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# The Cross-Market Spillover of Economic Shocks through Multi-Market Banks

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Discussion by:

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# Overview

- The paper investigates the (de)stabilizing role of geographic diversification of banking during the recent crisis.
- Main motivation:
  - The significant increase in multi-market banks.
  - Affect on vulnerability to local economic shocks.
    - Multi-market banks remain less affected during local loan supply shocks.
    - BUT they reduce lending more during local demand shocks – shifting lending to other markets.
  - What about in case of shocks to **other** markets?
  - Recent studies document the cross-country transmission of shocks.

# What the paper does

- Explores the way multi-market banks transmit shocks.
- Analyze at sub-national level in the U.S.
- Focus on home mortgage lending behavior where some regions experienced larger declines in home prices.
- Which effect dominates?
  - heavy exposure to high-delinquency markets leads to
    - **Spillover** effect : reduced lending in less affected regions
    - or **substitution** effect: increased lending in local markets.
- *Importance* of local market, does it play a role?
- *Ability of securitized lending* in mitigating the shock.

# Findings

- They find that **spillover** effect from loan supply shocks outweighs substitution effect from loan demand shocks: *multi-market banks reduced lending in low-delinquency markets.*
- The effect is stronger in *peripheral* markets.
- The decline in lending was mitigated to some extent by securitized lending.
- Contribution: First to distinguish between spillovers to markets based on share in lending.

# Main comments

- Credit supply vs. demand
- Sample selection
- Measurement of certain variables
  - LHS variable
  - Peripheral
- Cross-section regressions
- Pooled regressions
  - Need for some robustness analysis
- Missing controls
- Is there room to exploit the data more?

# Supply vs. demand

- A change in credit volume does not necessarily imply a change in credit supply.
- We observe equilibrium levels.
- Major problem in banking studies as long as one does not have access to loan applications/rejections data
  - Popov and Udell (2010) and Puri, Rocholl and Steffen (2011 JFE)
- The authors do a good job in controlling for demand effects.
  - Market\*year effects
- Still concerned if that would work well within the same country during the crisis.

# Sample selection & Measurement

- Only bank/market observations with positive mortgage originations in both pre-crisis and crisis periods are included in the sample.
  - Selection based on LHS variable ???
- I can see that it was necessary due to the definition of dependent variable, LNGROWTH (log growth in bank  $i$ 's mortgage originations):
  - Not possible to compute if there is no origination in one of the periods.
  - BUT not having the observations with no originations in time  $t$  and positive originations in  $t+1$  would bias the results.
- Alternative measurement for the dependent variable.
- At least, we should know how many observations are left out.
- The descriptive section uses same data too...
- What happens to banks that went bankrupt?

# Measurement of Peripheral

- 1 to 50 percent of the bank's total originations referred as "peripheral"
- Choice of 50 percent? Arbitrary.
- Why prefer dummies instead of actual shares?
- Can you observe shares at borrower level too?
- Location of the borrower only or lending at branch level?
  - Can you distinguish cross-regional lending? Or is it always the corresponding branch?



# Empirical approach

- Cross-section regressions use aggregated data over two years.
  - Impact of 2006-2007 variables on changes over four years.
  - Still able to find a significant impact though.
- Why exploit time dimension only in robustness?
  - Results are parallel.
  - Is it possible to observe quarterly data?
- Main concern with panel data:
  - Why only pooled regressions?
    - treating banks as homogeneous entities
  - What about (unobservable) factors that influence individual bank behavior?
    - Are we confident that the included bank specific variables control for all factors?

# Empirical approach-2

- My preferred specification is a panel estimation that includes bank fixed effects
- You may argue that
  - You do not want to remove the cross-sectional variation.
  - You are not interested in the value of the unobserved bank-specific effect, but rather in making inferences with respect to population characteristics.
  - However you need to show first that individual effects are not correlated with the explanatory variables.
- Also clustering at bank level is needed.
- It would be nice to see those results as robustness.

# Securitized Lending

- The authors compare portfolio lending with total lending (portfolio+securitized).
- The effects are (mostly) mitigated for total lending estimations.
- Did you check with securitized only?
  - No effect or much smaller effect?
- How to interpret the larger effect with non-residential NPL? (Table5)
- Differences not very large in pooled regressions (Table6)
  - Coefficient in (2) larger for highly peripheral (important variable)

# Extensions

- The importance of markets works in the same direction with relationship lending.
  - Share of financing at borrower level.
  - Cost of relationship lending to the banks
- Possible to explore this?
- Use distance across regions.

# Minor Comments

- Empirical model includes peripheral where the estimations start with the 'multi-market' dummy.
- Estimate for Portfolio lending by excluding loans sold to an affiliate.
  - Any changes?
- Role of different loan types?

# Summing up

- Very interesting and well written paper.
- Very important question with interesting results and policy implications.
- It would be nice to see some alternative specifications too.
- Looking forward to reading the next version.