

Servicer Heterogeneity and Spatial Heterogeneity of Loss Mitigation Practices in the Soft Housing Market

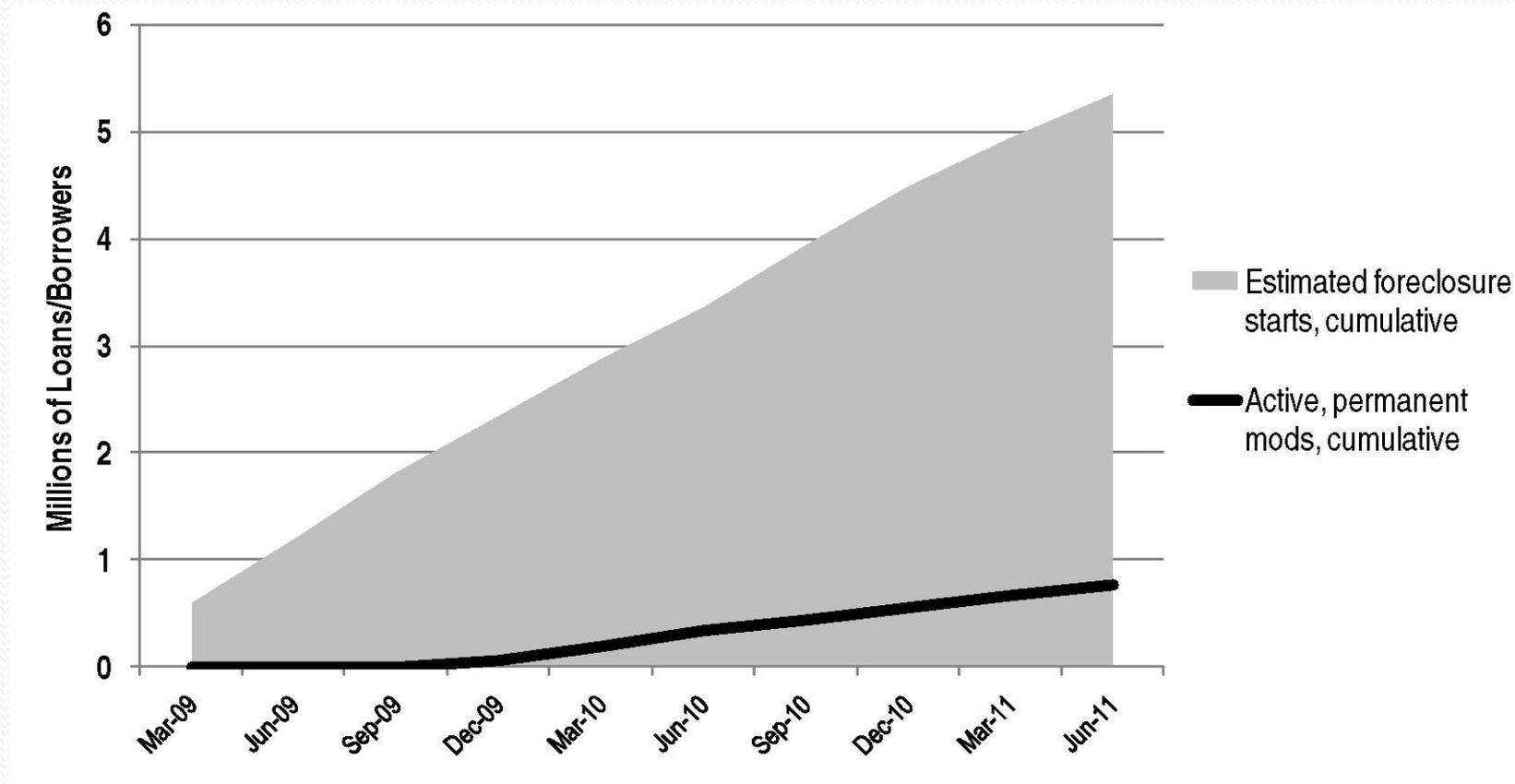
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The 2012 Policy Summit
Cleveland, OH

Motivation

- Governments at all levels have made foreclosure prevention an important policy goal.
- The Home Affordable Mortgage Program (HAMP) has been the first coordinated large-scale government efforts.
- Has HAMP been effective?

