SPEECH

Three key challenges for macroprudential surveillance

A speech delivered by Joseph Yam, Chief Executive of the Hong Kong Monetary Authority, at the High Level Meeting on the Implementation of Basel II in Asia and Other Regional Supervisory Priorities on 11 December 2006.

Joseph Yam spoke on the key challenges for macroprudential surveillance faced by central bankers and the ways to tackle them. He called on EMEAP to work together with the international supervisory community to address these issues.

Ladies and Gentlemen,

For most of today the main subject covered has been Basel II. This is only natural given the timing of this meeting, only a couple of weeks before Basel II starts coming into operation. But as you have already had a full day of Basel II I thought you might welcome a change of subject, or at least a shift of emphasis, so in my remarks tonight I'm going to talk about a matter increasingly dear to a central banker's heart, namely, macroprudential surveillance.

The concern to ensure the overall soundness of the financial system is part of what Tomasso Padoa-Schioppa once called the "genetic code" of central banks. It has been one of their core functions throughout their history, especially given their role as lender of last resort. However, in the past ten to fifteen years central banks have started to give much more explicit emphasis than in the past to their macroprudential responsibilities and have distinguished them more clearly from the role as bank supervisors. Encouraging progress has also been made on developing more sophisticated techniques of financial stability analysis. However, this is still a work in progress and I would like later to raise three key challenges for further enhancing macroprudential surveillance.

But let me preface these by emphasising that high standards of banking supervision are the first prerequisite of financial stability. No financial system can be stable unless the individual banks in it are stable. Thus risk-based supervision and proper risk assessment by banks are essential measures to help ensure financial stability. In this regard Basel II will help strengthen financial systems by encouraging banks to adopt stronger risk management mechanisms. Pillar 2 of Basel II also provides a more formal mechanism to evaluate a broad range of risks – including some of those that might impact on the system as a whole as well as on individual banks, such as credit concentration risk. By encouraging greater transparency by banks Pillar 3 also contributes to making financial systems more resilient.

It is particularly pleasing to note the role that EMEAP has played in encouraging high standards of supervision among its members. Almost ten years on from the financial crises that affected many member countries, a great deal has changed. Banking systems in the region have become much more robust, and there has been a step-change in the standards of supervision. Risk-based supervision is increasingly replacing compliance checking. There are also now moves under way to improve regional cooperation on issues like Basel II implementation. In all these initiatives EMEAP has been playing a leading role in the region.

However, an important lesson of the experience of a decade ago is that financial stability cannot be attained only by paying attention to the soundness of individual banks. We also need to pay attention to what is now referred to as the "macroprudential" perspective, which takes into account system-wide risks. Macroprudential policy, as I view it, has four main features:

- First, it aims to limit the distress to entire financial systems rather than distress to individual institutions.
- Second, the chief aim is to avoid macroeconomic costs – such as expensive bank bailouts – rather than necessarily protecting the depositors of an individual bank.
- Third, it is based on the assumption that at least some of the risks faced by the banking system as a whole differ from those faced by individual banks. In other words, the risk to the system is not simply the sum of risks to individual banks.
- And, fourth, it aims to examine risks that arise from the interaction of banks as part of a financial system rather than on a bank-by-bank basis.

As an example of the kind of issue I have in mind, the exposures of banks to foreign exchange risks didn't show up on bank balance sheets prior to the Asian financial crises. The risks were instead in the balance sheets of many of their major borrowers, who had borrowed heavily in foreign currencies even though they had domestic currency cash-flows. Thus a banking system can be exposed to a common risk that isn't obvious from looking at each bank individually.

The experience of the financial crises of 1997-98 was undoubtedly one factor behind the greater emphasis that many central banks now place on macroprudential surveillance. To this we can add the development of the joint IMF-World Bank Financial Sector Assessments, which many EMEAP members have experienced in recent years, and the attempts by some G-10 central banks to develop sophisticated methods of financial system monitoring.

One important practical consequence of the greater emphasis now placed on macroprudential surveillance has been the creation of financial stability units – small teams with backgrounds in economics and banking supervision whose job it is to monitor wider trends in the financial system – that are now increasingly a feature of the organisational charts of many central banks.

The chief product of these units has been the publication of a financial stability report. The Bank of England was among the first movers and its Financial Stability Report, which is now a decade old, recently underwent a revamp that illustrates how rapidly this type of analysis has evolved in a relatively short space of time. Many other central banks have since followed the Bank of England's lead, and in the HKMA we have published our own Monetary and Financial Stability Report for several years now. More recently we began an internal Banking Stability Report which aims to provide a macroprudential perspective on trends in the banking system that we can then use to target our supervisory priorities and resource allocation more effectively. The eventual goal is to try to draw these two reports more closely together and to bring a more forward-looking perspective to our banking supervision work.

