



## IMF Conference - Rethinking Macro Policy III: Progress or Confusion?

April 15-16, 2015

### Session 5: Capital Inflows, Exchange Rate Management and Capital Controls

## Some lessons of the Global Financial Crisis from an EME and a Brazilian perspective

Remarks by

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### 1. Introduction: “progress” and “conundrums” after the Global Financial Crisis (GFC)

The topic of this session<sup>2</sup> is “capital flows, exchange rate management and capital controls” or to use a current terminology, capital flow management (CFMs) and I would like to give an emerging market economy (EME) perspective. I don’t want to over-simplify but let me suggest that, for many of us, the Global Financial Crisis (GFC) gave a sense of “*déjà vu*”: what happened with advanced economies (AEs) is very much what we experienced and knew about large debt-financial crises putting aside size and scope.

From this angle, I see some “progress” in many ways. The GFC had a lax regulatory component at its origin<sup>3</sup>, which we, in EMEs, knew very well from our past experiences with bad origination, high debt and currency mismatches. To some extent the GFC validated many aspects of the pragmatic policy framework that EMEs in general and Brazil in particular have been using to ensure macroeconomic and financial stability in our countries. This framework allowed us to conduct monetary policy with independence even in an increasingly financially globalized and interdependent world. The GFC also showed the importance of quickly unleashing countercyclical policies to respond to a severe collapse in confidence, using extreme, albeit necessary, versions of highly expansionary policies (e.g. including fiscal and Unconventional Monetary Policy action or UMP). In EMEs in particular, we knew that too, and for the first time had some (fiscal and monetary) room to join the collective G20 counter-cyclical effort. And we also understood how to pragmatically manage the spillover effects of UMP while maintaining our macro-financial frameworks (an Inflation Targeting (IT) and flexible Exchange Rate Regime (ERR)) and preserving our stability.

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<sup>2</sup> Last year’s “Rethinking II” focused this session on the importance of the choice of an adequate exchange rate arrangement for emerging market economies (EMEs) and the role of macroprudential instruments and capital controls in mitigating the effects of global excessive liquidity. See Akerlof G., O. Blancher, D. Romer and J. Stiglitz “What have we learned, macroeconomic policy after the crisis”, MIT Press, 2014.

<sup>3</sup> A. Blinder, “After the Music Stopped”, Penguin Press, 2013.

Having said that, I do not necessarily see “confusion” but “conundrums”: why such massive stimuli still delivered so little growth in advanced economies (AEs)? Why are we debating whether we are in just a “plateau” waiting for a new growth cycle or in a “secular stagnation” desert? Did we underestimate: (a) the “balance sheet” effect of high-debt crisis with its effect on weakening both credit multipliers and financial accelerators? (b) the political economy that can complicate (to say the least) any coordination between monetary and fiscal policies; (c) a “structural change” in labor markets that affects “traditional” Phillips curves? and/or (d) changes in the post-GFC value of key parameters of central bank reaction functions such as the NAIRU and the neutral interest rate?

I will not dare trying to solve these “puzzles” and will concentrate my remarks on lessons of the GFC from an EME and Brazilian perspective for capital flows, exchange rate management and capital flow management. I will deal essentially on how we developed a “pragmatic” policy framework to address “sudden stops” and “sudden floods” of foreign capital while maintaining an independent monetary policy aiming at macro and financial stability.