HAMP Active Permanent Modifications Compared to Foreclosure Starts



Source: Immergluck, 2011

Borrowers Assisted through Obama-Era Federal Foreclosure Prevention Programs

Program	Acronym	Date Started	Borrowers Assisted as of June 2011
Home Affordable Modification Program	HAMP	begins April 2009	772,559 receiving assistance*
Home Affordable Refinance Program	HARP	begins April 2009	810,084 completed refinances (as of May 2011)
Second Mortgage Program	2MP	begins in March 2010	33,715 loan extinguishments and modifications
Home Affordable Foreclosure Alternatives	HAFA	begins April 2010	10,280 completed short sales or deeds-in-lieu of foreclosure
Hardest Hit Fund	HHF	from February 2010 to September 2010	2,343 receiving assistance (as of March, 2011)
Home Affordable Unemployment Program	UP	begins July 2010	6,752 receiving assistance (May 2011)
Emergency Homeowners Loan Program	EHLP	begins June 2011 N/A	did not begin until summer 2011
Principal Reduction Alternative	PRA	begins October 2010	26,258 receiving assistance
Federal Housing Administration Short Refinance	FHA Short Refi	begins September 2010	257 loans originated
Home Affordable Modification Program Tier 2	HAMP Tier 2	begins June 2012	N.A

Sources: Immergluck (2011); U.S. Department of the Treasury (2009); SIGTARP (2011); U.S. Government Accountability Office (2011); Federal Housing Finance Agency (2011).

