

Discussion of

Credit supply responses to reserve requirements: Evidence from credit registry and policy shocks

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The impact of macroprudential policies: an empirical analysis using credit registry data

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Summary of the paper

- Question and identification:
 - The impact of reserve requirements (RR) on credit supply
 - Exploit Brazil changes in RR and credit register, both RR from tightening and loosening cycles
 - Use either a panel or cross-sections around policy events
 - Use either a “simple index of RR policy or a treatment variable definition based on bank-level change in RR filtered out of variation that would occur independently of the policy”
- Results:
 - RR policy affects credit in the expected direction, that is, RR easing increases credit, while RR tightening decreases credit
 - Higher liquidity and capital ratios appear to reduce the impact of RR policy
 - Monetary policy is possibly a complement to RR policy in the sense that tightening one policy increases the effect of the other on credit
 - On the risk-taking channel, they find that banks avoid riskier firms in the aftermath of policy changes

Contribution to the literature: RR and monetary policy

- The bank lending channel of monetary policy through reserve requirements has been shown theoretically among others by Bernanke and Blinder (AER 1988) and Stein (Rand 1998)
- However, the empirical evidence has been analyzed with macro data (Bernanke and Blinder (AER 1992)) and with bank level data (Kashyap and Stein (AER 2000))
- The identification of the bank lending channel through reserve requirements has been elusive, as it has been analyzed with macro or bank level data which cannot control for borrowers' fundamentals (demand). As Khwaja and Mian (AER 2008) among others show, loan-level data is needed to identify the supply of bank credit stemming from a bank shock
- Jimenez, Ongena, Peydro and Saurina (AER 2012) analyze the bank lending channel of monetary policy but not due to RR but to monetary policy rates
- Camors and Peydro (2013) (Camors-Peydro-Tous 2016) analyze RR and credit supply in Uruguay, but Barroso-Doonik-Cinelli-Gonzalez analyze more policy changes than us (e.g., softening vs. tightening cycles)

Contribution to the literature : RR and MP in emerging markets: a link to macroprudential policy and capital controls

- Financial crises are typically preceded by bank credit booms in conjunction with strong foreign capital inflows (Reinhart and Rogoff (PUP 2009), Schularick and Taylor (AER 2012), Jorda, Schularick and Taylor (IMF 2013), Gourinchas and Obstfeld (AEJ Macro 2013))
- The adverse consequences that strong credit booms fuelled by fragile foreign liquidity may end up in a financial crisis imply a role for macroprudential policy related to monetary policy
- Local domestic monetary policies through interest rates may be ineffective, as higher monetary policy rates may attract more capital inflows thereby increasing local credit booms
- Not surprisingly, many emerging countries are trying to use reserve requirements, often on non-insured non-deposit liabilities, which are very related to the new macroprudential policies that are discussed (Freixas, Laeven and Peydro (MIT Press 2015))
- Barroso-Doonik-Cinelli-Gonzalez significantly contributes to this literature showing the impact of RR and the links with MP rates

Contribution to the literature: RR and MP in emerging markets: a link to macroprudential policy and capital controls (2)

- RR by targeting foreign bank liabilities, policy makers can target both credit booms and capital inflows
- In Camors and Peydro (2013) (Camors-Peydro-Tous 2016) we also analyze the impact of reserve requirements on the supply of credit to the real sector
- For identification, we exploit a tightening of reserve requirements in Uruguay during a global capital inflows boom, where the change affected more foreign bank liabilities and foreign currency bank deposits, in conjunction with its credit register that follows all bank loans granted to non-financial firms
- We find that the tightening of the reserve requirements for banks imply a reduction of the supply of credit to firms, but importantly, the stronger quantitative results are for the tightening to bank liabilities stemming from foreign banks
- This part mainly separates the two papers

