JPMorgan Chase & Co. Institute

Did Mortgage Forbearance Reach the Right Homeowners? Income and Liquid Assets Trends for Homeowners during the COVID-19 Pandemic

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Introduction

COVID-19 devastated the US labor market, causing the unemployment rate to spike from 4.4 percent in March 2020 to 14.7 percent in April 2020 and threatening homeowners' ability to stay current on their mortgage.[1] During the Great Recession, payment relief was more difficult to come by despite various programs designed to help homeowners. In contrast, the Coronavirus Aid, Relief, and Economic Security (CARES) Act, passed early on during the COVID-19 pandemic, provided most impacted homeowners with up to 12 months of payment relief if they attested to COVID-related hardship (see "Mortgage Forbearance under the CARES Act"). At the same time, the CARES ACT did not cover everyone. It was silent on non-federally backed mortgage holders and those experiencing non-COVID related hardship. Furthermore, a Fannie Mae survey[2] shows that half of borrowers were not aware of mortgage relief options and that many were worried about potential balloon payments after forbearance ends.

How well did this widespread intervention work? Did the homeowners most in need avail themselves of the program? Did it reach all those who might have benefitted? Is there evidence of widespread moral hazard— that is, homeowners taking advantage of forbearance when there is no apparent need? How did forbearance impact the ability to save? These are important questions to answer in order to understand the impact of forbearance as a policy tool. Using checking account data linked to loan-level mortgage servicing data, we explore these questions.

We find that while a third of homeowners in forbearance made all payments to date, a small fraction of homeowners not in forbearance did miss payments. Also, we find little evidence of widespread moral hazard. Families using forbearance to miss mortgage payments showed larger drops in total income than other homeowners and experienced income changes similar to those who have gone delinquent without the protection of forbearance. Also, families in forbearance were more likely to have lost labor income and received UI than families not in forbearance. Finally, we find that forbearance helped families with low levels of liquid assets to maintain their cash buffers.

Mortgage Forbearance under the CARES Act

The CARES Act offered two forms of relief for homeowners with mortgages backed or funded by the federal government or Government Sponsored Enterprises (GSE) – FHA, VA, USDA, Fannie Mae, or

[1] Bureau of Labor Statistics

[2] Fannie Mae survey: https://www.fanniemae.com/resources/file/research/housingsurvey/pdf/covid19-consumer-impact-nhs-q22020.pdf

Freddie Mac. [3] First, lenders and servicers are barred from beginning foreclosure and from finalizing a foreclosure judgement or sale until December 31, 2020.

Second, through December 31, 2020 (or the end of the nationally declared emergency if that comes earlier), homeowners have the right to request forbearance if they experience financial hardship due to the coronavirus pandemic. Homeowners can request forbearance for up to 180 days and an extension for another 180 days for a total of 360 days of forbearance. The homeowner must either contact or respond to outreach efforts from their servicer to request this forbearance. The homeowner does not need to submit any documentation other than an attestation of pandemic-related financial hardship. [4]

Servicers are prohibited from adding on fees, penalties, or additional interest beyond what is already scheduled to loans in forbearance. Also, for loans that are otherwise current and have received relief, the servicer is required to report the account as "current" to credit bureaus even if the homeowner misses payments.

The CARES Act was silent on repayment of missed payments after the forbearance period ends. In guidance subsequently released, Fannie Mae/Freddie Mac, FHA/HUD, USDA, and the VA all made clear that lump sum repayment at the end of the forbearance is not required. Homeowners exiting forbearance are presented with a waterfall of options depending on their ability to repay. They can repay all missed payments in a lump sum, resume higher monthly payments, or resume regular monthly payments. Options include deferral of payments until the end of the loan (or at sale or refinancing), repaying past due loans via higher monthly payments, or loan modifications that change the terms of the loan so that the homeowner can resume payments. [5]

Non-federally backed loans are not covered by the CARES Act. Many servicers, at their discretion, extended the same forbearance policy to these homeowners with a variety of forbearance exit options.[6]

Data and Analytics

We join loan-level mortgage servicing data to account-level checking account data in order to observe income and liquid asset trends for four groups of homeowners with a Chase mortgage. In much of our analysis, we will use the *No forbearance + no missed payments* group as our baseline group.

[3] See section 4022: https://www.congress.gov/116/plaws/publ136/PLAW-116publ136.pdf

[4] Many large servicers used multiple channels to let homeowners know about their options, including on their mortgage bill, phone calls, text messages, via their own homepages, etc. This is especially true for customers who have gone delinquent. In many cases, customers did not actually need to even speak to a person as they could request forbearance automatically on their servicer's webpage or using automated phone systems by answering that they had been impacted financially by COVID.

[5] https://www.consumerfinance.gov/coronavirus/mortgage-and-housing-assistance/after-you-receive-relief/

[6] For more information on what happens to loans in forbearance, see *Oversight by Fannie Mae and Freddie Mac of Compliance with Forbearance Requirements Under the CARES Act and Implementing Guidance by Mortgage Servicers*

		Mortgage Payments	
		Made all payments between April and August 2020	Missed one or more payments between April and August
Forbearance Status	In active forbearance during at least one month between April and August 2020	Forbearance + no missed payments group	Forbearance + missed payment group
	Never in active forbearance between April and August 2020	No forbearance + no missed payments group (Baseline group)	No forbearance + missed payments group

Source: JPMorgan Chase Institute

For each loan in the Chase mortgage servicing data, we find all Chase checking accounts where either the primary or secondary borrower is listed as primary on the checking account. We remove secondary borrowers when s/he is >15 years older than primary borrower so as to not include income and assets for parents who are listed on their children's mortgages.

Importantly, we do not screen for prior delinquency nor do we analyze our groups by delinquency status. Instead we focus on whether the homeowner missed payments after forbearance became available (between April and August). All groups, however, contain some homeowners with existing delinquency. For more details, please see the Data Asset and Methodology appendix.

From a universe of over **16 MILLION** Chase mortgage customers (2018 to 2020)

Mortgage Data Requirements

- Active Chase loan
- First lien

Checking Account Requirements

- At least five transactions per month across all accounts
- Checking account data exists from January 2018 through August 2020

Final Sample: **156,665 loans**

Source: JPMorgan Chase Institute

Finding 1: A third of homeowners in forbearance made all payments to date while a small fraction of homeowners not in forbearance have missed payments.

First, we estimate the fraction of homeowners with a mortgage who took up forbearance and the fraction who missed payments. There are four distinct groups of homeowners: (1) in forbearance and missed payments, (2) in forbearance but no missed payments, (3) not in forbearance and no missed payments, and (4) and not in forbearance but missed payments. The vast majority of mortgage holders in our sample—89 percent—are in this last group, in that they did not seek forbearance and continued to make mortgage payments (Figure 1). In subsequent analyses we will use this group as our "baseline group", against which we will compare homeowners who are in forbearance or missing payments. Nine percent of loans were in forbearance at some point between April and August 2020. Of these, about one-third (3 percent) continued to make all payments in full during this period and two-thirds (6 percent) missed at least one payment. The remaining 2 percent of our sample of borrowers missed at least one payment during this period but were never in active forbearance.

Figure 1. About 9 percent of homeowners were in active forbearance with a third having made all payments. Almost all of the rest were not in forbearance and continued to make payments, but about 2 percent became delinquent while not in forbearance.

Incidence rate - April to August 2020		
	No missed payments	Missed >1 payment
Forbearance	3%	6%
No Forbearance	89%	2%

Note: This is the rate of mortgages having ever been in forbearance during this time period.

Source: JPMorgan Chase Institute

The fact that one-third of homeowners in forbearance continued to make payments suggests that many homeowners signed up for forbearance as a precautionary measure. As previously discussed, the CARES Act made it very easy to ask for and receive forbearance. Many homeowners may have opted in in case of future sickness, job loss, or other disruption. Indeed, Black Knight data shows that most homeowners in forbearance entered forbearance in April.[7]

There are several reasons that could account for why a small group of homeowners (2 percent) missed payments but did not request forbearance. First, the CARES Act only covered COVID-related financial hardship. Even during a pandemic that seemingly touches all aspects of life, some small fraction of homeowners experience hardship that would have occurred independent of the pandemic. Indeed, during the same April to August period in 2019 when we know that any hardships leading to

[7] https://cdn.blackknightinc.com/wp-content/uploads/2020/09/BKI_MM_Jul2020_Report.pdf

delinquency would have been non-COVID related, 2.4 percent of this sample missed a payment. In our sample, 14 percent of those who missed payments without being in forbearance between April and August of 2020 (0.7 percent of all homeowners) were already delinquent before the pandemic (Figure 3).[8] These homeowners were already experiencing non-COVID related hardship. As time goes on, it is natural to expect that additional homeowners would encounter life events unrelated to COVID.

Second, the CARES Act did not extend forbearance to non-federally backed loans. While many servicers (including Chase) extended forbearance to all loans, some homeowners with non-federally backed loans may have assumed that they were not covered.

Third, the CARES Act did not specify forbearance exit plans, particularly whether all missed payments would need to be repaid at once when forbearance ended. Early on before various agencies issued guidance on exit options, borrowers may have been worried about these balloon payments. A survey from the National Housing Resource Center shows that almost 70 percent of housing counselors said that "fear of lump sum repayment at the end of forbearance" was a reason for soon-to-be delinquent homeowners not signing up for forbearance.[9]

Finally, not all homeowners were aware of mortgage relief options. A Fannie Mae survey shows that half of homeowners do not know about forbearance options and that the knowledge gap is particularly acute for lower-income and minority homeowners.[10] Although outreach to increase awareness of forbearance from government agencies, GSEs, CFPB, and servicers was robust, additional outreach from non-servicers and community partners may be particularly useful as many homeowners are reluctant to talk to their servicer when they are having trouble making payments.

As shown in Figure 2, the fraction of homeowners in forbearance when they missed their second payment of this period was higher than the fraction of homeowners in forbearance when they missed their first payment. This provides some evidence that outreach efforts to homeowners in the early stages of delinquency were working. Notably, we do not see the same increase in forbearance beyond the second missed payment.

Finally, the fraction of homeowners in forbearance when they missed their first payment is going down over time. This could be related to outreach efforts diminishing over time or a greater fraction of homeowners assessing their hardship to be non-COVID related.

