

Designing a Global Financial Safety Net

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Key Points

- It often is neither possible nor sensible to immediately correct the underlying macroeconomic disequilibria that a financial and economic crisis reveals.
- To cushion the process of adjustment a global financial safety net is needed: owned reserves, regional financing and borrowing from the International Monetary Fund.
- Since the Asian crisis of 1997/98 there has been an accumulation of owned reserves amongst emerging economies as a form of self-insurance, along with the development of regional financing arrangements.
- There are advantages and disadvantages of the various components of all these arrangements and reform needs to take these into account.

Introduction

With the prospect that US interest rates will rise further as the US economy continues to recover from the global financial crisis of the late 2000s, there is concern amongst emerging economies that a related capital outflow will create liquidity problems, and possibly deeper economic crises, for them. Faced with such a scenario, in accordance with the international macroeconomic policy trilemma, they would have to allow the outflow to be reflected in exchange rate depreciation, or to match the hikes in US interest rates, or to introduce controls on capital outflows in order to insulate themselves from the effects of US monetary policy. The trilemma states that

countries cannot simultaneously have pegged exchange rates, open capital accounts and monetary independence.

A softer interpretation of the trilemma implies that emerging economies could instead opt for a combination of the above responses: allowing a greater degree of exchange rate flexibility that incorporates a more limited element of exchange rate management; introducing a muted and limited range of capital controls; and retaining the partial ability to set interest rates with consideration for domestic economic circumstances (see, for example, Klein and Shambaugh, 2013).

Recent claims that the trilemma no longer exists are based on the argument that countries cannot escape from the effects of US monetary policy even if they are prepared to allow their exchange rates to float freely. In such a case, emerging economies would face a yet starker choice which involves either matching US interest rates or introducing firm capital controls to staunch capital outflows. Rey (2015) refers to this as an ‘irreconcilable duo’.

However, at least in the short to medium term, another course of action is available to them. This would involve running down international reserves or replenishing the outflows of private capital by seeking alternative sources of financing. Running down accumulated international reserves and engaging in sterilized intervention in the foreign exchange market to offset the monetary implications of this intervention would be time-constrained by the finite level of reserves, as well as by the scope for sterilization, which may be limited. Financing from external sources in the form of bi-lateral swaps or borrowing from regional and international financial institutions would also be constrained by the availability of these alternatives and the terms on which they could be arranged. There would be political as well as economic constraints.

Taken together, these national and international sources of finance constitute what is, in effect, a global financial safety net (GFSN). Such a safety net allows countries that encounter balance of payments problems to avoid or reduce the need for rapid economic adjustment. The worry is that without an adequate global financial safety net, they might be forced to pursue policies of economic adjustment that would be damaging to national

and regional economies and even to the global economy as a whole. But what form should a global financial safety net take? How should it be constructed and how should it operate?

Given the volatility of international capital flows and the related incidence of financial crises, increasing attention is being paid to the best way of arranging and organizing a GFSN, and the roles that should be played by owned reserves, by regional financing arrangements (RFAs), such as the Chiang Mai Initiative Multilateralization (CMIM), the European Stability Mechanism (ESM) and the Latin American Reserve Fund (FLAR), and by the International Monetary Fund (IMF).¹ There is also the experience of the IMF's involvement in the Euro crisis, alongside the European Central Bank and the European Commission as part of the so-called 'troika', upon which to draw. This historical precedent illustrates many of the difficulties associated with having both regional and international financial institutions simultaneously involved in trying to resolve a country's economic woes and forming elements of a GFSN.² Many questions need to be considered in an attempt to ensure that a GFSN is well designed, effective and efficient.

This paper identifies the principal issues associated with a GFSN and discusses the ways in which the related problems can be handled. A form of GFSN has *de facto* evolved as crises have occurred and it will, no doubt, continue to evolve as a consequence of circumstances that confront the world economy at any particular moment in time. While this implies that the evolution will be driven by short-term necessity and expediency, it seems more sensible to think things through in a more measured way. The design of a GFSN should not be determined in a largely *ad hoc* and somewhat random and uncoordinated fashion, and as a response to short-term events and constraints. Necessity may be the mother of invention, and the need to deal with contemporary crises may dictate expedient solutions, but short-term necessity and expediency are unlikely to result in the design of an

¹ There are other regional financing arrangements including the Arab Monetary Fund, the North American Framework Agreement and the BRICS Contingent Reserve Arrangement. Furthermore, there are various bi-lateral swaps agreements that give countries access to foreign exchange as a way of supporting the value of the domestic currency. The CMIM is based on such a system of swaps. In this paper however we focus on European, Asian and Latin American arrangements. Many of the issues to which these give rise apply to RFAs in general.

² For a fuller description and analysis of the IMF's involvement in the Eurozone crisis see Bird (2015).

optimal GFSN. At the very least, it is important to give full consideration to the underlying issues.

The rest of this paper is organized in the following way. The second section describes the key features of the contemporary global economy that justify having a global financial safety net. In the context of balance of payments strategy, it demonstrates how inadequate international financing will reduce global economic welfare. The third section analyzes the financing options available to countries as a component of a balance of payments strategy when encountering financial crises that are associated with sudden stops or reversals in capital inflows, such as those that have occurred over recent years. It investigates the key characteristics of owned reserves, regional financing arrangements and the IMF. It also briefly describes and explains the evolution of the GFSN in the period since the Asian crisis in 1997/98. The fourth section assesses how the GFSN may evolve in the future. The final section offers some concluding remarks and discusses some issues for further consideration. It evaluates the role played by a GFSN as part of overall reform of the international monetary system.

The World Economy and the Need for a GFSN

The contemporary global economy is characterized by a number of well-established features. First, there is a high degree of financial globalization. Large amounts of international capital move around the world, often rapidly. Second, the related capital flows are relatively volatile; in particular, this relates to bank lending and portfolio investment. This means that countries can experience periods when foreign capital surges into them, only to be followed by periods when the capital inflows stop quite suddenly or indeed move into reverse: large capital inflows may be followed by large capital outflows. Moreover, the pattern of capital flows may be significantly influenced by events or ‘shocks’ that are outside the control of individual countries; this makes it difficult to predict future capital movements. Thus, for example, the policy of quantitative easing (QE) in the US in the aftermath of the 2008/09 global financial crisis is seen as having contributed significantly to the additional amounts of capital that flowed into emerging

economies, while that of the tapering out of QE is seen as inducing a capital outflow. In the same way, an increase in US interest rates may pull international capital back into the US and away from emerging economies. The volatility and unpredictability of international capital movements make it difficult to manage economic policy. For poorer, low-income countries that have less access to private international capital, the source of balance of payments shocks may be more from the current account and may be more strongly associated with instability in export prices. Here a sudden adverse movement in the terms of trade may create severe balance of payments disequilibria that require short- to medium-term financing.

