



International monetary policy interactions: challenges and prospects

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Let me start by thanking both CEMLA and SEACEN for the opportunity to address you today. Such meetings are an excellent opportunity for central banks from the Americas and Asia to compare notes and learn from each other’s experience. After all, didn’t the so-called Tequila crisis of the mid-1990s prefigure the Asian financial crisis of a couple of years later?

In Jackson Hole at the end of August, I asked why the cooperation that we take for granted in regulating banks generally seems to be regarded as unnecessary, or even uncalled for, when it comes to monetary policy.¹ Today I should like to sharpen the focus and discuss international monetary interactions.

No doubt this is a matter of some controversy. At the same time, with a number of emerging market central banks having shifted to easing policy in 2012, there may be a window of opportunity for less disagreement and more understanding on the subject.

Let me state my message at the outset. I want to make the case for a better understanding of monetary policy interactions and for incorporating them more systematically in policy. I shall first set the context, then discuss policy interactions, and conclude by addressing the risks and challenges of the way forward.

1. The context

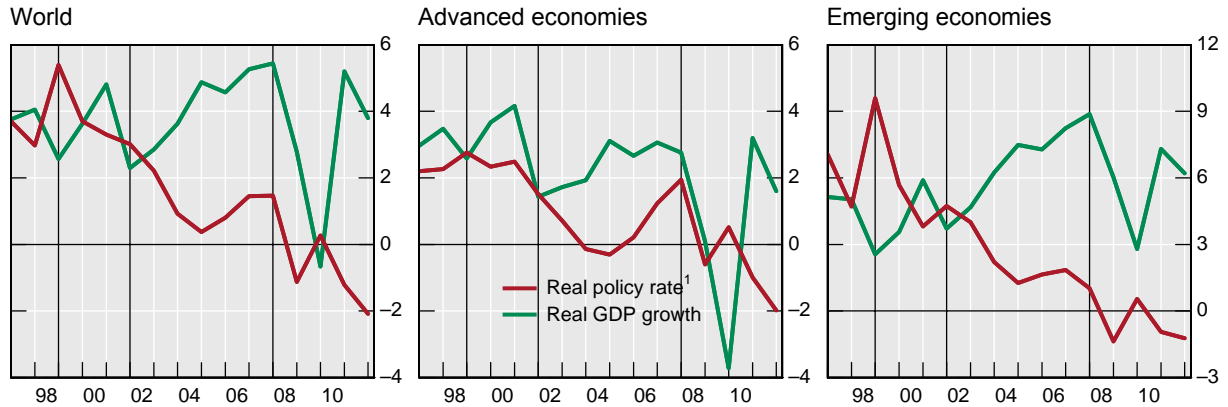
Let’s step back and take a global perspective on monetary policy. It is hard to avoid a troubling observation. For the world as a whole, monetary policy has been unusually accommodative for a very long time. By this, I mean for 10 years or more.

What evidence leads to this observation? Successive BIS Annual Reports have laid out two strands of evidence.

¹ See J Caruana, “Policymaking in an interconnected world”, luncheon speech at the Federal Reserve Bank of Kansas City’s 36th Economic Policy Symposium on “The changing policy landscape”, Jackson Hole, Wyoming, 31 August 2012 (<http://www.bis.org/speeches/sp120903.htm>).



Graph 1
Real policy rates and real growth
In per cent



The vertical lines indicate the Long-Term Capital Management crisis (1998), the bursting of the dotcom bubble (2001) and the onset of the global crisis (2007).

¹ Weighted average based on 2005 GDP and PPP exchange rates of 62 economies for world, major advanced economies or major emerging economies. Nominal policy rates adjusted for consumer price inflation.

Sources: IMF; Bloomberg; CEIC; Datastream.

An admittedly quite simple and common approach is to compare real policy interest rates with real growth rates.² As can be seen from Graph 1, real policy rates have fallen short of real growth by some measure and with some frequency, for the world as a whole, for advanced economies and for emerging economies.

Another, more constructed, approach is to examine the gap between actual policy rates and those that obey simple Taylor-type rules, which link policy rates in a mechanical way to inflation and the output gap.³ True, estimating their underlying parameters poses challenges. Both the steady-state real interest rate and potential output are exceedingly hard to measure. That said, for a variety of standard specifications, there is clear evidence of a tendency for policy rates to deviate from this simple standard by some margin, with some frequency and for quite some time, at both the global and regional level (Graph 2).