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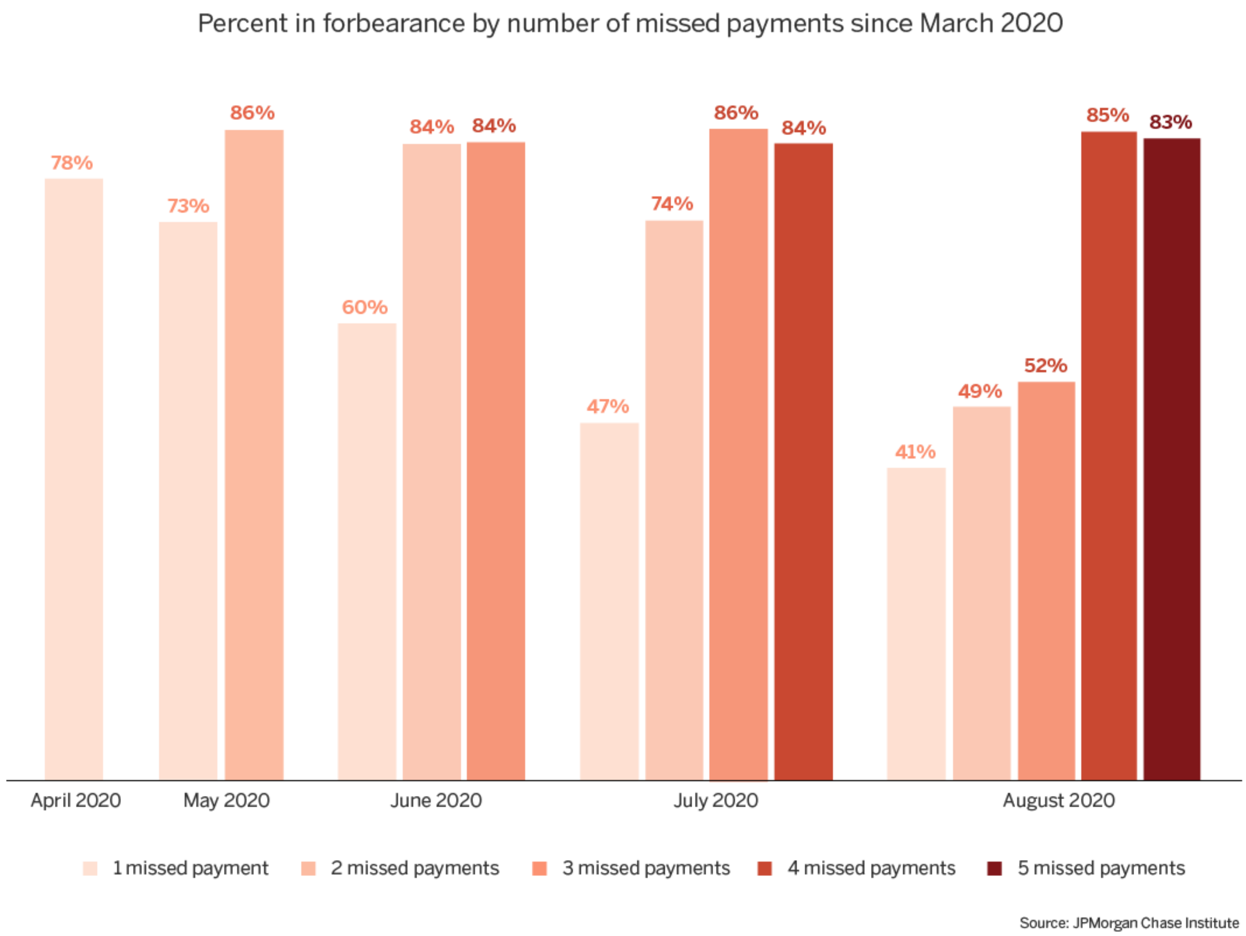
[8] This might seem low relative to overall delinquency rates in early 2020, but it is biased downwards because we are requiring loans to be in our sample through August 2020, which means loans that were prepaid are not represented. Homeowners already delinquent and struggling to pay may be more likely to sell their home. Foreclosures were paused due to the CARES Act, so that should not be a factor.

[9] https://www.hsgcenter.org/wp-content/uploads/2020/07/Survey-results-Forbearance-and-Delinquency2.pdf

[10] https://www.fanniemae.com/resources/file/research/housingsurvey/pdf/covid19-consumer-impact-nhs-q22020.pdf

Figure 2. A significant fraction of homeowners going from one to two missed payments entered forbearance.

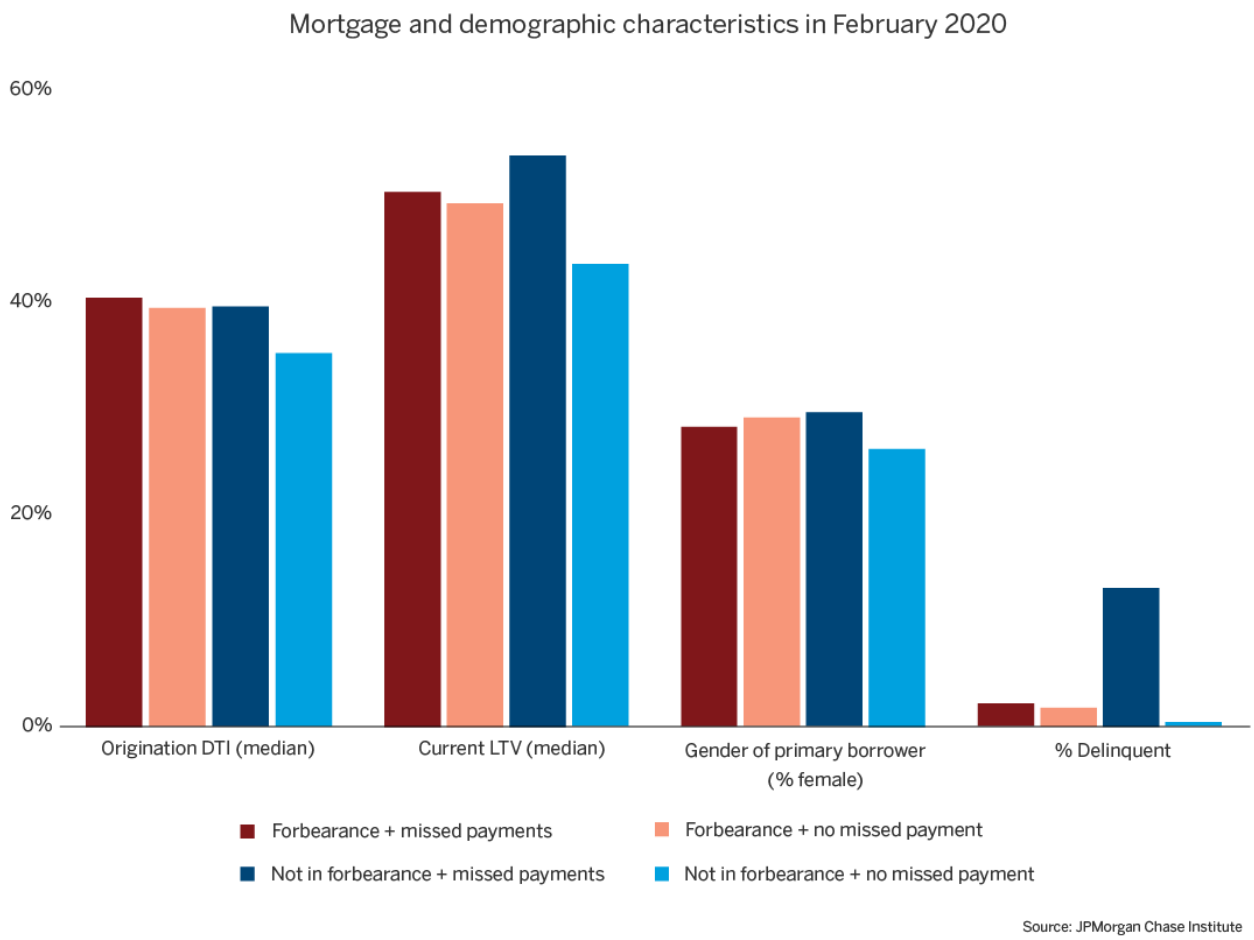


To further understand the four groups of homeowners identified in Figure 1, we examine baseline characteristics for each. As shown in Figure 3, the four groups of interest were similar in terms of debt-to-income (DTI) at origination and current loan-to-value (LTV). However, the "no forbearance + missed payments" group was, by far, more likely to have been delinquent entering the COVID period. This may be evidence that at least some of these households experienced hardship not related to COVID.

Finally, compared to those in the group not in forbearance and making all payments, the loans in forbearance and/or with missed payments were more likely to have a female primary borrower.[11] Most loans have male primary borrowers as couples tend to list the husband as the primary borrower. Therefore, the loans with female primary borrowers are more likely to represent single female borrowers, which is consistent with studies that have shown that the COVID recession hit women harder than men.[12]

[11] The percent female in this chart is calculated as the fraction of loans with a male or female primary borrower that have female primary borrowers. There are a subset of loans where the gender of the primary borrower cannot be determined because the algorithm that assigns gender uses the borrower's name as an input and performs poorly with less common names.
[12] https://www.nber.org/papers/w26947.pdf

Figure 3. Those missing payments while not in forbearance were much more likely to have already been delinquent in February 2020.



In terms of baseline financial characteristics in February 2020, those in forbearance had lower total income and labor income than those not in forbearance (Figure 4). They also had liquid asset levels that were around 60% of those not in forbearance (which are overwhelmingly in the light blue "no forbearance + no missed payments" group)[13]. However, those missing payments and not in forbearance had the lowest levels of total income and labor income levels of the four groups. This group also had the lowest level of liquid assets–around one third of those not in forbearance and making all payments. The much larger magnitude of the liquid asset difference between the groups indicates that having a much smaller financial buffer likely played a larger role than income does in determining who signs up for forbearance and who misses payments.[14]

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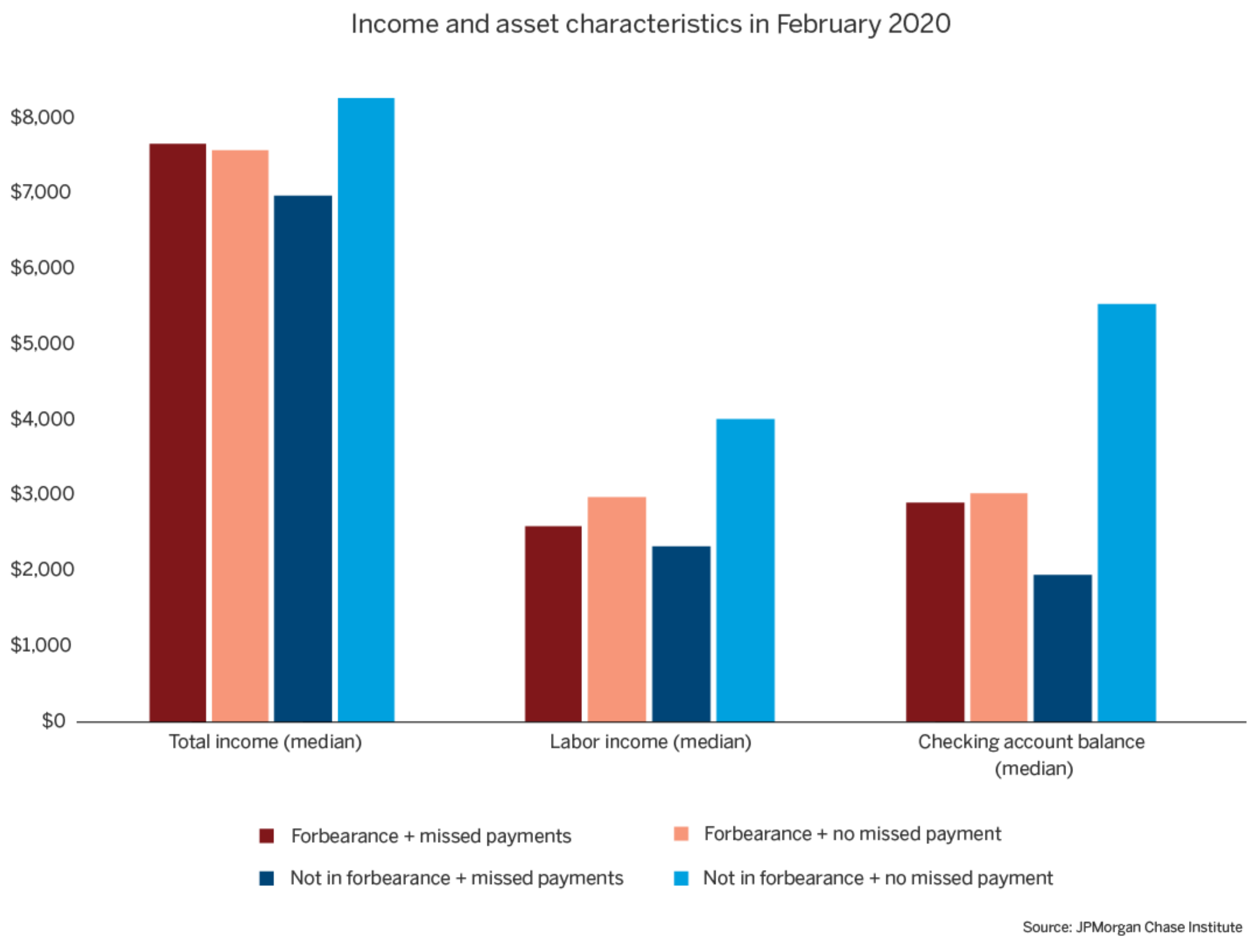
[13] Liquid assets is measure as checking account balances.

