Mortgage Default, Foreclosure and Bankruptcy in the Context of the Financial Crisis

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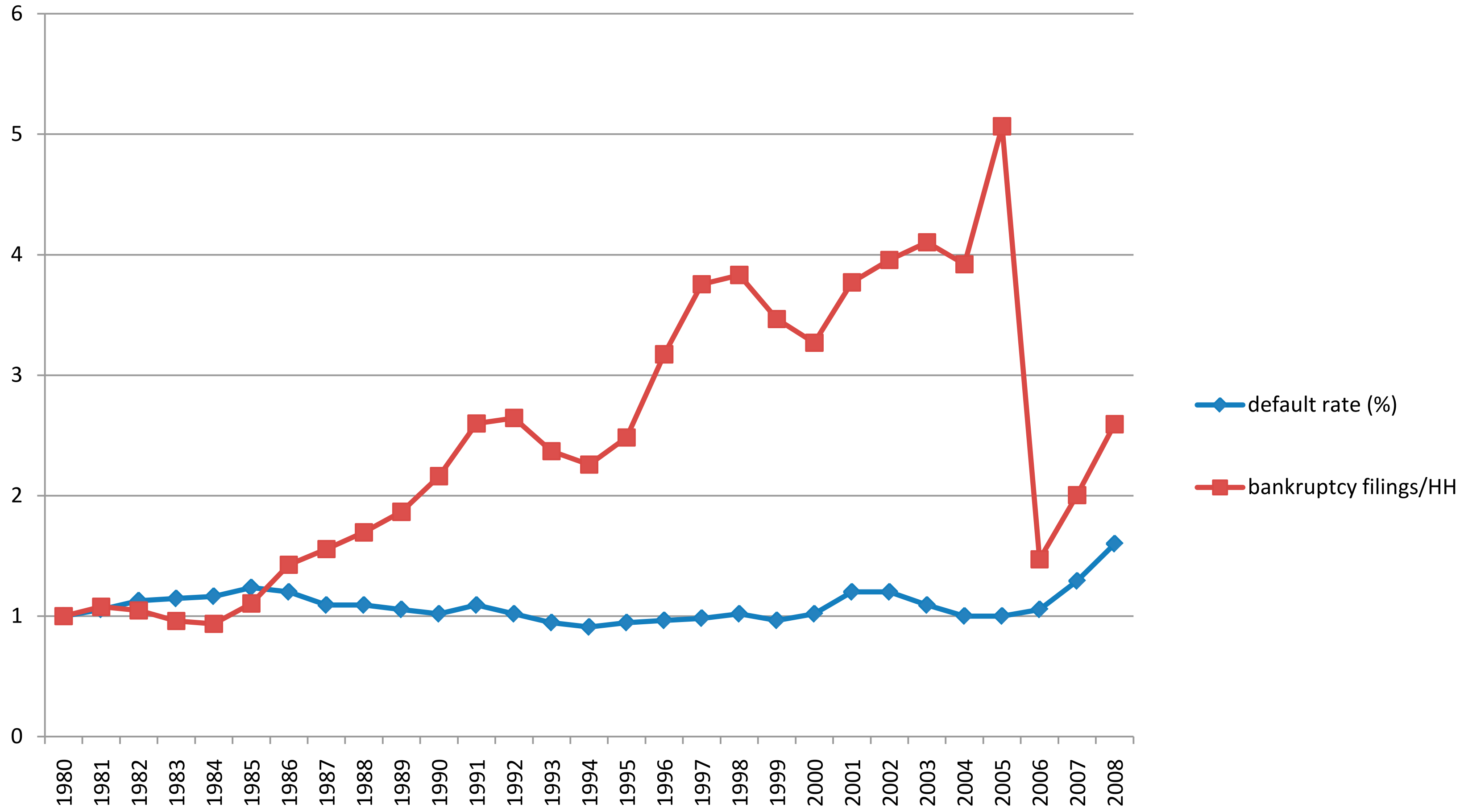
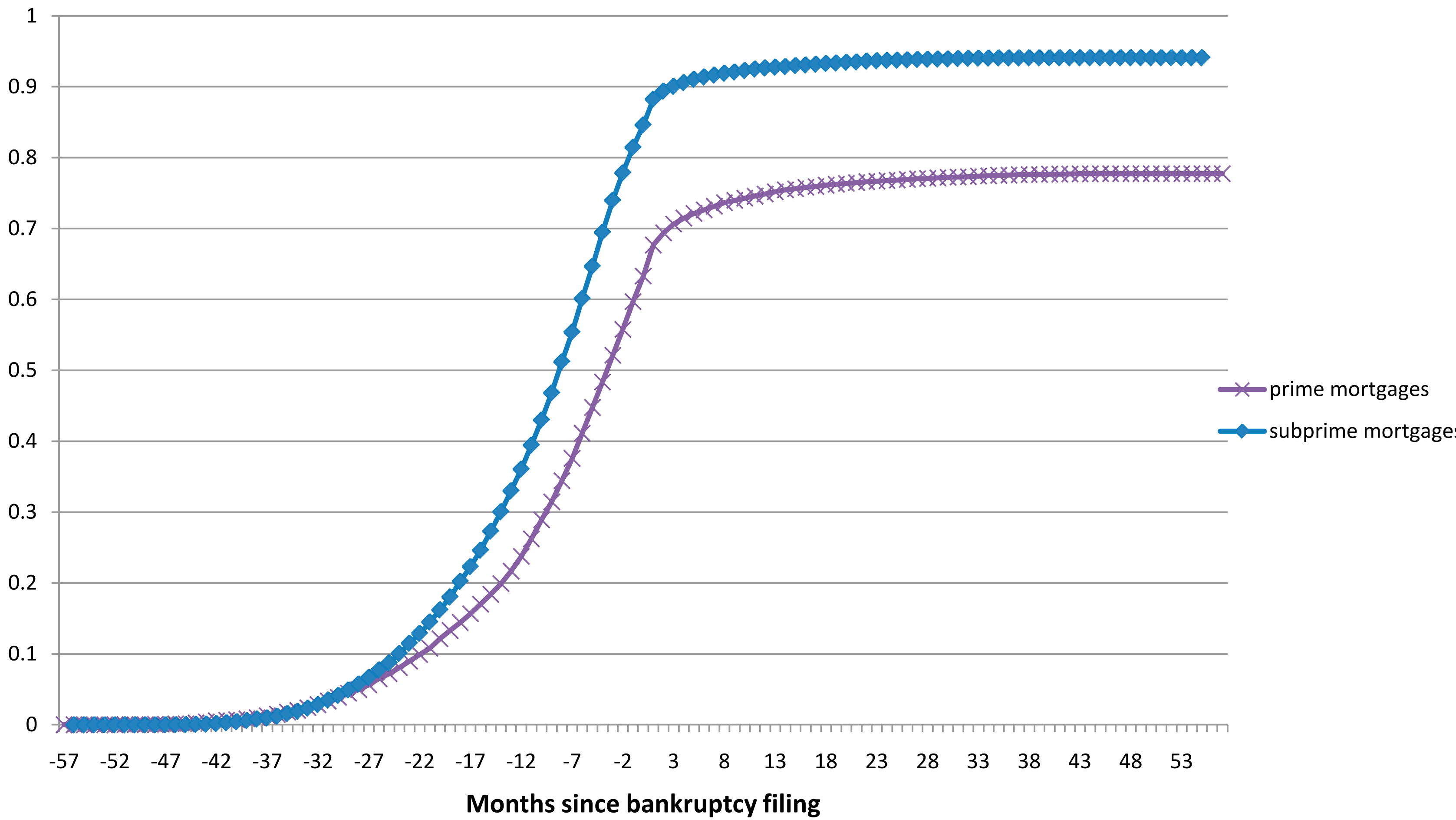
Basic Idea

