A pedestrian walking past a real estate office in a popular shopping district in Hong Kong. In the Chinese city and Singapore, governments have introduced several measures to curb real estate bubbles, including stamp duties and lower mortgage percentages. PHOTO: AGENCE FRANCE-PRESSE

Warning signs of future asset bubbles

BY PETER C.B. PHILLIPS
& JUN YU
FOR THE STRAITS TIMES

STABILITY in the world financial system is a valuable international public good. Like peace and a stable climate, its benefits are largely taken for granted until they are lost. Legislators, regulators and central bankers are guardians of this public good. Their collective responsibility is to implement standards that preserve it.

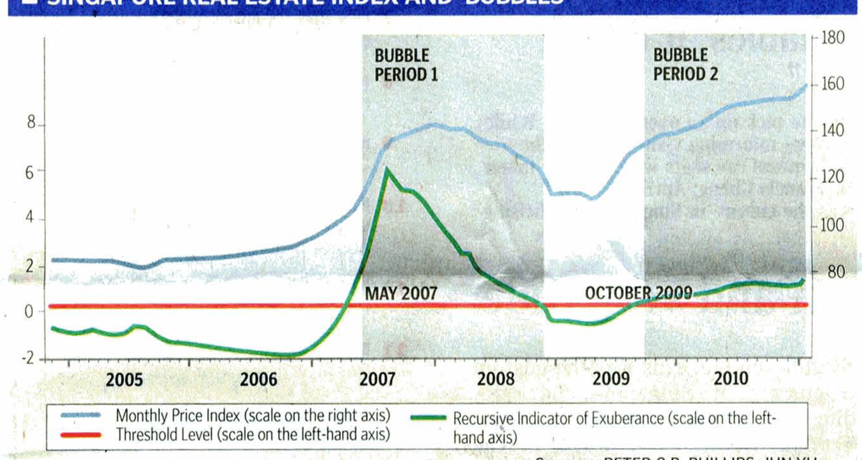
Leading financial representatives have sought conditions to promote a stable framework of world banking – beginning with the Basel I Accord of 1988, followed by the Group of 10 and Group of 20 leading economies, and now a wider set of 27 country jurisdictions in Basel III.

The global financial crisis drew attention to the complexity of the task of modern banking regulation and surveillance. The explosion of new financial products, skilful packaging of assets, and creative new trading milieus in the increasingly sophisticated financial industry have left regulators to play catch-up.

Can anything be done to avert such crises in the future? Have the seeds of future crises already been sown, with impending sovereign debt defaults in the European periphery, booming commodity prices, asset price inflation in Asia, and global trade imbalances that pose long-term structural and exchange rate adjustment problems?

Amid this global scenario, central bankers, regulators and policymakers convened in Sydney on March 24 and 25 to discuss Basel III and the future of international banking.

SINGAPORE REAL ESTATE INDEX AND BUBBLES



Sources: PETER C.B. PHILLIPS, JUN YU

On Thursday next week, Singapore will be the venue for a major financial symposium that will follow up on these themes and explore their relevance in this region. It will convene central bankers, leading commercial bankers, finance industry specialists and academics to discuss the financial future and the role of regulation, governance and central banks in ensuring financial stability.

To avert future crises, many central bankers have expressed concerns about escalating asset prices and indicated the need for more pro-active policy in combating asset bubbles.

Former US Federal Reserve vice-chairman Donald Kohn indicated in a speech last year that "policymakers should deepen their understanding about how to combat speculative bubbles to reduce the chances of another financial crisis".

In his Basel III speech, Reserve Bank of New Zealand governor Alan Bollard flagged various tools to help dampen future asset and credit bubbles and maintain the stability of his country's financial system.

In Singapore and Hong Kong, governments have introduced several measures to curb real estate bubbles, including stamp duties and lower mortgage percentages.

An important presumption in this strategy to combat speculative bubbles is that they must be spotted as they emerge, not just after they have collapsed. The common mantra of "you cannot define it but you know it when you see it" has long been applied to pornography. While this may suffice for obscenity, a quantitative standard of evaluation is needed in the case of financial bubbles. That topic is now an active arena of academic research.

We have developed a statistical diagnostic tool that signals the presence of an asset bubble in data. We used this diagnostic tool to assess evidence of financial exuberance on Nasdaq in the 1990s. That work shows statistical evidence of exuberance 15 months prior to former US Fed chairman Alan Greenspan's December 1996 speech, which famously introduced the term "irrational exuberance" and flagged an emerging problem.

To illustrate the detection mechanism, we applied the same technology to real estate prices in Singapore.

In the chart, the blue line shows the monthly Singapore Residential Price Index. The green line which tracks market exuberance is derived from the blue line by using a sophisticated statistical tool. The red line is the threshold. When the green line crosses above the red line, the diagnostic test signals the presence of market exuberance.

As shown in the chart, there was real estate exuberance for most of 2007 and 2008 (the first shaded area). Interestingly, some evidence of another bubble emerged in late 2009 (the second shaded area) and was still ongoing in January this year. The latest reports indicate some market softening following the new stamp duty charges and loan to valuation limitations introduced on Jan 14. We expect the empirical effects of these changes to become evident in our test indicator when the data is available.

These diagnostics help predict the temperature of the prevailing real estate market. As the chart shows, in May 2007 we would have been alerted to emergent bubble conditions in real time. A similar alert would have occurred in October 2009.

In this way, the methods provide early warning diagnostics for financial asset bubbles. They may be used by policymakers in timing the measures that are being considered by central bankers to dampen financial asset and credit bubbles.

Peter C.B. Phillips is sterling professor of economics at Yale University and distinguished term professor of economics at Singapore Management University (SMU). Jun Yu is professor of economics and professor of finance at SMU and director of the Sim Kee Boon Institute for Financial Economics. They are co-chairs of the Annual Conference on Financial Economics: A New Global Financial Landscape to be held on Thursday next week.