

Spillover Effect of Neighborhood Subprime Lending

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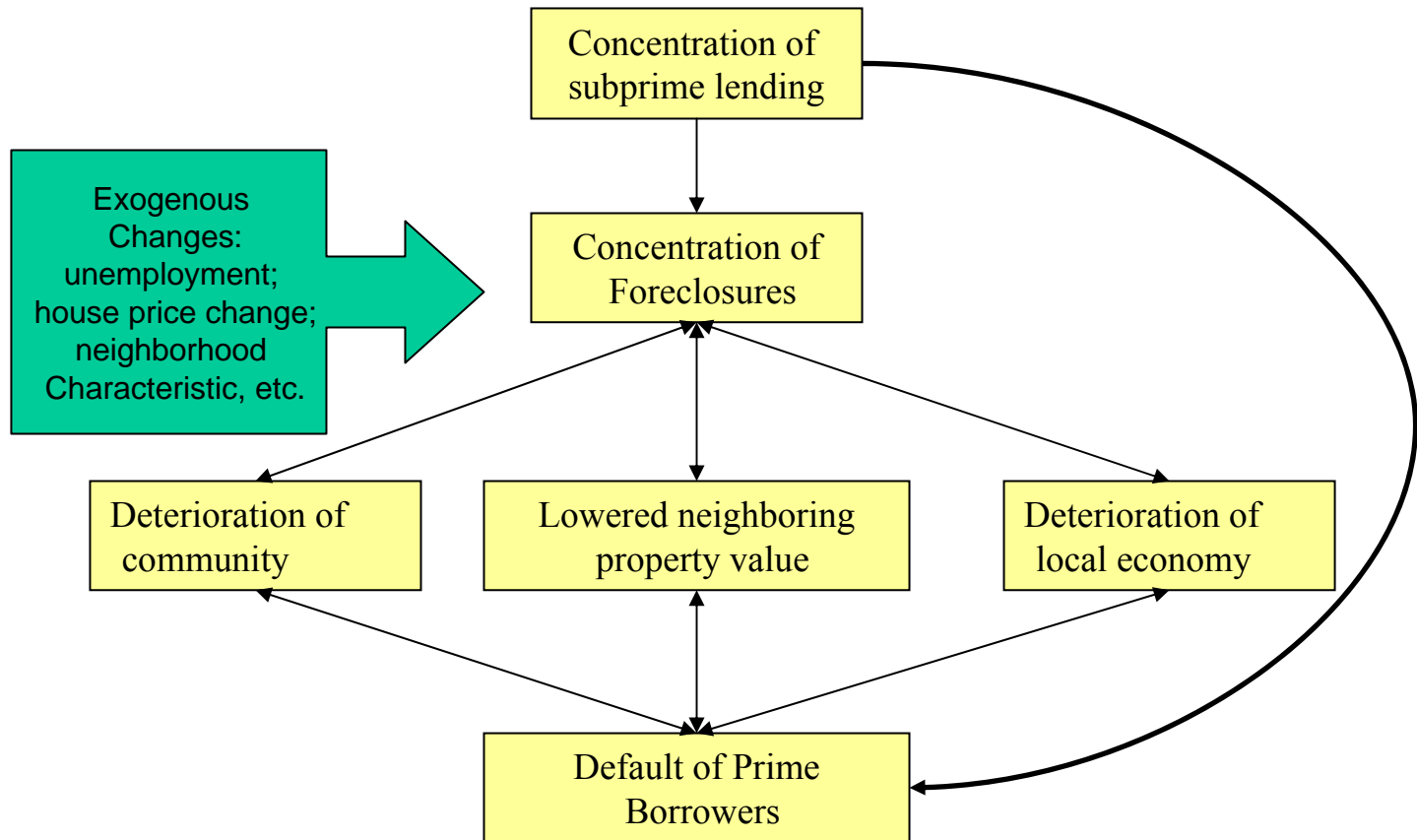
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Background