Third, and again primarily for emerging economies, the volatility of international capital also contributes to the incidence of financial, currency and economic crises. A situation that is sustainable for as long as international capital continues to flow into an economy may quite quickly become unsustainable if there is a sudden stop in the capital inflow or a capital reversal. Financial crises may then arise even in circumstances where the underlying economic fundamentals are reasonably sound. Via a series of different routes, a crisis in one country may spill over and affect others.³ And, on top of this, financial crises may lead to broader economic ones. A failure to deal adequately with what is basically and initially a liquidity crisis may allow it to mutate into a more deep-seated solvency one.

As a general principle of economics, welfare will be lower if there are no means available to borrow in the event of a liquidity crisis. This applies just as much to the global economy as it does to national economies. Without access to international liquidity, countries will be forced to deal with balance of payments deficits by adopting policies of rapid economic adjustment. Faced with a binding financing constraint and the imperative of correcting a balance of payments deficit relatively quickly, the emphasis will almost certainly be placed on compressing aggregate domestic demand. This will carry costs in terms of lost domestic output, higher unemployment and falling living standards; costs that will then, in effect, be exported to other countries

³ For a wide-ranging discussion of contagion and the channels through which it may occur, see Forbes (2012). Where there is an adverse external shock, crises may be made more probable where markets respond in a strongly negative way. A change in market sentiment may then contribute significantly to the incidence of crises.

via trade and financial connections. These costs may be avoided, or at least minimized, by having access to adequate financing capacity.

When confronting a balance of payments deficit, there are alternative strategies that countries can, in theory, pursue, ranging from those that are adjustment-intensive to those that are financing-intensive. Again, in theory, it is possible to conceptualize an optimal strategy. This depends on the nature of the deficit, whether it is temporary or not; the relative costs of adjustment as compared to financing (noting that financing implies delayed adjustment); and a society's time preference between current and future consumption, with financing serving to protect current levels of consumption, but at the cost of sacrificing future consumption. Having determined the optimal balance of payments strategy and the optimal blend of financing and adjustment speed, the question is from whence the necessary financing will come. How should a financing safety net be constituted in the light of the relevant theoretical issues involved? To what extent should it rely on owned international reserves that are held by individual countries? What should be the contributions of RFAs and the IMF? How well does the world's existing financial safety net perform the required functions and how might it be reformed?⁴

The Composition of a GFSN: History and Theory

The various components of a global financial safety net are not perfect substitutes for one another. They can be differentiated in terms of a number of key characteristics. These relate to: the amount of resources involved; the degree of certainty in the provision of support; the degree of liquidity; the costs of usage; the extent and nature of any associated conditionality; and the signals that are transmitted by using them and the response of private capital markets. Analyzing the make-up of a GFSN therefore draws on other

⁴ Just as international liquidity may be inadequate, with this having undesirable consequences, it may also be excessive. In these circumstances countries may defer adjustment that is required for there to be a strengthening in long-term economic performance. We return to this issue later. There is also the important point that, with a given amount of international liquidity, lending to one country may come at the cost of reduced lending capacity to others. There are, therefore, potentially significant distributional issues, with not all countries having similar access to liquidity.

established areas of economic analysis relating to the optimum quantity of international reserve holdings and the design of IMF conditionality.

There are also important political and institutional factors at work. Directly regional and international financial organizations become involved, issues arise in terms of the political economy of the institutions, their representativeness and their legitimacy, and therefore their effectiveness. Regional arrangements may be expected to work rather differently when they bring together countries between which there are strong political alliances than when they do not. While regional arrangements, by definition, involve countries that are geographically proximate or 'neighbours', history may mean that the neighbours have not always been on friendly terms.

There is also an important 'Catch 22' phenomenon built into regional financing arrangements. In order to be successful there has to be a relatively low degree of co-variance in the economic performance of member countries. If all member countries are simultaneously in a weak economic position and experiencing balance of payments deficits, regional arrangements may run up against financing constraints. If they are all in a strong position, none of the members will need to look for regional financial support. If some are economically strong while, at the same time, others are weak, then there are likely to be calls on RFAs to provide liquidity. However, in these circumstances, there may be tensions between the creditor and debtor members; something that has been observed in the context of the Eurozone crisis and the relationship found there between the stronger economies, in particular Germany, and the weaker ones, in particular Greece.

The significance of the range of influences over the composition of a GFSN is likely to change over time. Changes have been particularly evident in the period since the Asian crisis in 1997/98. As the crisis erupted, the initial response of the countries involved was to run down their holdings of international reserves. In the case of Thailand, the country that 'triggered' the crisis, borrowing from the IMF was a course of action only pursued once the country's reserves had been virtually wiped out. For many of the Asian economies that turned to the IMF for assistance (for example South Korea), the associated conditionality attached to IMF loans was seen as excessive and over-intrusive. It was often portrayed by critics as serving the political and

economic interests of the Fund's main creditor countries, and in particular the United States, rather than the borrowing countries themselves.⁵ In the years that followed, many Asian countries opted to self-insure against future crises by building up their own international reserves, thereby reducing the chances of having to turn to the IMF again. In effect, they substituted out of the IMF component of a GFSN and into an owned international reserves component.

The large accumulations of owned reserves across Asian economies, as well as other emerging economies, such as Brazil and India, led to debates about whether reserve holdings had become excessive. Were countries relying too heavily on their own reserves as a financial safety net? Part of the justification for initially establishing the IMF had, after all, been to pool international reserve holdings in order to avoid the relative economic inefficiency associated with individual countries holding large amounts of their own reserves that might never be needed and that carried a high opportunity cost.

