BI Norwegian Business School

Nonbank Lending and the Transmission of Monetary Policy

Dominic Cucic and Denis Gorea

9th IWH-Fin-Fire Workshop on "Challenges to Financial Stability"
Halle (Saale)

Discussion by Ljubica Georgievska

October 19, 2023

Motivation & Research Question

- Nonbanks play major role in credit markets
- Unclear how nonbanks affect monetary transmission
  1. Does monetary tightening shift credit from banks to nonbanks?
  2. Why do banks and nonbanks react differently?
  3. How does rise of nonbank credit affect real outcomes?
- Provides new empirical evidence using:
  - Loan-level data on unsecured credit
  - Detailed data on borrowers and households and their real outcomes

Main Argument & Key Findings

- Nonbanks act as "spare tire" during tightening
  - Cushion decline in total credit
- Increase lending when rates rise
  - Lending share of nonbank financial institutions up 5-6% after monetary tightening
- **Channel: Long-term funding access enables this expansion**
  - Flows from banks to nonbanks
- Sustains investment, consumption
  - Mitigates drop without more risk-taking

Data

- Loan-level data on all unsecured bank and nonbank loans in Denmark, 2003-2018
- Administrative data on firms and households
  - Avoids sampling bias
  - Detailed financial and real outcomes
- Lender balance sheets link funding and lending
- Monetary policy shocks via Euro currency peg
  - Provides exogenous variation

Monetary Policy Shock Measure

- Measure surprise Euro Area rate changes from asset prices around ECB announcements (Jarocínski and Karadi, 2020, and Altavilla et al., 2019)
  - Difference is surprise change due to announcement
- Use as exogenous shocks for Denmark due to currency peg

Key Regressions

1. Nonbank lending share rises 5-6% after tightening

$$y_{b,l,t} = \alpha_{b,t} + \delta_l + \beta(\text{Nonbank}_l \times \text{MP Shock}_{t-1}) + \theta(\text{Nonbank}_l \times \text{MacroControls}_{t-1})$$

2. Long-term funding flows from banks to nonbanks

$$\Delta\text{Funding}_{l,t} = \alpha_l + \beta\text{MP Shock}_{t-1} + \theta\text{MacroControls}_{t-1}$$

3. Nonbanks reliant on long-term funding drive credit response

$$\log(\text{credit})_{b,l,t} = \alpha_{b,t} + \delta_l + \beta\text{MP Shock}_{t-1} + \eta\text{Funding ratio}_{l,t-1} + \theta\text{MacroControls}_{t-1} + \gamma(\text{MP Shock}_{t-1} \times \text{Funding Ratio}_{l,t-1})$$

4. Nonbanks effect on borrower's real oucomes

$$\log(\text{y})_{b,t} = \alpha_b + \beta(\text{Nonbank borrower}_{b,t-1} \times \text{MP Shock}_{t-1}) + \gamma\text{MP Shock}_{t-1} + \theta(\text{Nonbank borrower}_{b,t-1} \times \text{MacroControls}_{t-1})$$

Main Advantages

- Complete coverage of unsecured bank & nonbank lending
- Administrative data avoids sampling bias
- Lender balance sheets link funding & lending
- Exogenous monetary policy variation
- Detailed borrower financial & real outcomes data

Relationship to US Literature

Complements US studies on rise of shadow banking:

- Buchak et al. (2018): Nonbanks expand when banks constrained
- Xiao (2020): Money funds lend more when rates rise
- Drechsler et al. (2017): Shadow banks absorb bank funding shocks
- Elliott et al. (2021): Nonbanks expand riskier lending
- Drechsler et al. (2022): Offset US mortgage lending contraction
- Irani et al. (2021): Links shadow banks to regulation arbitrage
- Chernenko et al. (2020): Firms borrow from nonbanks when banks tighten

Provides:

- Non-US evidence on nonbanks & monetary transmission
- **New long-term funding channel** transmission to real economy