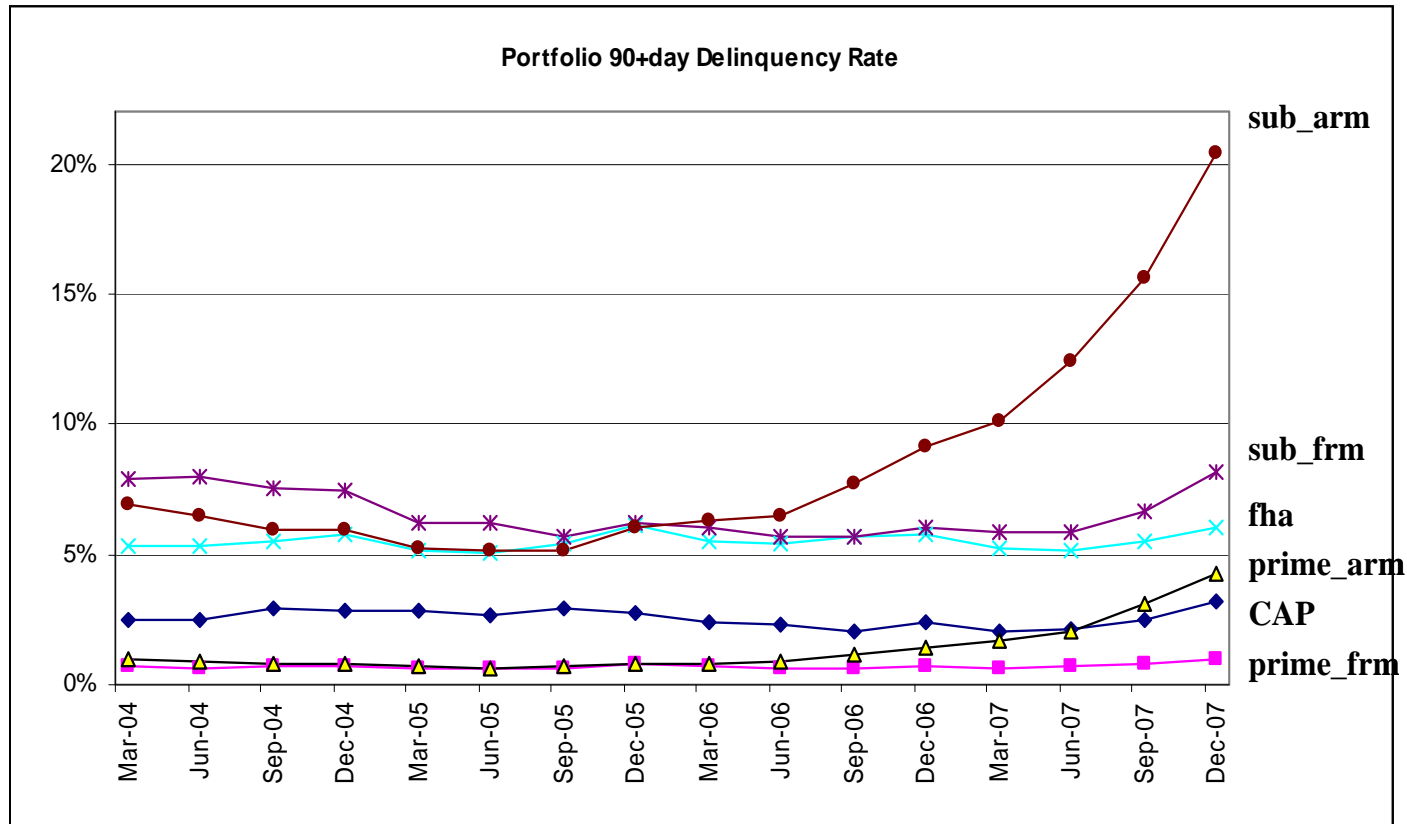
Data

- Community Advantage Program (CAP)
 - Partnership of Self-Help, Fannie Mae, Ford Foundation
 - Started from 1998, over 50,000 loans
 - Secondary market outlet for CRA-type loans
 - Prime mortgage products serving borrowers with
 - Low- to moderate- income
 - Weak credit history and/or low down-payments
 - A sample of 6,879 CAP loans originated during 2004-2006

- HMDA
 - Treat HUD defined “high-cost” mortgages as subprime
 - Share of subprime loans in census tract, county, MSA
 - Treat subprime purchase and refinance activities separately

