How do capital requirements affect loan rates? Evidence from High Volatility Commercial Real Estate

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Disclaimer

The views expressed in this presentation are my own and do not necessarily reflect those of Banca d'Italia.

Overview

Research question

- What is the impact of higher bank capital requirements on loan pricing?

- Transmission mechanism from higher capital requirements to bank financing costs, then passed to loan rates
- Are banks passing to targeted loans their higher financing costs derived from the higher capital requirements?
- The paper provides new evidence on the intensity of this effect

What the paper does

- Ex-post evaluation of the impact of a within-sector capital requirements policy
- HVCRE rule: risk weight increase from 100% to 150% for HVCRE ADC loans, while the risk weight for non-HVCRE ADC loans and non-ADC CRE loans remained at 100%
- The rule was announced in June 2012 and implemented in January 2015 with no grandfathering of earlier originated loans
- Focus on a subcategory of construction lending: a non-1-4 family ADC loan is considered to be HVCRE if its LTV ratio exceed supervisory limits

Methodology

- Diff in diff approach: the β measures the average relative increase in interest rates for targeted loans (i.e. non-1-4 family ADC loans with high LTV exposed to the post HVCRE period) in comparison to untargeted loans (i.e exempted non-1-4 family ADC loans)
- Triple diff approach: the β measures the average relative increase in interest rates for targeted loans in comparison to other CRE loans not impacted by the HVCRE rule (i.e. 1-4 family construction loans and non-ADC CRE loans)

Main results

Average effect

The HVCRE rule increases loan rates by 35 b.p. This means that 1p.p. increase in required capital raises loan rates by 8.8 b.p.

Heterogeneous effect

The previous result is entirely due to loans from banks that are capital constrained (i.e. closer to the risk-based capital ratio).

Non-price effect

No evidence that the rule induced banks to take on more risk within the HVCRE loans to compensate for a higher required return.

General comments

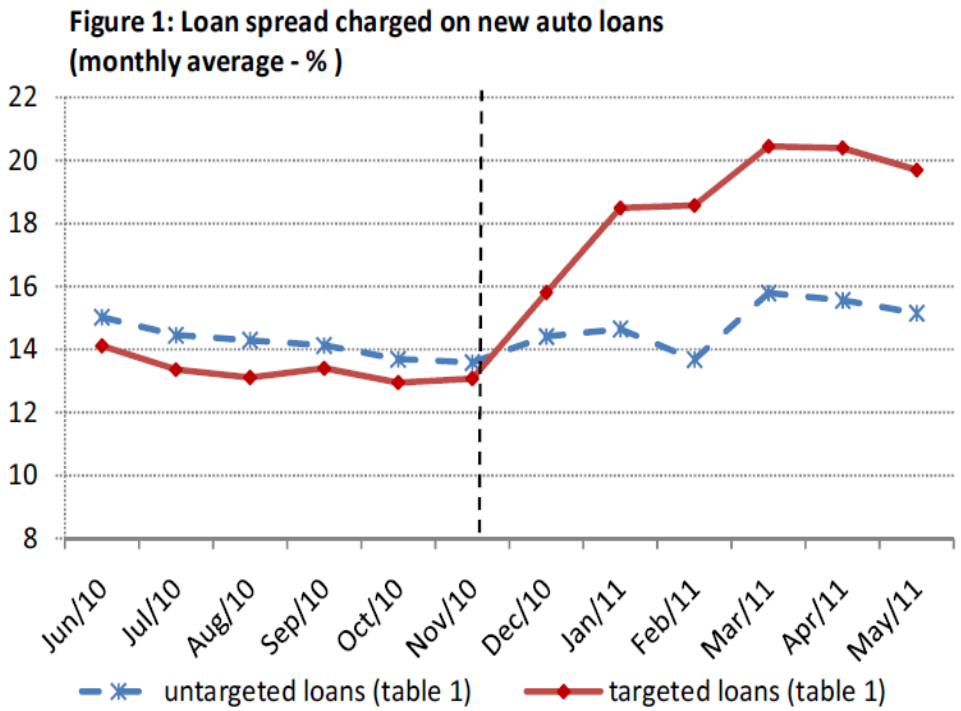
- Strengths: policy-relevant topic, loan-level data, good methodology
- Weaknesses:
  1. no discussion on the parallel trends assumption
  2. doubts on robustness:
     - the diff in diff average effect (35b.p.) is sensible to the selection of controls;
     - the triple diff approach does not add robustness to the magnitude of the average effect.

Comment 1: Parallel trends assumption

Hypothesis: the average change from the pre-treatment to the post-treatment period in the control group represents the counterfactual change in the treatment group if there were no treatment.
Testable condition: pretreatment dynamics are identical for controls and treated loans

- issue: Were the control and targeted loans on the same pre-reform time trends?
- suggestions:
  - graphical evidence: interest rates of targeted and untargeted non-1-4 family ADC loans over time (see for example fig.1)
  - testing strategy: include linear trend polynomial
  - testing strategy: treatment effect under alternative Parallel-(q) assumptions [Mora and Reggio, 2017]

Figure 1



Source: Martins, Schechtman (2013)

Comment 2: Robustness on the magnitude of the HVCRE rule effect

- issue: the average effect (35b.p.) is sensible to the selection of controls and the triple DID doesn't add robustness to it ($\approx$ placebo test)
- suggestions:
  - add borrower controls
  - restrict the sample to borrowers who have taken non-1-4 family ADC loans from the same bank both before and after the regulatory capital change [Martins and Schechtman, 2013]

Comment 3: Miscellaneous suggestions

- heterogeneous effects: test if specialized banks (high share of ADC loans over total assets) respond more to the HVCRE rule banks [Ferrari et al., 2017]
- timing effects: investigate whether the impact of the HVCRE rule is less pronounced one or two years after the implementation [Ferrari et al., 2017]

Conclusions: possible policy implications

- Policy-relevant paper: the empirical estimate of the elasticity between loan rates and capital requirements for HVCRE loans is informative for calibration.
- BUT caution: besides the caveat of external validity, there might be non-linearities in banks' reactions to regulatory requirements (stronger calibration $\Rightarrow$ more sizable effects?; tightness $\neq$ release)

References

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