Deregulation, Market Structure, and the Demise of Old-School Banking, by Emilio Bisetti, Stephen A. Karolyi, and Stefan Lewellen

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Main questions and background?

- Does competition increase bank risk?
    - Change banking IO?
    - Explain the demise of "old-school banking"?
    - Contribute to financial crises?
- Old and still important *policy* question
    - E.g., Depression era policy makers felt need to protect banks from "*excess competition*" to foster financial stability
    - Fed Governor Daniel Tarullo (2012):

      ["...primary aim of Dodd-Frank is to contain systemic risk, even if this reduces the competitiveness and efficiency of banks."]
    - Fed won't allow "narrow banks" (compete with normal banks)

Theory

- Backdrop: Banks have incentive to gamble with leverage
- Competition **increases** bank risk:
  - **Key motivation for this paper:** Banks won't jeopardize rents by taking risk (e.g., Keeley, *AER* 1990).
  - Competition reduces information rents from relationship banking leading to more moral hazard and adverse selection (e.g., Petersen and Rajan, *QJE* 1995).
- Competition **decreases** bank risk:
  - If banks charge rates that are too high, they encourage risk shifting (e.g., Boyd and De Nicoló, *JF* 2005)
  - Too-big-to-fail
  - **More recent/less well known:** Competition decreases *correlation* of bank risk strategies (Anginer, Demiriguc-Kunt, and Zhu, *JFI* 2014)

Main contributions

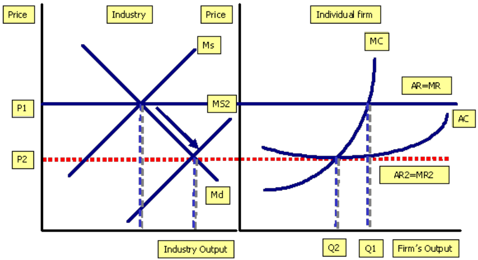
- Like many others: use staggered rollout of state-level interstate banking laws to identify shocks to competition.
- **Key novelty:** Differentiate between:
  - *StatesIn*: # of states whose banks can compete with in a given bank's home state.
    - E.g. For Colorado bank XYZ in 1986q3 on LHS of regression, how many states can branch into Colorado?
    - Measures competition directly
  - *StatesOut*: # of states a given bank can enter
    - E.g. For Colorado bank XYZ in 1986q3 on LHS, how many states can Colorado banks enter?
    - Authors say measures "Investment Opportunities"

Main contributions

- Controlling for *StatesOut*, *StatesIn* (Competition):
  - Decreases:
    - Profitability (Net interest margin, ROA, ROE, interest expense)
    - "Old-school banking" **as % of whole** (Loans/Assets, loans kept, interest income/income)
  - Increases:
    - Bank risk (Loss provisions, charge offs, Risk-weighted assets, $\sigma(ROE)$, $\sigma(ROA)$)
    - M&A activity
- Controlling for *StatesIn*, *StatesOut* generally has opposite effect
- **Paper's Interpretation:** Competition reduces "rents" and banks respond with more risk taking and non-traditional banking.
- Suggestive that banking competition helped set stage for great financial crisis...

Interpretation issue: What does "competition" mean?

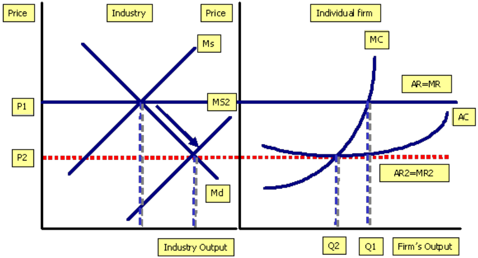
- Monopoly power occurs when **firms** face downward-sloping demand.
- Banks can be price takers before and after deregulation
- Outward shift in supply happens when new banks can enter (and bring better production technology/lower cost curves).



- **ALL** of the results in this paper are consistent with zero economic rents before and after "competition" increases.

What does "competition" mean?

- Same logic applies to quantity of *risk* as opposed to quantity of \$ in supply/demand curves
- Outward shift in supply of loanable funds increases marginal risk taken at the margin.



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Perfect competition supply interpretation, continued

- Reasons to believe cost economies shift *alone* can be sufficient to explain reduced profitability/increased risk
    - Economies of scale now realizable
    - **Operating leverage**, presumably lower for branches than HQ's, allows for more aggressive supply of banking services at the margin
    - In investment asset pricing theories, lower OL results in lower cost-of-capital and lower equilibrium profitability
- Otherwise identical entrants will *mechanically* have lower ROA and ROE than incumbents (rather than lower *economic* profits)
    - They have not fully depreciated new buildings & equipment yet
    - Operating profitability vs earnings? or incumbent dummy?
- Outward shift in supply seems (in total $ sense) inconsistent with "demise of old-school banking"
- Why not use/include neo-classical competitive benchmark?

Missing LHS variables related to interpretation

- Missing key LHS variables for the rent/risk-taking story (although hard because equity not always public)
  - M/B or Q: (Charter value/rents).
- Even with greater risk of *assets*, it is not clear that *banks* are riskier.
  - Where is leverage...???
  - ..systemic risk?
  - ...inter-bank correlation?
  - ...(funding) liquidity risk?
  - FDIC insurance payouts?
  - All critical if going to make big leap of intra-banking sector competition setting stage for great financial crisis.
- Note that 8-quarter earnings volatility to measure bank risk is problematic
  - Will *mechanically* be high if a downward trend in earnings follows increase in *StatesIn*.
  - Any publicly owned banks? (Return volatility)

What does *StatesOut* measure?

- Authors say new "investment opportunities"
  - Used like "anti-competition"
  - This interpretation is important because *StatesIn*/*StatesOut* decomposition is key novelty
  - Interact *StatesOut* with *StatesIn* from *StatesOut* states to measure investment opportunities?
    - NPV depends on competitive advantage
- Can also positively measure competition:
  - e.g., new states are outside source of deposits and therefore *supply* of loanable funds that can be used in home state
  - Outside states source of human capital

Empirical setting exposition

- Why were states rolling out these measures?
  - Why then?
  - International competition? (Was competition *already* there?)
  - Trouble with local banks? (Were local banks going to have problems anyway?)
- Who were early adopters?
  - One was NY (Jiang, Levine, and Lin, *RFS* 2016, WP 2018))
  - Important for the 20-years later interpretation
- How intertwined were changes to *intrastate* branching?

Boring but important econometrics

- Clustering matters!
  - LHS = bank-time; RHS = state-year $\Rightarrow$ need state-year clustering!
    - Even with fixed effects!!!
    - See, e.g., When Should You Adjust Standard Errors for Clustering? By Abadie, Athey, Imbens, and Wooldridge (https://www.nber.org/papers/w24003)
- Why not value-weight (GDP/population) directed graphs?
  - NY banks don't care if WY banks can enter

Conclusion

- Clever empirical design
- New evidence on very important classic questions
- Still not 100% convinced on interpretation, measurement, and statistical inference.