

Comments and Discussion

COMMENT BY

PASCAL NOEL There is normally a strong positive relationship between unemployment and mortgage default. Yet during the COVID-19 pandemic, the unemployment rate rose dramatically while mortgage defaults fell. This paper by Susan Cherry, Erica Jiang, Gregor Matvos, Tomasz Piskorski, and Amit Seru provides an explanation for this surprising pattern. They show that the novel expansion of mortgage debt forbearance initiated by the Coronavirus Aid, Relief, and Economic Security (CARES) Act can account for the missing defaults relative to what would have been expected based on economic fundamentals alone. In total, 6.3 million mortgages entered forbearance between March 2020 and May 2021, with borrowers being permitted to miss \$31 billion in payments on these mortgages.

The paper extends beyond this basic conclusion in four significant ways. First, the authors show that the relationship between higher mortgage forbearance and lower defaults is not just a correlation. They present compelling evidence that increased availability of forbearance caused a reduction in defaults. Second, they quantify the substantial impact of forbearance across all consumer debt products, not just mortgages: borrowers of student loans, auto loans, and credit cards were also permitted to miss \$55 billion in payments through forbearance over this time period. Third, the authors address distributional questions, showing that forbearance was relatively well targeted overall. In particular, it appears to have helped households negatively affected by the pandemic but who were unlikely to be eligible for other income-based programs. Finally, they show that who provided this forbearance mattered. Traditional banks were more likely to provide forbearance in their role as intermediaries than were shadow banks.

Overall, this paper suggests that the aggressive forbearance policy pursued during the pandemic was largely successful. The goal of my discussion

is to expand on this finding by comparing the (largely successful) forbearance policy implemented during the COVID-19 recession to the (less successful) debt relief policy implemented in the Great Recession. In particular, I will briefly describe the main government debt relief policy implemented during the Great Recession (the Home Affordable Modification Program, or HAMP), summarize lessons learned from a decade of research assessing HAMP's limitations, argue that the pandemic debt relief policy addressed each of HAMP's three main limitations, and conclude by considering implications for future policy.¹ My comments focus on forbearance in the mortgage market.

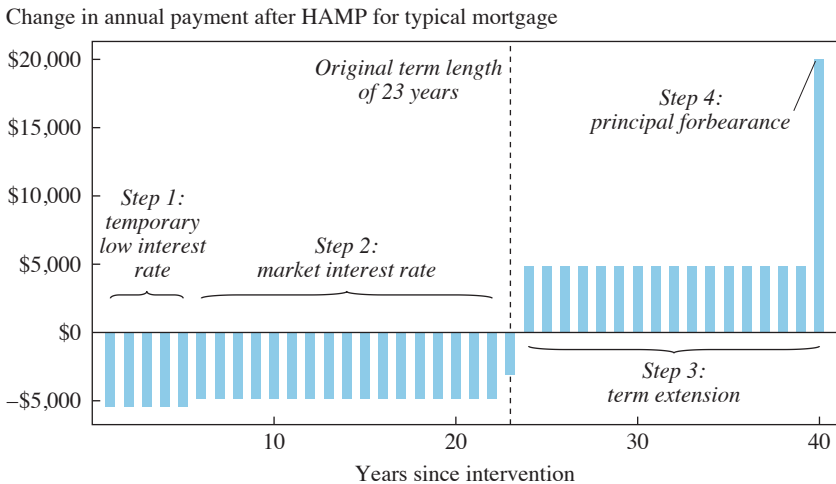
HAMP TWISTED THE PAYMENT SCHEDULE BY CREATING AN ENTIRELY NEW LOAN
During the Great Recession, HAMP was the main government program designed to restructure distressed mortgage debt. In total, around 1.8 million borrowers received modifications through the program.

The program had three important characteristics. First, it was heavily subsidized by taxpayers. Second, it was implemented by servicers. While the government guarantees and sets standards for a significant portion of mortgage debt, for the most part it does not directly issue mortgages or interface with individual borrowers. Thus, any program to address distressed debt within the prevailing market structure needed to go through mortgage servicers, who intermediate between borrowers and lenders. Third, HAMP was designed as a modification of the original mortgage contract. Therefore, it required the execution of an entirely new contract with new terms and, crucially, new underwriting. Furthermore, this new contract varied across borrowers on a case-by-case basis.

