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Pauline Bourgeon, Université de Paris-1

Jérôme Sgard, SciencesPo - CERI

In: The *Oxford Handbook of International Governance,* edited by Brousseau, Glachant et Sgard, 2019.

DOI : 10.1093/oxfordhb/9780190900571.013.2

International crisis management at the time of 9/11

In the hours that followed the terrorist attacks of 11 September 2001 in New York, the major central banks of the world unexpectedly announced the introduction of a new policy instrument that has found since then its place at the very top of their collective toolkit. They exchanged on a bilateral basis equivalent amounts of their respective currencies, at the current exchange rate. The European Central Bank (ECB) thus received billions of dollars issued by the US Federal Reserve against a similar amount of euros, issued by the ECB. After a few weeks the reverse exchange closed the whole operation.

This utterly simple, two-legs transaction, called a liquidity swap, provided a very effective response to the enormously destructive threat caused by the sudden drought of dollars across the world: on that fateful morning, many New York-based financial institutions had suddenly ceased to operate, either because they were located in one of the Twin Towers, or because the material infrastructure of communication and payment transfers was out of work. In turn, this unexpected shock threatened hundreds of banks across the world that were due large dollar cash transfers from their US counter-parties, at that exact time. In a very classic way, a worldwide systemic ("domino") crisis could have ensued.

Of course, non-US Central banks could have supported their local banking system by acting as local Lenders of Last Resort (LLR), i.e. by printing and lending massive amounts of their own currency. But this would have not solved the dollar problem they had on their hands. The same applies to their dollar-denominated officials reserves that, in the large majority of cases, were just not large enough to backstop the local banking systems. And of course the International Monetary Fund (IMF) does not have the institutional capacity to lend under such short notice. In practice, only the Fed could do the trick and make cash dollars available were they were urgently needed. Within a few hours, swap lines thus allowed the ECB to offer dollars to Eurozone banks through its own discount window, in Frankfurt; the same applied to the Bank of England, the Bank of Japan and the Bank of Canada. Symmetry in these swap arrangements was however formal more than real, as the US Fed eventually did not draw on the pool of euros, pound sterling or yens that it had received in exchange for the dollars it had supplied. Still, as soon as the international crisis receded and private payments normalized, the dollar liquidity that had been lent to private banks reflowed to the individual Central banks and were then transferred back to the Fed, against the respective amounts of euros and the like. Currency Swaps can thus be extended very easily and under very short notice, but they are also easy to fold and easy to extend anew.

This remarkable policy innovation was commented upon in a small series of papers [Ref?] but was also perceived by most Central bank watchers as a one-off, exceptional improvisation. After fall 2007 however and again at the time of the Euro/ Greek crisis, *hundreds of billions* of dollars have been exchanged again by the US Fed and 14 other Central Banks. In practice, bilateral currency swaps became the building blocks of a Fed-centred, multi-layered global network of Central Banks that functioned de facto as an International Lender of Last Resort (ILLR). At a point, for instance, the Bank of Sweden had "upstream" swap lines with both the Fed and the ECB, and "downstream" swaps with the Central Banks of Iceland, Latvia and Lithuania. Similarly, the Bank of Japan entered equivalent arrangements with the respective institutions in India and Indonesia. Still the conditions of these arrangements were clearly differentiated: they were de facto unlimited between core Central Banks, whereas in the case of Brazil, Mexico and Korea, there were explicit ceilings. Beyond, no such arrangement was put in place with for example with Argentina, India or China as well as with most other smaller, developing countries.

There is no question that technically Currency Swaps have been a great success. They have plugged a large hole in the international policy framework by delivering a high-value international public good. Baba and Paker (2010) find empirical evidence that both the settlement of currency swaps and the amounts provided through the swap lines have significantly reduced the cost of funding on the respective money market as well as the volatility on foreign exchange markets. [1] These results are in line with the ones from Aizenman and Parischa (2010). The overall benefits of swaps were also eventually confirmed by the decision in October 2013, by six central banks, to transform them from ad hoc transactions into standing arrangements. [2]

At the same time, this remarkable innovation sanctions a wholesale rebalancing of the division of labour between the main organizations that regulate international finance, primarily the International Monetary Fund (IMF) and the Central Banks. This broad evolution sheds light on the present trends at work in today's global economy, but it also brings in a historical dimension, especially that of the Interwar years, when state Treasuries and Central banks already competed for (and shared) the responsibilities of fighting international crisis. The former then used to work primarily through the Economic division of the League of Nations, which invented conditional lending and foreshadowed the action of the IMF, an organization that is still very much today the creature of Treasuries and Ministries of Finance (Pauly, 1996). Central banks, on the other hand, operated during the 1920s on a more informal and less politicised basis that allowed i.a. to co-opt the large US investment banks into an informal network. This second track of international policy making led eventually, in 1930, to the creation of the Bank of International Settlement (BIS), an institution that remains today the professional hub of central bankers.

After the Bretton Woods conference (July 1944) this dualism largely disappeared because of the towering position that was then given to the IMF, but already by the early 1960s the gradual re-emergence of international capital markets slowly brought the Central Banks and the BIS back into the discussion. While they were still in the backseat during the international debt crisis of the 1980s, financial globalisation proved a watershed on that count as well: the role and responsibilities of Central banks in regulating markets has increased dramatically since then and so the need for them to coordinate closely, especially at time of systemic crisis.