This is all the more so if we take into consideration two additional factors. First, these benchmarks do not incorporate commitments to keep interest rates low for a prolonged period or the wide range of balance sheet measures that many central banks have taken, such as large-scale bond purchases and liquidity support. Second, they also ignore the fact that, especially during financial booms, real-time estimates of potential output are biased upwards, thereby underestimating the degree of policy easing.⁴ And we know that a number of economies, not just emerging market ones, have been experiencing such booms lately.

Thus, whichever way the data are cut, it is hard to escape the conclusion that, globally, policy rates have been unusually low for an unusually long time. Now, why is this so?

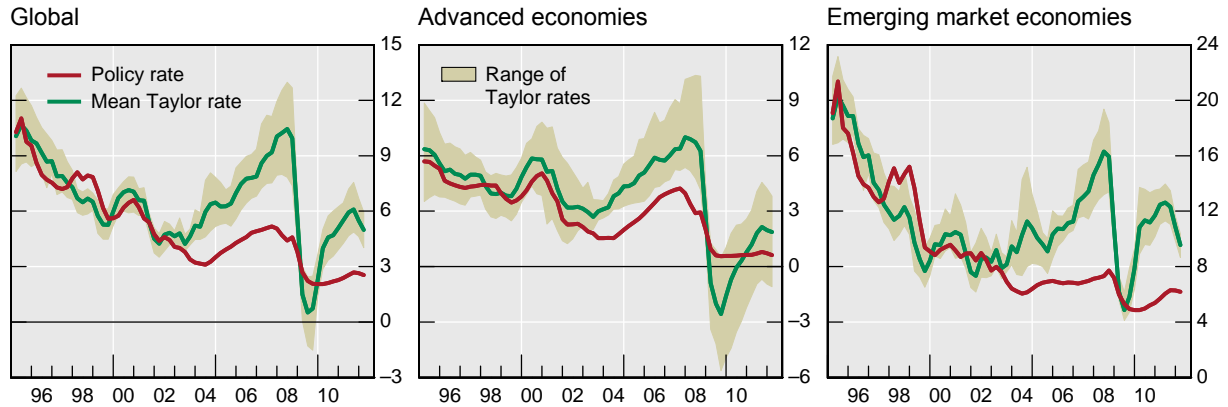
² See H Hannoun, "Monetary policy in the crisis: testing the limits of monetary policy", speech at the 47th SEACEN Governors' Conference, Seoul, 13–14 February 2012 (<http://www.bis.org/speeches/sp120216.htm>).

³ See BIS, *82nd Annual Report*, June 2012; and for a more systematic analysis, B Hofmann and B Bogdanova, "Taylor rules and monetary policy: a global 'Great Deviation'?", *BIS Quarterly Review*, September 2012, pp 37–49.

⁴ See C Borio, P Disyatat and M Juselius, "Rethinking potential output: embedding information from the financial cycle", BIS, mimeo, 2012.

Graph 2
The Taylor (1999) rule and policy rates¹

In per cent



The Taylor rates are calculated as $i = r^* + \pi^* + 1.5(\pi - \pi^*) + 0.5y$, where π is a measure of inflation, y is a measure of the output gap, π^* is the inflation target and r^* is the long-run level of the real interest rate. We compute Taylor rates for all combinations of four measures of inflation (headline, core, GDP deflator and consensus headline forecasts) and measures of the output gap obtained from three different statistical ways to compute potential output (HP filter, segmented linear trend and unobserved components). For the advanced economies, we also use the structural output gap estimate from the IMF WEO. In each case, the long-run real interest rate is set equal to the trend output growth rate as estimated by the trend filter used to construct the respective output gap measure. π^* is set equal to the official inflation target or goal levels when available. Implicit target levels for the inflation measures to which the official inflation target does not refer are constructed by adding the average difference over the sample period between the respective inflation measure and the targeted inflation measure to the official inflation target. For countries that do not have an official inflation target, we use the sample average of the respective inflation measure in the case of advanced economies, and the inflation trend obtained from an HP filter in the case of emerging market economies. For the consensus CPI inflation forecast, we use the same target level as for the actual CPI inflation rate. The graph shows the range and the mean of the Taylor rate of all inflation-output gap combinations.

