

## Tackling Financial Problems Can Require Non-Financial Solutions

### Summary

*Financial regulation is most effective when it targets the origins of the problem it seeks to remedy. This is akin to the medical adage: treat the cause, not the symptom. Identifying the causal factors driving distress in financial markets is no easy task. One complication is that the cause might lie in non-financial markets. New research on the financial crisis highlights this point. Attempts to stem foreclosures and steady housing markets focused on interventions in credit markets like principal forgiveness or reductions in monthly payments. But the ultimate driver of foreclosure is, predominately, job loss. Given this, a more direct solution is a labor market policy: increase unemployment benefits to struggling homeowners in order to support their consumption and prevent default. Financial policymakers must be alert to the possibility that the best way to tackle a financial problem is through a (traditionally) non-financial policy option.*

When faced with a problem in a financial market, policymakers should not constrain themselves to interventions in the troubled market alone. After all, financial difficulties can result from shocks that are not strictly financial in nature. In such cases, it may be both more effective and less disruptive to tackle the problem at its root. This approach requires cooperation with regulators in the field where the problem starts, from consumer markets to labor markets. Moreover, to help the open-minded policymaker identify where best to intervene and what tools to use, more research is needed on the causal origins of financial trouble and how non-financial policies impact financial outcomes.

New research on the housing market exemplifies the importance of this holistic approach. The financial crisis of 2007-08 was characterized by a collapse in house prices, waves of foreclosures and depressed consumer spending. Until recently, academic research and the policy debate have focused on the best way to intervene in *credit* markets in order to address these problems. Two prominent proposals considered during and after the crisis were mortgage principal reductions for borrowers struggling due to “debt overhang” and monthly payment reductions for those at risk of defaults due to income disruptions like job loss.

In a new [working paper](#), Peter Ganong and Pascal Noel (2017) provide evidence that monthly payment reductions are the more effective policy. They study the impact of loan modifications made under the U.S. government’s Home Affordable Modification Program (HAMP), introduced during the financial crisis.

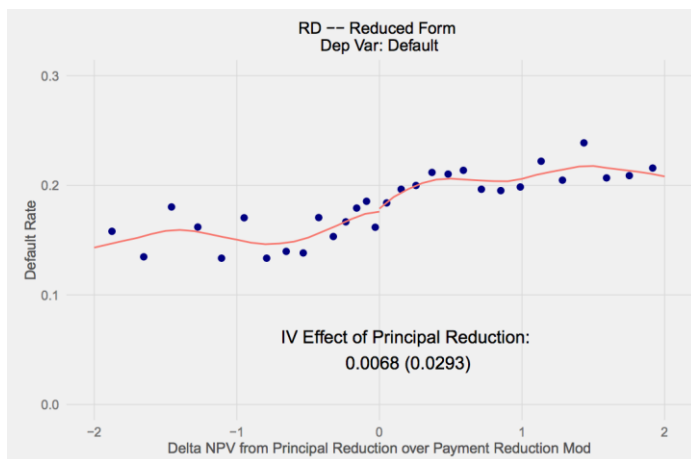
*This policy brief was prepared by Adam Sheridan, a doctoral student at the University of Copenhagen. He can be reached at [adam.sheridan@econ.ku.dk](mailto:adam.sheridan@econ.ku.dk).*

MIT Golub Center for Finance and Policy  
One Broadway  
Suite 1375  
Cambridge, MA 02142  
(617) 324-7367  
[gcfp@mit.edu](mailto:gcfp@mit.edu)  
[gcfp.mit.edu](http://gcfp.mit.edu)  
@MITCFP

HAMP involved two types of modifications designed to help homeowners on the brink of foreclosure. The first reduced monthly payments to 31% of income. The second did the same *and* reduced principal balances (\$70,000 on average). Comparing the default and consumption behavior of borrowers who, for plausibly random reasons, received the second type of modification relative to those who received the first allows the authors to isolate the impact of principal reductions, since both groups experienced the same change in monthly payments.

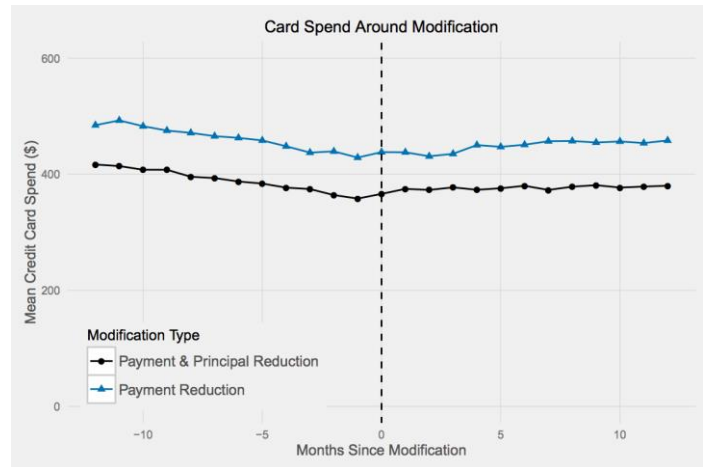
Three results stand out from their empirical analysis that exploits detailed account-level data. First, receiving a principal reduction has very little, if any, effect on foreclosures. This is shown in Figure 1. Assignment to each modification plan is based on which has the highest net present value (NPV). Borrowers to the right of 0 on the horizontal axis received a principal reduction and those to the left did not. Reading from the vertical-axis reveals that there is no discontinuous change in default rates at the point where borrowers cross over the cut-off point and start receiving principal reductions as-if random.

