BANK FOR INTERNATIONAL SETTLEMENTS

Ebbing global liquidity and monetary policy interactions

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I would like to thank Governor Vergara and his colleagues for the opportunity to address this session on "Global liquidity environment: Policy challenges for central banks". This topic leads me to return to my theme this time last year at the CEMLA and SEACEN conference in Punta del Este.[1]

There I argued that the interactions between accommodative monetary policies in major countries and those in emerging markets were manifold. In particular, I highlighted five distinct but overlapping channels: (i) follow-the-leader behaviour in setting low short-term policy rates; (ii) diffusion of low bond yields to local bond markets; (iii) exchange rate appreciation; (iv) booming dollar credit growth; and (v) capital inflows. These manifold interactions go beyond exchange rates or capital flows.

Today I shall argue that the evidence from May through August 2013, while hardly a controlled experiment, nevertheless conveys a message. Namely, all these mechanisms must have been at work in 2012 because they all worked in reverse in the middle of 2013. So in my remarks this morning, I will highlight what the 2013 experience has taught us about each of the five channels.

In short, the mere prospect of some normalisation of monetary policy showed how important policy spillovers were, are and will be. This evidence strengthens the case for policymakers to take into account these interactions when setting their own policy. And policymakers in small open economies need to take advantage of the temporary lull to undertake prudent measures to make their economies more robust when the exit really happens.

In addition to re-examining international monetary interactions in the light of the new evidence, I shall also propose a new theme. Capital flows have become even less reliable as an indicator of overall positioning. The development of hedging markets means that investors can reduce their exposure with little outright selling. Nevertheless, the exchange rate can depreciate and yields can rise as both foreign investors and issuers hedge. It is probably too early to confidently explain these observations. But it is not too soon to say that, in addition to conventional capital flows, flows of risk positions bear watching. Let me turn now to the five channels of international monetary interactions, considering first three price channels and then two quantity channels.

[1] See J Caruana, "International monetary policy interactions: challenges and prospects", speech to the CEMLA-SEACEN conference on "The role of central banks in macroeconomic and financial stability: the challenges in an uncertain and volatile world" Punta del Este, Uruguay, 16 November 2012.

Policy interest rate setting

The first channel operates via central banks' responses to interest rate setting in the major currencies. In Punta del Este, I suggested that many central banks tend to set their domestic policy rates on the low side in the face of very accommodative monetary policy in the major currencies. One way of seeing this is by plotting average policy interest rates against those indicated by a Taylor rule with fairly conventional parameters. Such rules of thumb once tracked observed policy rates, but suggest that policy rates have been low since well before the global financial crisis.[2]

The reasons for follow-the-leader policy vary. In some places, it is a concern for currency appreciation and its potential to damage the traded goods sector. In other places, it is a concern for the threat of capital inflows through the banking system to finance unsustainable and potentially damaging credit extension.

Central banks at times highlight the influence of major currencies' policy settings on their own policy rates. The Central Bank of Norway transparently discusses its response to euro interest rates.[3] The Chinese authorities are said to try to avoid setting interest rates more than 3% above or below US dollar rates.[4]

In any case, between May and August 2013 this process went into reverse. The mere prospect of tapering in bond buying sent the exchange rates of many commodity exporters and emerging markets down, risking higher inflation. A number of central banks found themselves raising policy interest rates in response. It should be said that the Central Bank of Brazil had started to raise interest rates well before May 2013. But a number of emerging market central banks only raised policy rates in the May through August period to check inflationary currency depreciation.

That said, prudence had its reward. Some emerging market central banks that had maintained interest rate differentials at prudent but often uncomfortable levels have been able to cut their policy rates since May, notwithstanding the pressure on their currencies. I refer to the Bank of Mexico and our hosts, the Central Bank of Chile, who had left themselves the policy room to manoeuvre.

Bond market backups

The second channel works through the integration of global bond markets. Coming into 2013, US 10-year Treasury bonds carried a term premium of about *minus* 1%. To secure a fixed yield, an investor had

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[2] B Hofmann and B Bogdanova, "Taylor rules and monetary policy: a global 'Great Deviation'?", *BIS Quarterly Review*, September 2012, pp 37–49. These benchmarks do not incorporate forward guidance or balance sheet policy of central banks. They also ignore the underestimation of policy ease during booms owing to the upward bias of estimates of potential output then. See C Borio, P Disyatat and M Juselius, "Rethinking potential output: embedding information about the financial cycle", *BIS Working Papers* no 404, February 2013.

[3] See discussion in J Taylor, "International monetary policy coordination: past, present and future", paper presented to 12th BIS Annual Conference, 20–21 June 2013, Lucerne, Switzerland, and "International monetary coordination and the Great Deviation", paper presented to American Economic Association annual meetings, San Diego, January 2013.