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[1] These results are also confirmed by Moessner and Allen (2013)

[2] Fed Press release, October 31, 2013: *"The standing arrangements will constitute a network of bilateral swap lines among the six central banks. These arrangements allow for the provision of liquidity in each jurisdiction in any of the five currencies foreign to that jurisdiction, should the two central banks in a particular bilateral swap arrangement judge that market conditions warrant such action in one of their currencies.*

The emergence of an International Lender of Last Resort, based on a hierarchic network of top Central banks, is just the last and probably the most significant steps in this long run story. It de facto implies a new division of labour with the Fund that used to be (and tried to remain) the only global crisis management.

The purpose of this chapter is to disentangle the various dimensions and consequences of the policy innovation that first surfaced on 9/11. We now discuss how Liquidity Swaps have been used during the years 2007-2013(section 2) and how they are structured in practice (section 3). The genealogy of this innovation, both in the policy debate and in policy practice, is then envisaged in contrast with the better known IMF practice (Section 4). The originality of new methods for international crisis management can thus be better identified. A new hierarchy between currencies and a new division of labour between available policy tools and policy institutions may then be proposed (section 5).

I. A Remarkable Policy Innovation.

The track-record

Since the emergence of financial globalisation, in the early 1990s, commercial banks across the world have thoroughly diversified both their investment portfolio, on the asset side of their balance sheet, and their funding sources, on the liability side. Many, though not all have kept a large home-base of deposits, but in order to fund their international operations, large banks typically rely as well on large-scale market operations, like bonds and inter-bank loans. One benefit of this strategy is to raise resources denominated in different currencies, typically those that are widely used in international payments and finance: the US dollar, the Euro, the Japanese Yen, the Pound sterling, the Swiss Franc. The Brazilian Real or the Indian Rupee, on the other hand, open the door to investments in the respective domestic markets, but they are not used in any substantial way as international currency. Hence, they weigh little in the consolidated balance sheet of global commercial banks.

The counterpart to this evolution is that banks and financial institutions are now exposed to funding risks in these respective key currencies (McGuire and von Peter, 2009). The 9/11 systemic crisis was a short and brutal reminder of how the underlying liquidity risks can materialize. But as soon as early September 2007, the gradual collapse of the US sub-prime market caused new and brutal tensions: dollar funding became increasingly difficult to obtain, both for American and international investors (Milesi-Ferreti and Tille, 2011). Many solvent, profitable financial institutions that had funded their investments with large-scale dollar borrowing had serious difficulties refinancing themselves and experienced acute liquidity pressure. Large European commercial banks, for instance, that had been financing dollar-denominated contracts for Airbus planes had to liquidate a large part of these credit lines in a few months and in a context of great stress. This is exactly the type of situation when a Lender of Last Resort may have to step in and inject liquidity in the system, so as to control the risk that these viable investors default on their obligations and extend further the scope of the crisis.

In December 2007, the Fed, the ECB and the Swiss National Bank (SNB) thus announced that they were again entering Liquidity Swaps, following procedures similar to those adopted on 9/11 (Goldberg et al., 2011, Fleming and Klagge, 2010). One year later, in September 2008, after the failure of Lehman Brothers, market seizure and acute liquidity shortages across the world brought these operations on a wholly different scale: from September 17 till November

12, the total volume of swaps issued by the Fed increased to more than half a trillion dollars. The largest swap line was a one-week contract of 170 billions dollars exchanged with the ECB on October 15. The total outstanding volume of swaps then stayed above the half a trillion dollars threshold from early November 2008 till early January 2009, before being gradually reduced during the rest of that year. Yet again, from May 2010 onwards, when the crisis had become a properly European one, new dollar swap lines were exchanged with the European Central Bank, plus the Swiss, the English, the Japanese and the Canadian one. However their total volume was significantly lower than in 2008-2009: they reached a maximum of slightly over 100 billions in January and February 2012.

<<< Table XX about here >>> [3]

As a whole, between 2007 and 2011, 14 Central banks have entered swap lines with the Fed, at a point or another, though under very contrasted conditions. In fact, a two-tiered structure comes out strongly, as most swaps lines were in fact concentrated on the top currency issuers: the European, then the English (BOE) and the Swiss Central (SNB) banks. These three institutions were also the only ones to enter very short term swaps, including one-day operations, which represented 34% of the total in the case of the ECB and the BOE and 24% in the case of the SNB. This suggests a highly reactive, day-by-day mobilisation of this new policy tool. On the other hand, all other Central banks, including the Japanese one, operated exclusively with swaps lines of one to three months. Quite often, they even did not draw on it, as the Banco de Mexico for example who signed on a 3,2 billions dollars, three-months line in April 2009, and simply renewed it twice before exiting the arrangement in early January 2010, without having actually drawn a single dollar.[4] In other words, entering a Swap line could also work as a signalling device, very much part of the practice of last resort lending: the mere fact that such line was available proved enough to calm the market and restore liquidity. Note also, in passing, that countries that were no part to this network also benefitted from this intervention which effect was to stabilize the entire global market, of which they are almost all a part.

Table 1 underlines further the leading role of the US Fed, hence of the dollar. There is just no question, in particular, that the Euro emerged from these episode as with an international status comparable with that of the dollar, whether the core of the crisis was in the US (2008) or in Europe (2011-2013). The corollary is the shear volume of money creation which these swaps entailed: for many months in 2008-2009 the domestic and international LLR operations of the Fed were of similar size, in its balance sheet. They entirely dwarfed as well the total volume of official reserves owned at that time by the respective non-US Central Banks.

