

HOUSEHOLD RENTAL DEBT DURING COVID-19

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1. Introduction

COVID-19 and associated economic shutdowns have led to unprecedented job losses, with up to 20 million households and 24 million individuals experiencing an unemployment spell between March 2020 and August 2020.¹ The scale of these losses, their disproportionate impact on lower-income workers, and the uncertain timeline of economic recovery have raised concerns about the ability of households to maintain rent payments while out of work. Helping households stay in their homes is important for public health reasons and because eviction is associated with many negative outcomes, particularly for disadvantaged households (Desmond 2012, Desmond and Bell 2015, Desmond and Kimbro 2015), and in particular causes lost earnings, financial strain, homelessness, and health emergencies (Collinson and Reed 2019, Humphries et al. 2019). Beyond the effects on renters, the inability to repay rental debt could create cascading financial challenges for smaller landlords and significantly disrupt local housing markets (Choi and Young 2020, Brennan et al. 2020).

Many policies have been implemented since March to protect households from income losses and help them remain in their homes. The Coronavirus Aid, Relief, and Economic Security (CARES) Act expanded eligibility for unemployment insurance (UI), increased the number of weeks UI can be received, substantially increased the amount of UI benefits received (by an extra \$600 from April through the end of July), and made one-time payments of up to \$1,200 per adult and \$500 per child to eligible households in April. More specific to housing, state and local governments enacted a patchwork of eviction moratoriums, and in September the Centers for Disease Control and Prevention (CDC) ordered a national moratorium on residential evictions for nonpayment of rent through the end of December 2020.

However, many households may still remain at heightened risk of eventual eviction, for two key reasons. First, not everyone who lost a job was

eligible for April stimulus payments or UI, and many who are eligible may still not receive them. Second, all eviction moratoriums enacted thus far make clear that any rental debt² accrued during the moratorium would still be due when the moratorium expires. Yet data limitations have made it difficult to form a complete picture of how many households might be unable to pay.

This report provides new estimates of the number of households with rental debt — and the amount of debt owed — resulting from employment losses attributable to COVID-19. We present these estimates from March 2020 through March 2021 to directly inform how many renter households may be at risk of eviction because of COVID-19 when the national moratorium expires. It also informs the amount and forms of additional help that could help reduce this risk. We begin with data on the incomes and rents of a nationally representative sample of millions of households working in March 2020. We add in observed monthly changes in employment by industry at the state level, individual-specific UI income replacement amounts from Ganong et al. (2020), and state-specific UI reciprocity rates (the share of all unemployed individuals receiving UI). We then simulate individual job losses (and gains) over time and forecast any resulting shortfalls in households' ability to pay rent in each month. We consider different policy scenarios — such as whether individuals receive standard state UI, CARES UI, and Economic Impact Payments — to understand how effective these policies have been and for which households. We also show results separately by demographic characteristics such as race/ethnicity and household type to better understand the distributional effects of COVID-19 on rental debt. Our scope is national, although we include results by state to help inform policymaking at that level.

We have four main conclusions. First, many renter households are likely in need of additional support beyond what has been made available so far. Of 32 million renter households with at least one worker

¹ Authors' calculations from Current Population Survey, Current Employment Statistics, and IPUMS data. Details are provided in the data and methods sections.

² Throughout this report, we use "rental debt" to refer to any form of back rent that may eventually be owed, regardless of whether it is formal debt.

in February 2020, 7.5 million (23.5 percent) have experienced some unemployment between March 2020 and August 2020. We estimate that by December 2020, 1.34 million renter households (4.2 percent of all renter households and 18 percent of those experiencing some unemployment) will owe \$7.2 billion in rent, which is around \$5,400 each. These 1.34 million households contain 3.9 million individuals: 2.8 million adults and 1.1 million children. This scenario assumes that 90 percent of all households received Economic Impact Payments and that nationally, 50 percent of workers who have lost a job since March 2020 received CARES UI (from state or federal sources), and 50 percent did not receive any UI.³ These estimates are reasonably robust to alternative UI reciprocity rates.

Second, we show that policies designed to replace lost income for unemployed workers — such as standard state UI, the supplementary \$600 per week CARES Act UI benefit available from April through the end of July, and the Economic Impact Payments (which we will refer to as stimulus) sent to households in April — have been very effective at preventing rental debt *for those households that receive them*. For example, if every unemployed worker received UI with the CARES supplement and stimulus payments, only 125,000 households (0.4 percent of all renter households) would have any rental debt by December 2020.⁴ By contrast, if no unemployed households received UI or stimulus payments, 3.4 million (10.6 percent of all renter households and 45 percent of unemployed renter households), would have accumulated at least

³ We calculate state-specific UI reciprocity rates from the Census Bureau's Household Pulse Survey, which yields a national rate of 50 percent. Although this rate suggests a large share of unemployed workers have not received benefits, it is much higher than state reciprocity rates before COVID-19 and is similar to the levels reached in the first few months of the Great Recession. An alternative approach calculates UI reciprocity rates from continuing UI claims data and unemployment estimates, though this approach has its own drawbacks, such as that the number of claims does not necessarily correspond to the number of unique individuals actually receiving benefits.

⁴ The protectiveness of UI with CARES provisions is not surprising given that the extra \$600 per week in UI payments through CARES was chosen precisely so that total UI benefits would replace 100 percent of pre-tax wages for the average worker. It is also consistent with results from the National Multifamily Housing Council's Rent Tracker showing that rent payments have been more stable than employment losses alone would suggest and from Bhutta et al. (2020) showing in the Survey of Consumer Finances that UI is highly protective for most households.

some rental debt by December 2020.⁵ The total rental debt accrued by that time would be \$18 billion.

Third, in the overall scenarios, greater shares of households of color and female-headed households will experience rental debt by December 2020. This is consistent with findings from previous studies showing that COVID-19 has disproportionately affected these households, which primarily reflects their overrepresentation in jobs lost during the pandemic.⁶

Finally, there is substantial variation in rental outcomes by state. This reflects differences in employment losses by state, differences in income and rents by state, differences in UI reciprocity rates by state, and differences in UI income replacement rates by state. We provide results for all states in Section 5.

Comparison with Previous Studies

Many previous studies have estimated the number of households that may need additional housing assistance during COVID-19. Early studies identified at-risk jobs based on assumptions about which occupations or industries were most likely to be impacted by efforts to mitigate the spread of COVID-19. These early analyses varied in whether and how they incorporated assumptions about the offsetting impact of UI and the federal CARES Act but generally found that such supports would substantially mitigate rent and mortgage shortfalls.⁷ Our study differs in that our goal is to estimate the actual numbers of households with rental debt when the national eviction moratorium expires on December 31, 2020, and to do so with realistic inputs for incomes, rents, other costs, savings and UI replacement rates for various policy scenarios. We consider a range of rental debt outcomes, such as average debt accumulated

⁵ These 2.5 million households represent around 7.25 million individuals.

⁶ Lower-income, minority, and female workers are more likely to work in jobs requiring close physical proximity and in jobs that are not easily done from home, which have been most affected by social distancing requirements (Mongey et al. 2020).

