Discussion of:
Mortgage loan pricing in a negative interest rate environment

Monica Paiella

Università Parthenope Napoli

Research question of the paper

- Does the funding structure of banks have implications for the transmission of monetary policy in a negative interest rate environment?

Policy rates and banks' interest income

- What matters for banks is not the level of policy rates per se, but instead the spread between the rate they pay and the rate they earn for a unit of money they intermediate, which determines their interest income.
- Lower policy rates, if expected to prevail for a long time, lead to a flatter yield curve, driving yields on assets lower, and may lower the spread that banks earn if they fund long-term assets with short-term liabilities

When rates turn negative…

- With a negative deposit facility rate (NDFR), banks may be unable to reprice part of the funding and lower below zero the rates on deposits.
- Hence, they could:
  1. limit the interest cuts on loans (hindering the transmission of monetary policy);
  2. adjust their balance sheet on the liability side;
  3. adjust their balance sheet on the asset side/cut lending.

When rates turn negative…

Do banks limit the interest rate cut on loans when deposits, whose rates cannot go negative, are an important source of funding?

Data

112,000 loans
(25% FRM)

31 banks

- Loan-level residential mortgage data for Italy
  - Interest rate at origination + loan characteristics (e.g. LTV, purpose, amortization type, payment frequency…)
  - borrower characteristics (e.g. employment status, income, region …)
- Bank balance-sheet data
- Period: Jan. 2013 – Dec. 2015 (monthly)
- NDFR: June 2014 + Sept. 2014 → NDFR to -0.2%

announcement of TLTRO

DID regression

- Regression of interest rate on new mortgages on overnight deposit ratio x before-after dummy

Overnight deposits (≅ 40% of assets)
= deposits yielding the lowest interest rates among the possible deposit types which include transaction accounts, saving & MM deposit accounts, and time deposits

Results / Comment 1

- Banks with a 1 SD (=10 p.p.) higher ODR charge 23 basis point higher interest on FRM

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- WHO BORROWS FIXED RATE FROM THESE BANKS?
  - It is not riskier borrowers!
- Why not controlling for all available loan and borrower characteristics? Instead of including just a non-linear combination (i.e. Fitch probability of default)

Results / Comment 2

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- If it is not the riskier borrowers, from a policy transmission perspective, it is relevant to understand how large the phenomenon is.

- Check for balance sheet adjustments on asset side:

  e.g. cut in lending, switch from FRM to ARM

  → regress the ratio of FRM to ARM on ODR

  → regress the ratio of FRM to assets on ODR

Results / Comment 3

- Banks with a 1 SD (=10 p.p.) higher ODR charge 23 basis point higher interest on FRM
  → 6% of mean
  - Statistically significant
  - Economically small effect

Example:

3.58% 20yr fixed rate €100.000 mortgage → €584/mo

3.81% 20yr fixed rate €100.000 mortgage → €596/mo

Methodology / Comment 4

- Difference-in-difference methodology
  → captures the difference in loan rates between high and low ODR banks after the DFR becomes negative

  → what about the level of (average) loan rates ?

  → *do low ODR bank cut the rates with NDFR?*

Other comments

- Control for non-linearities in the effect of NDFR by adding an interaction between ODR and a time dummy for September 2014, when the DFR was lowered further to -0.2%
  - Is there something «special» about rates cutting the zero threshold?

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- Control for non-linearities in the effect of NDFR by adding an interaction between ODR and a time dummy for September 2014, when the DFR was lowered further to -0.2%
  – Is there something «special» about rates cutting the zero threshold?
- Regarding the stability of overnight deposit (as a share of assets): the figure is based on a sample of 135/177 banks, whereas the analysis is based on a sample of 31 Italian banks…

Concluding remarks

- Very interesting exercise
- Suggestive evidence, but need an argument to rationalize it
- For policy, further investigation of the economic size of the effect is needed

THANK YOU