As said, the new International Lender of Last Resort did not only mobilise only dollars. The ECB in particular entered similar, euro-based arrangements with the Central banks of Hungary, Sweden and Denmark. In turn, Iceland received some support from the Scandinavian central banks while Estonia and Latvia, where Swedish commercial banks have substantial direct investments, benefitted from swaps with the Bank of Sweden. The Swiss National Bank also supported the Hungarian Central Bank, as a consequence of the large

[3] I thank Adam Tooze for mentionning this point to me.

[4] During the FOMC meeting on October 28-29, 2008.The participants approved Fed swap lines only with four emerging countries (Brazil, Korea, Mexico and Singapore) underlying their systemic importance and mentioning the existence of the new IMF short-term liquidity facility for other countries facing liquidity issues. These minutes are available on the Fed website. http://www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm

amounts of Swiss Francs that had been borrowed by private businesses and households. Japan, who had large swap lines with the Fed, also provided US dollars to India and Indonesia by collateralizing an equivalent amount of their own currency.

The broad picture of all the swap arrangements we have mentioned is depicted on figure 1. The figure shows a core/periphery pattern with a global network with the Fed as the core and the peripheral networks with regional cores (the ECB, the SNB, and the BoJ).

<< Figure 1 about here >>

Note however that all things called swaps are necessarily identical. After 2007 for instance the Chinese central bank (PBOC) entered 31 apparently similar arrangements with Central Banks, primarily from developing countries. Their object was not to respond to a systemic payment crisis in Renimbi, if only because the Chinese currency is not yet widely traded internationally so that very few financial institutions in the world may be threatened by a potential payment crisis in China. The aim of these Chinese swaps was to offer trade finance on easier term at a time when overall credit supply at the international level was tightening. Another example here is the *Chiang Mai Initiative*, which had been established in 2000 as an instrument for mutual help among some Asian Central banks but was not mobilized during the 2008-2009 international crisis (Rhee et al., 2013).

Operating mode

Currency Swaps are utterly simple and flexible tool. They can be drawn and signed upon in a few hours, disbursement is almost automatic, refinancing and extension is utterly easy, paperwork and other transaction costs are close to nil, and governments and politicians are out of view. Maturities range from one day to three months; interest rates are market-based, although they typically include a slight positive premium that should incite the borrowing Central Banks to reimburse them as soon as possible and fall back on market operations.[5] The contracts themselves are in fact an extremely banal type of transactions, directly imported from the tool-box of private capital and money markets. Legally, we are in the world of boilerplates. As far as can be known, no dispute over Swaps arrangements has ever surfaced ex post between Central Banks. Even the internal logistics of distributing of foreign currency has been easy to settle: as a rule, Central banks used an auction procedure similar to the one for operations in their own currency.

Beyond, Liquidity Swaps present three defining characteristics that highlight their novel character. First and foremost, Currency Swaps do not come with any notion of policy conditionality: they do not ask that one party commits itself to some given policy course, over a given period of time. Hence, these transactions do not include any clause regarding monitoring, sanctions or possible renegotiation. Obviously, this goes a long way in explaining why overall transactions costs are so low, especially when compared with IMF loans.

Second, like standard domestic LLR operations, Currency Swaps are not intended to have any direct macroeconomic impact: their only aim is to restore the aggregate supply/ demand

[5] Initially, the Fed provided an amount of US dollars at a fixed interest rate equal to 100 basis points over the overnight indexed swap (OIS) rate for a period of one or three months. This strategy of pricing these transactions was a way to prevent any moral hazard issue. Then, as market rates no longer exceeded the OIS rate more than 100 basis points, obtaining dollars through central bank currency swaps were no longer profitable.

equilibrium on the money market, hence the overall level of interest rates. They are indeed a monetary instrument, not a financing one, so that they do not present any redistributive or subtractive dimension: individual market participants or national regulators cannot appropriate the benefits of those operations at the expenses of others. An international LLR is actually a near-perfect example of a pure international public good.

Lastly, rather than being founded on hard, multilateral rules and treaties, Currency Swaps rests on a logic of mutual recognition hence on peer-based, bottom-up, informal relations between professionals and experts (Schmidt 2002, Maduro 2007). This trend is neither unique to monetary affairs, nor new. It has been at work for decades in many international policy fields, some of which are also analysed in the present volume: banking regulation, anti-trust, consumer protection, etc. Swaps, in this perspective, are just a superior example of this model of global governance that operates below the radar of politicians and the media. One could not be farther away from the grand discourse on a "new international architecture" or "a Bretton Woods for the Twenty-First Century". Swaps have been mentioned for the record and in few lines in the final communiqués of IMF annual meetings and G20 conferences. Almost certainly, no President or Prime Minister ever had a say on the exchange of liquidity swaps. No international press conference was ever convened in order to trumpet what is actually a spectacular progress in international crisis management.

In the second part of this chapter we now look at the pre-history, or the genealogy of this remarkable policy innovation so as to better appraise its many consequences. Why did emerge after 2000 rather than before? Which policy debates led to the introduction of this new tool? And how does it affect our understanding of how the international financial systems is structured?

II – Global Finance and Global Systemic Crisis

Old Crisis, New Crisis

During the post-war decades and until roughly 1990, the main source of external financing available to a country in a liquidity crisis was the IMF. It was the first and often the only port of call. Its key tool was the Stand-By agreement: a standardized framework that it has developed from 1953 onwards by way of trial and errors, and that gradually codified the practice of conditional lending. Joseph Gold, the father of the Fund legal doctrine, played a major role in this development and insisted often that *conditionality should not be construed as a contractual relation*. It was a looser, two-ways exchange of commitments that allows for a lot of on-going bargaining and adjustment during the whole life-cycle of the loan, hence before and after the agreement is signed. A lot of discretion is thus allowed for within the rules of the Stand-By, which structure the on-going game between the two parties unfolds: rules state the successive steps in the development of a Stand-By, the type of commitments that are entered into, the successive tranches in the disbursement of the loan, the clauses for monitoring and for exchanges of information, the exit clauses (or waivers) that might be written into the agreements, or how disputes or failures to comply are to be addressed.

