EUROPEAN CENTRAL BANK

EUROSYSTEM

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European Central Bank

Discussion of "Eurosystem's asset purchases and money market rates"

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Roadmap

1. Introduction
   – research question & main findings

2. Comments / questions
   – economic mechanisms
   – empirical set-up

3. Summary

Roadmap

1. Introduction

This paper in a nutshell

- Research question: Do Eurosystem government bond purchases (PSPP) affect repo rates?
  - focus on “special” repo rates only (repo rates with a specific bond as collateral that are lower than General Collateral (GC) rates)
  - sample: January 2015 – May 2017

- Answer: Yes, PSPP pushed down special repo rates, even below the deposit facility rate (DFR)
  - If 1% of the outstanding amount of a bond is purchased through the PSPP, its repo rate declines by 0.78 b.p.

2. Comments / questions

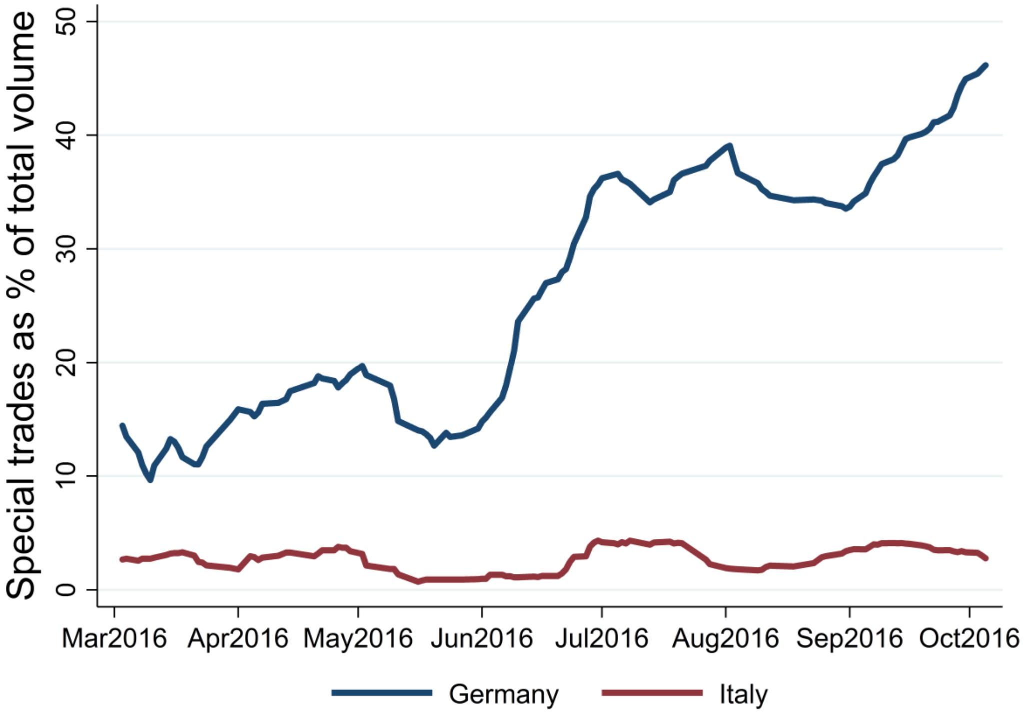
Comment 1: What are the mechanisms?

- Paper: (foreign) counterparties sell to Eurosystem $\rightarrow$ no access to DFR $\rightarrow$ place cash in repo market $\rightarrow$ push rates down (even below DFR)
  - wouldn't foreigners wanting to place cash simply go to the GC repo market?
  - why would they insist on lending cash against a specific bond (earning a lower interest rate)?
- Paper: counterparties for the PSPP trades are short-sellers, who then have to borrow a particular bond in the repo market
  - more intuitive… any hard evidence?
- Sharpen the discussion of the mechanisms

Comment 2: Which bonds are special?

- "Specials" trade at rates lower than GC rates
- During 2016, German bonds trade increasingly special