⁷ For example, see Strohach et al. (2020), "How Much Assistance is Needed to Support Renters Through the COVID-19 Crisis?," which focuses on addressing rent burdens.

for those with any debt, to inform efforts to provide emergency rental assistance. We also emphasize the monthly dynamics of policies and rental debt outcomes, differences in outcomes by demographic characteristics, and forecast all outcomes out to March 2021.

Other previous studies rely on survey data on individuals' confidence that they will be able to pay rent now or in the future. These studies assume that low confidence in ability to pay rent is evidence of rental debt and then estimate total rental debt using summary statistics on rents for the survey respondents. This approach typically yields much higher estimates of rental debt than other approaches, for at least two reasons. First, low confidence in ability to pay rent may not translate one-to-one into actual inability to pay rent, even though it may still signal general financial distress. Second, these studies typically do not distinguish low confidence in ability to pay because of COVID-19 from preexisting low confidence. Thus, they may capture preexisting financial distress that, while important, is not the specific focus of this report.

The rest of this report is organized as follows. Section 2 describes the data and methods we use to simulate job losses and forecast rental debt. Section 3 describes national results for the different policy and overall scenarios, and Section 4 breaks out the overall scenarios by race/ethnicity and by household type. Section 5 describes state-level results, and Section 6 concludes.

2. Forecasting Rental Debt

a. Data

Our analysis relies on five main data inputs. The first is individual-level survey data for a nationally representative sample of millions of households drawn from the Census Bureau's American Community Survey Public Use Microdata Sample (PUMS) accessed via IPUMS. For each individual in a household, we see employment status, income, weeks worked, industry, occupation, state, and demographic characteristics such as race/ethnicity and education

level. At the household level, we observe whether the household rents or owns, the monthly rent or mortgage payment, the type of household, and the number of adults and children in the household. We restrict the sample to individuals who are employed and have positive incomes. The data include self-employed workers, freelance workers, and anyone else who self-identifies as employed when surveyed by the Census Bureau. Thus, we are able to capture a sample of all workers, not just those in payroll employment.

The most recent PUMS data available includes this information for individuals and households surveyed in 2018. We therefore adjust the data to match the state of the world in February 2020 as follows. First, because the survey is nationally representative, we assume individuals in the data in 2018 are similar to individuals living and working in February 2020 in terms of their characteristics, incomes, and rents. Second, we adjust the number of working households to match the number of working households observed in the Current Population Survey (CPS) in February 2020.⁸ The final data set provides a snapshot of working renter households just before COVID-19 began to affect the economic situation in the United States.

The second input is monthly changes in payroll employment from the CES. These capture the effect of COVID-19 on our sample of workers from IPUMS.⁹ Employment data are available by state, industry, and month for March 2020 through August 2020.¹⁰ We apply percent changes in payroll employment in each month from the CES to total employment at the

⁸ We do this by inflating the individual and household weights in the PUMS 2018 by the ratio of employed workers age 16 or older in the CPS in February 2020 to employed workers 16 or older in the PUMS 2018. The ratio is about 158 million to 149 million, or 1.06.

⁹ We assume that all employment changes beginning in March are because of COVID-19. An alternative approach would use year-over-year changes in employment (or some other form of seasonal adjustment) to better isolate employment changes specific to 2020. Given the scale of job losses in 2020 compared with 2019 and the many other approximations we have to make, this adjustment would not affect our main conclusions. CES data are available in a seasonally adjusted form but have much more suppression at the state by industry by month level than the unadjusted data.

¹⁰ We prefer measuring employment changes with the CES rather than the CPS because it is available at a more disaggregated level (by month, state, and industry).

beginning of each month from IPUMS to generate total employment losses in each month.¹¹

The third input is the amount of standard state UI benefits that each worker in a given state would receive while unemployed. We obtain these estimates using a program made publicly available by Ganong et al. (2020). Their program takes as inputs individual incomes and weeks worked and returns the amount of income that UI would provide for a worker in a given state based on each state's specific formula for calculating UI benefits. Our inputs are the income, weeks worked, and state of residence of each worker in the IPUMS data.

The fourth input is an estimate of the share of all unemployed workers who actually receive UI, called the reciprocity rate. There is little information about how many unemployed workers have actually received UI benefits since the beginning of the COVID-19 pandemic, particularly broken out by geography or demographic characteristics.¹² We therefore estimate state-specific UI reciprocity rates using data from the Census Bureau's Household Pulse Survey (Pulse Survey), pooling responses from June and July. Reciprocity rates are calculated as the share of respondents with a COVID-19-related reason for being out of work that reported using UI benefits to meet their spending needs within the last seven days. This yields a national reciprocity rate of just over 50 percent, which is consistent with recent work examining benefit receipt during the pandemic (Bitler, Hoynes, Schanzenbach 2020), as well as the authors' tabulations of the July 2020 supplement to the Survey of Household Economics and Decisionmaking. Mastro et al. (2015) also find using administrative data that the national reciprocity rate ranged from 50 to 60 percent in the first few months of the Great Recession.

¹¹ This assumes that percent changes in employment among payroll workers in a month, state, and industry are the same as the percent changes in employment among nonpayroll workers.

¹² It is not straightforward to determine using administrative data sets. Efforts to estimate UI receipt based on claims data are likely to significantly overstate the rate of households receiving assistance, as applications do not necessarily correspond to unique individuals.

The fifth major input is an estimate of essential costs other than housing. Unfortunately, PUMS does not include questions about these. We therefore approximate nonhousing costs by assuming that each person in each household requires \$8,000 per year in expenses other than housing. This is about halfway between a bare-bones budget that includes only food and personal necessities (around \$4,000 per person per year) and costs that are typical for the average household without a job loss and before COVID-19 (around \$12,000 per person per year).¹³ This essentially assumes that after a job loss and after COVID-19, the average unemployed household can reduce their nonhousing expenses by about 33 percent.

The final input is initial household savings, which are also not available in PUMS. We therefore assume that households have 5 percent of their initial household income in savings, which we calculate using data on median family savings and median family incomes for renters in the 2019 Survey of Consumer Finances.¹⁴ For example, a household with a pre-COVID-19 income of \$50,000 would have \$2,500 in initial savings in accessible accounts such as savings and checking accounts. This is equal to about two months of the median rent for households in our data.

b. Simulation Methods

We use these data inputs to simulate job losses and forecast resulting rental debt as follows. We begin with all working individuals (both renters and owners) in February 2020, which is around 150 million people. The CES data tell us how many workers lose their jobs in March in each state and in each industry. Because we do not know exactly which individuals lose jobs, we simulate job losses by assigning a certain share of workers job losses. For example, if the CES says 10 percent of workers in an industry and state lose jobs in March,

¹³ The first estimate is a back-of-the-envelope calculation using information in the MIT Living Wage Calculator, and the second estimate is a back-of-the-envelope calculation using information for the average household from the Consumer Expenditures Survey.

¹⁴ Available at www.federalreserve.gov/econres/scf/dataviz/scf/chart/.

we assign 10 percent of those initially employed in that industry and living in that state a job loss in March. To reflect the economic implications of social distancing requirements, we ensure that the workers who work in close physical proximity to others and with low ability to work from home are the first to lose their jobs.¹⁵ Mongey et al. (2020) show that lower-income households are more likely to work in such occupations, and this helps us generate the now well-established pattern that lower-income households, households of color, and female-headed households have been more likely to lose jobs during the COVID-19 pandemic (Saenz and Sparks 2020; Chetty et al. 2020).

