Comments on "A comparison of liquidity management tools in seven Asian economies"

Martin Bodenstein[1]

Summary

This paper assesses how the choice of sterilisation tool for foreign exchange interventions impacts bank lending. The paper's theoretical and empirical results suggest that both increases in reserve requirements and the issuance of central bank bills are effective in absorbing excess liquidity in the banking system, and that the former can slow bank lending by more. The issuance of central bank bills may actually increase bank lending in some cases. Overall, the effects are more pronounced for increases in reserve requirements and increases in reserve requirements disproportionately impact small and weaker banks.

These findings are obtained from panel data for eight Asian countries with the data running from 2000 to 2013, ie the years after the Asian financial crisis. The estimation strategy follows the one-step procedure in Kashyap and Stein (2000). The fixed effect panel regression seeks to explain bank lending by bank attributes, attributes of the economy, central bank assets and liabilities, and interaction terms.

Comments on data

Before embedding this paper into a broader context, a few technical comments are in order. Data comparability across countries is always an issue in international studies and this paper is no exception. The definition of required reserves differs vastly across central banks. What asset classes are subject to reserve requirements at which financial institutions in the different countries? For example, many developing countries apply lower reserve ratios to small rural banks. Also, depending on the use of reserve requirements for the purpose of monetary policy, banks may strategically choose to allocate assets to avoid such requirements.

Broader perspective

To place this paper in a broader policy context, I distinguish between two liquidity ("bank reserves") positions of the banking system. The system can be either in deficit or in surplus. The system's liquidity position impacts the transmission of monetary policy, the conduct of central bank, and the central bank's income.

[1] National University of Singapore.

If the system faces a structural liquidity deficit, commercial banks are forced to borrow from the central bank to meet reserve requirements and interbank payments. The central bank focuses on injecting liquidity into the market, and it determines the conditions of the transactions by setting the price, quality, and quantity of the assets and the required collateral. This situation used to describe the position of the banking system in the United States and the euro area before the 2007–08 Global Financial Crisis.

When the banking system faces a structural liquidity surplus, the situation of the central bank is fundamentally changed. Commercial banks may not be forced to transact with the central bank any more. And the central bank may find itself in a weaker position to determine the conditions of the transactions with regard to price, quality, and quantity of the assets and the required collateral.

How does a surplus situation come into existence? A liquidity surplus can arise from sustained growth in any assets of a central bank, but the most common sources are growth in (net) foreign assets and (net) government lending. In the emerging economies of East, South and Southeast Asia, central banks drastically increased their holdings in foreign currency assets after the Asian financial crisis and have generated excess liquidity in the financial system through exchange rate interventions. As a result of this asset accumulation, central bank balance sheets have grown. An interesting aside to this issue is the fact that many aspects and challenges of the liquidity management in emerging Asia are similar to those faced by central banks in the developed world upon normalisation of their monetary policy.

To mange the liquidity surplus, central banks can employ the very same tools as under a liquidity deficit, namely required reserves, open market operations and standing facilities. These three tools can be used to provide or drain liquidity. In the case of a liquidity surplus, however, the additional question arises whether the central bank wants to push the system into liquidity deficit.

In the case of emerging Asia, central banks have resorted mostly to changing reserve requirements and/or the issuance of central bank bills in open market operations. Central bank bills have several appealing features. They are marketable instruments issued by the central bank, of any maturity (often below two years), denomination (domestic or foreign), or interest rate (fixed or flexible). The operations with these securities are unrestricted in size except for market appetite or law. Furthermore, central bank bills can be tradable in secondary markets and permit equitable distribution of liquidity when interbank markets are not well developed. Absent large holdings of government debt by the central bank – as is commonly the case in developing Asia – absorbing reserves through open market operations in central bank bills is a close substitute for operations with government debt.

Despite the appeal of central bank bills, reserve requirements remain a popular tool for managing a liquidity surplus situation, as they provide a simple and cheap way of absorbing liquidity. See the paper by the authors for country details. However, in contrast to central bank bills, reserve requirements are often unremunerated and represent a tax on financial intermediation. They constrain deposit-taking and lending, and incentivise banks to engage in activities that are not subject to reserve requirements. Also the precision of the instrument with respect to the volume of reserves absorbed has been called into question as the outcomes are dependent on bank balance sheets. Finally, changes in reserve requirements may have a differential impact on banks, as reserve holdings can vary importantly across banks.

Reconnecting to the paper

In the light of the various characteristics of reserve requirements and central bank bills, I close by asking the normative question about the desirable characteristics of a tool that is employed to drain liquidity. Many lists can be drawn up for this purpose, and the following is only one. A good tool for draining liquidity in a surplus situation should:

- be easy to employ and transparent to implement;
- be powerful and effective;
- require limited action to offset the unintended consequences of sterilisation; and
- keep distortions in the banking sector to a minimum.

Overall, central bank bills seem to score higher than reserve requirements when taking the above list as a yardstick. This paper has taken an important step towards supporting this view. According to the authors, reserve requirements were found to slow bank lending while the issuance of central bank bills could actually result in an increase in bank lending. Furthermore, increases in reserve requirements disproportionately impact small and weaker banks and lead to distortions in the banking sector. However, more quantitative evidence is required to arrive at a final assessment.

For references and background see:

Ho, C (2008): "Implementing monetary policy in the 2000s: operating procedures in Asia and beyond", *BIS Working Papers*, no 253.

Nyawata, O (2012): "Treasury bills and/or central bank bills for absorbing surplus liquidity: the main considerations", *IMF Working Paper*, no WP/12/40.

Gray, S and P Runchana (2015): "Issuance of central bank securities: international experiences and guidelines", *IMF Working Paper*, no WP/15/106.