Macroprudential and Monetary Policy: Loan-Level Evidence from Reserve Requirements

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Introduction

- To make up for my relative lack of expertise in the area of macroprudential policy, I began my preparation for this conference by listening to a 1:29:11 long podcast of an event entitled "Reserve Requirements in the Brave New Macroprudential World" that took place at the Brookings Institution on April 14, 2014.
- The authors of the report were Tito Cordella (World Bank), Pablo Federico (BlackRock Investments), Carlos Vegh (Johns Hopkins and NBER) and Guillermo Vuletin (Brookings). See http://www.brookings.edu/events/2014/04/01-macroprudential-world
- The panel members who discussed the report were Stijn Claessens (IMF) and Alessandro Rebucci (Johns Hopkins).

Reserve Requirements and Macroprudential Policies

- After listening to this highly informative discussion, I wish to preface my comments with some points that I gleaned from it.
- The report examined the role of reserve requirements essentially from a macroeconomic business cycle perspective.
- It asked whether changes in reserve requirement policy are **countercyclical** or **procyclical**, especially during the 2005-2011 era.
- It also inquired whether there is **substitutability** versus **complementarity** of reserve requirement policy with interest rate policy over this period, and whether this behavior differs for industrial versus developing economies.

Some Stylized Macro Facts

- The main findings in this respect are that
  (i) many developing economies have followed activist and countercyclical reserve requirement policies over the 2005-2011 period,
  (ii) these policies have typically been substitutes for interest rate policy, which has been procyclical in response to external vulnerabilities typified by "the fear of free falling" in bad times or the fear of capital inflows in good times.
- The report also discusses briefly whether there could be unintended incentive effects of reserve requirements policy at the microeconomic level, but aisde from Stijn Claessens who will most likely have more to say on this topic, it does not delve too deeply into this issue.
- A final issue of discussion is whether policies should be state-contingent or invariant to cyclical conditions.

Micro Evidence on Changes in Reserve Requirements

- The paper under discussion by Cecilia Dassati Camors and Jose-Luis Peydro (2014) provides much needed evidence on the effects of changes in reserve requirements at the micro level.
- They make use of a unique policy experiment in Uruguay that changed reserve and liquidity requirements for banks in 2008 together with a unique data set that allows them to match firms and banks lending to them.
- They analyze the impact of changes in reserve requirements on the average supply of loans both at the intensive margin, conditional on positive loans, as well as on the extensive margin, by estimating the likelihood of a firm changing or ending its bank relationship.
- They also condition on firm and bank characteristics to determine the impact on the risk-taking behavior of banks.

The Results

- The Intensive Margin
  - Banks that were more exposed to funds targeted under the reserve requirement policies cut their lending to the same firm after the policy reform.
  - When heterogeneous effects are allowed for, larger banks are more capable of mitigating the negative effects of higher reserve requirements on their loan supply while banks with a lower solvency ratio are less capable of this act. Also, more affected banks tend to increase their exposure to riskier firms.
- The Extensive Margin
  - The average and heterogeneous effects imply that a firm that holds a relationship with a bank affected by the reserve requirements is more likely to change to another less affected bank or to end its bank relationship.
- Firm-level Analysis:
  - Only those firms with the highest credit rating or those related to large banks were able to mitigate the negative effects of higher reserve requirements on banks.

Implications

- One of the key issues underlying discussions of a monetary policy regime such as inflation targeting with an interest rate rule is the level of financial development in emerging economies.
- If reserve requirements have different effects on large versus small banks and tend to distort the risk-taking incentives of affected banks, what are the implications of changes in reserve requirements for financial development and financial deepening in emerging economies?
- Furthermore, since bank finance is the typical source of investment in many emerging economies, the inability of most firms (aside from those with the best credit rating or a relationship with a large bank) to insulate themselves from the decline in credit due to higher reserve requirements also has implications for long run economic activity.