¹ Weighted average based on 2005 PPP weights. "Global" comprises the economies listed here. Advanced economies: Australia, Canada, Denmark, the euro area, Japan, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. Emerging market economies: Argentina, Brazil, China, Chinese Taipei, the Czech Republic, Hong Kong SAR, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Poland, Singapore, South Africa and Thailand.

Sources: IMF, *International Financial Statistics* and *World Economic Outlook*; Bloomberg; CEIC; © Consensus Economics; Datastream; national data; authors' calculations.

Such low rates to some extent reflect an asymmetry in monetary policy frameworks. In particular, pre-crisis, it was thought that no monetary policy response was appropriate to evidence of tailwinds from rapid credit growth amid booming asset prices as long as near-term inflation remained under control. At the same time, a very strong response was seen as the right way to address the headwinds of a financial crisis. Admittedly, post-crisis, the centre of gravity of the debate has been shifting towards a more preventive use of monetary policy to limit risks from the build-up of financial imbalances. Even so, there has been a strong revealed preference for relying almost exclusively on macroprudential tools.

But well beyond policy frameworks, on a global level, low average policy rates also result from policy interactions. After all, global outcomes reflect decisions of groups of policymakers in individual economies who take the decisions of policymakers in other economies as inputs to their decisions. Thus, we can think of monetary policy as a dense web of interactions, with both global and important regional strands.

But what are those interactions exactly? And why should they have led to looser monetary policy globally? Let me first trace the channels through which monetary policy in one country affects conditions in another and then discuss the induced policy responses. I will focus very much on financial channels, which I think are particularly powerful.



2. Policy interactions: transmission channels

In discussing transmission channels, let me distinguish between the impact on the exchange rate and asset prices, on the one hand, and on quantities, notably capital flows, on the other. While the two are obviously related, it is analytically helpful to keep them distinct to avoid the temptation of overstating their link. This point is well known, but is easily forgotten in discussions of policy.

In particular, prices can adjust substantially with no change in underlying quantities. Prices need only to respond strongly to incipient portfolio adjustments to ensure that agents are content with the positions they already hold. Moreover, what is true of transactions in general is also true in particular of transactions between residents and non-residents, ie capital flows. Exchange rates can adjust and asset prices move in sync quite closely without necessarily giving rise to capital flows. And to the extent that transactions are involved, these need not be between a resident and a non-resident. For example, the BIS triennial foreign exchange survey reveals that from a third to three quarters of all foreign exchange transactions of major emerging market currencies take place among non-residents.⁵ As another example, it has long been observed in Australia that most of the change in Australian dollar bond yields happens while Australia's own markets are closed: the news that moves them most is not the employment report in Australia but that in the United States.

Turning then to the *asset price* channels, the first and most obvious one is the exchange rate. A reduction in the policy rate or the announcement that it will be kept low for some time should, all else equal, put downward pressure on the exchange rate. While the strength of the impact is not easily predictable, this is precisely one of the usual ways monetary policy is expected to operate. In addition, balance sheet policies can have a similar effect, as when central banks engage in large-scale bond purchases to push longer-term bond yields lower. There is considerable evidence that such operations have been quite successful in reducing yields. How far this, in turn, has induced exchange rate depreciation is less clear, in part because of policy responses, to which I shall return.⁶

A second channel operates via *government bond yields* themselves, regardless of whether they fall as a result of expectations of lower future policy rates or of direct bond purchases. I have already noted the example of Australian bond yields, but the effect is much more general. It simply reflects the thorough integration of global bond markets. For instance, one study has found broad effects of the announcement of the Federal Reserve's bond buying on Canadian, UK, German, Japanese and Australian government bonds. A follow-up study suggests that bond yields fell in these markets not because of lower expected policy interest rates, but because of a lower term premium. Yet another study has found similar effects in the bond markets of East Asia and Latin America.⁷

⁵ The dollar, euro or yen share is about three quarters. See R McCauley and M Scatigna, "Foreign exchange trading in emerging currencies: more financial, more offshore", *BIS Quarterly Review*, March 2011, p 72.

⁶ For exchange rate effects, 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; and B Bernanke, "US monetary policy and international implications", remarks at "Challenges of the global financial system: risks and governance under evolving globalization", high-level seminar sponsored by the Bank of Japan and IMF, Tokyo, 14 October 2012.

⁷ C Neely, op cit; M Bauer and C Neely, "International channels of the Fed's unconventional monetary policy", manuscript, 29 August 2012; and Q Chen et al, op cit.



