC ("Euro-CAC")	Based on European Commission Debt Sustainability Analysis — but no hard requirement
EU BoP Facility	Hungary Latvia Romania	Yes	Not necessary but expected	None	Not explicit
EU EFSM (inactive)	Greece	Yes	Troika	Euro-CACs (for euro members only, for the others bond-by-bond or not CACs)	IMF
CMIM/AMRO	None	No	Not if access < 30% of max	None	No
BRICS Contingent Reserve	None	No	Not if access < 30% of max	[Enhanced CACs for most new lending]	No

Source: Authors.

IMF, effectively allowing the IMF a veto over crisis lending in specific circumstances.

- A set of lending policies, coupled with a framework for sovereign debt restructuring, that matches or surpasses the lending policies and framework espoused by the IMF at the global level. Indeed, the fact that RFAs are (explicitly or implicitly) financially junior to the IMF (that is, will take losses first) creates a case for *stronger* selectivity and conditionality at the regional level. A senior institution needs less conditionality to safeguard its resources than a junior institution.

In light of the fact that most regional lending arrangements were created to reduce the dependence of their members on the IMF, the first of these approaches has always been implausible. More interestingly, the strategy to condition regional crisis lending on IMF participation and thus indirectly import the IMF's lending policy has been undercut by the most recent incarnation of the IMF's exceptional access criteria. The reason for this is that the IMF's latest exceptional access policy explicitly allows the Fund to lend to countries with doubtful debt sustainability if these countries "obtain financing from sources other than the Fund [which], although it may not restore sustainability with high probability, improves debt sustainability and sufficiently enhances the safeguards for Fund resources" (IMF 2015a). This creates a circularity. The shareholders of a regional arrangement may wish to require co-lending with the IMF as a way of committing the RFA not to lend to countries that may not repay. But under the terms of its new exceptional access policy, the IMF will be happy to lend to such countries provided the RFA joins in on sufficiently soft terms. Hence, even if a regional lending arrangement wished to tie itself to the IMF's lending policies, the commitment effect created by this link would be much diminished.

To be sure, the commitment effect does not go away entirely: by making the "price tag" of lending to unsustainable debt cases explicit, the IMF's involvement may lead regional arrangements to balk at specific bailouts, in particular if the seniority of the IMF is enshrined in the RFA's charter and hence visible to its political masters. But what the IMF's new policy will not do — unlike the original policy — is to help RFAs commit against such bailouts when they realize that they may be willing (or pressured) to pay this price tag *ex post*.

Thus, the only way in which regional arrangements can avoid becoming a source of moral hazard is to develop their own rules and governance structures that restrict access to crisis lending in certain settings and protect the resources of the regional arrangement. Because they tend to be financially junior, getting this right is, if anything, more important for regional institutions than it is for the IMF. At the same time, political interdependence and the possibility of financial contagion may make it even harder to create credible rules limiting access at the regional level than at the global level. This is the main message from the multi-year experience of the euro crisis, which is reviewed in the following section. But the situation is not hopeless, because the regional context could also facilitate agreement on commitment devices that would be impossible to agree on globally (such as treaties or treaty changes). Again, Europe could be a possible testing ground for such arrangements, as argued in the final section.

Lessons from Greece: Troika Troubles

Until 2008, advanced Europe — and in particular the euro area — was generally regarded as immune to crises of the type that were regularly experienced by emerging market economies. Sudden stops and sovereign debt crises were not supposed to happen in advanced market economies, let alone inside a currency union. As a result, the initial response to the accelerating series of crises was often suboptimal and subject to frequent correction.

By now, however, Europe has collected extensive experience in handling — and often mishandling — financial crises. The crises have also left a permanent mark, on both the euro-zone and international architecture. Their recent history holds lessons for both.

The Creation of the Euro-area RFAs and Their Interaction with the IMF

Greece has been at the epicentre of the euro-area crisis since news of an unexpectedly high Greek budget deficit emerged in 2009. To address the Greek debt crisis, Europeans had to be creative and pragmatic, in particular in light of a central pillar of the construction of the euro zone, the "no-bailout clause." The preceding section has already discussed how the crisis affected IMF lending policies. In this section, the focus is on the interaction between regional and global lenders in responding to a singular debt crisis. The drama is set in three stages.

Stage I: Creating a Euro-area RFA in Response to the Greek Crisis

The financial architecture of the euro area had been constructed with a plan that was very different from that of the global financial architecture. Official lending to a sovereign facing debt servicing difficulties was not foreseen inside the euro area. Indeed, many assumed that it was ruled out by article 125 of the Treaty on the Functioning of the European Union (TFEU, sometimes referred to as the "Lisbon Treaty"), which prohibits both the European Union and its member states from assuming liability for the financial commitments of other member states. Together with an extensive set of fiscal rules (the "Stability and Growth Pact"), article 125 and the lack of an official lending framework were meant to serve as a firm anchor for fiscal discipline. But it also left the euro area without an instrument to deal with a severe debt crisis (unlike non-euro-zone members of the European Union, for whom there was a facility for balance-of-payments support).

Greece had been a troubled and sometimes troublesome member of the euro area since it joined in 2001 (see Table 4). In late 2004, a Eurostat audit revealed that Greece's deficit had been understated by more than two percentage points, on average, in the three years used to assess its preparedness for adopting the euro (Eurostat 2004). Then Greece violated the Stability and Growth Pact, the main instrument for monitoring, correcting and sanctioning fiscal indiscipline in the euro zone. As a result, Greece became subject to the "excessive deficit procedure" and agreed to a plan for fiscal correction but was not able to deliver on it. In 2004, the European Council found that "no effective action has been taken in response to the Council Recommendation according to Article 104(7) addressed to Greece" (European Commission 2004) and further escalated the procedure.

Greece exited the procedure in mid-2007 but re-entered in early 2009 after it became clear that the 2007 deficit had exceeded three percent of GDP. Six months later, in October 2009, the newly elected government of Prime Minister George Papandreou declared that Greece was expecting a deficit of 12.5 percent for 2009, rather than the 3.7 percent that the European Commission had predicted in April. Shortly thereafter, markets began to lose confidence, and in the spring of 2010, Greece was on the verge of losing market access. At this point, there were only two places for it to turn: the

Table 4: The Crisis in Greece and Its Effects on the IMF and on Europe — Stage I

Stage I	Greece	IMF	European RFA
Pre euro crisis 1999–2009	2001: Greece becomes member of the euro zone. The deficit is later revealed to have been above three percent at the time of entry. 2004–2007: Greece is under excessive deficit procedure.	2003: IMF adopts exceptional access policy following the Argentina crisis: There are only two "buckets" — "debt is either sustainable with high probability" or "debt is unsustainable." The latter precludes large-scale IMF lending (except possibly in the context of a definitive debt restructuring). Very hard commitment in principle.	1999: The euro is introduced without a financing facility and sovereign debt bailouts prohibited by law (article 125 TFEU). Extremely hard commitment in principle.
The beginning of the euro crisis 2009–2010	Early 2009: Greece returns to the excessive deficit procedure. October 2009: Greece announces an expected deficit of 12.5 percent for 2009.	May 2010: IMF participates in Greek crisis lending without requiring a prior restructuring although this contradicts the exceptional access policy prevailing until then (as the IMF staff did not deem Greek debt "sustainable with high probability"). Soft in practice; framework changed ad hoc to allow lending in this particular case.	May 2010: Greek Loan Facility is created to provide €80bn bilateral loans to Greece. Subsequently replaced with a multilateral structure, the EFSF. Soft in practice: framework changed at hoc to allow lending in this particular case.
Institutional response 2010–2012: New IMF exceptional access policy, creation of ESM, and decision to include CACs in future bond contracts of euro members.		2010–2012: IMF reforms exceptional access policy in order to grant uniform treatment to its membership. Introduces a third bucket (grey zone) in which "debt is sustainable but not with high probability," and a "systemic exemption," which allows exceptional access in the grey zone without restructuring first. Significant softening of previous regime.	Euro-zone governments agree to establish a permanent RFA, the ESM, based on an amendment of the Lisbon Treaty. A Franco-German initiative to introduce sovereign restructuring framework by way of EU treaty change is not pursued. Instead, the ESM treaty requires CACs in future bonds of euro-area members and a debt sustainability assessment "conducted together with the IMF wherever appropriate and possible." Unambitious contractual framework together with attempt to align the ESM with IMF lending policies.