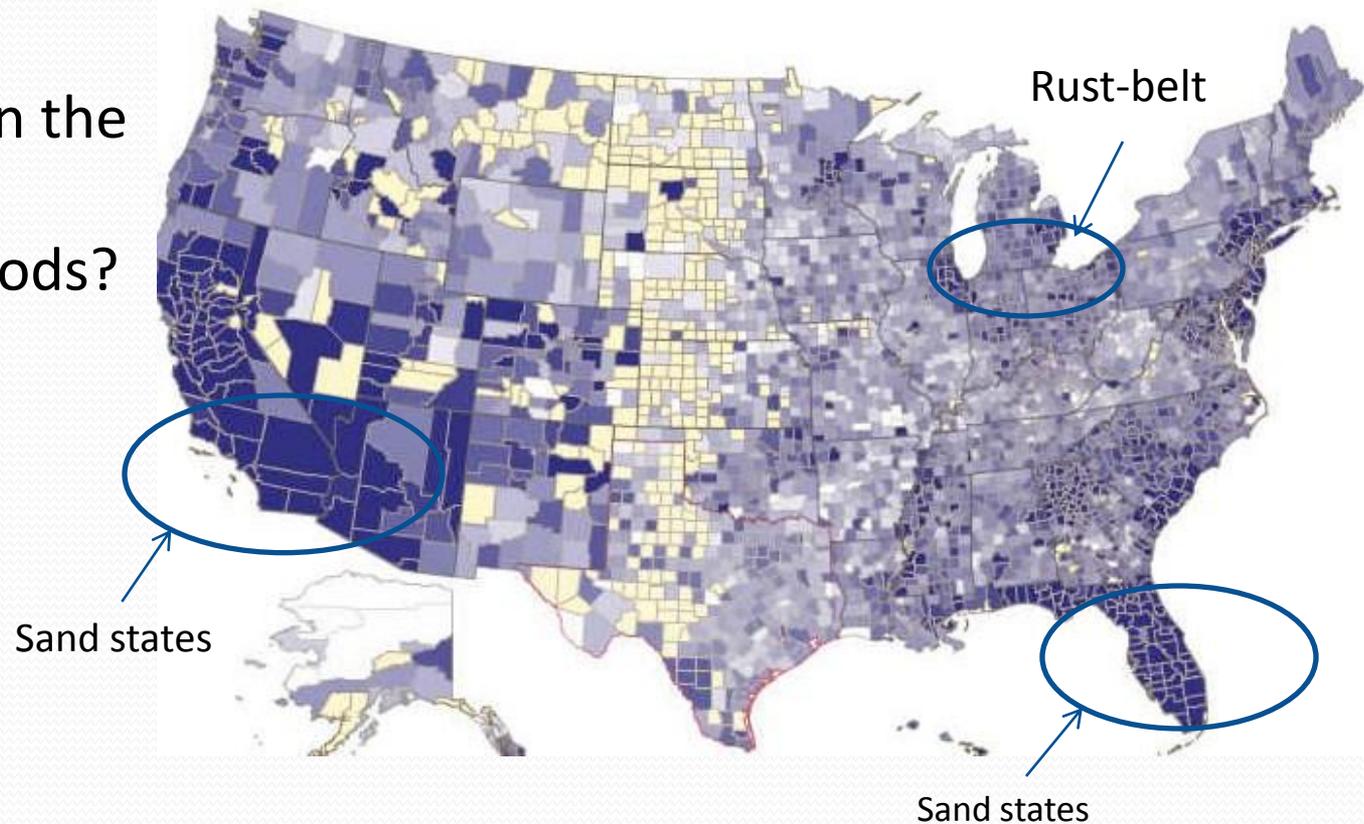
Motivation

- Studies show large variation in servicer loss mitigation practices before 2009
 - Agarwal et al (2010)
 - Stegman et al (2007)
 - Quercia and Ding (2009)
- Any change after HAMP?
 - SIGTARP, July 2011
 - four of the top 10 servicers needed “substantial improvement” and the remaining six needed “moderate improvement.”
 - many borrowers who should have received a loan modification were wrongly denied: four out 10 servicers had unacceptably high numbers of such cases
 - Interagency Review of Foreclosure Policies and Practices, April 2011
 - problems in foreclosure process governance, organizational structure and availability of staffing, documentation practices and quality control
 - borrowers who have faced foreclosure are eligible for foreclosure review

Motivation: Some Markets Were Hit Harder

All - Mortgage Delinquency Rate 90+ Days - Current (2010Q3)

What has been the experience of troubled borrowers in the hardest-hit neighborhoods?



Source: New York Fed

Motivation

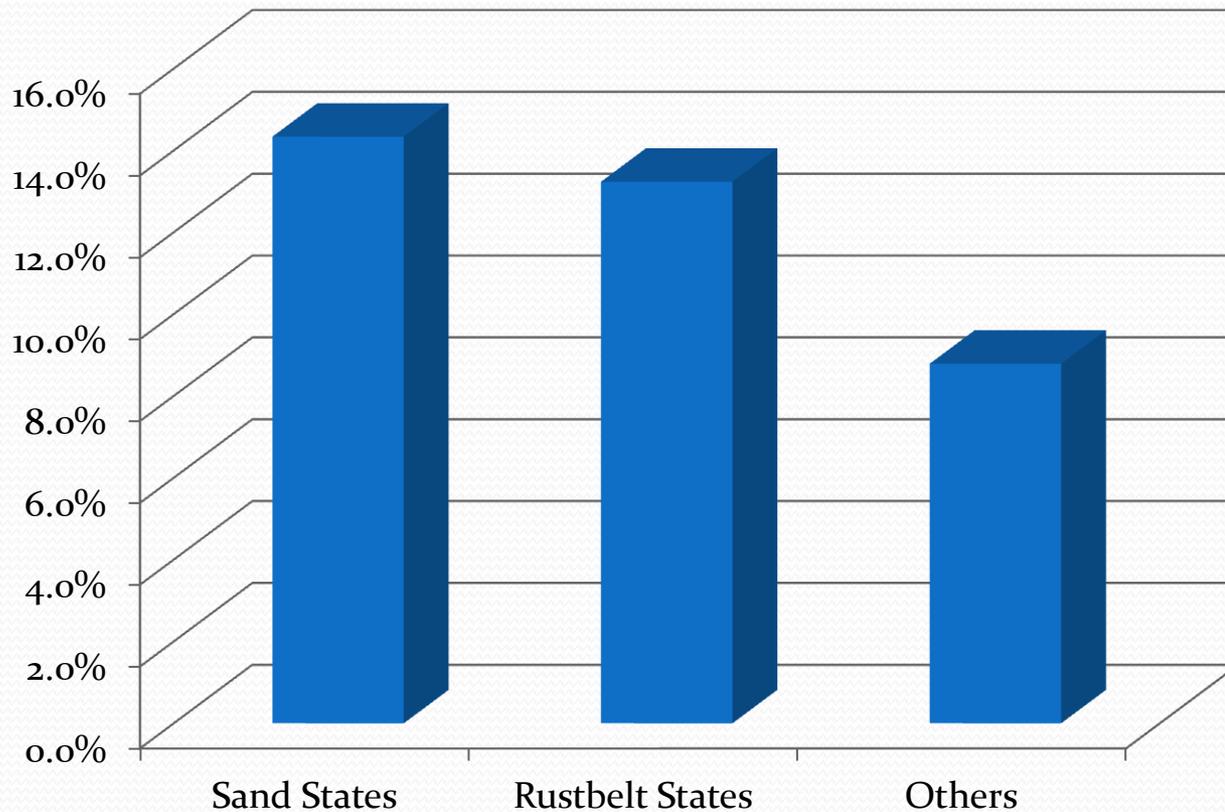
Specifically, we examine what has happened in the soft markets:

- **Servicer and loan modification**
 - which servicers are more likely to modify a troubled loan?
 - which servicers are more likely to conduct a concession mod?
- **Borrower and loan modification**
 - whether borrowers of color are less/more likely to be modified?
- **Neighborhood and loan modification**
 - whether borrowers in hardest-hit neighborhoods are less/more likely to be modified?