For everyone who loses a job in March, we assume their monthly income is one-twelfth of their annual earnings, which lets us recalculate their household's new monthly income after their job loss. We can compare this income with their monthly rent (from PUMS) and monthly other costs (as described previously) to determine whether they would experience an income deficit in March.

Policy Scenarios

We then model five different policy scenarios:

1. **Nothing:** This is the simplest scenario, described in the previous paragraph, without any source of replacement income for workers who lose jobs.
2. **Standard UI:** When recalculating household income after a job loss, we add back in income replaced by standard state UI, which we calculate for each worker in each state as described previously. We add this income beginning in the first month of job loss (March in the current example) and extending for the number of weeks UI is available in that state (26 weeks for most states).
3. **Stimulus (without any UI):** We add Economic Impact Payments to the initial stock of savings

¹⁵ We do this using occupation-level data on physical proximity and ability to work from home from Mongey et al. (2020). Specifically, when assigning a certain number of job losses within a month, state, and industry, we first rank jobs by their combined risk (from close physical proximity and inability to work from home) and start assigning jobs to the highest risk jobs first until all job losses are assigned.

described previously for each household in April.¹⁶ When household income after a job loss is less than rent and other costs, households draw down this stock of savings to avoid going into a rental deficit until the stock is gone. The stimulus payment amount reflects the number of adults and children in the household up to some income limit, as defined in the CARES Act. The typical household receives \$1,200 per adult and \$500 per child.

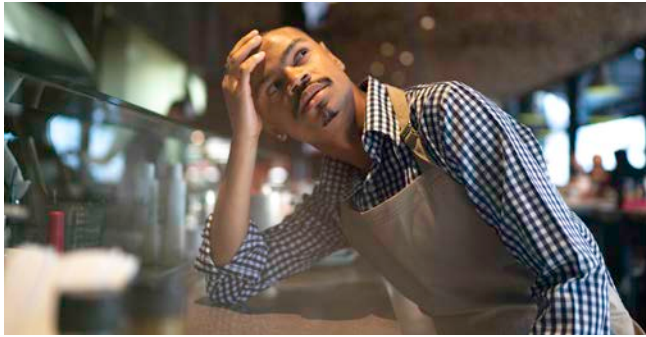
4. **CARES UI (without stimulus):** When recalculating household income after a job loss, we add back in income replaced by standard state UI plus an additional \$600 per week that is only available from April until the end of July. We also add in the \$300 per week FEMA UI supplement for the month of August for all states.¹⁷ We also extend the number of weeks individuals can receive UI by 13 weeks.
5. **CARES UI and Stimulus:** Households receive both the Stimulus and CARES UI scenarios.

We now have a March income deficit for each of these scenarios. For example, a household might lose a job and then have an income deficit in the Nothing scenario. However, they might not have an income deficit in the Standard UI scenario if enough of their lost income is replaced by UI. In each scenario, if there is an income deficit then we attribute the amount that would have gone to rent as the *rental deficit*.¹⁸ If a scenario results in a positive income surplus, the entire surplus goes toward paying off any debt accumulated so far and, once all debt is gone, into a stock of savings. This is important because stimulus payments and CARES UI both resulted in many households having higher incomes after job loss than before, and we want to reflect this.

¹⁶ We do this for all households in April regardless of whether they are currently unemployed, as these payments were not conditional on unemployment.

¹⁷ While timing of actual adoption of these extra benefits differed by state, we assign all of this extra benefit to August for simplicity.

¹⁸ For example, if a household has a monthly rent of \$1,000 and an income deficit of \$300, we attribute all \$300 to the rental deficit. If they have an income deficit of \$1,500, we attribute only \$1,000 to the rental deficit, and the rest will be other types of debt. This ensures that our final rental debt outcomes capture only rental debt caused by a job loss, not all debt.



The process then continues to the next month. Each month begins with each individual's and each household's employment and debt status at the end of the previous month. The CES again tells us the number of workers who lose jobs in each state and industry in April. If there are more job losses, we assign workers new job losses as described previously. If there are job gains, we assign unemployed workers job gains in a similar way.¹⁹ We then recalculate household incomes after job losses (or gains) and compare them with rents and other costs for the different scenarios, and these yield income deficits or surpluses for each household. These then affect rental debt as described previously.

We continue this process for all scenarios for each month through March 2021. This yields information from which we can calculate our four related debt outcomes in each month: the number of renter households with any accumulated debt, the share of all renter households with any accumulated debt, the total dollars of accumulated debt, and the average accumulated debt for households with any debt.

Overall Scenarios

While we model the five debt scenarios separately, the overall debt picture nationally and by state will reflect a blend of households receiving different policies. We therefore provide three overall

¹⁹ When unemployed workers regain jobs in a given month, we recalculate their household income with the new income. If there is still a monthly deficit (because the new income is sufficiently low), they continue to accumulate rental debt each month as when they were unemployed, just more slowly. If the new household income yields a monthly surplus, all of the monthly surplus is used to help pay off the stock of accumulated rental debt. After enough months, the debt can be paid off completely and the household is no longer counted as in rental debt. Thus, someone can lose a job in April, go into rental debt, gain a job in June, and be back out of rental debt by October.

scenarios in addition to the five policy scenarios. For these, we always assume that 90 percent of households receive the Stimulus scenario. For our main overall scenario, we then assume that the share of households receiving UI in each state is the reciprocity rate calculated from the Pulse Survey.²⁰ Because the national rate in the Pulse Survey is 50 percent, we call this scenario Reciprocity 50. We then also show two additional overall scenarios to understand how robust the overall results are to reasonable differences in the UI reciprocity rate. Reciprocity 60 adds 10 percentage points to each state's Pulse Survey rate (yielding a national rate of 60 percent), and Reciprocity 70 adds 20 percentage points.²¹

c. Caveats

There are a few important caveats to our approach. First, as mentioned before we do not observe household savings or nonhousing costs. We therefore estimate these from available sources, although they are important inputs and different values can yield different results. Second, at the time of writing, employment data from the CES are only available through August 2020. We hold employment fixed at its August level in all subsequent months, meaning any changes in the pace of the recovery will affect debt estimates in December 2020 and March 2021.²² We hope to update our results in the future to reflect changing employment and any major policy changes. Third, we do not account for financial strain caused by hour or wage reductions that do not result in employment changes measured by the CES. Fourth, we study how many households are specifically in rental debt that has resulted from job losses since March 2020. The PUMS data show that

²⁰ State reciprocity rates calculated from data in the Pulse Survey are included in the last column of Table 6.

²¹ For a specific example, assume a state has a reciprocity rate of 55 percent in the Pulse Survey. Then the Reciprocity 50 scenario assumes that for workers in that state, 55 percent of workers received the CARES UI and Stimulus policy scenario, 10 percent received the Nothing scenario, and the remaining 35 percent received the Stimulus Only scenario. In this example, 90 percent of households received stimulus payments (regardless of UI receipt) and 45 percent of households do not receive UI (regardless of stimulus receipt).

²² Most COVID-19-related job losses, and subsequent gains, have occurred by August. Thus, in our results most households falling into rental debt have done so by August. This suggests that any changes to debt outcomes that we miss because we lack employment changes after August may be small relative to the overall level of the debt outcomes.