Source: Authors.

IMF, which had been in the business of crisis lending for decades but was constrained by its lending rules; and its euro area partners, which at that point lacked any facility for crisis lending.

This put both the 2003 exceptional access framework of the IMF and the no-bailout framework of the euro zone to the test. Both failed the test in the sense that they had to be hastily reinterpreted and amended. The IMF introduced the systemic exemption to justify exceptional access for Greece. It was only at the board discussion that a director pointed out that this constituted a new policy, and asked whether such policy would apply to the entire membership. This was subsequently confirmed. The euro zone quickly put together a bilateral loan agreement (the Greek Loan Facility), followed by the multilateral but temporary EFSF and, eventually, in 2012, the creation of the ESM, backed by an amendment of the

TFEU.[15] The latter was particularly controversial since it was seen as a radical departure from the previous regime and potentially in contravention of article 125. However, it survived legal challenge, with the European Court of Justice ruling in November of 2012 that ESM crisis lending did not violate article 125 so long as it was subject to strict conditionality and repaid with interest.[16]

In Germany, the decision to both rescue Greece and create a large crisis lending facility for the euro area immediately raised the question of whether and how this could be reconciled with avoiding moral hazard and restoring the hard budget constraints that were the objective of article 125 and the remainder of the "no bailout framework." In a May 2010 speech following the approval of the Greek crisis package to the Bundestag — the same speech in which she famously declared that "if the Euro fails, Europe will fail" — German Chancellor Angela Merkel gave her answer at the time, arguing for much tougher sanctions for "notorious deficit-sinners" and stating that "above all, it is necessary to develop a procedure for orderly state insolvency. This would create a powerful incentive for Eurozone members to keep their budgets in order" (Merkel 2010; authors' translation). By October, Chancellor Merkel was able to convince French President Nicolas Sarkozy of this view. In their "Deauville declaration," the two leaders stated that the creation of the ESM should go along with an amendment of the European treaties that would, from 2013 onward, establish a legal framework for private sector involvement in the resolution of euro-area debt crises.[17] The reaction of financial markets was "immediate and fierce: sovereign spreads of Greece and several periphery countries rose sharply and Merkel was widely blamed for the contagion.

In the end, the idea of requiring a sovereign debt restructuring mechanism in Europe as a quid pro quo for the creation of the ESM was abandoned in favour of a softer approach, in which the possibility of private sector bail-ins was mentioned

15 Rather than amending article 125, which would have been unacceptable for Germany and other potential creditor countries, the amendment took the form of adding a paragraph to article 136 of the TFEU, stating that "the Member States whose currency is the euro may establish a stability mechanism to be activated if indispensable to safeguard the stability of the euro area as a whole. The granting of any required financial assistance under the mechanism will be made subject to strict conditionality." Without this amendment, the only legal anchor for the ESM would have been article 122(2), which allows financial assistance if a member state is seriously threatened with "severe difficulties caused by natural disasters or exceptional occurrences beyond its control," which in light of article 125 was viewed as insufficiently strong (de Witte 2011).

16 Case C-370/12 *Thomas Pringle v. Government of Ireland, Ireland and the Attorney General*, see European Court of Justice (2012).

17 "La France et l'Allemagne considèrent qu'il est nécessaire de réviser le traité et qu'il devrait être demandé au président du Conseil européen de présenter, en étroit contact avec les membres du Conseil européen, des options concrètes permettant l'établissement d'un mécanisme robuste de résolution des crises avant la réunion de mars 2011. La révision des traités sera limitée aux points suivants:

- L'établissement d'un mécanisme permanent et robuste pour assurer un traitement ordonné des crises dans le futur, comprenant les arrangements nécessaires pour une participation adéquate du secteur privé et permettant aux Etats membres de prendre les mesures coordonnées appropriées pour préserver la stabilité financière dans la zone euro.
- Dans le cas d'une violation grave des principes de base de l'Union Économique et Monétaire, et suivant les procédures appropriées, la suspension des droits de vote de l'État concerné.

Les amendements nécessaires devraient être adoptés et ratifiés par les Etats membres en accord avec leurs règles constitutionnelles respectives, en temps utile avant 2013." (*The Economist* 2010)

"France and Germany consider it necessary to amend the treaties and take the view that the President of the European Council should be asked to present, in close contact with the members of the European Council and prior to the March 2011 European Council meeting, concrete options that would allow the establishment of a robust crisis resolution mechanism. The revision of the treaties shall be limited to the following points:

- The establishment of a permanent and robust mechanism to ensure orderly crisis management in the future, which includes the necessary arrangements for adequate private sector involvement, and allows member states to take appropriate coordinated actions to ensure financial stability in the Euro area.
- In case of a severe violation of the basic principles of Economic and Monetary Union, and following the appropriate procedures, the suspension of voting rights of the member state concerned.

The necessary treaty changes should be adopted and ratified by the member states in accordance with their respective constitutional rules prior to 2013." (Author's translation)

in the preamble of the ESM treaty ("in accordance with IMF Practice, in exceptional cases an adequate and proportionate form of private sector involvement shall be considered")[18] and euro-area governments agreed to include CACs in all government bonds issued after January 1, 2013 (article 12.3). The treaty also stated that "the ESM will cooperate very closely with the International Monetary Fund….A euro area Member State requesting financial assistance from the ESM is expected to address, wherever possible, a similar request to the IMF" (Treaty Preamble 8) and required the European Commission to assess whether public debt is sustainable, and "wherever appropriate and possible, such an assessment is expected to be conducted together with the IMF." Hence, rather than the statutory debt restructuring framework hinted at in Merkel's speech and in the Deauville declaration, the euro area ended up with modest improvement in bond contracts (see next section, "Reforming the Architecture of the European RFA") — and an attempt to closely link its crisis lending to the policies of the IMF.

Following a debate on whether the IMF should be involved or whether the resolution of euro-area crises should be solely in European hands (Bastasin 2015), the "Troika" of the European Commission, the IMF and the ECB, backed by ESM financing, emerged as the crisis manager in the euro area. Officially, involving the IMF was motivated by the desire to draw on the IMF's expertise in crisis management. Unofficially, creditor countries such as Germany welcomed the participation of the IMF as a disciplining device and to counter concerns that the euro zone would be too soft if left to its own devices.

Stage II: The Greek Debt Restructuring and Its Effects on the ESM

By mid-2011, it had become clear that the Greek program was not working (see Table 5). Output had collapsed and debt was ever increasing. In its fourth review of the stand-by arrangement, the IMF acknowledged that debt restructuring was unavoidable (IMF 2011). Private sector debt was eventually restructured in March 2012 with the help of strong pressure on banks by governments and regulators. Also, Greek debt had mostly been issued under domestic law that could be changed, effectively introducing one-limb aggregation of bondholder votes retroactively. The restructuring was successful in the sense that it achieved a high participation rate and a large haircut, namely a present value reduction of over 60 percent (Zettelmeyer, Trebesch and Gulati 2013).

