



Insult to Injury

Natural Disasters and Residents' Financial Health Highlights

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April 2019

Images of climate change–driven destruction—coastal communities swept away by storm surge and hurricane-force winds, wildfires and tornadoes erasing whole neighborhoods—increasingly fill newspapers and TV screens. These disasters lead to injury and loss of life, can displace entire communities overnight, and destroy homes and businesses. Among other economic, social, and environmental consequences, natural disasters can lead to both immediate and long-term financial setbacks for residents of affected areas. Damaged or destroyed property must be replaced or repaired, health care costs for bodily injury and mental health needs may rise, and housing and relocation expenses must be covered—all while local businesses and employment opportunities may suffer, leaving families with reduced capacity to cover even routine expenses such as rent or mortgage payments, utilities, auto loans, and other bills.

A wide range of public, private, and charitable recovery assistance programs and temporary financial relief help mitigate the financial consequences of disasters.¹ But because these programs are often targeted at the most severe disasters, not readily available to all affected residents, and limited in scope and duration, they may leave many affected residents vulnerable to financial hardship. Especially for families that are already financially fragile, the additional shock from a natural disaster of any size or type could be a recipe for short-term financial hardship that leads to long-term declines in financial health.

This brief highlights key takeaways from the report *Insult to Injury: Natural Disasters and Residents' Financial Health*, which builds an evidence base for understanding how natural disasters impact

residents' financial health.² We summarize our findings and identify seven actionable strategies for promoting resilience and recovery by multiple actors: regulators and government (local, state, and federal), philanthropy, and nonprofit leaders focused on financial health. These strategies can help communities build residents' resilience before a disaster hits and help them better cope afterward.

What Questions Are Studied?

To better understand how natural disasters impact residents' well-being, we examine the following questions:

- What are the effects of natural disasters on residents' financial health, as measured by credit scores, debt in collection, credit card debt, bankruptcies, foreclosures, and auto debt?
- How do the effects differ by severity of the disaster, which can result in variations in the provision of financial relief and recovery assistance?
- How do the effects differ by the demographic and economic characteristics of residents and the communities they live in?

We use Federal Emergency Management Agency (FEMA) data on multiple disasters across the United States, combined with financial health data from a major credit bureau and local-level contextual data from the American Community Survey (ACS). Our empirical approach compares the financial health of residents affected by natural disasters with the financial health of people with similar characteristics living in unaffected areas.

To examine differences by disaster magnitude, as measured by total FEMA-assessed damage, we look separately at three groups. The first includes only Hurricane Sandy. Because this disaster is by far the largest in the study time period, we choose to consider it separately. The next group, labeled "large" disasters, includes disasters where FEMA assessed \$200 million or more in damage.³ The final group, labeled "medium-sized" disasters, includes disasters with less than \$200 million in assessed damage that were large enough to trigger FEMA assistance but less likely to receive federal funding for long-term recovery. In our data, most of the people affected by medium-sized disasters are affected by a 2014 storm that hit urban areas in and around Detroit, which did not receive long-term recovery aid.

How Do Natural Disasters Affect Financial Health?

Comparing the financial health of residents in areas affected by natural disasters to otherwise similar people in unaffected areas—looking across results for each of our three disaster groups (over a four-year follow-up period), our full set of outcomes, and each of our populations of interest—four general themes emerge in our findings:⁴

- Disasters lead to broad, and often substantial, negative impacts on financial health.
- The negative effects of disasters persist, or even grow over time, for important financial outcomes.
- Medium-sized disasters appear to lead to larger and more consistently negative effects on financial health than large disasters, though this conclusion is tempered somewhat by the fact that most of the people affected by medium-sized disasters in our analysis were hit by the 2014 storms and flooding in urban areas in and around Detroit.
- People and communities more likely to be struggling financially before disasters strike are often the hardest hit by disasters, suggesting a widening of existing inequalities.

We discuss each theme in turn below.