The reason that HAMP required a new mortgage contract is that it provided payment relief to borrowers via a complicated restructuring of each mortgage's specific terms. The target was to reduce a borrower's payments to 31 percent of their income for a period of at least five years. A HAMP modification involved as many as four steps to achieve this target.

First, the interest rate was reduced down to a floor of 2 percent for a period of five years. Second, the interest rate gradually increased to the market rate prevailing at the time of the modification, essentially providing a refinance. Third, if the target was not reached after the interest rate changes, the mortgage maturity was extended out to forty years. Finally, if the target was still not reached, a portion of the unpaid principal balance was converted into a non-interest-bearing balloon payment due at the end

1. US Department of the Treasury, "Home Affordable Modification Program (HAMP)," <https://home.treasury.gov/data/troubled-assets-relief-program/housing/mha/hamp>.

Figure 1. Structure of Typical Great Recession Mortgage Modification

Source: Author's calculations.

Note: This figure simulates the annual cash-flow impact of the standard HAMP modification structure if it were applied to a mortgage with the average premodification characteristics of loans that received CARES forbearance. The premodification characteristics used are those for GSE loans reported in table A11 in the online appendix. The modification is calibrated to match an initial payment reduction of 35 percent, the average reduction observed during the Great Recession (Ganong and Noel 2020a, appendix table 1). This is achieved by simulating multiple modifications that followed the HAMP protocol with an initial payment reduction between 5 percent and 65 percent, to capture the impact of all four possible modification steps.

of the mortgage term. This structure meant that the exact level of the new payment varied according to each borrower (since it depended on their individual income), as did the exact terms of the new “modified” mortgage contract.

Figure 1 shows how cash flows are affected under the standard HAMP modification structure. To ease comparison between HAMP and CARES Act interventions, the figure applies the HAMP modification structure to the typical mortgage that entered a CARES Act forbearance plan.² Figure 1 depicts the change in annual payments under HAMP relative to the payments owed according to the premodification mortgage terms. The average HAMP modification resulted in a 35 percent payment reduction, or about \$5,500 per year for the typical mortgage. As figure 1 shows, these payment

2. I use the characteristic for government-sponsored enterprises (GSEs) loans from table A11 in the online appendix. This borrower had a premodification interest rate of 4.4 percent, a principal balance of \$223,000, and a remaining loan term of twenty-three years.

reductions remain significant throughout the original mortgage term. Past the initial mortgage term of twenty-three years, payments would have been higher due to the term extension and principal forbearance components of the modification. Thus, the four modification steps in HAMP twisted the payment schedule, with reduced payments initially offset by increased payments far in the future.

LIMITATIONS AND LESSONS LEARNED SINCE HAMP While HAMP did provide assistance to millions of borrowers, analysis since the Great Recession has pointed to three challenges that limited its impact. First, HAMP may have been on the wrong side of the trade-off between type I and type II error. In the political climate of 2009, policymakers expressed worry about providing bailouts to borrowers who didn't need or deserve government assistance. This can explain HAMP's strict documentation guidelines. Borrowers needed to provide detailed documentation of their current income, attest to their lack of savings, explain the reasons behind their current financial hardship, and fill out necessary paperwork. Furthermore, servicers needed to verify and keep track of all this paperwork and pass documents back and forth for borrower signatures and final execution. However, the strict guidelines induced by the worry about false positives (admitting undeserving applicants) led to many false negatives: it was far too difficult to obtain a modification and millions of borrowers were turned away (GAO 2012). Over time, the government recognized this challenge and responded by relaxing documentation requirements.