Figure 1. Source: Top panel of Fig. 4 from Ganong & Noel (2017)



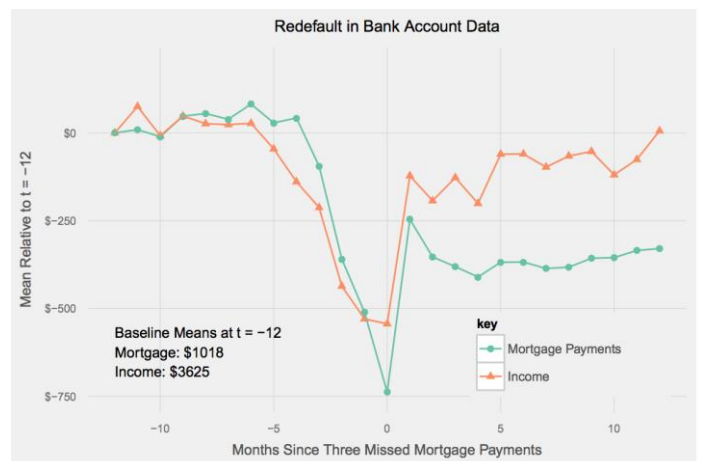
Second, the principal reduction had a similarly insignificant effect on spending. Figure 2 demonstrates this by plotting monthly average credit card expenditures around the date of the HAMP intervention for those who, for plausibly random reasons, received both payment and principal reductions and those who only experienced a change in monthly payments. Their trends in expenditures are identical.

Figure 2. Source: Top panel of Fig. 6 from Ganong & Noel (2017)



Third, rather than a strategic choice by borrowers who owe more on their homes than they could sell them for, default seems to be driven by job loss. This result can be seen in Figure 3. In the months leading up to the date where the mortgage becomes delinquent (time 0), missed mortgage payments (green line) are completely explained by a fall in income (orange line).

Figure 3. Source: Fig. 5 from Ganong & Noel (2017)



So why were principal reductions so ineffective at preventing foreclosures and boosting household consumption? Supported by a theoretical model, Ganong and Noel (2017) argue that it is because households really dislike default and foreclosure: homeowners will continue to pay their mortgage, as long as their liquidity situation allows, even when underwater. These high costs of default include the cost of relocating and, perhaps more importantly, the moral and social stigma attached to not making good on debts. In the presence of such costs households do not default for strategic reasons;

they default because of major shocks to liquidity like job loss. Thus, a conclusion of this paper is that policies focused on intervening in credit markets to help underwater borrowers are best directed at reducing monthly payments rather than overall debt obligations.

Ganong and Noel's (2017) findings also point to an alternative, non-financial policy option for stemming foreclosures. If income loss is the trigger driving underwater borrowers to default, then more generous benefits in the event of unemployment does more than just support consumption; it can prevent foreclosure and the associated effects on house prices. [Joanne Hsu, David Matsa and Brian Melzer \(2016\)](#) are the first to identify this link empirically.

Exploiting extensions to unemployment insurance (UI) during the financial crisis, the authors provide a variety of estimations of the link between unemployment benefits, delinquency and foreclosure, and their key findings are summarized in Figures 4 and 5. Figure 4 plots the state-level change in mortgage delinquency rates against the change in maximum regular unemployment benefits for households who experience a layoff for the period 1991 to 2010. States with larger increases in UI experienced a bigger decrease in delinquencies. This relationship is only evident for the household experiencing a layoff, suggesting it is a causal effect.