TABLE 1: NATIONAL SUMMARY STATISTICS

	Ever Unemployed	Never Unemployed	All
Renter Households	7,509,255	24,449,184	31,958,439
Median Annual Household Income Before Job Loss (\$)	47,633	49,750	49,183
Median Annual Head of Household Income Before Job Loss (\$)	28,565	35,862	33,516
Median Monthly Rent (\$)	1,055	1,059	1,058
Average Monthly Other Costs (\$)	1,932	1,623	1,696
Average Adults per Household	2.1	1.7	1.8
Average Children per Household	0.8	0.7	0.7

Notes: Sample is all renter households with at least one member working before March 2020. Other costs, adults per household, and children per household shown as averages instead of medians because there is less variation in these at the household level. The precision of these estimates should not be overinterpreted, and they are likely only accurate to one or two significant digits.

Sources: IPUMS 2018, CES, and CPS.

many working households struggled to meet housing and other costs even before job loss. We include these households in our simulation, but we do not include these initial (pre-job loss) income deficits when calculating rental debt or any nonhousing debt accrued after a job loss.²³ While these are important, they are not the focus of this report.

3. National Results

Table 1 presents summary statistics of our sample of renter households with at least one adult worker in

February 2020.²⁴ There are 32 million such households. Of these, 24.5 million maintain consistent employment from March through August. This leaves 7.5 million, or 23.4 percent, who are ever unemployed during the same period. Pre-COVID median annual household income is slightly lower for those who experience unemployment from March to August compared with those who do not. The income difference is more pronounced when looking at the median annual incomes of *individual householders*: \$28,500 for those in households experiencing

²³ Initial deficits may reflect problems in the survey data, outliers in terms of the nonhousing costs we do not observe, households going into debt, or other types of preexisting financial insecurity.

²⁴ The precision of all estimates in this report should not be overinterpreted, particularly given the many assumptions required to generate them. Estimates are likely only accurate to one or two significant digits, and we discuss them accordingly.

FIGURE 1: NATIONAL DEBT OUTCOMES FOR DIFFERENT POLICY SCENARIOS

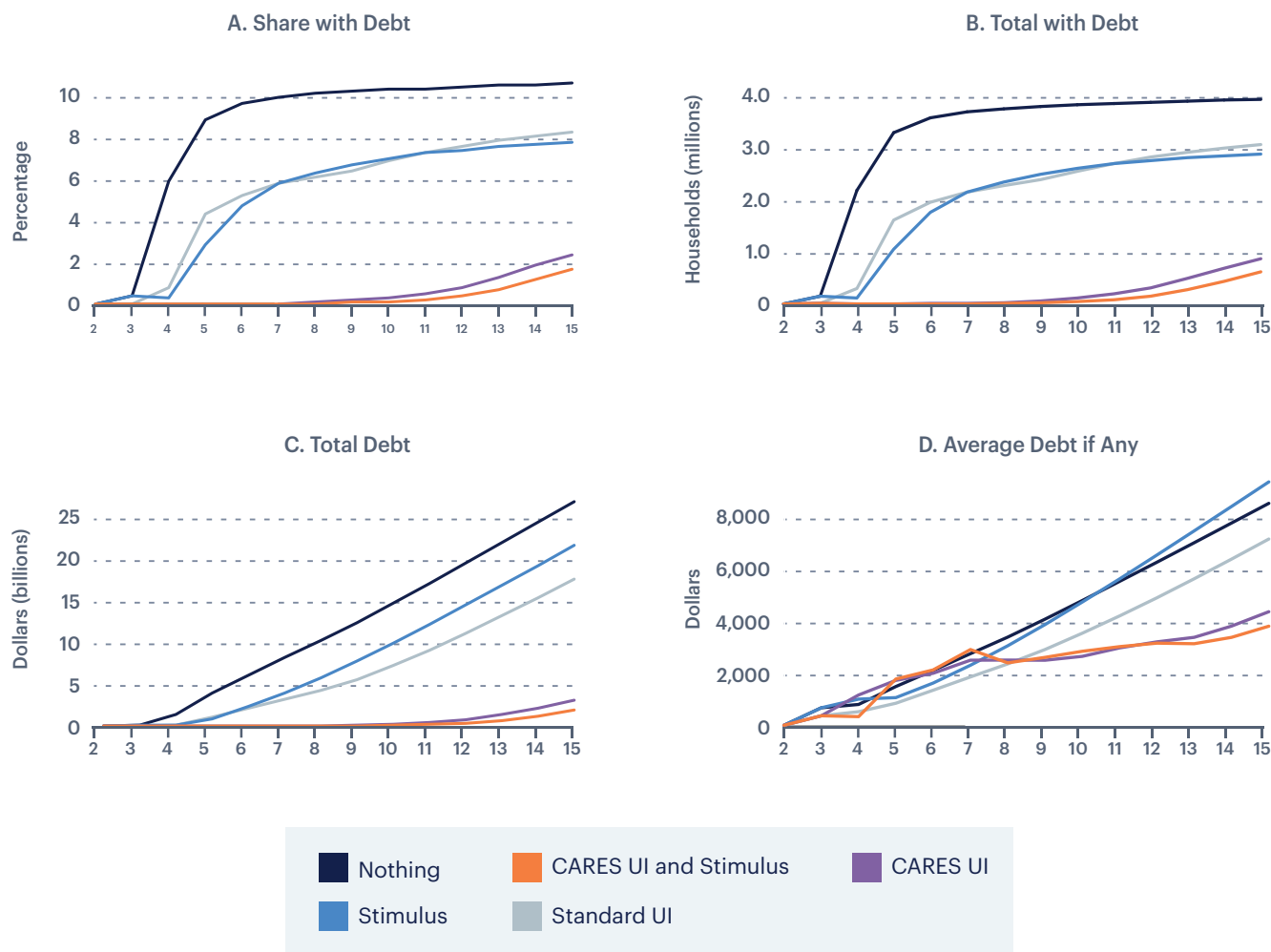


Figure notes: Sample is all renter households with at least one member working before March 2020. Months 13, 14, and 15 refer to January, February, and March 2021, respectively. Sources: IPUMS 2018, CES, and CPS.

unemployment (which is often the householder) versus \$36,000 for those who are not. These differences reflect the well-established finding that lower-income workers have been more likely to experience job loss because of COVID-19 (Chetty et al. 2020). A smaller difference at the household level may imply that households experiencing unemployment have more earners, and in fact we see in Table 1 that they have more adults. Median monthly rent is similar across employed and unemployed households at around \$1,050 per month. Average monthly other costs are higher for households experiencing unemployment, reflecting more people in those households.

a. Different Policy Scenarios

Figure 1 shows our four debt outcomes by month for the five different policy scenarios described in the previous section.²⁵ Each panel summarizes a different debt outcome. Within each panel, each line represents that outcome for a different policy scenario. For example, Figure 1, Panel A, shows the share of all 32 million renter households with any rental debt in each month. Each line represents a different policy scenario, such as the Nothing scenario and the CARES UI and Stimulus scenario. Panel B shows total households with debt, Panel C

²⁵ Here and throughout the report, month 3 corresponds to March 2020 and month 15 corresponds to March 2021.



shows millions of dollars of debt, and Panel D show average debt per household in debt.