The intellectual backbone of a financial stability report is provided by stress testing techniques. In the HKMA's case we issued requirements on stress testing by banks some time ago. Our Supervisory Policy Manual Module on Stress Testing, issued in early 2003, requires banks to have in place a stress-testing programme and to integrate stress testing into their risk management processes. For our own internal purposes we also conduct stress tests by applying a range of shocks to the supervisory data that is reported to us. These shocks take into account various adverse movements in banks' liquidity, interest rate and market risk positions.

The first generation of stress tests simply took a variable and subjected it to a shock. It was basically just a matter of saying "let's see what happens to capital if non-performing loans increase to 20 percent to total loans." This type of crude stress test is quite helpful for a sense of how solid the system's capital buffer might be in certain adverse conditions, but it doesn't take into account second and third round effects in the economy at large. If NPLs have risen to 20 percent of total loans, then there are likely to be a lot of other things happening in the economy at the same time – such as interest rate spikes and sharp falls in asset prices – all of which could have additional implications for banks' financial soundness.

This brings me to my first key challenge for macroprudential policy. There is a need to develop more sophisticated stress testing techniques that can take into account the second and third round effects of a macroeconomic shock. Fortunately, important innovations in this direction are already starting to appear. The Bank of England's recent revamp of its financial stability report, which I mentioned earlier, aimed to give a larger role to scenario analysis. This involves economists constructing scenarios for the outlook on GDP, interest rates etc. and tracing through these changes in terms of their impact on the key measures of banking system soundness. To do this they also need to identify the key risk transmission channels and find ways of quantifying their potential impact on bank profitability and capital adequacy. This approach involves some quite advanced economic modelling techniques and is still in its infancy. Some EMEAP members are further advanced in these techniques than are others, and thus it would be valuable to try to spread this expertise more generally through the membership.

A second key challenge concerns the best way to integrate macroprudential surveillance with banking supervision. At one level the aims of macro- and micro-level analysis are different and therefore some difference in perspective is unavoidable. Macroprudential surveillance is concerned with system-wide risks, and with monitoring the behaviour of broad aggregate numbers, whereas banking supervision is concerned with the soundness of individual institutions. Against this background we might regard them as distinct activities which only overlap at the margin. But this seems to make the relationship between these two activities unduly clear-cut. From the macroprudential perspective we gain a sense of the potential vulnerabilities that might affect the financial system as a whole. But where these vulnerabilities will "bite" will be at the level of individual institutions. When bank failures occur they involve individual institutions, not the aggregate numbers studied by macroprudential surveillance.

In consequence, we need to find ways of assessing how the pattern of financial shocks assumed in macroprudential surveillance might affect individual banks, and to factor that into our bank supervisory activities. The essence of macroprudential surveillance, especially when it is conducted using scenario-type analysis, is its forward-looking perspective. It aims to assess risks which might potentially occur. Risk-based supervision also aspires to have a forward-looking perspective to risk, and aims to prioritize supervisory resources based on the risks presented by an individual institution to the financial system as a whole. It would appear that there is a natural affinity between risk-based supervision and the macroprudential surveillance perspective. Although there has also been some progress on bringing these two perspectives more closely together, much more still remains to be done, and I believe that this is a problem with which most EMEAP members are currently wrestling. Thus our second challenge is to find ways to integrate the macroprudential perspective with banking supervision.

My third, and final, key challenge concerns how we can make macroprudential surveillance more relevant to today's globalised financial system. In the past it might have been reasonable to think that systemic risk was something that began and ended at the boundaries of a particular jurisdiction. That assumption began to crack in the 1970s with the experience of Bankhaus Herstatt, and it has long since ceased to be true. When a hedge fund based in the Caribbean is capable of moving markets half way round the globe, we have to take seriously the potential for shocks to have an impact far outside the financial systems in which they originate.

At the moment, however, our financial stability analysis has focused exclusively on the domestic financial system and has devoted very little attention to possible spill-over effects between jurisdictions.

There are obvious reasons why this is the case. It is clearly very problematic to appear to be accusing one's neighbours of being a potential source of systemic risk in one's own jurisdiction – even if the intention is merely to point out potential risks and vulnerabilities. However, given the pressing need for more cross-border financial stability analysis, we must find a way in which the potential sensitivities do not become an obstacle to understanding these serious sources of systemic risk.

This is the third challenge that I hope we in the region will rise to meet. The best way to deal with the sorts of sensitivities that can arise in developing scenarios for cross-border systemic risk is for the work to be undertaken as a common effort. As a first step, it would be helpful if we could start the process of mapping some of the main cross-border transmission mechanisms that provide the channels through which systemic risk would flow. Only once we have a proper understanding of these channels would it make sense to try to quantify them, or to construct scenarios for how cross-border contagion might unfold.

The three key challenges that I have outlined this evening – how to develop more sophisticated stress testing tools; how to integrate the macro- and micro-perspectives in financial stability analysis; and how to take into account possible cross-border spill-overs – amount to a lengthy and demanding agenda. But given EMEAP's past successes in assisting its members to address some of the most pressing issues in ensuring financial stability, I would hope that, together with the assistance of our friends in the international supervisory community, we will be able to make progress within the region on addressing these issues in the near future.