Creditor Rights, Collateral Reuse, and Credit Supply

Brittany Almquist Lewis[1]

[1]Indiana University Bloomington - Kelley School of Business

Why is Collateral Bankruptcy Treatment Important?

- In the 'repo' (sale and repurchase of securities) market, large dealers can *re-hypothecate* or re-use collateral that has been pledged to them in a completely separate transaction
  - Bilateral market - where dealers typically lend
  - Tri-party market - where dealers typically borrow
- Dealers in the bilateral repo market fund independent mortgage companies (IMCs) or shadow banks via warehouse lines of credit

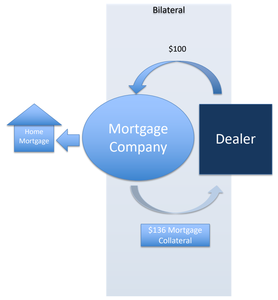


Fig. 1: (a) Repo markets before BAPCPA

- Bankruptcy Abuse Prevention and Consumer Protection Act 2005 (BAPCPA) – passed April 2005 – granted preferred bankruptcy status to private-label mortgage collateral (risky mortgage collateral)
- *Main Conjecture:* Allowed private-label collateral to be rehypothecated by dealers more easily
  - The haircuts that IMCs and dealers were each required to post on the same rehypothecated collateral would differ
  - Would create a money multiplier of the cash into the mortgage sector

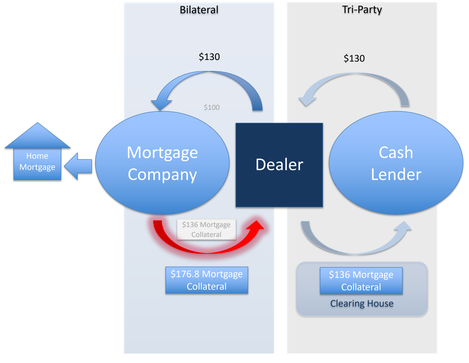


Fig. 2: (b) Repo markets after BAPCPA

Given the haircuts reported by a subset of IMCs in my data, and the 5% haircut posted by a dealers in the tri-party market (Copeland, Martin, Walker (2014)), I calculate the following upper bound on the money multiplier created by BAPCPA:

Why is Collateral Bankruptcy Treatment Important? (cont'd)

$$1+\sum_{i=1}^{3}1.3^i+1.3^3\sum_{i=1}^{3}1.2^i+1.3^3(1.2^3)\sum_{i=1}^{3}1.06^i+1.3^3(1.2^3)(1.06^3)\sum_{i=1}^{3}1.095^i$$
$$+1.3^3(1.2^3)(1.06^3)(1.095^3)\sum_{i=1}^{3}1.10^i=66.5.$$

Meaning a dealer could turn an initial \$100 invested in an IMC into \$6,650

This would increase financial instability in the repo market by increasing the number of interlinked intermediaries as well as the number of times the same collateral was used to borrow.

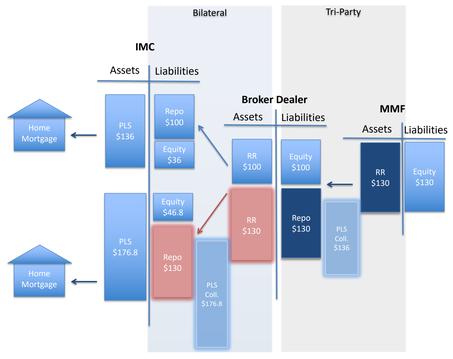


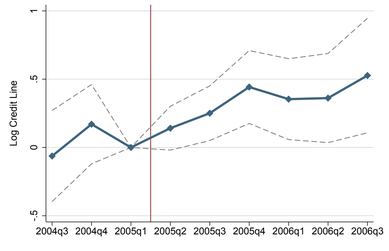
Fig. 3: Repo markets after BAPCPA

Dealer Lending to Mortgage Companies

To test if dealers increased lending to IMCs in response to BAPCPA, for IMC i, and dealer j, in quarter t, I estimate the within mortgage company, across dealer difference-in-differences (DID) specification where $\gamma_{i,t}$ & η_j are $IMC_i \times Quarter_t$ & $Dealer_j$ fixed effects (FE)

$$\log(CreditLine_{i,j,t}) = \gamma_{i,t} + \eta_j + \sum_T \beta_T \, Treated \; Dealer_j \times 1_{t=T} + \epsilon_{i,j,t}. \quad (1)$$

- Dealers who were more exposed to the policy change ↑ credit lines to IMCs by 28.9% relative to control dealers.



What was the Impact on the Housing Market?

I estimate a county level treatment intensity DID. In counties with higher market share of IMCs, a 10% ↑ in $IMCMktShare_{c,2004}$ leads statistically significantly to

- Mortgage originations ↑ 2.7%
- Fraction balloons mortgages ↑ 0.3 pp
- Initial interest rate ↓ 2.4%
- Default hazard rate ↑ 1.4 pp

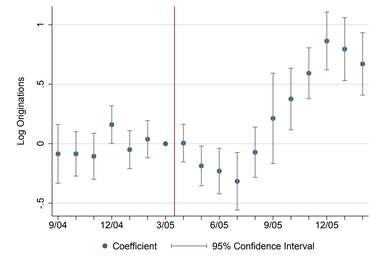


Fig. 5: IMC County Market Share Effect on Total Mortgage Originations

Counties more exposed to the policy change ↑ the fraction of prime mortgages and ↓ the fraction of subprime mortgages originated.

- Consistent with new originations being "Alt-A," with near prime credit scores but risky amortization structures, owner occupancy, and documentation

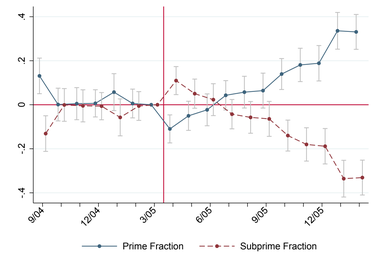


Fig. 6: IMC County Market Share Effect on Prime/Subprime Fraction

A 10% ↑ in $IMCMktShare_{c,2004}$ leads to a 2.1% ↑ in home prices between 2005-2006 & a 3.3% ↓ in 2008.

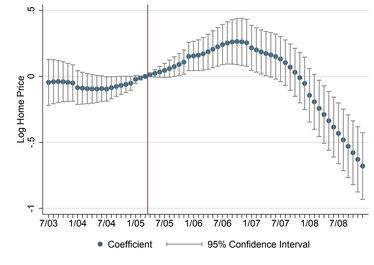


Fig. 7: IMC County Market Share Effect on Home Prices

Estimate the expansion in credit ↑ originations by 9% & accounted for 38% of defaults on mortgages originated during 2005-2006.