A third channel operates via *other asset prices*, and for much the same reasons. Here too, the degree of market integration is crucial. The effects are stronger for highly global markets, such as equities, and weaker for highly domestic ones, such as real estate.

Consider now the channels that operate via *quantities*.

A direct, if sometimes neglected, channel works through assets and liabilities *denominated in foreign currency*, notably in the major international currencies such as the US dollar and, to a lesser extent, the euro and the yen. In particular, as interest rates are reduced in any of these currencies, emerging market borrowers find it cheaper to borrow in them and those who have already borrowed enjoy lower financing costs. Thus, a substantial stock of foreign currency debt directly transmits the policy of the major central banks to other countries.

The pre-crisis experience in central and eastern Europe provides striking evidence of the relevance of this channel. Borrowers there found it attractive to fund themselves at lower euro or Swiss franc rates, notably in the form of mortgages. When local central banks raised rates, not only did they not raise the cost of existing foreign currency loans, but they also saw borrowers take on more of them.⁸

This channel, of course, is not confined to central and eastern Europe. There is something like \$7 trillion in US dollar credit to borrowers who reside outside the United States. At times since the crisis, its growth rate has been as high as 20% year on year.⁹

We finally come to *capital flows* more generally – a much discussed channel. Easier monetary conditions in core economies tend to encourage capital flows to economies where interest rates are higher. Quite apart from being one of the mechanisms that puts upward pressure on exchange rates – think of carry trades between residents and non-residents – and on asset prices, such as through portfolio investments, gross capital flows have often helped to pump up credit booms. There is, for instance, considerable evidence that the cross-border component of credit tends to grow faster than domestic credit during such episodes.¹⁰ Moreover, in a cross section of emerging markets in 2003–08, the resulting rise in the share of cross-border credit is associated with a rise in the overall ratio of bank credit to GDP.¹¹ Bank inflows bear watching when one is concerned about rapid credit growth.

To be sure, the link between easier monetary conditions in core economies and capital flow surges is far from mechanical, and its strength varies greatly over time. Other factors can play a key role, including changes in risk attitudes and domestic conditions.¹² We are all

⁸ See M Brzoza-Brzezina, T Chmielewski and J Niedźwiedzińska, “Substitution between domestic and foreign currency loans in Central Europe: do central banks matter?”, *ECB Working Paper Series*, no 1187, May 2010.

⁹ Credit in foreign currency is now recognised to be a key manifestation of the notion of global liquidity. Committee on the Global Financial System, *Global liquidity – concept, measurement and policy implications*, CGFS Publications, no 45, November 2011.

¹⁰ See C Borio, R McCauley and P McGuire, “Global credit and domestic credit booms”, *BIS Quarterly Review*, September 2012, pp 43–57.

¹¹ See S Avdjiev, R McCauley and P McGuire, “Rapid credit growth and international credit: challenges for Asia”, in V Pontines and R Siregar (eds), *Exchange rate appreciation, capital flows and excess liquidity: adjustment and effectiveness of policy responses*, Kuala Lumpur: the SEACEN Centre, 2012, pp 215–44; for a parallel result for Europe, see P Lane and P McQuade, “Domestic credit growth and international capital flows”, draft, October 2012.

¹² Moreover, the link can sometimes be very counter-intuitive. For example, QE2 in the United States actually triggered a net inflow of interbank funds. As the Fed purchased Treasuries from the non-bank public, who did not necessarily wish to increase their holdings of bank deposits, banks financed their holdings of US dollar excess reserves through the international interbank market. One reason was that branches of foreign banks had a comparative advantage in holding these reserves, because of exemption from Federal Deposit



familiar, for instance, with market participants' talk of "risk-on/risk-off", which conditions capital flows.¹³ These factors are only partly influenced by those monetary conditions themselves. Moreover, as I shall explain in a minute, the link is shaped by the policy response in recipient economies. That said, it would be hard to deny the link. In particular, in the risk-on mode, wide interest rate differentials act as a magnet for debt capital flows.

3. Policy interactions: responses

So much for the transmission channels; what about the policy responses? These depend on circumstances. In some cases, major central bank actions may amount to no more than background noise or may even strengthen the policy response by the local central bank to domestic conditions. In other circumstances, however, they may constrain domestic policy and give rise to difficult trade-offs. Such circumstances may explain the unusually accommodating monetary conditions we have seen pre- and post-crisis.

