

Comments on Eric Girardin, Sandrine Lunven and Guonan Ma's paper

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I. What does this paper do and say?

First, this paper converts a bundle of monetary policy instruments into a single monetary policy index (MPI), and introduces the idea of "equivalent 27 basis point changes" in the policy index. It also integrates different instruments for each period of time, allows time-varying instrument components in the index, and measures policy stance in both directions and magnitudes.

The paper then uses this index to answer the following two relevant questions regarding the monetary policy rule of the People's Bank of China (PBC): which one is the PBC more responsive to, output or inflation? Is the PBC an inflation targeting central bank?

The paper finds that there is a clear change of policy style: big and infrequent policy changes before 2002, but frequent and small policy changes thereafter. It also finds that the PBC has attached a growing weight to inflation, as captured by empirical models (both backward-looking and hybrid). The paper argues that as inflation expectations tend to be increasingly important, this implies a more forward-looking style of the PBC's policy considerations.

II. Comments

I offer my comments on the paper by attempting to answer the following three questions: first, how should we define and measure China's monetary policy stance? Second, what are the implications of the changing relationship between the quantity and price of credit? And third, is the detected regime shift robust?

Measuring the PBC's monetary policy stance is a difficult task. According to Bindseil (2004), "the monetary policy stance at a certain moment in time consists of the prevailing value of the operational target and the expected changes thereof that result from the central bank's communication." However, the PBC does not publicly specify a clear operating target. While we know that PBC is in action when it moves any of its arsenal of policy instruments, its policy stance is in fact hidden behind the policy actions. In addition, whether a certain level of the operational target variable reflects a tight or loose stance cannot be determined independently of the circumstances. The MPI constructed by the authors may not be a good indicator of the PBC's policy stance because it relies solely on the observed changes in the PBC's policy instruments, and does not relate to the prevailing macroeconomic conditions.

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One approach to gauging the PBC's policy stance is to treat instrument changes as "signals" of movements in the unobservable policy stance. Adopting this approach, He and Pauwels (2008) estimate a discrete choice model, which measures the PBC's policy stance as a latent variable that has realisations in the form of observed changes in the PBC's policy instruments. The authors run a discrete choice regression that relates these realisations of policy stance to major trends of macroeconomic and financial developments, which are represented by common factors extracted from a large number of variables. The fitted or predicted values of the dependent variable are taken as an indicator of the PBC's desired monetary policy stance. They found that, despite the more frequent policy actions taken by the PBC during 2007, the estimated implicit stance in late 2007 was actually looser than was observed in 2006. Thus, relative to the prevailing macroeconomic conditions, the strength of policy tightening during 2007 was probably weaker than commonly thought.

Any characterisation of the PBC's monetary policy stance also needs to take into consideration China's evolving monetary policy strategy. The broad context of the strategy is China's transition from a planned economy to a mixed economy, and then to a market economy. In this context, the PBC's monetary policy strategy has been shifting from a focus on the quantity of credit to the price of credit, and the transition is yet to be completed. The key question is then: how do we translate quantities into prices in measuring the PBC's policy stance? What is the "interest rate equivalence" of certain credit targets? The authors treat a rise of the RRR of 50 basis points as equivalent to a 27 basis point rise in the benchmark interest rate. This may be problematic because the strength of these two policy actions can be quite different.

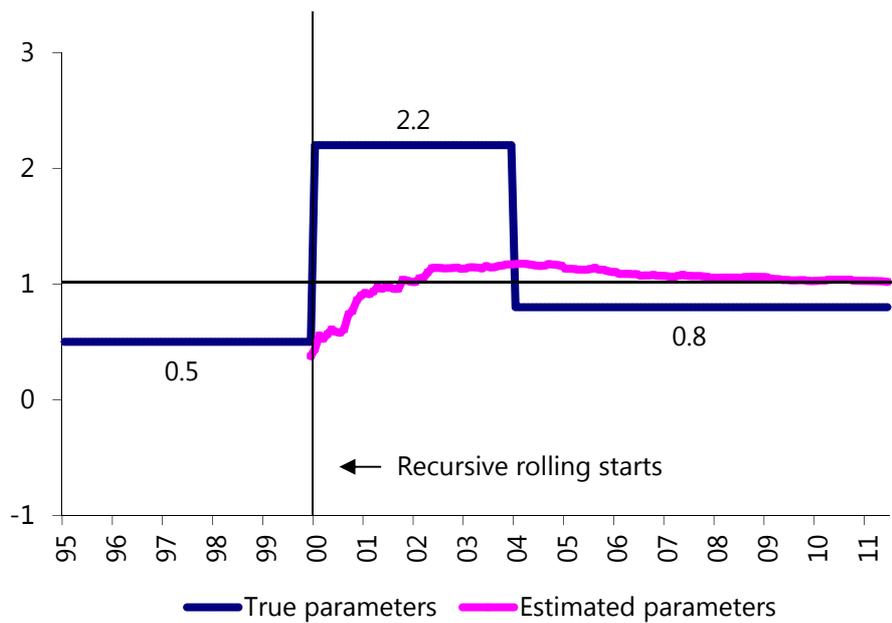
We need a benchmark in order to measure the strength of different policy instruments. He and Wang (2012) gauge the strength of policy instruments by examining their impact on the money and bond market rates, in the context of China's "dual-track" interest rate system. According to their findings, a 27 basis point change in the benchmark interest rate would be 1.3–1.5 times as powerful as a 50 basis point change in the RRR. However, this relationship might not have been the same back in the 1990s. In the 1990s, the interest rate elasticity of credit was very low, so small movements in the quantity of credit would imply very large interest rate changes. In the 2000s, the diversification of channels of financial intermediation and the emergence of "dual-track" interest rates imply that, in the banking sector, the interest rate elasticity of credit was probably still low; but in money and capital markets, the interest rate elasticity of credit was much higher. In fact, He and Wang (2013) find that the "loan rate is affected not only by the regulated benchmark deposit rate, but also by market-determined interest rates. On the other hand, loan size does not appear to be sensitive to either the regulated rate or the market rate; instead, it seems to be affected by an implicit quota imposed on aggregate bank lending as a policy instrument of window guidance."

