The Renaissance of Macroprudential Monetary Policy Tools: Evidence from China

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This paper aims to improve our understanding of roles that monetary policy tools that were believed to be obsolete in developed western economies. While for a while most monetary economist believed that all that monetary policy required was some form of inflation targeting, this view had to be reconsidered in response to the financial crisis. But some policies now advocated under the new label “macroprudential policy” are not new and have never been abandoned by central banks in developing countries. Examples for such policies that the Chinese Central bank (PBC) uses are credit controls, specific central bank lending schemes, window guidance and differentiated required reserve ratio across banks. We study these “unconventional” monetary policy tools that the People’s Bank of China (PBC) has been applying to counter the credit cycle and to constrain the potential build-up of financial vulnerabilities. To do so, we use the PBC’s documents and extract the relevant information on how the PBC comes to the decision of taking various macroprudential policies and construct an index of these measures. With our index, we estimate the impact of the macroprudential policy tools on credit aggregates, consumer loans and on asset prices.

The recent financial crisis has renewed interest in how to identify financial instability early enough for successful countermeasure and how to make the financial system more resilient to shocks. As early as in the 1970s, Minsky (1977) and Kindleberger (1978) have argued that the financial system is prone to generate economic instability through endogenous credit booms. More specifically, Eichengreen and Mitchener (2003) provide evidence for the credit-boom view of economic cycles and interpret the Great Depression as “credit booms gone wrong”. The recent work by Schularick and Taylor (2012) lends compelling support for this argument, where they use the large dataset and find that past growth of credit predicts future financial instability. This finding strengthens the financial accelerator theory, as modelled in Bernanke, Gertler, and Gilchrist (1996), in the way that credit matters, “above and beyond its role as a propagator of shocks hitting the economy” (Schularick and Taylor 2012: 1058).

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This “credit-booms-gone-bust” finding provides the rationale for the mitigation of potential financial fragility through policies leaning against credit booms. The current debates are more involved in the search for a new toolkit of countercyclical macropudential policies to manage the credit cycle. However, these discussions have ignored either the active use in earlier eras of many credit-smoothing macroprudential measures in the conduct of monetary policy in advanced economies, or the current use of many “unconventional” monetary policy measures in emerging countries to control credit and hence dampen credit-fueled asset bubbles. This project aims to study the case of China to provide some empirical evidence for the discussion about the effectiveness of “obsolete” tools, especially the differentiated required reserve ratio across banks, in the conduct of monetary policy.

Unlike the monetary policy regimes in advanced economies, the PBC believes that the development and implementation of credit policy is one of its main duties, as stated by itself. To do so, the PBC relies on several measures:

First, credit controls have a long history in China and are still in existence, as shown in Sun (2013, 2014). Until 1997, the PBC implemented monetary policy through a credit plan. The PBC set the quantitative bank-specific loan quotas, which were precise lending ceilings for individual financial institutions, and provided liquidity to those banks, which then allocated credit to government-preferred subsectors and projects. Only in January 1998, bank-specific credit quotas were formally abolished. At the moment, the PBC sets a target for the total bank lending each year and uses it, together with the broad money aggregate (M2), as its intermediate targets. The tight credit control and even credit crunches occur when the ceiling is hit.

Second, the PBC often launches specific central bank lending schemes, under which it provides special funds at a lower cost for a particular group of industries or regions, and holds regular meetings with commercial banks in a form of “indirect pressure” so as to window-guide “financial institutions to strengthen the extension of supporting loans for central government-invested projects” (China Monetary Policy Report 2009 Quarter IV: 16). Through these lending schemes, the PBC is actively engaged in directing bank lending and affecting the structure of bank loans. In general, these credit tools are direct, yet

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2 Elliott, Feldberg, and Lehnert (2013) and Reinhart and Rogoff (2013), among others, provide comprehensive surveys of the U.S. historical use of multiple monetary policy tools in the macroprudential management of financial risks.
administrative and discretionary. Most central banks in advanced economies abolished such schemes in the 1970s and 1980s.

Third, the PBC uses the required reserve ratio as a multipurpose instrument of monetary, credit and macro-prudential policy. Recently, the PBC has been extensively using the reserve requirement, mainly for two purposes: 1. the need of freezing the excess liquidity in the banking sector after foreign exchange interventions; 2. the need of the macroprudential management. The distinct use of the reserve ratio for the second purpose is shown through its introduction of the differentiated reserve requirements across banks.

Initially, China’s reserve requirement system was relatively simple with a uniform required reserve ratio applied to all kinds of the non-financial corporate and personal RMB deposits, regardless of maturity. Then in two steps, the PBC introduced the differentiated required reserve ratio. In September 2008, the PBC adopted a two-tier reserve requirement system. A higher ratio is applied to bigger commercial banks, usually 1-2 percentage points above that applied to small banks. Later in 2011, the PBC introduced a pilot scheme of “dynamic differentiated required reserve ratio”, under which the reserve ratio for an individual bank varies on a quarterly basis, depending on criteria such as its contribution to the deviation of aggregate credit growth from its trend and various other prudential indicators.

Our paper first applies the narrative approach, by studying the PBC’s documents to extract the relevant information on how it comes to decision of taking various macroprudential policy measures, so as to provide a comprehensive survey on them, with the special focus on the differentiated required reserve ratio. We then quantify these policy tools, and estimate their impact on credit aggregates, on consumer loans, and on asset prices.
References