Table 1 provides data on official reserve holdings in the period 2010–17. From this it can be seen that the accumulation of reserves in emerging economies carried on until 2014, after which reserve holdings began to decline. It can also be seen that the changes in reserve holdings are largely accounted for by changes in foreign exchange holdings rather than reserves held in the IMF. Table 2 shows the currency composition of foreign exchange holdings in emerging economies and illustrates the dominant position of the US dollar. In the period covered by Table 2, there is no evidence of further currency diversification. The rapid increase in foreign exchange holdings in emerging economies in the period following the Asian crisis in the late 1990s is shown graphically in Figure 1. The graph also shows how the accumulation of foreign exchange reserves came to an end in 2014, and how for the next two years foreign exchange holdings declined.

⁵ Feldstein provides a succinct statement of this point of view (Feldstein, 1998). Within the extant literature there is a wide-ranging debate about the extent to which the IMF is unduly influenced by advanced economies, and in particular the US. For a brief summary of this literature, see Bird and Rowlands (2014).

Table 1: Official holdings of reserve assets in emerging market and developing economies

(Billions of SDRs)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Apr-17 |
|--------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total reserves excluding gold | | | | | | | | |
| Fund-related assets | | | | | | | | |
| Reserve positions in the Fund | 14.3 | 24.3 | 25.6 | 24.3 | 21.1 | 17.3 | 26.5 | 26.2 |
| SDRs | <u>75.4</u> | <u>75.4</u> | <u>75.5</u> | <u>75.5</u> | <u>75.5</u> | <u>75.5</u> | <u>75.5</u> | <u>75.5</u> |
| Subtotal, Fund-related assets | 89.6 | 99.7 | 101.1 | 99.8 | 96.6 | 92.8 | 102.0 | 101.7 |
| Foreign exchange | <u>3,984.3</u> | <u>4,402.5</u> | <u>4,703.8</u> | <u>5,093.0</u> | <u>5,323.8</u> | <u>5,007.3</u> | <u>4,890.1</u> | <u>4,830.3</u> |
| Total reserves excluding gold | 4,068.1 | 4,493.8 | 4,794.8 | 5,182.2 | 5,408.9 | 5,086.6 | 4,971.4 | 4,911.5 |
| Gold | | | | | | | | |
| Quantity (millions of ounces) | 180.5 | 191.6 | 204.9 | 215.6 | 224.0 | 252.1 | 254.8 | 258.8 |
| Value at London market price | <u>164.7</u> | <u>191.1</u> | <u>221.9</u> | <u>168.6</u> | <u>186.4</u> | <u>192.8</u> | <u>217.2</u> | <u>239.0</u> |
| Total reserves including gold | 4,232.8 | 4,684.8 | 5,016.7 | 5,350.8 | 5,595.3 | 5,279.4 | 5,188.6 | 5,150.5 |

Note: Components may not sum to totals because of rounding.

Source: IMF, *International Financial Statistics*.

Table 2: Currency composition of foreign exchange holdings in emerging market and developing economies

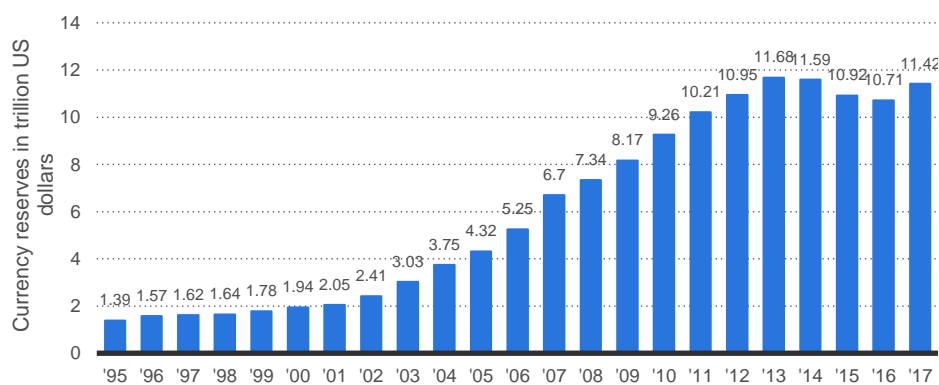
| | 2005 | 2010 | 2015 |
|------------------|------|------|------|
| US dollar | 61.9 | 59.1 | 64.2 |
| Japanese yen | 2.6 | 2.8 | 3.4 |
| Pound sterling | 5.6 | 5.5 | 5.0 |
| Swiss franc | 0.1 | 0.1 | 0.1 |
| Euro | 28.3 | 27.4 | 19.0 |
| Other currencies | 1.6 | 5.1 | 4.0 |

Note: Components may not sum to 100% because of rounding.

The larger gap between the individual shares and the total in 2015 is accounted for by a reclassification of Australian and Canadian dollars.

Source: IMF, *International Financial Statistics*.

Figure 1: Global currency reserves, 1995–2017 (in trillion US dollars)



Note: Worldwide; 1995 to 2017; as of fourth quarter each year.

Source: IMF. ID 247281.

Clearly it seems that changing circumstances induced a change in the composition of the GFSN. By implication, and to the extent that the accumulation of reserves in the aftermath of the Asian crisis revealed the

preferences of emerging economies, it meant that the perceived cost of using the IMF component of the GFSN had risen relative to that of holding owned reserves.⁶

At the same time as Asian countries amassed international reserves as a precautionary safety net, they also developed an additional regional source of balance of payments assistance in the form of the Chiang Mai Initiative (later modified into the CMIM). Once more, the revealed preference of the member countries was to endeavour, to some degree at least, to substitute out of the IMF and into a regional financing arrangement. RFAs also exist in Europe, where they were clearly evident during the Euro crisis since 2009, and in Latin America where they take the form of the FLAR. As noted in footnote 1, they exist in other regions as well.

In choosing what components of a GFSN to use, it is reasonable to assume that governments will implicitly, if not explicitly, consider the costs and benefits of the various options that are open to them. These will be both economic and political in nature. They will also consider how the costs and benefits change at the margin and over time. At the outset of a crisis, it may be that the balance of the costs and benefits clearly favors one course of action. As this course is followed, however, the calculus may alter such that, at some future point, a change of course seems rational. The result of the changing marginal costs and benefits means that, during the different stages of a crisis, governments may opt for different financing options or combinations of financing options. So what are the costs and benefits of the various financing options and how might they change during a period of crisis and in its aftermath?