## **2. How did EMEs end up with a pragmatic policy framework? Learning from our typical crises of the 1990s**

The GFC displayed many familiar analytical features for us, in EMEs and Brazil in particular, because of our currency-financial crises of the 1990s. These crises originated a large body of literature that pointed regularly to a perennial problem of policy inconsistency. In many cases, the local political economy leaned toward macro-populist policies<sup>4</sup> that expanded domestic absorption to unsustainable levels in order to grow faster and/or accommodate conflicting demands over the budget and resources in general. Whether the component of aggregate demand driving the excess was consumption (Latin America) or investment (Asia), both cases ended in a debt crisis, a banking crisis, a currency crisis and high or even hyper-inflation. The severity of the ensuing crisis naturally depended on other features such as fiscal profligacy, financial fragility, available reserves vis-à-vis forex liabilities under the chosen exchange rate regime (ERR) and other institutional characteristics such as various forms of indexation, monetization of deficits and of conducting monetary policy. Despite, of course, significant differences between EMEs and AEs in governance, institutions and income per capita, from a macroeconomic perspective there are some resemblances (e.g., financial exuberance and intra-Eurozone bank credit flows in the wake of convergence, neglecting self-imposed fiscal thresholds and debt ceilings, quasi-fiscal guarantees for the housing sector to enhance social inclusion, etc.).

In the case of EMEs, naturally the first step after the 1990 crises was to put boundaries to fiscal and para-fiscal excesses especially in countries with several layers of government (and thus debt). That implied first prohibiting monetization of deficits, privatizing and relying on rules (of law) and less on discretion. In parallel, monetary policy lessons were learned<sup>5</sup> and most EMEs moved their policy frameworks first from money-targeting to exchange rate (ER)-targeting and then to inflation targeting. An important part of the lesson was also to understand the macro-financial dangers of

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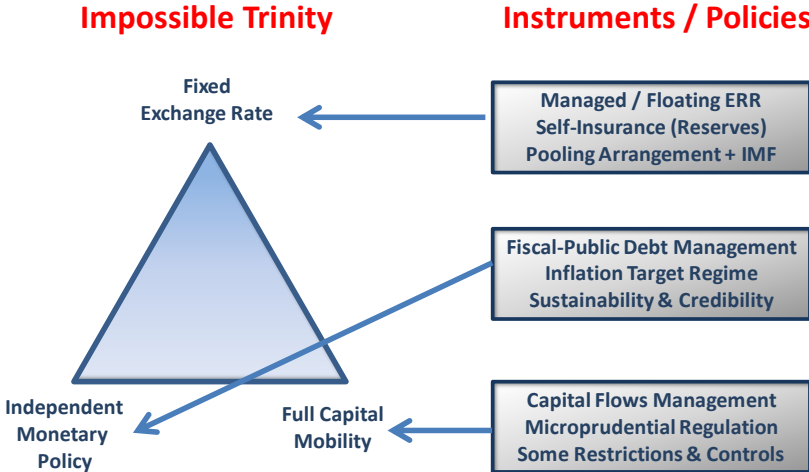
<sup>4</sup> See Dornbusch R. and S. Edwards, (eds.) “The Macroeconomics of Populism in Latin America”, University of Chicago Press, 1991.

<sup>5</sup> Frankel, J. “Monetary Policy in Emerging Markets”, in Handbook of Monetary Economics, Vol. 3B, North-Holland, 2011, pp. 1439-1520.

destabilizing external shocks for fixed or even pegged ER arrangements for EMEs and progressively adopting a flexible exchange rate regime (ERR)<sup>6</sup>. That went pari passu with understanding that capital flows to EMEs are essentially pro-cyclical and therefore that prevention is better than cure: in order to avoid the typical confidence-crisis triggering à la Calvo “sudden stops”<sup>7</sup>, we came to the logical conclusion that we needed stronger fundamentals, sound macro-financial policies and buffers of self-insurance to pursue our own development strategies in a stable and sustainable way if we wanted to make good use of foreign savings.

Many EMEs came out of these episodes with a sobering and pragmatic way to face the challenges of the new global world or, in other words, to “manage the impossible trinity”. In essence, the pragmatic option was to: adopt a floating ERR as a first line of defense against external shocks; keep debt, especially public debt, within reasonable limits –if possible— through legal explicit rules; and control inflation by implementing a credible monetary rule, in many cases using an inflation targeting framework. The “pragmatism” consisted in building (some) self-insurance and/or using multilateral liquidity when need be and, if forex global markets were excessively jittery, to smooth volatility in local forex markets. The conjunction of these textbook plus pragmatic policies and regimes were capable of building policy credibility and maintained fiscal and external sustainability.