The part of this history that is less well known is that the European official sector loans to Greece were also restructured multiple times. Interest rates on bilateral loans in the Greek Loan Facility were lowered in three steps between 2010 and 2013, reducing the interest margin over the Euro Interbank Offered Rate from 300–400 basis points to 50 basis points. The grace period was extended from three to 10 years and the maturity from five to 30 years. EFSF loan conditions were restructured in a similar way, most importantly by almost doubling the average maturity of the loans to more than 30 years. After these restructurings, the "grant element" of EFSF lending to Greece — defined as the difference between face value and present value, using a five percent discount rate — rose to over 60 percent (Schumacher and Weder di Mauro 2016). And — importantly for the IMF, which was not fully convinced that Greek debt was sustainable even after the multiple restructurings of 2012 — the Eurogroup promised further debt relief measures, if necessary, to keep Greece's debt-to-GDP ratio on or below a pre-agreed path, provided that Greece complied with program conditionality.[19]

As a result of these concessions, one of the most important legacies of the Greek crisis was not just the creation of a permanent European crisis lending facility, but the fact that by late 2012, European crisis lending had become highly concessional, as the new Greek terms were extended to all program countries and also to future lending. ESM loans now have a large grant element and are both much cheaper and much longer term than IMF loans. (This also helps to explain why Greece was not so keen to receive IMF financing for its third program and applied first to the ESM.) At the beginning of the

18 The text of the ESM treaty is available at www.esm.europa.eu/sites/default/files/20150203_-_esm_treaty_-_en.pdf.

19 See Eurogroup (2012), IMF (2012) and IMF (2013c, particularly paragraph 51).

Table 5: The Crisis in Greece and Its Effects on the IMF and on Europe — Stages II and III

Stage II	Greece	IMF	ESM
Greek debt restructurings 2011-2012	Greek debt to GDP rises to about 170 percent. Debt held by private creditors is restructured in February–April of 2012, followed by a bond buyback in early December.	The systemic exemption clause is used repeatedly to justify lending to Greece, IMF increasingly pushes for a debt restructuring. Privately held debt eventually restructured in 2012 with a net present value reduction of about 60 percent. Criticism of the IMF for its role in the Troika.	Repeated restructuring of official loans, making the conditions of the two European facilities much more favourable to Greece. Maturities extended from five to 30 years and margins lowered from 400 to 0 basis points, with promises of further debt relief if Greece complies with its program conditions. New financial conditions applied to existing EFSF programs and all new ESM lending.
Interim period, 2013-2014	Greek falls into recession; repeatedly fails to meet program targets but concludes program reviews.	Program reviews concluded among increasing criticism of the IMF for its role in the Troika. Gradual hardening of framework through a more explicit model for debt sustainability analysis. IMF staff proposes to abolish systemic exemption.	Increasing criticisms of Greece for not complying and of the Troika for imposing too much austerity. ECB introduces various liquidity facilities. Some conditional and country specific, such as outright monetary transactions (OMT), others are unconditional and unspecific, such as quantitative easing.
Open conflict, 2015	The new Greek government of Alexis Tsipras makes debt forgiveness a condition of the next program. Six months of confrontation culminate in banking crisis and capital controls, which end with a new program negotiation. Third program remains on track, albeit with significant delays in implementation.	IMF hardens stance: argues that the systemic clause should no longer apply for Greece and calls for concessions from Europeans. IMF refuses to join program unless Eurogroup commits to significant debt restructuring that would make debt sustainable even if Greece does not meet the fiscal adjustment targets of the third program.	Euro-zone governments refuse to grant further debt relief. A new (third) program is agreed with a promise to reconsider possible official debt restructuring after the first review, but no commitments. ECB repeatedly softens the conditions for emergency lending (emergency liquidity assistance [ELA]) to keep the Greek banking and payments system from collapse.
2015-2016: ESM-only program and protracted stand-off between EU and IMF	Greece implemented many program conditions. Continues to push for debt relief.	IMF abolished systemic exemption and revised lending framework: it can lend in the grey zone but only if other creditors provide enough concessionary financing to protect IMF resources and improve debt sustainability. Significant hardening of access framework.	Intense (academic) debate about a debt restructuring regime for the ESM. Strong political resistance to further debt relief for Greece. Debate about abolishing the Troika. Stuck in discussions with the IMF.

Source: Authors.

Greek crisis, the intention had been to make European official crisis lending available as medium-term financing at a penalty rate. In the course of the crisis, however, this mutated into very long term lending at highly concessional rates.

Stage III: Open Conflict and an ESM-only Program

Following the debt restructurings of 2012, Greek program implementation initially improved, delivering a primary fiscal surplus in 2013 for the first time. While the IMF continued to press for additional official debt relief under the November 2012 framework, the tone of its reports became more optimistic. By the second quarter of 2014, the primary surplus target of 1.5 percent seemed within reach, and the IMF projected the debt stock to peak in 2014 and Greece to return to growth in the same year. Greece even briefly returned to the capital market, issuing a €3 billion five-year bond at a yield of just under five percent in April, followed by a €1.5 billion, three-year bond issue at 3.5 percent in July.

In the event, Greece did in fact return to growth in 2014, but the program went off track in the second half of the year, requiring an extension of the program period ahead of presidential and parliamentary elections. The new anti-austerity government of Alexis Tsipras and his finance minister, Yanis Varoufakis, sought a direct and very public confrontation with the Troika (now renamed "the institutions"), making deep official debt relief, less ambitious fiscal targets, and a rollback of some of the previous reforms conditions for a new program. This was unacceptable to the Eurogroup, which insisted that Greece "finish" its previous program before discussing a new one.

Without market access or official crisis lending and accelerating deposit flight, it fell to the ECB to prevent the eruption of a full-blown banking crisis in Greece, by regularly extending the limits of ELA to Greek banks in the spring and early summer of 2015. It hence found itself in the unhappy position of being the only support mechanism preventing Greece's exit from the common currency while also attempting to avoid political decisions, which it felt had to be taken by European governments and the European Commission. At the same time, the political level was not able to come to an agreement, and the ECB was berated — particularly in Germany — for overreaching its mandate and supporting an insolvent state.

The crisis came to a head after negotiations to release a €7.2 billion disbursement to Greece ahead of the end-June expiration deadline for the second program failed. On June 28, 2015, the ECB announced that — given the expiration of the program — it would not provide additional ELA credit to Greece. With no fresh official lending or ECB liquidity support and facing a depositor run, Greece imposed capital controls and cash withdrawal restrictions, and missed an end-June payment to the IMF of about €1.5 billion.

Given the ECB's refusal to provide new liquidity to the Greek banking system without constructive program negotiations, European leaders faced the choice of either accepting Greece's de facto exit from the euro (presumably in the form of the introduction of a parallel currency under the control of the Bank of Greece) or starting negotiations on a new economic program. At an emergency summit that ended in the early morning hours of July 13, they chose the latter. The euro summit statement, agreed by all euro leaders including Alexis Tsipras, laid out a set of "prior actions" — largely lifted from previous negotiation rounds — whose implementation would unlock some initial cash, enabling Greece to meet a €3.5 billion payment deadline to the ECB on July 20. Negotiations with the institutions on a new €82–86 billion program ahead of Greece's next payment deadline to the ECB on August 20 followed. In the event, the prior actions were, by and large, undertaken; a new Memorandum of Understanding (MoU) on an ESM-supported third program was agreed by Greek and EU negotiators on August 11; and the new program was approved by the ESM board on August 19.

Crucially, however, the IMF did not financially participate in the new arrangement. Increasingly skeptical of the ability of the Greek government — in particular a government led by the left-wing Syriza party — to implement meaningful reform and additional fiscal adjustment, and fed up with European intransigence with respect to debt relief, it had published a scathing debt sustainability analysis in late June of 2015 that effectively committed it against any financial support for Greece (IMF 2015c). Far from placing Greece in the "grey zone" defined by the IMF's 2010 exceptional access framework, which would have allowed continuing support under the systemic exemption, the new analysis presented a sea of bright red risk indicators. To give political cover to the new program, IMF Managing Director Christine Lagarde nonetheless welcomed the new MoU as "a very important step forward." She also promised to reconsider IMF financial participation after the first program review, expected to take place in the first quarter of 2016, provided the policies agreed in the MoU were supplemented by additional "fiscal structural and financial sector reforms, as well as by significant debt relief" that would restore debt sustainability (IMF 2015d). European leaders, in turn, promised to consider — but did not commit to — additional debt measures following the successful completion of the first review of the program.

