Issues faced by emerging market economies in the evolving international monetary and financial system: what has the global financial crisis revealed?

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I will try to show in these remarks that the tale of the Global Financial Crisis (GFC) can be related, in part, to a lack of local and global discipline that a domestic macroeconomic framework and an international monetary and financial system (IMFS) are supposed to mutually contribute to enforcing. Both should send warnings of and alert to excessive imbalances and price risk more adequately, whether sovereign or private. They have proved insufficient. In addition, the GFC, and especially the post-Lehman unconventional monetary policies (UMP) in key Advanced Economies (AEs) added more complex challenges to the macro framework that Emerging Markets Economies (EMEs) were used to implementing under the rules of Bretton Woods 2 (BW2; see Dooley et al (2004)): managing the "impossible trinity" using their Inflation Targeting (IT) framework became more complicated due to large movements of capital and more volatility in asset prices including the exchange rate (ER). Anchors went missing: there was increased uncertainty about the "new normal" value of key parameters for monetary policy (MP) (eg the nominal and real neutral interest rate in reserve currency areas and/or the future sustainable equilibrium growth rate of output). Thus it became much more complicated to evaluate the pace and intensity of MP cycles. Asset pricing and portfolio composition became more dependent on central banks' asset purchase programmes (quantitative easing, or QE) and their communication and signalling rather than fundamentals. These difficulties apply to EMEs and AEs alike. Therefore, the GFC revealed and/or exacerbated "old" problems regarding: (i) the role of an IMFS – ie whether its self-correcting discipline can work without the support of a much stronger global regulatory framework, particularly for cross-border lending, and some form of international policy coordination; and (ii) whether EMEs can/should lean against the wind (LAW) to manage effectively their local business and financial needs without the complement of other policies – eg including macroprudential (MaP) tools because hiking interest rates could attract even more procyclical "hot money". I will discuss these policy dilemmas, and the complex debates surrounding them, and try to draw some lessons from the GFC for both problems (see also (Caruana (2016b)).

[1] The views expressed here are my own and not necessarily those of the Bank for International Settlements. I thank, without implication, Michael Chui for his excellent contribution to these remarks and Claudio Borio and Philip Turner for useful comments. All remaining errors are mine.

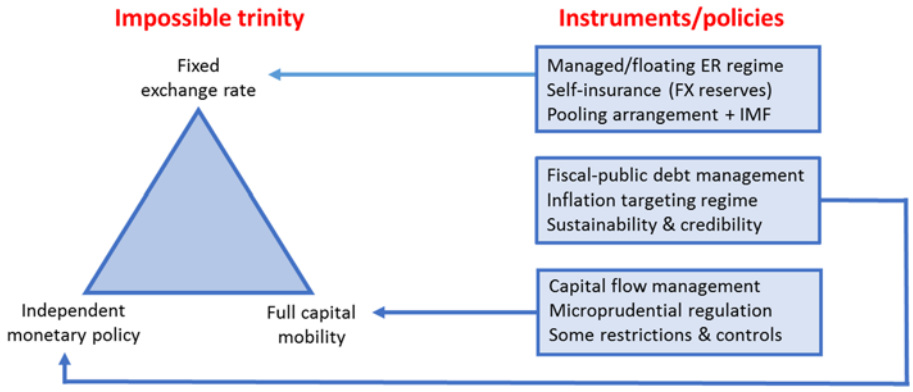
1. Life under the evolving BW2 IMFS: the uneven enforcement of rules between AEs and EMEs

An IMFS should have incentives and rules for "prudent behaviour" and "adjustment" embedded in its framework. But the angle under which you measure things matters (Borio et al (2014)). If one focuses mostly on current account balances and less on financial flows and the capital account, the capacity to detect "potential" global financial crises will be missing. Rules (and institutions, eg the IMF and World Bank) that would help adjust/reduce ("large") disequilibria in the goods markets (eg using "programmed" devaluation and conditional liquidity assistance) would be of limited effectiveness in restraining, in a globalised financial world, the propensity to amplify financial surges and collapses – coined the IMFS's "excess financial elasticity". Accordingly, the perspective from which to assess global systemic vulnerabilities cannot be solely that from the country of residence/non-residence but also the consolidated balance sheets of global financial institutions (banks and non-banks). Therefore, to some extent, financial globalisation gave AEs financial "degrees of freedom" to run large but (apparently) financeable current account deficits (CADs).

On the other hand, under the IMFS format of Bretton Woods 1 and 2 (BW1 and BW2), constraints were indeed binding for specific countries: the EMEs with "original sin" (eg the mistrust of their capacity to repay their debt – a situation "in which the domestic currency cannot be used to borrow abroad or to borrow long term, even domestically" (Eichengreen and Hausmann (1999)). If they wanted to avoid "sudden stops" à la Calvo (1998) of external financing, they had to produce a balanced outcome (eg "behave well" to survive). EMEs learned painfully, through various crises, to operate as consistent as possible a domestic macro-financial framework to benefit from trade, FDI, global integration, etc.

In policy terms, to behave well, EMEs had to live within the constraints of the (Mundell-Fleming) impossible trinity. So, after their 1990s crises, they adopted a macroeconomic policy framework consisting of: a (relatively) floating ER regime, a (relatively) sustainable fiscal policy, and a (relatively) open capital account – all of which, in turn, ensured room for manoeuvre to run a (relatively) independent monetary policy. In that area, analytical work and experience confirmed the effectiveness of conducting monetary policy using inflation targeting (IT) frameworks. Central banks improved their track record, anchoring inflation and expectations at a low and stable level combining interest rate policy with increasingly sophisticated communication and signalling. Financial stability goals and instruments further complemented the framework: the local financial system needs to be well capitalised, strongly regulated and supervised to withstand even unusual shocks. Finally, sufficient FX reserves and/or access to some multilateral liquidity provision were used to withstand short-term shocks. So EMEs learned well how to achieve internal and external stability. Provided their domestic political economy setup did not interfere too much, policies would remain consistent in terms of the ER regime, the openness of the capital account and the spread of the domestic interest rate. The bottom line is that combining prudent domestic demand management that results in a moderate debt level would limit the likelihood of a crisis. While these analytics were known, the "escape valves" for accommodating pressure and the main points of contention revolved around managing the exchange rate and capital flows.

