1. Motivation
▶ No consensus regarding the relationship between bank concentration and risks.
  • Negative relationship: Corbae and Levine (2018).
▶ Role of Bank capital in shaping the concentration-risk relationship:
  • Bank capital is positively correlated with bank concentration in U.S.
  • Bank capital matters for financial risks.

2. Research Questions
▶ How does bank capital affect the concentration-risk relationship?

3. Entrepreneurs’ Problem
▶ Entrepreneurs choose between
  • Gambling project: return of $a$ with prob. of $p$, and nothing o.w.
  • Prudent project: return of $z$ with prob. of 1.
▶ Limited liability for entrepreneurs.
▶ Entrepreneurs are financially constrained ($k \leq \lambda a$).
▶ Entrepreneurs’ Decision: 4 types of entrepreneurs.

4. Bankers’ Problem
▶ $M$ bankers compete for loans ($Q_L$) and deposits ($Q_D$) à la Cournot.
▶ Asymmetric information between bankers and entrepreneurs.
▶ Budget constraint:
  \[ c^b + q'N' \leq p'[(1 + r^d)qQ^L - (1 + r^d)qQ^D] \]
  where $q$ is the price of capital, $p'$ is the expected repayment rate of loans, $N$ is bank capital, and $r^d$ and $r^b$ are deposit and loan rates.
▶ Banker’s balance sheet identity: $Q^L = Q^D + N$.
▶ Bank capital constraint: $N \geq \kappa Q^b$.
▶ Risk shifting mechanism in the partial equilibrium:
  \[ \frac{\partial p^b}{\partial p^d} < 0 \]

5. Two Mechanisms
▶ Risk shifting mechanism in the general equilibrium ⇒ Positive or Negative concentration-risk relationship.
  • bank concentration $\uparrow$ ⇒ loan rate $\uparrow$ ⇒ risks $\uparrow$.
  • The direction of risk shifting mechanism in the general equilibrium depends on how bank concentration affects loan rate.
▶ Net margin mechanism ⇒ Negative concentration-risk relationship.
  • bank concentration $\uparrow$ ⇒ Net interest margin $r^d - r^b$ ⇒ autarky entrepreneurs $\downarrow$ ⇒ loan size $\downarrow$ ⇒ risks $\downarrow$.

6. Bank Concentration and Loan Rate
▶ Innovation: The relationship between bank concentration and loan rate is non-monotonic.
  • Loan rate starts to decline when bank capital constraint is NOT binding.
▶ Bank concentration and loan rate in the data.

7. Bank Concentration and Risks
▶ Risk measure: how much capital is used in gambling projects.

8. Key Takeaways
▶ When bank capital constraint is binding ⇒ ambiguous relationship between bank concentration and risks.
  • The two mechanisms operate in an opposite direction.
▶ When bank capital constraint is non-binding ⇒ negative relationship between bank concentration and risks.
  • The two mechanisms operate in the same direction.