One and a half years later, in January of 2017, Greece, the IMF and European creditors are still fundamentally in the same place — that is, without a European commitment to significant debt relief, and without financial participation by the IMF, or even the beginning of a negotiation that could lead to such

participation. Although a June 2016 compliance report of the European Commission (2016) judged the Greek program to be broadly on track, the first review of the program, originally expected for the first half of 2016, was only completed in November. And while the Eurogroup did discuss an array of possible debt relief measures for Greece in late May of 2016, it committed only to a modest set — waiving a step-up interest rate margin originally envisaged for the year 2017 and passing through the benefits of ESM funding operations designed to increase the length of ESM issues and reduce interest rate risk. Decisions on more significant debt relief, in particular, maturity extensions and capping and deferral of interest payments, were postponed until after the successful completion of the program — that is, 2018 at the earliest.

As of this writing, the most likely scenario is a continuation of the ESM program with Greece without IMF financial participation. If so, the ESM treaty's attempt to link ESM and IMF crisis lending at the hip, and thereby import the IMF's conservative lending policies, will have failed.

Lessons from the Greek Experience

Arguably, the most important lesson from the rocky relationship between the IMF and Europe in the context of the Greek program is that using the IMF as a commitment device may not be a reliable, politically viable option for an RFA — even for an arrangement that builds this commitment device into its charter and is keen to make it work.

With respect to Europe's involvement in Greece, the IMF commitment device failed twice, albeit in different ways. At the beginning of the Greek program, which financed a deeply insolvent country and ended up doing much harm to Greece, European cohesion and the IMF's reputation, the IMF proved institutionally too weak. Rather than playing the role of an anchor, it allowed itself to become unmoored, adapting its principles to fit the case rather than the other way around. Since the second quarter of 2015, however, the opposite has been observed. The IMF is now very firmly moored, asking for very large debt relief for Greece from its European partners, and showing little appetite for compromise. But the political price of adhering to this commitment — in this case, agreeing to large upfront debt restructuring as a condition for making the next financial engagement work — turned out to be too high for Europe's creditor countries. As a result, it is now Europe that is cutting the ropes to its IMF anchor, using the "escape clauses" that are allowed under the ESM treaty.

One could argue that both problems were specific to a moment in history and to Europe, and hence need not carry over to other RFAs. In 2010, the IMF had just returned from a long stretch of financial inactivity that had, in the previous years, threatened its international stature and even its financial position. The IMF's management at the time had exceptionally strong interests to become involved in the euro-area crisis, which may have contributed to its willingness to accommodate the preferences of its European partners on critical matters, including the decision to avoid an early debt restructuring (Blustein 2016; Independent Evaluation Office [IEO] 2016). Used to emerging market programs, the IMF staff probably underestimated the difficulties of fiscal adjustment and, in particular, structural reform in Greece. As far as 2015-2016 is concerned, the IMF's new exceptional access and strengthened debt sustainability analysis (DSA) framework set it up for a direct conflict of interest with its European partners. For the European creditor countries, meeting the current demands of the IMF means not only accepting a very large fiscal loss by calling an end to what is effectively a gamble for redemption that could still go on for years, but doing so in a very public and politically costly fashion.

This said, the conflict that drove the soft divorce of the IMF and Europe in 2015-2016 may be less unique than it seems. First, creditor-debtor relationships across countries also exist in other regions of the world, such as in East Asia. Hence, the politics of regional redistribution might get in the way of adherence to IMF-imposed debt sustainability standards in these regions as well. Second, part of the tensions between the IMF and the European crisis lenders emerged because they held different perspectives: a country focus versus a focus on the euro area,

respectively.[20] Even without a threat to a common currency, RFAs are bound to be more conscious of regional contagion and of regional politics. Therefore, the path of the European RFA from a strict lender of last resort to a provider of soft financing may not be unique. And the recent change in the IMF's exceptional access policy fosters this shift, as it promises IMF collaboration even in risky cases, so long as the RFA's lending terms are soft enough.

In sum, the message of this section is that tying one's hands to the IMF's lending policies is no substitute for building an institutional framework that will both generate good incentives for domestic policy makers and protect RFA resources, particularly since these tend to be more vulnerable than those of the IMF because of their junior nature. The point is not to argue that collaboration between the IMF and RFAs cannot work. Rather, it is that it will not work well, particularly in the case of programs with highly indebted countries, unless the lending policies of the IMF and the RFA are better aligned, and can withstand the pressures of a regional debt crisis. This requires creating workable alternatives to bailouts for highly indebted countries. The next section examines how this could be achieved in Europe.

20 G. Russell Kincaid (2016, vii) notes that "European authorities felt that the IMF teams did not appreciate sufficiently the constraints placed on policy options by EU/euro membership and they paid too little attention to the implications for the single EU/euro market and possible spillovers to other EU/euro countries (for example, from sovereign and bank debt restructuring)."

Reforming the Architecture of the European RFA

The European financial architecture has been significantly reformed and expanded since the great financial crisis of 2008-2009.[21] With respect to the prevention and management of financial crises, it currently rests on two pillars.[22]

First, there is an extensive system of rules, procedures and institutions that are meant to ensure fiscal soundness, prevent macroeconomic imbalances, and control financial sector risks. These include a revamped set of fiscal rules (the Stability and Growth Pact); a formalized surveillance process that checks compliance with these rules and engages in policy dialogue (the macroeconomic imbalance procedure, leading to country-specific recommendations for every EU member); the European Systemic Risk Board, created in 2010 to mitigate financial risk and coordinate macroprudential authorities; and (since November 2014) centralized banking supervision for the euro area, the single supervisory mechanism.

Second, there are institutions, policies and funds to mitigate and manage financial crises, should they nonetheless occur. This includes, first and foremost, the ESM, a €500 billion strong RFA that can engage in conditional crisis lending if the stability of the euro area requires it; an ECB policy, OMT, under which the ECB may intervene in bond markets to prevent "run" on the debt of a euro member, provided this member is complying with ESM conditionality; and a common bank resolution agency, the Single Resolution Mechanism, which is, in turn, backed by its own fund (the Single Resolution Fund).

One gap in this ambitious and by now rather complex financial architecture is arguably a procedure to deal with deep sovereign debt crises, that is, crises that — as exemplified by Greece — cannot be resolved via fiscal adjustment and reform in the context of an ESM lending program. European policy makers and academics are sharply divided on whether this gap matters or not. With slight exaggeration, it is possible to distinguish two views.

Official European institutions — in particular the European Commission — and government officials in the countries most sensitive to rises in borrowing costs do not see a problem that would require such a procedure.[23] In their view, much-strengthened euro-area policies and institutions created since 2010 would likely have prevented the Greek sovereign debt crisis, as well as other euro-area crises that originated in the 2000s. Furthermore, by lending at very low rates, the ESM could help even highly indebted countries regain solvency without any need to restructure their private sector debts, assuming that it lends in sufficiently large volumes conditional on economic reform. Finally, in the very unlikely case that debts nevertheless have to be restructured, this could be done ad hoc — as happened in the case of Greece — including by relying on the new "euro-CACs" — CACs introduced in all euro-area bonds since 2013.

However, the application of European surveillance procedures and fiscal rules still leave much to be desired — and seem to

21 Most of these changes were introduced between 2010 and 2014. The intellectual and historical background of these reforms is laid out masterfully by Markus K. Brunnermeier, Harold James and Jean-Pierre Landau (2016).