Lesson: "Keep your house in order" Graph 1



Source: Author.

But the main lesson for EMEs was summarised in the motto "keep your house in order" which meant using instruments/policies in a pragmatic way to extract "room for manoeuvre" around the impossible trinity (Graph 1). EMEs relying on foreign savings to grow could not allow to run excessive imbalances, ie large CADs. Any regime incompatibility (eg excess local demand) was rapidly spotted and challenged by markets. Either domestic policy correction took place or a crisis took care of the necessary macroeconomic adjustment. It suffices to observe the many EME crises in the 1990s. A wise summary of the main lessons from EMEs' crisis going beyond those picture in Graph 1 can be found in the "unpublished" Robbins Lectures by Stanley Fischer, delivered at the London School of Economics in 2001 and commented many years later by Maurice Obstfeld (see Fischer (2001), Obstfeld (2014)).[2]

While these lessons were being learned by EMEs, did AEs also keep their "house in order"? Did the IMFS help to enforce "prudence" among AEs, especially issuers of reserve currency? Not necessarily, and in at least the following dimensions:

Prominent commentators (Blinder (2013), Rajan (2005)) saw a significant contribution to the GFC from the combination of a deterioration in the quality of mortgage origination (the US subprime market) and the opaque and complex build-up of poorly regulated financial instruments, disseminated in excessively and highly leveraged interconnected balance sheets, etc. All of this was allowed by inadequate regulation/supervision and (very) bad incentives. The subprime element could also be seen as a manifestation of "financial/credit populism" in AEs. We all know that macroeconomic populism usually appears in its fiscal version and in the Tropics (Dornbusch and Edwards (1991)). But it can also rear up in a different guise in the North. The GFC perhaps showed that the role of government-sponsored entities in the United States, allowing excessive risk-taking by private banks, combined with ad hoc regulation can be seen as a form of complacency with guarantees and/or governance. That was facilitated by accommodative monetary conditions, or "easy money", following the post-dotcom bubble US monetary stance. The systematic purchase by (mostly) Asian surplus countries of large amounts of US debt, and especially Treasuries, contributed to lower term premia (the Greenspan conundrum). All of these acted as "additional" accommodative factors on top of MP. Elsewhere in the aftermath of euro area expansion,

[2] According to Obstfeld's commentary, EMEs did conform by and large to Fischer's prescriptions, evolving toward IT frameworks to deliver stable and low inflation, flexible exchange rates but acknowledging the utility to intervene from time to time provided that no signaling or commitment to a particular exchange rate was made; keeping level of reserves higher than expected under floating ER; aiming at moderate debt levels; there was less progress in international lines of pre-approved credit lines but those lessons allowed EMEs to sail through the GFC.

there was an accelerated reduction of sovereign risk spreads between Germany and the EU periphery, with the complacency of private and public agencies. It certainly facilitated financing in the US market and exerted a procyclical push in an already booming local housing market.

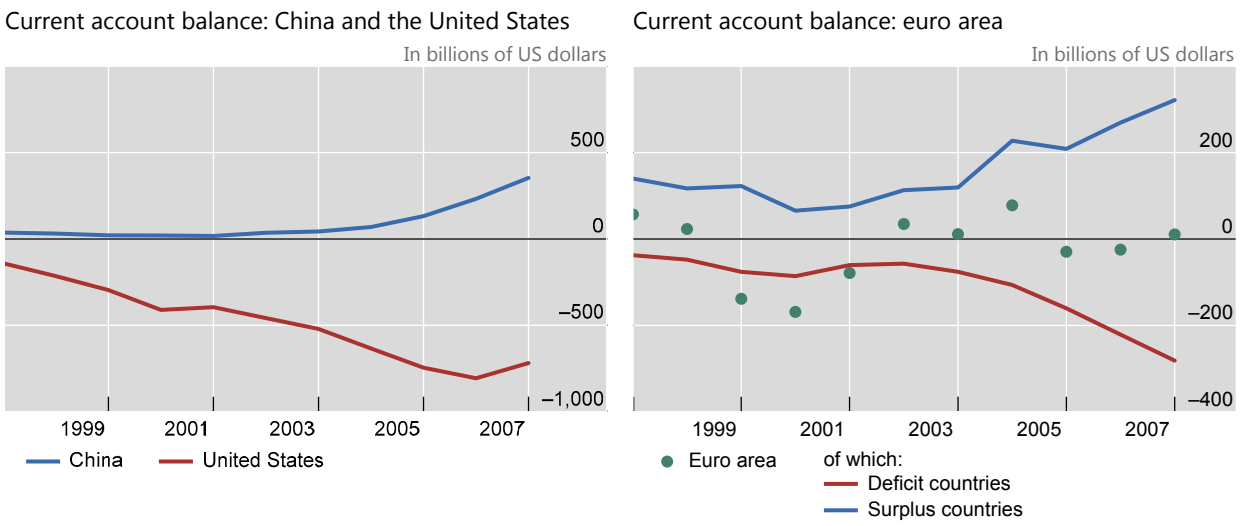
Hence, the GFC was preceded by a generalised debt-driven growth model: the IMFS allowed large "global imbalances" to go unchecked, especially because of oversight in several risk ratings (for sovereigns during the euro area convergence, for households in the United States). And when a poorly regulated global financial system with bad incentives meets "cheap" foreign financing, it can allow large, growing current account imbalances to go unchecked (for quite a while, by recycling surpluses into deficit countries) and exacerbate global financial risk (with traders looking for higher risk premia) (Graph 2). The IMFS framework did not have enough red flags to reverse a "benign neglect" on the part of markets, credit agencies and bondholders, among others, vis-à-vis debt levels in AEs. Whether this was public debt arising from financing the increased mismatch between social welfare needs and capacity to tax, or private debt to sustain excessive consumption levels or housing booms, the IMFS did not penalise AEs as much as it did EMEs.