Owned international reserves

To individual countries, owned reserves have a number of attractive features as a component of a financial safety net. They are highly liquid and involve no conditionality. They involve none of the uncertainties associated with negotiating financial assistance from regional agencies or the International

⁶ Bird and Mandilaras (2011) empirically analyze the impact of IMF involvement in the Asian crisis on subsequent reserve behavior and report a significant and positive effect. In earlier work, they also show that there has been a desire to accumulate reserves that is consistent with the ‘Mrs Machlup’s wardrobe theory’ of reserve behavior, whereby countries aim to increase their reserves year on year (Bird and Mandilaras, 2010).

Monetary Fund. Furthermore, since there is a relatively high opportunity cost associated with holding reserves, there is relatively little cost associated with using them during a crisis. This option becomes less appealing as reserves diminish.

Clearly therefore the extent to which using reserves is an option depends on how big the reserve holdings are in the first place. Since a strong part of the rationale for accumulating reserves in the post-Asian crisis era was to be able to avoid having to turn to the IMF for assistance in the event of a future crisis, a downside of depleting them is the lost option of following this path in the future.

Another downside is linked to the potential response of markets; depleting reserves may be interpreted as a negative signal. The strength of this signal will almost certainly depend on the extent of the depletion and the speed with which it occurs. Where reserves are initially perceived as being excessive and considerably greater than optimal, a modest depletion of them may cause little concern. Here reserve use may be interpreted by the markets as fulfilling a sensible smoothing role that protects output and employment. In circumstances where countries encounter a modest and temporary capital reversal, using reserves to cushion the consequences may therefore seem to be a rational response. However, if reserve levels are initially at the optimal level their depletion, especially where it occurs rapidly, may 'spook' markets and lead to additional capital outflows and a deeper crisis. This will be particularly the case if reserves were initially perceived as being too low. In this way, reserve depletion, when taken too far, may result in a full-blown currency crisis. Markets may also respond negatively where their perception is that reserve depletion is allowing needed economic reform to be deferred. From this point of view, the lack of conditionality associated with reserve use may be seen by the markets as a cost.

What do these theoretical ideas suggest in terms of recent events? Much of the literature based on existing theories of optimum international reserves has argued that reserve accumulation by emerging economies in the aftermath of the Asian financial crisis in 1997/98 was taken too far. The claim is based on both conventional and less conventional ratio-type indicators of

reserve adequacy, such as the ratio of reserves to imports, international debt denominated in foreign currencies, and various measures of domestic credit creation. Welfare analyses of reserve accumulation based on calculating the benefits and costs of reserves have often reached similar conclusions.⁷ In retrospect, the revealed preference of emerging economies in terms of the composition of a financial safety net suggested that inherited welfare analyses had either underestimated the perceived benefits of owned reserves or overestimated their opportunity cost.

The perceived benefits of holding owned reserves depend on the estimated probability and costs of crises and the perceived costs of borrowing from regional and international agencies, and in particular the IMF. As noted earlier, in the aftermath of the Asian crisis these factors help to explain the substantial reserve accumulation that was observed. Following the events of 1997/98, and given the psychological phenomenon of ‘disaster myopia’, crises seemed more likely to occur in the future and to carry heavier economic, social and political costs than had previously been thought. Moreover, the economic and political costs of having insufficient reserves, which meant that crisis countries might have to borrow from the IMF, were now seen as being very considerable. Much was made of the ‘stigma’ associated with having to turn to the IMF, with this being believed by governments to carry a potential negative catalytic effect.⁸ This would then have made it less easy for them to restore market access and reverse capital outflows. At the same time, relatively low global interest rates in the early 2000s reduced the opportunity cost of holding reserves.

In the case of Asian emerging economies, however, it is not coincidental that the initial response to the 1997/98 crisis, in the form of reserve accumulation, was followed by the pursuit of a regional arrangement that could provide a financial safety net and yet still allow them to reduce the

⁷ For example, Bird and Rajan (2003) provide empirical evidence that suggests that reserve accumulation in the aftermath of the Asian crisis was excessive based on conventional indicators of adequacy and conventional theories of optimum reserve holding.

⁸ The IMF has often claimed that its involvement has a positive catalytic effect on other capital flows, with the IMF providing a seal of approval to a government’s economic policies that generates greater market confidence. However, the theory of the catalytic effect is ambiguous and, while nuanced, the empirical evidence on balance is more strongly consistent with a negative effect. Bird and Rowlands (2016) present a brief summary of the theory and some disaggregated empirical estimations of the catalytic effect of IMF programs.

probability of having to borrow from the IMF. In this sense, RFAs and the IMF may be seen as substitutes. In principle, the system of bilateral swaps that the CMIM involves enables member countries to avoid having to build up their own reserves further, or even run them down, without simultaneously increasing the risk of initially having to turn to the IMF.

Holding owned reserves is an inefficient use of resources both for individual countries and for the world economy as a whole. In one sense, reserves represent latent global demand. In a world economy enduring the aftermath of a global crisis, and experiencing recession and deficient aggregate demand, repressing demand further by building up reserves does not appear to be sensible. This implies that it may be preferable to pool reserves either regionally or internationally.

The composition of the global financial safety net certainly changed following the Asian crisis. Prior to it, owned international reserves represented a relatively modest component of the GFSN (relative to the post-crisis situation) and borrowing from the IMF represented a relatively more important component. In the immediate aftermath of the crisis, owned reserves became a much more important component and borrowing from the IMF a much less important one. But the post-crisis era also witnessed the development of regional financing arrangements.

Regional financing arrangements and bi-lateral swaps

In Asia the development of the Chiang Mai Initiative, although yet to be tested, represents a component of a GFSN that potentially fills the gap between owned reserves and borrowing from the IMF.⁹ Their intermediate position is a common feature of RFAs.

RFAs attempt to retain some of the benefits of holding owned reserves whilst avoiding some of the costs. At the same time, they seek to offer a more user-friendly alternative to the IMF whilst retaining some of the benefits associated with IMF involvement in terms of the outside monitoring of economic policy. Their evolution is therefore a fairly natural response to the

⁹ 'Potentially' since it has yet to be used. Indeed, the fact that it was not used following the global economic and financial crisis in 2008/09 suggests that the Association of South-East Asian Nations (ASEAN) countries with balance of payments difficulties preferred to use other means of financing. In contrast, the swap line between Korea and the US is generally seen as having played a significant role.

perceived costs of using IMF resources on one hand, and the problems associated with excessive accumulations of owned reserves on the other.

