SUBMITTED BY:

Keith Gunnar Bentele

University of Arizona

Southwest Institute for Research on Women

925 N. Tyndall Avenue, Suite 209

Tucson, AZ 85721

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For additional information, contact Keith Bentele at keithb@arizona.edu.

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INTRODUCTION

The passage of the $900 billion relief bill in late December and the passage of the $1.9 trillion American Rescue Plan Act in March, make forecasting the likely number of individuals displaced from housing or at risk of homelessness nearly impossible. The provision of additional unemployment insurance and rent assistance, and the recent extension of the eviction moratorium to October, will undoubtedly help keep many individuals and families housed in the short term. The macroeconomic situation remains serious, but there are very strong signs of improvement. At the national level, the July employment report was extremely strong and indicated that employers added nearly 1 million jobs in July (see page 20). This robust growth slowed significantly in August, with most economists attributing this slowdown to the spread of the Delta variant. The course of the pandemic is very likely to shape the strength and speed of the ongoing economic recovery.

After many months of slow job growth in Arizona, the rate of job growth accelerated significantly in June and July (see page 22). UA economic George Hammond stated, “Arizona job growth exploded in June with the state adding 37,800 seasonally-adjusted jobs over the month. That was the largest gain since last June and was six times higher than average monthly job gains from 2015-2019.”

Despite that strong job growth the unemployment rate in Arizona only fell from 6.8% in June to 6.6% in July, as more Arizonans have been entering the labor force in recent months. More recent data on the number of initial unemployment applications in Arizona fell to pre-pandemic levels for the first time since the onset of the recession in February and have stayed low through early-September (see page 20). This is great news and suggests that the economy in Arizona has continued to recover in recent weeks.

The most recent Census Household Pulse Survey wave, conducted August 18th–30th, indicates that the proportion of Arizona renters not current on rent was 7.3%. This is down from 11.6% in late June/early July and 18.4% in mid-June. This is welcome news and likely the result of an improving economy, the distribution of rental assistance, and the Child Tax Credit payments that households with children began receiving in mid-July. However, of that 7.3% of renter households not current on their rent, the proportion who reported that they were “very likely” to experience an eviction in the next two months jumped from 12.2% to 25.1% in this most recent wave. The proportion seeing eviction as “somewhat likely” in the next two months also increased to 35.5% from 17.4% in the previous wave. This represents a very substantial increase in the proportion of non-current Arizona renters who think eviction is somewhat or very likely in the next two months. We currently have a situation where the share of non-current renters continues to shrink, but the level of financial stress among those non-current renter households is increasing. Further, the vast majority of non-current renters (88%) have not applied for rental assistance.

The big, and largely unknowable, question is, how many individuals and families are going to fall through the cracks before assistance or the economic recovery reaches them? The following report compiles indicators that provide rough insight into the potential magnitude of these challenges that lie ahead.

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Indicators of the Scope of the Problem: Did Not Pay Rent Last Month

Source: Census Household Pulse Surveys Weeks 1-21

Indicators of the Scope of the Problem: Not Currently Caught Up On Rent

Source: Census Household Pulse Survey –Weeks 22 – 36

The % not current has fallen to 7.3% in the most recent wave.
Indicators of the Scope of the Problem: National Indicators of Ability to Pay Rent

It has been widely noted that the levels of inability to pay rent reported in the Census Household Pulse Survey are not consistent with the levels of strain captured in other measures, particularly those collected by industry research. The National Multifamily Housing Council collects national rental payment data from an enormous sample of apartments (see figure below).

Rent Payment Tracker: Full Month Results

**Data collected from between 11.1 - 11.7 million apartment units each month**

<table>
<thead>
<tr>
<th>Month</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar</td>
<td>97.2%</td>
<td>95.2%</td>
</tr>
<tr>
<td>Apr</td>
<td>97.7%</td>
<td>94.6%</td>
</tr>
<tr>
<td>May</td>
<td>96.6%</td>
<td>94.6%</td>
</tr>
<tr>
<td>Jun</td>
<td>96.0%</td>
<td>94.6%</td>
</tr>
<tr>
<td>Jul</td>
<td>96.6%</td>
<td>94.9%</td>
</tr>
<tr>
<td>Aug</td>
<td>94.5%</td>
<td>93.7%</td>
</tr>
</tbody>
</table>