22 This section draws on Zettelmeyer (2016).

23 Unlike other "big ideas," such as the creation of a European Deposit Insurance System or a fiscal capacity mechanism for the euro area, there is no mention of the idea in the "Five Presidents' Report" of June 2015 (Juncker 2015), which outlines the official view of the presidents of the European Commission, the European Council, the Eurogroup, the ECB and the European Parliament on reform of economic and monetary union.

be giving rise to increasing tensions between the European Commission and member states and across member states, raising doubts about their sustainability. Furthermore, there are two additional problems with the official view.

First, the conditions under which official financing may "cure" deep debt crises — essentially, substituting official financing for private financing at much lower interest rates, barely above the risk-free rate — are precisely the conditions under which official crisis lending can become a big source of moral hazard. At this point, private creditors have been bailed out. What comes next is essentially a struggle to apportion losses between the taxpayers backing the official creditors and the national taxpayer expected to make extraordinary adjustment efforts to repay them. Regardless of who wins the struggle, the outcome is unfair and generates poor incentives, as generally neither of these two parties can be held responsible for the actions that led to the crisis.

Second, the case of Greece does *not*, in fact, prove that future ad hoc debt restructurings in Europe would be feasible without much damage. Greece was able to impose a debt restructuring negotiated with two-thirds of domestic creditors on the dissenting minority via an act of Parliament because close to 90 percent of its debts had been issued under domestic law. In contrast, several other euro-area borrowers have issued much larger shares of English law bonds.[24] Even when local law instruments dominate, they may be harder to restructure than in Greece — for example, because of constitutional protections against state expropriation of contracts, or because the introduction of the euro-CACs could be used as a basis for legally challenging any non-contractual approach to debt restructuring. At the same time, the euro-CACs are only present in new issues, and, in any case, are not particularly helpful in a restructuring, because they require agreement not just by a supermajority of all bond holders, but also by a supermajority of the holders of each individual bond series. This makes it easy for distressed debt funds to buy a majority of the outstanding volume of a bond series and hold out for full repayment. The incentives to try such a holdout strategy have, if anything, increased since the Greek restructuring, as Greece decided to repay its holdouts in full, in part reflecting European pressures to avoid outright default. Finally, and perhaps most importantly, since the Greek restructuring, most sovereign debt of euro-area countries has become concentrated in the portfolios of domestic banks and pension funds (Battistini, Pagano and Simonelli 2014). This makes debt restructurings excruciatingly painful for government borrowers, both economically and politically.

The continuing and perhaps increasing difficulty to pull off an orderly debt restructuring in the euro area makes the first problem worse. The harder it is to restructure debt, the more risks international lenders will be prepared to take in order to resolve a debt crisis without a restructuring, and hence the greater the potential distributional impact of lending — and with it the moral hazard.

As a result, it is not surprising that there has been a heated debate for several years now on how to strengthen the governance of the euro area by introducing legal frameworks that make debt restructuring easier, combined with a set of lending policies that would lessen the chance that the ESM rides to the rescue of countries with unsustainable debts. This is the good news. The bad news is that this debate — and experiences from the 2011-2012 phase of the euro crisis — has also made it clear that it is very difficult to introduce such frameworks and policies at a time of high debt. This poses a dilemma, with lessons for other regional arrangements.

Proposals to Strengthen Debt Crisis Resolution in the Euro Area

Table 6 lists several policy proposals published since 2010 — as the full extent of Greece's debt problem was becoming clear — to create a procedure to deal with deep debt crises in the euro area. The columns state whether the proposals attempt to address three key problems alluded to in the second section,

24 See Zettelmeyer, Trebesch and Gulati (2013) and CIEPR (2013).

Table 6: Proposals to Deal with Deep Sovereign Debt Crises in the Euro Area

Proposal	*Does proposal attempt to address the:*		
	Holdout problem?	Commitment problem?	Transition problem?
Gianviti et al. (2010)	Yes	No	No
Gros and Mayer (2010)	No	Yes	No
Weder di Mauro and Zettelmeyer (2010)	No	Yes	Yes
European Economic Advisory Group (2011)	A bit	Yes	No
Weber, Ulbrich and Wendorff (2011)	Yes	Yes	No
Buchheit, Gulati and Tirado (2013)	Yes	No	No
Paulus and Tirado (2013)	Yes	No	No
CIEPR (2013)	Yes	Yes	Yes
Fuest, Heinemann and Schröder (2014, 2015)	Yes	Yes	Yes
Corsetti et al. (2015, 2016)	Yes	Yes	Yes
Andritzky et al. (2016)	Yes	Yes	Yes

Source: Authors.

"The Unplanned Growth of the International Financial Safety Net," and the discussion above:[25]

- The "holdout problem" refers to the possibility that a single creditor may refuse to participate in a restructuring even when this is in the collective interest of creditors, hoping to obtain better terms by suing the government.

- The "commitment problem" refers to the fact that even if a legal mechanism exists that solves the holdout problem, euro-area governments may choose not to use it — even in cases of doubtful debt sustainability — as long as the ESM offers an easy way to postpone the day of reckoning. The reason for this is the classic time-consistency problem: euro-area governments may *wish* to use the ESM only in cases when debts are clearly sustainable, as prescribed by the ESM treaty, including to maintain an incentive to prevent debt from becoming unsustainable in the first place. Once a country is at the point where crisis prevention has failed, however, it may well be optimal to let bygones be bygones and lend, even when the success of the program is doubtful. This requires a policy or governance mechanism that constrains ESM lending when certain criteria are not met — that is, a form of conditionality *ex ante*, as discussed in the previous section.

Finally, introducing a debt restructuring procedure at times when debts are high will make debt holders nervous and could actually *trigger* a crisis, particularly when the procedure entails a commitment device that may prevent the use of ESM lending unless sovereign debts are restructured or rescheduled. High debt creates a chicken-and-egg problem: without a commitment device, incentives to reduce debt may not be strong enough and countries may remain vulnerable to crises; at the same time, the introduction of such a device may make things worse. The question is how to manage the transition from the present state to a state in which a debt restructuring procedure can be safely introduced. In the table and the discussion that follows, this is referred to as the "transition problem."

Without going into details, the proposals' attempts to tackle these problems can be summarized as follows:

- *Holdout problem.* One solution would be a full-fledged, treaty-based mechanism resembling corporate bankruptcy, involving a sovereign bankruptcy court (for example, a chamber of the European Court of Justice). Decisions of that court would be binding for all creditors (Gianviti et al. 2010; Paulus and Tirado 2013). Somewhat less ambitiously, Lee Buchheit, Mitu Gulati and Ignacio Tirado (2013) — and following them, CIEPR (2013); Clemens Fuest, Friedrich Heinemann and Christoph Schröder (2014) and Giancarlo Corsetti et al. (2015) — propose a change

25 This misses some important related aspects of the debate, in particular, how to regulate euro banking systems to reduce their exposure to sovereign debt (Corsetti et al. 2015; 2016), and whether and how to create a seniority structure in sovereign debt (see Corsetti et al. 2015; Wendorff and Mahle 2015).

to the ESM treaty that would extend immunity from judicial process to sovereigns whose debt restructuring has been negotiated in the context of an ESM program and agreed by a (super)majority of creditors. Finally, several authors argue for better contractual mechanisms, in particular CACs that allow "one-limb aggregation" of bondholders, along the lines advocated by IMF (2014b), above.

