BANK FOR INTERNATIONAL SETTLEMENTS

Addressing risks to financial stability

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1. Introduction

I would like to thank Governor Khatiwada, the Nepal Rastra Bank and SEACEN for inviting me to a conference in such a beautiful location.

This session is on "New financial architecture, macroprudential regulation and supervision for financial stability and growth".

One month ago we had a symposium in Basel celebrating the 25th anniversary of the first Basel capital accord. Among the topics discussed, a particularly relevant one related to the kind of financial architecture needed to preserve financial stability. The question was: how do we keep up with continuous innovation and change in the financial system? In a highly dynamic and complex world, our imperfect knowledge tends to leave regulatory design in permanent catch-up mode.

In the discussion in Basel, there were several responses to this question:

One was that we need generously sized buffers and the right incentives in the regulatory framework. Large capital and liquidity buffers would protect the system against shocks that cannot be anticipated. If properly calibrated, such buffers would also induce banks to internalise systemic risks. The idea of buffers is not limited to the financial area. Fiscal buffers, or if you prefer, fiscal space, could also be critical in providing credible backstops and preventing negative feedback loops should the unexpected happen.

The second response also arose from the notion that no regulation, no matter how sophisticated, can anticipate all potential cases, situations and changes. This means we will need a much more proactive supervisory process, one with a system-wide perspective. Preserving financial stability will require the capacity and the willingness to act, making full use of both macro- and microprudential policies.

Of course, the authorities in Asia have understood this all along. There is a rich history here of devising and implementing macroprudential measures. As far back as the 1990s, if not earlier, Asian central banks have used a variety of prudential instruments to mitigate systemic vulnerabilities. Ceilings on loan-to-value and debt-to-income ratios were applied in Hong Kong and other places. New measures are being tested out all the time. For instance, Korea's levy on the foreign exchange liabilities of banks seems to have worked well, as a preliminary analysis suggests.

A third response started from the recognition that any regulatory framework will have some "cracks" – meaning that it can cover some parts of the system but not all. As a result, other policies may be needed to help promote financial stability. In particular, monetary policy could play the important role of determining the universal cost of leverage, which is what would be needed to fill in the cracks.

I will not delve into the first point here today. Let me just mention that we have made significant strides in this area. The new Basel rules call for more and better-quality capital as well as minimum liquidity buffers. We have identified systemically important banks and have set more stringent standards for them. In addition, we now provide for buffers to be built up during booms and drawn down in times of stress. The ongoing work on setting additional "bail-in-able debt" and minimum standards on haircuts will provide additional shock-absorbing capacity. Not only do these buffers make the system considerably stronger than before, but they also help align incentives so that they reflect the macroprudential dimension.

True, all these buffers will impose some costs. But, even with capital well above the minimum levels set in Basel III, the upfront outlay will bring benefits in the long term. For a start, a more resilient financial system will allow the global economy to grow with fewer interruptions from financial crises. And, when crises do occur, they will be less severe than before.

Another dimension with respect to prudential standards is highlighted in the programme of this conference; that is, the importance of an inclusive financial system and inclusive growth. On this let me make two points: first, financial exclusion can incur costs in terms of social and financial stability. Second, technological innovation is a key factor in promoting financial inclusion and equitable growth. Both points need to be taken into consideration so that prudential standards are calibrated according to the risks but do not get in the way of the innovation that is needed to facilitate inclusive growth.

In the rest of my remarks today, I would like to focus on the two other aspects I mentioned at the beginning, namely, proactive systemic supervision and the role of monetary policy. These will be key elements within a comprehensive financial stability framework. Within such a framework, while banks tend to get most of the regulatory attention, it is important to monitor developments in the financial system as a whole. In this regard, I would like to draw your attention to a recent development that bears watching. I have in mind the significant change in the patterns of funding flows, particularly in Asia. I am referring to the rapid growth of corporate bond issuance in hard currencies, or as Hyun Song Shin has called it, the new phase of global liquidity.

2. Being systemic and proactive with supervision

As I said, the Basel III capital and liquidity standards set a new framework for a sound and stable banking system. They provide a solid foundation on which to build a more systemic approach to bank supervision.