As of the 6th of September 2021, 72% of renters had paid the rent, compared to 81.2% who had paid by the 6th of September 2019 (see graph above). As of the 6th of September 2021, 72% of renters had paid the rent, compared to 81.2% who had paid by the 6th of September 2019 (see graph above). In previous reports I have noted the consistent difference in the data signals received from the Census Household Pulse Survey and this national survey from the NMHC. The Census data consistently captured a substantially larger proportion of renter households that were not currently than was found in this NMHC survey. These differences have fallen to a negligible level with both surveys suggesting that 6-7% of renters were not current on their rent at the end of August. In addition, it is worth noting that the finding (below) that only 72% of renters reported being current as of the 6th of September would normally be a cause for concern. However, the NMHC notes that the holiday weekend in combination with recent natural disasters are likely to have caused reporting issues that make this figure not directly comparable to previous years.
Rent Payment Tracker: Weekly Results

**Data collected from between 11.1 - 11.7 million apartment units each month**

<table>
<thead>
<tr>
<th></th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sept</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>82.9%</td>
<td>78.0%</td>
<td>81.7%</td>
<td>80.2%</td>
<td>81.6%</td>
<td>80.8%</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td>77.0%</td>
<td>79.7%</td>
<td>77.4%</td>
<td>76.5%</td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td>81.2%</td>
<td>79.3%</td>
<td>80.2%</td>
<td>81.2%</td>
</tr>
<tr>
<td>Pre-COVID-19</td>
<td>76.4%</td>
<td>72.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Week Ending: 6th*

*Source: National Multifamily Housing Council*
Indicators of the Scope of the Problem: Not Caught Up On Mortgage Payments

Percentage of Arizona Mortgage Holders Who Are Not Currently Caught Up on Payments
January 2021 - August 2021

This orange line is the three-wave moving average of mortgage holders not caught up on payments.

Source: Census Household Pulse Survey – Weeks 22 – 36

69%

Homeownership Rate in Arizona in 2020

Source: U.S. Census Bureau
Indicators of the Scope of the Problem: Ability to Pay Next Month’s Rent

Arizona Renters

Very modest decrease in those with slight confidence in their ability to pay next month’s rent.

Source: Census Household Pulse Survey –Weeks 22 - 36
Indicators of the Scope of the Problem: Likelihood of Leaving Due to Eviction Among Arizona Renters Not Caught Up on Rent

The trends in the graph below are based on questions only asked of Arizona renters not caught up on their rent: 7.3% of all AZ renter households – August 18th – 30th

Recent positive shifts have reversed with the proportion of non-current renters seeing eviction as “very” or “somewhat likely” increasing substantially in this most recent wave.

Source: Census Household Pulse Survey – Weeks 22 – 36
Indicators of the Scope of the Problem: Months Behind on Rent and Rental Assistance

The following graph display responses to questions only asked of Arizona renters not caught up on their rent: 7.3% of all AZ renter households – August 18th – August 30th

The majority of Arizona renters who are behind on their rent are only 1 or 2 months behind on their rental payments (53%). This is good news, but there is also a significant share (22%) who report being 7 months behind on rent. Turning to application and receipt of rental assistance, only 6% of non-current renter households report having applied and being denied assistance. Most noteworthy is the fact that the vast majority of non-current rental households in Arizona have not applied for assistance (88%). This suggests enormous potential benefit to outreach and promotion efforts in regards to the availability of rental assistance.
Indicators of the Scope of the Problem: Leaving Due to Foreclosure Among Arizona Mortgage Holders Not Caught Up on Payments

The trends in the graph below are based on questions only asked of Arizona mortgage holders not caught up on their payments: 5.6% of all AZ mortgage holding households – August 18th – 30th

Percentage seeing foreclosure as “somewhat likely” increased dramatically this wave. Proportion answering “very likely” remained very low.

Source: Census Household Pulse Survey – Weeks 22 – 36
Indicators of the Scope of the Problem: Estimates of Rental Shortfall – ARIZONA

Estimates of the number of individuals behind on rent and the size of their rental debts (at both the state and county level) have been made available in the National Equity Atlas data tool. This tool is produced by PolicyLink and the USC Equity Research Institute. The methodology used to produce these estimates is provided in the appendix to this report. These estimates rely on Census Household Pulse survey data and the estimates below are based on the data collected as a part of Wave 34 of the survey conducted July 21st - August 2nd 2021. We now have two additional wave of the Census HPS survey, Wave 35 & Wave 36, collected August 4th -16th and August 18th -30th 2021. The percentage of renters not current statewide in Wave 34 was 9.3%. This fell 22% to 7.3% in Wave 36, the adjusted estimates below (in the second table) provide a simple reduction in the Wave 34 estimates by 22%.