This practice of conditional lending belongs in fact to classic multilateralism: rules are established by sovereigns, they are supposed to apply equally to all, they are also operated by an organization they control (the Fund), and, consistent with the classic, Westphalian definition of sovereignty, the legal language of private rights has remarkably little leverage here. In other words, we could not be farther away from the private law, contractual character of Swaps contracts. This model of governance also comes with a capacity to assemble policy tools and design strategies pragmatically, on an ad hoc basis. The international debt crisis of the 1980s remains here the superior example (Sgard 2016).

After 1990 however the magnitude of financial crisis changed entirely due to the emergence of dis-intermediated global capital markets. The policy implications became clear with the 1994-1995 Mexican Crisis, dubbed the "first crisis of the 21st century". Observers were first impressed, at the time, by the short-run, destructive character of this episode: it unfolded in a matter of a few months, with the key, most dangerous phase of the crisis extending over a few weeks. This not only tested the nerves and minds of crisis-managers, but also the decision-making procedures of institutions. In the old days, negotiating an IMF Stand-By typically took several months, rather than a few weeks, and it would amount in the largest cases to a few billions dollars, rather than *tens* of billions after 1994. What is worst, in the following years, especially with the Asian Crisis of 1997-1998, a fair number of those programs entirely failed to stabilize both the markets and the domestic economies. Such was actually the case in Mexico in 1994, but also in Indonesia and South Korea (1997), in Russia (1998) and Argentina (2001).

Analytically, this new, liquidity-driven model of crisis resulted primarily from the direct connection now established by financial and capital account liberalization between the foreign exchange markets on the one hand, and the domestic banking sector of individual countries on the other. The major risk of a "twin crisis" derives in particular from the possibility for investors and savers to liquidate *en masse* their domestic bank accounts and asset portfolios, then to rush to the foreign exchange market and sell the local currency against dollars (Kaminsky and Reinhart, 1996). A domestic bank panic may thus directly contribute to the collapse of the foreign exchange; and in turn the latter may feed back into the banking scenario, especially if banks have taken on large amounts of short-term, foreign currency debts. At that point, domestic Central banks will soon be paralyzed: lending last resort support to domestic banks may only accelerate the fall of the exchange rate, while ending these LLR operations may trigger a full collapse of the banking sector (Sgard 2002).

In Thailand, Indonesia and Russia, the domestic banking system entirely collapsed in a matter of a few days or weeks. In turn, this caused a freeze in domestic retail-trade, a major contraction of aggregate credit supply, the failure of many viable firms and of course acute social distress. Not least, the potential for cross-country contagion, also briefly witnessed in 1995, took a new dimension in 1997-1998: a crisis that had strong domestic causes in Thailand extended almost immediately to Malaysia and Indonesia, in spite of the limited micro- and macro-imbalances observed in those countries. Shortly afterwards, capital outflows reached South Korea which soon had to call for help (November 1997). In turn, this latter episode revealed the underlying weaknesses of the payment position of Russia and Brazil, which would soon experience a sharp crisis (July-August 1998 and January 1999 resp.).

The IMF as both a Bankruptcy court and an International LLR?

This long series of crisis triggered an intense international policy debate, packed up under the slogan of a "new international architecture" (Clinton 1998). From the mid-1990s onwards, a kind of on-going, international research seminar thus tried to reach a consensus understanding of the issues at stake and the main policy response that could b envisaged. One core topic was how to reform the IMF and consolidate its position as the superior regulator of new global markets. And for sure, the IMF itself was a strong voice at this point: the drive to establish it as a multi-task global financial authority came as much from within as from outside the organization.

Without simplifying excessively, one can summarize the Fund's implicit project, at the turn of the 2000s, around the two paradigmatic approaches that a crisis manager can adopt when confronted to financial turmoil – the bankruptcy procedure (market exit and financial restructuring) and last resort lending (market continuation). To a large extent, the Fund tried to recycle these two instruments that sovereign states have developed historically at the domestic level and to adapt them to two of the most serious policy problems of the day: how to structure sovereign debt in a world of bond-based finance? and how to provide liquidity support to countries exposed to a "twin-crisis" – a banking and a foreign exchange one? There was no suggestion that these two strategies worked in tandem or that they would offer a comprehensive, watertight vehicle for global crisis management. The problem raise by cross-border bankruptcies, especially in the case of large banks, was already perceived at that time as critical. Still, an international LLR instrument and a court for sovereign debtors became de facto the two priorities in this attempt at re-inventing the Fund. In practice, however, the Fund's experimentations on both counts ended up in a substantive and convincing failure. This is the background against which Currency Swaps and the broader movement of crisis management out of multilateralism should be accounted for and its consequences appraised.

The question of how sovereign debt restructuring should be addressed emerged again in the mid-1990s, after it had become clear that the methods used during the 1980s would not work in a world of dis-intermediated finance with thoroughly dispersed investors and debt issuers (Eichengreen and Portes 1995). The key contribution however was the project, launched in 2001 by Anne Krueger, the Fund's own Number Two, to establish a supra-national bankruptcy court for sovereigns, at the IMF or close to it (Krueger 2002). A series of technical papers then followed before the whole proposition was shelved: the US would just not consider the possibility that contracts signed under US law could be interpreted or even intervened by a supra-national authority. In the following years, the whole issue of sovereign debt restructurings then moved steadily out of the Fund's oversight and into that of national courts – primarily the New York South District Court that has jurisdiction over Wall Street. (Weidemaier 2013, and in this volume).