RFAs attempt to derive the benefits from reserve pooling and to mitigate the inefficiency associated with individual countries holding their own reserves.¹⁰ They also attempt to circumnavigate the stigma associated with turning to the IMF.

In relation to this, members of a regional financing arrangement may consider that they are more fully represented and exert more influence within a regional agency than within the IMF. To individual countries, therefore, the political costs of borrowing from a regional agency may be seen as being considerably lower than those associated with borrowing from the IMF. The economic costs may also be perceived as being lower if member countries believe that regional financing arrangements are less likely to be linked to strict conditionality and programs of economic reform that they may not themselves favour.

There is no one common model for RFAs. The existing regional financing arrangements incorporate different features. Table 3 summarizes some of the key features of the main RFAs.

The CMIM involves a network of pre-committed swap arrangements, whereas the FLAR involves lending out paid-in capital from the member countries. The lending capacity of the ESM far outweighs that of the FLAR. In the case of the CMIM there are pre-qualification criteria which, in essence, constitute a form of *ex ante* conditionality. This applies to the first 30% of the available resources. The remaining 70% is contingent on IMF conditionality. Lending by the FLAR, in contrast, is not formally linked to IMF conditionality. Thus, RFAs may be seen in some respects, and to some extent, as a substitute for IMF lending, and in others as a complement to it.

¹⁰ Rajan et al. (2003) provide an empirical estimation of the benefits for Asian economies from reserve pooling by comparison with holding owned reserves.

Table 3: Features of selected regional financing arrangements and the IMF

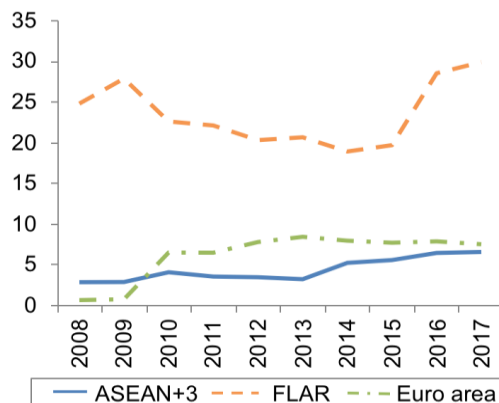
| | International Monetary Fund (IMF) | European Financial Stability Facility (EFSF) | European Stability Mechanism (ESM) | Latin American Reserve Fund (FLAR) | Chiang Mai Initiative Multilateralization (CMIM) |
|-------------------------|---|--|---|---|--|
| Established | 1945 | 2010 | 2012 | 1978 | 2000 |
| Lending capacity | SDR 700 bn (US\$1,000 bn) | €400 bn | €500 bn | US\$4.8 bn | US\$240 bn |
| Member countries | 189 | 19 (all Eurozone member countries) | | 8 Latin American countries (Bolivia, Colombia, Ecuador, Costa Rica, Peru, Uruguay, Venezuela and Paraguay) | 16 (13 ASEAN member states, China, Japan, and the Republic of Korea) |
| Major objective | Macroeconomic stability, response to financial crisis | Preserving financial stability of the Eurozone through temporary financial assistance to Eurozone members facing exceptional problems beyond their control | | Supporting members' balance of payments with credits and guarantees | Provision of balance of payments and short-term liquidity support through currency swaps |
| Surveillance | Bi-lateral regional and multilateral surveillance | Only the countries receiving financial assistance | | Surveillance | Surveillance through ERDP (AMRO as a surveillance unit) |
| Conditionality | – | Financial assistance linked to policy conditions specified in MoU between beneficiary member state and the EC, ECB and the IMF. May also involve conditionality in IMF program | | Central bank of requesting member state provides a report on monetary, credit, exchange, fiscal and trade policies to be implemented, subject to approval of FLAR's Board | Beyond 30% of a member's borrowing limit, disbursements tied to an IMF program |

Where regional agencies and the IMF become simultaneously involved, a question arises as to whether the regional agencies exercise any indirect influence over the design of IMF conditionality or whether this remains something that is negotiated bi-laterally between the Fund and the relevant borrowing country. In the case of the Eurozone crisis there were heavily reported differences of opinion across the members of the troika of creditors concerning the appropriate design of *ex post* conditionality (Bird, 2015). Since some of the IMF's precautionary facilities also involve lending that is based on pre-qualification criteria, the degree of competition between a regional lending agency and the Fund depends on the nature and specification of these criteria and the extent to which compliance with them is strictly applied as a precondition for financial support.

In general terms, regional financing arrangements are relatively liquid and certain. They involve a limited degree of conditionality; more than in the case of reserves but less than in the case of the IMF. The market response to a country activating its access to regional financing may also be different from the response to reserve use and to that of negotiating a program with the IMF, although there is currently insufficient evidence upon which to identify what the differences are or may be. In principle, and where markets believe that economic reform is needed, the market response to the use of regional financing arrangements will depend on the extent to which their use increases the probability of such reform being put in place. It will also depend on the lending capacity of the RFA and whether the market believes that the associated liquidity is adequate.

Figure 2 shows the financing capacity of the ESM, CMIM and FLAR relative to the external debt of member countries.

Figure 2: Availability of RFA financing (as % of short-term external debt)



Source: Park (2018)

The features of regional financing arrangements described above make it theoretically likely that they will be used as a second tier of liquidity for countries encountering balance of payments problems that are not susceptible to relatively quick correction. As reserves decline and reach some minimum acceptable threshold, countries may be expected to activate regional financing arrangements. In principle, at this point, the net marginal benefit of using regional financing exceeds the net marginal benefit of further reserve depletion. Indeed, a stage may have been reached where there are net marginal costs associated with the continued running down of reserves.

The differences summarized in Table 3 show that there is a degree of variation across RFAs concerning the role and design of monitoring and surveillance, as well as the degree and nature of the conditionality that is attached to the financing that is made available. More conventionally, the design of conditionality has been seen as an area where the IMF has a comparative advantage.

