

Christoph Basten:

Discussion of Ferrari, Pirovano & Rovira-Kaltwasser (2016)

“The Impact of Sectoral Macroprudential Capital Requirements on Mortgage Loan Pricing: Evidence from the Belgian Risk Weight Add-On”

NBB, Brussels, October 13, 2016

What is the paper about? The Context.

- Bank capital requirements specified in % of Risk-Weighted Assets (RWA)
- For banks under Basel Standardized Approach (SA), risk weight (RW) on residential mortgages is 35% by default, higher for high risks
- Banks using «Internal Ratings Based» (IRB) approach compute RW using own estimates of Probability of Default (PD) and Loss Given Default (LGD)
- In principle, lower average RW accepted under IRB approach to reflect these banks' presumably more sophisticated risk management
- Since the financial crisis however, concerns that IRB RW based on fair weather data only might be too low; Supervisors tried 3 adhoc remedies:
 - Floor on IRB risk weights (e.g. Sweden: 25%)
 - **Add-on on IRB risk weights (e.g. Belgium: +5 PP)**
 - Multiplier on IRB risk weights (e.g. Switzerland)
- **Present paper analyzes how Belgian add-on affected mortgage pricing**

Empirical Approach and Findings

- Add-On imposed by National Bank of Belgium in **December 2013**
- Paper exploits that the add-on applied to 8 IRB banks but not to 5 SA banks:
Lends itself to a Diff-in-Diff analysis, with bank and time FE:

$$spread_{b,t} = \alpha + \beta_{b,t} add-on_t + \delta X_{b,t-1} + FE_b + FE_t + \varepsilon_{b,t}$$

- Paper also investigates how treatment effect varies with other bank characteristics Z:

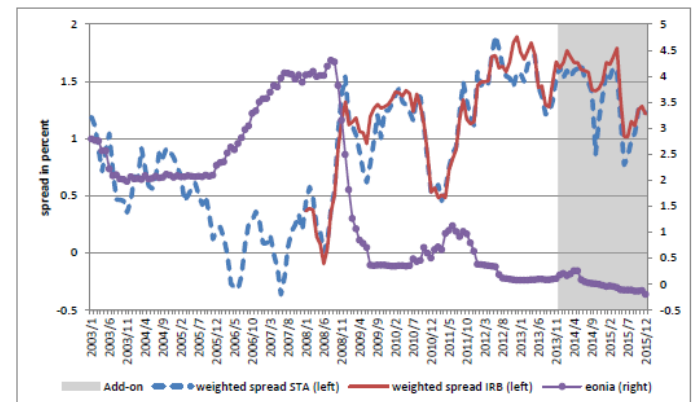
$$spread_{b,t} = \alpha + \beta_0 add-on_t + \beta_1 Z_{b,t-1} add-on_t + \gamma X_{b,t-1} + FE_b + FE_t + \varepsilon_{b,t}$$

- Baseline estimates cover 2003 - 2015, robustness checks start in respectively 2008 and 2011
- **Find average effect of 12 bps, with range of 0 – 35 basis points**
- **Larger for banks w/ smaller capital buffer & mortgage specialized banks**

General Evaluation

- **Exciting question:** Especially in EMU macroprudential capital requirements increasingly used, so important to understand how they work
- Setup **perfectly suitable** for Difference-in-Difference design
- The authors have done a **great job** in setting up and explaining their context, analyses and results
- **Key critique:** Using 2003-2013 seems too long as control period, seeing how much happened in the meantime, so I would use one of the robustness checks starting in 2008 or 2011 as baseline
- Starting 2008, the main effect disappears, but this is fine and also seems more in line with what their Figure suggests
- In the following I provide a number of more detailed suggestions...

Figure 1 - Evolution of mortgage loan spreads (in percentage): 2003m1-2015m12.



On Interpretation of Results: Variation of Treatment Effects with Capitalization

- **Paper finds effect to vary with capital buffer/cushion = capitalization – regulatory requirements, but not with absolute capital/RWA**
 - I would interpret this more
 - I would read it as saying that banks aim to maintain a cushion above regulatory requirements rather than aiming to maintain an economically motivated level of capitalization ...
 - Is there heterogeneity in this? Practitioners tell me that often larger (Swiss) banks are more likely to use an economic approach rather than or in addition a regulatory approach
 - See our paper (Basten & Koch 2015) for citations of a number of papers discussing in particular the buffer/cushion idea

On Interpretation of Results: Variation of Treatment Effects with Specialization

- **In samples with 10 and 5 year control periods, find larger spread increases for banks more specialized in mortgage lending**
- Corresponds (like the result on capitalization) with what Basten & Koch (2015) find for the 2013 CyCB activation in Switzerland
- In the latter case we interpret this as reflecting the fact that the requirements apply also to lending made in the past where rates cannot be increased ex post, so more of this cost must be passed on to new lending
- You do not discuss this issue, but probably the same applies to your case?

On Interpretation of Results: Larger Banks Charging higher Spreads

- «**larger banks tend to charge, on average higher spreads ... probably due to their market power**»
- I think you need to discuss how this and related results might also be due to inter-bank differences in the composition of borrowers (LTV, PTI, etc.)
- In Basten & Kpch (2015) this is controlled for as we observe offers from different banks for the same borrower
- The present data I think do not allow to control for such differences, which is perfectly fine, but I would acknowledge it when interpreting results

Institutional Questions

- Was add-on communicated to be temporary (like the CycB) or understood as quasi-permanent? Might matter for interpretation...
- What was the initial combined market share of the banks affected? Has it changed after the treatment?
- Was Add-on to be fulfilled in Tier 1 or only in CET1 (Swiss case)?
- What was the state of the Belgian real estate and mortgage market cycle?
- What share of banks' total RWA affected? 18%? So Add-On was about 2.5% of total RWA?
- Which banks became IRB banks?
 - Banks' incentives?
 - Supervisory judgement?

Discuss different ways for supervisors to address IRB RW deemed too low

- **Floors (e.g. Sweden):**
 - Set lower bound for risk weight
 - IRB model output completely ignored
- **Add-Ons (e.g. Belgium):**
 - Differences in risk weights between banks are preserved
- **Multipliers (Switzerland):**
 - Preserves differences in risk weights between banks (depending on whether/how multiplier is set differently for different banks) and within each bank for different assets

Two more Methodological Questions

- Outcome variable is spread between mortgage and swap rates, using 4 different swap rates → Why not more granular? Swap rates are in Bloomberg at least by year. Are your mortgage rates so aggregated?
- Why is it that spreads in the Belgian market tend to be higher when rates are lower?
 - Plot also maturity-specific swap and mortgage rates
 - Are mortgage rates more persistent than interbank rates? Why? Interesting.