**National Equity Atlas – Estimates based on Wave 34 of the Census HPS**

<table>
<thead>
<tr>
<th>Estimated Number of Arizona Households Behind on Rent</th>
<th>Estimated Total Rental Debt Statewide</th>
<th>Estimated Rental Debt per Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>67,000</td>
<td>$174.7 million</td>
<td>$2,600</td>
</tr>
</tbody>
</table>

**National Equity Atlas Estimates Adjusted based on Wave 36 of the Census HPS**

<table>
<thead>
<tr>
<th>Adjusted Estimated Number of Arizona Households Behind on Rent</th>
<th>Adjusted Estimated Total Rental Debt Statewide</th>
<th>Estimated Rental Debt per Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>52,600</td>
<td>$137.1 million</td>
<td>$2,600</td>
</tr>
</tbody>
</table>
Indicators of the Scope of the Problem: Estimates of Rental Shortfall – PIMA COUNTY

The National Equity Atlas data tool also provides county level estimates. The estimates below are also based on the data collected as a part of Wave 34 of the Census Household Pulse survey conducted July 21st- August 2nd 2021 (first table), and can also be adjusted downwards in light of information from Wave 36 of the Census HPS (second table).

**National Equity Atlas – Estimates based on Wave 34 of the Census HPS**

<table>
<thead>
<tr>
<th>Estimated Number of Pima County Households Behind on Rent</th>
<th>Estimated Total Rental Debt Countywide</th>
<th>Estimated Rental Debt per Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,264</td>
<td>$25.8 million</td>
<td>$2,300</td>
</tr>
</tbody>
</table>

**National Equity Atlas Estimates Adjusted based on Wave 36 of the Census HPS**

<table>
<thead>
<tr>
<th>Adjusted Estimated Number of Pima County Households Behind on Rent</th>
<th>Adjusted Estimated Total Rental Debt Countywide</th>
<th>Estimated Rental Debt per Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,842</td>
<td>$20.3 million</td>
<td>$2,300</td>
</tr>
</tbody>
</table>
“Back of the Envelope” Estimates of Potential Displacement and Homelessness Based on Estimates of Total Households Behind on Rent Payments- ARIZONA

The estimates provided below take the estimated number of Arizona households behind on their rent (and the adjusted estimates) from the National Equity Atlas and then provides ranges of possible outcomes for both displacement and homelessness as a result of these potential housing displacements. Many and probably most will be helped enormously by current and forthcoming assistance. The exercise here provides examples of the size of the potential increase in homelessness depending on the proportion of these at-risk households that actually experience a housing disruption. What does it look like, for example, if 20% of the vulnerable households estimated by the National Equity Atlas to be at risk actually experience a housing displacement? No sophisticated modeling approaches were used to generate these figures, just calculations of proportions of the National Equity Atlas estimates of households at risk. As such, these are “back of the envelope” calculations to provide a rough sense of the ranges of strain that could emerge depending on the extend of the ameliorative impacts of forthcoming relief assistance (unemployment insurance, stimulus checks, rental assistance, & etc). Please do not cite or distribute these figures without these caveats and without checking with the author first. See next page for caveats.

<table>
<thead>
<tr>
<th>At Risk Pop</th>
<th>Adjustment (not all housing insecurity results in displacement) and forthcoming assistance will reduce hardship.</th>
<th>Number of People</th>
<th>Assuming 25% of displaced actually become homeless</th>
<th>Assuming 10% of displaced actually become homeless</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARIZONA</td>
<td>Midpoint* of Estimates of # of Households Potentially Facing Housing Disruption or Eviction Filings</td>
<td>Number of Households</td>
<td>Average HH Size in AZ = 2.69</td>
<td>#HH*2.69</td>
</tr>
<tr>
<td>Renters not Current</td>
<td>59,800</td>
<td>10% result in displacement: 5,980</td>
<td>16,086</td>
<td>4,022</td>
</tr>
<tr>
<td>Renters not Current</td>
<td>59,800</td>
<td>20% result in displacement: 11,960</td>
<td>32,172</td>
<td>8,043</td>
</tr>
</tbody>
</table>

*This is the midpoint between the two estimates of the number of renters not current found on page 13.
These National Equity Atlas estimates from late-July/early-August only provide an estimate of the number of Arizonans not current on their rent and an estimate of the extent of their rental debt. The exercise above then simply provides ranges of possible impacts depending on how many people are actually displaced from their housing. In order to get a rough sense of whether these estimates are realistic, we can compare these estimates to other available indicators. These estimates are based on Wave 34 data of the Census Household Pulse Survey. The Census Household Pulse Survey asks if renting households are current on their rent. In the most recent wave of the survey, Week 36 conducted August 18th-30th, 7.3% of Arizona renter households reported not being current on their rent payments. There were 927,771 renter-occupied units in Arizona in 2019, according to a Census American Community Survey (1-year) estimate.