Data

Portfolio Serious Delinquency (90+day) Rate

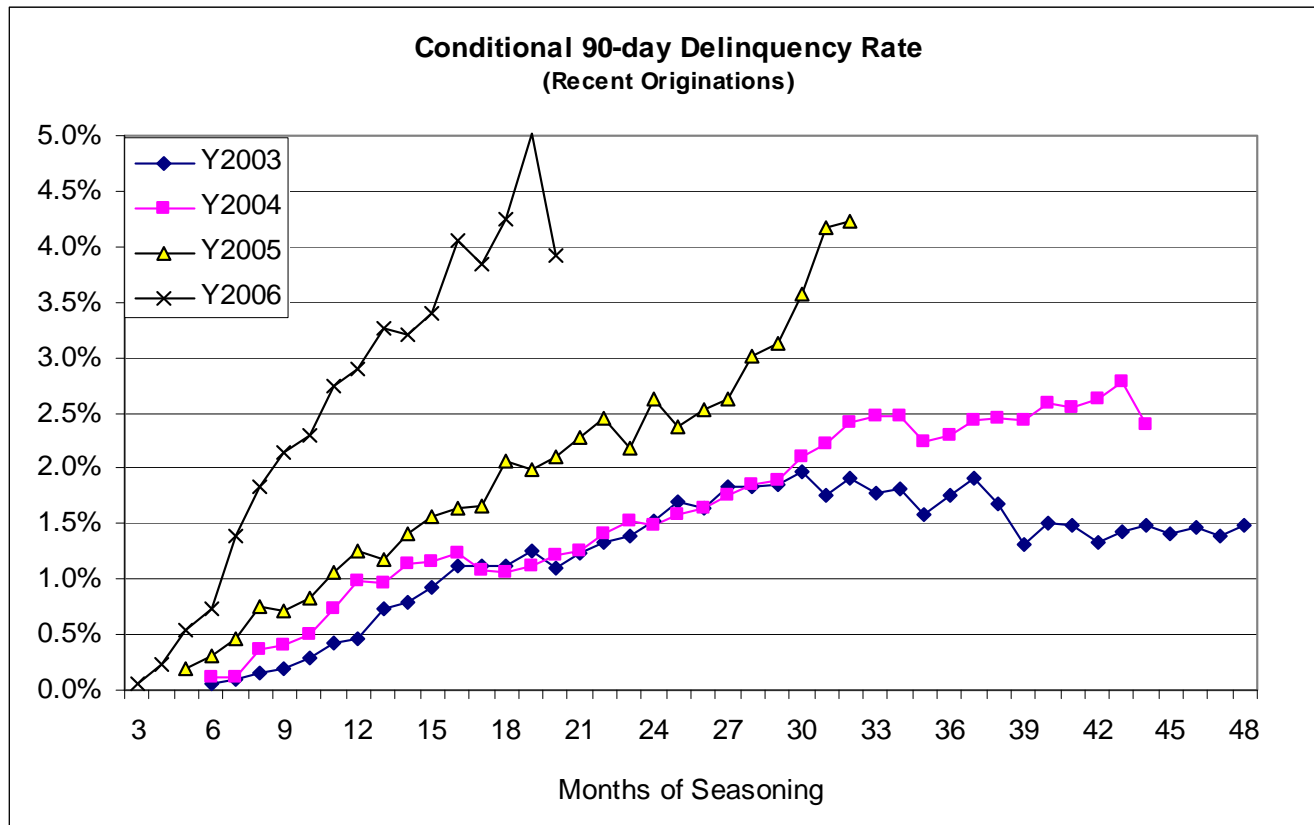


Source: Mortgage Bankers Association and Self-Help. 90+day delinquencies include loans in different foreclosure stages.



