Money Markets and Bank Lending: Evidence from the Tiering Adoption

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Institutional context

- Not that long ago, central banks sought to ease monetary policy.
- 2014: ECB introduced negative interest rates (NIR).
- Delicate balance:
  - NIR increase banks' incentive to lend.
  - NIR hurt banks' profitability and capitalization.

Institutional context

- Not that long ago, central banks sought to ease monetary policy.
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- Delicate balance:
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  - NIR hurt banks' profitability and capitalization.
- 2019: two-tier system for remunerating excess liquidity holdings.
  - Exempt (from NIR) 6x required reserve, which is 1% of customers' deposit.
  - Deposit constitutes 60% of funding (EBF (2022)) $\Rightarrow$ exempt 4% of asset.
  - Comparison: share of equity in total assets.
    - Deutsche bank: 3.4% (2021).
    - Santander: 6.1% (2021).

Findings of this paper

The two-tier remuneration system

- Increased valuation of banks with more excess liquidity than the exemption amount (high liquidity).
- Increased interbank trading that redistributed liquidity.
- **Increased lending by banks with unused exemptions (low liquidity).**
    - **Q: Why? What changed?**

Proposed channel: reduced fragmentation

- Mechanism: reduced fragmentation in money markets (i.e., more interbank trading relationships) allowed banks to "insure liquidity risks and thus reduce their precautionary behavior and spur lending".

- Motivation: all else equal, banks have an easier to time to borrow from existing relationships. See Brauning and Fecht (2017), Cocco et al. (2009).

- Evidence:
  - Low-liquidity (LL) banks established new relationships with, and borrowed from high-liquidity (HL) banks.
  - LL banks increased lending to customers (at lower rates and longer maturities).
  - LL banks reduced holdings of governmental bonds.

- This mechanism could be more tightly established.

Comments on the current mechanism

- Documented: LL banks increased lending to customers.
  - If more lending relationships spur lending, why didn't HL banks also increase lending?
- Documented: LL banks reduced holdings of government bonds.
  - Paper's interpretation: government bonds are used as collateral for secured borrowing, reducing these bonds suggests "a decrease in precautionary behavior".
  - Alternative explanation: government bonds had negative yields. LL banks had the capacity to convert government bonds into higher yielding exempt reserve.
- What would be more convincing:
  - Cross-sectional test of lending on number of new relationships.

Alternative channel: cheaper liquidity

- Mechanism: HL banks always have an incentive to offload excess liquidity, thus providing a cheap and consistent funding base for LL banks.
- Motivating evidence: new loans made by LL banks have lower rate and longer maturity.
- Another potential test to tease apart "reduced fragmentation" vs. "cheaper funding": changes in the share of new credit lines offered.
  - Credit lines are profitable but can drain liquidity, especially in bad times.
  - If increased lending is spurred by better (perceived) insurance protection arisen from less fragmented money markets, then share of credit lines could go up.

Why the distinction?

- Different mechanism leads to different response to future policies and shocks.
- Further monetary policy loosening:
  - Fragmentation-mechanism: unclear.
    - New links need not to form, generating little additional insurance.
  - Funding-mechanism: good.
    - The amount of cheap funding is tied to deposit base, which is likely to grow.
- Sudden negative shock:
  - Fragmentation-mechanism: good.
    - Insurance absorbs shock.
  - Funding-mechanism: unclear.
    - Funding may disappear.

Conclusion

- An enjoyable paper that clearly and convincingly documents the effects of two-tier remuneration system.
  - Two-tier system led to increased bank valuation, increased inter-bank trading, and increased lending by LL banks.

- More analyses on the mechanism that led to the increased LL bank lending can provide critical insights to policymakers.

Brauning, F. and Fecht, F. (2017). Relationship lending in the interbank market and the price of liquidity. Review of Finance, 21(1):33–75.

Cocco, J. F., Gomes, F., and Martins, N. C. (2009). Lending relationships in the interbank market. Journal of Financial Intermediation, 18(1):24–48.

EBF (2022). Banking in europe: Ebf facts & figures 2022.