Yet, while capital and liquidity standards may be necessary, they are not sufficient. Strong standards need the support of strong supervision, just as strong supervision needs the support of strong standards. In the wake of the recent global financial crisis, the Basel Committee reappraised its core principles for banking supervision, and revised principles were issued in 2012. Supervision should be intrusive, proactive, comprehensive, adaptive and conclusive.

Supervision should take a systemic view, integrating the macroprudential with the microprudential approaches. What does it mean to be more systemic? It means at least two things. First, we must pay greater attention to systemically important banks. Second, we must adopt a system-wide, macro perspective and be ready to take pre-emptive action. Let me say something about each of these two principles.

First, regarding systemically important banks, the Basel Committee has proposed a methodology for identifying such banks at the global level. It relies on five broad indicators of systemic importance: size, interconnectedness, substitutability, complexity and cross-border activity. These indicators have now allowed us to identify 28 *global* systemically important banks or G-SIBs.

We can use a similar methodology to identify *regional* systemically important banks as well as *domestic* ones. Once these banks are identified, we can supervise them more closely, perhaps following the regulations already formulated for the G-SIBs.

Second, this kind of supervision requires not only a new and different kind of expertise but, even more importantly, the capacity and willingness to act under significant uncertainty. These include the ability to conduct group-wide consolidated supervision and to challenge banks' business models, their corporate strategy, governance, risk profiles, ROE targets and capital plans. Also necessary will be the willingness to exercise judgment and to act pre-emptively under conditions of uncertainty.

Macro stress tests are an important tool for gaining a system-wide macro perspective. By imposing macroeconomic tail risks, such as sharp falls in GDP or property prices, these tests differ from the traditional stress tests used by banks, which focused on the tail risks only in financial variables. Another difference is that supervisors impose the scenarios uniformly across a cross-section of banks, rather than stress testing each bank individually.

You may remember that supervisors applied macro stress tests to US banks in 2009, and to good effect. The 19 largest American banks were assessed, and some were found to be undercapitalised. These banks proceeded very quickly to raise the needed capital. I believe this was an important turning point in the US subprime crisis. Indeed, the Dodd-Frank Act now requires US supervisors to apply macro stress tests every year to all but the smallest banks.

After the Financial Stability Board met in Moscow on 8 November, they endorsed comprehensive stress testing with "severe but plausible scenarios" as a vital tool for mitigating financial stability risks. In general, these tests should take into account factors that might amplify financial distress.

One caveat I should mention is that, at the present state of the art, macro stress tests are still more useful as a crisis management tool than as an early-warning device. None of the many stress tests conducted before 2008 warned us about the impending crisis. This is because the art of stress testing involves the formulation of scenarios that are severe yet plausible. The subprime crisis actually unfolded in a series of scenarios that, before the event, would have been considered highly implausible. By contrast, the 2009 US stress tests worked well in part because they were done when the crisis was already under way, so that appropriately severe scenarios seemed plausible. Those stress tests helped to get the crisis under control. But, given the global economy's complexity, the challenge is to formulate crisis scenarios that would seem plausible *before* a crisis occurs.

Nonetheless, macro stress tests can usefully lend transparency to a supervisor's financial stability goal and serve as a basis for dialogue with the financial sector. Indeed, in the present environment, when there are already clear hints of a desirable normalisation from a prolonged period of extraordinary monetary accommodation, the FSB has issued a recommendation that is particularly timely – that authorities should communicate the impact of scenarios which consider "high asset price volatility and an overshooting of long-term interest rates relative to fundamentals". The need for supervisors to gauge the impact of such scenarios is especially relevant for those emerging market economies and smaller advanced economies that have experienced rapid growth in credit and property prices in the past few years, and are now at a late stage of their economic cycles.