[4] Y Yu, "Managing capital flows: the case of the People's Republic of China", in M Kawai and M B Lamberte (eds), *Managing capital flows: the search for a framework*, Cheltenham, Edward Elgar, 2010, pp 217–38; D He and R McCauley, "Transmitting global liquidity to East Asia: policy rates, bond yields, currencies and dollar credit", *BIS Working Papers* no 431, October 2013.

to *pay away* about 1% of the expected short-term rates over the next 10 years.[5] In effect, the authorities had succeeded in putting their thumb on the scale in the global bond market.

Under these circumstances, the prospect of the authorities' changing the pressure of their thumb on the scale could have quite an effect. Studies of the announcement effects of the large-scale bond buying had suggested that the effect diffused widely to the global bond market. Now, by the same logic, the prospect of adding less pressure diffused widely throughout the global bond market.[6]

To be sure, investors in sovereign and corporate dollar or euro bonds were not surprised that these underperformed US Treasuries or German bunds, respectively. What came as a surprise to many, perhaps, was the underperformance of many local government bonds. After all, local currency bonds had been bought for purposes of diversification. Once again we saw the loss of diversification benefits precisely when they were most wanted.

Domestic bonds did offer some diversification benefits in economies where previous prudence in policy rate setting allowed the central bank to stand pat, or even to lower rates. Without attempting a full analysis, there is no doubt some merit in the popular identification of the worst performers as countries that both ran current account deficits and depended on bond inflows. But one should not overlook the influence of the first channel: if the local central bank had to raise its policy rate from a relatively low level, this too contributed to the sell-off in the local bond market.

Currency depreciation

The third channel works through currency depreciation. Several studies had suggested that emerging market and other advanced economy currencies appreciated in response to announcements of large-scale bond purchases.[7] Yet most of these studies, like those that analysed the global diffusion of lower bond yields from the same announcements, examined relatively short windows and left open the question of the persistence of any currency appreciation. Indeed, it was observed that over a four-year period since mid-2008, the US dollar had depreciated just a bit against emerging market currencies.[8]

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[5] Estimates vary depending on the precise modelling strategy. See B Bernanke, "Long-term interest rates", speech at the Annual Monetary/Macroeconomics Conference: The Past and Future of Monetary Policy, sponsored by Federal Reserve Bank of San Francisco, San Francisco, California, 1 March 2013; P Hördahl and O Tristani, "Inflation risk premia in the euro area and the United States", forthcoming in the *International Journal of Central Banking*.

[6] See C Neely, "The large-scale asset purchases had large international effects", Federal Reserve Bank of St Louis, *Working Papers*, 018B, 2010; Q Chen, A Filardo, D He and F Zhu, "International spillovers of central bank balance sheet policies", *BIS Papers*, no 66, October 2012, pp 220–64; J Moore, S Nam, M Suh and A Tepper, "Estimating the impacts of U.S. LSAPs on emerging market economies' local currency bond markets", Federal Reserve Bank of New York, *Staff Reports*, no 595, January 2013; M Bauer and C Neely, "International channels of the Fed's unconventional monetary policy", Federal Reserve Bank of St Louis, *Working Papers*, 2012-028, updated 28 August 2013.

[7] See Neely, op cit; Chen et al, op cit; and Bauer and Neely, op cit.

[8] B Bernanke, "U.S. monetary policy and international implications", speech at "Challenges of the global financial system: risks and governance under evolving globalization," High-Level Seminar sponsored by Bank of Japan and the International Monetary Fund, Tokyo, Japan, 14 October 2012.

The recent episode, almost an experiment, provided evidence that supported the event studies. Extraordinarily accommodative monetary policy had pushed up currencies, since the mere mooting of its reduction pulled them down. From the beginning of May 2013 to their troughs in August or September, the exchange rates of the Australian dollar, the Indian rupee, the Indonesian rupiah, the Turkish lira and the South African rand all depreciated against the US dollar by something like 15%. The Brazilian real depreciated by closer to 20% while the Chilean and Mexican pesos did so by about 10%. Moreover, observed currency depreciation understates the exchange market pressure, given that some authorities raised policy rates, intervened in the currency market or took measures to manage capital flows.

Slowdown in dollar credit growth outside the United States

The fourth channel is dollar credit growth outside the United States. In Punta del Este, I argued that very accommodative monetary policy in major currencies provided inducements for borrowing in these currencies. If domestic currencies carried higher yields, if they were expected to appreciate and if volatility were priced cheaply, firms (and, in places, households) were tempted to redenominate their debt in major currencies. Such redenomination tends itself to put upward pressure on domestic currencies and creates the possibility of a scramble to hedge if the environment changes.