2. Did the IMFS and financial globalisation facilitate overborrowing?

With the benefit of hindsight, the IMFS under BW1 that later became BW2 never had at its disposal a strict "enforcing" apparatus to fully prevent and resolve crises for countries that did not have to negotiate and enter into an IMF arrangement. Surveillance mechanisms (eg Article IV consultations) tended to focus on the current account deficit countries and mostly on EMEs. Even the size of the resources of the two BW institutions was tailor-made to EMEs' CAD financing needs. The focus on "capital account" crises, with their much bigger financial implications that began challenging the international financial architecture, only started with the end-1990s Asian crises. Meanwhile, financial globalisation was rapidly increasing and partly helped AEs to finance their CADs by recycling EMEs' surpluses (these coming, as they did, from EMEs' commodity boom surpluses, their "saving glut" (Bernanke (2005), Krugman (2009)). In part, financial globalisation acted as a veil and did not incentivise a stricter enforcement of adjustment rules for AEs as it had consistently done for EMEs. Moreover, the IMFS somehow reinforced the role of the US dollar as a currency for settling payments as well as the dominant currency for international financing and funding (Graph 3). Since most cross-border credit flows were in US dollars, BW2 was progressively transformed into a globalised US dollar-based international credit system with mounting dollar-denominated debt (Borio et al (2014), Shin (2016)). As we know in retrospect, the late 1990s and early 2000s saw the accumulation of the systemic risk ingredients that would led to the GFC.

Global imbalances (1981–2007)

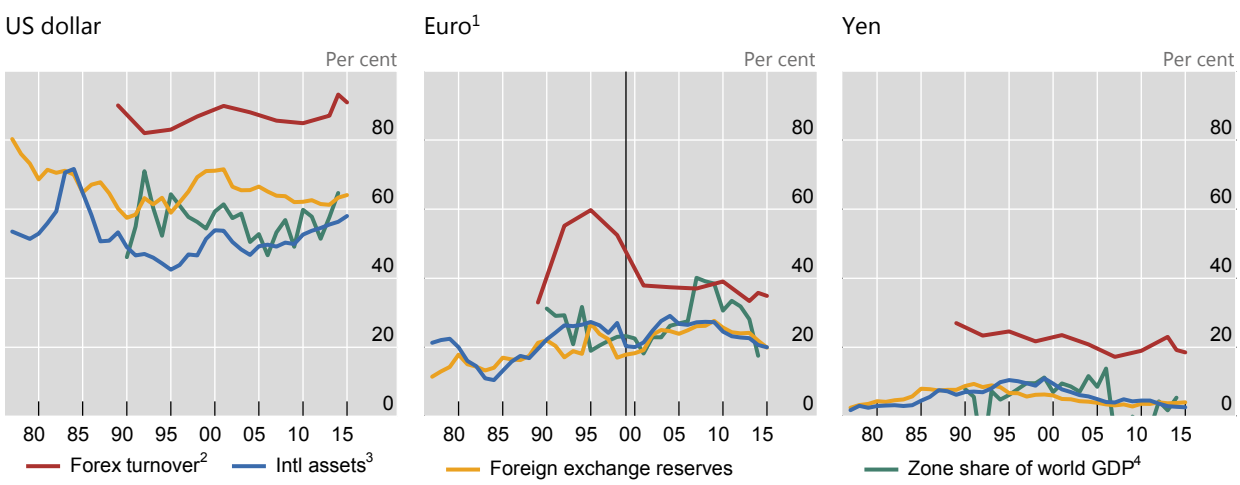
Graph 2



Source: IMF, *World Economic Outlook Database*.

The international roles of currencies: the US dollar remains

Graph 3



[1] Before 1999, "euro" aggregates available for predecessor currencies. [2] The shares sum to 200% because each transaction involves two currencies. 2014 is estimated based on CLS trading data for April. [3] Include bank deposits of non-banks and debt securities. Bank deposits are proxied by all bank liabilities before 1995. For the euro area, bank deposits exclude deposits vis-à-vis euro area banks. Debt securities are based on BIS international debt securities statistics before 1999 and the ECB's narrow measure of euro bonds since 1999, which excludes euro area residents' euro-denominated issues. [4] Estimated as each economy's share of PPP GDP, plus the elasticity-weighted share of all other economies' PPP GDPs.

Sources: ECB; IMF; CLS; Datastream; national data; BIS international debt securities statistics; BIS calculations.

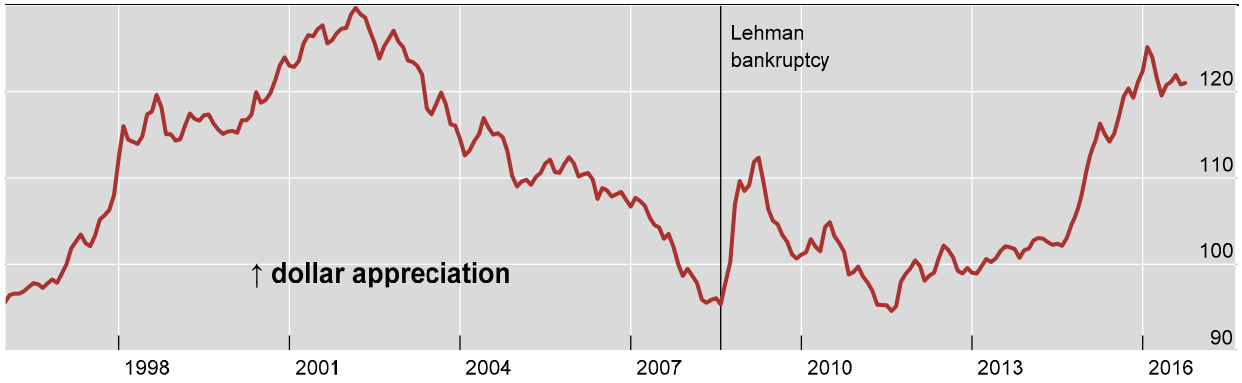
Moreover, even when focusing on the narrow current account (CA) view of global imbalances, the IMFS was not producing a consensus view about the imminence of a GFC. There was a "benign" and there was a "malignant" view: (a) AEs' large CADs could gradually be resolved through a natural regaining of competitiveness by AEs and higher consumption in EMEs; and many technological innovations (eg IT-