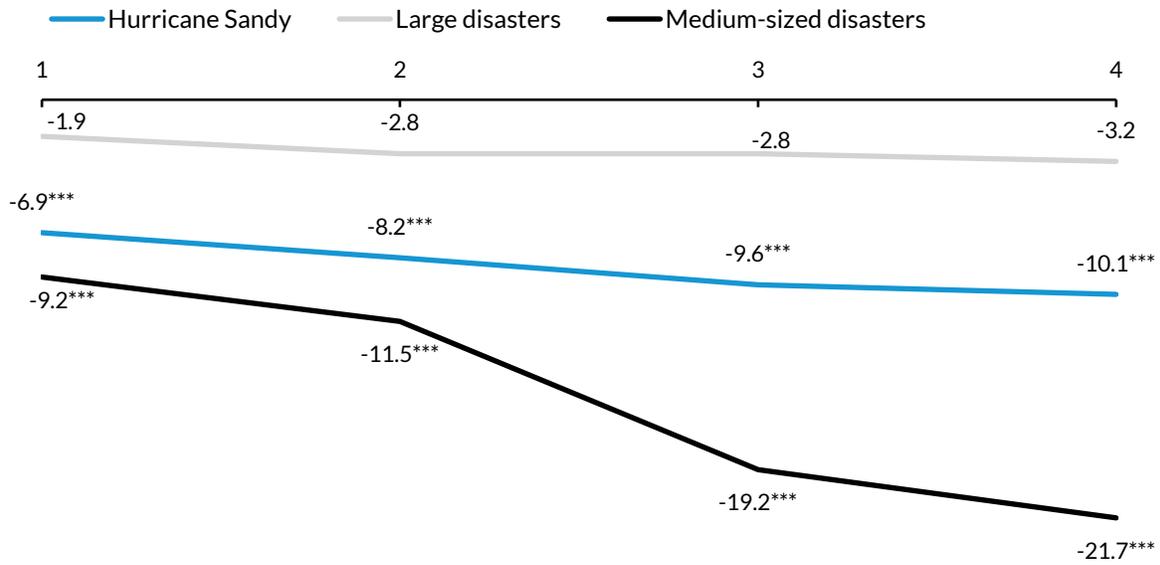
Disasters lead to broad, and often substantial, negative impacts on financial health. While the patterns vary by disaster magnitude and affected populations, we find evidence of negative impacts across most measures of financial health, including credit scores, debt in collections, bankruptcy, credit card debt, and mortgage delinquency and foreclosures. In many instances, these effects are of meaningful magnitude.

For example, compared with otherwise similar people in unaffected areas, we find that living in an area affected by a natural disaster leads to significant and persistent reductions in credit scores (figure 1). These effects are evident in the first year after disasters strike, persist for all four years after the disasters hit, and tend to grow over time. Credit scores are a composite indicator of financial health, where having a good credit score reduces the cost of borrowing and can save residents hundreds or even thousands of dollars (Elliott and Lowitz 2018). Residents hit by Hurricane Sandy experienced average credit score declines of 10 points in year four. The largest estimated effects on credit scores—down by nearly 22 points in year four for people affected by medium-sized disasters—would typically indicate substantial deteriorations in access to and the cost of credit (e.g., the ability to obtain credit cards or auto loans, and on what terms). In our data, the average credit score in year four is 647—near the borderline of what is considered fair and poor—for people in our comparison group for medium-sized disasters. Declines of 22 points could make them solidly poor credit risks, limiting their ability to recover from natural disasters.

FIGURE 1

Natural Disasters Lead to Declines in Credit Scores, and These Declines Increase Over Time

Change by disaster group and year(s) after disaster



Source: Urban Institute calculations based on credit bureau, FEMA, and ACS data.

Notes: Values represent estimates of average differences in credit scores between people affected by the indicated disaster (or set of disasters) and matched people from unaffected areas. Effects are estimated separately for each disaster for each of the four years following the disaster.