[14] This is consistent with previous JPMC Institute research showing that default is proceeded by a drop in income and that liquidity is highly correlated with default for those with low levels of liquidity. See, for example, [Trading Equity for Liquidity]().

Figure 4. Those in forbearance had lower income and much lower liquid assets before the pandemic than those not in forbearance. Those missing payments while not in forbearance had the lowest levels of income and liquid assets.



Finding 2: Families using forbearance to miss mortgage payments had larger drops in income than other homeowners and the distribution of their income changes was similar to those who missed payments without forbearance.

Next, we compare the trends in total income for those in forbearance or missing payments to the vast majority of the population who were not in forbearance and continuing to make payments.[15] We find little evidence of significant moral hazard, as homeowners using forbearance to miss payments experienced worse income trends than those not in forbearance. Importantly, the distribution of their income changes is similar to that for those going delinquent without the benefit of forbearance (i.e., not in forbearance during COVID or prior to COVID).

In Figure 5 we show total income trends for those missing payments and/or in forbearance relative to our baseline group—borrowers not in forbearance and not missing payments (89 percent of the sample). Specifically, we subtract the year-over-year percentage change in income for the baseline group from the year-over-year percentage change in income for each of the other groups.

Income trends were worse for those who missed payments than those who did not regardless of forbearance status. The difference was especially pronounced in the early months of the pandemic and decreased into the summer months, which is likely related to government support, especially expanded unemployment insurance (UI) payments[16].

Specifically, those who missed payments and were in forbearance (solid red line) experienced the worst income trends—a 13 percentage point larger drop in April than homeowners not in forbearance and still making payments. Their income trends were even worse than those missing payments while not in forbearance (solid blue line).

This indicates that moral hazard among those using forbearance to miss payments was not widespread. If it was, then we would expect income trends among families who took advantage of forbearance and missed a payment to be less negative or closer to the dotted red line (in forbearance but missed no payments). Indeed, our data show that those who used forbearance and missed payments experienced materially worse income trends than those who were in forbearance as a precautionary measure.

In addition, this is also evidence that there was potentially unmet need among those who went delinquent while not in forbearance as this group had worse income trends than those continuing to make payments though we do not know the source of their income disruption.

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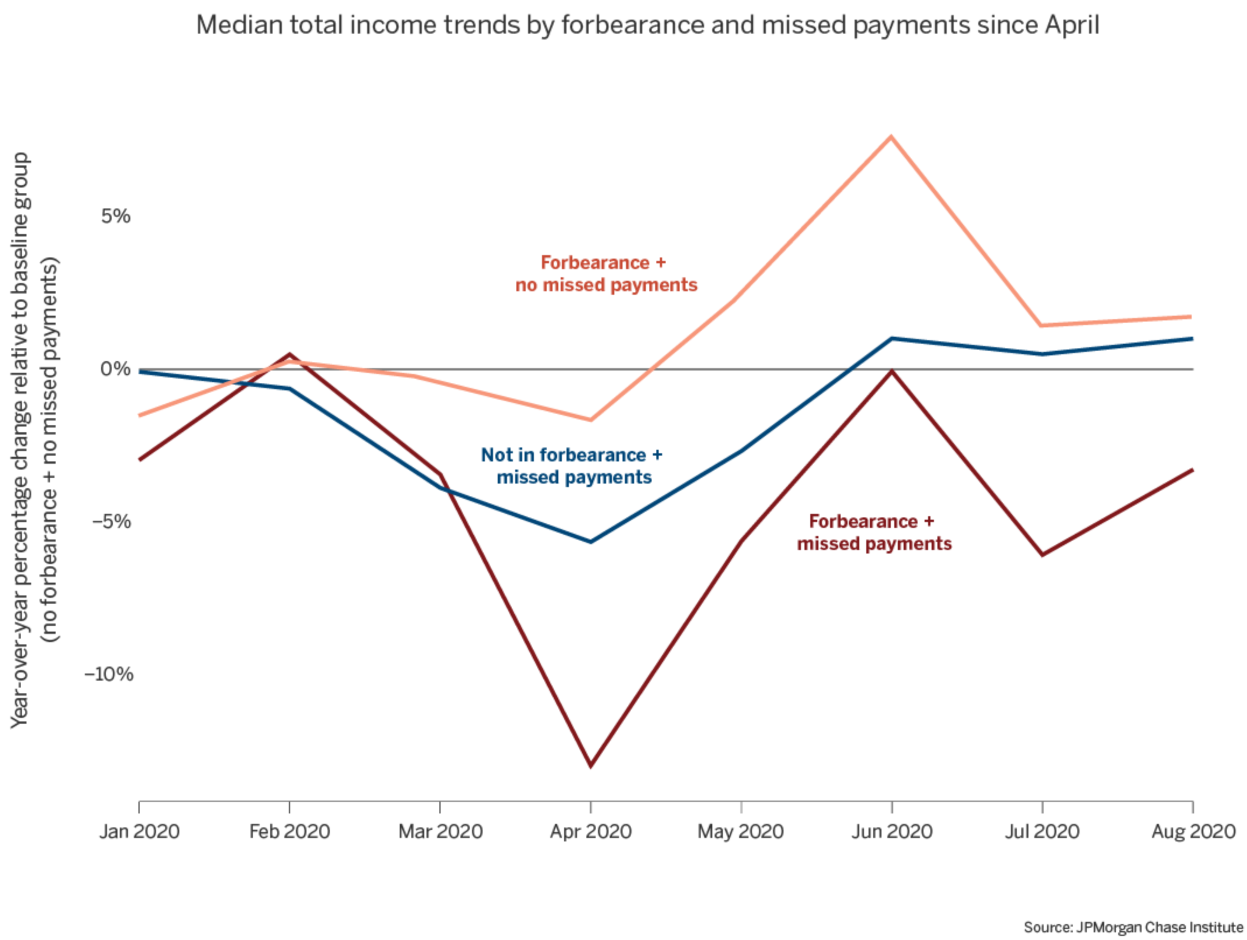
[15] Total income is defined by total inflows into checking accounts minus transfers from investment, savings, and checking accounts.

[16] For this and the subsequent labor income chart, we show the relative year of year percentage change. To see charts showing the year over year percentage change for all groups, see Figures 13 and 14 in the appendix.

Figure 5. Income trends were worse for those who missed payments than those who did not regardless of forbearance status.

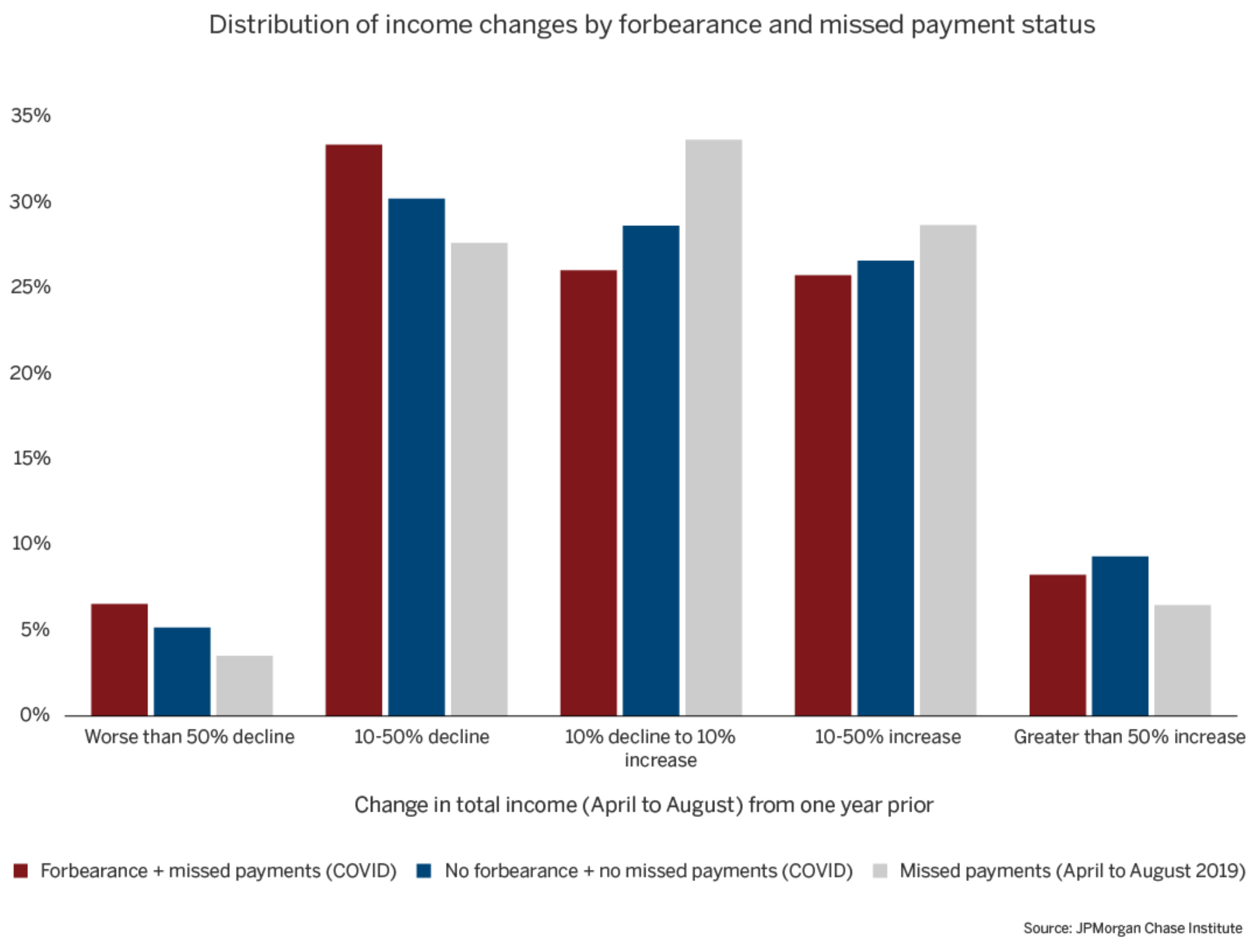


To further understand the extent to which there might have been moral hazard, we look at the distribution of total income changes. It is important to note that, as we have documented elsewhere (Farrell et al. 2019), income is inherently volatile and concurrent income changes are not necessarily the only indicator of need. For example, a borrower may have stopped making mortgage payments because they knew they will lose their job the next month but their concurrent income was the same (or even higher due to severance).