These panels show that rental debt outcomes are markedly different between the scenarios that incorporate the CARES Act provisions and those that do not. In the Nothing scenario, the number of households in debt increases dramatically in April, reflecting the magnitude of employment losses in that month, and stays there through the end of the year. Total and average debt rise steadily each month. By contrast, in the CARES UI and Stimulus scenario, in which everyone receives these policies, the number and share of households in debt stay low through the end of the year, only rising after December when most state UI benefits begin to expire.

In between these two extreme scenarios, we also show results for different intermediate scenarios in

order to show how effective each component of these policies has been. Standard UI is a useful benchmark. While outcomes in this scenario are certainly better than in the Nothing scenario, they are actually closer to the Nothing scenario than either the CARES UI or CARES UI and Stimulus scenarios. This suggests that the extra \$600 per week in UI benefits provided by CARES was instrumental in keeping households out of rental debt. The Stimulus scenario shows that Economic Impact Payments alone were about as protective from rental debt as standard state UI typically is. However, comparing CARES UI with CARES UI and Stimulus reveals little difference in any outcomes between them. This implies that stimulus payments provided little additional benefits, in terms of these outcomes, beyond receiving state UI plus the additional \$600 per week from April to July. The

TABLE 2: NATIONAL DEBT OUTCOMES FOR DIFFERENT POLICY SCENARIOS

Month	NOTHING				STIMULUS ONLY	
	Share of Renter Households in Debt	Total Renter Households in Debt	Millions of Dollars of Debt	Average Debt If Any	Share of Renter Households in Debt	Total Renter Households in Debt
3	0.4	134,819	78	578	0.4	134,819
4	6	1,914,087	1,316	688	0.3	98,036
5	9	2,880,800	3,689	1,281	2.9	919,422
6	9.8	3,129,446	5,684	1,816	4.8	1,540,796
7	10.1	3,233,644	7,656	2,368	5.9	1,875,215
8	10.3	3,279,797	9,566	2,916	6.4	2,050,966
9	10.4	3,317,020	11,643	3,510	6.8	2,184,571
10	10.5	3,346,003	13,809	4,127	7.1	2,280,902
11	10.5	3,368,579	16,033	4,760	7.4	2,355,180
12	10.6	3,392,346	18,298	5,394	7.5	2,410,321
13	10.7	3,410,150	20,593	6,039	7.7	2,455,595
14	10.7	3,425,014	22,911	6,689	7.8	2,493,226
15	10.8	3,439,394	25,248	7,341	7.9	2,524,836

Notes: Sample is all renter households with at least one member working before March 2020. The precision of these estimates should not be overinterpreted, and they are likely only accurate to one or two significant digits.

Sources: IPUMS 2018, CES, and CPS.

Month	STIMULUS ONLY		CARES UI AND STIMULUS			
	Millions of Dollars of Debt	Average Debt If Any	Share of Renter Households in Debt	Total Renter Households in Debt	Millions of Dollars of Debt	Average Debt If Any
3	78	578	0	9,190	3	313
4	85	865	0	86	0	285
5	840	914	0	319	0	1,529
6	2,153	1,397	0	901	2	1,831
7	3,723	1,985	0	1,574	4	2,505
8	5,391	2,629	0	6,244	13	2,064
9	7,277	3,331	0.1	16,806	38	2,246
10	9,297	4,076	0.1	36,412	89	2,447
11	11,405	4,842	0.2	69,561	181	2,601
12	13,575	5,632	0.4	125,323	341	2,717
13	15,791	6,431	0.7	235,847	636	2,698
14	18,044	7,237	1.2	381,382	1,109	2,908
15	20,326	8,051	1.7	539,229	1,768	3,278

CARES scenarios' effectiveness in preventing rental debt reflects that the extra \$600 was chosen to replace 100 percent of lost pretax income for the average worker, which resulted in it replacing more than 100 percent of lost income for 76 percent of unemployed workers (Ganong et al. 2020).

Table 2 shows the values of the monthly debt outcomes depicted in Figure 1 for three of the five policy scenarios: Nothing, Stimulus Only, and CARES UI and Stimulus. If every household experiencing unemployment were to receive CARES UI and Stimulus, then by December 2020 approximately 125,000 renter households would have rental debt and would owe around \$2,800 each. At the other extreme, if no households received any of these policies, 3.4 million households would owe \$5,400 each.

The dramatic differences in debt outcomes between the CARES UI scenarios and other scenarios shown in Figure 1 and Table 2 imply that whether a household experiencing unemployment actually receives UI is the biggest determinant of its likelihood of accumulating rental debt. Consequently, they also imply that the share of all such households that actually receive state or federal UI — the reciprocity rate — is key to understanding the overall picture of rental debt. The next section shows these overall scenarios for different likely values of the reciprocity rate.

b. Overall Scenarios with Different Reciprocity Rates

Figure 2 shows results for the three overall scenarios described in Section 2.b. Reciprocity 50 is our best approximation of the overall rental debt picture. Because each scenario is a different blend of the same specific policy scenario inputs (Nothing, Stimulus, and CARES UI and Stimulus), the patterns over time are mechanically very similar for the Reciprocity 50 percent, 60 percent, and 70 percent scenarios. In the 50 percent scenario, the share of households with any rental debt rises modestly to 0.7 percent by April, reflecting that the large employment decline in April was largely offset by the stimulus payments received by 90 percent of households in this scenario. The share of households with debt then jumps more sharply in May and June

as more jobs are lost and unemployed households spend all of their stimulus payments meeting rent obligations. The shares and totals then continue rising, although more slowly given smaller employment changes, through March 2021.

Table 3 provides additional details on the patterns described for Figure 2. In the Reciprocity 50 scenario, 1.34 million households (4.2 percent of all renter households) will have accumulated rental debt by the time the CDC eviction moratorium expires in December. This would total \$7.2 billion, or \$5,400 for each household with debt. These numbers would be slightly lower if reciprocity rates are 10 or 20 percentage points higher, although they are generally similar, suggesting the estimates are reasonably robust to other values of the reciprocity rate.

Our results for total households in debt and millions of dollars of rent owed are similar to — but lower than — some widely cited estimates published previously.²⁶ Our analysis differs from these efforts in several meaningful ways, as described in the introduction. We believe our choices provide results that are most specific to our research question: how many households are likely to owe rental debt, and thus be at risk of eviction, because of pandemic-related job losses.

4. National Results by Race and Ethnicity and Household Type

We now look at differences in rental debt outcomes by race and ethnicity and by household type. Previous research has documented that COVID-19 has had disproportionate negative impacts on health and employment in communities of color, suggesting that rental debt after job loss may follow similar patterns. Furthermore, unlike previous recessions, women's employment has been disproportionately impacted, with effects

²⁶ See, for example, Aspen Institute, "20 Million Renters Are at Risk of Eviction; Policymakers Must Act Now to Mitigate Widespread Hardship," available at www.aspeninstitute.org/blog-posts/20-million-renters-are-at-risk-of-eviction/ and National Coalition of State Housing Agencies, "Analysis of Current and Expected Rental Shortfall and Potential Eviction Filings in the U.S.," available at www.ncsha.org/resource/current-and-expected-rental-shortfall-and-potential-eviction-filings/.