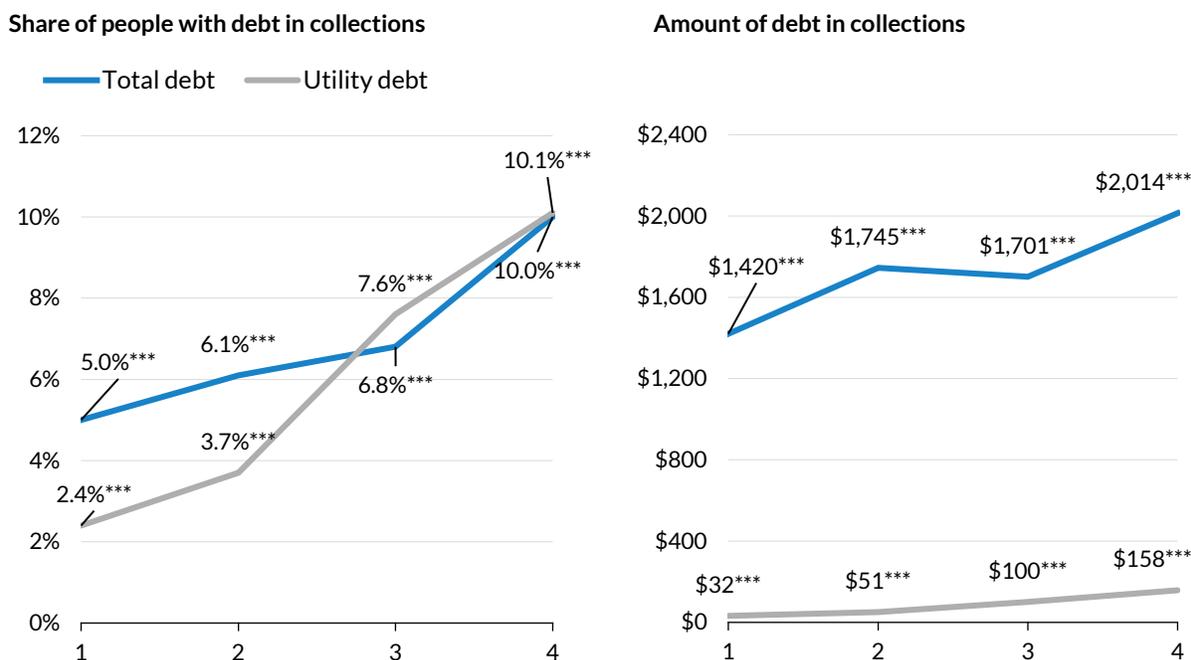
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The negative effects of disasters persist, or even grow over time, for important financial outcomes. For many important financial health outcomes, the negative effects do not abate over the four years following the disaster. Additionally, for key outcomes the effects grow larger over time.

FIGURE 2

Financial Hardship Increases Over Time in Communities Hit by Medium-Sized Disasters

Change in the likelihood and amount of total and utility debt in collections by year(s) after disaster



Source: Urban Institute calculations based on credit bureau, ACS, and FEMA data.

Notes: Values represent estimates of average differences in each outcome between people affected by medium-sized disasters and matched people from unaffected areas. Effects are estimated separately for each of the four years following the disaster.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

We find a rising trend in the effect of medium-sized disasters on both the share of people with debt in collections and the average amount of debt in collections (figure 2). Having debt in collections is suggestive of people suffering from cash flow challenges that lead them to fall behind on their obligations. For residents affected by medium-sized disasters, the share of people with any debt in collections is 5 percentage points higher in the first year after the disaster, rising to 10 percentage points by year four. These effects are substantial; the share with debt in collections is nearly 25 percent higher by year four than for comparable people not hit by a disaster (not shown). The average amount of total debt in collections is \$1,420 higher in year one, rising to \$2,014 in year four. This is also a correspondingly large effect; the average amount of debt in collections in year four is about \$2,700 for comparable people not hit by a disaster. We also see increases in utility debt in collections over time.

A similar trend, also most pronounced for medium-sized disasters, is exhibited for the effects of disasters on credit scores. The initial decline of 9 points for residents affected by medium-sized disasters more than doubles by the third year following the disaster (19 points), and reaches 22 points after four years (figure 1). The growth in magnitude of the effects over the four years after disasters is consistent with credit scores exhibiting a degree of path dependency; that is, once one's credit begins to

deteriorate due to a disaster, that initial decline leads to further deterioration as they lose access to or face higher costs for traditional credit.

Medium-sized disasters appear to lead to larger and more consistently negative effects on financial health than large disasters. For most financial health outcomes, in most years, and for most populations, we find that the effects of medium-sized disasters (i.e., disasters that cause less than \$200 million in total damage and are large enough to trigger FEMA individual assistance, but are less likely to receive special congressional appropriations for long-term recovery) are more substantial than the effects of larger disasters. Four years following a disaster, for example, the effect of the disaster on credit scores is roughly twice as large for those affected by medium-sized disasters as for those affected by Hurricane Sandy (figure 1). In our data, most of the people affected by medium-sized disasters were hit by the 2014 storms and flooding in Michigan, which hit urban areas in and around Detroit but did not receive additional funds for long-term recovery. Because southeastern Michigan is a denser urban environment that has faced significant economic challenges, this finding may not be generalizable, and analyses of medium-sized disasters deserve additional study.