Three Data Sources

- Columbia Collateral File data: over 4 million nonprime securitizations
 - loan characteristics
 - loan modification information
 - loan performance
- Home Mortgage Disclosure Act data
 - borrower race, ethnicity, income
 - property geography
 - HMDA and CCF data were merged using variables that are common in both data sources (matching rate about 70%)
- Neighborhood risk data: from HUD
 - Based on the estimated serious delinquency/foreclosure rate
 - HUD identified the top 20% of neighborhoods with higher default risk (high-risk neighborhoods) as NSP targeted areas

Neighborhood Default Risk by Markets



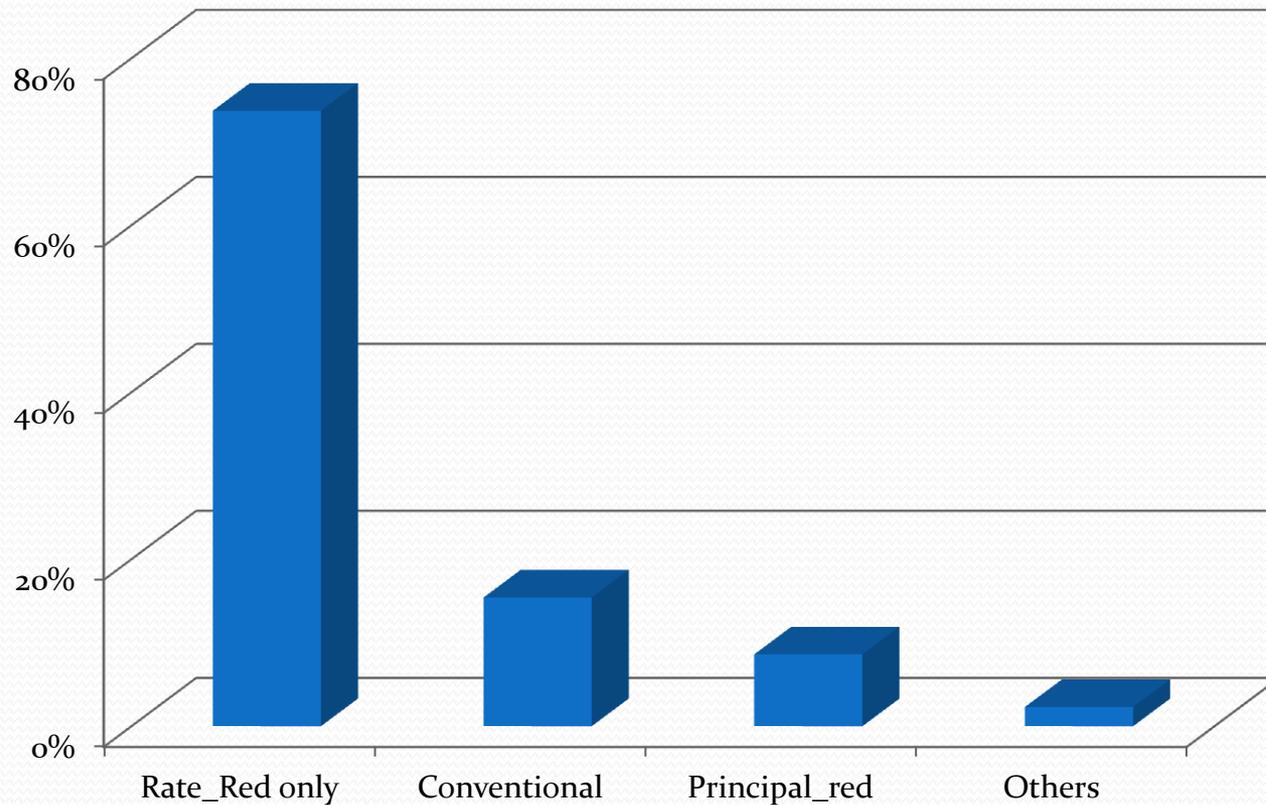
Note: Based on HUD NSP3 neighborhood foreclosure need score

Identification Strategy

- Focus on recent delinquencies: loans that were not in foreclosure in Q4 2009 and were delinquent or modified during 01/2010-05/2011.
- Logit model of the likelihood of receiving a loan modification, conditional on being 60+day delinquent
 - credit score, DTI, CLTV, documentation, loan characteristics
 - borrower race, ethnicity
 - servicer dummies, neighborhood dummies, and interaction variables