Figure 1



**3. How come, almost like everybody else, we underestimated the GFC? What have we learned from it?**

Well, because perhaps the gray area in this pragmatic framework was how to combine financial stability with the “divine coincidence” of output-price stability.

<sup>6</sup> Mishkin, F. “Monetary Policy Strategy”, e.g., Chap 17, “The dangers of Exchange Rate Pegging in Emerging Market Countries”, pp.445-463, MIT Press, 2007.

<sup>7</sup> Calvo, G. “Capital Flows and Capital-Market Crises: The Simple Economics of Sudden Stops”, Journal of Applied Economics, (Nov-1998)

It was assumed that –in complement to the pragmatic framework above-- using a set of microprudential regulations, i.e., rules that would apply to each individual financial institution, the financial system as a whole would remain stable. Under average financial conditions that might have been true. Another way to explain this “under-estimation” of systemic financial risk is to remember the benign neglect with which we brushed aside some pre-crisis warning signals of trouble (e.g., “global imbalances”, “irrational exuberance”, “asset price booms”, etc.).

In any event, major novelties emerged in the last couple of decades that had positive and negative (risky) aspects for exacerbating financial cycles<sup>8</sup>: (a) the financial system became larger in size, much more global and interconnected; (b) financial globalization spread and while allowing larger local imbalances to get financing globally, it also made possible to accept pusillanimous attitudes toward debt (“this time (seems always) different” but never is)<sup>9</sup>; (c) financial innovation improved risk metrics, created new products and facilitated financial outreach but it also allowed more opacity to grow unnoticed in large, interconnected balance sheets of globalized too-big-to-fail financial institutions; and (d) prolonged periods of very low short-term interest rates and very moderate inflation seemed to confirm our full control of the business cycle but also enticed to take more risk with more leverage and less capital.

In a nutshell, the GFC left all of us with the following questions or lessons:

- (1) Financial regulation and supervision cannot simply focus on individual firms’ conduct and risk and need to adopt a macroprudential perspective to identify weaknesses in the financial system as a whole and mitigate systemic risk;
- (2) Low and stable inflation does not, by itself, guarantee financial stability; the logical next question is whether central banks need to rethink their role in preventing the build-up of systemic risk and financial imbalances;
- (3) If so, should monetary policy respond to (some measure of) financial (in)stability; should we revisit the (old) debate of “leaning against” the financial cycle versus “cleaning after” asset bubbles burst; and what metric of financial (in)stability should be considered an early warning indicator (e.g., asset prices)?

The post-GFC reflexion<sup>10</sup> seems to go in the direction of a “New Normal” and another “pragmatic” framework: in order to address macro and financial stability objectives, monetary and macroprudential policy are independent, but can act in a complementary, coordinated way with their respective instruments to achieve price and financial stability. Although a kind of “divine coincidence II” between macro and financial stability objectives does not seem to exist, under a “New Normal”, either a single unified or two different authorities can act effectively combining demand management policies with macro-micro prudential tools in order to achieve macro-financial stability.

In particular, the G20, the Financial Stability Board (FSB) and the Bank of International Settlements (BIS) made a significant effort to address the excessive pro-cyclicality of bank lending behavior that

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<sup>8</sup> Borio C. “The financial cycle and macroeconomics: What have we learnt?” BIS Working Papers, No. 395, December 2012.

<sup>9</sup> Rogoff K. And C. Reinhart, “This Time Is Different”, Princeton University Press, 2009.