7.3% of 927,771 = 67,727 AZ renter households who are not current on their rent payments.

Not all, and perhaps only a minority, of households reporting that they are not current on rent payments will actually experience an eviction. These households were then asked about their perception of how likely it is that they will have to leave their home due to eviction in the next two months. 25.1% of these households that are not current on their rent reported being “very likely” to be evicted, while another 35.5% said this is “somewhat likely”.

25.1% of 67,727 = 17,000 AZ renter households who think it is “very likely” that they will be evicted in the next two months.

60.6% of 67,727 = 41,043 AZ renter households who think it is either “somewhat likely” or “very likely” that they will be evicted in the next two months.

These comparisons suggest that the hypothetical scenario outlined above of 20% of the Arizona renter households not current on their payments being at risk of a potential housing displacement (roughly 12k rental households) may be a better estimate of the extent of financial strain among Arizona renters. To be clear, the vast majority of these households will benefit substantially from forthcoming benefits and relief assistance and most will be at substantially lower risk of eviction as a result.
“Back of the Envelope” Estimates of Potential Displacement and Homelessness Based on Estimated Total Eviction Filings - PIMA COUNTY

The estimates provided below take the estimated number of Pima County households behind on their rent (and the adjusted estimates) from the National Equity Atlas and then provides ranges of possible outcomes for both displacement and homelessness as a result of these potential housing displacements. Many and probably most will be helped enormously by current and forthcoming assistance. No sophisticated modeling approaches were used to generate these figures, just calculations of proportions of the National Equity Atlas estimates of households at risk. These are “back of the envelope” calculations to provide a rough sense of the ranges of strain that could emerge depending on the extend of the ameliorative impacts of forthcoming relief assistance (unemployment insurance, stimulus checks, rental assistance, & etc).

<table>
<thead>
<tr>
<th>At Risk Pop</th>
<th>PIMA COUNTY</th>
<th>Midpoint* of Estimates of # of Households Potentially Facing Housing Disruption or Eviction Filings</th>
<th>Adjustment (not all housing insecurity results in displacement) and forthcoming assistance will reduce hardship. Number of Households</th>
<th>Number of People</th>
<th>Assuming 25% of displaced actually become homeless</th>
<th>Assuming 10% of displaced actually become homeless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renters not Current</td>
<td>10,053</td>
<td>10% result in displacement: 1,005</td>
<td>2,704</td>
<td>676</td>
<td>270</td>
<td></td>
</tr>
<tr>
<td>Renters not Current</td>
<td>10,053</td>
<td>20% result in displacement: 2,011</td>
<td>5,409</td>
<td>1,352</td>
<td>541</td>
<td></td>
</tr>
</tbody>
</table>

*This is the midpoint between the two estimates of the number of renters not current found on page 14.

Please do not cite or distribute these figures without these caveats and without checking with the author first.
These National Equity Atlas estimates from late-July/early-August only provide an estimate of the number of Pima County renters not current on their rent and an estimate of the extent of their rental debt. The exercise above then simply provides ranges of possible impacts depending on how many people are actually displaced from their housing. In order to get a rough sense of whether these estimates are realistic, we can compare these estimates to other available indicators. These estimates are based on Wave 34 data of the Census Household Pulse Survey. The Census Household Pulse Survey asks if renting households are current on their rent. In the most recent wave of the survey, Week 36 conducted August 18th-30th 2021, 7.3% of Arizona renter households reported not being current on their rent payments. There were 151,943 renter-occupied units in Pima County in 2019, according to a Census American Community Survey (1-year) estimate.

7.3% of 151,943 = 11,092 Pima County renter households who are not current on their rent payments.

Not all, and perhaps only a minority, of households reporting that they are not current on rent payments will actually experience an eviction. These households were then asked about their perception of how likely it is that they will have to leave their home due to eviction in the next two months. 25.1% of these households that are not current on their rent reported being “very likely” to be evicted, while another 35.5% said this is “somewhat likely”.

