



Digging Deeper – Evidence on the Effects of Macroprudential Policies from a New Database

by

Z. Alam, A. Alter, J. Eiseman, G. Gelos, H. Kang, M.
Narita, E. Nier and N. Wang

Discussion by A. Nobili (Banca d'Italia)

Bank of Russia - St. Petersburg, July 2019

The views expressed herein do not necessarily reflect those of the Banca d'Italia

What the paper does?

Evaluation of **intended** and **unintended** consequences of **Macropru policy**

- **Intended:** effects on HH loans and house prices
- **Unintended:** effects on consumption and GDP

Revisiting existing empirical literature by exploiting a **larger (great!) dataset** from several sources (34 AE and 29 EMDE for 1990Q1-2016Q4)

- “dummy-type” approach: categorical variable for Macropru actions

Improving the assessment of effects of **borrower-level policies** (LTV):

- comparing results from categorical vs. quantitative information for LTV
- potential non-linear effects
 - The **initial level** of the LTV may matter
 - The **size of the change** in LTV may matter
- Several estimation techniques; Propensity Score matching to better deal with **endogeneity** concerns and attenuation bias

Main results

Result # 1: significant effect on targeted instrument (HH credit) while weaker on house prices

Result #2: mild side-effects on real consumption

Result #3: Non-linear effects on HH debt while not on real consumption

- Declining with the size of the LTV adjustment (explanation: regulatory arbitrage leads to an increase in non-banks and cross-border lending which are not “treated”)
- If the initial LTV level is already tight effect on credit is weaker but that on consumption is stronger

Other important results

EMDE vs AE: interesting twist but mixed results; some techniques (propensity score matching) hardly to be applied

Effects of LTV policy essentially reflect the experience in Asian countries (maybe in Latin America) characterized by **low-income borrowers**

General comment: this study is necessary!

Evaluating effects of Macropru actions is difficult

- Broad range of policy actions and related transmission channels
- Variation for some policies is very limited across countries and time

What can policymakers do?

1. **Event studies** with very granular data for the effect of a **single tool** on a **single country** with treated and non-treated economic agents
 - **Pros:** reach more robust identification; heterogeneity across agents help in understanding the transmission mechanism
 - **Cons:** issues related to the external validity of results for other countries and tools; no role for structural features in the transmission mechanism
2. **Cross-country studies** with **aggregate data**
 - **Pros:** estimates of aggregate effects; comparison between different policy actions; role for structural features in the transmission mechanism
 - **Cons:** identification is weaker; identification of channels more difficult

Main points to addressed/clarified

What about the transmission of LTV changes?

- Heterogeneity across agents: key channel is **number of constrained borrowers** in the economy
- Importance of **domestic bank** lending in financing the housing sector
 - Non-bank lending (when not affected by policy)
 - Foreign lenders and/or international capital flows
- Segmentation of housing market

How do non-linear effects relate to these mechanisms?

What about side-effects of LTV changes?

- If housing markets is difficult to be affected via Macropru actions on banks, **wealth effect** is not surprisingly **limited**
- Rebalancing between consumption and savings depends on **property structure** of the economy and **rent-to-price ratio**

Alternative explanations

House prices and credit: a two-way link

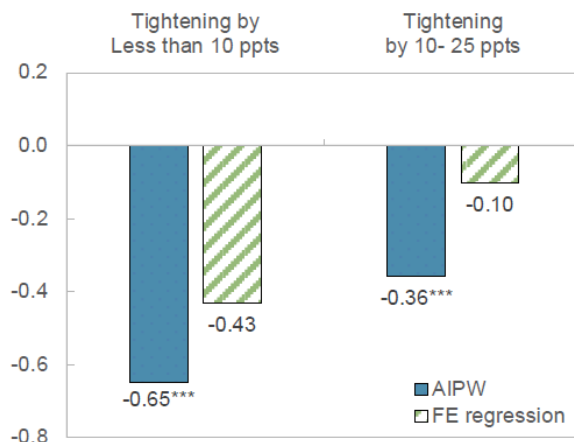
Supply-side Macropru negatively affect loans to construction firms (which are usually more leveraged), which, in turn lower new residential investments, housing supply and sustaining house prices!

What about effects on **credit to (construction) firms and housing supply?**

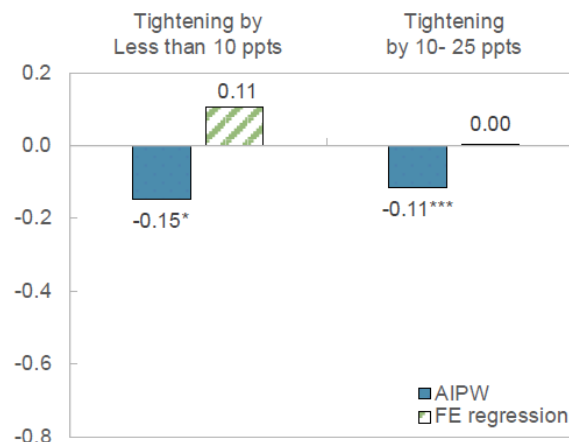
Non-linear effects on credit while less on consumption. Why?

Figure 6. Causal Effects of One Percentage Point Tightening in LTV limits

1. Real Household Credit Growth



2. Real Consumption Growth



Does intensity of LTV change really matter?