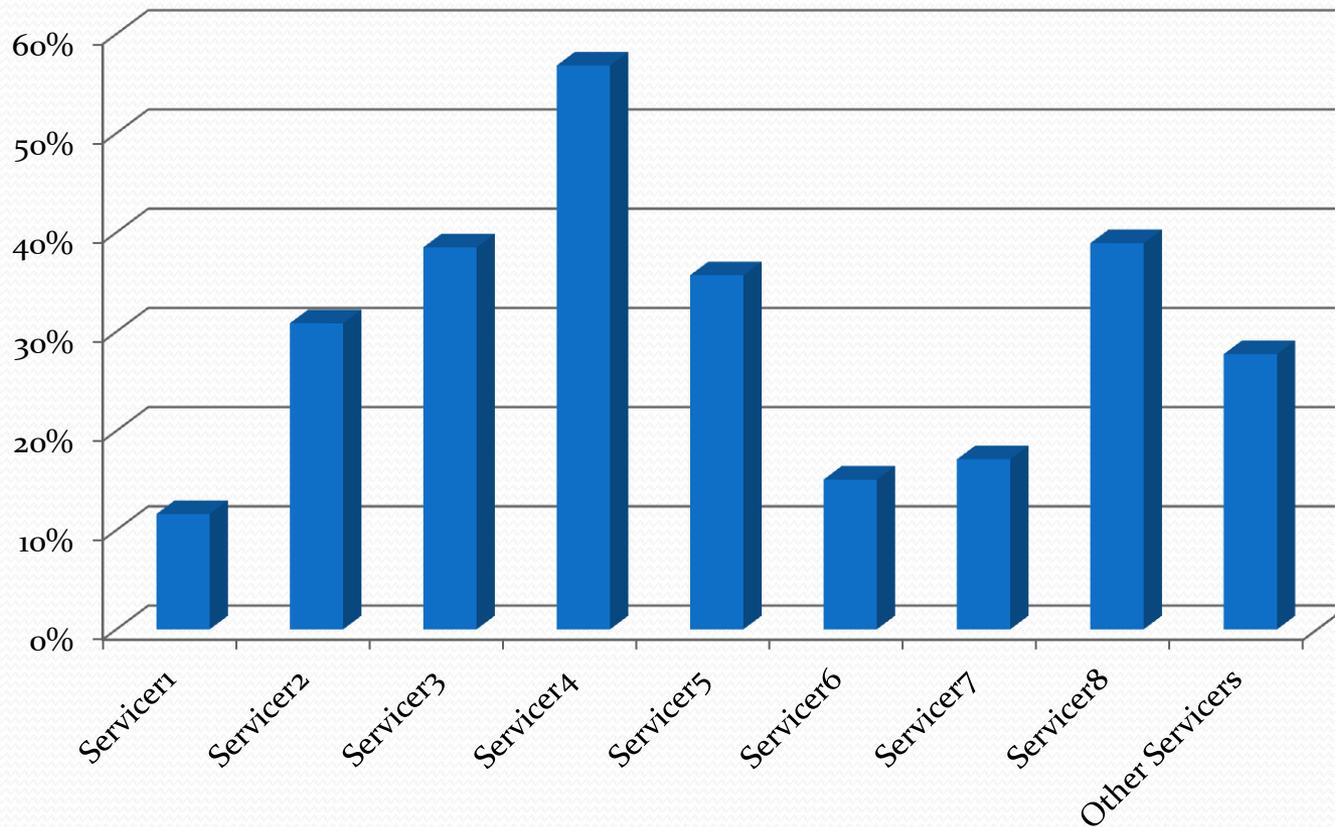
Loan Modification Data

Types of Mods



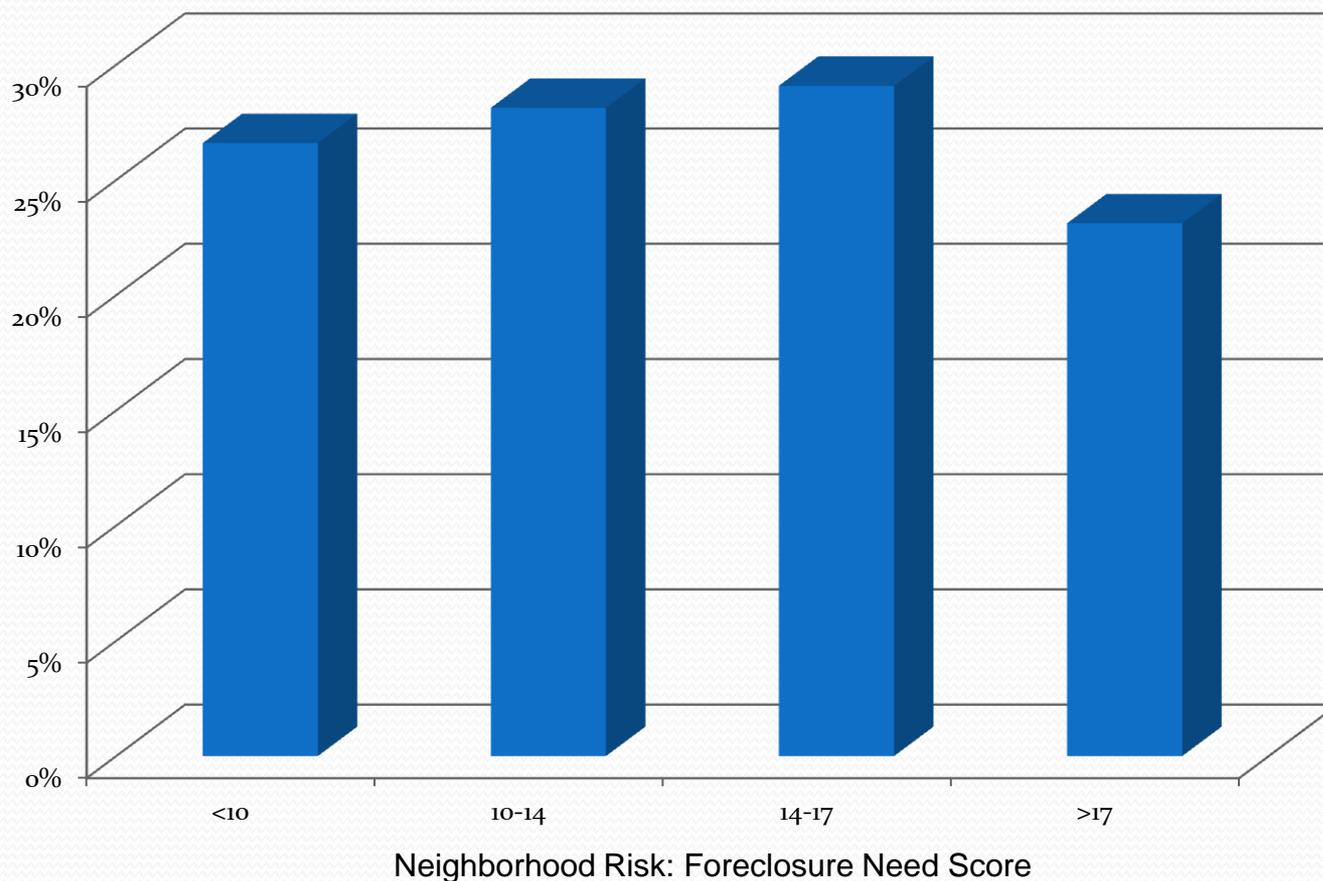
Note: N=35,939