- *Commitment devices*. These could take the form of time or volume limits to ESM support (for example, a maximum of three years, or a maximum of 60 percent of GDP; see European Economic Advisory Group 2011; Fuest, Heinemann and Schröder 2014; and Gros and Mayer 2010). Alternatively, ESM support (or at least large-scale ESM support, or ESM support without an accompanying maturity extension) could incorporate explicit *ex ante* conditionality, that is, be open only to countries that have good policy track records, and/or remain below certain debt levels (Weder di Mauro and Zettelmeyer 2010, CIEPR 2013, Corsetti et al. 2015; Andritzky et al. 2016). Risks to official creditor and the taxpayers that back them can also be mitigated by bond clauses requiring a maturity extension if a country becomes a recipient of an ESM loan, exceeds a certain level of debt to GDP, or a combination of both (Weber, Ulbrich and Wendorff 2011; Fuest, Heinemann and Schröder 2015). The latter amount to contractual versions of the "reprofiling" idea embodied in the IMF's new exceptional access policy, while Corsetti et al. (2015, 2016) and Jochen Andritzky et al. (2016) would require reprofiling, under some conditions, via a change of the ESM treaty.

- *Transition problem*. Two possible solutions have been proposed, sometimes in combination:
  - *Delayed commitment*: The commitment device is agreed today, but comes into effect only either after a fixed number of years — giving countries both time and an incentive to adjust their debts downward (Fuest, Heinemann and Schröder 2014) — or if, and only if, *newly* issued debt exceeds a certain threshold. For example, Andritzky et al. (2016) propose a new ESM lending policy requiring a "reprofiling" of privately held sovereign debt, which would come into effect after newly issued debt exceeds 60–90 percent of GDP. Depending on the country and based on current fiscal projections, it would take between five and 16 years to reach the lower threshold.
  - *A common transition plan*. The commitment device would come into effect only after a transition phase in which high debt countries would be offered incentives to adjust. These usually take the form of guarantees or some other form of financial support (Weder di Mauro and Zettelmeyer 2010; CIEPR 2013; and Corsetti et al. 2015). In Corsetti et al. (2015), euro-area countries would commit a revenue source to a new European fund, which issues common debt and uses the proceeds to buy back or swap national debts. Unlike all other transition plans, national debt stocks are hence reduced in one "stock operation." At the same time, the "doom loop" between sovereign and domestic banks holding the debts of their sovereigns is eliminated, and a sovereign debt restructuring regime is introduced that deters countries from building up excessive new debts at the national level.

Among the three elements covered by these proposals, the ideas to deal with holdouts are relatively straightforward. Some of them would also be easy to implement: in particular, there is no reason why the euro area should not follow the IMF's recommendation to include CACs allowing for "one-limb aggregation" into new bond contracts. The main limitation of this approach is that it does not address the stock of bonds that have already been issued. This would be achieved by treaty-based "statutory" changes such as the Buchheit, Gulati and Tirado (2013) proposal, which maintains the rights of holdouts but protects sovereign property inside the euro area from judicial action, and more elaborate procedures such as those proposed by François Gianviti et al. (2010) and Christoph Paulus and Ignacio Tirado (2013), who would in effect create a euro-area level — or perhaps even EU-level — sovereign bankruptcy

court. The Buchheit, Gulati and Tirado (2013) approach has the advantage that it merely requires the insertion of one new paragraph in the ESM treaty, and no additional institutions. It would not, however, protect euro-area sovereign assets outside the euro area. A specialized sovereign debt court for euro-area countries could do just that for sovereign bonds issued under its jurisdiction, as debt disputes between holders of these bonds and euro-area sovereigns would be adjudicated by the court.

Proposals to constrain ESM lending raise more complex issues. Borrowing from the language of statistical testing, all commitment devices involve a trade-off between "type I" and "type II" errors. In the context of the debate on debt restructuring in Europe, the type I error would be that countries that should have restructured their privately held debts are instead bailed out by official lenders. This error would be reduced by any of the proposed lending rules or contractual mechanisms. But in the process, the commitment device would introduce a type II error: the probability of ending up with a restructuring even though a conventional conditional adjustment program would have done just fine.

For the reasons outlined in the third and fourth sections, the current state of affairs, in which euro-area countries facing loss of market access can count on ESM support on highly concessional terms regardless of debt levels or pre-crisis policies, is not optimal. This said, one can imagine commitment devices that are "too tough" in the sense that they reduce the type I error (currently high) at the expense of creating a disproportionate type II error (currently near zero). One can also imagine devices that have "low power" in the sense that they introduce type II errors without reducing the type I error much.

The question is how to identify commitment devices that both make a real difference in reducing type I errors and do not overshoot in the sense of creating large type II errors:

- One useful thought experiment is to ask whether the device would have prevented official lending to Greece in 2010 without an accompanying debt restructuring or rescheduling. This would not have been the case for devices relying purely on temporal or volume-based constraints to ESM lending, such as described in Daniel Gros and Thomas Mayer (2010) or Fuest, Heinemann and Schröder (2014). To the extent that one views the 2010 Greek bailout as the original sin that a commitment device should have helped to avoid, this is probably a reason to disqualify these types of devices.

- To avoid high type II errors, one should eschew commitment devices that force costly debt restructurings on the basis of simple threshold criteria that may be only loosely related to the quality of pre-crisis policies and to debt sustainability. This argues in favour of first requiring "soft restructurings," that is, maturity extensions or reprofilings rather than "definitive" debt restructurings, if *ex ante* conditions are violated. The latter maintain the option of a deeper restructuring in the future. The most recent proposals (Corsetti et al. 2016; Fuest, Heinemann and Schröder 2015; and Andritzky et al. 2016) all contain this feature to some degree. Keeping the type II error low also speaks for not making the *ex ante* condition entirely mechanical (for example, placing all faith in a particular debt threshold) but instead allowing some constrained discretion (for example, identifying debt ranges rather than thresholds, and allowing discretionary decisions within that range). This said, there is of course a trade-off between reintroducing discretion and maintaining commitment. To the extent that discretion is allowed back in, it should be exercised by independent expert bodies and based on pre-specified methodology, such as a transparent DSA analysis along the lines that is now conducted by the IMF, which allows the experts to be held to account.

Dealing with the "Transition Problem"

Just as with commitment devices, there are better and worse ways to approach the transition problem. Ideas to deal with this should be judged on, first, whether they convincingly avoid a market panic during the transition period, and second, whether they create a new time-consistency problem that weakens the credibility of actually ending up with the desired debt restructuring mechanism at the end of the supposed transition period. Schemes that simply set a deadline and do nothing else clearly run that danger: if there is insufficient adjustment during the transition period, it will be in everyone's interest to further put off the date on which the commitment device is supposed to bite. The strength of these schemes hence depends on the irrevocability of the initial legal commitment to let the debt restructuring regime come into force at the end of the deadline, come what may. But legal commitments are seldom that strong. And even if they were possible, it would not be very wise to adopt an iron-clad commitment without any escape clause (for example, to deal with a major crisis that disrupts the transition process).

One proposal that sounds attractive but turns out to be a dead end would be to introduce commitment devices gradually via new bond issues that require automatic maturity extensions if a country receives an ESM loan (Weber, Ulbrich and Wendorff 2011). Because automatic maturity extensions are only introduced for new bonds, issuing new bonds with such clauses should not have adverse effects on the secondary market prices of existing debt. And because no future actions are required, the proposal does not raise a time-consistency problem. However, the proposal might of course have substantial effects on the cost of *new* borrowing in high-debt countries, before these have had a chance to adjust — and consequently make adjustment much harder (to the point that high-debt countries could lose market access). To address this problem, high-debt countries would need to be given time before they begin to issue the new bonds, which again amounts to a transition regime that may not be time-consistent. So the contractual approach does not, by itself, offer a solution to the transition problem.

This said, there could be two ways to escape or at least minimize the transition dilemma.

