Does Temporary Mortgage Assistance for Unemployed Homeowners Reduce Longer-Term Mortgage Default? Analysis of the Hardest Hit Fund Program

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Background
The U.S. Department of Treasury spent $37.4 billion in mortgage loss mitigation programs from 2009 through 2016. Much of these expenditures went toward traditional loan modification programs, such as HAMP:
- Lower interest rate, extend loan term, increase or decrease principal balance; often short term, require delinquency
- Modified 10% of loans for 60+ delinquent homeowners between 2005 and 2011; half delinquency within 6 months (Adelino et al., 2013).
- More effective: principal reductions (Goodman et al., 2011); monthly payment reductions (Wino et al. 2012; Hughson, Okah, and Tracy, 2016; Calen et al. 2018).

In 2010, the U.S. Department of Treasury announced the $9.6 billion Hardest Hit Fund (HHF) Program. The program was unique in several ways:
- Financial hardship required, but not delinquency
- Targeted toward unemployed homeowners
- Stabilize mortgage payment during job search
- Administered at the state level by state HAs:
- No rigorous evaluations; only SIGTARP reports

Research Design
We aim to estimate the causal effect of HHF on loan outcomes, relative to otherwise similar homeowners. Otherwise similar homeowners would likely experience a similar shock to HHF borrowers but not receive HHF:
- HHF and Mortgage Outcomes
- Identifying HHF and HHF household data
- CoreLogic Data
- Analysis Samples, HHF Recipients

Hhf and Mortgage Outcomes
Intervention that temporarily reduces (eliminates) mortgage payment during an income shock:
- Monthly cash flow is more predictive of mortgage default than home equity TV (Gerardi et al, 2018)
- Duration of unemployment insurance (UI) benefits is associated with a decrease in the likelihood of mortgage default (Tian et al., 2016)
- Each additional $1,000 of extended UI benefits decreases the likelihood of mortgage delinquency by 24 basis points among households experiencing a layoff (Hsu, Matta, and Mester, 2018)
- But what about after the payment assistance ends? Does temporary payment assistance (without modification) simply delay inevitable default?

Research question:
- Does the receipt of mortgage assistance through HHF reduce the likelihood of re-default and foreclosure over the long term?

HHF Assistance Types

Hhf and Mortgage Outcomes

Competing Risk MNL

<table>
<thead>
<tr>
<th>Variable</th>
<th>coefficient</th>
<th>standard error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHF</td>
<td>0.21</td>
<td>0.04</td>
<td>0.001</td>
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<tr>
<td>HHF 2</td>
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<td>0.03</td>
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<tr>
<td>HHF 4</td>
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<td>0.03</td>
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Public Property Records
- Tax – property-level appraisal and other property characteristics
- Transactions – all publicly recorded transactions that have ever been associated with a given property-homeworker combination

Analysis Samples, HHF Recipients

Baseline Characteristics, In-Metro Sample

<table>
<thead>
<tr>
<th>HHF Recipient</th>
<th>HHF Comp</th>
<th>Comparison</th>
<th>Estimbale</th>
<th>Standard error</th>
<th>p-value</th>
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Results

Exploring the Counterfactual: Loan Modification vs. Self-Cure

Pre-modification (HHF: 14%, Comparison: 16%):
- Any substantial change in monthly payment amount (± 3%), active loan balance (± 2%), or interest rate (± 10 basis points), and
- Cures from 60+ days delinquent to current after the first delinquency (-17 to -2 months)

Self-Cure (HHF: 12%, Comparison: 11%):
- Cures from 60+ days delinquent to current after the first delinquency (-17 to -2 months) without a modification.

MNL Predicting Def. (90+/FC/REO) & Prepaid Status, Avg Marg. Effects, In Metro

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Bottom Line
HMF is associated with reduction in re-default risk by more than 60% at 24 months post-baseline and 50% at 36 months post-baseline.
- Hsu, Matta, and Mester (2018) found mortgage modifications reduce re-default by 10% to 12 months, while loan balance and rate modifications reduce re-default by 40% to 12 months.

Improving homeowner cash flow by temporarily eliminating the mortgage payment can improve long-term mortgage performance:
- For underwater homeowners, it can be more cost efficient to temporarily pay mortgage payment while economic shock than paying down principal balance.

Notes:
- These estimates are calculated using samples from HHF quarterly reports through Q4 2017.
- All samples are restricted to a non-HHF population. The reference groups are HHF borrowers without modifications.
- All analyses are robust to specification and include additional controls.
- For more details, see Hsu et al. (2021).

References: