Lunch Panel Session of the April 2nd 2013 Conference at the Peterson Institute for International Economics (PIIE): "Currency Wars and the G-20's Goal of Strong, Sustainable, and Balanced Growth"

From Currency Wars to Policy Peace under the G-20

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Summary: *The severity of the global financial crisis and its protracted recovery made a case for implementing unconventional monetary policies (UMP) in many advanced economies (AE). As we all know, in this context of abundant provision of liquidity, low interest rates and low growth prospects, the currencies of many advanced economies have weakened. Furthermore, unconventional monetary policy, however necessary for the recovery of AEs, has also produced side effects on emerging markets such as capital flow spillovers, which have put unusually strong pressure on emerging markets' inflation, domestic asset prices and local credit markets. In Brazil, we have tried to measure those effects through a rigorous counterfactual evaluation and they are significant. To countervail those "destabilizing" effects, policy reactions in emerging markets have combined textbook counter-cyclical fiscal and monetary policies with macroprudential (MaP) instruments to manage demand and preserve their own financial stability. Among these instruments, interventions in forex markets – which included capital controls-- aimed primarily at reducing exchange rate volatility. This overall context was dubbed: "currency wars" and by bringing additional policy uncertainty it might have affected market sentiment ("animal spirits") vis-à-vis the recovery. Ironically, that might have especially impacted investors' perceptions about emerging markets' policy predictability since many ad hoc interventions had to be used to face waves of capital flows in a complex risk-on/risk-off international environment. The bottom-line is that for both advanced and emerging economies, this is hardly a globally welfare-enhancing outcome: excessively volatile cross-border flows might create in the South "sudden stops" and "sudden floods" while not contributing in the North to the reactivation of credit multipliers and much needed risk-taking at home. Therefore, there is a role for the G20 to promote better cross-border regulation and foster policy coordination to create a more cooperative global environment. Given the still fragile external environment and the remaining uncertainties about the global recovery, we certainly need more dialogue than confrontation.*

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Introduction: the G20 and the "currency wars"

The debate about the G20 and currency "wars" or currency "manipulation" actually started much before the global financial crisis. Remember that the major pre-crisis policy issue was the rise of large and seemingly unsustainable "global (current account) imbalances" with excess savings on the one hand and excess consumption on the other, underlying asset transfers between large systemic surplus and deficit countries. It was in the mid-1980s the dispute between the US and Japan in part solved by the Plaza Accord. It became by the early 2000s an issue where the spotlight was on the US-China relationship[2]. The debate has incorporated a critique of China's export-led growth model that compounded its low labor cost advantage with an "under-valued" currency. That exacerbated current account imbalances and created global systemic risks as seen in the run-up to the Asian financial crisis.

Global imbalance issues produced a huge academic and political economy literature where arguments varied from accusations of outright currency "manipulation" that needed immediate correction to "strategic patience" to allow more time for real wages in China to catch-up with AEs' and progressively result in currency appreciation. The optimistic view[3] rested on the assumed "self-correcting" nature of the imbalances: persistent current account imbalances were a win-win situation for both deficits and surplus countries. Surplus countries would benefit from expanded markets for their goods and services, taking advantages of economies of scale and scope and enhancing competiveness. In addition, residents of surplus countries, including governments, would be able to channel their excess savings purchasing high quality assets abroad. Deficits countries, in turn, would benefit from absorbing external savings, financing their development through a large pool of resources, often at low cost. The opposite view rested on the fact that global imbalances, by definition, are unstable. Excessive investment or savings at the national level together with global financial integration would lead to the build-up of significant financial and economic fragilities and risks in balance sheets of banks and firms. Depending on market and economic conditions those risks could materialize.