First, the length of the transition period could be cut to zero by way of a debt swap through which a portion of national debts are exchanged for European debts (Corsetti et al. 2015; 2016). As a result of this swap, the levels of national debt to which the new ESM lending rules are applied would end up below the thresholds at which a reprofiling may be required. To ensure that the new European bonds do not become a new source of moral hazard, the latter would *not* be mutually and severally guaranteed. Instead, they would be divided into a junior tranche (European Junior Bonds) and a senior tranche (European Senior Bonds [ESBs]) as proposed by Brunnermeier et al. (2011; 2016). If the junior tranche is sufficiently "thick" to shield the holders of the senior tranche from any plausible default scenario, and if banks can be incentivized, through regulatory changes, to hold ESBs rather than national bonds, this would make the no-mutualization claim credible. At the same time, contractual changes such as single-limb CACs and changes to the ESM treaty would make restructurings more predictable and protect sovereigns from legal action by holdouts.

Second, the transition period could consist of the time that it takes to "phase in" (via debt redemptions and the issuance of new debt) a sufficiently large volume of debt instruments that are easier to restructure than the current outstanding bonds (Andritzky et al. 2016). As any future restructuring will be expected to occur through these new instruments, there should not be an impact on the outstanding bond stock. There could be a rise in the cost of new borrowing, but this should be more modest than in the Axel Weber, Jens Ulbrich and Karsten Wendorff (2011) proposal, in which automatic extensions are hard-wired into the bond itself — particularly if the ESM's tougher new lending policy continues to allow some discretion and/or if the thresholds of new debt above which the ESM would require a reprofiling are calibrated such that countries can stay below them with realistic policy effort. Like Corsetti et al. (2015; 2016), Jochen Andritzky et al. argue that the proposed debt restructuring regime will not be credible unless banks agree to hold fewer national bonds on their balance sheets.

To summarize, a European crisis lending regime that credibly avoids moral hazard requires at least three coordinated reforms: an improved legal framework for sovereign debt restructuring, involving new bond contracts and possibly ESM treaty change; a tougher ESM lending policy along the lines of the IMF's new exceptional access policy; and regulatory changes to encourage banks to reduce their exposure to national bonds. In addition, this package requires a convincing approach to dealing with the potential instability of making these changes in times of high debt. This could either be solved by a debt swap that replaces national with European debt using the mechanism proposed by Brunnermeier et al. (2016), or by opting for a long transition period involving the gradual replacement of current bonds with new bonds.

Conclusion

Over the last decade, the international financial safety net has greatly expanded. Regional crisis lending institutions or arrangements now rival, and jointly surpass, the size of the IMF. A network of permanent and, in principle, unlimited swap lines between the central banks of the United States, the euro area, Japan, the United Kingdom, Canada and Switzerland stands ready to provide liquidity to international banks facing a funding squeeze.

While strengthening the world's capacity to deal with financial disruptions *ex post*, this expansion raises two issues. First, it has been uneven. Areas of patchy coverage remain, notably with respect to emerging market countries outside Asia. Second, the governance of the new safety net is ad hoc and could weaken incentives to prevent crises. While the IMF has made significant efforts over the last decade to strengthen its lending policies in the direction of striking reasonable compromises between insurance and incentives and fostering debt restructuring when necessary, it is no longer the sole — or perhaps even the main — purveyor of global financial safety. As a result, its efforts have become progressively less relevant for the system as a whole. The net result may be weaker incentives for prudent policies.

So far, the Group of Twenty (G20) has made no determined effort to address this issue. It has recognized that the relationships between the IMF and RFAs might be problematic and suggested some general, non-binding principles for cooperation (G20 2011). *Inter alia* they stipulate that "RFAs and the IMF should foster rigorous and even-handed surveillance" (principle 1); "respect their specific roles, independence and decision-making processes of each institution, taking into account regional specificities in a flexible manner" (principle 2); and "consistency of lending conditions should be sought to the extent possible, in order to prevent arbitrage and facility shopping" (principle 5). While these principles for collaboration are desirable they hardly amount to a coherent framework. They do not suggest how potentially conflicting goals and mandates should be resolved.

In this essay, two sets of recommendations are put forward for strengthening the governance of the international financial system: one directed at central bank swap lines, and the other at RFAs.

With respect to governance of central bank swap lines, the IMF should have a stronger role: access to the new network should be extended to major emerging markets and smaller industrial countries to the extent that they pass the "pre-qualification" test associated with access to the IMF's FCL. In effect, this would combine central bank swap lines and the FCL into a single, two-step facility, in which central bank swaps provide the first line of defence, which is replaced by IMF lending if a liquidity need persists after a given initial period (for example, six months). From the perspective of the reserve currency central banks, this has the advantage of being backstopped by an institution that has experience in evaluating the strength of economic policies and institutions and, if necessary, designing adjustment and reform programs. From the perspective of the IMF, it would have the advantage of extending the FCL to a larger set of pre-qualified countries, as the attractiveness of the facility might increase (and political stigma might decrease) if it unlocks access to central bank funding, with IMF funding acting only as a backstop.

The challenge presented by RFAs is more difficult. In principle, there are two approaches such arrangements can take to limit the moral hazard associated with regional crisis lending. One is to tie their hands to IMF lending policies and the IMF governance structures that are supposed to make these policies credible. This has been the approach of the ESM, whose governing treaty requires it to lend together with the IMF whenever possible,

and tap into IMF expertise when assessing debt sustainability. Alternatively, RFAs can develop their own lending frameworks — in particular, devices that commit them not to lend in large amounts to countries with poor pre-crises policies and possibly unsustainable debts, unless this is accompanied by a debt restructuring.

The essay argues that the former approach is not a substitute for the latter. This is suggested both by the experience of Troika lending to Greece and the evolution of the IMF lending framework itself. In the absence of strong RFA-internal lending constraints, the pressures associated with regional rescues may put too much strain on the IMF as an "anchor" of the RFA. The anchor will then fail in either of two ways. First, it may get pulled out by the RFA "ship," rather than keeping it in place. This is what occurred in Europe in the spring of 2010: rather than forcing the Europeans to make the Greece rescue consistent with IMF rules — which at the time would have implied an upfront restructuring of privately held bonds — the IMF changed its lending policies to allow it to go along with the preferred European approach. Alternatively, if the anchor holds, but the political winds and currents tugging on the RFA ship are too strong, its crew will untie the rope connecting it to the anchor. Arguably, this is the situation that we have witnessed since the summer of 2015, when the IMF refused to participate in a third program with Greece, but the Europeans allowed the ESM to move forward anyway.

A further reason why the IMF cannot provide a credible substitute for RFA-internal commitment frameworks is that the IMF's exceptional access rules were recently changed in a way that greatly diminishes their role as an anchor — unless the RFAs also change their frameworks in a way that creates commitment. Under its most recent policy, the IMF may now quite explicitly lend to unsustainable debt cases, provided that the RFA (or some other source) provides adequate financing on sufficiently concessional terms. Clearly, after this change, the simple rule "we, the RFA, will only lend if the IMF is also willing to lend" loses most of its commitment value. In particular, it will not help RFAs commit against bailouts at the expense of regional taxpayers when they may be willing (or be pressured) to lend at highly concessional terms *ex post*. To regain its commitment value, the rule would, at a minimum, have to be amended to "we, the RFA, will only lend if the IMF is also willing to lend *on the same terms*" or "we, the RFA, will only lend if the IMF is also willing to lend and the IMF considers the borrower's debt sustainable *even without our financial participation*."

To be clear: this is not a suggestion that RFAs should refrain from collaborating with the IMF. Indeed, in many cases it may be useful for an RFA to engage in crisis lending in parallel with an IMF program. After all, while the Greek program was a disaster for Greece, Europe and the IMF, the three other Troika programs — in Ireland and, to a lesser extent, Cyprus and Portugal — were successful, notwithstanding the tensions and practical difficulties that they sometimes raised (IEO 2016). It may even be useful to *require* an IMF program as a condition for RFA lending. The point is not that such a requirement is necessarily a bad idea, but that it will not suffice — either as a commitment device or in creating the basis for a successful practical collaboration — unless it is matched by a strong set of internal commitment devices that align the lending policies and interests of the RFAs and their staffs with those of the IMF and its staff as far as possible.