Comment 1: Supply vs. Demand

- Euro peg provides exogenous policy variation, enabling clean identification of supply-side effects of monetary policy
- Potentially some minimal residual demand effects:
  - Euro shocks could influence Denmark's economy directly and be anticipated
  - Banks and nonbanks may have somewhat different customers
    - Their use of borrower fixed effects and borrower-level controls helps address this
- Ways to help further:
  - Control for more macro factors affecting Denmark
  - Examine credit registry data on loan applications
- Overall, identification strategy is quite strong

Comment 2: Lender Decision Making

- Estimates reduced form relationships
- Uncertainty interpreting lender responses:
  - Optimal? Constrained? Strategic?
    - Optimal: Profit maximization motives
    - Constrained: Lenders might have funding frictions (and no access to long term funding)
    - Strategic: Competitive motives
- Structural model could provide more insight
- But reduced form still very informative
- Results useful despite some uncertainty in interpretation

Comment 3: Generalizability

- Data from single country (Denmark)
- Currency peg provides clean identification but may limit generalizability
- Focuses on unsecured lending:
  - Secured markets may differ
- Less complex nonbanks than in US:
  - Larger nonbanks could differ
  - Few borrowers use bonds in Denmark than in US:
    - May overstate credit contraction if bonds substituted
- Findings most applicable to similar countries and nonbanks

Comment 4: Data

- Cannot fully distinguish loan types:
  - Different loan responses could be obscured
- Could bias results if omitted details differ for banks vs. nonbanks
- Does not observe loan rates/terms directly:
  - Imputed rates may not fully capture price response

Quibbles: Data

- Only annual data:
  - Unlikely to bias results, but higher frequency could reveal more lending dynamics
- Limited lender balance sheet data:
  - Unlikely to bias results, but more granular funding data could improve robustness
- Though the authors provide some evidence clearing this, the administrative data is only for a subset of firms
  - Potentially not fully representative results if the subset of firms is somehow not representative of the overall corporate sector
- Borrower-lender match requirement:
  - Restricts sample, may bias results to some degree if the matched subsample behaves differently than the overall pool of borrowers and lenders
- 2003-2018 period: Expanding sample could improve external validity

Conclusion & Impact

- A very interesting paper. Please Read!

- Nonbanks cushion effects of monetary tightening
  - Long-term funding enables "spare tire" role
- Important for central banks to account for nonbanks
- Complements US research on nonbanks and provides a model for studying nonbank transmission channels of monetary policy, with a focus on the role of long-term funding

Good Luck!

References

- Buchak, G., Matvos, G., Piskorski, T., and Seru, A. (2018) 'Fintech, regulatory arbitrage, and the rise of shadow banks', Journal of Financial Economics, 130(3), pp. 453–483.
- Xiao, K. (2020) 'Monetary transmission through shadow banks', The Review of Financial Studies, 33(6), pp. 2379–2420.
- Drechsler, I., Savov, A. and Schnabl, P. (2017) 'The deposits channel of monetary policy', The Quarterly Journal of Economics, 132(4), pp. 1819–1876.
- Elliott, D., Meisenzahl, R., Peydró, J.L. and Turner, B.C. (2021) 'Non-banks, banks, and monetary policy: US loan-level evidence since the 1990s', Federal Reserve Bank of Chicago Working Paper No. 2021-27.
- Drechsler, I., Savov, A. and Schnabl, P. (2022) 'How monetary policy shaped the housing boom', Journal of Financial Economics, 144(3), pp. 992-1021.
- Irani, R.M., Iyer, R., Meisenzahl, R.R. and Peydro, J.L. (2021) 'The rise of shadow banking: evidence from capital regulation', The Review of Financial Studies, 34(5), pp. 2181–2235.
- Chernenko, S., Erel, I. and Prilmeier, R. (2020) 'Why do firms borrow directly from non-banks?', Working Paper.
- Jarociński, M. and Karadi, P. (2020) 'Deconstructing monetary policy surprises: The role of information shocks', American Economic Journal: Macroeconomics, 12(2), pp. 1-43.