People and communities more likely to be struggling financially before disasters strike are often the hardest hit by disasters. We see relatively consistent evidence that people with lower credit scores prior to the disaster experience larger negative effects than other groups. People with poor initial credit, for example, see larger credit score declines and a loss of access to credit cards that other groups do not.

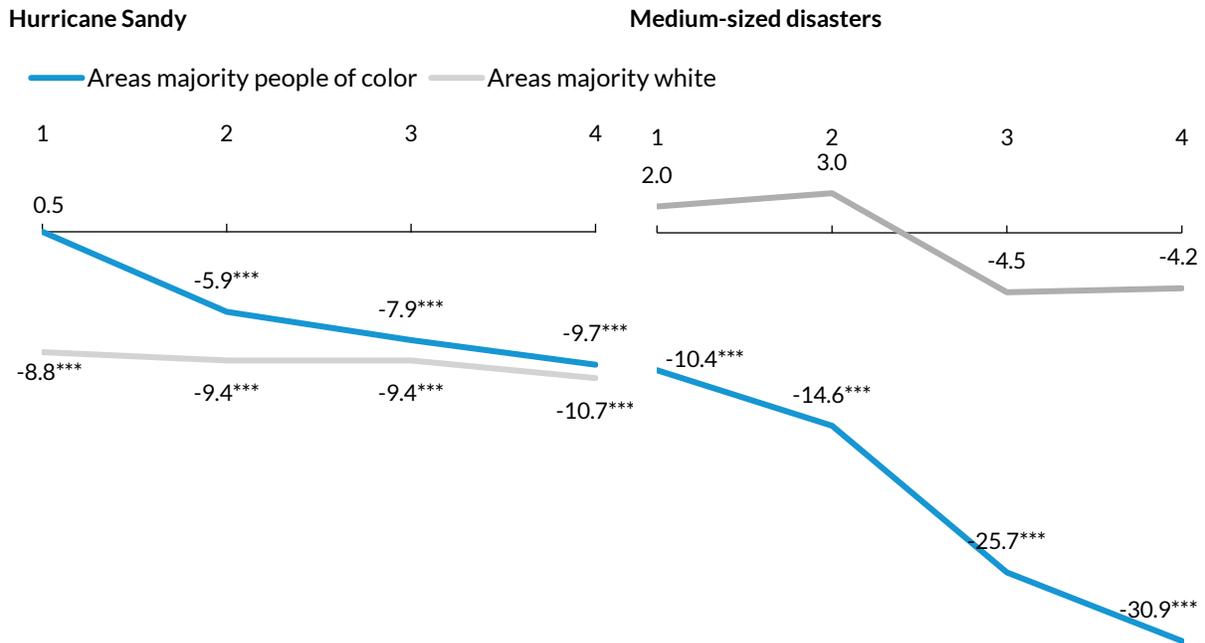
For some disasters and outcomes, we also see larger effects in low-income communities and communities of color. For medium-sized disasters the effects of disasters on credit scores are driven by effects in communities of color, which make up 85 percent of our sample. That is, while the pattern of effects over time in communities of color is similar to the overall results for medium-sized disasters, the magnitudes are larger, rising from a 10-point decline in credit scores in year one to a 31-point decline in year four (figure 3). Overall, these results are suggestive that disasters may not only be harmful for affected residents on average, but may also have the effect of widening already existing inequalities.

Taken together, the full pattern of results supports the conclusion that, in general, disasters lead to broad declines in financial health. For many outcomes, the estimated effects are substantial. Also, these are average treatment effects of residing in areas affected by a natural disaster, so those residents who are directly affected are likely to suffer larger impacts. We conclude that, in general, existing disaster relief programs and other forms of assistance, along with private sources of insurance and support, do not fully protect those affected by natural disasters from their financial consequences.

FIGURE 3

Credit Score Declines Are Larger in Communities of Color Hit by Medium-Sized Disasters

Change by area composition and year(s) after disaster



Source: Urban Institute calculations based on credit bureau, ACS, and FEMA data.