The parallel attempt by the IMF to develop a practice of International Last Resort Lending had a very similar career, one that reflects ultimately the same underlying force at work in a global economy where private agents and private rights often have more leverage than public authorities, especially multilateral ones. For some years, this very phrase – an International LRR - was the keyword for any ambitious, up-to-date, comprehensive project for a new international architecture. Sachs (1995) offered an early and clear-sighted discussion, but other useful contributions include Calomiris (1998), Giannini (1999) or Jeanne et al. (2008). The most remarkable one however was proposed again by the Fund's Number Two, Stanley Fischer, Anne Krueger's immediate predecessor. In a 1998 paper, he starts with a very classic discussion of the LLR doctrine, based on Bagehot classic 1871 essay. From there on, he defends that the Fund can actually assume the function of a LLR, at the international level, by working along similar lines as the national one (Fischer 1999). But in so doing, he defends that the capacity to "print money freely", which is a key to Bagehot's doctrine, is not so important after all.

Just as for sovereign debt restructurings, this proposal was the origin of many attempts at practical reforms. Could the IMF move indeed beyond its classic approach to conditional lending and become a much more potent, rapid-reaction crisis lender? For instance, could it bring forward conditionality oversight and offer an ex ante guarantee that in case of need "good pupils" would receive massive support, under very short delays? And would such strategy be enough to control the self-fulfilling dynamics that are at the core of all systemic crisis, past and present?

A first step in the direction of LLR-type lending by the IMF was the Contingent Credit Line (CCL), adopted with some fanfare in 1999 but abandoned already in 2003 after it has failed to be mobilized once. Emerging market countries, which were the stated clients of this instrument, considered that the ex-ante conditionality was way too intrusive and they feared that signing on this arrangement would be interpreted as a signal of poor self-confidence. A second attempt was the Flexible Credit Line (FCL) and the Precautionary and Liquidity Line (PLL), both adopted in 2009: ex ante control was to be less cumbersome and ex post access to liquidity would be even broader and even more forthcoming than under the previous arrangement (IMF 2009). To this day, only three countries have actually signed on the first proposal (Columbia, Mexico and Poland), and one country has adhered to the second one (Morocco). But again, at the time of writing, not a single dollar has been drawn from these lines.

In other words, these attempts at redesigning the Fund's lending tools did not deliver anything remotely looking like the proxy for an international LLR. And as should now be clear, the reasons for this failure are ultimately institutional, hence political: a Central bank that supports its domestic market by way of last resort lending, with or without currency swaps, acts vis-à-vis commercial banks in an entirely unilateral, non-negotiable, un-conditional way. It may ask for collaterals, but not for a restructuring plan. The Fund's standard rulebook, as said, is essentially about bargaining, arm-twisting, and the gradual convergence towards a policy outcome that might not be too afar from the initial target. The temporality of these two interactions is entirely different. Last but last least, and contrary to what Stanley Fischer had argued in 1998, the IMF cannot commit itself to "lend freely" to distressed countries, and investors know that perfectly well: in Mexico (1995) and in South Korea (1998) the Fund actually ran out of powder and had to cede the lead to US authorities.

The Outcome: a new hierarchy of policy tools and national monies

At the time of the 2008-2009 meltdown, and again after 2011, international policy makers fully acknowledged these lessons. On the one hand, the Fund's new lending vehicles remained unused so that, in practice, it relied exclusively during those years on its old workhorse policy tools, i.e. the Stand-By and its close kins, like the Extended Fund Facility (EFF). At the same time, a very effective International LLR operation emerged among Central Banks, far away institutionally and politically from the IMF. This remarkable policy innovation was also a most effective, if little acknowledged one. As a whole, this experience reveals a rather clear hierarchy of national monies that are differentiated by the type of policy instruments that can be relied upon at time of crisis:

i. At the top of the international monetary system is clearly the US dollar, which position is de facto uncontested, even though the 2008 crisis emerged from the US domestic financial system (Cohen, Dooley et al.). The fact that the Fed did not use, at any point, the foreign currency reserves it received through swaps attests most clearly to this position.

ii. Then come four international currencies that are widely used outside their home-jurisdiction: the euro, the pound sterling, the Swiss franc and the Japanese Yen – probably in this order. Their Central banks and the Fed are bound to work collectively at time of crisis: they are in practice the key operators of the new international LLR. This is illustrated by the huge size of the swap lines they exchanged with the Fed and also by the high intensity of this cooperation.

iii. Then come a group of countries which financial systems, in case of a local crisis, may eventually raise a systemic threat for the global markets. South Korea and Mexico are prime examples. The respective central banks may thus enter currency swaps with the Fed and its three adjuncts, though normally the intention would rather precautionary, or one of signalling. On the other hand, stabilizing such broad and financially developed economies remains definitely a challenge to the IMF, now just as during the Emerging market crisis of the 1990s.

iv. Then are all other countries that do not issue international currencies and do not raise global systemic threats. The standard international policy tool to address crisis in these cases is the IMF Stand-By and its kin.