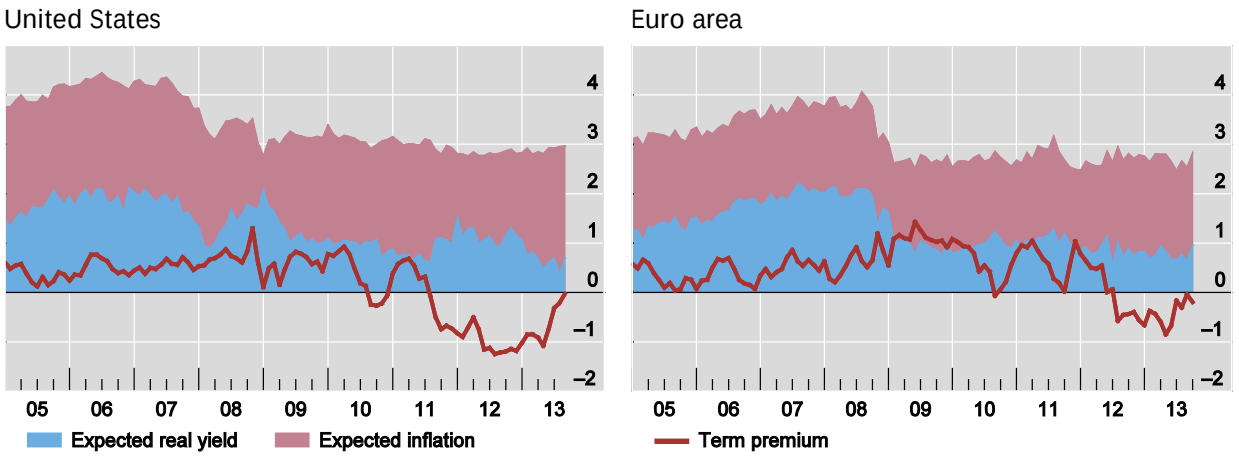
How far could long-term interest rates adjust? Figure 1 provides some indication. It shows the decomposition of US and euro area long-term interest rates into an expected path of real short rates

(the blue area), expected inflation (the dark pink area), and a term premium (the red line).[1] Against the backdrop of the Federal Reserve's large-scale asset purchases, the US term premium was deep in negative territory in 2012 (left-hand panel). Although the ECB does not actually engage in similarly large-scale asset purchases, its stated readiness to do so also saw a decline in the euro area term premium in the second half of 2012 (right-hand panel). All these will need to reverse at some point – indeed, some adjustments have already occurred, following the first mention of "tapering" earlier this year. But there is still some way to go before term premia can return to pre-crisis levels. And considering how rapidly long-term rates rose earlier this year and how sharply asset markets reacted, overshooting by long-term rates and further asset price volatility are indeed very plausible scenarios.

Decomposition of 10-year government yields, United States and euro area

In per cent

Figure 1



Sources: Bloomberg; Datastream; BIS calculations.

3. Filling in the cracks with monetary policy

Let me now turn to the second aspect, namely the need to fill those "cracks" in the regulatory framework.

What we now know is that financial cycles often pack more punch than we thought possible. On their own, regulatory and prudential policies – including macroprudential policies – are not sufficient to rein them in. History suggests that macroprudential policy tools can be effective in strengthening specific sectors but much less so in constraining financial booms. (For instance, macroprudential tools can help limit the quantity of mortgages and thus banks' exposure to the housing market, but they cannot directly dampen the volatility in house prices.) In addition to their technical constraints, macroprudential measures can also be weakened over time by regulatory arbitrage. As the perimeter of

[1] P Hördahl and O Tristani, "Inflation risk premia in the euro area and the United States", *International Journal of Central Banking*, forthcoming.

regulation is limited, regulated entities can often find ways round it. Recall that in the midst of one of the biggest bubbles of the century – that of Japan in the 1980s – the authorities did impose controversial limits on real-estate lending by banks. However, bank loans were subsequently transferred to specialised housing loan companies, with results that eventually hit the public purse.[2] And, right now, shadow banking activities in mainland China provide another example of financial institutions beyond the reach of supervision that are frustrating policy efforts to rein in excesses.

All this means that policies other than prudential ones must also play a part in promoting financial stability. Fiscal policies that gain fiscal space during the financial cycle[3] and structural policies that help to correct the sectoral misallocation of resources are very important in this regard, but I would like to focus here on monetary policy.