Figure 6 compares the group using forbearance to miss payments to two other groups: (1) those who missed payments during COVID but were not in forbearance and (2) those who went delinquent prior to COVID when forbearance was not an option. The distribution of income changes for those in forbearance and missing payments (red bars in Figure 6) was not materially different from these relevant comparison groups that were delinquent without forbearance (blue and black bars). This alone is evidence that there was not material moral hazard. If there was, we would expect families who took advantage of forbearance to have exhibited significantly stronger income trends than families experiencing delinquency pre-COVID—a right shift in the red bars relative to the black bars. In fact, the forbearance group was materially more likely to have large declines in income than the other two groups, suggesting real need for forbearance.

Some homeowners missed mortgage payments while their income *increased* significantly. Notably, the percent of homeowners in forbearance who missed payments (red group) with greater than 50 percent increase in total income is 2.3 percentage points higher than the percent of homeowners in the pre-COVID group (black group). This may be potential evidence of moral hazard for a small number of borrowers. However, the fact that both the red and blue bars are higher than the black bars in the "greater than 50 percent increase" group may also reflect the enormous amount of government support—in particular, stimulus payments and expanded unemployment benefits—during COVID that was not present in 2019. Importantly, these increases in government transfers were temporary so homeowners knew they could not count on them for long. Meanwhile, during COVID homeowners were facing much more economic and labor market uncertainty than the pre-COVID group. Given this context, the similarity of the distributions for these three groups is compelling evidence against significant moral hazard amongst the forbearance group.

Figure 6. The distribution of income changes for those in forbearance and missing payments was not materially different from relevant comparison groups that were delinquent without forbearance.

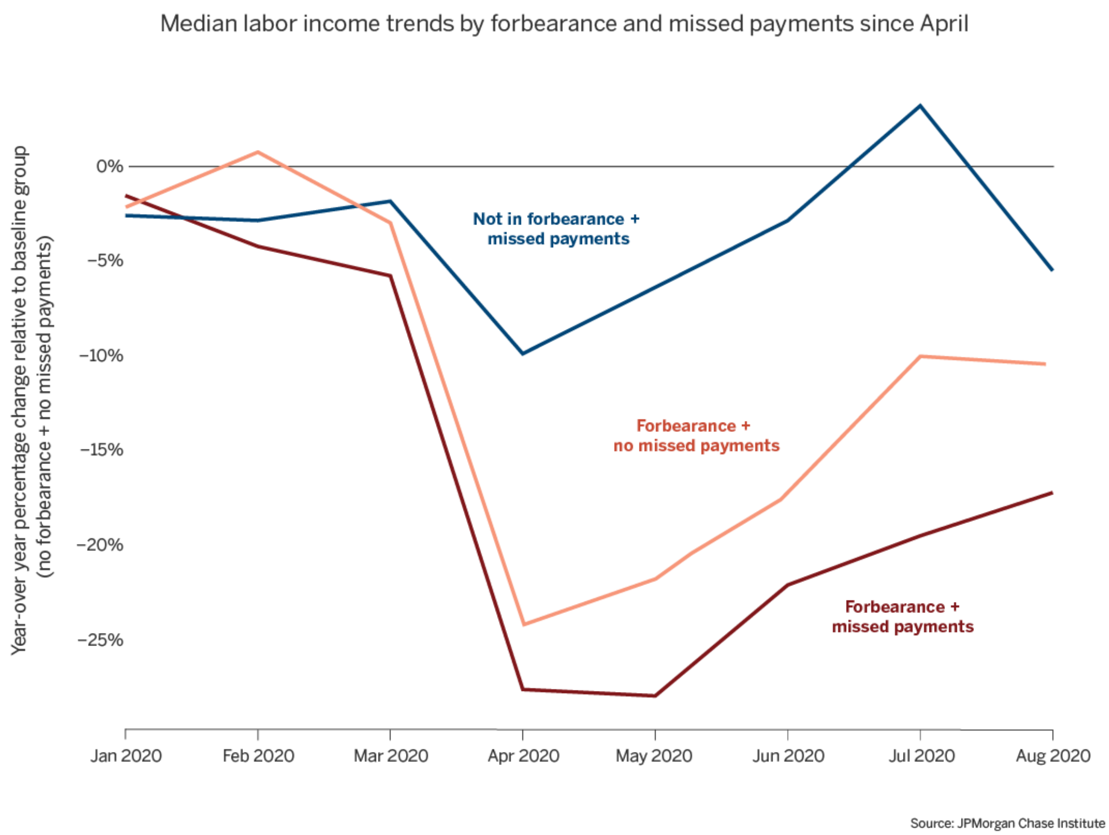


Finding 3: Families in forbearance were more likely to have lost labor income and received unemployment benefits than families not in forbearance.

With the results for total income in mind, we turn to labor income and unemployment insurance (UI) benefits. We find that, compared to homeowners not in forbearance, those in forbearance lost more labor income and were more likely to receive UI. This is consistent with the prior evidence of there not being significant moral hazard. In addition, those on UI were overwhelmingly more likely to receive forbearance but continue making mortgage payments. This underscores that unemployment benefits played an important role in helping homeowners stay current on their mortgages.

Figure 7 compares the labor income trends for borrowers in forbearance or missing payments relative to the baseline group—those who were not in forbearance and did not miss payments. [17] It shows that those in forbearance or missing payments experienced much larger drops in labor income than the baseline group. Indeed, those in forbearance and missing payments faced the worst labor income trends of any group—a 28 percentage point larger drop in labor income in May 2020 than our baseline group.

Figure 7. Homeowners in forbearance experienced larger drops in labor income than those not in forbearance.



[17] Labor income includes inflows that are generally easy to identify as paychecks, such as regular direct deposit inflows and is biased against certain types of labor income that are more irregular or not paid via direct deposit.

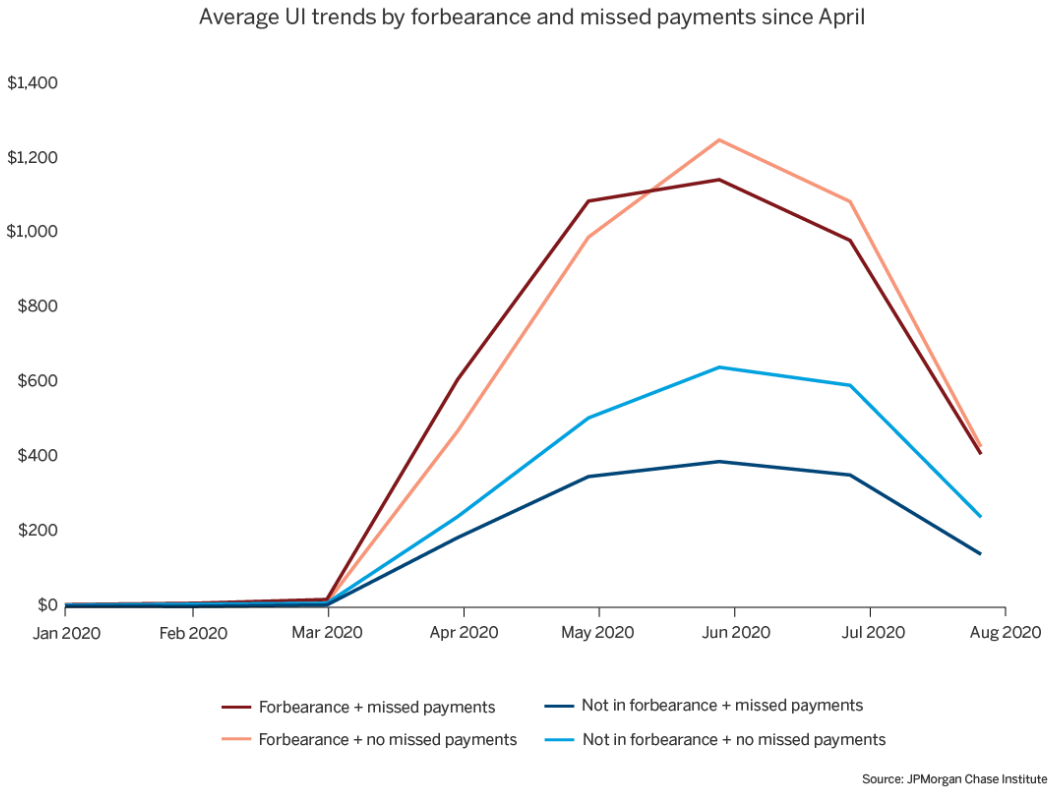
Figure 8 shows average UI income trends for each of the same four groups. Those in forbearance received more UI than those not in forbearance, consistent with job loss being a primary reason why a homeowner would sign up for forbearance. [18] It is important to note that the differences in the unconditional averages shown in Figure 8 are the result of those in forbearance having been much more likely to receive UI in our data and having received slightly higher amounts conditional on receipt.

In addition, those in forbearance and continuing to make payments received slightly more UI income in the first few months than other groups, suggesting that UI income was helping borrowers to continue making mortgage payments. We explore this further in Figure 9.

On the other hand, those not in forbearance and missing payments (solid blue line in Figure 8) had higher UI income, but not nearly as high as those in forbearance. It is possible that this group qualified for lower levels of benefits given their lower income levels (Figure 4). Alternatively, they may have received UI via a prepaid card (and we therefore could not detect their UI using deposit account data). Notably this group also had less of a drop in labor income than those in forbearance (Figure 7) but a substantial drop in total income (Figure 5), suggesting that job loss may have been a less important reason for delinquency relative to other life events and/or that this group receives less of its income in labor income.

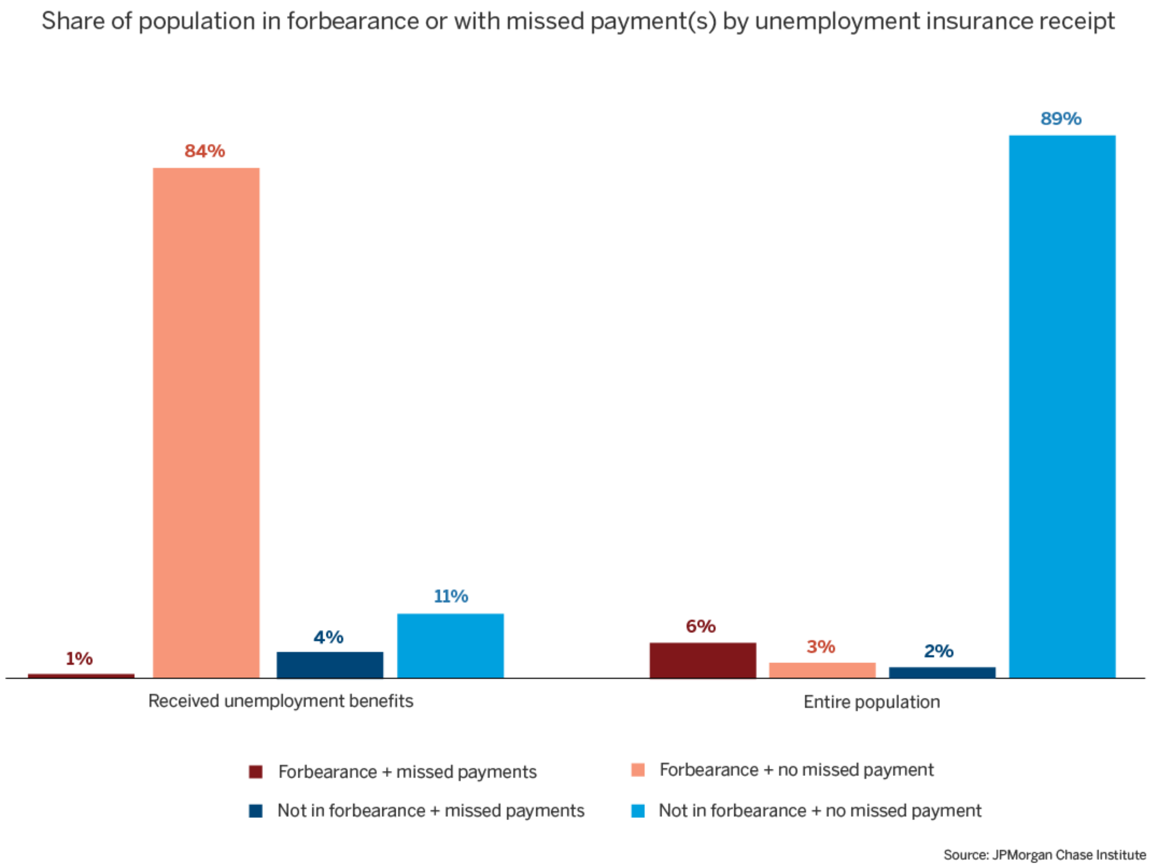
[18] In checking account data, we can only observe unemployment insurance payments when they arrive via direct deposit. Many states default to using prepaid debit cards, which we would not be able to categorize as unemployment insurance. Therefore, the actual amount of unemployment insurance received is likely to be much higher than we what see in Figure 8. Lower-income families are more likely to receive their UI benefits via prepaid cards and likely receive lower levels of benefits. Thus Figure 8 likely understates the gap in UI receipt between homeowners in forbearance or missing payments relative to our baseline group (no forbearance and not missing payments), who generally have higher incomes.