Since the global financial crisis, dollar credit to US residents has limped while dollar credit to non-US residents has galloped. Credit to the US non-financial sector, even including the government, is growing very slowly.[9] Meanwhile, dollar credit to borrowers outside the United States has mostly grown at 10–20% since the global financial crisis. In particular, foreign currency loans reported by banks in China grew 34.8% over the year to March 2013. Thus, going into May 2013, dollar credit to non-US residents was growing at a pretty rapid clip on a very substantial base of around $7 trillion.

Continued growth in dollar bank credit to borrowers outside the United States was all the more remarkable in view of the retreat of the largest providers of such credit, namely European banks. Their deleveraging has constrained the supply of dollar credit to borrowers outside the United States.

From the borrowing country perspective, dollar credit in Asia was growing faster than credit denominated in domestic currency. In Latin America it was growing about as fast.

At the same time, important changes have occurred that deserve some attention, in particular the rapid increase in emerging market corporate bond issuance in foreign currencies. One of the salient features of dollar credit growth in recent years has been the rapid growth of credit extended through dollar bond issues purchased by institutional investors and banks. Bank loans are the most common form of dollar credit extended to borrowers outside the United States, but in recent years their bond debt has grown faster. In particular, with the headwinds of the European bank retreat, dollar bank credit to borrowers outside the United States has been growing at single-digit rates, while dollar bonds outstanding have grown at about 20% per annum. Hyun Song Shin calls this the "second phase" of global liquidity.[10] Instead of banks extending dollar credit on the basis of higher leverage, asset managers are buying dollar bonds and thereby providing emerging market firms ample access to dollar credit.

Bond market borrowing by emerging market firms has advantages and disadvantages from a financial stability point of view. In contrast to firms borrowing from banks and banks in turn funding

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[9] See Graph 1.3 at www.bis.org/statistics/gli.htm.

[10] H S Shin, "The second phase of global liquidity and its impact on emerging economies", keynote address at Federal Reserve Bank of San Francisco Asia Economic Policy Conference, 3–5 November 2013.

themselves with short-term loans, bond market finance tends to bind investors and issuers over the medium term. This makes sudden reversals of dollar credit less likely. However, the longer-term funding available in dollars may tempt emerging market firms to run currency mismatches. The possibility that corporations with operations in different countries undertake some kind of carry trades and maturity mismatches needs more research and attention. And to the extent that such firms used offshore affiliates to borrow, the resulting debt could escape registering as capital inflows or in national debt statistics, creating hidden vulnerabilities.[11]

You will not be surprised to hear that the bond market rout from May through August 2013 hit the international dollar bond market hard. Net issuance of international dollar bonds halved in the third quarter relative to the second quarter, even with the sharp recovery of the market in September. In addition, there were reports of corporate borrowers using derivatives markets to hedge outstanding dollar credit as domestic currencies came under pressure.

BIS data on international banking flows lag, but already the second quarter data tell different stories for Asia and Latin America. Mostly dollar-denominated cross-border lending to China and ASEAN countries only decelerated, while claims on India and Korea fell. In Latin America, banks massively withdrew cross-border credit in the second quarter, mostly against Brazil but also against Mexico, Chile and Peru. The $47 billion decline was the largest on record.

Capital flow reversal?

The fifth channel is capital outflows. Indeed, capital flowed out of emerging markets in the May through August period, but that is not all that happened. We have heard from central banks at different meetings about derivatives transactions that allow what might be called virtual selling by non-residents. Investors engaged in such virtual selling through sales of the domestic currency forward (and perhaps interest rate swaps) rather than cash selling. Instead of non-resident investors, including multinationals with local operations, liquidating positions, they hedged them through forward sales of the currency (often offshore). Such virtual selling amounts to cross-border risk flows rather than cross-border capital flows alone. This reinforces the point that capital flows, like currency moves, cannot serve as a summary statistic of the manifold monetary policy interactions.

Conclusion

Let me conclude by underscoring two points. Some have argued that the recent monetary policy interactions cannot have been so challenging because measured capital flows did not reach record levels. To my mind this misses the point: policy rates may be set precisely to avoid capital flows; global bond markets can move in sympathy without flows; dollar credit can be funded domestically; and non-residents can trade in derivatives markets, leaving no trace in capital flows.

All in all, the experience of May through August 2013 can be read as evidence of the previous effect of accommodative monetary policy in major countries in (i) lowering emerging market policy rates; (ii) lowering local currency bond yields; (iii) appreciating currencies; (iv) inducing the shifting of corporate liabilities to dollars and euros; and (v) propelling capital flows. Since September we have been slipping back to the ease of finance that marked the earlier part of 2013. Policymakers can use the current policy

[11] R McCauley, C Upper and A Villar, "Emerging market debt securities issuance in offshore centres", BIS *Quarterly Review*, September 2013, pp 22-23.

interval – however long it proves to be – to bolster their resiliency in the face of monetary policy normalisation and the inevitable ebbing of global liquidity.