Abstract
This paper studies how bank ownership of industrial firms affects their markups. We find that bank ownership increases firms’ markups, while bank ownership of industry rivals reduces firms’ markups. Using bank mergers that generate exogenous shocks to bank ownership of industry rivals, we employ a difference-in-differences analysis to establish causality inference. For the affected firms, their costs of loans increase, and the adverse effect on markups is stronger for competitive industries, R&D intensive firms, and when banks have more proprietary information of firms. Our mechanism analysis shows that banks utilize their financing and information advantage to realize their impact.

A fact of banks’ equity holding
![Graph showing percentage of firms with bank block-ownership]

Debates: how banks shape competition
- Cestone and White (03’, JF); Cetorelli (04’, JMBC); Cetorelli and Strahan (06’, JF)
- Recently, two papers reawaken this questions:
  - Common lender could raise anti-competitive concerns
  - Saidi and Streitz (21’, RSFJ); De Franco et al. (20’, MS)
- Common ownership induces less aggressive competition
  - Azar et al. (18’, JF; 21’ FMJ); Xie and Gerakos (20’, AEAPP); Gutiérrez and Philippon (18’, AEAPP); Anton et al. (21’), etc.

OLS analysis

"Bank-firm connection"

- Banks block-held by banks enjoy higher markups (gross profit margins) than firms that are not block-held by banks.
- Firms whose industry rivals block-held by banks suffer lower markups (gross profit margins) than firms whose industry rivals that are not block-held by banks.
- **Bank-firm connections** could enhance firms’ market power.
- **Bank-rival connections** could hurt firms’ market power.

"Bank-rival connections"

- The merging bank has lending relationships with A₁ and B₁.
- The merging institutional investor hold block shares of R₄.
- R₄ is one of largest ten firms from A₁’s industry.

Identification strategy + DID analysis

**The merging has lending relationship with A₁ and B₁**

- **DealScan lender**
- A₁, B₁

**The merging institutional investor hold block shares of R₄**

**Treated sample**

- A₁

**Control sample**

- B₁

**R₄ is one of largest ten firms from A₁’s industry**

Does banks’ incentives matter?

**Conjecture 1.** As a bank’s stock investment in the industry rivals increases, the bank has a higher incentive to support the industry rivals.

**Conjecture 2.** As a bank’s lending share to the affected firm increases, the bank has a lower incentive to support the industry rivals.

Findings:
- The adverse effect on market power is stronger if the stock investment in the industry rivals represents a large share of the bank’s total stock investment.
- The adverse effect on market power is less pronounced and even disappears if the affected firm’s lending represents a large share of the bank’s total lending

Two underlying mechanisms

**Hypothesis 1: Financial resource distortion**

- Banks may charge higher loan spreads, reduce loan amount, and requires more collateral; or even refuse lending to the affected firms.
- Consistent with the “financial resource distortion channel”.

**Hypothesis 2: Proprietary information leakage**

- Firms with high proprietary costs are more sensitive to the adverse effect of mergers on market power and/or markups (profit margins).
- Consistent with the “information leakage channel”.

Takeaways

**Literature of institutions and competition**
- Bank and competitions: Cestone and White (03’); Cetorelli (04’); Cetorelli and Strahan (06’)
- Common lenders: Saidi and Streitz (21’); De Franco et al (20’)
- Common ownership: Azar et al. (18’, 21’); Gutiérrez and Philippon (18’); Anton et al. (21’), etc.

**Literature of bank’s equity holding**
- Firms’ performance and valuation (e.g., Gorton and Schmid (06’, JFE); Morck et al. (99’ JB))
- Debt capacity (Santos and Rumble (06’); Santos and Wilson (17’))
- Literature of information leakage in financial conglomerates
- Acharya and Johnson (07’); Massa and Rehan (08’); Iwashina and Sun (11’); Chen and Martin (11’)
- Bhattacharya and Chiesa (95’); Askar and Ljungqvist (10’); De Franco et al. (20’)

Conclusion

This study explores how banks’ equity holding shape the competitive strength of firms. Banks’ ownership of firms can enhance firms’ market power. In contrast, banks’ ownership of the industry rivals could harm firms’ market power.

Our mechanism analysis suggests that the financial resource distortion and proprietary information leakage are two non-exclusively channels.

Overall, banks’ equity holding of industrial firms induces the reallocation of market power within an industry, thus intensifies concern of unfair competition.