Two different concerns may result in a central bank's choosing a looser monetary policy in response to an accommodative monetary policy elsewhere.¹⁴ The authorities may seek to prevent a loss of trade competitiveness. Alternatively, or concomitantly, they may seek to prevent the financial stability and macroeconomic consequences of gross capital inflows, which can help finance a build-up of financial imbalances. In both cases, doubts about the self-equilibrating behaviour of the exchange rate play a key role. Let me take each in turn.

Concern over loss of competitiveness is long-standing, especially for countries that rely on manufactured, rather than commodity, exports. And it can be exacerbated by strategic considerations, namely a first-mover disadvantage. The first country to allow an appreciation can lose competitiveness if its trading partners successfully resist it. Perhaps if all allowed appreciation at the same time, the concern over competitiveness would be much allayed. Focusing on bilateral exchange rates, such as vis-à-vis the US dollar, as opposed to the more relevant effective exchange rate, may add inertia and exacerbate the link with monetary conditions in a specific country, potentially adding to the risk of instability.¹⁵

Concern about the financial stability implications of cross-border flows, especially their impact on credit expansion and asset price booms, is more recent. Financial crises in both emerging markets and advanced economies have made it more salient. The potential for withdrawal of cross-border credit has led authorities to build up war chests of foreign exchange reserves. And since damage can be done not only by the reversal of such flows

Insurance Corporation assessments, and they drew funds from abroad. Clearly, the popular image of a cascade of liquidity pouring out of the United States can be highly misleading. See L Kreicher, R McCauley and P McGuire, "The FDIC assessment on managed liabilities: interest-rate and balance-sheet responses", paper presented to the CESifo Venice Summer Workshop on Taxation of the Financial Sector, 20 July 2012.

¹³ See B Bernanke, op cit.

¹⁴ John Taylor cites the case of the Central Bank of Norway, which discusses its own policy rate in terms of an acceptable spread over the euro area's policy rate. See "Commentary on 'Capital flows and the risk-taking channel of monetary policy'", presentation at the 11th BIS Annual Conference, Lucerne, 22 June 2012.

¹⁵ For these dynamics before the Asian financial crisis, see T Ito, E Ogawa and Y Sasaki, "How did the dollar peg fail in Asia?", *Journal of the Japanese and International Economies*, vol 12, 1998, pp 256–304; and more recently: G Ma and R McCauley, "The evolving renminbi regime and implications for Asian currency stability", *Journal of the Japanese and International Economies*, vol 15, no 1, pp 23–38; and A Subramanian and M Kessler, "The renminbi bloc is here: Asia down, rest of the world to go?", *Peterson Institute for International Economics Working Paper* 12-19, October 2012.



but also by their preceding surge, authorities avoid large interest rate differentials, for fear of attracting capital inflows.

Regardless of whether the focus is on competitiveness or financial stability, the perceived risk of overshooting in the exchange rate adds to the worries. Such overshooting can do lasting damage to competitiveness, as lost markets and productive capacity are not easily regained. And it can add strength to the capital inflows and credit booms, by inducing expectations of further capital gains on investments and falling borrowing costs.¹⁶

The end result is predictable: a looser monetary policy stance and resistance to exchange rate appreciation. The monetary authorities may pre-emptively take interest rates lower than they would otherwise. Or they may intervene in foreign exchange markets and accumulate reserves in an effort to avoid reducing interest rates in response to loosening by major central banks.

These responses, in turn, can condition policy in the major advanced economies. After authorities intervene by buying major currencies, they invest the proceeds in major government bonds. Bond buying by foreign exchange reserve managers can lower yields in major bond markets just as such buying by the domestic central bank.¹⁷

The combination of unconventional policy measures in major advanced economies and the investment of the proceeds of intervention on major bond markets can lead to quite high fractions of official investment in such bond markets. Foreign official holdings of US Treasuries at end-June 2011 were \$3.5 trillion, and Federal Reserve holdings were \$1.6 trillion. These official holdings of \$5.1 trillion amounted to over half of the outstanding \$9.5 trillion. Such large players can make for substantial interactions even in a very large market.

Some express concerns that emerging market economies' resistance to currency appreciation puts more upward pressure on freely floating currencies.¹⁸ In any case, it is the strategic setting of low policy rates and the diffusion of low bond yields that can lead to a global easing of monetary conditions.