Loan Modification Rates By Servicer



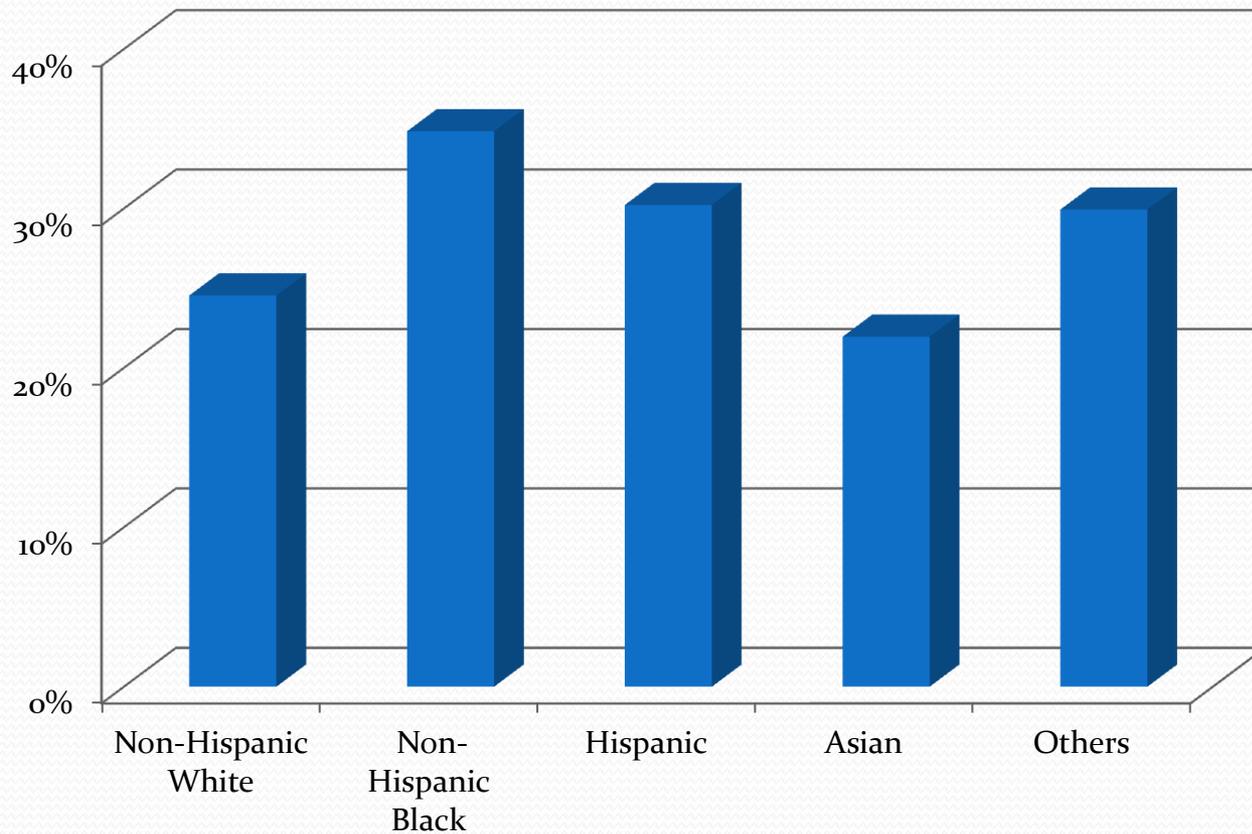
Note: N=129,010; servicer 1 to 8 are the eight major servicers