Notes: Values represent estimates of average differences in credit scores between people affected by the indicated disaster (or set of disasters) and matched people from unaffected areas. Effects are estimated separately for each of the four years following the disaster.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Implications of Findings for Disaster Preparation and Recovery Strategies

Our findings provide insight into strategies to promote resilience and recovery by multiple actors—regulators and government (local, state, federal), philanthropy, and nonprofit leaders focused on financial health. These strategies were informed by interviews with experts in the field, conducted in early 2019.

- **Post-disaster programs and resources should consider long-term needs, in addition to more immediate needs.** Federal agencies should consider extending the period of temporary assistance and relaxing or extending application deadlines, particularly when households are confronted with so many options and other life concerns. There is also a need for additional focus from state and local governments, as well as philanthropy, to fund ongoing programs aimed at stabilizing and improving residents’ financial health.

- ***A larger share of recovery resources should be aimed at communities struggling before the disaster hits.*** Financial “mitigation” activities like physical property retrofits, hazard property insurance and health insurance, and other preventative measures should be encouraged and supported. The federal government could make it easier for people in low-income communities and communities of color, who are often hit hardest by disasters, to apply and qualify for assistance. In addition, efforts focused on residents in vulnerable communities would ideally address residents’ needs before disasters hit.
- ***Expand the postdisaster resources available to communities and people hit by less-severe disasters.*** Because of the limited resources available to communities and residents in the aftermath of less severe disasters, we hypothesize that people hit by medium-sized (versus more severe) disasters suffer greater declines in financial health. Our results are consistent with this hypothesis, suggesting that government (from federal to local) and philanthropy should reevaluate and expand resources made available to residents affected by less-severe disasters to improve both their short-term and long-term financial health and stability.
- ***State and local resilience and disaster recovery plans should be more common and incorporate financial health.*** The traditional model of disaster management focuses first on relief and response, followed by property rebuilding. Links to long-term community planning and household financial health are needed. Communities should have better knowledge about housing and household conditions before a disaster to more quickly and appropriately recover afterward. At a basic level, local leaders should integrate financial health in existing platforms. In terms of resiliency, for example, local nonprofits could incorporate family budgeting and disaster planning in local workforce development programs. In the aftermath of disasters, programs designed to address residents’ immediate basic needs could incorporate elements to address their longer-term financial health needs. These plans should also consider how data can aid in disaster preparation and recovery.
- ***Consider rules and guidance around how natural disasters and subsequent delinquencies are identified on consumers’ credit reports and incorporated into credit scores.*** Coordination of data between FEMA, the credit bureaus, and credit scoring companies and federal regulatory agency rules around how natural disaster–related hardships are identified on consumers’ credit reports and incorporated in credit scores could help stem the tide of increasing and persistent declines in credit scores after disasters hit. At the same time, federal, state, and local governments could limit the ability of employers to examine credit reports in the hiring process. Residents whose employment is disrupted by a natural disaster could be doubly harmed by having potential employers check their credit report.
- ***States and municipalities should take steps to provide consumers with utility-related protections after a disaster hits.*** To help protect disaster victims, states could pass laws that require state-regulated private utilities to better address consumer needs; local leaders should consider similar laws related to municipal utilities. States and localities could take steps to revise billing procedures, ensure that all customers can negotiate payment plans and that they are treated equally, and put into place strong rules around the disconnection of utilities (National

Consumer Law Center 2018). States should also be aware that federal Low Income Home Energy Assistance Program (LIHEAP) funds can be used flexibly after disasters. Additional federal LIHEAP funds administered to states after a natural disaster would help protect low-income and vulnerable consumers.

- ***Mortgage lenders and government-sponsored enterprises should update existing mortgage delinquency and foreclosure policies to account for long-term financial burdens following disasters.*** Current policies provide short-term foreclosure moratoria, forbearance plans, and loan modifications following disasters. These policies should be extended. Another option is better assistance navigating the disaster aid application process. For example, Fannie Mae began offering disaster case management in 2018. Finally, increased assistance, education, consumer protections, and regulation could help prevent homeowners from being underinsured. This is particularly important with regards to the National Flood Insurance Program.