<sup>10</sup> See IMF “Key Aspects of Macroprudential Policy” <http://www.imf.org/external/np/pp/eng/2013/061013b.pdf>, 2013, and IMF “The Interaction between Monetary and Macroprudential Policies”, January 29, 2013, <http://www.imf.org/external/np/pp/eng/2013/012913.pdf>, O. Blanchard, D. Romer, M. Spence and J. Stiglitz (ed.) “In the Wake of the Crisis, Leading Economists Reassess Economic Policy”, IMF, 2012.

tends to exacerbate exuberance. This effort led to the idea and implementation of counter-cyclical regulatory instruments<sup>11</sup> (e.g., counter-cyclical capital requirements, maximum leverage ratio, minimum liquidity requirements and more stable medium-term funding ratios) that would prevent and/or limit global/local financial cycles by making pro-cyclical behavior more costly due to the need to raise more capital and/or keep more liquid assets in balance sheets.

#### **4. How EMEs enhanced their pragmatic policy framework with MaPs, the Brazilian experience**

Therefore, in addition to the behavior of bank lending in general, for EMEs the GFC did pose specific and more complex issues of macro-financial stability. We were used to manage an “Old Normal” of “sudden stops” of capital flows. Now, we had to learn how to maintain macro-financial stability under a “New Normal” situation of “sudden floods” of capital flows. In other words how to avoid the transmission of external exuberance into our local asset and credit markets by combining monetary policy (MP) and macroprudential tools (MaPs) and using when needed capital flow management instruments (CFMs)?

Indeed, depending on the nature of shocks, the scope for using monetary policy may be limited, with the additional “pulling effect” of MP in the case of “sudden floods” of capital. That might represent a serious issue for EMEs as these flows are often a cause of macroeconomic and financial instability<sup>12</sup>.

The problem is not capital flows per se, it is their volume and intensity; when it’s too much, it can lead to excessive credit expansion, lower quality of credit origination, increased financial system exposure to exchange rate risk, asset price distortions (including excessive exchange rate appreciation), and even inflationary pressures (if the inflationary effects from the boom in aggregate demand surpass the opposite effect stemming from exchange rate appreciation). Easy global money can boost domestic demand in whatever policy stance the economy might need to be; it amplifies expansion beyond what you might desire; you might have then to slow down expansion sooner than envisaged; the “party gets too wild too soon”. And when you get this “feeling good” mindset, it complicates even further your domestic political economy (sometimes already complex even without easy money); that means it hampers your capacity to slow down the “party” with policy instruments that depend on political cycles; this is for all countries AEs and EMEs alike. Then, if you tighten MP it might exacerbate short-term inflows and compound potentially destabilizing forces in domestic asset markets<sup>13</sup>. It is a threat to financial stability and in particular, the collateral effects of UMP in EMEs

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<sup>11</sup> See inter alia for the CCCB, Drehmann, M., C. Borio, L. Gambacorta, G. Jiménez “Countercyclical capital buffers: exploring options”, BIS Working Papers. No 317 and Basel Committee on Banking Supervision. Consultative Document. Countercyclical capital buffer proposal. Issued for comment by 10 September 2010

<sup>12</sup> See Rajan, R (2014): “Competitive monetary easing – is it yesterday?” Speech at the Brookings Institution, Washington DC, 10 April, Rey, H (2013): “The global financial cycle and monetary policy independence”, paper presented at the Jackson Hole Symposium, 24 August and Agénor, P.R., Alper, K. and Pereira da Silva, L.A. “Sudden Floods, macroprudential regulation and financial stability in an open economy”, *Journal of International Money and Finance*, 48 (2014), 68-100.

<sup>13</sup> In 2010 only, emerging markets and developing economies received almost USD 225 billion in net portfolio flows. This was more than double the already very strong portfolio flows received in 2007, just before the crisis, and can be compared to an average level of net portfolio flows below USD 20 billion earlier in the decade.

was real exchange rate appreciation, widening of current account deficits, a more rapid credit and monetary expansion, asset price pressures, as documented for example in the case of Brazil<sup>14</sup>.

The Brazilian experience might be useful to illustrate how we enhanced our pragmatic policy framework: (1) keeping an independent monetary policy and acting accordingly to address domestic inflationary pressure; (2) strengthening the robustness of our financial system, that is well-capitalized, liquid and well-provisioned; (3) using MaPs to avoid excessive domestic credit growth; (4) using forex interventions to smooth volatility and provide forex hedge to our domestic firms; and (5) now that we approach the full exiting of UMP (with the prospects of a forthcoming rate rise in the US), strengthening our policies to sail through this last phase of the GFC.