These mechanisms have been at work both before the crisis and since. Just recall the massive increase in foreign exchange reserves, although it has slowed to a crawl in emerging markets over the last year. And while it is tough to prove that interest rates have been kept lower than otherwise for the reasons suggested, the message of Taylor rules is

¹⁶ See V Bruno and H Shin, "Capital flows and the risk-taking channel of monetary policy", manuscript, 6 July 2012.

¹⁷ B Bernanke, V Reinhart and B Sack, "Monetary policy alternatives at the zero bound: an empirical assessment", *Brookings Papers on Economic Activity*, 2004-2, pp 1–100, found that the Japanese Ministry of Finance intervention in 2003–04 was associated with lower US Treasury yields. P Gerlach-Kristen, R McCauley and K Ueda, "Currency intervention and the global portfolio balance effect: Japanese lessons", *BIS Working Papers*, no 389, September 2012, suggest that these lower yields diffused broadly in global bond markets. For a broad study, see F Warnock and V Warnock, "International capital flows and US interest rates", *Journal of International Money and Finance*, vol 28, 2009, pp 903–19. More recently, there has been discussion of the effect of Swiss investment of euros purchased in the foreign exchange market on yields in the euro area; see eg F Gill and I Morozov, "How the Swiss National Bank is driving down yields for the eurozone core", *RatingsDirect*, Standard & Poor's, 24 September 2012.

¹⁸ See M Carney, "The evolution of the international monetary system", remarks before the Foreign Policy Association, New York City, 19 November 2009. In addition, diversification of the currency allocation of official foreign exchange reserves can directly put upward pressure on flexible advanced country currencies. See Minutes of the Monetary Policy Meeting of the Reserve Bank Board, 7 August 2012, for discussion of central bank investment in the Australian dollar.



strongly suggestive. Even more telling is the frequent complaint that it is exceedingly hard to set policy rates appropriately when they are so low in the larger economies.

The strategic aspects of the overall situation are apparent. The more countries find themselves in this condition, the harder it is for any one of them to deviate. This is true regardless of the specific concern underlying the policy response. As a result, a very accommodating monetary policy can become entrenched globally.

4. Policy challenges, risks and a way forward

Monetary policy conditions that are too easy for too long can lead to problems down the road. Macroeconomic problems can emerge in the form of an inflation surprise or, as they have more recently, serious financial distress, when financial booms turn into busts.

To be sure, policymakers have recognised these risks and have acted to improve the trade-offs they face. The corresponding measures have taken various shapes and sizes and, in practice, the delineation between them can be ambiguous. Their common denominator is an attempt to restrain the impact of foreign spillovers and of the induced policy response through interest rates and, possibly, foreign exchange intervention.

The first set of measures comprises standard monetary policy administrative tools – although now they are sometimes re-dubbed “macroprudential” tools. The most common example is higher reserve requirements. They seek to tighten credit conditions without encouraging capital inflows, as an increase in interest rates might do, through in effect a tax on banks.¹⁹

The second set of measures comprises macroprudential tools. These target specifically systemic risk and are supported by specific governance arrangements to keep them properly focused.²⁰ Prominent examples include higher bank capital requirements, stricter and less cyclically sensitive loan loss reserves, and lower loan-to-value or debt-to-income ratios.²¹ Other such tools include Korea’s taxes on banks’ non-deposit short-term foreign currency funding and limits on foreign exchange forward positions. Moreover, going forward, countries will be able to implement Basel III’s countercyclical capital buffer fully backed by reciprocity arrangements, which are designed to limit the possibility of cross-border regulatory arbitrage – to my mind an often underappreciated breakthrough in international regulatory coordination.²²

¹⁹ See C Ho, “Implementing monetary policy in the 2000s: operating procedures in Asia and beyond”, *BIS Working Papers*, no 253, June 2008; R Moreno and C Montoro, “The use of reserve requirements as a policy instrument in Latin America”, *BIS Quarterly Review*, March 2011; and G Ma, Y Xiandong and L Xi, “China’s evolving reserve requirements”, *BIS Working Papers*, no 360, November 2011.

²⁰ See Financial Stability Board, Bank for International Settlements and International Monetary Fund, *Macroprudential policy tools and frameworks: progress report to G20*, 27 October 2011.

