Contribution

- The first study to clearly identify the **causality**:

Geographical diversification \(\Rightarrow\) Reduction of bank market value

- **Positive** aspects of geographical diversification
  - economies of scale
  - better diversification of idiosyncratic shocks

- ...are **dominated by** the **negative** consequences of growing informational asymmetries
  - More credit to insiders
  - More bad loans
New Identification Strategy

- *Not new:* -ve correlation between geographic (activity) diversification & market valuation
- *New:* causality from a close scrutiny of interstate bank deregulation (1978 – 1994)

Bank-level data on balance sheet and income st. (1986 – 2007)

- 50 US states and D.C.
- 964 Bank Holding Companies (BHCs) and their subsidiaries
- FED’s quarterly data on ”Call Reports”: balance sheet & income st.

Allows construction of instruments heterogeneous across:

1. Time
2. States
3. Banks (BHCs)
Careful variable selection

- Measures of geographic diversification
  1. *Dummy* = 1 if BHC in > 1 states
  2. Share of BHC’s assets helf out-of-state
  3. Herfindahl-Hirschman Index of BHC’s assets in each state
  4. Average distance to affiliates’ HQs

- Control for other factors to limit spurious inference
  - Activity diversity (income & asset levels & rates, )
  - Size of BHCs
  - Time-varying but state-specific characteristics (q, growth of income)
Banks

- **Banks which diversify are:**
  - ~ 9 times larger than banks which don't
  - More profitable
  - More diverse in their activities
  - Slightly less well capitalized
  - Tobin’s Q nearly identical! (larger Mean but smaller Median)

- **Preliminary OLS regression**
  - More highly valued BHCs diversify
  - But valuations fall after diversification
  - A break in a downward trend of $q$ after diversification
    - But not very significant
  - Not causal
State – Time instruments:

- Nine sets of instruments (!!)
  - 3 inward time-state removal measures
  - 6 new measures identify outward expandability: accessible states, accessible markets, different weighting schemes,...
- Deregulation soaks up a lot of variation in BHC’s diversification
- Valid instruments, new ones perform better
- **Geographic diversity significantly lowers Tobin’s Q**
  - Small but economically meaningful coef:
    - ↑ 1 s.d.(Div) ⇒ ↓ Q by 0.15 - 0.3 s.d.
- Results 4-9 times larger than from OLS
State – Time – Bank instruments:

- Method #1 does not differentiate between banks in the same state
- Apply ”Gravity” framework of Frankel and Romer (1999) to banks
- Distance adds a bank-level dimension of heterogeneity
  - Far-away subsidiaries should see smaller asset share (diversity), c.p.
  - Market size matters
- Use four different techniques in the first stage (just in case!)
  - Shares declines in distance
  - Shares increase in relative market size
- Again, geographic diversity significantly lowers Tobin’s Q of BHCs
- Similar second-stage coefficient size as with method #1
- Decline in Q is mainly due to decline in Market Value
Evidence: increasing agency problems in diversifying banks

- Use Call Reports data to measure loans to insiders and bad loans
  1. **Insiders**: executive officers, directors, main shareholders & relatives
  2. **Bad loans**: 90+ days past due

- Quantitatively:
  - ↑ 1 s.d.(Divers.) ⇒ ↑ 0.4 s.d. Insider lending share
  - ↑ 1 s.d.(Divers.) ⇒ ↑ 0.6 s.d. Bad loans share

- Strongly suggestive of **decline in monitoring effort following diversification**
  - ↑ Insider loans after diversification (moral hazard?)
  - ↑ Bad loans after diversification (imperfect information or lack of enforcement?)
    - "HQ in NYC now performs remote due diligence"?, but could also be
    - "My boss used to be upstairs, now she is a thousand miles away"
Comments
Comment #1

- Very thorough, convincing and complete empirical work
- Yet also a creative new approach utilizing 3D heterogeneity
  - The deregulation indeed seems fairly idiosyncratic from BHCs view, thus a good "laboratory"
  - But I wonder if there is some historical evidence on **lobbying** by the banks to gain access to the most lucrative markets
  - You discuss orthogonality of timing of deregulation and distance. Was this also true if consider their market sizes?
Wishlist: Gross effects

- I would like to see work identifying the **gross effects**
  - beneficial risk-sharing (etc.) effects of diversification, vs.
  - adverse agency effects

1. Is there some natural experiment?

2. Diversification benefits may increase in some macro/industry heterogeneity which determines the potential for sharing risks. Perhaps this can be incorporated to infer gross effects.

- Or at least try some interaction dummies to learn when your net effect is stronger and weaker
Wishlist: empirical evidence on mechanism

- More work on the **mechanism** to draw policy implications
- May be possible to identify from micro-data the origin of said insider/bad loans or other aspects of agency problems:
  - *Why* do these (big) banks diversify?
  - Lots of cash looking for a return & dropping their game? That could cause bad loans, but not insider loans.
  - Are banks buying up as much market access as possible to pre-empt competition, and being shabby at it? Again, cannot explain insider loans.
  - Or are these some ”growing pains” that go away few years after M&A? You may want to consider modeling the *dynamics* (*Transitory effects*?).
  - Alternatively, are the expanding banks ”too big”, causing some structural informational/agency problems to dominate?
- You have the right kind of data to answer these questions.
Comment #2: Gravity

- **Gravity** equations typically see the "force" (here: asset share) **increasing in both** market sizes.

- The authors use a single relative metric (home and foreign markets have identical coefficients but opposite signs): "gravity" **decreases in home** (relative) market size.

- More of a Krugman’s IRS trade aspect than gravity per se
Comment #3: Distance

- Distance to HQ used to capture the bank-dimension in gravity equations
- **How heterogeneous is this measure across banks within a (median) state?**
  - Aren’t most big banks’ HQs located in NYC?
  - If they are, then the bank-dimension of the panel is very similar to state-dimension, when considering distance as the metric.
- How much additional gain?
A Loose comment/suggestion

- My prior was that this result was surely spurious
  - Surely diversification is good!
- But it seems that there indeed is small, but very important net effect:
  
  (Geographic) Risk-sharing at Micro-level does not work very well, due to agency problems

- Macro puzzle about the observed lack of risk-sharing: Backus-Smith
- Answers evolve around a nominal exchange rate ”disconnect”
- Perhaps Macro risk-sharing should also consider more ”earthly” reasons?
  - Institutional proximity?
  - Geographical proximity?
  - Cultural proximity?