In any event, at that time the major risk that the G20 and others (e.g., the IMF) were mainly concerned about was that of a "confidence crisis" on the sustainability of the US running large current account deficits. That's when the G-20's goal of "strong, sustainable, and balanced growth"[4] was first formulated and a (Global G20 Policy) Framework to achieve that objective began to be discussed. The Framework and its subsequent by-products such as the Mutual Assessment Process were a way to frame high-level multilateral policy discussions around the highly sensitive issue of national growth models and strategies and its negative spillovers effects. They implicitly and diplomatically conveyed the idea that some global coordination of policies has globally welfare-enhancing effects and that some form of a commitment to act could be reached through the G20 process. The analysis was rather general and uncontroversial, pointing to the need for a more

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[2] In retrospect perhaps we could have detected then what we can see clearly now, a similarly worrisome structural "imbalance" within the Eurozone's current accounts, between its core and its periphery.

[3] Cooper (2007), Dooley, Folkerts-Landau, and Garber (2003)

[4] The Group of Twenty Countries or G20 was created to be a high level forum for multilateral policy discussion and coordination, complementing the surveillance (IMF) and investment (World Bank) framework of the international financial architecture with a decision-making instance capable of exerting peer pressure and leading by example. The Framework is the document that aims at guiding global policy-making in a cooperative fashion.

balanced growth path with a rotation in the sources of global growth with a more sustainable pattern for consumption and savings; and structural reforms in order to engineer this transition and make it last.

1. The Crisis and advanced economies (AEs) Policy Responses: from Zero Interest Floor (ZIF) to Forward Guidance (FG), Quantitative Easing (QE) and Unconventional Monetary Policy (UMP)

The crises that eventually stroke us in 2007-2008 was not the “global imbalance”-related confidence crisis that the G20 Framework has tried to discuss and prevent although some commentators[5] like Roubini & Setser (2005), Obstfeld & Rogoff (2009) and Borio & Disyatat (2011) had made the connection. It was indeed a typical financial crisis located at the core of AEs and of an unprecedented large size. Alan Blinder (2013) describes with precision the origin of the disaster with the perverse combination of deterioration in the quality of mortgage origination (the US subprime market), opaque and complex built-up of poorly regulated derivative instruments, disseminated in excessively and highly leveraged interconnected balance sheets, etc. and all that allowed by lax regulation-supervision and (very) bad incentives. The lax regulation features more prominently than lax monetary conditions. The connection with the “global imbalance” story might have been that the systematic purchase by (mostly) Asian surplus countries of large amounts of US debt and especially Treasuries could have contributed to maintain lower term spreads than otherwise and therefore acted de facto as an “additional” accommodative factor for monetary policy (the “conundrum” and the “savings glut”). It could have eased financing conditions in the US financial markets[6] and exerted a pro-cyclical push in an already booming housing market perhaps contributing (decisively?) to the housing bubble.

In any event, the speed of propagation, the size of the financial *cum* real damage and the global nature of the crisis were unprecedented. Fortunately for us, AEs policy-makers seemed to be well-prepared having learned lessons from the Great Depression and post-bubble Japan in the 1990s. They acted, fast and decisively indeed. Pretty much the whole old and the brand new arsenal of macro policies have been used by AEs. The good news: it looks like we have managed to avoid a 21st century New Depression. Very powerful bazookas have been fired and succeeded, no doubt thanks to the unprecedented, bold, timely and coordinated fiscal *cum* monetary policy action taken by the G20. That included reaching quickly a Zero Interest Floor (ZIF) or a zero bound policy rate monetary policy; giving explicit signals that this low rate will be maintained for a prolonged period of time (forward guidance or FG); and, in addition, implementing various forms of quantitative easing (QE), all leading to unconventional monetary policy (UMP) in many advanced economies. As stated by Chairman Bernanke (2012) *“(...) declining yields and rising asset prices ease overall financial conditions and stimulate economic activity through channels similar to those for conventional monetary policy. (...) Large-scale asset purchases can influence financial conditions and the broader economy through other channels as well. For instance, they can signal that the central bank intends to pursue a persistently more accommodative policy stance than previously thought, thereby lowering*

[5] Obstfeld and Rogoff (2009), Roubini, Borio and Disyatat (2010)

[6] As much as financial integration in the Eurozone also facilitated the financing of housing bubbles in Spain, Ireland, etc. with the very rapid pace of (too rapid in retrospect) risk premia convergence across Eurozone members.

investors' expectations for the future path of the federal funds rate and putting additional downward pressure on long-term interest rates, particularly in real terms."

The common sense idea was that balance sheet (BS) repair in AEs (of banks first and then also of firms) conducted with the extraordinary help of fiscal and monetary authorities will progressively restore credit multipliers and the financial accelerator. With base rates at ZIF, term spreads anchored down for a prolonged period of time with FG, and with liquid balance sheets thanks to QE, investors' animal spirits will be boosted, risk-taking will resume and firms will start re-investing, re-hiring, etc. This has been supported by sophisticated academic analysis (Woodford (2012) where the purchase of assets can work both as quantitative easing (QE) but also through the expectations channel because markets see it as a form of forward guidance (FG), as well as other commentators. Krugman argued for example that when monetary policy is at ZIF, the central bank can still boost activity if it can convince markets that it will pursue a more inflationary policy than previously expected after the economy recovers, suggesting that *"the central bank needs to credibly promise to be irresponsible"* in order to entice more spending and consumption. This is not without controversy, since central banks (in particular the Fed) have always reassured politicians that policy will revert to normal as soon as possible, that they remain alert about inflation.

How come that with all weapons deployed that the recovery is taking longer than all previous episodes, that it is still so weak perhaps with the exception of some green shoots in the US? The bad news is that BS repair with its painful deleveraging took and is taking more time than anticipated. We strongly suspected that in 2009 but now know in 2013: this new combination of unprecedented conventional and unconventional monetary policy cannot solve all the fundamental problems advanced economies face. These problems include the size and fiscal characteristics of Welfare States mainly in advanced economies. Those pending and unresolved issues affect confidence and "animal spirits" of investors and spill over from one AE to the other[7].

2. Collateral Effects of ZIF+FG+QE

So yes, ZIF+FG+QE worked and saved, we hope, the World but did produce collateral effects especially for emerging market economies (EMEs). First, there was a spillover of the large pools of liquidity under QE and the new financial conditions prevailing in AEs (including their term spreads) into the weakening of AEs' currencies. How? Excess liquidity in AEs' financial institutions BS translated into (limited) new credit, (a lot of) excess reserves and (a little) investment into (relatively) safe foreign assets: other smaller AEs' assets (including their currencies such as the Canadian and Australian Dollars, the Swiss Franc, etc.); futures' commodities markets; but also (some) emerging markets' assets (including their currencies such as the Brazilian Real, etc.). Secondly, given the size of EMEs financial and asset markets compared to the expansion of AEs' central bank balance sheets, even a little bit of carry-trade may and in fact represent a significant pressure on macroeconomic and financial stability.

[7] Almost five years into the crisis, behind the word "over indebtedness", what seems to be dragging the recovery are political economy issues. Quite possibly some of AEs problems can only be addressed by new innovative "social pacts" that could really overcome the seemingly intractable political economy paralysis in AEs. Yet, it is hard to see how, when and with whom in the presently fragmented and divided political arena in the US, Japan and Europe.

That's why EMEs' policy makers point out that a possible important side effect of QE has been "excessive" capital inflows in various forms of carry-trade that triggered in turn excessive growth in domestic asset prices and local financial system aggregates. The BRICS reaffirmed for example that "*excessive liquidity from the aggressive policy actions taken by* (advanced economies) *central banks to stabilize their domestic economies have been* ***spilling over into emerging market economies****, fostering excessive volatility in capital flows and commodity prices"*[8].