- The financial crisis of 2008 was triggered by the rise in subprime mortgage defaults. We ask if bankruptcy also played a role.
- We show that:
  - Bankruptcy and mortgage defaults move together.
  - Bankruptcy and foreclosure also move together.
  - But bankruptcy reform in 2005 caused fewer bankruptcies, more defaults and foreclosures
- Lots of policy implications.

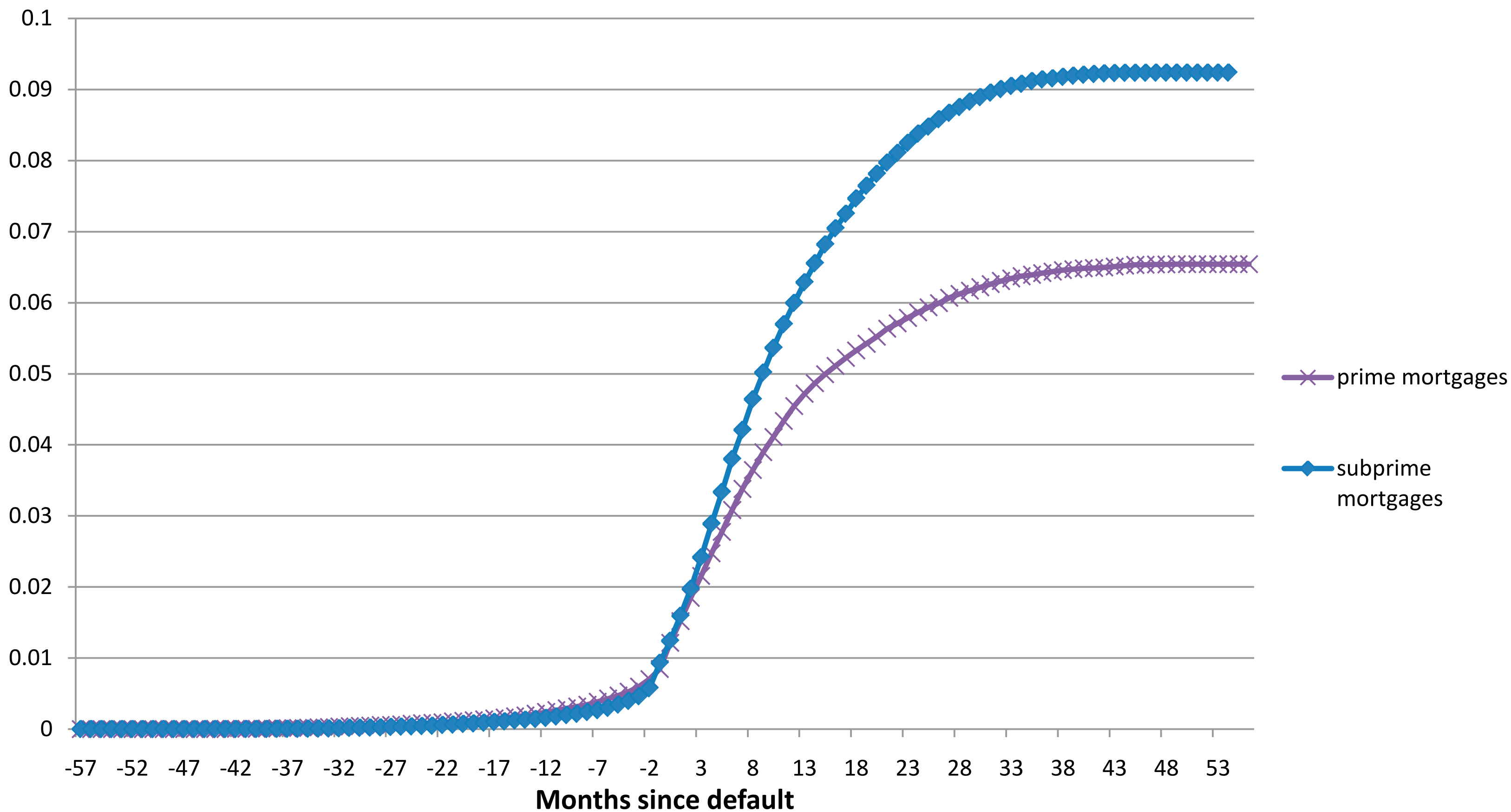
Mortgage default and bankruptcy rates, 1980-2008