Much of the work associated with operationalizing these recommendations lies in the hands of the federal program administrators, starting with FEMA program managers and applicant reviewers. Federal officials play a critical role in allotting recovery funds that eventually reach the disaster-affected households, and therefore play a critical role in incentivizing state and local jurisdictions to monitor the financial conditions of residents before disasters as much as their financial needs afterward. However, those same state and local entities can independently reduce siloes between economic development, long-term planning, and financial safety net activities that they conduct as part of routine business into disaster planning to ensure that all needs are anticipated more robustly and that aid is delivered directly at timely points along a household's recovery. Rethinking and realigning the disaster safety net requires thoughtful coordination between these agencies but, ultimately, requires legislation to change the statutory authorities' and assistance program rules. Further, consistency and timeliness in appropriations across disaster types can keep households from falling off the financial cliff after the short-term financial aid and credit relief dries up following less severe disasters, or from falling between the cracks of temporary aid and potential long-term assistance delivered years later.

Private-sector lenders, creditors, banks, and affiliated financial institutions such as mortgage underwriters and credit-reporting agencies also have a role in providing information to public officials for planning and response functions. Developing consistent and transparent rules about what they can provide in different disaster scenarios can mitigate some of the chaos that occurs for households. These actors can also serve as conduits of information about public and private assistance resources since they are often the first lines of communication to borrowers and consumers; it is in these institutions' best interest to ensure that their customers understand their options and get back on solid financial standing quickly and sustainably.

Beyond these strategies above, field experts and direct service providers we spoke with underlined several strategies aimed at ensuring vulnerable people and communities are not left behind in rebuilding efforts. One respondent described communities using the disaster rebuilding process as an opportunity to increase the equity and vibrancy of their communities—for example, by replacing damaged or destroyed housing in ways that create more mixed-income communities.

There are a number of strategies that hold promise for increasing resilience and improving residents' financial health following a natural disaster. Together they highlight the importance of involvement of many actors—from state and local governments to community organizations to national nonprofits and philanthropy to private sector organizations to federal policy agencies. Changes across these levels could strengthen recovery and resilience efforts, and thereby lessen the negative effects of natural disasters on residents' financial health that we find in this study.

Notes

- ¹ Key among these are assistance from the Federal Emergency Management Agency (FEMA), the US Department of Housing and Urban Development (HUD), and the Small Business Administration (SBA). FEMA's Individual Assistance (IA) program funds direct disaster assistance through the Individuals and Households Program (IHP), and SBA provides loans for homeowners to repair or rebuild, for example. Additionally, Congress can appropriate funds for the Community Development Block Grant Disaster Recovery (CDBG-DR) program.
- ² For more information, see *Insult to Injury: Natural Disasters and Residents' Financial Health* by Caroline Ratcliffe, William J. Congdon, Alexandra Stanczyk, Daniel Teles, Carlos Martín, and Bapuchandra Kotapati. The report provides more sources for the research summarized here.
- ³ This large disaster group excludes Hurricane Sandy.
- ⁴ We estimate the effects of natural disasters on individual financial outcomes as follows: We first identify, for each disaster, a set of comparison communities using propensity score matching. We then compare financial outcomes of residents in affected areas in the year of the disaster with those of otherwise similar people in unaffected areas. We estimate these effects using a propensity score-matching model, matching to nearest-neighbors using age and the predisaster values of the outcome of interest.

References

- Elliott, Diana, and Ricki Granetz Lowitz. 2018. "What Is the Cost of Poor Credit?" Washington, DC: Urban Institute.
- National Consumer Law Center (NCLC). 2018. "Model Utility Consumer Protections When Natural Disasters Strike." Boston: NCLC.

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Acknowledgments

This research was funded by a grant from JPMorgan Chase. We are grateful to them and to all our funders, who make it possible for Urban to advance its mission.

The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders. Funders do not determine research findings or the insights and recommendations of Urban's experts. Further information on the Urban Institute's funding principles is available at urban.org/fundingprinciples.

The authors are grateful for the time and insights of the organizations we spoke with in developing this report: the California Community Economic Development Association; Catalyst Miami; Cities for Financial Empowerment Fund; The Data Center; Enterprise Community Partners; The Kinder Institute for Urban Research, Rice University; Houston Local Initiatives Support Corporation; Volunteers of America Texas; the National Association of Counties; the National Consumer Law Center; the National Low-Income Housing Coalition; and United Way of Greater Houston/United Way THRIVE. The authors also gratefully acknowledge feedback on earlier versions of this report from Laurie Goodman and Courtney Jones at the Urban Institute.



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