based growth) in AEs seemed to back this view up; thus, the benign neglect of large current account imbalances was not foolish, provided they kept being financed by the Asian saving glut or were confined to a monetary union (albeit imperfect); (b) but another strong view was that too much debt is always harmful (Rogoff and Reinhart (2011), BIS (2014, 2015)), that excessive CADs would at some point become non-financeable even for triple-A AEs.

The GFC vindicated many warnings by the BIS. It was preceded by an unprecedented financial boom that created housing price bubbles, too much debt, excessive financial exuberance, etc (Borio and Disyatat (2011)). As we now know, given lax financial regulation, cross-border flows carried significant amounts of opaque toxic assets that contaminated the balance sheets of all major global financial institutions. Those (Roubini and Setser (2005)) that were looking at the GFC as a classical sanction by markets of the accumulated global imbalances in AEs were puzzled. The GFC actually made the US dollar appreciate and it did not follow the traditional pattern of the adjustment instrument that corrects external imbalance (Graph 4). Why? The forces behind the flight to quality (eg towards the US dollar as a reserve currency and to hedge/repay dollar liabilities) were stronger. More people than just export-import traders needed dollars after Lehman, of course. In fact, most large investors need dollars to carry on their normal financial life (Caruana (2016a)): the US dollar is essentially the currency through which investors with a global portfolio of assets operate. Beyond the size of US domestic financial markets, there is a broad "stock" of global US dollar-denominated assets. Since these are held by foreigners, it might create a currency mismatch and hence the need to hedge against ER risk. The US dollar is also needed to fulfil the obligations of various large entities (eg pension funds) vis-à-vis their domestic stakeholders. Although their liabilities are usually in local currency, in most cases their asset side is invested in US dollars. The IMFS might have rules for settling CA in various currencies, but the whole financial system is largely US dollar-denominated. Finally, the evidence of significant funding in dollars across borders can be found in cross-currency swap trading opportunities, an "anomaly" departing from the traditional view that covered interest parity holds but explained by the global demand for US dollars (Bruno, V and H S Shin (2015), Shin (2016)) (Graph 5).

US dollar nominal effective exchange rate[1]

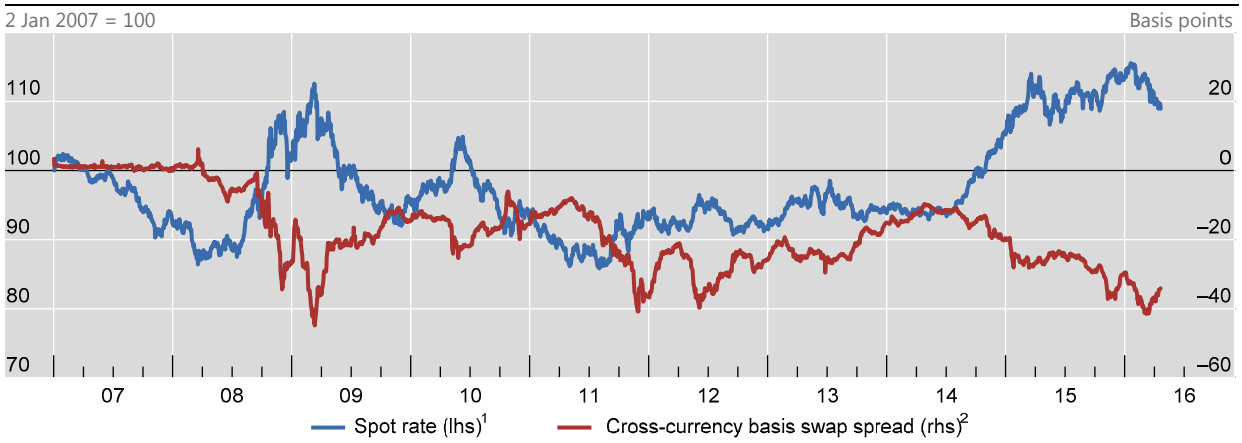
Mar 1973 = 100 Graph 4



[1] Federal Reserve broad currency index.

Source: Board of Governors of the Federal Reserve System.

US dollar exchange rate and the cross-currency basis Graph 5



[1] Simple average of the bilateral exchange rate of the US dollar against CAD, CHF, EUR, GBP, JPY and SEK. Higher values indicate a stronger dollar. [2] Simple average of five-year cross-currency basis swaps against CAD, CHF, EUR, GBP, JPY and SEK vis-à-vis the US dollar.

Sources: Bloomberg; BIS calculations. Graph from Avdjiev et al (2016).