Beyond the main conclusion is that core countries, whether one thinks to the currency they issue or the systematic threat they may raise, coordinate at time of crisis via their Central Banks only: the IMF may only come in an observer, an advisor or an adjunct service provider. Smaller and peripheral countries, on the other hand, remain the natural clientele of the Fund: they will not receive liquidity support by way of unconditional currency swaps (limited or unlimited), but via a Stand-By, hence with policy conditionality and Fund monitoring. In-between, there is room for uncertainty and, indeed, for policy adjustment. In 2008 Korea was first refused a swap line, but after a sharp volatility in its markets, the Fed extended such line, a move that almost immediately brought an end to this episode. The Chinese Renimbi may also become at a point an international currency so that a systemic crisis may well have large and threatening impact abroad.

Yet, international coordination and cooperation are inherently fragile. They depend strictly on the willingness of sovereign states to play by the rules and to enforce them. The international financial crisis of 1931-1934 has shown how an international regime of financial integration and fixed exchange rate rapidly collapsed and left the way to exclusively national, unilateral policies. One should thus remember at this point the strong resistance observed after 2008 at the US Congress against the very principle of the Fed lending indirectly to foreign commercial banks. If these voices were to become predominant, dollar swaps may not be available next time, a possibility that should leave all central bankers of the world awake at night. Alternately the impact on the IMF of a withdrawal, or just an uncertain support by the US may have far-reaching consequences, given that the credibility of the Fund has rested since 1946 on the backup of the US hegemon.

But unilateralism is already here and, in a sense, it has always been a readily available option: one that was generally criticized but that did not necessarily prove destructive of the world economic order. The most straightforward example brings us back to exchange policies and payment crisis, against which countries may impose capital controls. One of the best-known case is Malaysia, which pointedly refused to call the IMF for help in 1997-1998 and eventually adopted such measures. While this strategy caused at the time an international uproar, the doctrine of the Fund and the G7 countries in this matter has evolved a lot since the turn of the 2000s in the direction a much greater tolerance if not outright support (Gosh and Qureshi, 2016). Whereas capital controls belonged to a no-go zone at the time of the Asian crisis, they are now accepted as, indeed, a last resort option when a financial crisis threatens a whole economy with wanton destruction.

This evolution suggests a less imperial view of “good economic practices” and also a recognition that global crisis may not be addressed with a single, top-down, integrated approach: local, decentralised responses do have a large to play, which global authorities should endorse. Beyond, national governments and Central banks, especially in developing and emerging countries, cannot be expected anymore to stay silent at the receiving end of global crisis management. In the future, they will not ask the permission to do “whatever it takes” to protect their own economy.

In a post-multilateral future, capital controls and liquidity swaps may thus emerge as the twin, last resort options against systemic crisis, respectively at the local/ peripheral level and at the global/ central one. In turn the failure to preserve here a degree of coordination would rise directly, in both cases, the prospect of a dislocation of international capital markets. A free-for-all generalization of unilateral controls by individual countries may thus lead to a scenario of gradual fragmentation of markets, similar to that observed during the 1930s. On the other hand, a US decision not to extend liquidity swaps anymore might cause almost immediately an entire collapse of those markets. Such is in fact the incredible value of the international public good that Central Banks invented on 9/11.

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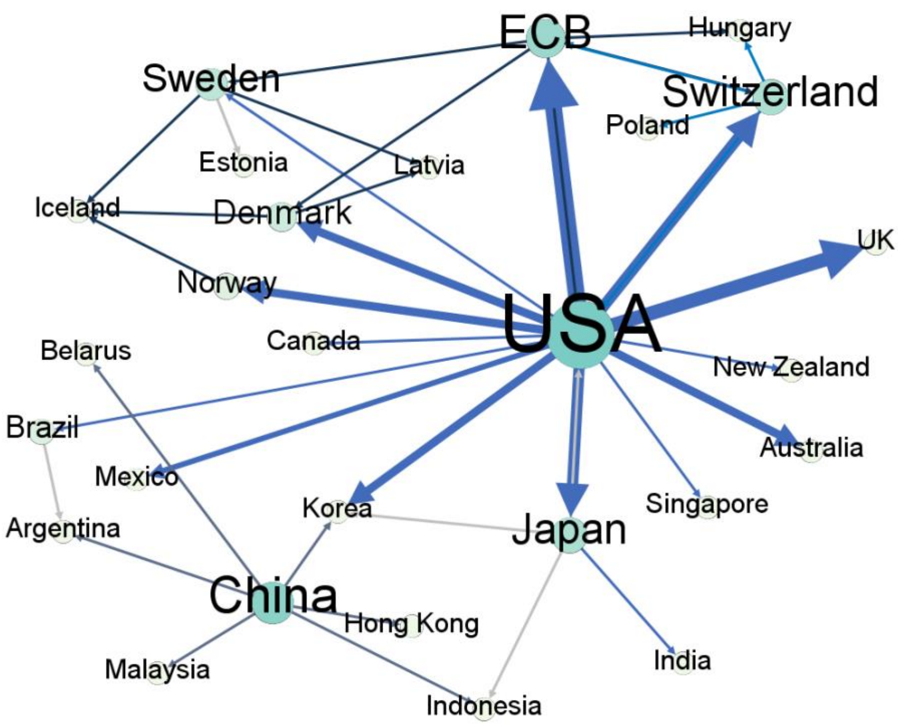
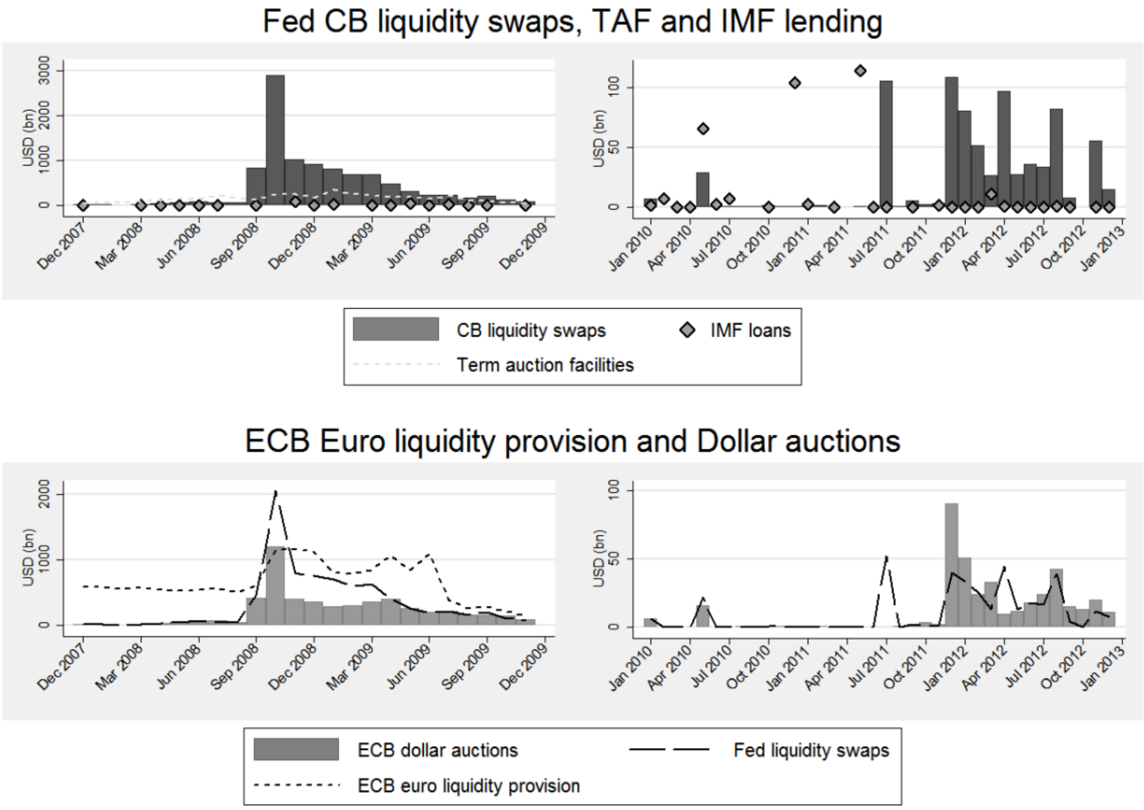
Figure 1 - Central Banks network