International financing arrangements: the International Monetary Fund

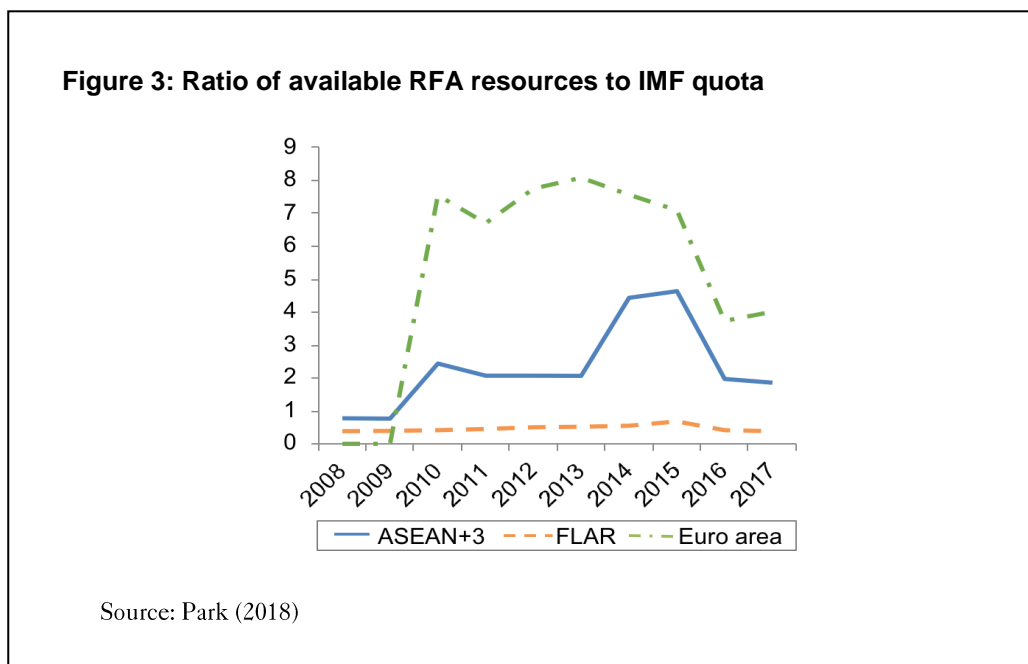
Negotiating a program with the IMF and drawing on IMF resources may logically, and for various reasons, constitute the third and final tier of liquidity as part of the global financial safety net. The Fund is, in many respects, a global lender of last resort. However, it is important to be careful in making generalizations since different IMF facilities involve different characteristics and types of conditionality. There is scope for countries to negotiate a precautionary loan from the Fund in advance of a specific need to draw on the resources, and this will reduce the uncertainty that would be involved in negotiating a program from scratch in the midst of a crisis, although it also runs the risk of transmitting a negative signal to markets, with this making a financial crisis more likely. Even so, most conventional types of IMF financing will tend to be less certain and less liquid than either owned reserves or regional financing. Where the rate of charge on IMF lending is linked to commercial rates, it may also come at a higher financial cost.

This having been said, the principal cost of borrowing from the IMF, certainly as perceived by many potential users, is a political one. This is associated with the loss of sovereignty over the design of economic policy that is seen as being involved with borrowing from the IMF. Even though the IMF stresses that programs are government programs that are supported by the IMF, the perception of governments is frequently very different. They often regard the programs as belonging to the IMF and as being imposed on them. They therefore feel a low degree of ownership, with this, in turn, adversely affecting the implementation and therefore the effects of IMF programs.¹¹

In addition to this, while the Fund has claimed that having an IMF program exerts a beneficial catalytic effect on other sources of financing, and therefore helps to resuscitate capital inflows, as noted above many emerging economies believe that the effect is just the opposite, and that there is a stigma associated with using IMF resources. According to this perception, having a program with the IMF is a sign of economic malaise and, to the extent that IMF borrowing is only countenanced when owned reserves have

¹¹ For further discussion of the implementation and effects of IMF programs see Bird and Rowlands (2014).

been depleted and regional financing options exhausted, extreme economic malaise. Whereas the Meltzer Commission (IFIAC, 2000) argued that the Fund’s lending was too soft and involved a moral hazard problem, encouraging countries to turn to the IMF too early in the evolution of their economic problems, the experience of the Asian crisis and the period that followed it is inconsistent with this. The IMF went on a ‘charm offensive’ in the aftermath of the crisis to try and change this perception. It also embarked on making changes to conditionality that, in some ways, appeared to make it less strict.¹² Following the global economic crisis in 2008, the 14th general review was used to double the size of IMF quotas. The related increase in lending capacity is reflected in Figure 3 which shows the size of IMF quotas relative to the lending capacity of the individual RFAs.



As already noted, the accumulation of owned international reserves in emerging economies in the period following the Asian crisis, and the construction of regional alternatives, revealed a strong preference amongst

¹² Bird (2009) provides a reasonably detailed account of the changes in IMF conditionality. We therefore do not examine them in detail here.

emerging economies to avoid borrowing from the IMF. The composition of the global financing safety net changed. How might it change in the future, and can a better coordinated approach be designed?

The GFSN and the Future

There are two broad issues in considering the future evolution of a global financial safety net. These relate first, to the incidence of financial and economic crises, and second to the design of a GFSN to deal with those that occur. A better understanding of the causes of crises garnered from experience over the period since the Asian crisis should help to identify policies to minimize their recurrence. In this context, and in a fairly conventional way, the pursuit of macroeconomic stability and the avoidance of unsustainable macroeconomic disequilibria are key. Large fiscal deficits that eliminate all fiscal space and result in debt accumulation that goes beyond the capacity of countries to deal with it have been clear elements of recent crises. Not unconnected to this, excessively rapid credit creation has also been shown to be closely linked to the probability of crises (see, for example, Amri et al., 2016).¹³ Moreover, recent crises have emphasized the importance of domestic financial policy and of macro-prudential policies.

The adequacy of any global financial safety net can therefore be significantly affected by reducing the need for one. This means that improving the effectiveness of a safety net does not necessarily depend on increasing the amount of resources that can be mustered. Additional resources do not automatically guarantee a more appropriate and better designed GFSN. In this respect the role of regional and international financial institutions in monitoring macroeconomic policy in their member countries (a surveillance function), and in encouraging the pursuit of policies that reduce the probability of crises (an adjustment function), may be at least as important as the role of providing liquidity (the financing function) when crises occur.

¹³ The impact of credit growth in principle depends on how the credit is used.