Second, the program required intensive effort by servicers with limited capacity, and many intermediaries were sluggish at providing assistance. For example, Agarwal and others. (2017) document substantial heterogeneity across different servicers, with a few large servicers in particular offering modifications at half the rate of others. Agarwah and others (2017) show that total modifications could have increased by 70 percent if these less active servicers renegotiated loans at the pace of their more active counterparts. Furthermore, the paper shows that these low modification rates were due to servicer-specific factors related to preexisting organization capacity, which was necessary to execute the complex HAMP modifications. As another example, Piskorski, Seru, and Vig (2010) show that ownership is also important in limiting complex renegotiations: securitized loans were renegotiated at lower rates than bank-held loans.

Third, HAMP provides drawn-out payment relief, while research since the Great Recession suggests that immediate liquidity is the key driver of mortgage defaults. As figure 1 shows, HAMP provides payment relief spread out across many years. However, a large body of literature now

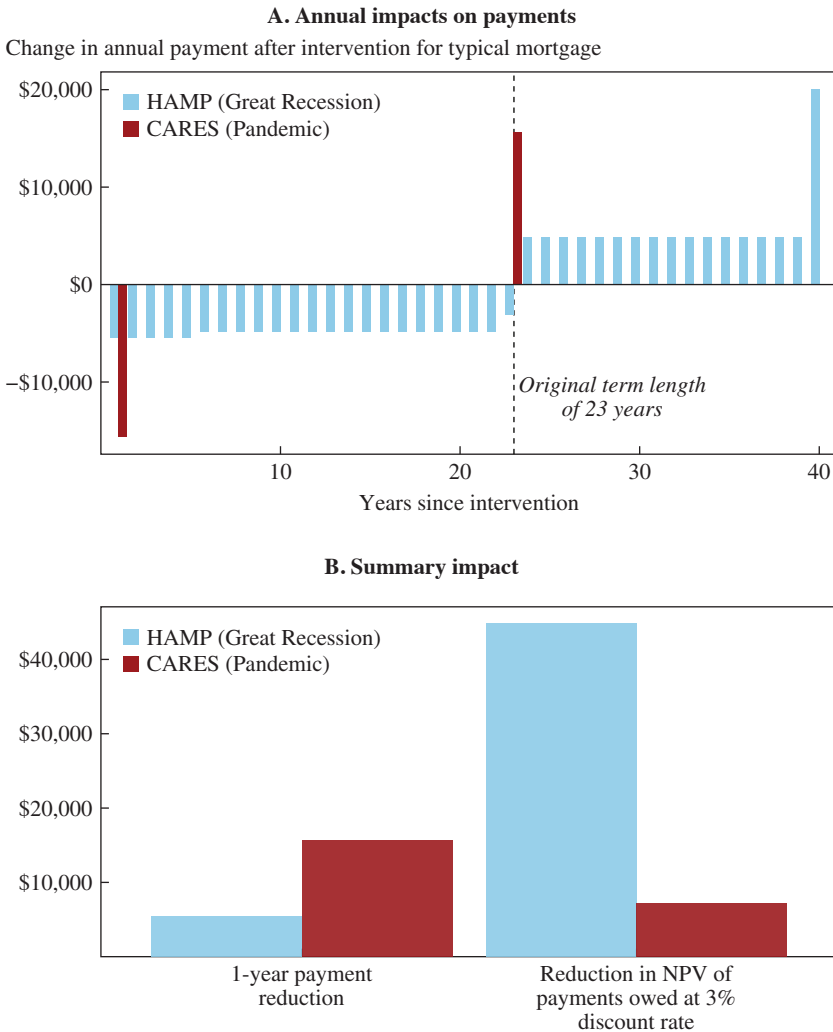
points to the key role of current liquidity in driving defaults. For example, in prior research with Peter Ganong, I have found that payment reductions more than five years in the future have no impact on default, while immediate payment reductions have large impacts on default (Ganong and Noel 2020a). Other research on the strong relationship between current payments and default includes Hsu, Matsa, and Melzer (2018), Piskorski and Seru (2018), Tracy and Wright (2016), Fuster and Willen (2017), Di Maggio and others (2017), Agarwal and others (2020), Ganong and Noel (2020b), Scharlemann and Shore (2017), Ehrlich and Perry (2015), and Abel and Fuster (2021).