3. New challenges brought by the UMP response to the GFC

So the IMFS acted more as a conduit to accelerate overborrowing rather than sending alerts to trigger a self-correcting mechanism. Compounded by lax regulation, focusing mainly on firm (bank)-level microprudential rules, the system proved somewhat lenient. But what was already a permissive framework channelled even more liquidity with the surge of global "easy money" under UMP. After the first coordinated, G20-led post-Lehman wave of fiscal-monetary countercyclical responses to the GFC in AEs in 2008–09, the deliberations about "additional fiscal stimulus" to the still incipient recovery gave way to a debate about fiscal space and lost the support of the local political economy in AEs. The debate delayed decisions, which pushed independent central banks in many AEs to engineer novel, unconventional monetary policy (UMP) responses to what was perceived to be a still too "mediocre recovery". UMP can be summarised as the combined effect of very low funding costs in the short term (eg putting the policy rate near the zero lower bound (ZLB)); exerting downward pressure on term premia, in particular through the purchase by the central bank of certain assets (eg QE); and "direct" central bank communication in order to affect market expectations that the policy environment will remain accommodative for a long period of time (eg forward guidance (FG)). The underlying assumption was that all this would trigger reasonable long-term risk-taking by stronger financial institutions willing to complete deleveraging and then quickly invest in the real economy. Thus, a new cycle of credit origination and growth would be launched.

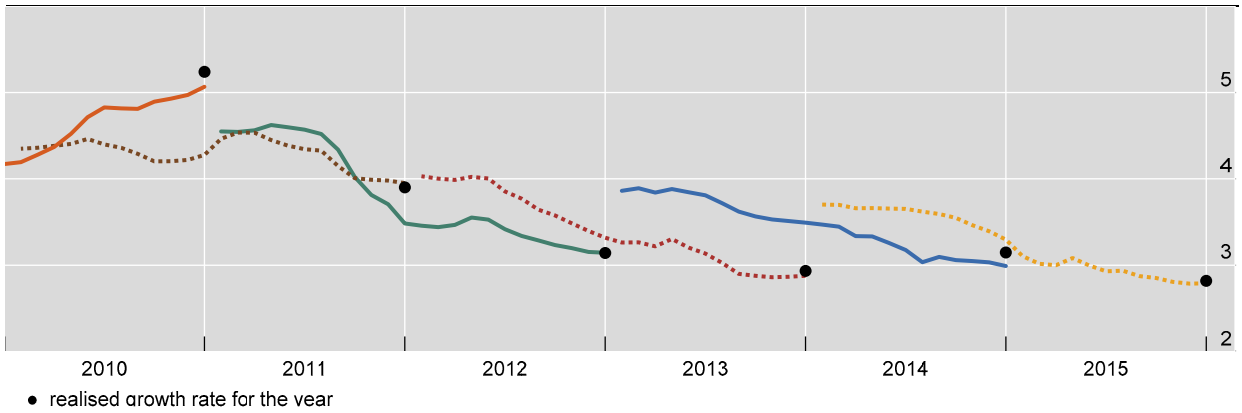
But this is not, as we know, what really happened, although as always the "counterfactual" is unknown and surely an aggressive initial response by central banks "saved the World". But after a while, the response of the real economy remained modest. Perhaps because other factors overcame this direct cost-reducing channel of MP. Or because the euro area debt crisis revealed additional problems in a major currency area. In any event, there was no rebound in "confidence" and "animal spirits" (eg Akerlof and Shiller (2009)). And without that, there was little hope that the virtuous cycle of new credit bringing more growth would materialise quickly. So instead of a relatively short episode of ZLB cum other unconventional instruments, we ended up with a prolonged period of ultra-low interest rates (dubbed "low for long" and

then "very long"). And we perhaps landed in a vicious circle: because UMP was seen as an exceptional recourse, keeping exceptional policies did not bode well for confidence building. One hypothesis is that the more UMP was seen as settling in, the less real sector agents seemed to believe in a recovery. One illustration of that feeling has been the continuous revisions downwards of projections for global growth by the most observed forecasters (eg Consensus and the IMF, World Bank and OECD) (Graph 6).

Consensus forecasts for global growth

In per cent

Graph 6



Source: Consensus Economics.

So despite a set of good performances in getting progressively back to almost full employment in the United States, market nervousness about any hint of MP normalisation called for even more QE each time, as if markets became addicted to some regular form of central bank liquidity provision. Despite the reaffirmation of caution and gradualism by monetary authorities, volatility remained elevated. Therefore MP was progressively cornered into an uncomfortable position: UMP was not really creating sustainable conditions for the resumption of growth (eg measured by inflationary pressure and/or some metric about the output gap) and not trickling down confidence. And any hint of a normalisation of MP created financial panic (such as the taper tantrum). Hence, sticking with UMP was apparently less and less growth-effective while hinting at abandoning it was life-threatening – a singular and very difficult dilemma.

"Currency wars". Given, then, the decreasing capacity of UMP to put growth onto new sustainable paths and help AEs reach their inflation targets, attention shifted towards any possible collateral effect that these ultra-low policies rates might have on the exchange rate, and through this channel on growth prospects. That channel was (provocatively but tellingly) dubbed the "currency war" effect of UMP. Although both the BW2 IMFS and the dominant AE/EME macro frameworks assume and recommend use of a floating ER regime, FX markets were and are affected by the combination of QE and signalling effects by central banks.