FIGURE 2: NATIONAL DEBT OUTCOMES FOR DIFFERENT RECIPIENCY RATES



Figure notes: Sample is all renter households with at least one member working before March 2020. Months 13, 14, and 15 refer to January, February, and March of 2021, respectively. Reciprocity rates are calculated from the Census Household Pulse Survey and described in detail in the text.

Sources: IPUMS 2018, CES, and CPS.

TABLE 3: NATIONAL DEBT OUTCOMES FOR DIFFERENT RECIPIENCY RATES

Month	RECIPIENCY RATE 50 PERCENT				RECIPIENCY RATE 60 PERCENT	
	Share of Renter Households in Debt	Total Renter Households in Debt	Millions of Dollars of Debt	Average Debt If Any	Share of Renter Households in Debt	Total Renter Households in Debt
3	0.2	71,230	40	558	0.2	58,667
4	0.7	229,514	164	715	0.7	219,719
5	2	642,387	688	1,071	1.7	550,476
6	2.8	908,120	1,385	1,525	2.4	754,131
7	3.3	1,050,337	2,185	2,080	2.7	862,973
8	3.5	1,126,196	3,019	2,681	2.9	921,723
9	3.7	1,187,828	3,962	3,335	3	971,051
10	3.9	1,238,474	4,979	4,020	3.2	1,014,025
11	4	1,286,334	6,056	4,708	3.3	1,057,772
12	4.2	1,337,766	7,196	5,379	3.5	1,109,267
13	4.4	1,413,209	8,426	5,962	3.7	1,191,234
14	4.7	1,503,544	9,764	6,494	4	1,292,360
15	5	1,597,944	11,212	7,016	4.4	1,399,383

Notes: Sample is all renter households with at least one member working before March 2020. Other costs, adults per household, and children per household shown as averages instead of medians because there is less variation in these at the household level. The precision of these estimates should not be overinterpreted, and they are likely only accurate to one or two significant digits.

Sources: IPUMS 2018, CES, and CPS.

Month	RECIPIENCY RATE 60 PERCENT		RECIPIENCY RATE 70 PERCENT			
	Millions of Dollars of Debt	Average Debt If Any	Share of Renter Households in Debt	Total Renter Households in Debt	Millions of Dollars of Debt	Average Debt If Any
3	32	549	0.1	46,104	25	536
4	156	709	0.7	209,924	147	701
5	604	1,097	1.4	458,566	520	1,134
6	1,170	1,551	1.9	600,141	955	1,591
7	1,813	2,101	2.1	675,609	1,441	2,133
8	2,481	2,692	2.2	717,251	1,943	2,709
9	3,238	3,334	2.4	754,274	2,514	3,333
10	4,058	4,002	2.5	789,576	3,138	3,974
11	4,934	4,665	2.6	829,210	3,812	4,597
12	5,872	5,294	2.8	880,767	4,549	5,165
13	6,911	5,801	3	969,260	5,395	5,566
14	8,071	6,245	3.4	1,081,175	6,377	5,899
15	9,356	6,686	3.8	1,200,822	7,500	6,246

FIGURE 3: DEBT OUTCOMES BY RACE AND ETHNICITY

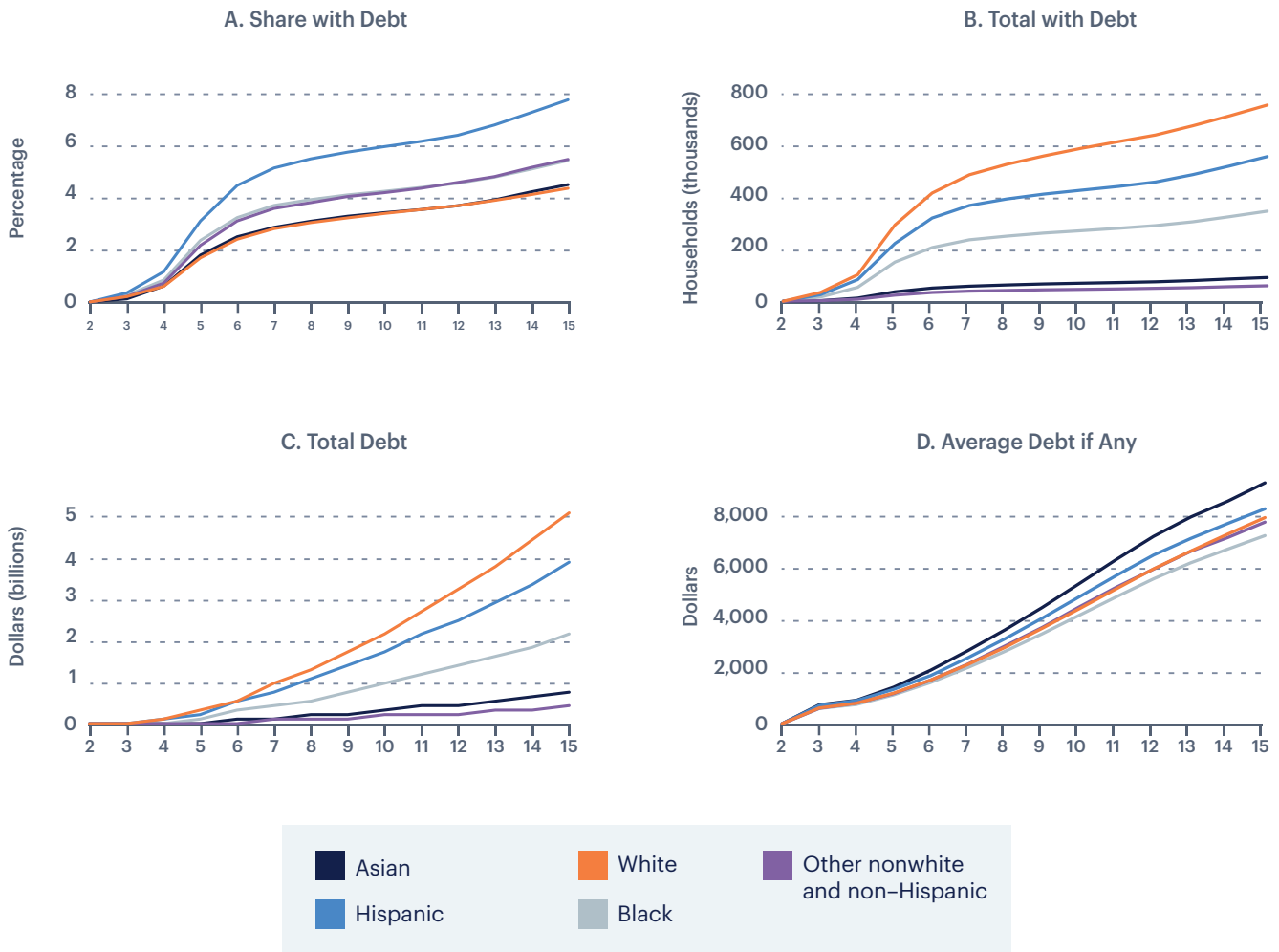


Figure notes: Months 13, 14, and 15 refer to January, February, and March of 2021, respectively. Race/ethnicity categories are exclusive, such that Hispanic households may be of any race and all other racial groups refer to non-Hispanic households. Debt outcomes are calculated using the state-specific reciprocity rates estimated from the Census Bureau's Household Pulse Survey, which yields a national average of 50 percent.