25.1% of 11,092 = 2,784 Pima County renter households who think it is “very likely” that they will be evicted in the next two months.

60.6% of 11,092 = 6,722 Pima County renter households who think it is either “somewhat likely” or “very likely” that they will be evicted in the next two months.

These comparisons suggest that the hypothetical scenario outlined above of 20% of Pima County renter households not current on their payments being at risk of a potential housing displacement (roughly 2,500 households) may be a better estimate of the percentage of households at risk (when compared with the information offered in the Census Household Pulse survey). To be clear, the vast majority of these households will benefit substantially from forthcoming benefits and relief assistance and most will be at substantially lower risk of eviction as a result.
The Road Ahead

While we are currently experiencing robust job growth at both the national and state level. In the medium-term, most economists are expecting continuing robust growth and falling unemployment. The households at high risk of experiencing a housing disruption in the coming months remain disproportionately lower income and households of color. I remain concerned about the likelihood of homelessness among those households that experience a housing disruption over the next couple of months, as it is not guaranteed that employment opportunities will replace lost earnings.

Source: Calculated Risk Finance & Economics
Arizona Initial Claims for Unemployment Insurance and Pandemic Assistance

Source: UA Economic and Business Resource Center

Arizona Unemployment Rate

Source: U.S. Bureau of Labor Statistics

Shaded areas indicate U.S. recessions.
Total Nonfarm Employment Arizona

Extremely strong job growth in June.
Income Disparities

The COVID-19 recession has been uniquely unequal in its impacts, hitting lower income workers and households particularly hard. Worse, the recovery from these disproportionate impacts has also been skewed towards those with more resources, resulting in the so-called “K”-shaped recovery.

Source: Census HPS Week 14 – Sept 2nd-14th 2020
Census HPS Week 27 – March 17th-29th 2021

Households with children began receiving Child Tax Credit payments between these two waves.

Source: Census HPS Week 33 – June 23rd- July 5th 2021
Census HPS Week 36 – August 18th – 30th 2021.
Consequently, lower-income households are at particularly high risk of housing insecurity and homelessness during this recession.
Racial/Ethnic Disparities
The current recession is also disproportionately impacting individuals and communities of color, trends evident in both losses of employment income and housing insecurity.


Share of prime-age adults who have jobs
Employment-population ratio of those 25-54 years old by race or ethnicity

"Very Difficult" to Pay Usual Expenses in Last Week
ARIZONA Renter Households - March 3 - 15th

Source: Census Household Pulse Survey – Week 26

"Very Difficult" to Pay Usual Expenses in Last Week
ARIZONA Renter Households – August 4-16 2021

Source: Census Household Pulse Survey – Week 35

"Very Difficult" to Pay Usual Expenses in Last Week
ARIZONA Renter Households - August 18-30 2021

Source: Census Household Pulse Survey – Week 36
Appendix: National Equity Atlas Rent Debt Methodology

This document describes our current methodology for estimating the number of renter households behind on rent and the total and per household rent debt for the United States and selected counties, regions, and states, as presented in the Rent Debt Dashboard.

Our estimates use the share of households behind on rent from the Census Household Pulse survey and the median contract rent paid by households from the American Community Survey, both broken down by income bracket, to determine the total amount of monthly rent owed by households behind on rent. We then multiply these monthly figures by the average number of months that households are in arrears to estimate total rent debt. We assume that approximately 25 percent of behind households are one month behind, 28 percent are two months behind, 12.5 percent are three months behind, and 5.5 percent have not paid for the entire pandemic. We use three data sources:

1. Household rent and income data from the 5-year 2019 American Community Survey (ACS) summary file and microdata.
2. Data on late payment of rent from the U.S. Census Bureau’s Household Pulse Survey for states and the 15 largest metros. The Pulse survey is updated every two weeks.
3. Distribution of rent arrears estimates derived from the University of Southern California’s Center for Economic and Social Research’s “Understanding Coronavirus in America” panel survey, which has been collected between April 2020 and March 2021.

