Discussion of:

Bank Competition and Targeted Monetary Policy

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Global Credit Flows

ECB TLTROs

- **What are the TLTROs?**
  - · Long-term collateralized loans to banks
  - · Every bank can borrow provided it pledges collateral
  - · TLTRO loans are cheap (haircut+rate) for Italian banks
  - → Banks are incentivized to lend to firms (Targeted LTRO)

- **Targeted Monetary Policy**
  - · Standard ECB OMO through MROs and LTROs
  - · Conditions (rate, borrowing limit) linked to bank lending to nonfinancial private sector
  - ! March 2019: *"A new series of quarterly TLTROs will be launched [...] to preserve favourable bank lending conditions and the smooth transmission of monetary policy"*.

- **Results:**
  - · Banks reduce loan rates by approx 20 bps (diff-in-diff)
  - · Banks' ↑ market power: delayed and muted effect
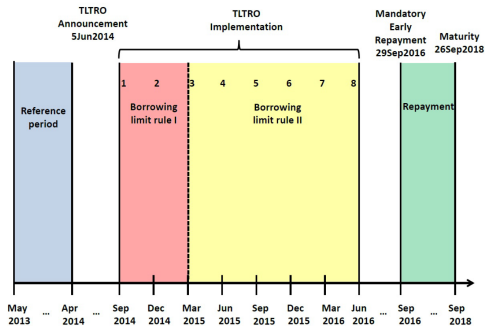 - → What about credit volume?

Identification Challenges

1) **Demand vs. supply**
   - Within borrower estimation á la Khwaja and Mian (2008) (does not capture bank-specific demand)

2) **Selection into treatment**
   - Banks *choose* how much to borrow from the ECB
   - IV: exploit TLTRO allocation rule $q_b^1 + q_b^2 \leq 0.07 \times EL_b^{Apr14}$

First Stage

- **Valid instrument** ☺
  - $> 90\%$ of banks actively participating to the operations borrowed $> 0.95 \times Rule_b$ in the first two TLTROs
  - $Rule_b$ definitely "more exogenous" than TLTRO and point estimates change significantly once we use the IV approach

- **Exclusion Restriction**

$$Y(TLTRO, X) \stackrel{?}{=} Y(TLTRO, X, Rule_b)$$

  ? "The differences in potential treatment across banks are therefore predetermined and orthogonal to unobservables that may affect supply in the period after TLTROs"

  $\rightarrow$ Show the estimates of X in the first stage

First Stage

	Binary treatment	Continuous treatment
	(1)	(2)
Rule × Post	2.15***	0.080***
	(0.287)	(0.012)
Firm-time f.e.	Yes	Yes
Bank f.e.	Yes	Yes
Bank-time controls	Yes	Yes
Kleibergen-Paap F-statistic	41.81	56.36
Kleibergen-Paap LM-statistic	17.44	20.52
Observations	354,060	354,060
Adjusted R^2	0.82	0.82

Uptake of TLTRO Liquidity

- **Gross Vs. net uptake**
  - · Part of TLTRO used to rollover previous ECB borrowing
  - ⇒ Gross Uptake>Net Uptake
  - · Authors use *net* borrowing. Which friction is relevant?
  - · What if TLTRO is normalized by bank assets?

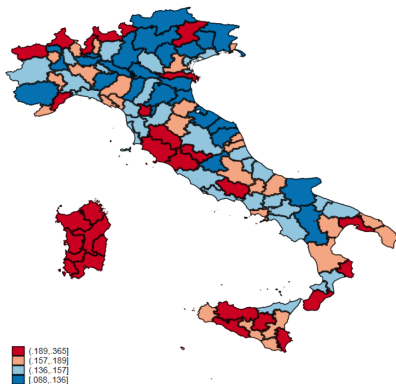$$TLTRO_{bt} = \phi Rule_b \times Post_t + \gamma_{ft} + \gamma_b + \theta X_{bt} + \epsilon_{bfmt},$$

$$Y_{bfmt} = \sum_{\tau} \alpha_\tau \mathbb{I}_{\tau=t} \times TLTRO_{b\tau} + \gamma_{ft} + \gamma_b + \theta X_{bt} + \varepsilon_{bfmt},$$

- **Clarify timing**
  - · *Rule_b* or *Rule_{bt}*?
  - · One TLTRO per quarter ⇒ repeated treatments
  - ⇒ What is the "diff" estimated?

Competition in Bank Credit Sector

✓ Robust using two sources of exogenous variation coming from the historical development of banking markets

⇒ Would emphasize this part more (now on page 29...)

Conclusion

- Timely paper: TLTROs are the "new normal"
- Improved identification (IV for selection into treatment)
- My comments:
  - ▶ More careful claims, especially for the exclusion restriction
  - ▶ Clarify empirical specification (timing, $TLTRO_{b\tau}$)
  - ▶ More emphasis on the role of competition