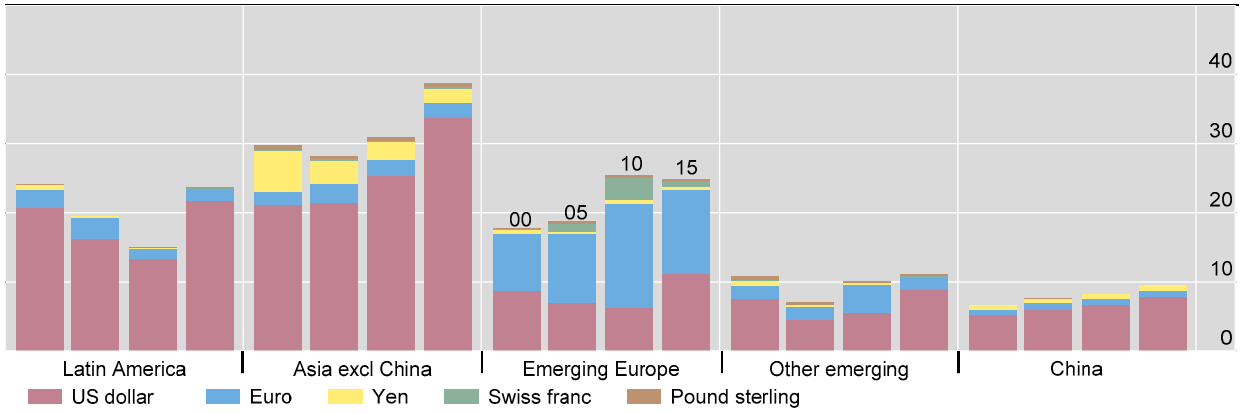
Fiscal policy and new policy mix. When it also became clear that MP alone was not going to deliver the long-lasting sustainable growth rebound, and central banks became "the only game in town", some observers started arguing that the current policy mix in AEs was tilted excessively towards MP and was not using enough fiscal instruments. Naturally, while the debate is now evolving towards rebalancing policies (eg the latest G20 communiqué, of September 2016), it is worth recalling that, at the onset of the GFC, the heated debate between prominent academics about "fiscal space" had fed into the local political economy (eg the difficulties in AEs of considering using more forcefully direct fiscal tools in the context of the difficult debate about the sovereign debt crisis in the euro area). It seems that the assessment of fiscal space now needs to be revisited and hopefully linked with its capacity to be used to improve the efficiency of spending in productivity-enhancing areas (eg, Pereira da Silva (2016)).

Negative Interest Rate Policy (NIRP). Given the insufficient impact of UMP at the ZLB, the debate went into the possibility and the pros and cons of setting policy rates in negative territory. While this seems to be technically feasible (eg Constâncio (2016)), from the viewpoint of NIRP being compatible with well-functioning money markets, there is acknowledgment that a prolonged period of ultra-low (and even negative) rates does have an impact on the health of the financial sector, on banks and, even more so, insurance companies and pension funds, and that it is a complicated narrative to sell to the general public (IIF (2016)). Moreover, from the perspective of keeping savings in an AE at the adequate level, given what is known about the average savings requirement of AEs' ageing societies, the long-term effect of ultra-low interest rates and NIRP needs to be examined very carefully to say the least (Wolf (2016)). In particular, more analytical work is needed to ascertain MP's new "anchors" in what has been dubbed the "new normal". It is obviously easy to speak with the comfort of both hindsight and no direct policymaking responsibility. The rationale, contours and timing of policy decisions post-GFC, ie in the "new normal", have given rise to a number of "puzzles" and "confusion" among seasoned academics and practitioners (Blanchard et al (2016)). But it is also true that markets are experiencing increasing difficulties in evaluating the key parameters needed to grasp the transmission of MP – how the policy rate eventually shapes the yield curve. Where is the so-called r^*, the neutral interest rate in reserve currency areas? How flat is the new Phillips curve and what is the new non-accelerating inflation rate of unemployment (NAIRU)? What is the new potential output and how close are we to it, eg do we believe in secular stagnation à la Gordon or not? Are we simply in a necessary low growth because of "too much debt" and a painful deleveraging process? And hence, would policy rates in AEs stay "low for long" or "low forever"?

The expansionary effect of "global easy money" in EMEs. What is clear is that ultra-low rates and further NIRP created new challenges for EMEs (Rey (2013)). Too much easy money was a "curse" in disguise for many EMEs. It gave a sense of further licence to borrow, that "excessive expansionary behaviour" could be condoned, that "original sin" was forgiven and that markets were now much more lenient towards EMEs (Graph 7). In some cases, this new global complacency compounded what were already excessive fiscal and parafiscal anti-GFC policies in some EMEs, using more credit (debt) to finance consumption or investment. For politicians (but, to be fair, also firms, households, etc) used to central banks "taking away the punch bowl" at the party, it was a pleasant but quite convenient surprise to be able to follow the tide and overspend and overborrow when there was such a low cost for global credit. EMEs were accustomed to facing the binding constraint of "sudden stops" of capital à la Calvo (1998). The GFC's UMP turned the story upside down. Excessive capital inflows, mostly in short-term, "carry trade" flows, led to the classic problems of excessive local financial exuberance; overvaluation of assets, including the ER; and growing CAD as macroeconomic imbalances eventually grew, etc (Chui et al (2016)). In short, "global easy money" makes it even more difficult to bypass deep-rooted traditional EME populism. It creates a "feel good" sensation among all agents, businesses, households, investors and governments. This setting feeds into the local political economy and is extremely difficult to challenge, whether in AEs or EMEs. Naturally, ex post, one would call that "complacency" or "irrational exuberance", but it is difficult to halt this logic ex ante and on the spot. The "party" tends to grow much wilder than otherwise.

US dollar-denominated debt[1]

Ratio of total foreign currency debt to GDP, in per cent — Graph 7



[1] Total foreign currency debt of non-bank residents of the respective economies; simple average across regions; end-of-year figures.

Sources: National data; BIS debt securities statistics and locational banking statistics; BIS calculations.

Therefore the GFC triggered "sudden floods" of capital in EMEs with an unforeseen intensity and magnitude. Excessive borrowing allowed EMEs to become more complacent, derailing the "good behaviour" painfully acquired through their own past crises. The evidence of the spillover effects of QE is well documented (Agénor et al (2014), Barroso et al (2014), BIS (2014, 2015), IMF (2013)).

4. The debate about inflation targeting and leaning against the wind

The GFC also placed an important analytical debate centre-stage, especially because most AEs (and many EMEs) had chosen to conduct MP and ensure price stability using inflation targeting frameworks: should MP also incorporate a financial stability objective? What are the pros and cons of LAW (re asset prices and credit booms) and how should it be implemented? With MP using higher policy rates and/or in combination with MaP instruments? As we all know, this is a fundamental debate for both theoretical and practical reasons, but a (very) complex one that requires paying careful attention to the different analytical approaches and tools used (partial/general equilibrium, closed/open economy) as well as the supportive empirical work.