The process and data are further described below:

Household Pulse Survey data is filtered to include only renting households paying a non-zero rent in the most recent survey wave. Those households are assigned a rent status based on their response to the survey question: “Is this household currently caught up on rent payments?” The percentage of households in rent arrears – the “behind rate” – is calculated by household income category and by geography. Households are initially grouped into three income categories: those with an annual income less than $50,000, those with an annual income between $50,000 and $100,000, and those with an annual income greater than $100,000. Pulse estimates are available for all 50 states and for the 15 largest metropolitan regions in the US. For geographies where regional data are available, we use regional estimates of behind rates; for geographies where regional data are not available, we use statewide estimates of behind rates. If the unweighted count of observations for a given income category within a metropolitan region falls below 100 in the most recent Pulse survey wave, statewide behind rates are used for households in that income category in that metropolitan region instead. If unweighted counts of statewide observations fall below 100 for either of the top two income categories but the two categories combined have more than 100 observations, a single rate is used for both of the categories. If unweighted counts of statewide observations fall below 100 for the top two income categories combined or for the lowest income category, a single behind rate is used for all households in the state. If a state has fewer than 100 unweighted observations, national behind rates are used and rent debt estimates are not calculated for that state.

The estimates of the percent of households behind on rent by income bracket are necessarily broad, in geographic terms, given data availability in the Household Pulse Survey. However, to estimate monthly rent debt for households that are behind, they are applied to estimates of median monthly contract rent by income bracket that are geographically specific (i.e. based on the same cities and counties for which the rent debt estimates are ultimately

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2 Source: [https://nationalequityatlas.org/rentdebtmethodology](https://nationalequityatlas.org/rentdebtmethodology)
reported. We use median rent (rather than mean rent) based on the assumption that renters who are behind on rent are likely to have lower monthly rent than the average for each income bracket. Estimating median monthly contract rent by income bracket was straightforward for states, regions, and larger cities and counties as they could be drawn directly from the ACS microdata. For smaller cities and counties not identified in the ACS microdata, however, we developed an approach that relied primarily on the ACS summary file with some inputs from the microdata.

Specifically, we drew information from Table B25122 of the ACS summary file on the number of households by income bracket gross rent bracket and utilized a Pareto interpolation procedure to estimate median monthly gross rent for each of the aforementioned income brackets in each geography. This procedure required an upper bound for the top gross rent category ($2,000 or more), which is not provided in Table B25122. To adjust our estimate to reflect median contract rent (rather than median gross rent, which includes the cost of utilities), we also needed an adjustment ratio to apply to our resulting Pareto estimates.

We estimated these data inputs for each of the smaller city and county geographies using ACS microdata for the Public Use Microdata Area (PUMA) or PUMAs they intersect. This was accomplished using population-based crosswalks we developed between 2010 PUMAs and 2010 counties, and between 2010 PUMAs and 2010 census-defined places (which include all cities), by taking a population-weighted average of the PUMA-level measures for each smaller city and county geography. Following this approach, we estimated the maximum gross rent, median gross rent, and median contract rent for overall and for each income bracket. The estimated maximum gross rent is inputted into the Pareto interpolation procedure to estimate median gross rent by income bracket for each of the smaller city and county geographies. Those initial estimates were then adjusted to reflect median contract rent by multiplying by the ratio of median contract to gross rent from the PUMA-based estimates. The approach seeks to utilize as much geographically-specific information from the ACS summary file as possible and substitutes in less geographically-specific information from the ACS microdata as necessary.

We assume that differences between reported rents from the 2019 5-year ACS (which reflect a 2015-2019 average expressed in inflation-adjusted 2019 dollar values) and 2020 actual rents are negligible for households that have not moved in 2020, as those households were likely locked into pre-pandemic leases and/or month-by-month agreements with fixed/stable rents. The total amount of monthly rent owed by behind households is then calculated by multiplying estimated median monthly rent for each income category by the number of Pulse households in that income category and summing those values for each geography (city or county). Regional and statewide estimates are produced by summing estimates from their constituent county geographies.

These figures are converted to total rent debt by adjusting based on our estimate that households were, on average, 3.75 months in arrears. There is no source of data on the distribution of rent arrears among behind households, so we estimated this distribution based on the University of Southern California (USC) “Understanding Coronavirus in America” panel survey from April 2020 through March 2021. Restricting the sample to renter households that were recorded at some point during each of the twelve months from April 2020 to March 2021 and determining a household’s behind status in each month based on their response closest to the end of the month, we measure how many months each household reports not paying their rent. Using this method, we found that approximately 25 percent of behind households are one month behind on rent, 28 percent are two months behind, 12.5 percent are three months behind, and 5.5 percent have not paid for the entire pandemic.

These estimates do not take into account the requirement of the California eviction moratorium passed in August 2020 (AB 3088) that Covid-19-affected tenants must pay 25 percent of rent accrued between September 1, 2020 and January 31, 2021 by January 31, 2021 to be protected from eviction. This incentive likely decreases the amount of arrears.