Negative interest rates, bank profitability, and financial stability

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THE PAPER IN A NUTSHELL: IMPACT OF NEGATIVE RATES

- Bank profitability (bank-year):
  - macro factors (inflation and GDP),
  - interest rate factors (level, slope, negative).
- Market assessment of bank risk (CDS, bank-day):
  - Policy rate expectations,
  - Market assessment of corporate risk,
  - Market assessment of sovereign risk.

THE PAPER IN A NUTSHELL: MAIN FINDINGS

- Negative rates are associated with lower profitability.
- Expectations of rate cuts are associated with higher banks CDS.
- Capitalization and business models explain different response of bank CDS to policy rate cuts.
- Rationalize empirical evidence with a "loss-absorption" story: Banks with high capital less affected by negative rates.

THE PAPER IN A NUTSHELL

- Very topical for the current policy debate:
  - bank profitability under negative rates,
  - side effects of monetary policy for financial stability.
- Straight-forward exercises.
- Cross-country dimension.

THREE COMMENTS

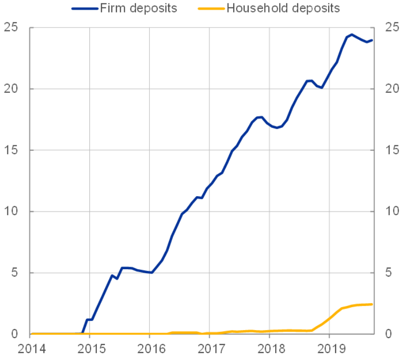
1. Assumption: "specialness" of zero.
2. Identification 1: Rates vs circumstances.
3. Identification 2: Expectations vs shocks.

1. FRICTIONS DUE TO NEGATIVE RATES

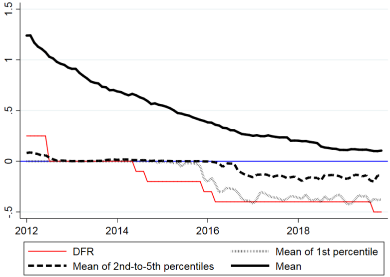
- Does economy behave differently when rates are below zero? (De Bortoli, Galì, Gambetti)
- What determines supposed "specialness" of zero?
  - Leakage from financials to cash (no support so far).
  - Higher stickiness of nominal retail deposit rates at zero.
- However:
  - Banks access alternative sources of funding w/o LB.
  - Real rates have been multiple times below zero.
  - Effective rates is already negative (fees & commissions).
  - Some deposit rates happen to be negative, even for households.

1. NEGATIVE DEPOSIT RATES

Percentage of deposits with negative rates



Evolution of deposit rates



From: Altavilla, Burlon, Giannetti, Holton (2019).

2. NEGATIVE RATES OR NEGATIVE CIRCUMSTANCES?

- NIRP implemented only when macro outlook grants it (CB has a mandate).

- How to disentangle bad times from policy?

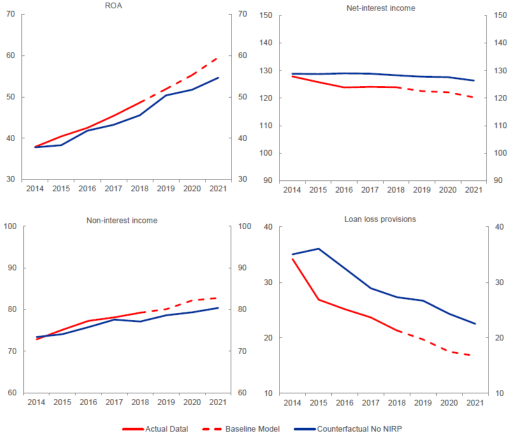
  1. Exposure measures:
     - reliance on retail deposits (Heider et al and many others),
     - excess liquidity/liquid assets (Demiralp et al, Bottero et al),
     - self-reported impact (Altavilla et al, Arce et al)

  2. Counterfactual: same "bad times" but w/o policy (via yield curve).

- (High capital, rather than loss absorption, measures risk-bearing capacity.)

2. NO-NIRP COUNTERFACTUAL FOR ROA

Chart 6.27: Return on assets and its main components under different scenario *(basis points of total assets)*



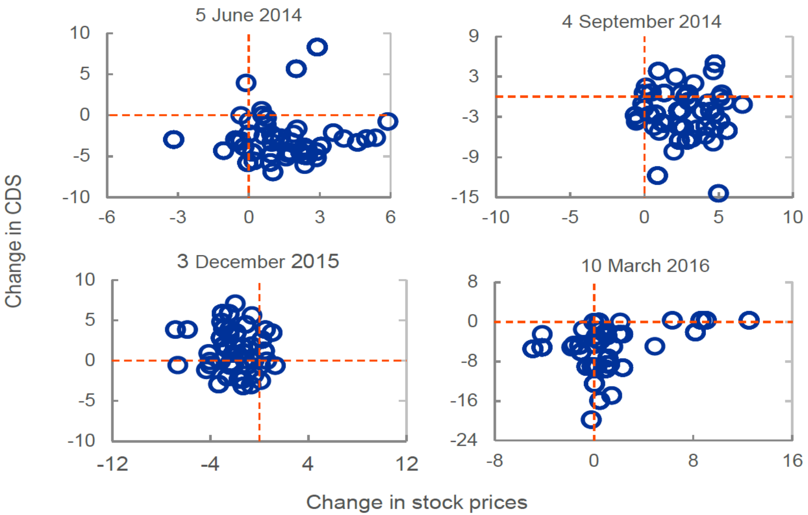
Notes: The charts report observed (red line) and counterfactual (blue line) return on assets (ROA), net interest income, non-interest income and loan loss provisions over the period 2014-2018 obtained with a dynamic VAR model similar to Altavilla, Boucinha, Peydró (2018) that uses individual balance sheet data from the IBSI dataset matched with Supervisory and SNL data. The variables included in the model are: ROA, net-interest income, non-interest income, provisions, lending rates, deposit rates, loan volumes, real GDP growth, inflation rate, Eonia, and interest rates with a remaining maturity of 2-, 5-, and 10-years. The no-NIRP scenario is given by the forecast of the BVAR model conditional on the assumption that the ZLB would be enforced at all times, therefore preventing the term structure to assume negative values across all maturities.

From: Rostagno et al (2019).

3. WHAT DO POLICY EXPECTATIONS ACTUALLY TELL US?

- Markets receive news, especially macro news.
- Bad macro news $\rightarrow$
  - higher CDS
  - lower policy expectations (if CB reaction function well understood).
- (Actually negative relation may be sign that markets factor in leeway of monetary policy even with negative rates!)
- In fact, instantaneous responses to policy innovations are positive.

EVENT STUDY ON MONETARY POLICY ANNOUNCEMENTS



From: Altavilla, Boucinha, Peydró (2018).

Thank you.