Figure 8. Homeowners in forbearance were more likely to receive UI than those not in forbearance, regardless of missed payments status.



Finally, Figure 9 shows the fraction in each of the four groups of interest for two different populations: those who received UI during this period and the broader group (same as results in Figure 1). Over 80 percent of those who received unemployment insurance (UI) were in forbearance and have not missed any payments. Eleven percent were not in forbearance and continued to make mortgage payments. The bulk of the remainder (4.4 percent) were not in forbearance but have missed payments. The remainder (0.8 percent) were in forbearance and have missed payments. In contrast, for the entire population, almost 90 percent were not in forbearance and have not missed payments and the next largest group (6 percent) were in forbearance and have missed payments. This is evidence of a pivotal role for UI—it is helping families in financial trouble who signed up for forbearance to make their mortgage payment.

Figure 9. Unlike the broader population, homeowners that received UI were overwhelmingly likely to be in the group that received forbearance but still made mortgage payments.



Finding 4: Forbearance helped families to maintain their cash buffers.

In the final set of analyses, we examine liquid asset levels and trends for these same four groups. [19] We find that homeowners missing payments and those in forbearance had lower levels of liquid assets, which likely played a role in why they missed payments or were in forbearance. Also, liquid assets increased over this time period for everyone, likely due to stimulus payments, expanded unemployment benefits, and lower spending. Missing payments allowed homeowners to maintain their small cash buffer in a time of great economic uncertainty. Forbearance, in particular, allowed homeowners to forgo making mortgage payments and increase their cash reserves.

Figure 10 shows liquid asset levels normalized as months of mortgage payments for each of the four groups while Figure 11 shows year over year changes in months of mortgage payments.[20,21] In interpreting these charts, it is useful to remember that 89 percent of homeowners are in our baseline group (the dotted blue line), 6 percent received forbearance and missed payments (solid red line), 3 percent received forbearance and made payments (dotted red line), and 2 percent did not receive forbearance and missed payments (solid blue line). With these proportions in mind, we can deduce from Figure 11 that homeowners going into forbearance or missing payments had lower levels of liquid assets to start with than the baseline group. In other words, families with less of a financial cushion to start with were more likely to go into forbearance or miss payments. This evidence of the importance of liquidity to a homeowner's ability make mortgage payments is consistent with our other research as summarized in Farrell et al (2019a).

All four groups experienced increases in liquid assets after a low in March 2020. This is consistent with aggregate data on spending declines during COVID, increased government transfers such as expanded UI and stimulus payments, as well as an increase in the savings rate during this period.[22] Our baseline group, those not in forbearance and making payments (dotted blue line), had the largest increase in liquid assets. The two forbearance groups (missing and making payments in the solid and dotted red lines, respectively) had smaller increases. The group going delinquent while not in forbearance (solid blue line) had the smallest increase.

Figures 10 and 11 also show liquid asset levels had the households missing payments made their payments (light red and light blue lines). In that case, their increase in liquid assets would have been significantly smaller. Forbearance therefore helped families facing enormous economic uncertainty with already small financial buffers build up their cash reserves without impacting their credit scores.

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[19] Liquid asset are measured as checking account balances.

[20] Figures 15 and 16 in the appendix show the same trends in dollars rather than number of mortgage payments.

[21] The drop off in August is again due to the $600 UI supplement ending (and unemployed households dipping into their savings as shown in related JPMC Institute work on the expiration of the $600 UI supplement) and the "Five Friday" effect where August 2019 had five Fridays and August 2020 only have four Fridays.

[22] The Bureau of Economic Analysis estimates that the personal savings rate increased from a pre-pandemic level of 8 percent to 13 percent in March and 34 percent in April before falling down to 25 percent, 19 percent, and 18 percent in May, June, and July.

Figure 10. Liquid asset levels for those who missed payments are much lower than for those who did not miss payments and lower for the overall forbearance group than those not in forbearance.

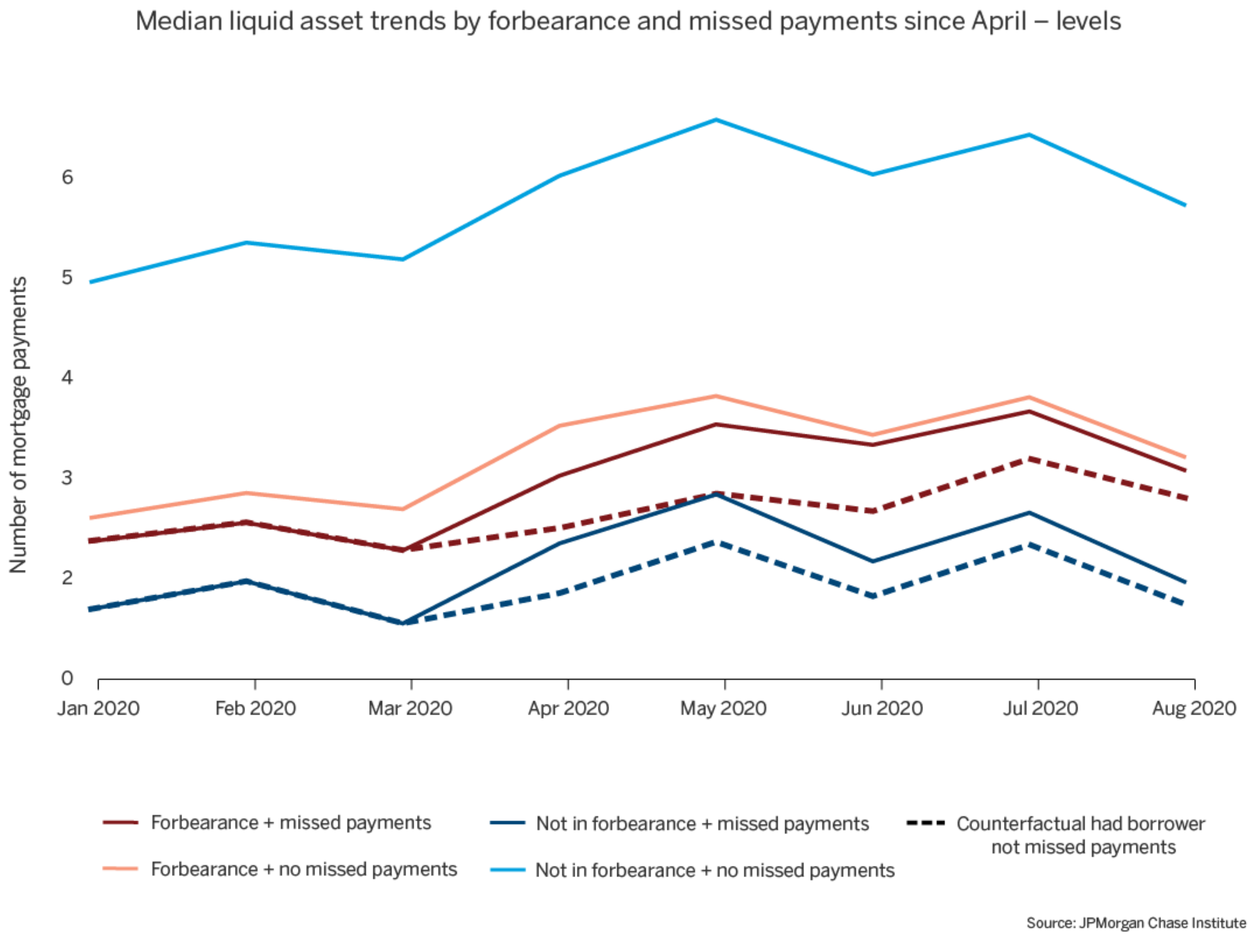
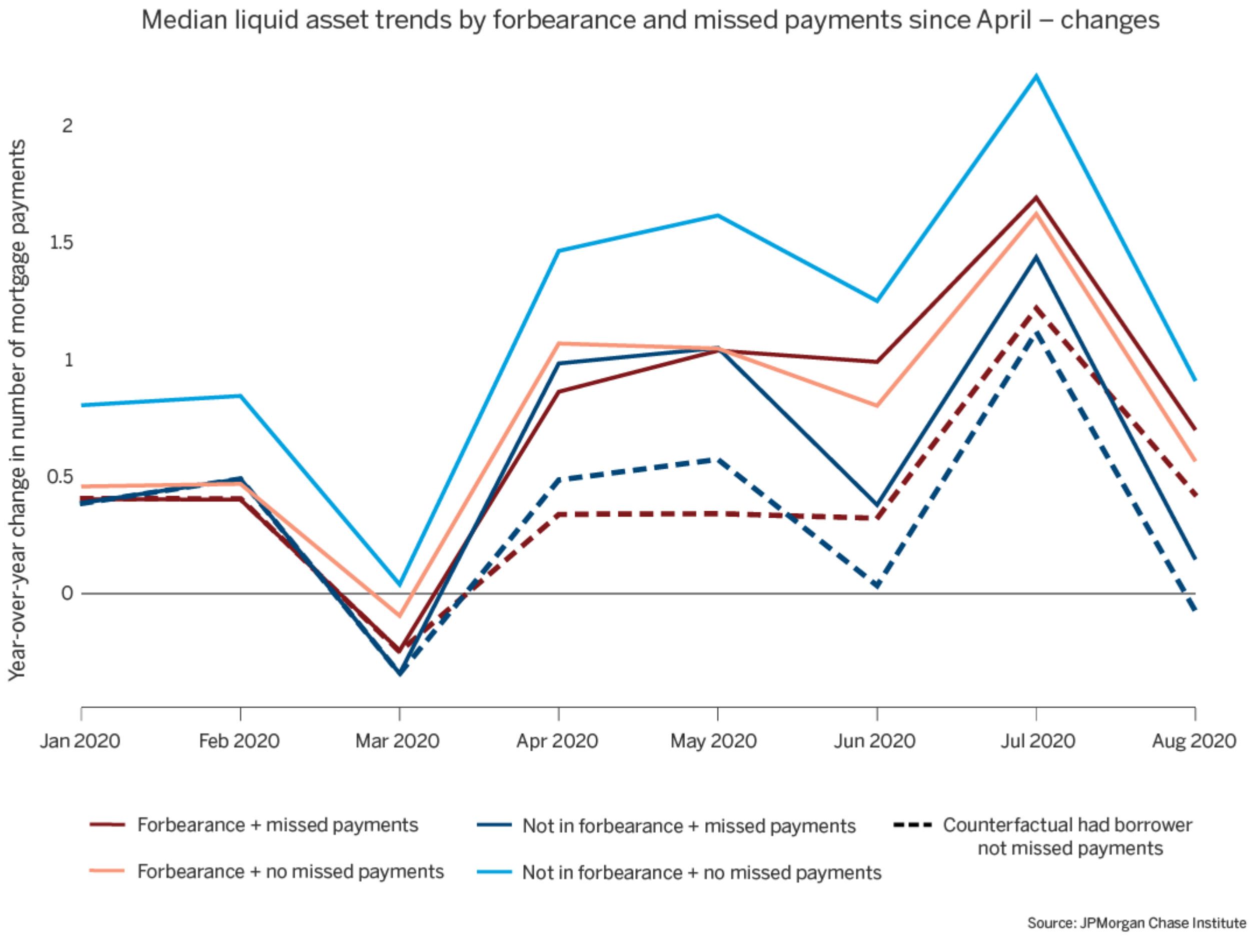