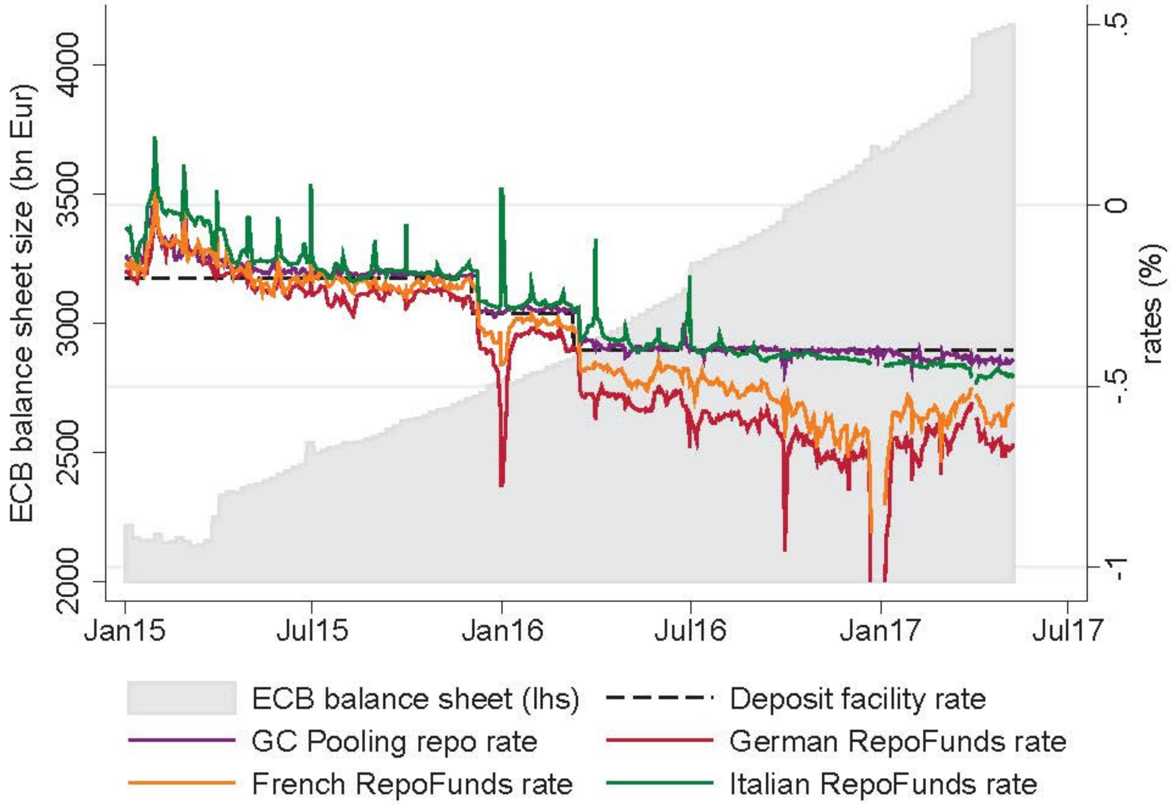
Proportion of trades at special rates (DE and IT govt bonds)



Note: A special trade is a trade at a rate below the respective GC rate minus 25 b.p. Source: ECB, based on MTS and BrokerTec data.

Comment 2: Which bonds are special?

- In 2016, German and French GC rates drop below the DFR:



- Eurosystem could not purchase bonds with yields < DFR until January 2017
  - effects of purchases indirect prior to 2017?

Comment 3: Regression setup

- Regression specification:

$$\Delta Repo\ rate_{i,t} = \beta \Delta PSPP_{i,t} + FE_i + FE_{countrybucket,t} + e_{i,t}$$

- What is β really capturing?

- $PSPP_{i,t}$ is the cumulative purchases of an individual ISIN relative to the amount outstanding
  - $PSPP_{i,t}$ is mechanically zero for all bond yields below DFR (prior to 2017)… does β only capture effects on above-DFR repo rates?

- In particular for specials, it may matter how much of the amount outstanding is available to the market. Here, $\Delta PSPP_{i,t}$:
  - going from 0% to 1% PSPP holdings is treated the same as going from 25% to 26% → robustness using $PSPP_{i,t}$ or high-low holdings?

Comment 4 (more technical)

- Extensions of the baseline model need clarification

- For example, the model that differentiates between on-the-run and off-the-run:
  - on-the-run should depend on time (and ISIN); include level, because it is not captured by the fixed effects
  - easy to fix!

Comment 5: Data

- 5 million repo trades, 1282 ISINs, January 2015 to May 2017 (about 600 trading days)
  - i.e., about 6.5 transactions a day for an average ISIN
  - unevenly distributed?

- It would appear so: after cleaning and winsorization, 800 ISINs
  - for each ISIN, calculate daily average repo price
  - would expect around 480,000 observations (~ 600 trading days x 800 ISINs)
  - instead: only around 200,000 daily observations → many ISINs without daily transactions?
  - is this a panel with gaps? implications for the analysis?

3. Summary

Concluding remarks

- Contribution of the paper:
  - provide evidence for the PSPP impact on special repo rates
- Authors might want to make clear what they do:
  - adjust the title of the paper as it is really about special bonds and not repo rates in general
  - clarify mechanisms at play
- A nice approach that could be developed further:
  - different measures of bonds available to the market
  - adjust empirical setup
  - update the dataset to capture more below-DFR purchases and re-run the analysis