During the phase of large inflows in 2011-2012, corresponding to the beginning of the Federal Reserve (FED) asset purchase programs or quantitative easing (QE) in the US<sup>15</sup> and massive capital inflows into Brazil, we used a combination of MP and MaPs that tighten capital rules. These measures aimed at calibrating consumer credit growth (e.g., asking more capital for some consumer loans, lowering loan-to-value (LTV) and hiking reserve requirements (RR)). We also enhanced the monitoring of household indebtedness and raised reserve requirements to reduce excessive bank exposures in forex). These rules were eventually relaxed when we had to turn to the next phase of the GFC.

The next phase began when the FED started communicating in May 2013 that it could start moderating its assets repurchase program. Global financial markets became more volatile and there was a process of re-pricing risks sometimes leading a sell-off of emerging market assets. As usual, market perceptions toward EMEs seemed to have shifted more than fundamentals might have warranted: the optimistic view of the immediate post-GFC rebound was replaced by a gloomy pessimism. However, by end-2013, and since then, the tapering took place and there was a significant improvement in sentiment, more cautious and detailed communication including about the next logical steps by the FED which would be the timing of the beginning of rate movements. There too, the general sense is that the full exit from UMP with a rate increase, at the appropriate time, is a welcome transition to a more normal global monetary policy condition. Since that would be a result of economic recovery in the world's largest economy, it shall be a net positive for emerging market economies, which will benefit including through global trade.

In Brazil, in addition to our experience with "sudden stops", "sudden floods" and improved fundamentals, we prepared ourselves for this transition. In particular, we designed and implemented a foreign exchange intervention program to provide timely and ample hedge to mitigate financial risks arising from monetary policy normalization in the US. The program was adopted in August 2013 and was last renewed in December 2014 until March 31<sup>st</sup>, 2015, when it was not extended. However, all swaps expiring after May 1<sup>st</sup> 2015 will be rolled over. The program was successful in preserving financial stability, providing forex hedge to private agents. Approximately 80% of the stock of swaps

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<sup>14</sup> See Mohanty M.S. "The transmission of unconventional monetary policy to the emerging markets", BIS Paper No 78, September 2014 or Barata J., Pereira da Silva L.A. e Soares A., "Quantitative Easing and Related Capital Flows into Brazil: Measuring its effects and transmission channels through a rigorous counterfactual evaluation", Working Paper No. 313, Central Bank of Brazil, July 2013, forthcoming Journal of International Money and Finance.

<sup>15</sup> See Pereira da Silva L.A. and Harris, R. "Sailing Through the Global Financial Storm" Chapter 7 in Carrasco and alii. (eds.) Managing Capital Flows, ADB and Oxford, 2014.

is allocated in non-financial companies. The total amount supplied, approximately US\$ 114 billion, correspond to about 30% of our foreign exchange reserves.

## **5. Conclusion: our pragmatic framework is at work and showing its resilience in this (last?) phase of the GFC**

With the benefit of hindsight, the GFC revealed that both mature and developing countries, advanced and emerging economies (AEs and EMEs), despite obvious differences in institutional maturity, could have crises with similar ingredients: too much financial exuberance, too much debt, inconsistent exchange rate regimes (ERR), lax fiscal, lax monetary, lax regulations, poor governance and a political economy favoring unsustainable expansionist policy stance, etc.

Like many EMEs, but with our stronger prudential and regulatory differential, we developed in Brazil a pragmatic policy framework, building from our experience with our past crises of the 1990s and strengthening it with standard policies to ensure price stability (an IT regime) and fiscal responsibility laws (a set of rules to control public debt). We also adopted a flexible exchange rate as a 1<sup>st</sup> line of defense against external shocks.

Our framework sailed well through the various phases of the GFC and proved resilient. Are there any general lessons?