To allow successful and sustainable crisis lending, regional arrangements should adopt lending policies of their own that are in the spirit of the IMF's new exceptional access policies. That is, they should prohibit lending in unsustainable debt cases unless accompanied by a sufficiently deep debt restructuring, and at a minimum require maturity extensions (reprofiling) of private claims when there is doubt whether the debt is, in fact, sustainable. To be credible, such policies need to be: based on DSA methodologies that minimize the room for fudging (possibly aided by rules that require a reprofiling when particular debt thresholds are exceeded); and accompanied by changes to bond contracts and/or legal frameworks that make such reprofilings feasible without major financial and economic disruptions. In spite of the complications created by high sovereign debt and low growth, introducing such rules and reforms should be feasible even in today's euro area — in particular if combined with other improvements in the euro-area financial architecture.

Regional arrangements that are concerned about private debt crises and — unlike the euro area — have not developed common financial sector regulation and supervision should consider going a step further. While IMF-style exceptional access criteria offer protection against unsustainable sovereign debts, they do not limit exceptional access to countries in which poor policies and weak institutions have led to banking crises or other large-scale *private* debt crises — so long as these private debts have not been assumed by the government. This creates a loophole for certain types of moral hazard — such as Indonesia's "crony capitalism" of the 1990s. To close this loophole and protect their resources — which tend to be financially junior to the IMF, and hence at greater risk — RFAs should consider explicitly linking the level of access to regional safety nets to the quality of a broader set of pre-crisis policies. This could go as far as excluding countries with very poor financial sector governance from the regional safety net entirely (such countries could still apply to the IMF for support). Applying such criteria would of course require strong, independent surveillance institutions. This may be even harder at the regional level than at the global level, but it does not seem beyond reach. Indeed, some regional arrangements have recently made promising steps in this direction, such as the upgrading of AMRO by the ASEAN+3.

Although these recommendations are based mostly on the European experience, they should also apply to other RFAs, in particular for Southeast Asia. The CMIM/AMRO lending framework is still under construction and remains untested. At present it avoids a "Troika situation" by making a clean distinction: for drawings below 30 percent of maximum access, CMIM/AMRO would be the sole lender, while above 30 percent the IMF would be in charge of the program. However, this does not mean that conflicts can be avoided. In a large program with the IMF leading there would be a sizable regional contribution and thus, a desire to have a say in program design. After all, the origin of CMIM/AMRO was largely motivated by IMF stigma. There is an ongoing debate about increasing the portion of access without IMF involvement to 40 percent. As a result, CMIM/AMRO will not be able to avoid a debate on how to deal with borrowers that have solvency rather than just liquidity problems. In particular, it should design an access policy that prevents it from bailing out borrowers whose solvency problems cannot be addressed without a restructuring of private claims. A suitable gatekeeper could be an IMF-style debt sustainability analysis with appropriate regional thresholds. Should CMIM/AMRO expand its lending options into contingent facilities it will also have set *ex ante* criteria, which are sensible and credible enough to avoid moral hazard and political pressure.

The multipolar global safety net is still very young, inexperienced and untested — except in Europe, where it had to grow up in a hurry and under pressure, and failed the test in its highest-profile case. To prevent another spectacular failure, the struggle for coherent global governance and incentives for prudent policies should be high on the agenda of the G20. The time to implement speed limits and safety rails that will help prevent another major accident of the world financial system is now.

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Acronyms

AMF	Arab Monetary Fund
AMRO	ASEAN+3 Macroeconomic Research Office
ASEAN+3	Association of Southeast Asian Nations plus China, Japan and South Korea
BIS	Bank for International Settlements
BoJ	Bank of Japan
CACs	collective action clauses
CCL	Contingent Credit Line
CIEPR	Committee on International Economic Policy and Reform
CMI	Chiang Mai Initiative
CMIM	Chiang Mai Initiative Multilateralization
CRA	Contingent Reserve Arrangement
DSA	debt sustainability analysis
ECB	European Central Bank
EFSD	Eurasian Fund for Stabilization and Development
EFSF	European Financial Stability Facility
ELA	emergency liquidity assistance
ESBs	European Senior Bonds
ESM	European Stability Mechanism
FCL	Flexible Credit Line
FLAR	Latin American Reserve Fund
FOMC	Federal Open Market Committee
G20	Group of Twenty
ICMA	International Capital Markets Association
IEO	Independent Evaluation Office
IMF	International Monetary Fund
MoU	Memorandum of Understanding
PBoC	People's Bank of China
RFAs	regional financing arrangements
SAARC	South Asian Association of Regional Cooperation
SDR	special drawing rights
TFEU	Treaty on the Functioning of the European Union

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About the Authors

Beatrice Weder di Mauro is a senior fellow with CIGI's Global Economy Program. She is distinguished fellow in residence at the Emerging Markets Institute of INSEAD in Singapore and holds the chair of international macroeconomics at the University of Mainz in Germany. She has provided high-level policy advice to European governments, the European Commission, several international organizations and various central banks. For eight years she served on the German Council of Economic Experts, the highest advisory body for economic matters reporting directly to the German chancellor. She has been a member of strategic advisory groups for the Swiss and the Austrian governments, led research projects and acted as a consultant for the International Monetary Fund, the World Bank, the European Central Bank, the Deutsche Bundesbank and the Organisation for Economic Co-operation and Development and the Group of Twenty (G20).

She received her Ph.D. from the University of Basel and subsequently worked as an economist in the European and the Fiscal Affairs Department of the International Monetary Fund. She held visiting scholar positions at Harvard University, the National Bureau of Economic Research in Cambridge, MA, the United Nations University in Tokyo and INSEAD in Singapore. She is a research fellow at the Centre for Economic Policy Research in London, a senior fellow of the Asian Bureau of Finance and Economic Research in Singapore and a member of the Committee on International Economic and Policy Research at CIGI and the Brookings Institution in Washington, DC. Her research addresses policy-related questions in international macroeconomics. Recent publications have focused on reforms of the euro zone, debt sustainability, cross-border banking regulation, financial integration, international competitiveness, the G20 and the global financial architecture.

Jeromin Zettelmeyer is a senior fellow of the Peterson Institute for International Economics. From 2014 until September of 2016, he served as director-general for economic policy at the German Federal Ministry for Economic Affairs and Energy, reporting to the German Vice-Chancellor, Sigmar Gabriel. Before joining the German government, Jeromin was director of research and deputy chief economist at the European Bank for Reconstruction (EBRD) and Development (2008–2014) where he co-wrote and edited the *Transition Report* and other EBRD flagship publications. Prior to that, he was a staff member of the International Monetary Fund, where he worked in the Research, Western Hemisphere, and European II Departments (1994–2008).

Jeromin holds a Ph.D. in economics from the Massachusetts Institute of Technology (MIT) (1995) and an economics degree from the University of Bonn (1990). In addition to his role at the Peterson Institute, he is a research fellow in the International Macroeconomics Programme of the Centre for Economic Policy Research and a member of the World Economic Forum's Global Future Council on Financial and Monetary Systems. Jeromin has published widely on topics including international financial architecture, sovereign debt, monetary policy, economic growth and transition to market. He is the author, with Federico Sturzenegger, of *Debt Defaults and Lessons from a Decade of Crises* (MIT Press, 2007). His current research and policy interests include fixing Europe's currency union, dealing with Greece's debt problem, improving our understanding of the social impact of macroeconomic adjustment and reform and thinking through the causes and consequences of the global productivity slowdown.

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Centre for International
Governance Innovation

67 Erb Street West
Waterloo, Ontario N2L 6C2, Canada
tel +1 519 885 2444 fax +1 519 885 5450
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