For some (eg Svensson (2015)), there is little justification for LAW with MP. A higher policy rate is too "blunt" an instrument and produces more costs (eg lower output, higher unemployment and lower inflation) than benefits (eg measured as a lower probability/depth of future crisis). The so-called trade-off, ie accepting lower short-term output for higher output in the longer term, is a weak argument. If LAW with MP does not significantly affect the probability of a crisis, it would unnecessarily weaken the economy and make things worse (not unlike, perhaps, undergoing "preventive chemotherapy" without knowing if one has cancer). LAW thus has an additional cost in the form of the higher cost of a crisis when a crisis does occur. A cost-benefit analysis of LAW shows that costs exceed benefits.

Conversely, others argue that applying LAW preventively with MP should be an integral part of a macro-financial stability framework designed to smooth financial booms and busts systematically and reduce the perverse effects of large financial cycles (Borio (2016)). The intuition is that the benefits cannot be measured only if crises occur. Financial fluctuations create allocative distortions that damage the whole

economy. Therefore the issue is not necessarily to reduce the probability of a crisis and/or its cost. Actually, the bigger the ongoing imbalance caused by resource misallocations, excessive debt, etc, the larger the costs will be in a downturn. So, LAW with MP can control the build-up of vulnerabilities and help to make the economy hover around a "financial equilibrium". It is therefore (Filardo and Rungcharoenkitkul (2016)) desirable to lean against financial booms; and the larger the bubble, the greater the benefit from LAW (as the contractionary balance sheet effect of the crisis will be longer and deeper).

While these two directions are important to explore further with more analytical and empirical work, it is critical to note that MaP tools and MP could be viewed as complements in achieving financial stability. But more importantly, to evaluate their welfare implications, they need to be analysed in a general equilibrium and open economy framework. It is perhaps under this specific angle that a macro-financial stability framework needs to be articulated and the benefits of MP/MaP coordination could be fully assessed. Accordingly, others (Agénor, P-R and L A Pereira da Silva (2013)) propose an "integrated inflation targeting" (IIT) framework. IIT could be defined as a flexible inflation targeting regime where the central bank's mandate is explicitly extended to include a financial stability objective, the policy interest rate is set to respond directly to a (well defined) measure of excessively rapid credit expansion, and MP and MaP policies are calibrated jointly to achieve macroeconomic (price) and financial stability. The calibration needs to be conducted in general equilibrium and open economy macroeconomic models that account for the key fact that macroprudential regimes may alter the monetary transmission mechanism.

Under the IIT regime, since multiple instruments will be used to achieve macroeconomic and financial stability, policymakers need to ensure that they understand the interaction of macroeconomic and financial stability in the context of the transmission process of monetary and real shocks. It is also important to investigate the transmission process in the context of imperfections and frictions that account for the economic environment of EMEs. Once these precautions are taken, an IIT with an augmented Taylor-type rule could be explored. Naturally, the central bank will have to deal with the issue of credibility and expectations. Its credibility will be affected by any hint of a new policy regime, ie the introduction of a modified reaction function, if its objectives are not communicated properly to and well understood by the public.

The debate is not trivial, nor is it complex. There are still difficult analytical challenges, as well as discussions outstanding on how to LAW for EMEs or AEs, and there is no unanimous mindset among academics and policymakers. The pragmatic approach applied so far in many EMEs (Pereira da Silva (2013)) has been to combine a flexible inflation targeting MP framework with macroprudential tools to reduce temporarily excessive cross-border credit flows (using eg reserve and capital requirements, FX interventions and, in some cases, capital flow management (CFM) measures). Those policies have proved quite effective in moderating capital inflows and leaning against excessive financial exuberance when applied consistently with other demand management tools locally and if and when the external global environment is reasonably calm.

5. The debate about how the regulatory framework can make the IMFS less debt-friendly

Having a more pragmatic IIT that responds more aggressively (eg with MaP policies, FX interventions and CFM measures) to the post-GFC challenges (eg massive capital inflows affecting the domestic financial cycle and asset prices) is necessary but not sufficient to prevent crisis. The IMFS needs also to contribute to the stabilisation efforts. One way to correct past weaknesses and their perverse incentives is to strengthen the global financial system through adequate regulation that would ensure more discipline for large cross-border flows and/or at least contribute to more adequate pricing of the systemic risks associated with very large capital flows.

The new global regulatory (ie Basel III) framework, inter alia, contributes to that end by:

(a) obliging financial institutions to have an adequate level of and more equity-like capital – more resilient financial institutions can resist shocks with more capital, provisions and liquidity;

(b) proposing an additional capital surcharge for systemically important financial institutions (SIFIs);

(c) having a much stronger, higher-quality regulatory Basel III minimum capital base that can absorb larger, several standard-deviation crises;

(d) not allowing debt-like hybrid instruments to be counted as capital;

(e) creating new instruments that become capital in specific crisis-like circumstances (eg "bail-in-able" products);

(f) ensuring that the system is well provisioned, and has sufficient liquidity – only specific highly liquid instruments will be allowed;

(g) reducing the size of large SIFIs, by shrinking too-big-to-fail financial institutions that create moral hazard;

(h) avoiding regulatory arbitrage – coverage and applicable prudential rules should be capable of including all providers of financial services (eg insurance, shadow banking, all providers of some form of credit);

(i) improving trading and transparency of financial instruments (eg securitisation, over-the-counter derivatives) – financial instruments should be easier to understand, as standardised as possible and traded in central clearing houses;

(j) clarifying resolution mechanisms for complex, global banks that operate across several jurisdictions; and

(k) improving accounting, disclosure and data quality to properly assess risk in the financial system – transparency and data quality could be promoted through registration of financial transactions.