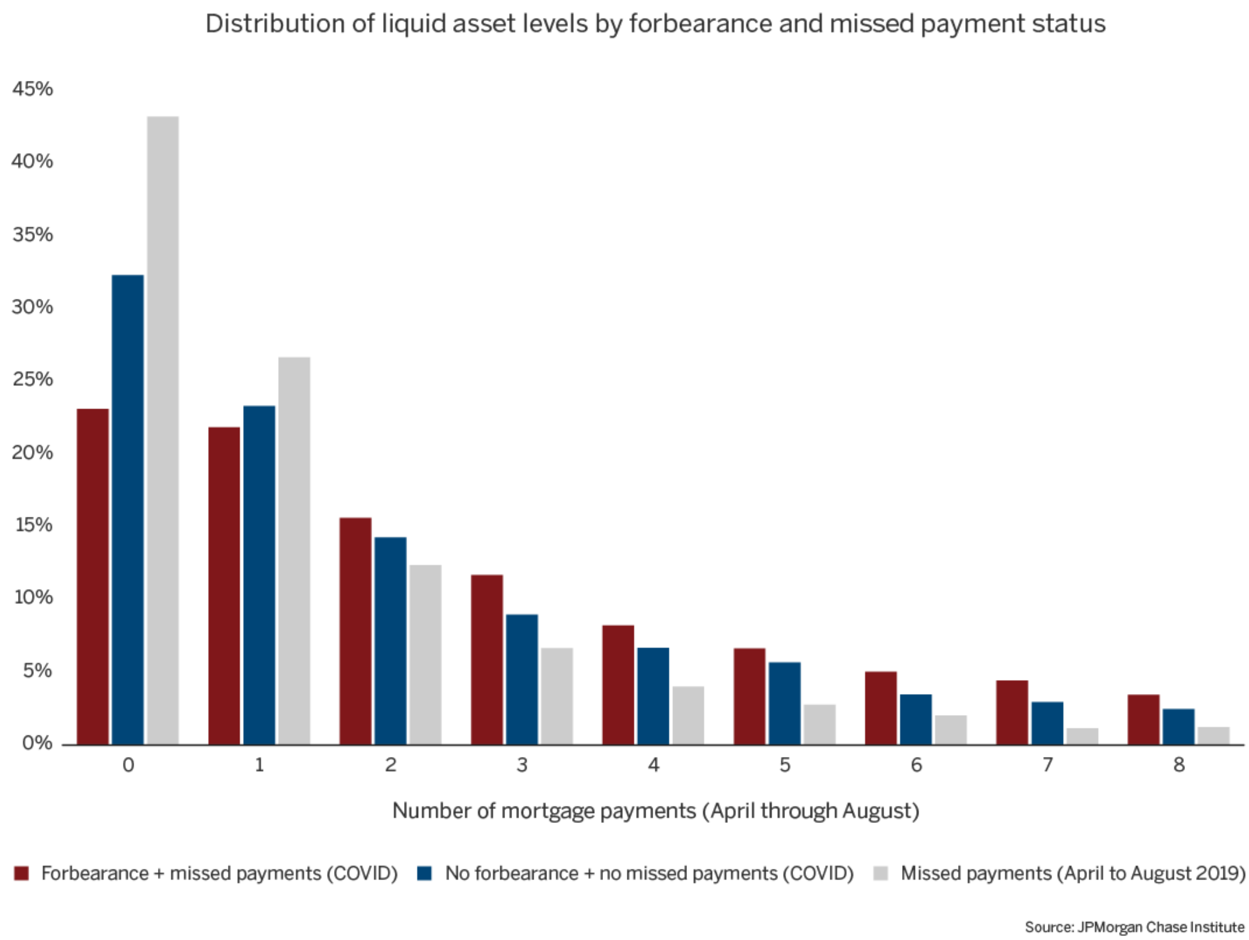
Figure 11. Missing payments allowed homeowners in financial trouble to build up liquid assets to a similar degree as those not missing payments.



Similar to the analysis in Figure 7, we also compare the liquid asset levels of those who missed payments while in forbearance (red bars) to those who went delinquent while not in forbearance (blue bars) and those who went delinquent in 2019 (black bars) in Figure 13. Relative to patterns pre-COVID, those who missed payments during COVID were more likely to have had higher levels of liquid assets. This may reflect increased aggregate savings during this period resulting from decreased spending and increased government support. This pattern is especially stark for those who missed payments while in forbearance (red bars), which may reflect the relatively low cost of missing payments for families in forbearance relative to normal circumstances. Therefore, it does seem like forbearance allowed families to not make their mortgage payment and maintain a larger cash buffer than usual during a period of high economic and labor market uncertainty. This could be viewed as a desirable policy outcome since forbearance (similar to other forms of government support) expires at some point, so holding on to more savings in preparation makes sense.[23]

[23] In related JPMC Institute work on the expiration of the $600 UI supplement, our data show that UI recipients used the larger-than-usual cash buffers they built up during the time they were receiving the extra $600 per week supplement to smooth consumption once that supplement expired.

Figure 12. Compared to those who went delinquent without forbearance, those who missed payments while in forbearance during COVID were more likely to have had higher levels of liquid assets.



Implications

Mortgage forbearance has been an important form of relief uniquely offered in this COVID-induced recession. Roughly one in eleven homeowners have taken advantage of mortgage forbearance as of August 2020, and yet a third of homeowners in forbearance made all payments to date. We also find little evidence of significant moral hazard, though we do see evidence that the small number of homeowners who went delinquent without forbearance were experiencing financial hardship. Families using forbearance to miss mortgage payments had larger drops in income than other homeowners and experienced income changes similar to those who became delinquent without the protection of forbearance. In addition, families in forbearance were more likely to have lost labor income and received unemployment benefits than families not in forbearance. Finally, we find that forbearance helped families with low cash buffers to maintain that cushion.

CARES Act mortgage forbearance policies helped homeowners experiencing financial hardship in a material way.

Families who experienced large income declines or lost a job and received UI disproportionately took advantage of forbearance whether as a precautionary measure or to use it to miss payments. For homeowners who missed payments, forbearance allowed them to miss payments without a negative effect on their credit scores. Of course, this also has the downside of making it harder for financial institutions to identify risk using traditional credit scoring models.

In addition, forbearance helped families to build up a cash buffer which may avert hardship should labor market conditions not improve as forbearance ends. The pandemic represents a large uncertainty shock to the economy–a policy that allows vulnerable families to conserve their resources has real benefits.

There is little evidence of material moral hazard as a result of mortgage forbearance so far.

The CARES ACT offered immediate payment relief to all homeowners with federally-backed mortgages (which many servicers extended to all loans) while requiring only an attestation of COVID-related hardship. The lack of documentation seemingly introduced the potential for significant moral hazard. During the Great Recession, fear of widespread fraud and abuse drove the decision to require documentation for government relief programs. However, we see little evidence of significant moral hazard in our data so far.

Importantly, while 9 percent of homeowners were in active forbearance at some point during the period we studied, only two thirds missed any payments. And our data show that this subset had the worst total income trends of any group. Furthermore, we show that homeowners who chose to opt into forbearance lost more labor income than those who did not and received more UI income. For those who received unemployment benefits, they overwhelmingly were in forbearance, but chose to continue making their mortgage payments, evidence that people paid when they could.

It is true that forbearance probably benefited homeowners who were already delinquent pre-COVID who could now go into forbearance when they would have probably become more delinquent over time anyways. However, our data show that baseline delinquency was very low for the groups in forbearance and was highest for those going delinquent without forbearance.

It is also true that homeowners who missed payments during COVID had larger cash buffers than those who were delinquent pre-COVID, and this was particularly the case for those missing payments in forbearance. However, liquid assets have grown for families as a result of the CARES Act government supports and COVID-related spending drops (Cox et al., 2020). And some homeowners may have chosen to forgo mortgage payments on a precautionary basis because they had the costless option to do during an otherwise highly uncertain time. This could be viewed as some degree of moral hazard, but allowing homeowners to maintain this small cash buffer likely allowed them to maintain consumption levels and meet other debt obligations. And it is almost inevitable that a policy like this would come with some small degree of moral hazard. However, that cost must be weighed against the benefit of helping many more homeowners than if the policy had required substantial documentation and paperwork. As evidence from the Great Recession shows, those requirements hampered the success of many of the housing relief programs from that period.[24]

There is room for improvement in future legislation as a small fraction of homeowners facing hardship did not benefit from forbearance as defined under the CARES Act

Our results show that 2 percent of homeowners missed payments during COVID while not in forbearance, though 15 percent of them were delinquent prior to COVID. Black Knight data shows that over 1 million past due mortgages are not in forbearance (400,000 became newly delinquent post-COVID). Of these, 680,000 are federally-backed and 405,000 are FHA/VA loans.[25]

Reducing this share could include changes on several fronts including patching some of the holes left by the CARES Act (e.g., non-federally backed mortgages and non-COVID related hardship), but according to survey evidence, the two main reasons for not entering forbearance when there is a need are (1) lack of knowledge around relief options and (2) worries about what happens when forbearance ends. [26,27] Government agencies and servicers spent significant resources on reaching homeowners in need to let them know their options, but despite these efforts, some homeowners may simply be difficult to reach.

While additional effort from community partners or others might make a difference, a change that might have had a larger impact would have been if the CARES Act had been clearer on forbearance exit policies. The CARES Act was silent on this and, importantly, did not specify whether homeowners would be on the hook to make a lump sum payment to cover all missed payments once the one-year forbearance period ended. While guidance from government agencies that balloon payments would not be required eventually came, by then, the media had already widely circulated stories that could have scared some homeowners from asking for forbearance.

Was widespread, easily obtainable mortgage forbearance the right policy?