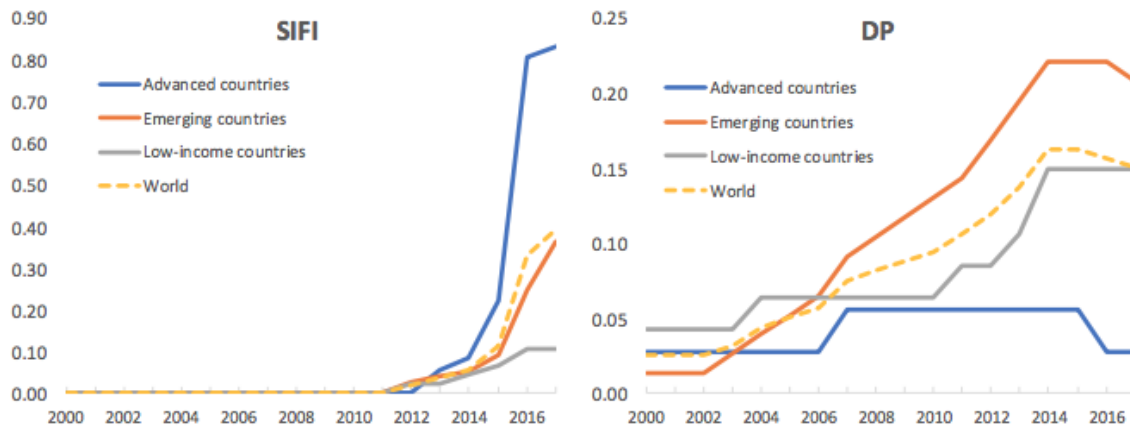
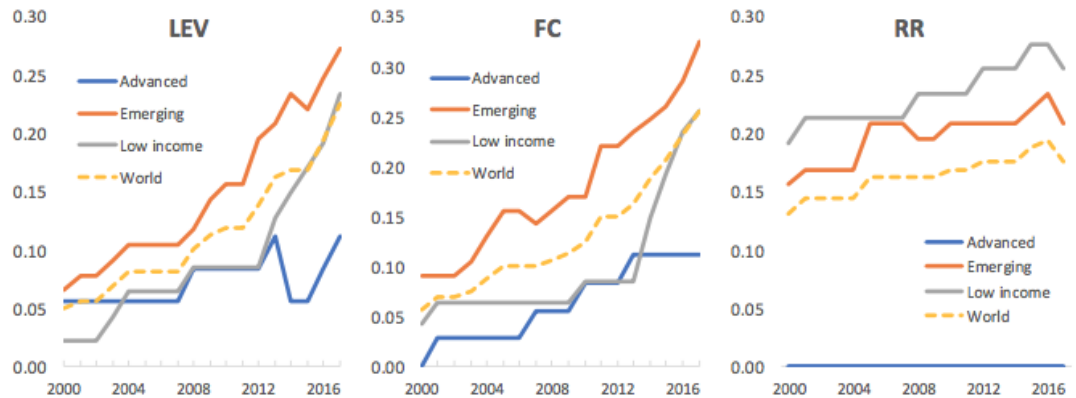
Effects are concentrated on EMDE & low-income countries; capability to saving is low and constant over time

Specification and econometric issues

$$\Delta_4 C_{i,t} = \rho \Delta_4 C_{i,t-1} + \beta \text{MaPP}_{i,t-1} + \gamma \mathbf{X}_{i,t-1} + \alpha_i + \mu_t + \epsilon_{i,t}, \quad (1)$$

- Panel regressions with time and country fixed-effects: how results change if you **drop time fixed-effects**?
- What about the asymmetric effects of **loosing vs. easing**?
 - Implemented in different phases of the business cycle
 - Important to validate potential asymmetric “side-effects”
- Exploring interaction **terms** between variables may be interesting
 - Any conflict with monetary policy? What about interactions with short-rate?
 - What about **interaction** terms between concomitant (are there?) **Micro** and **Macropru** actions? Policy implications are very relevant
- **Outcome variable**: total HH debt include both mortgages and consumer credit but LTV limits are designed to affect the former and house prices; consumer credit reacts mostly to business cycle rather than housing cycle

What about Advanced Economies?



Acceleration in usage of macroprudential policies in relation to post-crisis reforms aiming at improving the resilience of the banking system (e.g. Basel III, 2016 CRR/CRDIV framework in the EU).

Supply-side actions related to capital increases where intensity matters

No policy actions for most of the sample: what about **effects on post-crisis period?**

Early evidence for Europe

Central Bank of Ireland, Review of residential mortgage lending requirements: mortgage measures 2017,

V.V. Acharya, K. Bergant, M. Crosignani, T. Eisert and F. McCann, The anatomy of the transmission of macroprudential policies, May 2018.

Bank of England, 'The FPC's review of its 2014 mortgage market recommendations', Financial Stability Report, 40, 2016, 20-25;

Bank of England, Financial Stability Report, 43, 2018.

J.-P. Danthine, 'Macroprudential policy in Switzerland: the first lessons', speech delivered at the conference Next Steps for Macroprudential Policy, organized by Columbia University, New York, 12 November 2015.

S. Ferrari, M. Pirovano and P.R. Kaltwasser, 'The impact of sectoral macroprudential capital requirements on mortgage loan pricing: evidence from the Belgian risk weight add-on', Working Paper Research, National Bank of Belgium, 306, October 2016

Take away & policy issues

- Great dataset potentially useful for addressing many policy issues
- “Demand-side” policy actions successful in targeting credit but not house prices; why?
 - More effective in EMDE low-income countries;
 - What about AE countries? Maybe too early to answer!
- Not so much evidence on effects on banks’ resilience. What about risk-taking channel of Macroprudential policy?
- Interaction between Macro & Micro prudential policies may be important

Thanks for your attention!