Bearing these points in mind, the expansion of a global financial safety net that relies heavily on countries building up their own international reserves may not be ideal. This component of a GFSN is exempt from policy surveillance and does not necessarily ensure that necessary economic reform will take place. Furthermore, the national policies that are followed in order to accumulate owned reserves may be globally undesirable. For international reserves to grow, there either has to be an increase in a country's external borrowing or the country needs to run a trade surplus; goods and money move in opposite directions. However, the successful pursuit of current account surpluses in one part of the world implies corresponding deficits elsewhere. In other words, there will be global imbalances. Taken to extremes, global imbalances can threaten the durability of the international financial system and the stability of the world economy. A point can be reached where there is over-reliance on owned international reserves as a component of a global safety net, from the viewpoint both of individual countries and of the world; there are indications that such a point was reached following the Asian crisis. Paradoxically, the accumulation of reserves in order to establish a larger financial safety net may increase the need for one.

Since a considerable part of the motivation for Asian and other emerging economies to build up their owned reserves as a safety net against future crises was to do with the perceived costs of seeking IMF assistance, reducing the reliance on owned reserves also involves making the IMF a more attractive borrowing alternative and/or establishing other alternatives to the IMF, especially through regional financing arrangements. After a point, and as already discussed, RFAs and the IMF have potential advantages over reserve holding as components of a global financing safety net; they can exploit the benefits of reserve pooling, can exercise surveillance and, where necessary, encourage appropriate economic reform via conditionality.

A central issue for the future of the global financial safety net is the relationship between RFAs and the IMF. Should they operate in competition, or should they seek to complement each other? Competition could be based on the terms on which lending is made, including the rate of interest on loans, on seniority, and on conditionality, as well as on the amount of lending available. Such competition could help to neutralize some of the

standard criticisms of the IMF, including the public choice criticism that it suffers from excessive bureaucratic control, and the criticism that it represents the political and economic interests of its main shareholders.

Complementarity could be based on recognizing and exploiting differences in institutional comparative advantage. RFAs may present less threat to national sovereignty, while the IMF has greater experience in dealing with external debt difficulties and in the design of conditionality. Complementarity may also exist if RFAs and the IMF tap different sources of international capital so that the resources they provide are additional to one another. Moreover, as well as the bi-lateral relationship that it has with its member countries, the IMF has the role of overseeing the operation of the international monetary system. Part of this involves the allocation of Special Drawing Rights. SDRs are a component of international liquidity and, in this sense, form a component of a global financial safety net, since in the midst of a financial crisis countries can use them.

In considering the relative roles of RFAs and the IMF, the devil is often to be found in the detail. The example of conditionality will suffice to illustrate the point. There is much debate in the extant literature about the appropriate design of conditionality. IMF conditionality has been exposed to substantial criticism over the years as either being ‘too hard’ or ‘too soft’. If, in principle, there is an optimum amount and design of conditionality, the question becomes what set of institutional arrangements is most likely to achieve it. There is a ‘Goldilocks problem’; conditionality needs to be not too hard and not too soft, but ‘just right’. There is a danger that if RFAs and the IMF compete with one another in order to lend to countries in financial difficulties, the competition may result in sub-optimal conditionality; conditionality that is too soft and does not encourage appropriate economic reform that will help to reduce the incidence of future crises. This potential problem could arise in the context of *ex ante* conditionality and pre-qualification criteria as well as *ex post* conditionality. Institutional competition over conditionality could then lead to inconsistencies and confusion. It is not coincidental that, beyond a certain point in the evolution of a crisis, the design of conditionality has usually been delegated to the IMF; there appears to be implicit and even explicit recognition of the need for

some degree of institutional complementarity. This does not negate the need for IMF conditionality to take into account the relevance of national ownership when considering the extent to which economic reform is likely to be implemented; an issue that has been widely discussed within the RFAs.

Concluding Remarks and Matters for Further Consideration

Where does the above discussion leave us in terms of the design of a global financial safety net? It suggests that the three main components, owned reserves, regional financing arrangements and the IMF, have different combinations of strengths and weaknesses. They are not perfect substitutes for one another. Relying exclusively on any one of them would therefore be undesirable. The underlying problem is to combine them in a way that maximizes the net benefits from the GFSN as a whole. A strong argument can be made that, since the Asian crisis, emerging economies have placed too much reliance on owned international reserves, and this runs the risk of failing to exploit the benefits of RFAs and the IMF. In Asia the CMIM has never been activated. The willingness to use owned reserves instead of activating the CMIM may reflect the extent to which they were deemed to have been accumulated excessively in the post-1997/98 period, as well as some underlying deficiencies of the CMIM as perceived by member countries.

The above discussion suggests that owned foreign exchange reserves may not unreasonably represent a first line of defence when confronted with a balance of payments crisis. They are the first layer in the GFSN. Their use is appropriate when countries are confronted with a short-term liquidity crisis where no adjustment is needed, or a crisis where, although adjustment is needed, it can be achieved relatively quickly. The retention of national sovereignty over the design of economic policy seems sensible in circumstances where there is no evidence of serious economic mismanagement. However, the owned reserve component of a GFSN is not well designed to deal with longer-term insolvency crises, which could reflect

economic mismanagement or lasting changes in the global economic environment to which a response is required but is not forthcoming.

A remaining issue relates to the nature of the owned reserve component of the GFSN. As shown in Table 1, owned reserves include a country's reserve tranche at the IMF. They also incorporate holdings of SDRs. Building up owned reserves via reserve positions in the Fund or SDRs would avoid the costs that are carried by individual countries, and by the world economy, when reserve accumulation is instead based on pursuing current account surpluses in order to boost holdings of foreign exchange reserves.

Regional financing arrangements represent the next layer of a GFSN. They have the advantage of gaining the benefits from reserve pooling either by using paid-in capital, as in the case of the FLAR, or organizing a network of swaps, as in the case of the CMIM. Regional financing arrangements should allow the quantity of owned reserves that member countries are motivated to hold to be reduced. RFAs may have a role to play in the context of liquidity crises that cannot be handled by running down owned reserves. On top of this, they also have a potential role in terms of exercising surveillance and imposing relatively 'light touch' conditionality. RFAs may be in a better position than the IMF to limit the erosion of country ownership. There may therefore be a higher probability that appropriate economic reform endorsed by RFAs will be adopted. If light conditionality is the 'carrot' to encourage countries to use regional financing, impaired future access to such finance could be the 'stick' that encourages them to implement the agreed policy reform. However, RFAs do encounter problems.