HOW CARES ACT FORBEARANCE ADDRESSES EACH OF THESE LIMITATIONS The design of mortgage forbearance as mandated through the CARES Act is significantly different than the design of HAMP modifications. One clear difference is its impact on borrower cash flows. Figure 2, panel A, compares the annual impacts on cash flows for the typical CARES Act forbearance to the impact on cash flows for the typical HAMP modification. While HAMP reduced payments by 35 percent on average, forbearance plans reduce payments by 100 percent for the duration of the plan. Mortgages covered by the CARES Act were eligible for a maximum of about eighteen months of forbearance, though figure 2 depicts the cash flow impacts for an average borrower taking up forbearance for twelve months.

Although the initial payment reduction provided by a forbearance is much deeper, it is also more temporary. After the forbearance plan ends, a range of options are available for making up the missed payments. One option emphasized by regulators and policymakers was payment deferral, whereby the missed payments are due at the end of the original mortgage term, essentially turned into a non-interest-bearing balloon payment.³ This payment deferral option is what is modeled in figure 2. The borrower saves \$15,600 during the one year of forbearance, goes back to making regular monthly payments when deferral ends, and then owes the \$15,600 of missed payments at the end of the mortgage term (or refinance or sale, whichever comes first). Moving payments from the present to the future reduces the net present value (NPV) of total mortgage payments due. Figure 2, panel B, summarizes this NPV impact using an interest rate of 3 percent, which was the average market mortgage interest rate during

3. Federal Housing Finance Agency, “FHFA Announces Payment Deferral as New Repayment Option for Homeowners in COVID-19 Forbearance Plans,” <https://www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-Announces-Payment-Deferral-as-New-Repayment-Option-for-Homeowners-in-COVID-19-Forbearance-Plans.aspx>.

Figure 2. Financial Impact of CARES Forbearance Relative to HAMP Modifications



Source: Author's calculations.

Note: This figure simulates the impact of the typical HAMP modification and CARES forbearance structure, applied to a mortgage with the average premodification characteristics of loans that received CARES forbearance. For CARES forbearance, this figure assumes that forbearance lasts one year, and the missed payments are added to the end of the mortgage term (i.e., payment deferral). Panel A plots the difference in average annual payments for borrowers receiving each type of intervention relative to the payments owed by borrowers under their status quo unmodified mortgage contracts. Panel B summarizes the financial impacts of interventions along two dimensions: the change in the first year payment and the change in the net present value of mortgage payments owed, discounted at a 3 percent interest rate.

the CARES Act forbearance period. The \$15,600 of immediate payment reduction only costs lenders \$7,300 in NPV cash flows, since the borrower must eventually repay. In sharp contrast, HAMP keeps payments low for much longer, costing substantially more in NPV terms to lenders (and taxpayers, who subsidized these modifications). Figure 2, panel B, shows that the \$5,500 one-year payment reduction in HAMP costs lenders \$44,800 in NPV terms.