Loan Modification Rates By Neighborhood Risk



Note: N=129,010; NSP3 Foreclosure need score data is from HUD

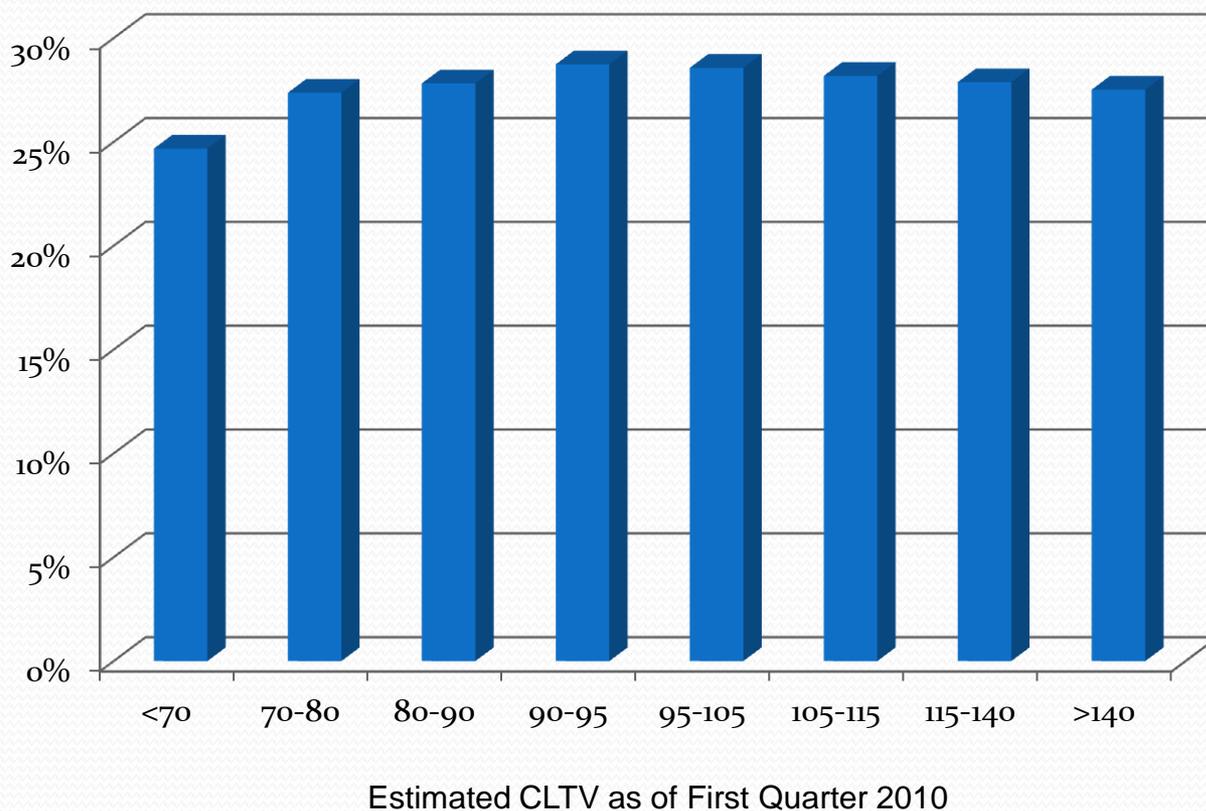
Loan Modification Rates By Borrower Race/Ethnicity