Data

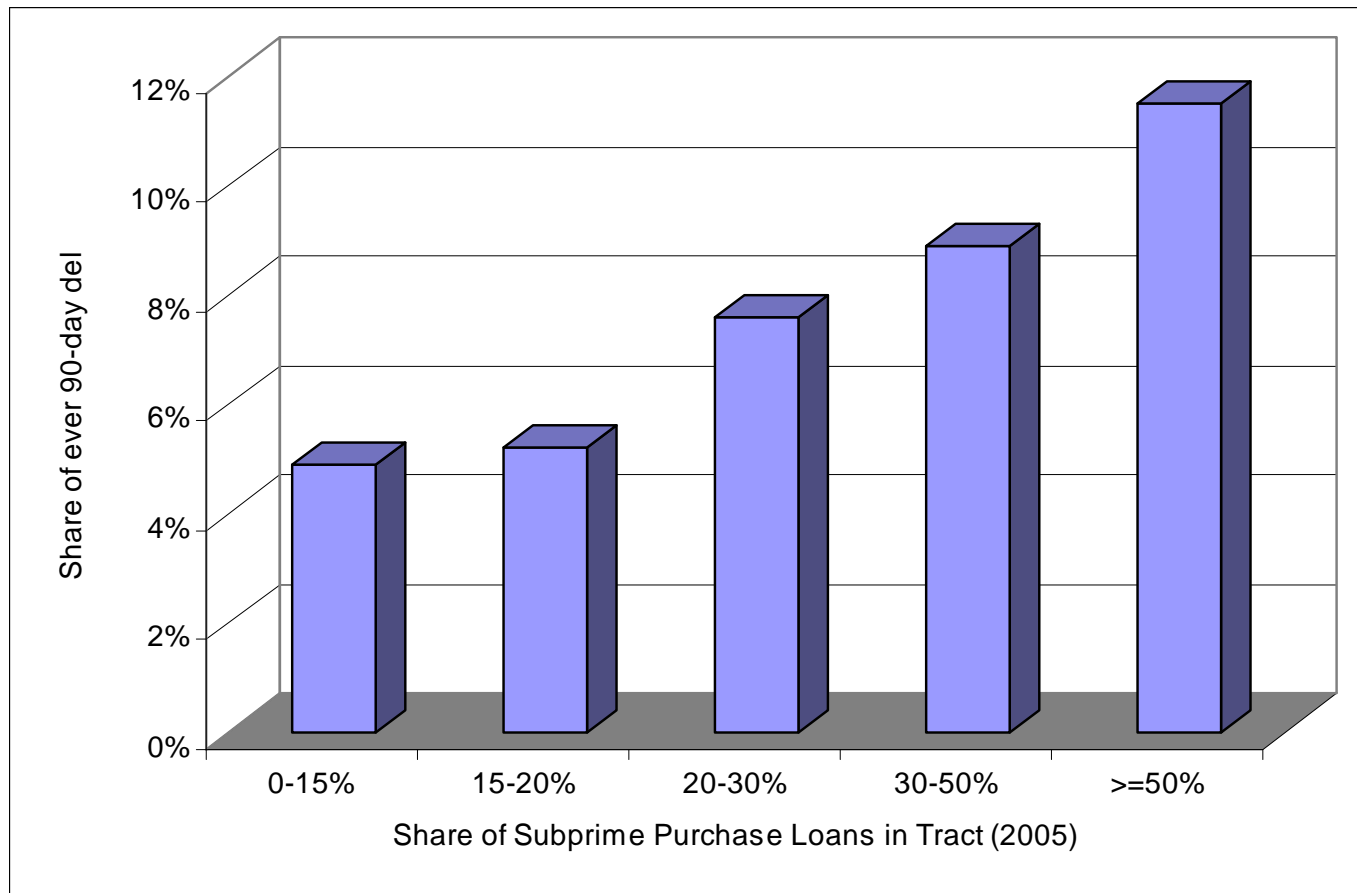
Trend of Serious Delinquency of CAP Recent Originations





Data

Level of Neighborhood Subprime Lending and 90-day Del rate of CAP Recent Originations

