Does the Tail Wag the Dog?
Unconventional Monetary Policy and Credit Contractions

Falko Fecht \(^1\) Jing Zeng \(^2\)

\(^1\)Frankfurt School of Finance & Management
\(^2\)University of Vienna

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Motivation

- Euro area economic slowdown since the financial crisis

- Unconventional monetary policy (UMP) measures widely adopted
  - Abundance of liquidity through repo transactions
  - Direct financing to banks via targeted long-term refinancing operations

- Theoretical underpinning (Bianchi and Bigio, 2018):
  Credit channel of monetary policy – A liquidity view
  - Banks trade off between lending profit and liquidity risk
  - Monetary policy affect credit supply by changing aggregate liquidity
Unconventional monetary policy transmission

- How effective has been central bank liquidity provision?
  - Restore credit supply, esp. by banks facing wholesale funding dry-up
    Carpinelli and Crosignani (2018), Andrade, Cahn, Fraisse and Mesonnier (2019)
  - Yet, other evidence suggests banks hoard CB liquidity rather than increase credit supply
    - Esp. banks reliant on interbank market that suffers a dry-up

⇒ Mixed evidence points to potential impairment to UMP transmission
  - Esp. given the abundance of central bank liquidity
  - Is all sources of liquidity not equal?
A model of bank credit supply in which lending has refinancing needs and is subject to moral hazard (Holmstrom and Tirole, 1997)

⇒ Banks refinancing risk arises due to limited pledgeability... ... rather than limited liquidity availability

Interbank relationship lenders can engage in peer monitoring

⇒ Prevents opportunistic behavior of the borrowing bank (Rochet and Tirole, 1996)

⇒ Credit channel of UMP with endogenous peer monitoring
Results preview

- Bank credit supply with endogenous interbank peer monitoring
  - Amplification effect of endogenous interbank market dry-up:
    - Small shock to lending opportunity $\rightarrow$ Large credit contraction
  - Endogenous interbank market dry-up can impair UMP transmission:
    - Central bank ex post optimal liquidity provision
    - Improves bank liquidity *conditional* on interbank market condition
    - *But* worsens interbank market liquidity ex ante
Main model ingredients

- Bank’s **credit supply** decision: Interbank borrower’s perspective
  - Loans requires refinancing but has limited pledgeability (moral hazard)
    - High return if refinanced and held to maturity
    - Low return if unable to refinance and liquidated
  - Trade-off: Expected return on loans (refinancing risk) vs. cash holding

- Bank’s **peer monitoring** decision: Interbank lender’s perspective
  - Improves the interbank relationship borrower’s refinancing capacity
    ⇒ Efficiency gain from reducing inefficient liquidation
  - Interbank lender gains market power thru peer monitoring
    ⇒ Profitable interbank lending, capturing part of the efficiency gain
  - Trade-off: Expected profit from interbank lending vs. monitoring cost
Key mechanisms I: Amplification effect

- **Strategic complementarity:**
  - Peer monitoring by interbank lender $\uparrow$
    $\Rightarrow$ Refinancing risk of borrowing bank’s loan portfolio $\downarrow$
    $\Rightarrow$ Return on loans and thus credit supply $\uparrow$
  - Credit supply by interbank borrower $\uparrow$
    $\Rightarrow$ Refinancing needs and thus efficiency gains from peer monitoring $\uparrow$
    $\Rightarrow$ Profits to interbank lender and thus peer monitoring $\uparrow$

$\Rightarrow$ Amplification of fundamental shocks:
  - A small shock to lending opportunity $\downarrow$ bank credit supply
  - Reduces endogenous peer monitoring and interbank market liquidity
  - Further reduces bank credit supply
Key mechanisms II: UMP transmission

- **UMP**: Central bank ex post liquidity provision
  - Supply liquidity to avoid liquidation of bank loan portfolio...
  - ...if unable to obtain sufficient liquidity from interbank market

- **UMP transmission**:
  - + direct effect on **credit supply**: ↘ refinancing risk
  - – direct effect on **peer monitoring**: ↘ interbank lending profit
    - CB liquidity strengthens interbank borrower’s bargaining position
  - Indirect effects due to strategic complementarity
    - credit supply ⇔ peer monitoring

⇒ CB liquidity provision and **credit supply**
- Conventional effect if + direct effect on **credit supply** dominates
  - thus ↗ peer monitoring and crowds in interbank market liquidity
- Endogenous interbank market dry-up may ↘ **credit supply**
  - if – direct effect on peer monitoring dominates