Monetary policy that takes into consideration not only the business cycle but also the financial cycle can be a useful complement to prudential policies, especially when financial stability risks appear high. Monetary policy sets the universal price of leverage, and this price resists regulatory arbitrage. To the extent that the economy and financial system are market-oriented, monetary policy can "get in all the cracks", as Governor Jeremy Stein put it.[4] The market price of leverage constrains hedge funds operating off-shore and other financial institutions operating beyond the reach of regulation. Indeed, one could view the recent short-term liquidity squeeze in China's interbank market in this light. Market prices were harnessed by the authorities to help rein in risky lending to shadow banks.[5]

Despite the wide-spread adoption of inflation targeting frameworks in the Asia-Pacific region, a number of central banks have recognised that monetary policy tools should not be dismissed if asset prices were to pose a risk to financial stability. For instance, before the two policy rate rises in 2003, the Reserve Bank of Australia made public its concerns about the risks of an overheating housing market.[6] In China, the monetary policy measures of the People's Bank show a very high correlation with macroprudential measures taken by the domestic financial authorities to curb housing price booms.[7]

At the same time, we must recognise that monetary policy is not a panacea and its effectiveness is not without limits.[8] Here we must distinguish between crisis management and crisis resolution. During a crisis, all policy levers must certainly be pulled to prevent the financial system imploding. But when it comes to the resolution (and consolidation) phase, priority should be given to structural policy and balance sheet repair, to pave the way for a self-sustaining recovery.[9] In addition to recapitalising banks,

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2 T Ito, "The stagnant Japanese economy in the 1990s: The need for financial supervision to restore sustained growth", in T Hoshi and H Patrick (eds), *Crisis and Change in the Japanese Financial System*, Norwell, 2000.

3 C Borio, "The financial cycle and macroeconomics: What have we learnt", *BIS Working Papers*, no 395, December 2012.

4 J Stein, "Overheating in credit markets: origins, measurement, and policy responses", speech at research symposium sponsored by the Federal Reserve Bank of St Louis, February 2013.

5 G Ma and C Shu, "Interbank volatility in China", *BIS Quarterly Review*, September 2013.

6 A Heath, F Packer and C Windsor, Introduction to the proceedings of a Reserve Bank of Australia-BIS conference on Property Markets and Financial Stability, Sydney, Australia, 20–21 August 2012.

7 K Kuttner and I Shim, "Can non-interest rate policies stabilise housing markets? Evidence from a panel of 57 economies", *BIS Working Papers*, forthcoming.

8 M Bech, L Gambacorta and E Kharroubi, "Monetary policy in a downturn: are financial crises special?", *BIS Working Papers*, no 388, September 2012.

9 One well known example of effective banking sector restructuring – which required considerable fiscal support – is that of the Nordic banking system in the early 1990s. By contrast, in Japan, a financial crisis around the same time was not accompanied by balance sheet repair for many years, due to political resistance to the use of taxpayer money. Despite very expansive monetary policies, the economy took longer to recover.

authorities should get banks to recognise losses. In short, just as we should avoid relying solely on prudential policy, we should also take care not to overburden monetary policy.