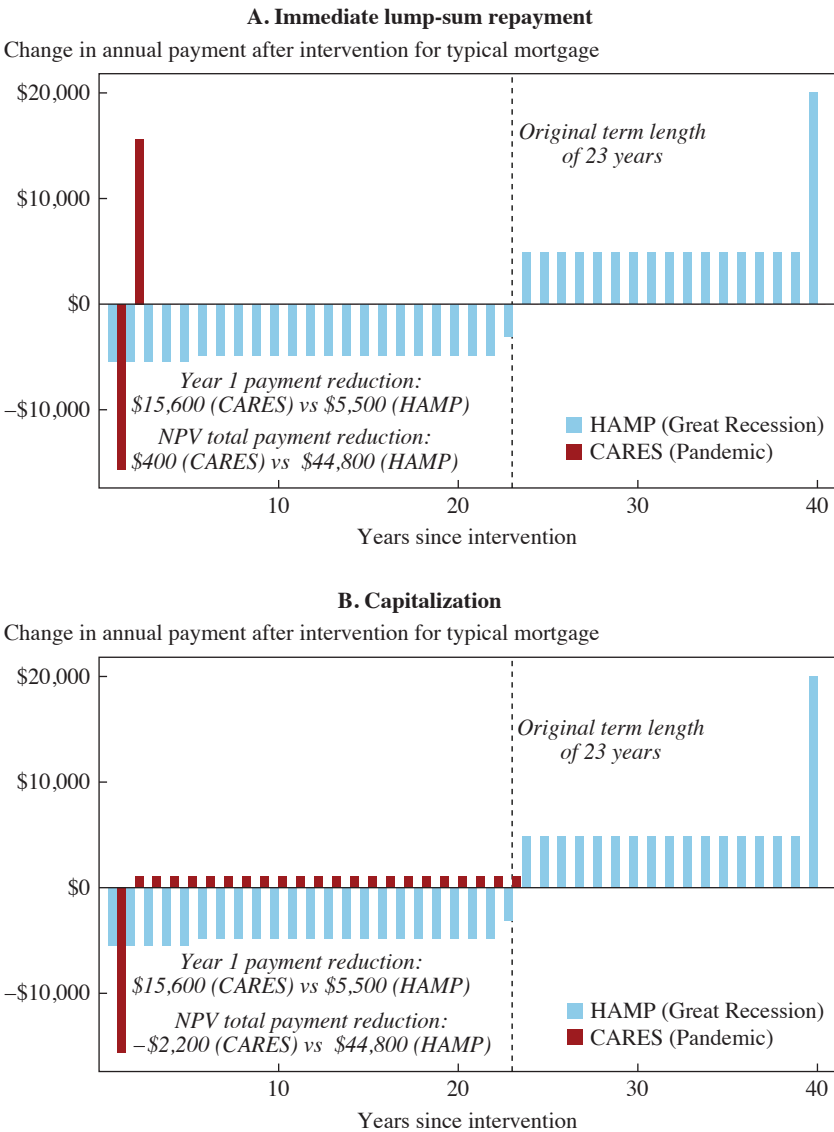
Figure 3 depicts the impact of CARES Act forbearance on cash flows under two alternative exit strategies also commonly provided to borrowers. First, borrowers who had the funds could immediately repay at the end of the forbearance plan. This amounts to a one-year interest-free loan. Second, borrowers who could afford slightly higher monthly payments could have the missed payments capitalized into the total principal balance and amortized over the rest of the initial loan term, resulting in an increase of about \$120 in the monthly payment. Each of these alternative exits were even cheaper than the payment deferral option from the lender's perspective. Indeed, because the prepandemic interest rate for the typical mortgage was above the prevailing 3 percent interest rate during the pandemic, capitalization actually has a negative cost to lenders.⁴

This cash flow design enabled CARES Act forbearance to address each of the three main limitations of HAMP. First, CARES Act forbearance required no documentation. Borrowers simply needed to tell their servicer that they had a pandemic-related hardship and request forbearance. This simple process avoided the issue of widespread false negatives from HAMP: essentially any borrower who wanted a forbearance could get one. The fact that CARES Act forbearance was substantially cheaper for lenders in an NPV sense helps justify this much more lax screening. If lenders aren't losing substantial money by providing this forbearance, it is less crucial for them to carefully limit entry.

Second, CARES Act forbearance is much simpler for the intermediaries to implement. There is no documentation requirement, no up-front re-underwriting, and no up-front modification to mortgage terms. Servicers simply pause payments and just need to keep track of the total dollar amount of missed payments. This design does not require the same organizational capacity as HAMP, found lacking in Agarwal and others (2017).

4. When the forborne payments are capitalized into the balance of the loan, the lenders earn the interest rate on the loan, which averages 4.4 percent in the authors' sample. This is higher than the interest rate of 3 percent that prevailed for new loans at this time. For this reason, capitalization has a negative NPV cost to lenders.

Figure 3. Financial Impact of Alternative CARES Forbearance Exits



Source: Author’s calculations.