Note: N=129,010

Loan Modification

By Current Loan-to-Value Ratios



Note: N=129,010

Preliminary Regression Results (Incidence of Loan Mod and Servicer)

	All			Sand States			Rustbelt		
	coefficient	p-value	odds ratio	coefficient	p-value	odds ratio	coefficient	p-value	odds ratio
neighborhood risk (10-14)	0.064	0.001	1.038	0.058	0.010	1.015	0.071	0.032	1.111
neighborhood risk (14-17)	0.012	0.451	0.986	-0.005	0.808	0.953	0.060	0.055	1.099
neighborhood risk >17	-0.102	<.0001	0.879	-0.096	<.0001	0.870	-0.096	0.001	0.940
servicer1	-0.999	<.0001	0.402	-1.017	<.0001	0.395	-0.748	<.0001	0.501
servicer2	-0.046	0.029	1.042	-0.057	0.019	1.031	0.007	0.882	1.065
servicer3	0.376	<.0001	1.589	0.333	<.0001	1.522	0.562	<.0001	1.856
servicer4	1.593	<.0001	5.366	1.586	<.0001	5.328	1.663	<.0001	5.584
servicer5	-0.010	0.711	1.080	0.016	0.610	1.109	-0.060	0.260	0.997
servicer6	-0.756	<.0001	0.512	-0.729	<.0001	0.527	-0.830	<.0001	0.462
servicer7	-0.751	<.0001	0.515	-0.705	<.0001	0.539	-1.315	<.0001	0.284
servicer8	0.678	<.0001	2.149	0.662	<.0001	2.116	0.778	<.0001	2.305

Note: N= 129,010; N=103,726 for sand states and 25,021 in rustbelt states; outcome is the incidence of loan mod.

Preliminary Regression Results (Loan Mod, Servicer, and Neighborhood Risk)

	coefficient	p-value
high-risk neighborhood	-0.081	<.0001
servicer1	-1.001	<.0001
servicer2	-0.056	0.010
servicer3	0.393	<.0001
servicer4	1.599	<.0001
servicer5	-0.035	0.223
servicer6	-0.762	<.0001
servicer7	-0.735	<.0001
servicer8	0.684	<.0001
servicer1_high	0.056	0.004
servicer2_high	0.047	0.025
servicer3_high	-0.075	0.000
servicer4_high	-0.010	0.696
servicer5_high	0.070	0.013
servicer6_high	0.035	0.337
servicer7_high	-0.105	0.001
servicer8_high	-0.023	0.515
sand state_high	-0.020	0.041

Note: N= 129,010; outcome is the incidence of loan mod

Preliminary Regression Results (Modification and Borrower Race/Ethnicity) (update!!)

	coefficient	p-value	odds ratio
black	0.211	<.0001	1.235
hispanic	0.100	<.0001	1.105
servicer1	-0.986	<.0001	
servicer2	-0.044	0.038	
servicer3	0.360	<.0001	
servicer4	1.592	<.0001	
servicer5	-0.011	0.687	
servicer6	-0.748	<.0001	
servicer7	-0.750	<.0001	
servicer8	0.674	<.0001	
servicer1_black_hisp	0.078	<.0001	
servicer2_black_hisp	0.010	0.618	
servicer3_black_hisp	-0.100	<.0001	
servicer4_black_hisp	-0.016	0.514	
servicer5_black_hisp	-0.016	0.538	
servicer6_black_hisp	0.086	0.016	
servicer7_black_hisp	-0.006	0.854	
servicer8_black_hisp	-0.019	0.588	

Note: N= 129,010; outcome is the incidence of loan mod

Summary of Results

- Considerable variation in loan modification practices across servicers.
- Loans in the hardest-hit markets/neighborhoods are significantly less likely to receive a loan modification.
- Generally no significant evidence that minority borrowers are less likely to receive loan mods in the soft market (in fact they are more likely).
- *Caveat: the study sample only focus on the soft market; may not represent the market of portfolio/prime/FHA mortgages; more detailed borrower information at the time of modification is needed.*

Policy Implications

- A more standard or uniform solution to loss mitigation should be recommended or mandated to a certain degree.
- While private servicers can make decisions based on self-interest, the government needs to better align incentives to encourage servicers to help borrowers in hardest-hit neighborhoods.



Thank you!
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