Bubble or roller coaster in world stock markets?

By PETER CB PHILLIPS and JUN YU

LOW interest rate regimes that have persisted since the financial crisis have driven down hedge fund returns and forced investors to take on greater risk exposure in search of positive returns. Falling commodity prices, concerns over the bond market and shaken property markets leave investors with slim pickings outside the stock market.

Supported by the US Federal Reserve’s quantitative easing programme and rising corporate profits, wolf packs of investors took the S&P 500 to new levels last month. Singapore stock prices also rallied with the Straits Times Index (STI) rising to five-year highs. Since then, stock market exuberance has unwound rapidly across North America, Europe and Asia. Was the latest market experience another asset price bubble?

The financial crisis also demonstrated that individual risk-taking can aggregate into perils of greater exposure — impacting the real economy, threatening financial institutions, and endangering global financial stability. The dot-com and US housing bubbles uprooted much textbook thinking about bubbles and efficient markets, implanting new concerns about the wider risks of financial market exuberance and ballooning debt.

As the stock markets rode to record levels last month the Federal Reserve chairman Ben Bernanke drew attention to the systemic dangers of excessive risk-taking. Mr Bernanke was cautious in talking about a bubble and thinking about bubbles and efficient markets, and endangering global financial stability. The asset bubble detector is shown by the green line (left axis), which is computed recursively — that is, period by period as the data (blue line) evolve. The red line is a threshold value corresponding to a one per cent probability of a false detection initially with declining probabilities of false detection thereafter. If and when the recursive test statistic (the red line) breaks above this threshold value, there is strong indication of exuberance in the market.

We found no such evidence of a bubble in the STI (or the S&P 500 or Dow Jones or FTSE 100) over the period August 2011 to June 2013. We also found no recent evidence of a bubble in US Treasuries or bond prices. These results together imply that Mr Krugman’s assessment last month was correct, and his advice to Mr Bernanke is well supported by the evidence on prices even without reference to economic fundamentals. The recent roller coaster in world stock markets was not an asset price bubble.

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