**Figure 4. Source: Panel A, Fig. 3 from Hsu, Matsa & Melzer (2016)**

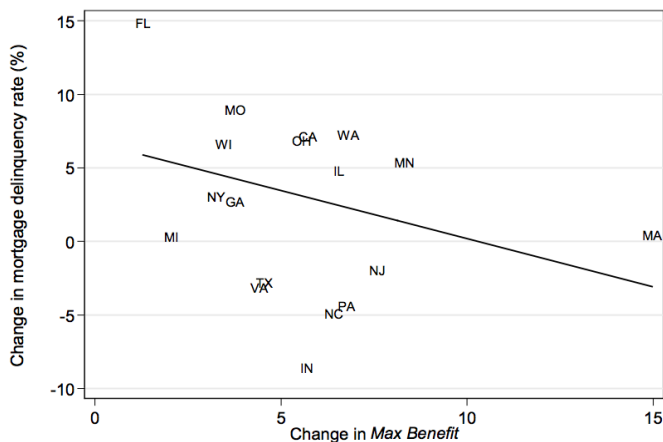
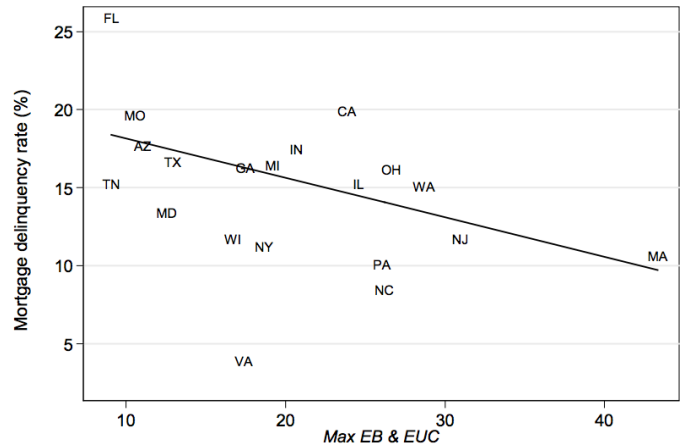


Figure 5 shows the relationship between the state-level value of extended benefits under Extended Benefits (EB) and Emergency Unemployment Compensation (EUC) - two federal plans to combat rising unemployment during the crisis - and the mortgage delinquency rate for

households experiencing a layoff in 2008. Again, delinquency rates are lower where benefits were made more generous and no such relationship exists for households that did not experience layoffs, suggesting this effect is also causal. In regression results, these effects are found to hold even for borrowers who are heavily underwater, a group for whom mortgage modifications might be particularly ineffective (Ganong and Noel, 2017).

**Figure 5. Source: Panel A, Fig. 4 from Hsu, Matsa & Melzer (2016)**



Hsu, Matsa and Melzer (2016) proceed to estimate the broader impact of extensions to UI on the housing market. First, they demonstrate that UI extensions considerably reduced not just delinquency but foreclosure rates as well. Second, using the estimated reduction in the probability of foreclosure, they project that the extensions to UI in the years around the financial crisis resulted in 1.3 million fewer foreclosures, averting associated costs such as property depreciation, negative effects on neighboring property prices, and losses for the household and lender. Finally, the authors find that the extensions to UI moderated the decline in home prices that was associated with rising unemployment in those years.

In sum, the findings in Ganong and Noel (2017) and Hsu, Matsa and Melzer (2016) provide support for the idea that policies attempting to assist homeowners at risk of default should focus on easing the difficulties of servicing debt in the short-term, rather than reducing debt obligations in the long-term. An open question is whether it is better to provide this support via reductions in

monthly payments, an intervention in credit markets, or through direct income support, traditionally a labor market policy.

Both approaches have their relative merits. Hsu, Matsa and Melzer (2016) discuss a few. Blanket extensions of unemployment insurance are likely to distort job search incentives. Thus, it might be better to target additional income assistance to distressed homeowners alone, instead of all displaced workers (a group including renters). Reducing monthly payments avoids this issue but could result in its own moral hazard: reducing payments for borrowers conditional on their delinquency status impacts borrowers' incentives to fall delinquent in the first place. Unemployment is an event that is more likely to be outside of the control of homeowners. Hence, it might serve as a more robust anchor to which to link policy interventions. Finally, experience suggests it is difficult to achieve cooperation with lenders and loan servicers in order to modify mortgage contracts; a requirement of loan modifications but a non-issue for income support.

Quantifying these trade-offs is an important avenue for future research. Providing answers will require better data linking job loss, credit behavior and job search. Moreover, robust conclusions necessitate studying a broader range of "natural" experiments varying benefit levels or loan terms. Ultimately though, these papers demonstrate the importance of identifying the causes of financial distress and, instead of focusing on the financial symptoms, the benefits from treating such distress with the appropriate policy in the relevant market.

## References

- Ganong, P., & Noel, P. (2016). The Effect of Debt on Default and Consumption: Evidence from Housing Policy in the Great Recession. Working paper.
- Hsu, Joanne W., David A. Matsa and Brian T. Melzer, 2016, Unemployment Insurance as a Housing Market Stabilizer, Working paper, conditionally accepted at the *American Economic Review*.

You can view other GCFP reports at:

<http://gcfp.mit.edu>