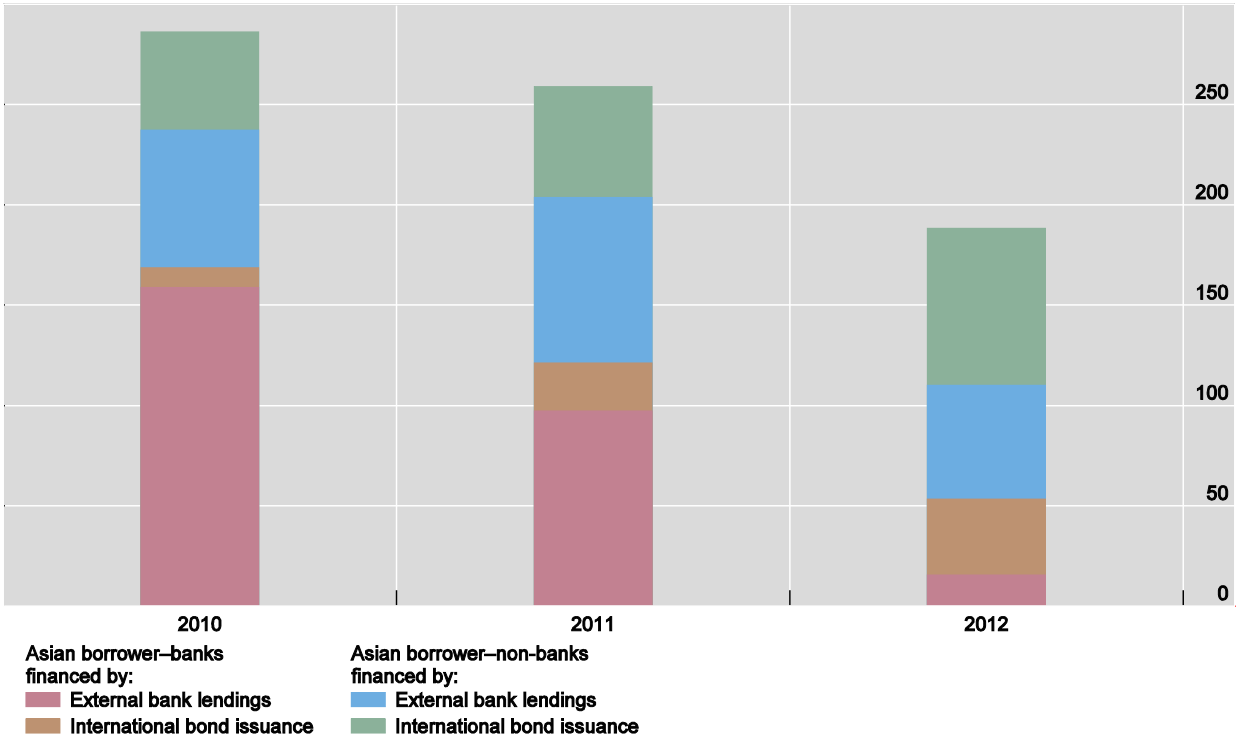
4. The new phase of global liquidity

I mentioned in my introduction that financial stability monitoring should not focus only on parts of the financial system (eg banks), but should track the evolution of the financial system as a whole. Indeed, in this regard, I would like to highlight a potentially important development: namely, the growth in private sector indebtedness via offshore debt financing. Many emerging markets are looking increasingly to international bond flows for financing, instead of relying on international banking flows. In a recent address, Hyun Song Shin has described this as "the second phase of global liquidity".[10] Global liquidity is being increasingly transmitted through the bond market, particularly through demand for debt securities that are sold across borders to global investors.

External financing of emerging Asia

In billions of US dollars

Figure 2



Based on data from a presentation by P Turner on "The global long-term interest rate, financial risks and policy choices in EMEs" at the Inter-American Development Bank meeting in October 2013 as well as additional BIS international banking statistics. External bank lending includes all currencies. Sample includes China, Chinese Taipei, India, Indonesia, Malaysia, South Korea, Thailand and the Philippines.

Sources: Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; BIS locational banking statistics by residence; BIS calculations.

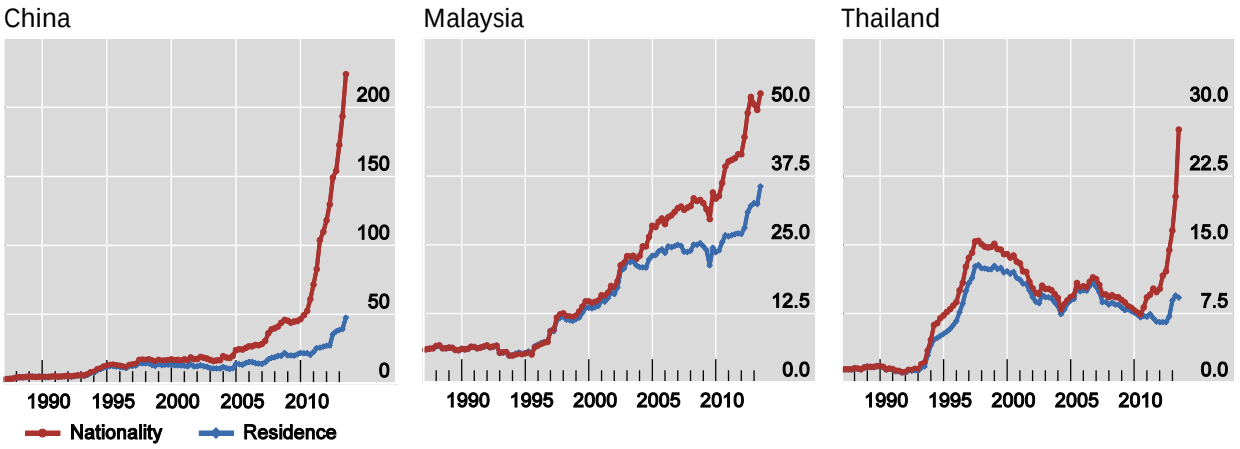
[10] H-S Shin, "The second phase of global liquidity and its impact on emerging economies", keynote address at Federal Reserve Bank of San Francisco Asia Economic Policy Conference, November 3–5, 2013.