AEs' policy makers argue that QE policies were aimed at sustaining growth and avoided extreme negative events, therefore supporting growth in emerging market economies as well. "*The G7 Ministers and Governors, reaffirm (…) that* ***our fiscal and monetary policies have been and will remain oriented towards meeting our respective domestic objectives*** *using domestic instruments, and that we will not target exchange rates."* [9]

Hence, QE policies and their effects became a hotly debated subject among policy makers and academics in the post-crisis environment. There is controversy as to the effectiveness and possible global spillovers of this combination of policy measures. Against this backdrop, the IMF has undertaken a set of studies[10] on the possible spillover effects of policies conducted by five major systemic economies (the US, the Eurozone, Japan, China and the UK) in the post-crisis environment. While the study concludes that we have evidence of highly correlated asset prices, negative effects of financial shocks, and that "*the actions and inactions of systemic economies have far greater effects on the world than in normal times*", the report is mostly based on Fund's global macro-model simulations which did not explicitly consider counterfactual scenarios. So, who is right? Apart from QE's announcement effects on financial variables, which can be observed empirically and in an almost real-time fashion, most academics would be very skeptical about reaching final conclusions on any effect of QE without adequate evaluation models and, in particular, would point to the difficult construction of a compelling counterfactual argument.

3. Measuring the "Destabilizing" Effects of ZIF+QE through a Rigorous Counterfactual Evaluation in Brazil

That's why (see Barroso, Pereira da Silva and Sales (2013)) we have decided in Brazil to proceed in a more rigorous way, using the Heckman tradition of building counterfactuals[11] for policy evaluations of these policies on the Brazilian economy. We have tried going beyond the simple "intuition" about the potential destabilizing effects of QEs and investigated if QE have had spillover effects on emerging markets, and, if so, how much of these effects could be attributed to excessive capital inflows. We focus on the Brazilian economy and on QE policies adopted by the Federal Reserve. The methodology is an extension of Pesaran and Smith (2012)[12]. It results in estimates of *ex-ante* and *ex-post* policy effects over a grid of counterfactuals. We propose a multivariate model where the

[8] Fourth BRICS Summit: Delhi Declaration, New Delhi, March 29, 2012.
[9] Statement by the G7 Finance Ministers and Central Bank Governors in preparation to the G20 meeting in Moscow, February 15-16, 2013.
[10] IMF 2012 Spillover Report, http://www.imf.org/external/np/pp/eng/2012/070912.pdf
[11] The counterfactual tradition mean answering the question "what would have occurred if some observed characteristics or aspects of the processes under consideration were different from those prevailing at the time." In a panel, we explore similar individuals. In a time series, we explore similar time patterns.

different channels are represented and formulate an exact decomposition. The method was applied to a large set of domestic variables, under a large grid of counterfactual scenarios, and allowing for possible structural breaks. Therefore, we are able to highlight robust results across a range of specifications with an ample scope to evaluate how destabilizing has been quantitative easing and related capital inflows into Brazil. Our counterfactual evaluation shows results that are consistent with the view that QE policies in advanced economies had significant spillover effects on the Brazilian economy. These effects were mostly transmitted through excessive capital inflows that led to exchange rate appreciation, stock market price increases and a credit boom. Our results quantify the economic significance of the effects which appears clearly and are sizeable.

First, and as suggested by EMEs' policy-makers, capital inflows into Brazil were found to be the most important transmission channel of quantitative easing to other domestic variables. This conclusion follows both from the relative importance of the capital inflows in channel decompositions and from the fact that only the capital flow channel was consistently statistically significant across variables and samples[13]. The effects were non-trivial indeed and make it harder for emerging markets to manage both macro (price) and financial stability. Since capital inflows are the main channel of transmission of this process, there is a case for capital inflow regulation, possibly from a macroprudential perspective and taking into account interactions with monetary policy (Agénor, Alper and Pereira da Silva (2012); Barroso, (2012)). The effectiveness of regulation would have to be assessed, perhaps with the same methodology proposed at the aforementioned paper.