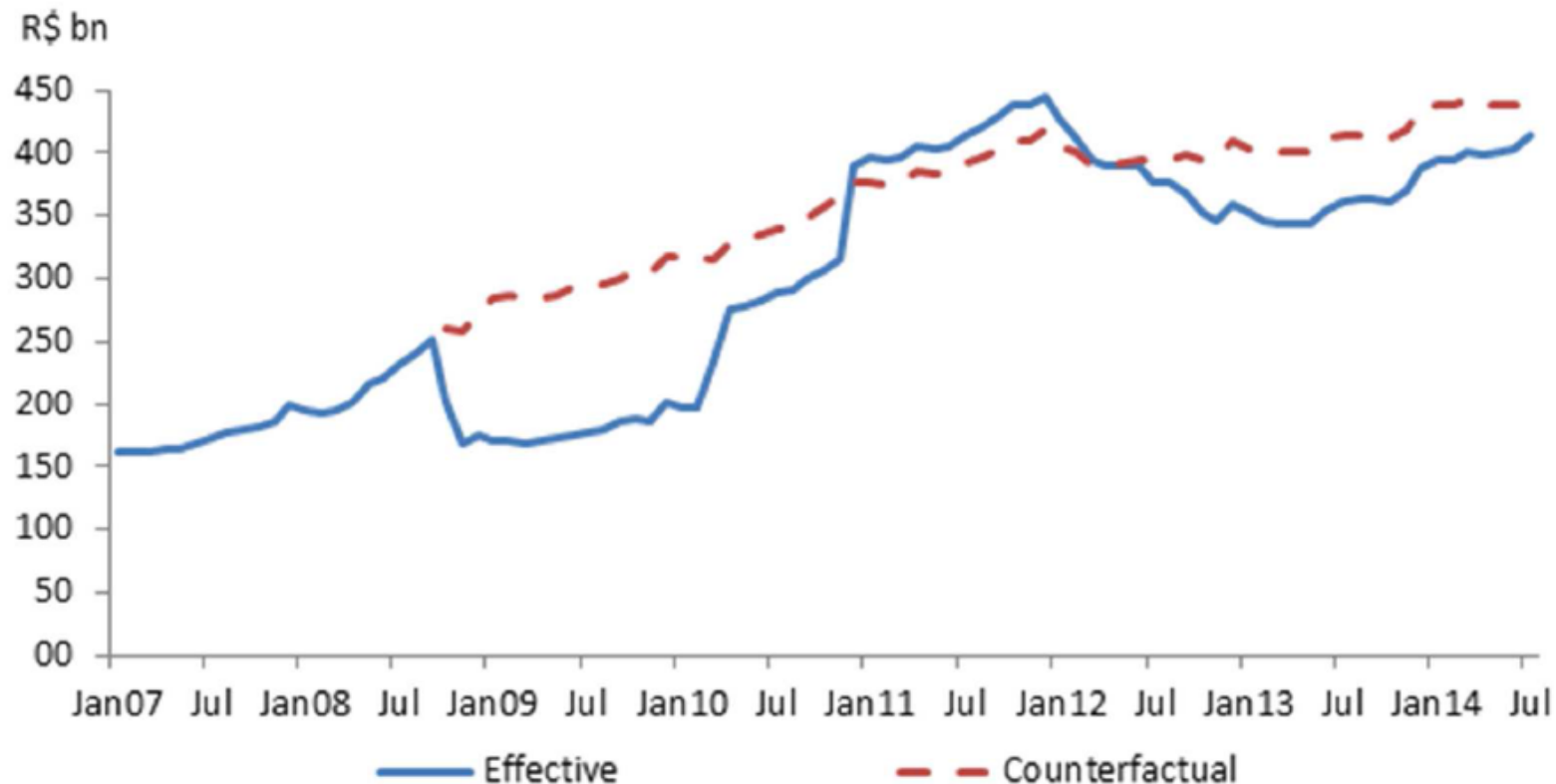
Summing up the contribution

- Barroso-Doonik-Cinelli-Gonzalez (2016) is a very interesting paper, and as I said, with significant contributions to the literature
- There are several differences with our paper from Uruguay, e.g.:
 - Explore a larger and longer dataset and there are differences with our RR measure
 - With policy shocks from tightening and loosening cycles
 - In Jimenez, Ongena, Peydro and Saurina (JPE forthcoming), we find very strong differences between the effects of dynamic provisioning on credit and real effects in good vs. bad times
 - whereas in your case the differences between softening and tightening are relatively small. Is it because you are basically analyzing a short period of time?

Some potential negative aspects

- Changes in RRs in Brazil are in the period after the start of the global crisis, so there are other important shocks like the crisis, also Brazil tried other policies such as capital controls and MP rates. How do these other shocks and policies affect the results?

Figure 1. Total Reserve Requirements in Brazil (BRL in billions)



Notes: (i) Total includes all public, private domestic and private foreign banks operating in Brazil.
(ii) Counterfactual reserve requirements are calculated based on regulation in place before September 2008.

Final comments

- They use the actual change in RR for each bank, which is not only due to change in policy RR, but also change in specific bank liabilities, which brings some endogeneity to the measure
- Counterfactual RR: It is always complicated to construct counterfactuals, that is “how the RR should have behaved without policy changes”
- When interactions are included, the level effect of the estimated coefficient of RR changes significantly the value, even the signs sometimes. Are the data demeaned? If not, it should be
- Changes of credit on changes in RR in the panel, with moreover lots of fixed effects, it is about (change in) acceleration, right? So what exactly the authors are measuring?
- Previous points could be relevant for testing the risk-taking channel of monetary policy (Jimenez, Ongena, Peydro and Saurina *Econometrica* 2014)
- Clustering in panel is at the bank level, this implies to assume that for a given RR change, there are many independent RR changes within the same period. Clustering should be double at the *time, bank* level
 - Note results in cross sectional are weaker than in panel
- All in all, a very interesting paper! Some issues to improve
- Thanks