²¹ See Committee on the Global Financial System, “Macroprudential instruments and frameworks: a stocktaking of issues and experiences”, *CGFS Publications*, no 38, May 2010.

²² See J Caruana, “Dealing with financial systemic risk: the contribution of macroprudential policies”, panel remarks at the Central Bank of Turkey–G20 Conference on “Financial systemic risk”, Istanbul, 27–28 September 2012; and J Caruana, “Macroprudential policy: could it have been different this time?”, speech at the People’s Bank of China seminar on macroprudential policy, in cooperation with the IMF, Shanghai, 18 October 2010.



The final set of measures comprises capital controls, which specifically target transactions between residents and non-residents. These include restrictions on foreign investors' access to the home bond market or on domestic firms' access to global bond markets.

While, to varying degrees, these three types of policy can help, they have two limitations. They may fall short of their objective; and some of them may have considerable side effects.

The risk of falling short of the goal should not be underestimated. Experience indicates that, over time, administrative controls tend to become porous and subject to circumvention. Reserve requirements, for instance, boost what might be called the shadow banking sector. Capital controls can become less effective or more expensive as domestic enterprises become more multinational, so that their treasury operations span the border.

As for macroprudential frameworks, no doubt their implementation has been a major achievement that deserves to be pursued vigorously. That said, we should keep our expectations realistic. These frameworks can certainly improve the resilience of the financial system, by building up buffers when it is cheap and easy to do so. But their ability to restrain a financial boom sufficiently is limited and uncertain. They cannot be expected to bear the whole burden. Monetary policy has to play its part, duly supported by fiscal policy.²³

Is the risk of falling short of the objective materialising? Inflation so far has remained relatively subdued. But in a number of cases, headline inflation has been exceeding targets and has proven surprisingly resilient given prevailing views about the excess capacity across countries. Moreover, while commodity prices have come off their peaks, they can quickly pose policy challenges again, especially in economies where food makes up a large part of the consumer basket.²⁴

More pressingly perhaps, risks to financial stability merit close attention. For a number of years now, several economies have experienced very rapid credit growth, sometimes accompanied by buoyant asset prices. Some of these financial booms appear to have reached maturity and possibly even to be deflating. Experience shows that, unless addressed in timely fashion, such developments can put at risk years of economic advance.

Turning to the side effects, capital controls may deflect capital from one receiving economy to another.²⁵ Might those economies thought least likely to change the rules on capital inflows ironically face the challenge of still larger flows?

This brings me to broader political economy considerations. We have reached a delicate global monetary policy configuration. If this analysis is correct, there is a real risk that frictions could multiply and intensify, especially if the economic environment were to deteriorate further. They could involve not just frictions over currencies, but also over investment decisions in foreign bond markets. A world in which officials hold large portions of the largest bond markets does not strike me as an ideal one.

²³ See J Caruana, "Monetary policy in a world with macroprudential policy", speech to the SAARCFINANCE Governors' Symposium 2011, Kerala, 11 June.

²⁴ Moreover, we tend to take commodity prices as a given when we make policy. But we need to take on board that *in aggregate* our monetary policy can influence them.

²⁵ See International Monetary Fund, "The multilateral aspects of policies affecting capital flows – background paper", 21 October 2011; J Forbes, M Fratzscher, T Kostka and R Straub, "Bubble thy neighbor: portfolio effects and externalities from capital controls", *ECB Working Paper Series*, no 1456, August 2012; and D Ostry, A Ghosh and A Korinek, "Multilateral aspects of managing the capital account", *IMF Staff Discussion Notes*, no 12/10, 7 September 2012.



The ultimate risk is that of a discontinuity in the international regime. We are used to fearing trade protectionism, but there is also a risk of financial protectionism – financial protectionism not just through capital controls, but also through regulatory and supervisory action. In a world of multinational financial firms, uncoordinated efforts to preserve liquidity, to limit reliance on short-term funding and to avoid risks of policy shifts can further segment already fractured markets. And with very high levels of public and private sector debt, sooner or later such a world is likely to turn to inflation. The temptation to repress financial markets to inflate debts away may simply prove too strong. It would not be the first time.

We are, of course, not facing such a scenario right now. And it is policymakers' duty to prevent it from ever materialising. I believe that a keener recognition of monetary policy interactions would be an important step in the right direction. The BIS, through its committee structure and own analysis, intends to strengthen its efforts to support this process.