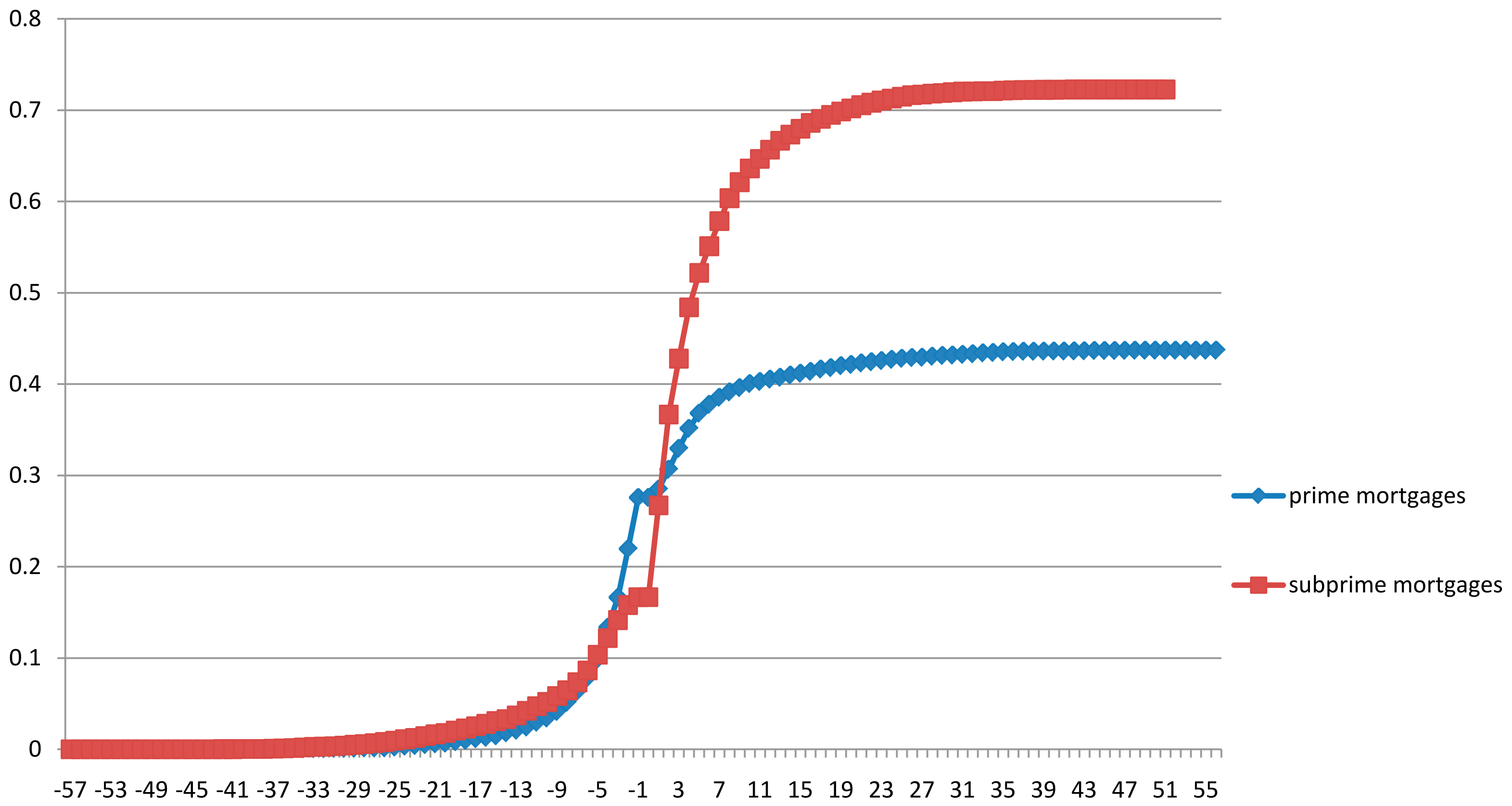
Cumulative Prob of Mortgage Default if Homeowners File for Bankruptcy



Cumulative Prob of Bankruptcy if Homeowners Default on Mortgages



Cumulative Prob of Bankruptcy Conditional on Foreclosure



Why are bankruptcy and default/foreclosure related?