Note: This figure compares the financial impacts of HAMP modifications to two alternative structures for CARES forbearance. Panel A shows the impact of an immediate lump sum repayment of the forbore amount, also known as a bullet payment. Panel B shows the impact of capitalizing the missed payments into the unpaid principal balance and recalculating the monthly payment under the pre-forbearance mortgage term and interest rate.

Nevertheless, the evidence in this paper suggests that there is still room for improvement on this dimension. In particular, there appears still to be some implementation challenges with shadow banks, despite the simple design. Providing automatic forbearance to 100 percent of borrowers, as was done for student loans, would fully address this challenge, though at a much larger financial cost and, as the authors note, worse targeting.

Third, and perhaps most striking, the mix between current and future payment reductions is completely flipped between CARES Act forbearance and HAMP modifications. CARES Act forbearance provides almost three times the immediate liquidity at one-sixth the NPV cost. This maximal provision of immediate cash flow relief to borrowers is exactly what is suggested by recent research.

IMPLICATIONS FOR FUTURE POLICY This paper makes a compelling case that aggressive forbearance initiated by the CARES Act was effective at preventing a spiral in mortgage defaults. The success of this intervention shows that a policy design that reflects the lessons learned since the Great Recession can work in practice. In particular, a policy that is broadly available, simple to implement, and maximizes immediate liquidity can reach millions of borrowers quickly and prevent acute distress.

Does the success of CARES Act forbearance suggest that policymakers should implement a policy like this in a future crisis? Although there are reasons to be cautious about this conclusion, I believe the answer is yes. As I have argued, the design of CARES Act forbearance addresses each of the major shortcomings of prior interventions. And as the authors have shown, it actually worked.

Given the success, why might we be worried about generalizing this remedy to alternative environments? There are at least three reasons. First, the housing market coming into the recession was very strong. In particular, households had substantial equity. If defaults are sometimes driven by negative home equity alone, then a policy focused on borrower liquidity may not work in other situations when homeowners are more likely to be underwater. However, my own view, influenced by my recent research, is that negative cash flow shocks are necessary conditions for nearly all mortgage defaults (Ganong and Noel 2020b), so it seems likely that a liquidity-focused policy would work even in a scenario with falling prices and underwater borrowers.

Second, the pandemic was an obvious negative external shock that was outside of any individual household's control. If widespread forbearance was made available in a future crisis, would households who didn't actually need assistance abuse the program? The authors' finding that less than

10 percent of eligible borrowers actually took up the forbearance option suggests that this may not be a concern in practice.

Finally, forbearance makes the most sense when there is a temporary shock, but payments can't be reduced to zero forever in the face of a more permanent shock. However, at the onset of a crisis, it is difficult for lenders and policymakers to triage borrowers into those needing temporary versus permanent assistance. This desire to tailor policy to each borrower's specific individual circumstances is exactly what made HAMP unwieldy in practice. It seems preferable to provide maximal, but temporary, liquidity up front and then use the intervening time to triage borrowers. Indeed, the authors find that two-thirds of borrowers exited forbearance on their own, before their eligibility expired. In this circumstance, lenders and policymakers can then focus on those remaining borrowers who reveal a need for deeper assistance. Furthermore, by buying time at the onset of a crisis, the policy itself can reduce the share of borrowers likely to experience permanent shocks by improving macroeconomic conditions.

Therefore, I think the arguments in favor of implementing a policy like this again outweigh the potential concerns under many possible scenarios. I hope we never face a severe housing crisis again. But if we do, I hope policymakers recognize the success of the forbearance policy documented in this paper and consider a similar approach.

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COMMENT BY

SUSAN WACHTER With the onset of COVID-19 in early 2020, Congress quickly passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act to help indebted households. Despite unemployment hitting 15 percent highs in April 2020, mortgage delinquencies declined with the act's implementation, as the law intended. This paper documents the public and private debt relief that the law provided and the positive outcomes for avoiding debt distress. The authors' documentation of these outcomes is an important contribution to the evaluation of debt relief assistance for policymakers and future historians.

The paper analyzes the results of debt forbearance in the aggregate and by credit type, identifying how the mechanisms of the law varied with