But second, as suggested this time by AEs' policy-makers, domestic economic activity in Brazil would generally be lower without QE policies. These policies did also produce positive spillover effects into EMEs. Hence, the evidence is in partial agreement with the argument sustained by AEs' policy-makers, that QE have had positive spillovers to economic activity in EMEs, including industrial production, capacity utilization, employment and civil construction, even if all those effects cannot be attributed to capital inflows alone.

4. EME's Policy Responses: Complementing Standard Aggregate Demand Policies with Macro-Prudential Policies (MaPs) and Capital Controls

While many AEs were struggling to cope with the global crisis, most EMEs like Brazil used counter-cyclical policies to engineer fast V-shaped recoveries in 2009-2010 (see Pereira da Silva and Harris (2012)). However, many EMEs experienced some over-heating and in order to deal with inflationary pressures arising from their strong rebound, implemented standard aggregate demand management instruments (tight fiscal and monetary policies). Brazil followed textbook recipes to slow down its own recovery that was hovering at a 7 ½ percent GDP growth pace end-2010 well above potential growth.

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[12] We also provide a decomposition of the transmission channels of the policy effects, an important contribution, and test for their statistical significance. The channel decomposition is an important contribution. Pesaran and Smith (2012) were not able to explore it because they used a single equation model.

[13] The additional capital inflows resulting from QE2, for instance, were estimated to be of the order of 100 USD billion (almost a third of our international reserves). This was associated with additional 0.9% of GDP of non earmarked credit to households, a fall of 5 percentage points in interest rates in reference loans, an increase of 12% of GDP in the stock market value, a nominal exchange rate appreciation of 20 basis points, with a counterfactual exchange rate of 1.8 against the actual 1.6 BRL/USD

But Brazil had simultaneously to deal with the above-mentioned QE+UMP global environment of excess liquidity in 2010-2011. That context makes policy-making more challenging. A combination of monetary policy action with strong financial sector regulation and supervision to continue to ensure financial stability, in particular, using a set of MaP instruments have been a pragmatic answer to the challenges.

As far as the credit market is concerned, the main MaP measures implemented were: (a) increased bank reserve requirements to dampen the transmission of excessive global liquidity to the domestic credit market; (b) increased capital requirements for specific segments of the credit market (essentially consumer loans) aiming at correcting a deterioration in the quality of loan origination; and (c) new reserve requirements on banks' short spot foreign exchange positions and taxation of specific inflows to correct imbalances in the foreign exchange market and to dampen the intensity and volatility of capital flows. While combining monetary and macroprudential instruments to lean against the financial cycle, the Central Bank of Brazil has always made clear that macroprudential measures are not a substitute for monetary policy action and are primarily geared at addressing financial stability risks. The pragmatic solution has been dubbed a "separation principle", stretching the argument *à la* Tinbergen: use one instrument --monetary policy-- to ensure one objective, price stability; and use a second instrument --macroprudential regulation-- to ensure a second objective, financial stability. This separation *cum* complementarity is especially useful in a post-crisis world of volatile and more intense capital flows that can have destabilizing effects on emerging markets.

Still, a final challenge is the post-crisis volatility of exchange rate. What to deal with it? Before the crisis, (almost) free floating exchange rates was the rule and somehow easy to follow including through accepting some global coordination and formal Accords (e.g., the Plaza example). In emerging markets, we knew very well that to strengthen the efficiency and credibility of our inflation targeting (IT) frameworks, we should **not** to have any commitment to target exchange rates. After the crisis, things somehow changed. For us in emerging markets, the global financial crisis provided clearer evidence--if need be—that the stability of our financial systems were affected by the monetary and financial conditions prevailing in advanced economies through sudden stops and sudden floods of capital and their consequences on our asset prices –including the exchange rate-- and credit market conditions. New literature including from the IMF (se Ostry, Ghosh and Chamon (2012), Lim, C., et al., (2011)) recognizes that *"large movement of the real exchange rate from medium-run equilibrium are costly"*, that interventions might be warranted and even that after other policy options had been exhausted, some forms of capital controls might be used as second-best options.