Would a tighter regulatory framework applied in each AE and EME be enough to deter excessive cross-border flows? Do we need to consider other policies if we aim at "global financial stability", "sustainable growth" and "price stability at a local and global level"? Naturally, policymakers will have to evaluate the trade-off between making the financial system stronger by imposing stricter rules to avoid excessive risk-taking, having more "skin in the game", removing public "bailouts", the need for financing innovation, growth and socioeconomic development in EMEs, and flows that seek higher but riskier returns, etc.

6. The debate about how international monetary policy coordination could work

When both the domestic and the international policy frameworks have deficiencies, the issue of international monetary policy coordination (IMPC) emerges. First, regarding MP, the traditional view is that national central banks should only be concerned with their own domestic conditions and that international coordination is only relevant if other monetary policies affect domestic output gaps and inflation. Hence, local MP prescriptions can largely abstract from considering openness. But then, in the light of the "currency wars" mentioned earlier, with cross-border spillovers and incentives to manipulate the terms of trade, some suggest that gains from international policy coordination may become more relevant. That is especially true if asset market distortions prevent efficient global allocation. And that is exactly what we are observing with the collateral effects of the ZLB and NIRP. These policies are triggering a potential

increase in global systemic risk and a "flight out from zero" of capital away from all AEs running a NIRP (eg the euro area, Japan and Switzerland). That explains part of the observed surge in the cross-currency basis, as explained earlier.

So despite the textbook neglect for IMPC, some observers (Mohan and Kapur (2014)) are suggesting that AE central banks need to acknowledge the negative spillovers resulting from their policies. While these central banks have standing mutual swap facilities among themselves, they could consider swap lines with central banks of systemic EMEs in order to – without creating moral hazard or condoning excessive US dollar borrowing by EMEs – reduce or smooth volatility in global financial markets. In the absence of such arrangements, others (eg Eichengreen (2013)) point out that suboptimal policies are put in place. Perhaps IMPC between AEs and EMEs would have been better than isolated uncoordinated policy responses that culminated in excess liquidity in AEs and global markets as well as CFM measures as a "response" by EMEs instituting capital controls. The old challenges for BW2, especially now post-GFC, are calling for a new reflexion about IMPC. We know that MP in AEs in the current state of affairs presents risks for global financial stability (eg the taper tantrum). But is IMPC a realistic proposition? Would an independent AE central bank be capable of arguing to its political representation that "external financial stability considerations" are also part of its decision-making process? Would the policy rate decision in AEs be subject to any potential spillover effect on other economies? The communication by major central banks has certainly improved and recognised this dimension, but not to the point where it would imply explicit IMPC.

A second best perhaps would be international policy coordination through MaP policies, which could set costlier capital requirements for "excessive" cross-border lending above a certain threshold. Would that have prevented the excesses between the core and the periphery of the euro area? It is hard to say. Another type of MaP policy that could be regarded part of a process of international coordination in a different way might be to consider coordinating the setting of capital requirements and CFM measures or "capital controls" on both sides (eg recipient and issuing jurisdiction). This type of international coordination through MaP policy could be an interesting avenue for policymakers to explore further.

7. Conclusion: How to reach balanced outcomes with sound financial regulation and a supportive IMFS

The key question is how to build a local and international (IMFS) macro-financial framework that ensures locally internal and external balances, avoids an excessive build-up of debt, smoothes excessive financial cycle exuberance and at the same time favours the financing of some risk-taking to expand the production frontier, potential output and productivity?

Let's remember what the original plan was under the BW version of the IMFS. A (happy) few AEs were issuers of reserve currency and the main originators of capital flows into EMEs, etc. For EMEs, it was expected that prudent management and keeping their "house in order" could allow all of them to overcome their "original sin"; and, at some point in time, the EME currencies would little by little become part of a global, "ideal" Bancor or SDR, an adequately weighted basket of all "credible" convertible currencies. The pool of investable, "risk-free" or rather "low-risk" assets would grow. That would then create solid foundations for reasonable, stable, non-speculative, FDI-like flows between all countries – AEs and EMEs alike, but especially low- to medium-income EMEs. Seventy years after BW, the only case that seems to be following that nice narrative is the renminbi and China, and this reflected China's size in global trade more than the openness of its financial system. At the same time, AEs were also supposed to behave "well". Given their stronger institutional frameworks, they were supposed to ensure the financial stability of their banking sectors, provide global liquidity without shortages or excesses, and allow a reasonable development of global finance without engineering global systemic financial risk and overreliance on one

exclusive funding currency (the US dollar). Global banks were also supposed to wisely use their dominant position to finance projects and/or low-savings countries and not take excessive risks.

The GFC disrupted a number of virtuous paths that we thought we were taking. It revealed larger than anticipated interconnected weaknesses in our IMFS (eg imperfect ways to enforce the build-up of excessive imbalances), in our regulatory framework (eg excessive risk-taking, moral hazard, easy contagion in a globalised financial system, the licence to borrow and get too much into debt, etc) and in the local typical macro framework used by EMEs to integrate into the global economy and global financial markets.

So the response to the key question above remains pretty much a "déjà vu" (BIS (2015)). Everyone (AEs and EMEs) needs to work on strengthening their domestic macro framework and putting their "house in order" from a macro-financial perspective; and the global regulatory framework needs to be strengthened to contribute to reinforcing the disciplinary dimension of the IMFS. Some aspects of IMPC need to be discussed further, especially given the current potential volatility that MP divergence and UMP have created. It would be especially interesting to see if the coordination of MaP policy across AEs and EMEs could be a potential win-win for the IMFS. Even with its limitations (eg the "exorbitant privilege" of the US dollar and the anomalies that were discussed), the IMFS combined with MaP coordination and sound local macro frameworks could offer a progressive way out of the policy stance prevailing in this phase of the GFC.

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