Sources: IPUMS 2018, CES, and CPS.

likely compounded by the closure of many schools and childcare facilities. As a result, female-headed households, particularly those with children, may be especially vulnerable to economic shocks and thus accruing rental debt.

a. Results by Race and Ethnicity

Figure 3 shows the overall scenario of rental debt outcomes broken out by the race and ethnicity

of the householder. Panel A shows that Hispanic households are the most likely to experience any debt (6 percent have rental debt by December), followed by Black and other nonwhite and non-Hispanic households (4.3 percent). White and Asian households are the least likely, at 3.5 percent. White households are a plurality of households in debt (Panel B) and total debt (Panel C), reflecting that they are a plurality of all renter households.

TABLE 4: SUMMARY STATISTICS AND DECEMBER DEBT OUTCOMES BY RACE AND ETHNICITY**Panel A: Summary Statistics for Households Ever Unemployed**

	Renter Households	Median Annual Household Income Before Job Loss	Median Annual Head of Household Income Before Job Loss	Median Monthly Rent	Average Monthly Other Costs	Average Adults per Household	Average Children per Household
Asian	385,649	53,000	28,690	1,312	2,167	2.5	0.7
Black	1,319,432	40,847	26,463	995	1,859	1.9	0.9
Hispanic	1,959,446	46,109	25,404	1,146	2,358	2.4	1.1
Other non-Hispanic and nonwhite	242,684	46,000	27,084	1,035	1,884	2	0.8
White	3,602,044	51,232	31,421	1,006	1,705	1.9	0.6

Panel B: Debt Outcomes in December 2020 for 50% Reciprocity Rate

	Total Renter Households	Share of Renter Households in Debt	Total Renter Households in Debt	Millions of Dollars of Debt	Average Debt If Any
Asian	1,909,452	3.5	66,206	420	6,351
Black	6,004,564	4.3	257,224	1,263	4,910
Hispanic	6,740,067	6.0	405,296	2,317	5,716
Other non-Hispanic and nonwhite	1,024,606	4.3	44,109	231	5,238
White	16,277,643	3.5	564,931	2,965	5,248

Notes: Sample is all renter households with at least one member working before March 2020. Months 13, 14, and 15 refer to January, February, and March of 2021, respectively. Debt outcomes are calculated using the state-specific reciprocity rates estimated from the Census Bureau's Household Pulse Survey, which yields a national average of 50 percent. The precision of these estimates should not be overinterpreted, and they are likely only accurate to one or two significant digits.

Sources: IPUMS 2018, CES, and CPS.

Table 4 shows summary statistics for renter households ever unemployed (Panel A) by race and ethnicity and also the data points from Figure 3 for December 2020 (Panel B). Initial household and householder incomes are lowest for households that are Black, Hispanic, or some other race. Average household size is largest for Asian and Hispanic households, contributing to higher average monthly nonhousing costs for these households.

Overall, households of color are generally larger and more likely to have children present.

Although households of color make up just under half of all renter households, they account for 58 percent of households projected to have rent debt by the end of December and 59 percent of all rental debt accrued by that time. As noted previously, Hispanic households are particularly likely to experience rent shortfalls, representing 30 percent

FIGURE 4: DEBT OUTCOMES BY HOUSEHOLD TYPE



Notes: Sample is all renter households with at least one member working before March 2020. Months 13, 14, and 15 refer to January, February, and March of 2021, respectively. Debt outcomes are calculated using the state-specific reciprocity rates estimated from the Census Bureau’s Household Pulse Survey, which yields a national average of 50 percent. The precision of these estimates should not be overinterpreted, and they are likely only accurate to one or two significant digits.

Sources: IPUMS 2018, CES, and CPS.

of households with rent debt in December despite being only 21 percent of all renter households. Although our simulation applies the same UI reciprocity rates across unemployed workers within each state, state-level variation in UI eligibility and benefit levels has been shown to be an important driver of racially disparate UI outcomes nationally (Edwards 2020) and could contribute to our national results.

b. Results by Household Type

Figure 4 shows results for the 50 percent reciprocity rate scenario broken out by household type. Again, we see a similar pattern of disparities

emerging in the early months of the pandemic, particularly after stimulus payments are spent, and slowly widening thereafter. Family households headed by single adults, which include single parents and multigenerational households, are the most likely to accumulate rent debt by December, with around 4.9 percent in rental debt. There are 350,000 such households in debt, the vast majority of which (274,000) are headed by females. Families headed by married couples represent the largest number of households with rent debt, reflecting that they are the largest group overall. For households with children headed by either single or married women, the added difficulties of accessing

TABLE 5: SUMMARY STATISTICS AND DECEMBER DEBT OUTCOMES BY HOUSEHOLD TYPE**Panel A: Summary Statistics for Households Ever Unemployed**

	Renter Households	Median Annual Household Income Before Job Loss	Median Annual Head of Household Income Before Job Loss	Median Monthly Rent	Average Monthly Other Costs	Average Adults per Household	Average Children per Household
Family, female	1,337,564	36,095	23,356	1,026	2,102	2	1.1
Family, male	460,275	52,899	30,000	1,069	1,975	2.3	0.7
Family, married	2,737,240	61,394	31,421	1,187	2,480	2.5	1.2
Nonfamily, female	728,472	30,000	25,821	912	828	1.2	0
Nonfamily, male	1,022,660	37,029	31,739	881	839	1.3	0
Other	1,223,043	53,349	26,641	1,047	2,074	2.3	0.8

Panel B: Debt Outcomes in December 2020 for 50% Reciprocity Rate

	Total Renter Households	Share of Renter Households in Debt	Total Renter Households in Debt	Millions of Dollars of Debt	Average Debt If Any
Family, female	5,572,949	4.9	273,988	1,363	4,974
Family, male	1,559,384	4.9	75,790	428	5,642
Family, married	10,506,891	4.2	436,165	2,565	5,881
Nonfamily, female	4,777,096	3.5	166,481	846	5,080
Nonfamily, male	5,561,611	3.7	207,171	1,080	5,211
Other	3,980,508	4.5	178,171	915	5,135

Notes: Sample is all renter households with at least one member working before March 2020. Months 13, 14, and 15 refer to January, February, and March of 2021, respectively. Debt outcomes are calculated using the state-specific reciprocity rates estimated from the Census Bureau's Household Pulse Survey, which yields a national average of 50 percent. The precision of these estimates should not be overinterpreted, and they are likely only accurate to one or two significant digits.

Sources: IPUMS 2018, CES, and CPS.

childcare during the pandemic could continue to depress employment rates (not modeled here), increasing the likelihood that more of these households will experience rental debts as UI benefits expire for most states in 2021 (Alon et al. 2020).