The evolving relationship between the price and quantity of credit in China could imply that the authors may have underestimated the strength of PBC policy stance in the earlier period of their sample: PBC might well have been very hawkish against inflation in 1990s, as it reined in credit supply when credit demand was very strong. But we cannot measure the strength of such policy actions because interest rates were controlled and we could not observe credit demand.

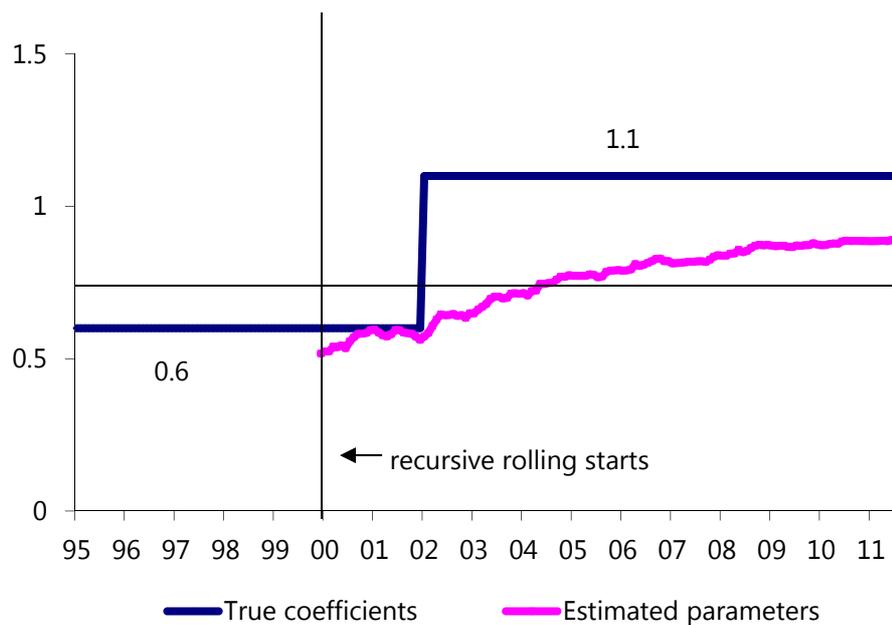
The authors detected a regime shift in the PBC's policy style – the Bank has become more hawkish toward inflation since 2003. Is this detected regime shift

robust? Or could it be just an artefact from the method of recursive regression? Graph 1 shows that estimated coefficients from a recursive regression can be easily affected by the early part of the sample. On the other hand, if the true coefficients of CPI were 0.6 before 2002 and 1.1 after 2002, then simulations show that the estimated coefficients from a recursive regression would increase over time (Graph 2). Since the authors believe that the sample period was characterised by two regimes, perhaps the model can be estimated for the two periods separately and the estimated coefficients can be tested to see whether they are significantly different.

Graph 1



Graph 2



III. Conclusions

This is an interesting paper addressing a very important question, and it contributes to a small but growing literature on the monetary policy framework of China, the world's second largest economy. Understanding China's monetary policy framework is difficult because it has a mixed financial system, characterised by a juxtaposition of quantity- and price-based policy instruments and the co-existence of regulated and market-determined interest rates. For future work, the authors may wish to strengthen their measurement of the policy stance, particularly in the earlier sample period. The authors may also wish to check whether the detected regime shift is robust to their estimation techniques.

References

Bindseil, U (2004): *Monetary Implementation: Theory, Past, and Present*, Oxford University Press.

He, D and L Pauwels (2008): "What prompts the People's Bank of China to change its monetary policy stance? Evidence from a discrete choice model", *China & World Economy*, Wiley Blackwell, vol 16(6), pp 1–21.

He, D and H Wang (2013): "Monetary policy and bank lending in China – evidence from loan level data", Hong Kong Institute for Monetary Research, working paper, no 16/2013.

——— (2012): "Dual-track interest rates and the conduct of monetary policy in China", *China Economic Review*, Elsevier, vol 23(4), pp 928–47.