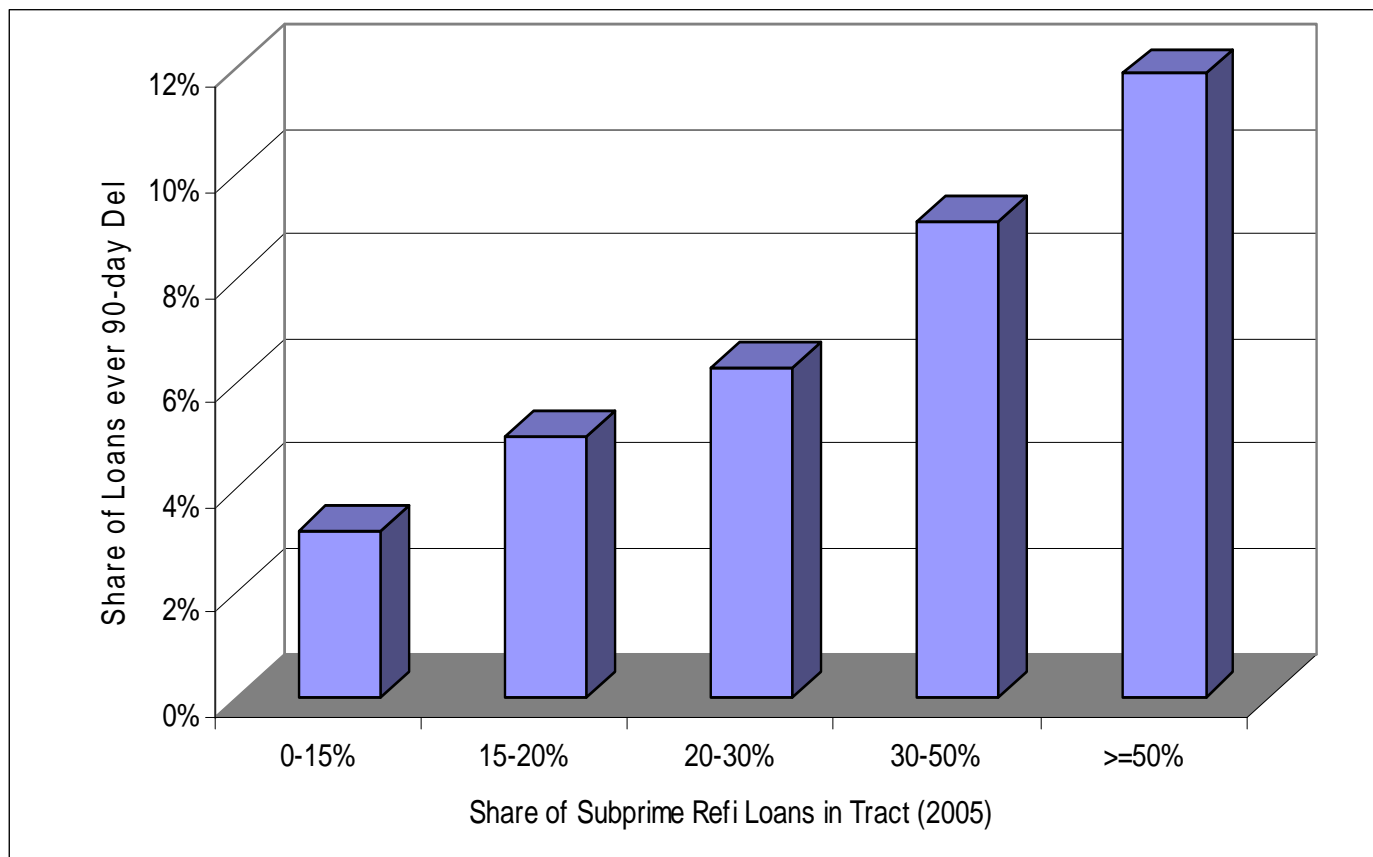


Note: based on a sample of 6,879 fixed-rate CAP loans originated during 2004-2006



Data

Level of Neighborhood Subprime Lending and 90-day Del Rate of CAP Recent Originations



Note: based on a sample of 6,879 fixed-rate CAP loans originated during 2004-2006



Methodology

- Research Question
 - Are prime borrowers in neighborhoods with higher level of subprime activities more likely to default/prepay?
- Model Specification
 - Multinomial logit regressions
 - Model prepayment and default as competing risks
 - Default measures: 90-day delinquency; foreclosure and returned loans because of non-performing
 - Controls include credit score, put/call option, loan age, loan size, borrower race, household income, tract relative income, tract share of black, unemployment rate, and time dummies.

Empirical Results

Impact of neighborhood subprime activities (purchase)

- Significant and positive on default probability of CAP loans
 - Default probability 35% higher when 2005 subprime purchase share 25% → 50%
- Significant and negative on prepayment probability of CAP loans
 - Prepayment probability 10% lower when 2005 subprime purchase share 25% → 50%



Empirical Results

Impact of neighborhood subprime activities (refi)

- Insignificant impact on default
- Significant and negative on prepayment probability of CAP loans
 - Prepayment probability 19% lower when 2005 subprime refi share 25% → 50%

Empirical Results

Impact of county level subprime activities (purchase)

- Significant and positive on default probability of CAP loans
- Insignificant on prepayment

Impact of MSA level subprime activities (purchase)

- Insignificant on both default and prepayment
- One possible explanation is because MSA level house price dynamic has been controlled

Caveats

- Analysis does not explicitly address causality issue
 - Subprime lending does not impact prime borrower's behavior directly
 - Subprime and prime foreclosures may be caused by the same exogenous changes
- Data from one particular program only
 - A segment of relatively more vulnerable prime borrowers

Conclusions and Discussion

- The results suggest a negative spillover effect on prime loan performance from the concentration of subprime lending.
- The level of subprime activities may serve as an excellent neighborhood risk indicator.
- Spatial concentration of risky loan products should be monitored more closely and be prevented before it is too late.