In summary, we see evidence that mortgage forbearance helped families facing financial difficulty during a sudden and severe economic contraction get immediate payment relief. We do not see

[24] See the SIGTARP July 29, 2015 Quarterly Report to Congress, Table 3.2.
[25] https://cdn.blackknightinc.com/wp-content/uploads/2020/09/BKI_MM_Jul2020_Report.pdf
[26] https://www.hsgcenter.org/wp-content/uploads/2020/07/Survey-results-Forbearance-and-Delinquency2.pdf
[27] https://www.fanniemae.com/resources/file/research/housingsurvey/pdf/covid19-consumer-impact-nhs-q22020.pdf

evidence of widespread moral hazard. The CARES Act forbearance policies, therefore, appear so far to have been a large step in the right direction relative to policies during the Great Recession.

However, homeowners are generally higher-income while this recession disproportionately affected lower-income families and families of color, who are more likely to be renters. In a world with scarce resources, was mortgage forbearance the right policy tool? Certainly, given the nature of this recession, policies targeted at the most vulnerable families (such as expanded unemployment benefits) and businesses (such as the Paycheck Protection Program), were critical to the success of the CARES Act. The durability of the housing market and the forbearance results in this report are likely the result of not just the mortgage forbearance policies, but these other programs included in the CARES Act and deployed over the same period. With the expiration of the $600 unemployment supplement at the end of the July and the exhaustion of the subsequent Lost Wages Assistance, many jobless workers may see a drop in their income if they are unable to return to work. In this circumstance, jobless workers may face a choice to cut spending or fall behind on debt payments, including their mortgage. As a result of mortgage forbearance, deferring mortgage payments is a costless option that, under current law, is available to them for a year provided they opt in before the end of 2020. Eventually, without further government support or significant labor market improvements, mortgage forbearance may be an important relief option worth extending through 2021 for those not yet signed up.

Finally, the success of the mortgage forbearance policies themselves will depend critically on the results of exit options. Exit options will vary for different homeowners depending on who owns their loan, who services the loan, and their own financial circumstances at the end of the forbearance period. However, given the depth of the recession, many homeowners may need additional help.

Data Asset and Methodology

For this report, the JPMorgan Chase Institute assembled a de-identified data asset of Chase customers to measure income and liquid asset trends during COVID. In conducting this research, we went to great lengths to ensure the privacy of customer data.

The JPMorgan Chase Institute utilizes rigorous security protocols to ensure all customer information is kept confidential and secure. Our strict protocols and standards are based on those employed by government agencies and we work with technology, data privacy and security experts to maintain industry leading standards. There are several key steps the Institute takes to ensure customer data are safe, secure, and anonymous, including:

• Removing all unique identifiable information – including names, account numbers, addresses, dates of birth, and Social Security Numbers – before the Institute receives the data.

• Putting in place privacy protocols for researchers, including rigorous background checks and strict confidentiality agreements. Researchers are contractually obligated to use the data solely for approved research and may not re-identify any individual represented in the data.

• Disallowing the publication of any information about an individual, consumer, or business. Any data point included in any publication based on the Institute's data may only reflect aggregate information.

• Storing data on secure servers and under strict security procedures such that data cannot be exported outside of JPMorgan Chase's systems. The data are stored on systems that prevent them from being exported to other drivers or sent to outside email addresses. These systems comply with all JPMorgan Chase Information Technology Risk Management requirements for data monitoring and security.

The Institute prides itself on providing valuable insights to policymakers, businesses, and nonprofit leaders. But these insights do not come at the expense of JPMorgan Chase customer privacy or security.

Creating our analytic sample

For this research, our goal was to find a sample of Chase mortgage customers for whom we could reliably observe their forbearance and missed payment status as well as their income and liquid assets.

Starting with a universe of over 5 million Chase mortgage accounts (first liens only) for which servicing data is observed from January 2018 to August 2020, we define a household as the primary borrower and the co-borrower on a mortgage account and identify Chase DDA accounts associated with either the primary borrower or the co-borrower. In an effort to limit the sample to households who use a Chase account as a primary checking account, either the primary borrower or co-borrower was required to be the primary account holder on the associated DDA account(s). The age gap between the primary borrower and co-borrower was limited to 15 years to exclude co-borrowers who might be parents or other relations where the co-borrower is not a household member. The sample was also restricted to household-months where the household had at least five transactions across all of their checking accounts every month between January 2018 and August 2020 to create a balanced panel of 156,665 households.

We then defined forbearance households as households who were actively enrolled in forbearance at some point since March 2020. Missed payment status was defined as an increase in delinquency from the previous month.

Household-level total income was measured as monthly total checking account inflows excluding transfers from DDA, retirement, and investment accounts for the primary borrower and co-borrower. Total income therefore captures labor income, government support, and inflows from channels such as electronic transfers, paper check deposits, and cash deposits. Labor income was defined as direct deposit inflows, and UI income was categorized as inflows labelled as unemployment insurance. Income was winsorized at the 2nd and 98th percentiles.

Liquid assets was measured as monthly total personal checking account balances for the borrower and co-borrower in a household.

Additional Income and Liquid Asset Charts

Figures 13 and 14 are analogous to figures 5 and 7 in findings 2 and 3. However, figures 5 and 7 show income changes relative to the "not in forbearance and no missed payments" baseline group whereas figures 13 and 14 show year over year changes for the all of the groups of interest.

In these figures, the sharp bump for both groups in April is the result of families receiving their Economic Impact Payment. The large drop in August is due to two factors: (1) the $600 UI supplement expired at the end of July 2020 and (2) there were five Fridays in August 2019 but only four in August 2020, so people received more paychecks in August 2019 than in August 2020. Similarly, in July, there were five Fridays in July 2020, but only four Fridays in July 2019.

Figures 15 and 16 are analogous to figures 10 and 11 in Finding 4 but show liquid assets in dollars rather than in number of mortgage payments.

Figure 13. Year-over-year percent change in total income by forbearance and missed payment status.

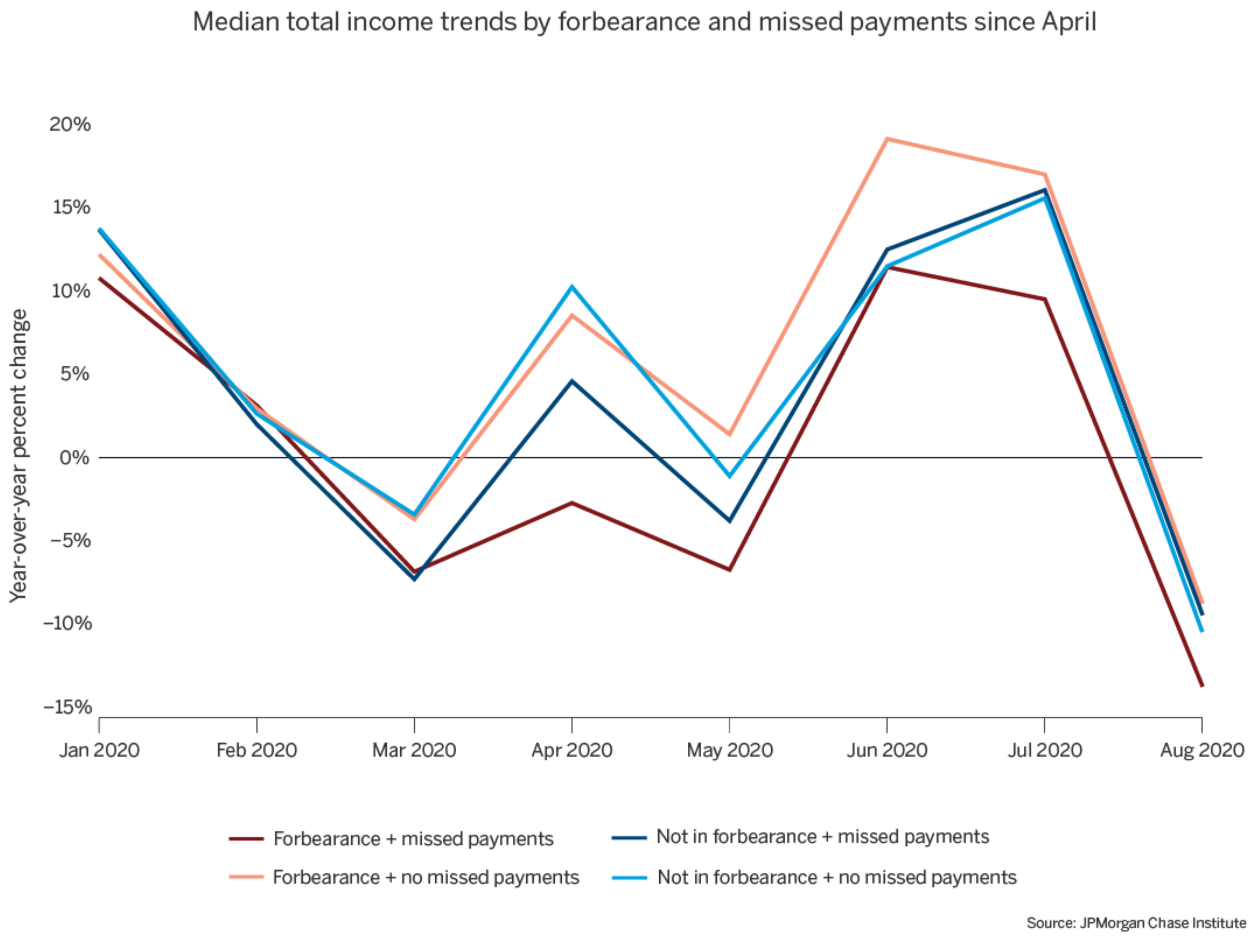


Figure 14. Year-over-year percent change in labor income by forbearance and missed payment status.