Sources:Allen, Mosner (2010)

Note: this figure depicts the liquidity swap agreements set up during the financial crisis. The arow width reflects the amounts of liquidity drawn on the swap lines

Figure 2- Liquidity provision from the Fed, the ECB and IMF



Sources: Federal Reserve of New York, IMF, ECB. Authors' calculation.

Note: this figure shows the amounts of liquidity provided by the Fed, the IMF and the ECB in USD billions equivalent. The upper panel presents the amount of liquidity provided by the Fed to other central banks through swap lines and to the U.S banking system through the Term Auction Facilities (TAF). The IMF loans stand for the outstanding amounts of IMF credit facilities including the SBA, FCL end EFF. The lower panel presents the amount of dollars and euros allotted from the ECB to the European banking system and the amount of dollars received by the ECB from the Fed through swap lines. The ECB euro liquidity provision corresponds to the LTRO and MRO facilities.

Besides being a costly strategy the accumulation of foreign reserves has revealed inefficient during the recent crisis (Rodrik, 2006). The experience of Korea is self-explanatory, following Lehman brothers failure the Korean foreign exchange swap market was under high tensions. The Korean authorities thus decided to use their foreign exchange reserves to provide liquidity to the private sector. This intervention failed to reassure the financial markets and tensions began to regress only when the Fed settled a swap line with the Bank of Korea. (Baba and Paker (2009), Aizenman et al. (2011)). Obstfeld et al., (2010) also conclude that foreign reserves holdings are not enough in extraordinary times as in 2008. This uniletral strategy to insure against currency crisis is not well suited to restore financial stability in cases of liquidity shortage on global financial markets.

Romania for an instance, an EU member-state, did not have access to swaps, either in dollars or Euros, and had to negotiate a Stand-By. [This complementarity has been discussed during the FOMC meeting in October 2008. A similar case appeared with Colombia that asked for an IMF Flexible Credit Line. Poland and Mexico also got this liquidity provision facility.]