We have managed in Brazil (after a while) to successfully master how to handle such episodes, using *inter alia* a set of MaPs. Considering foreign exchange markets, Brazil used essentially a Financial Transaction Tax (IOF) on portfolio investments by nonresidents and on margin deposits on derivatives. Many other emerging markets have done pretty much the same, adding sometimes capital controls to their policy toolkits. It has worked very well indeed in Brazil, we have managed to significantly reduce financial instability, stabilized our exchange rate volatility but there is no free lunch: we also had to pay a price in terms of foreign investors' perception, of policy transparency and predictability and perhaps in retrospect in terms of our own "animal spirits" at home. The point is that emerging markets might have faced a dilemma. On the one hand, given the deterioration of their financial stability conditions they had to act because indicators were suggesting the emergence of asset price bubbles and lax credit conditions which we know are precursors of financial crises. On the other hand, acting did mean using controls or "speed bumpers" that were unusual given the track record of past policy frameworks. That most likely --after a while-- affected market sentiment. The choice although difficult was necessary to prevent further risks to financial stability.

5. Global Policy Response: Financial regulation, the G20 from "war" to "peace" and cooperation

So what is the bottom line here? With plenty of good reasons, AEs and EMEs conducted their policy responses to the crisis and somehow succeeded. AEs used a vast arsenal of conventional and unconventional policies. All currency issuing countries claim unconventional policies are only directed to the revival of their domestic economy not to affect their exchange rates. Now in 2013, the issue is not to finger point anyone. Certainly, AEs' policy-makers were concerned –and quite rightly so-- about weak domestic activity and/or deflation at home. But their policies –as we have discussed above including using precise counterfactual evaluation-- did produce an unintended side effect: term spread reduction policies transmitted into international capital flows, affected their exchange rates and thus while helping activity, also triggered unusually strong capital movements. EMEs in turn used countervailing measures to react to these "sudden floods" of capital and their destabilizing effects. Their policies did have also an impact on investors' sentiment.

We seem to have evolved towards accepting a "pragmatic" laissez-faire: advanced economies can operate monetary policy at the zero lower bound and do QEs that they see fit while emerging markets are allowed to use countervailing capital flow management (CFM) measures and in some cases, to use some forms of capital control. We can certainly live with that, since as I mentioned earlier in Brazil we know how to do it and have the tools for that. However, this combination is risky, sub-optimal and certainly not conducive of welfare-enhancing outcomes globally. It might be the only possibility given the current state of global political economy but I would much prefer a discussion –perhaps at the G20 -- that considers a more coordinated and balanced framework to deal with exchange rate volatility in advanced and emerging economies. What else can be done?

First, continue cooperation on financial regulation at a global level. One important achievement for the G20 has been to consistently call for a strengthening of the regulatory and prudential framework and increase the cooperation between institutions in charge of regulation and setting standards for the industry. This work has been successfully carried out through the Financial Stability Board (FSB), the BIS and the Basel Committee, etc.

Second, on exchange rate issues, can we expect some degree of cooperation among G20 countries? We should, perhaps using incentives to increase credit multipliers in advanced economies, including through their prudential-regulatory framework to define temporarily more adequate risk-weights for cross-border flows into emerging markets while AEs' recovery takes strength. That would allow in turn emerging markets to lower their own CFMs and their own controls. That might succeed in producing a closer to Pareto-type global outcome with a more predictable, smooth and business friendly environment for all. We might then be able to move from "Currency Wars" to "Policy Peace" under the G-20's auspices.

Given the still fragile external environment and the remaining uncertainties about the global recovery, we certainly need more dialogue than confrontation.

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