First, keep the “old pragmatic framework” as strong as possible (e.g., the flexible ERR, the sound fiscal stance generating low levels of indebtedness, a strong IT framework, etc.).

Second you need a solid financial system, an intrusive supervision with the relevant and timely information (market infrastructure) about vulnerabilities so that the regulator can act preemptively. Indeed, we rely on the robustness of our financial system. The Brazilian financial system is well capitalized and liquid, and provisions are high. Our financial system has a historically low default rate and is very resilient to variations in the exchange rate. There is low reliance on cross-border financing. Foreign currency debt is also low and the bulk of it is hedged through exports, assets held abroad or financial hedged. We had already a number of stringent microprudential regulations and an intrusive supervision of our financial system that ensure its resilience and health (e.g., above Basel minimum capital requirement, high level of liquidity and provisions and very detailed market infrastructure with mandatory reporting of financial transactions and trading through CCPs).

Third, an important issue is to communicate well the separation principle that ensures that there is a clear understanding that each policy objective will be addressed by one policy instrument even if naturally there could be ex-post complementarity between them. It helps to strengthen the rationale and the credibility of the policy framework as a whole.

It seems that both the practical experience of some EMEs (and Brazil) and the new analytical work that has been testing policy responses to external shocks simulated by DSGEs with a financial sector,

using both MP and MaPs, indicate promising avenues to design a consistent approach to achieve macroeconomic and financial stability<sup>16</sup>.

A summary of these features is in Figure 2 below. While Brazil sailed well through the GFC, we developed during the last couple of years, typical “twin” imbalances (e.g., current account and fiscal deficits) that eventually affected private sector confidence. In 2015, we are precisely now in Brazil addressing the challenges of a transition year where: (a) a double adjustment in relative prices in the economy is taking place (i.e. a realignment of administered prices vis-à-vis the consumer price index and external prices vis-a-vis domestic prices through the exchange rate); and (b) a consistent set of fiscal measures, which include the reduction of current fiscal and parafiscal expenditures, the elimination of subsidies, realignment of public utility charges, as well as more structural measures are being put in place; the measures have the objective of sending public debt in a declining path in the medium term.

Figure 2:

Macro-economic Stability (Activity / Inflation & Financial)				
Policy Areas	Price Stability	Debt Stability	Financial Stability	
	Monetary Policy	Fiscal Policy	Macro-Prudential	Exchange Rate
Policy Instruments	CB Rate Policy under Clear Arrangement (Flex IT, etc.) to Manage Activity/Inflation and Anchor Expectations	Short-term Credible Fiscal Targets to Stabilize (Gross, Net) Public Debt-to-GDP; Medium-Long Term Public Debt Management	Reducing Excessive pro-Cyclicality, i.e., smoothing financial accelerator and credit multiplier; reducing “excesses” in prices & quantities	Floating as 1st Line of Defense, Reserve Accumulation for self-insurance, FX Intervention to Avoid Excessive Volatility, FX hedge program to strengthen Financial Stability, etc.

Therefore, our framework is precisely being strengthened in this (hopefully final) phase of the GFC. In Brazil, monetary policy has been, is and will remain vigilant to assure the convergence of inflation to our 4,5% target by the end of 2016. Under these circumstances the role of monetary policy is paramount and its objective is to contain the second order effects which result from these relative prices adjustments, circumscribing their impact to this year (2015) and anchoring inflation expectations to the 4,5% target by the end of 2016.

The achievements obtained in the fight against inflation, as exemplified by favorable signs from the medium- and long-term expectation indicators, however, are not sufficient. Given that, it is necessary for monetary policy to remain vigilant.

In any event, we are confident that our framework will succeed in fostering macro and financial stability in Brazil while our experience might be useful for other EMEs.

<sup>16</sup> For a review of EMEs approaches on this issue see, Agénor, P.R., and L. A. Pereira da Silva, “Inflation Targeting and Financial Stability: A Perspective from the Developing World”, CEMLA and IDB, 2013. <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=38367231>