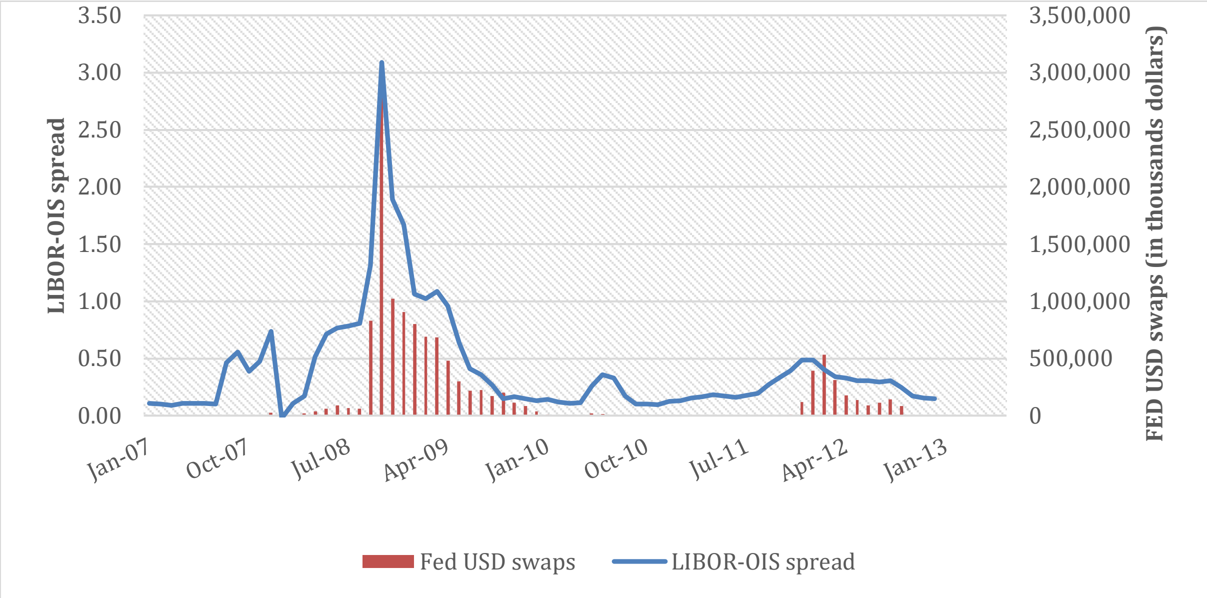
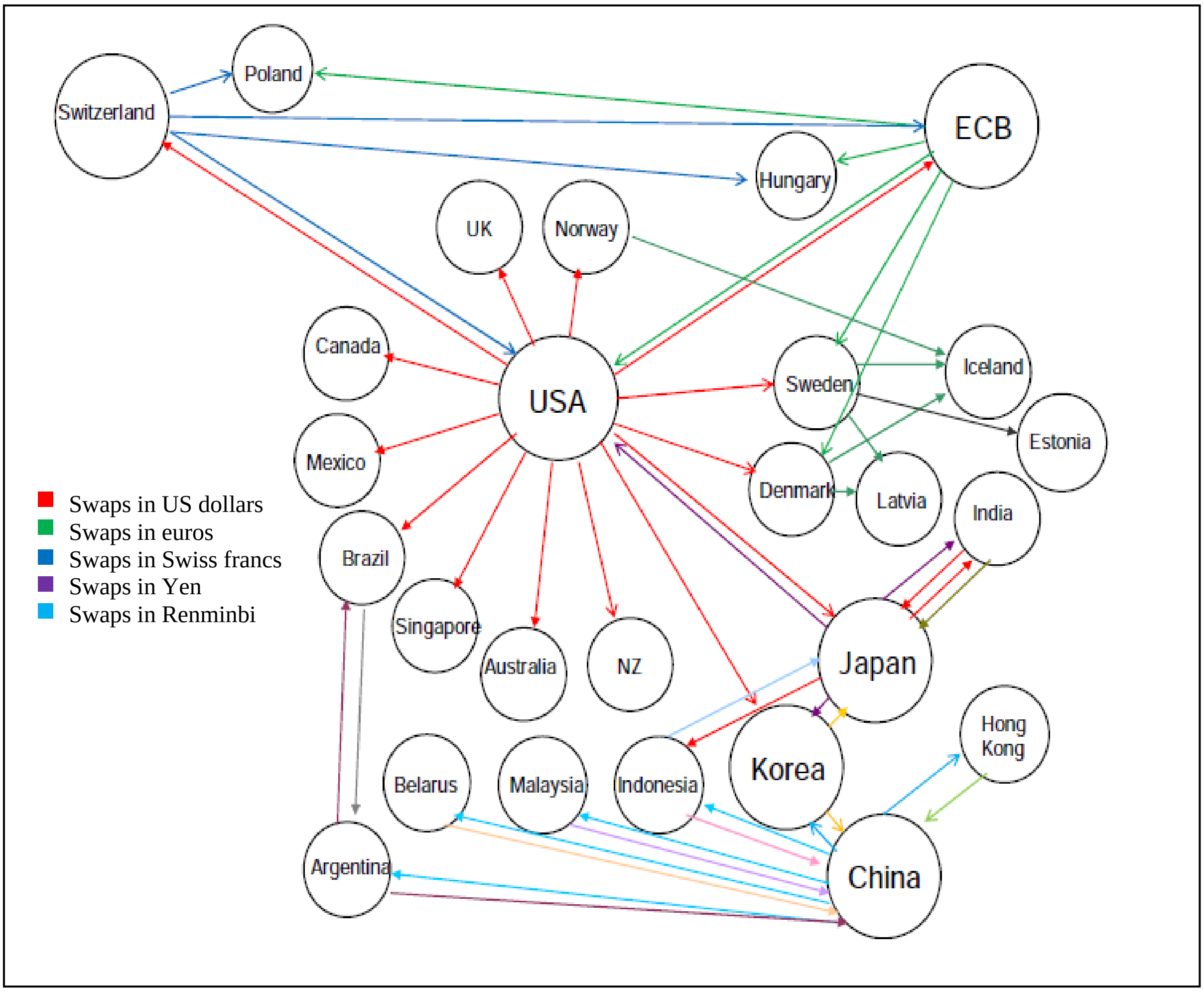

3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
LIBOR-OIS spread
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
FED USD swaps (in thousands dollars)
Jan-07
Oct-07
Jul-08
Apr-09
Jan-10
Oct-10
Jul-11
Apr-12
Jan-13
Fed USD swaps
LIBOR-OIS spread

Figure 3 – Central banks currency swaps network



Sources: Allen and Moessner (2010).