This new reliance on bond financing is especially pronounced in emerging Asia. In Figure 2 the stacked bars show the different components of net external financing for Asian emerging economies since 2010. External bank lending to banks in emerging Asia (the dark pink portion) has slowed dramatically (although it seems to be recovering in 2013), but the issuance of debt securities by banks (the brown portion) has grown. Similarly, while the increase in external bank loans to non-bank borrowers in Asian emerging economies has been slowing (the blue portion), their net issuance of international bonds has risen significantly (the green portion).

In this second phase of global liquidity, the distinction between the borrower's residence and its nationality is quite important. Figure 3 illustrates this for China, Malaysia and Thailand. In each case, the value of outstanding international debt securities is plotted both by residency of borrowers (the blue lines) and nationality of borrowers (the red lines). The difference between the two lines reflects offshore issuance by local borrowers. The difference has historically been very small, but since the global financial crisis it has widened for each of the three countries. China now has four times more international debt securities outstanding when calculated on a nationality basis as opposed to a residency basis. Thailand and Malaysia have three and one and a half times as much, respectively.

International debt securities by residence and nationality, selected borrowers

Amount outstanding, in billions of US dollars — Figure 3



Source: BIS international debt securities statistics.

Increased borrowing via offshore securities markets can be a mixed blessing from a financial stability perspective. To be sure, increased external financing by corporates via the bond market can be a healthy development. In contrast to bank loans, which tend to be shorter-term, bond market finance tends to bind investors and issuers over the medium to long term – and is thus relatively less susceptible to sudden reversals. To the extent that the corporates accessing external markets are those of higher quality and have foreign exchange income as a natural hedge, concerns about currency mismatches and defaults should also be contained.

However, financial stability concerns may arise if the demand for international debt securities is so buoyant such that even good-quality borrowers overextend themselves or if lesser-quality corporates with little capacity to manage currency and maturity mismatches are also able to load up on debt. The increasing stock of corporate debt and the relative opacity of corporate balance sheets need to be carefully watched in case potential vulnerabilities should emerge. Furthermore, offshore debt may not be registered as capital inflows or be fully captured by the national debt statistics. These caveats could lead to complacency on the part of the relevant authorities.

In any case, these developments will bear continued monitoring and they deserve our efforts to understand them better.

5. Conclusion

To conclude, let me reiterate the following points:

First, bank regulation is absolutely necessary, and it is a key pillar of a robust financial stability architecture. Nevertheless, it is not sufficient. We need supervision that is proactive and systemic.

Second, prudential measures – including macroprudential tools – are extremely useful, but there are often circumstances in which these will not be enough. We will need the help of other policies. In particular, we will need monetary policy that can help to "fill in the cracks". This could serve as a complement to macroprudential measures by helping authorities to lean against the boom phase of the financial cycle.

And third, the monitoring of bank lending is also not enough by itself. At present there is a new development that bears close watching. I refer to the growth of external financing in Asia in the form of bonds issued in foreign currencies.

But of course, our work is far from done. As financial systems and their interlinkages grow more complex, there is much we still need to understand, not least some of the new risks related to offshore debt finance that I have just discussed.

Nonetheless I am confident that we can continue to improve our approach, not least by learning from each other's experience and applying these lessons to reduce the risk of financial instability. If there is anything that the turbulence of the past five years has taught us, it is that these efforts will be worthwhile.