Table 5 shows summary statistics for renter households ever unemployed (Panel A) by household type and also the data points from Figure 4 for December 2020 (Panel B). Prior to job loss, female-headed households (both family and

TABLE 6: DEBT OUTCOMES IN DECEMBER 2020 FOR 50% RECIPIENCY RATE, BY STATE

State	Share of Renter Households in Debt	Total Renter Households in Debt	Millions of Dollars of Debt	Average Debt If Any	State Reciprocity Rate
AK	3.1	2,163	14	6,470	56.9
AL	3.8	15,525	63	4,075	37.4
AR	3.4	9,877	38	3,810	48.4
AZ	4.2	29,779	147	4,925	37.3
CA	5.4	239,619	1,666	6,953	52.3
CO	2.7	15,853	83	5,215	50.4
CT	5	16,167	92	5,676	45.7
DE	4.7	3,822	19	5,090	51.4
FL	5.6	112,709	640	5,676	38.5
GA	3	31,667	141	4,440	49.9
HI	5.5	7,963	66	8,340	64.5
IA	3.1	7,917	31	3,854	44.6
ID	2.5	3,382	10	2,811	36.7
IL	3.5	42,308	204	4,818	50
IN	2.9	16,512	58	3,504	44.3
KS	3.1	8,783	35	3,966	48.8
KY	3.3	12,817	45	3,515	53.6
LA	4.4	19,152	86	4,487	53.5
MA	4.8	32,663	192	5,892	53
MD	3.5	19,896	125	6,268	55
ME	2.8	2,733	9	3,238	52.1
MI	5.4	42,669	175	4,110	57.7
MN	2.9	13,096	59	4,480	55.5
MO	2.7	15,614	63	4,015	50.5
MS	2.6	6,346	22	3,527	52.3
MT	1.9	1,836	5	2,828	48.7

TABLE 6: DEBT OUTCOMES IN DECEMBER 2020 FOR 50% RECIPIENCY RATE, BY STATE

State	Share of Renter Households in Debt	Total Renter Households in Debt	Millions of Dollars of Debt	Average Debt If Any	State Reciprocity Rate
NC	4.4	44,745	196	4,371	44.9
ND	2.3	2,039	9	4,178	58
NE	2.3	4,478	17	3,708	42.1
NH	3.2	3,603	18	4,923	60.8
NJ	4.2	37,171	220	5,907	61.3
NM	2.9	5,608	23	4,154	50.5
NV	4.2	15,453	81	5,221	61.1
NY	5.3	128,018	822	6,419	63.2
OH	3.9	43,699	171	3,919	49.8
OK	3.3	12,387	50	4,013	34.4
OR	4.4	19,028	96	5,035	42.2
PA	4.5	48,124	224	4,663	48.3
RI	2.3	2,516	11	4,251	72.4
SC	3.3	14,146	58	4,125	45.1
SD	2.5	2,111	8	3,852	37.8
TN	3.2	20,197	83	4,125	48.4
TX	3.8	112,670	574	5,095	44.9
UT	2.7	6,384	29	4,506	45
VA	3.2	26,256	147	5,614	50.1
VT	3.6	1,853	8	4,473	66.1
WA	4	30,373	163	5,367	44.5
WI	3.7	20,565	83	4,048	45.7
WV	2.7	3,652	13	3,428	52.7
WY	3.4	1,820	7	3,924	43.6

Notes: Sample is all renter households with at least one member working before March 2020. Months 13, 14, and 15 refer to January, February, and March of 2021, respectively. Debt outcomes are calculated using the state-specific reciprocity rates estimated from the Census Bureau's Household Pulse Survey, which yields a national average of 50 percent. The precision of these estimates should not be overinterpreted, and they are likely only accurate to one or two significant digits.

Sources: IPUMS 2018, CES, and CPS.



nonfamily) had significantly lower incomes than other household types, suggesting they may have had less of a buffer against economic shocks. By definition, family households are generally larger and more likely to have children present. Accordingly, these households tend to have both higher median rents and higher nonhousing expenses.²⁷

Breaking out rental debt outcomes by demographic characteristics shows that COVID-related job losses are likely to widen many preexisting disparities in economic distress, translating into heightened housing insecurity for already disadvantaged groups. In particular, Hispanic households, Black households, and nonmarried family households (most of which are female-headed), are disproportionately likely to owe back rent when the CDC moratorium expires at the end of December. To the extent that the economic recovery also lags for workers in these households,

²⁷ "Other" households have similar characteristics to family households. Although a household type is not assigned for these households, they may consist of unrelated adults and/or children who are not related to the individuals designated as householder (although they may be related to another adult in the household).

these challenges are likely to grow in the early months of 2021 as existing UI benefits are exhausted. Extending UI benefits beyond the current limit of around 39 weeks for most states and expanding aid to households not receiving UI to begin with would help mitigate the disproportionate impact of COVID-19 for these households.

5. Results by State

Table 6 shows each of the four debt outcomes in December for all states in the overall scenario with a 50 percent reciprocity rate. Results reveal substantial variation in each of the outcomes by state. For example, the share of renter households in debt by December ranges from 1.9 percent in Montana to 5.6 percent in Florida, and average debt conditional on having any debt ranges from \$2,800 in Idaho to \$8,340 in Hawaii. These differences may reflect differences in state employment losses, differences in state incomes and rents, differences in state UI reciprocity rates, and differences in state UI income replacement

rates. The rankings of total renter households in debt and millions of dollars in debt mainly reflect rankings of state renter populations. Overall, these results can help state and local policymakers address the specific situations in their states.

6. Conclusion

Our results show that policies enacted to replace lost income for workers losing jobs during the COVID-19 pandemic, particularly the enhanced UI provided by the CARES Act, have been highly effective at keeping renter households out of debt *for those households that received these benefits*. Additionally, as intended, these policies were far more protective than standard state UI alone would have been. By contrast, households that received nothing at all or only Economic Impact Payments are far more likely to have accumulated rental debt since March 2020.

These findings point to some key takeaways for policymakers. First, further extending state and federal UI benefits beyond current maximums (39 weeks in the typical state) could help prevent many new households from falling into debt beginning in December.²⁸ Given that multiple extensions were granted during the Great Recession, there is strong precedent for doing so. This may be particularly important if, as our simulation assumes, the pace of economic recovery is slow. Our results also suggest that extending UI supplement amounts would continue to help protect households receiving UI from accruing rental debt.

However, households that never received UI, of which we estimate there are many, may need alternative sources of rental support. Although the CARES Act provided a modest amount of funding for state and local governments to develop responses to emerging housing issues, our results show that it is insufficient to meet projected rental



debt in December 2020, even before accounting for the costs of administration and the need for spending on other critical housing-related services.²⁹ Leveraging existing federal housing supports, such as the Housing Choice Voucher and Emergency Solutions Grants programs, could be an efficient and equitable means of delivering additional rental relief (Galvez et al. 2020).

The national eviction moratorium is currently set to expire December 31, 2020. Like the patchwork of state and local moratoriums preceding it, this temporary measure has protected many renters from the threat of losing their homes in the middle of a pandemic. However, our analysis suggests that this stopgap measure has left millions of additional households, many owing thousands of dollars of back rent, at risk when the moratorium expires. These households are primarily those with workers who lost jobs yet did not receive state or federal UI (and other associated CARES Act provisions). As states and cities allocate additional funding to meet the needs of their residents, they should ensure that programs are accessible to those in need, paying particular attention to eligibility requirements, making program information widely available, and avoiding making enrollment or compliance excessively burdensome.

²⁸ The modal state currently has a 39-week maximum (26 standard plus the extra 13 weeks included in the CARES Act). For workers losing jobs and beginning UI receipt in April, 39 weeks corresponds to late December 2020 or early January 2021.

²⁹ This refers to the \$5 billion allocated to the Community Development Block Grant – CARES (CDBG-CV) program.

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