The benefits of reserve pooling are undermined where there is a high degree of co-variance between member countries in terms of the incidence of crises. This could put pressure on the financing capacity of RFAs. The co-variance will be accentuated where there are strong contagion effects within regional groupings. However, where the regional group contains some members that are economically strong and others that are economically weak, there may be impediments that constrain the provision of low-conditionality finance. Regional proximity does not guarantee that there will be strong political ties between the members of any particular RFA. Nor does it ensure

that countries with stronger economies will be willing to underwrite and cross-subsidize countries with weaker ones. Moreover, while the *ex ante* conditionality used by RFAs may not be exactly the same as that advocated by the IMF, there needs to be a strong element of consistency; the pre-qualification criteria used by RFAs should not be in conflict with the *ex ante* conditionality that is favoured by the Fund. In reality it is more likely that the differentiation between borrowing from RFAs and from the IMF will be felt by member countries in political and institutional terms rather than economic ones.

There are, however, important political economy issues confronting RFAs in terms of the representation of members in decision making and therefore the degree of perceived legitimacy and effectiveness. Just as critics have sometimes seen the IMF as being used by economically more powerful advanced economies as a way of imposing their economic and political will on other countries, the experience within the Eurozone shows that RFAs are not exempt from similar problems.

The IMF represents the third and final layer in the GFSN. Given the wider membership of the Fund, it escapes the potential co-variance problem that RFAs may encounter. Conceptually it is at the apex of the pyramid of liquidity even though it may be that owned reserves and regional financing, individually and taken together, are quantitatively more important than IMF. The role of the Fund could therefore be strengthened by further increases in its lending capacity when circumstances warrant it. However, the basic idea would be that the IMF's main distinguishing characteristic is in the design of conditionality. It seems reasonable to assume that having arrived at the apex of the financing pyramid and having reached a situation where assistance from the IMF is being sought, there needs to be a stronger element of conditionality and policy advice than when the lower layers of financial support are being used. At the same time, in designing and reforming conditionality the Fund needs to take into account its political economy dimensions and the importance of ownership. Countries that perceive the IMF as attempting to impose inappropriate policies will be reluctant to turn to it for assistance, and where they do, will be less likely to implement those programs to which they have officially 'agreed'.

While it is possible to conceptualize the layers of financing involved in a global financial safety net, and the sequence in which they would be used, it is highly improbable that there would be discrete demarcation between the layers, such that the use of owned reserves would be curtailed when regional financing was used, or that the use of regional financing would end once the IMF becomes involved. From this point of view the layers of a GFSN are again, and to some extent, complementary rather than competitive.

The size and structure of the *de facto* global financial safety net has changed considerably in the period since the Asian crisis in 1997/98. New layers of financing have been added, particularly in the form of regional financing arrangements, and there has been a strong tendency for many emerging economies to construct their own safety nets by accumulating international reserves. For many countries the appeal of using IMF resources has diminished sharply.

These developments have not been ideal. They have been largely driven by relatively short-term political considerations. This raises the important question of whether a superior global financial safety net can be designed. This article has attempted to identify some of the main issues that will need to be addressed in establishing such a net. It leaves to one side another interesting issue, which harks back to the international macro policy trilemma and raises the question of the extent to which countries facing a sudden outflow of capital should seek to staunch the outflow by the judicious use of capital controls rather than by utilizing any of the elements contained in a global financial safety net. The greater use of capital controls would, in general, reduce the need for a global financial safety net. However capital controls encounter their own problems; a discussion of these lies outside the scope of this paper.

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References

Amri, P., Richey, G. and Willett, T. (2016). Capital flow surges and credit booms: how tight is the connection? *Open Economies Review* 27, 4, pp. 637–70.

Bird, G. (2009). Reforming IMF conditionality: from streamlining to major overhaul. *World Economics* 10, 3, pp. 81–104.

Bird, G. (2015). The IMF's uneasy excursion into the euro zone. *World Economics* 16, 3, pp. 61–82.

Bird G. and Mandilaras, A. (2010). Revisiting Mrs Machlup's wardrobe: the accumulation of international reserves, 1992–2001. *Applied Economics Letters* 17, 5, pp. 467–71.

Bird, G. and Mandilaras, A. (2011). Once bitten: the effects of IMF programs on subsequent reserve behavior. *Review of Development Economics* 15, 2, pp. 264–78.

Bird, G., and Rajan, K. (2003). Too much of a good thing? The adequacy of international reserves in the aftermath of crises. *The World Economy* 26, 6, pp. 873–91.

Bird, G. and Rowlands, D. (2014). IMF programs: participation, implementation and effects. In: Thomas Oatley and W. Kindred Winecoff (eds), *Handbook of the International Political Economy of Monetary Relations*, Basingstoke, UK: Edward Elgar Publishing.

Bird, G., and Rowlands, D. (2016). The International Monetary Fund: *Distinguishing Reality from Rhetoric*, Edward Elgar Publishing, Cheltenham, UK, Chapter 8, IMF programs and private capital flows, pp 187-216.

Feldstein, M. (1998). Refocusing the IMF. *Foreign Affairs*, March/April, pp. 20–33.

Forbes, K. (2012). The Big C: identifying contagion. *NBER Working Paper*, No. 18465, New York: National Bureau of Economic Research.

International Financial Institution Advisory Commission (IFIAC) (2000). Report of the IFIAC (the Meltzer Report). Washington DC: US Government Printing Office.

Klein, M. and Shambaugh, J. (2013). Rounding the corners of the policy trilemma: sources of monetary autonomy. *NBER Working Paper*, No. 19461, New York: National Bureau of Economic Research.

Park, C-Y. (2018). Regional financial arrangements and the role of the ADB's crisis support facilities. Presentation to the Second RFA Seminar, Cartagena, Colombia.

Rajan, K., Siregar, R. and Bird, G. (2003). Examining the case for reserve pooling in East Asia: empirical analysis. *CIES Discussion Paper*, No. 0323, University of Adelaide, Australia.

Rey, H. (2015). Dilemma not trilemma: the global financial cycle and monetary independence. *NBER Working Paper*, No. 21162, New York: National Bureau of Economic Research.