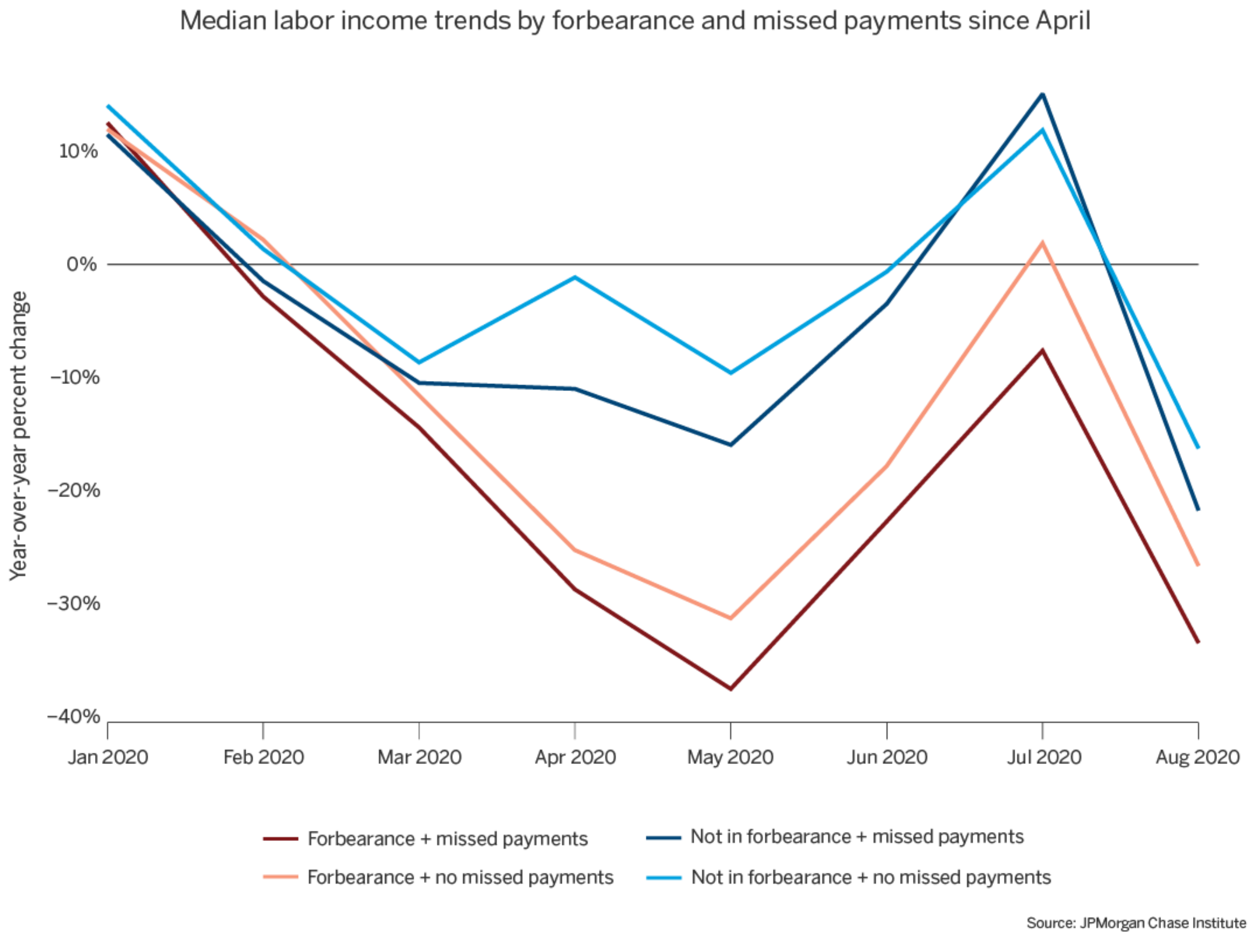


Figure 15. Liquid asset levels by forbearance and missed payment status.

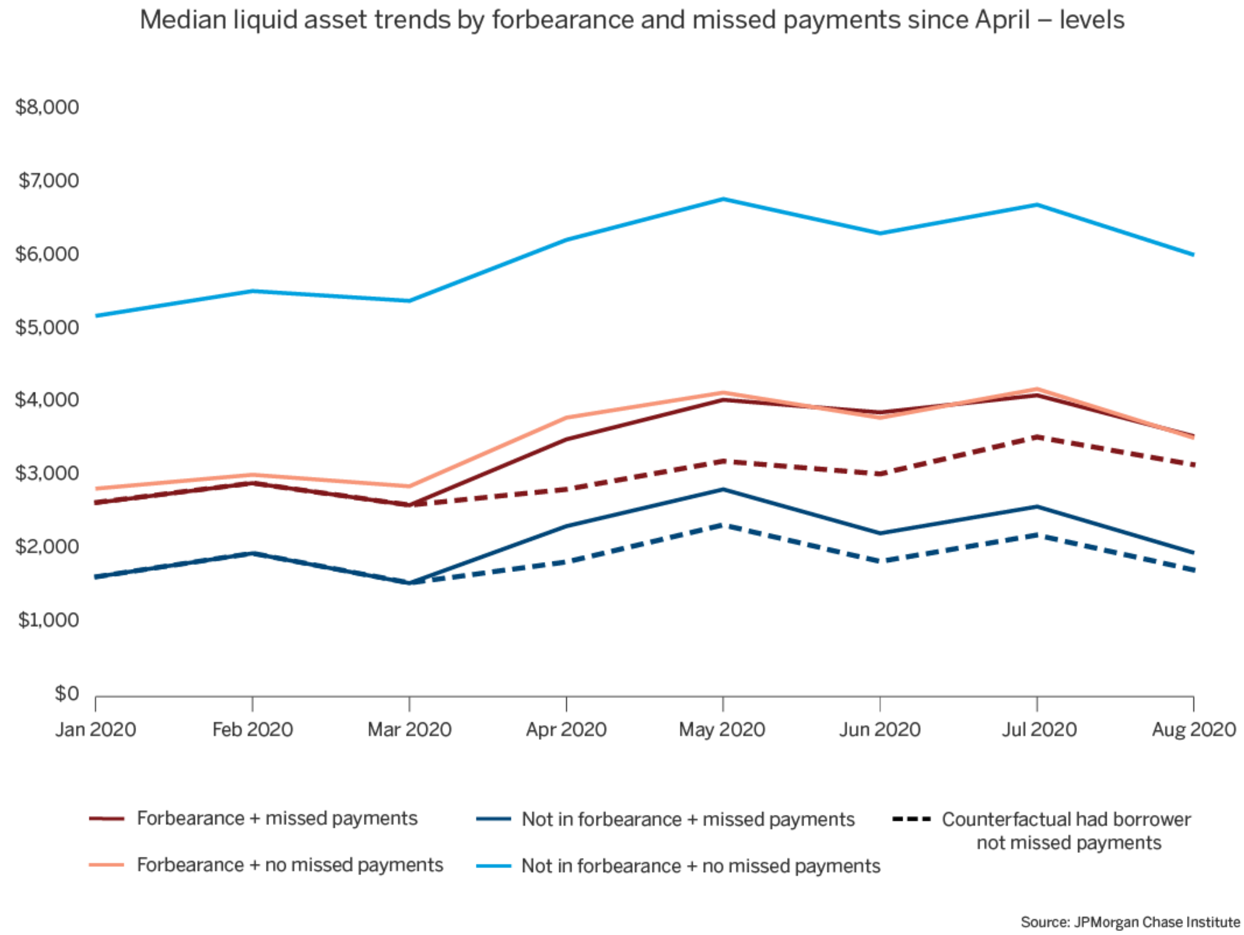
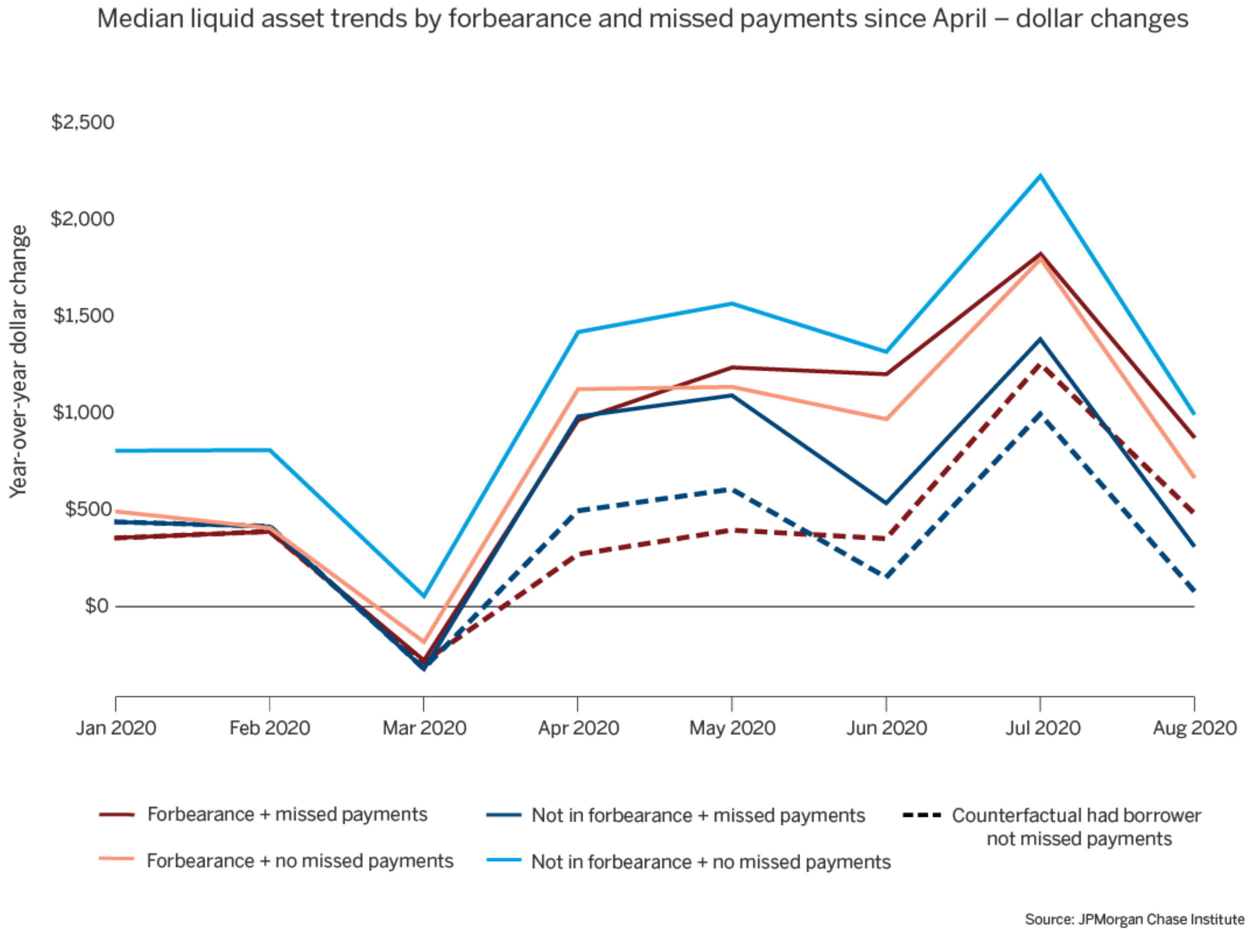


Figure 16. Year over year change in liquid assets by forbearance and missed payment status.



References

Alon, Titan M., Matthias Doepke, Jane Olmstead-Rumsey, and Michele Tertilt. 2020. “The impact of COVID-19 on gender equality.” No. w26947. National Bureau of Economic Research.

Black Knight. July 2020. “Mortgage Monitor: July 2020 Report.”

Cox, Natalie, Peter Ganong, Pascal Noel, Joseph Vavra, Arlene Wong, Diana Farrell, and Fiona Greig. 2020. “Initial Impacts of the Pandemic on Consumer Behavior: Evidence from Linked Income, Spending, and Savings Data.” Brookings Papers on Economic Activity, forthcoming.

Fannie Mae. August 2020. “National Housing Survey.”

Farrell, Diana, Kanav Bhagat, and Chen Zhao. 2019a. "Trading Equity for Liquidity: Bank Data on the Relationship between Liquidity and Mortgage Default." JPMorgan Chase Institute.

Farrell, Diana, Fiona Greig, and Chenxi Yu. 2019b. “Weathering Volatility 2.0: A Monthly Stress Test to Guide Savings.” JPMorgan Chase Institute.

Farrell, Diana, Peter Ganong, Fiona Greig, Max Liebeskind, Pascal Noel, Daniel Sullivan, and Joseph Vavra. 2020. "The unemployment benefit boost: Trends in spending and saving when the $600 supplement ended." JPMorgan Chase Institute.

Federal Housing Finance Agency Office of Inspector General. July 27, 2020. “Oversight by Fannie Mae and Freddie Mac of Compliance with Forbearance Requirements Under the CARES Act and Implementing Guidance by Mortgage Servicers.”

National Housing Resource Center. July 20, 2020“Forbearance and Delinquency Summary of Housing Counselor Survey.”

Office of the Special Inspector General for the Troubled Asset Relief Program. July 29, 2015. “Quarterly Report to Congress.”

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