- Homeowners gain from filing for bankruptcy if they default:
  - Unsecured debt is discharged.
  - Second mortgages and mortgage fees are sometimes discharged.
  - Bankruptcy delays foreclosure—allows homeowners more time to save their homes.
  - Bankruptcy delays foreclosure—gives homeowners cost-free housing if they don’t save their homes.

Analysis

- We use the LPS mortgage data.
- Prime and subprime mortgages originated Jan 2004 – Oct 2005.
- Mortgages are followed monthly from Jan 2004 to October 2008.
- Mortgage default occurs when homeowners are 2 months delinquent.

Analysis - 2

- We estimate a series of hazard models:
  - effect of past bankruptcy on default,
  - effect of past default on bankruptcy,
  - effect of past bankruptcy on foreclosure,
  - effect of foreclosure on bankruptcy.
- Regressions quantify the relationships and add controls, but don’t establish causation.
- Controls for FICO score, property characteristics, mortgage characteristics, local economic conditions, legal variables, state and year.

Mortgage Default Model

	Prime Mortgages	Subprime Mortgages
Bankruptcy 1-3 mo. before	3.94***	2.12**
Bankruptcy reform dummy	1.19***	1.24***
Home equity negative	1.13	1.69***

Bankruptcy Model

	Prime Mortgages	Subprime Mortgages
Default 1-3 months before	17***	14**
Default 4-6 months before	4.5***	1.9***
Bankruptcy reform dummy	0.5***	0.5***
Home equity is exempt (keep home in bankruptcy)	1.9***	1.4***

Foreclosure Model

	Prime Mortgages	Subprime Mortgages
Bankruptcy 1-3 mo before	7.1***	2.6***
Bankruptcy 4-6 mo before	7.4***	4.7***
Bankruptcy reform dummy	1.5***	1.2***
Lagged unemp rate (county)	1.10***	1.04***
Lagged foreclosure rate (zipcode)	64%*** rise if 1% increase	6-fold *** rise if 1% increase

Main Results:

- Bankruptcy and mortgage default and bankruptcy and foreclosure both move together.
- But the 2005 bankruptcy reform caused them to move them in opposite directions.
- Suggests that:
  - they are substitutes (more costly bankruptcy increases both default and foreclosure).
  - income effects cause both to rise or fall.
- Foreclosures cause more foreclosures.

Why does this matter?

- Foreclosures are very costly and part of the cost is externalized:
  - Displaced homeowners and renters must relocate, neighborhood ties lost, kids are more likely to drop out of school.
  - Some become homeless.
  - Vacancies cause neighborhood blight.
  - Cities cut public services because prop. taxes fall.
  - Foreclosures cause more foreclosures.
- External cost of bankruptcies is smaller.

Policy Implications-1:

- We compute that the 2005 bankruptcy reform caused foreclosures to increase by 250,000 per year.

Policy Implications-2:

- Optimal bankruptcy law should take account of the bankruptcy/foreclosure relationship:
  - Usual model: optimal punishment for bankruptcy depends on the tradeoff between debtors' gain from increased wealth insurance vs. debtors' loss from reduced access to credit.
  - Our results lower the optimal punishment, since lower punishment increases bankruptcies and reduces foreclosures.

Policy Implications-3:

- **Wage garnishment law**: protecting more wages from garnishment reduces bankruptcy filings and also reduces foreclosures. So more wages should be protected.
- New **credit card regulations** prevent creditors from raising interest rates on existing loans: this reduces bankruptcies and should also reduce foreclosures. So this change improves efficiency.