

Do Homeownership and Rent Subsidies Protect Individuals from Material Hardship?

Evidence from the Great Recession

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Contents

Background	3
Data and Measures	5
Housing status measures	5
Material hardship measures	6
Income and assets	7
Empirical Models	7
Descriptive Results	8
Macroeconomic context	8
Patterns of housing status by race and ethnicity, 2009–11	9
Experience of material hardship by race and ethnicity	11
Relationship between housing status and material hardship	12
Multivariate Estimates of Housing-Hardship Relationship	13
Alternative specifications	17
Do the gains from homeownership extend to non-Hispanic black and Hispanic families?	18
Conclusion	21
Notes	35
References	36
About the Authors	38

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Americans still regard homeownership as a part of the American dream, even after the dramatic fall in home prices and the recent decline in homeownership. According to a recent poll from the American Enterprise Institute for Public Policy Research, 80 percent of Americans view homeownership as “definitely part of the American dream” (2013, 2). Homeownership offers residential stability and reduces some of the risks of rising housing costs by locking in much of the monthly housing cash flow required. It also generally helps individuals accumulate savings automatically as homeowners build equity in their homes, through paying back mortgages and home price appreciation.

Public policies have promoted homeownership with tax subsidies and mortgage credit subsidies for decades. Still, policy researchers are divided on the value of homeownership and government subsidies. Obviously, for some, renting is more appropriate than homeownership. In recent years, however, the issue has received renewed attention because so many were encouraged to buy housing in a bubble market. The subsequent collapse of home prices and the dramatic increase in foreclosures have generated calls to slow or stop promotion

of homeownership, especially among low- and moderate-income families.

One question particularly relevant to low- and moderate-income families is the potential for homeownership to shield against material hardship. In a normal economic downturn, homeowners with low mortgage payments might be expected to weather the storm and limit material hardship by drawing on home equity to overcome liquidity constraints. In addition, for the many homeowners who have paid off some or all of their mortgage, monthly housing costs are lower than for renters. A few years of inflation will significantly reduce real mortgage debt. On the other hand, the dramatic declines in home values that accompanied the Great Recession wiped out large amounts of equity and left many grappling with how to keep up payments on their homes. Media stories highlighted the hardships of homeowners threatened with losing their homes and former homeowners who had lost their homes. The broader issue is whether homeownership nevertheless helps families avert material hardship during economic downturns. A related question is whether public rent subsidies relate to material hardship in a different way.

This paper analyzes the interaction between housing status and how well minority and low-income families have coped with hardships during and right after the Great Recession. Using the latest Survey of Income and Program Participation (SIPP) that follows individuals from late 2008 to late 2011, it examines whether homeownership and housing subsidies protected individuals from experiencing material hardship, and how the relationships varied by race and ethnicity.

We distinguish between homeowners, renters with a federal rent subsidy or public housing, and renters paying market rents. We look separately at different types of homeownership experiences, including when people purchased their homes and whether families owed more in mortgage debt than the value of their home (the latter are often called underwater owners). The focus is on how housing status in a recent prior year (2009) relates to the familial material hardship as of 2010–11, controlling for liquid assets, average income and income variability, and demographic characteristics. By material hardship, we mean the inability to pay bills, unmet medical or dental needs, food insufficiency, and/or dilapidated housing. To determine whether housing-hardship relationships vary by race and ethnicity, we develop separate estimates for non-Hispanic whites, non-Hispanic blacks, and Hispanics.

The estimates in this paper show that initial housing status is significantly related to subsequent material hardship. The likelihood of

experiencing any material hardship is 5.6 percentage points (or about 25 percent) lower for homeowners than renters who do not receive government rent subsidies, after controlling for age, education, race and ethnicity, family composition, liquid assets, income, and income variability. Rent subsidies offer some protection against hardship, but not as much as owning a home with positive equity. Homeowners who bought their home about the time of the housing crash are still better able to ward off hardship than unsubsidized renters. Owning a home for a longer period (over 10 years) provides more protection than purchasing a home recently (in the past four years). Non-Hispanic blacks and Hispanics are both less likely to own homes and more likely to have negative home equity if they own homes. However, homeownership's role in shielding people from material hardship appears at least as important for non-Hispanic blacks and Hispanics as for non-Hispanic whites. Among low-income individuals, the relationship between homeownership and hardship avoidance is larger than the relationship found for all income groups in the study sample.

The findings from this study are relevant to policy discussions about whether homeownership remains a sound strategy, especially for minority and low- and moderate-income families. Certainly, homeownership policies should depend partly on the timing of potential home purchases, particularly home prices relative to rentals and mortgage interest rates (Lerman, Steuerle, and Zhang 2012). For example,

homeownership looks particularly attractive in the wake of post-2006 declines in home prices, low interest rates, and continuing increases in rents. This study indicates that reducing material hardship offers an additional reason for encouraging homeownership, even among low-income families.

Background

The collapse of home prices and the dramatic increase in foreclosures have generated calls to slow or stop promoting homeownership, especially for low- and moderate-income families. Richard Florida and Dean Baker see homeownership as overrated and suggest that public policies should shift from promoting homeownership to encouraging rental markets.¹ Blanchflower and Oswald (2013) argue that homeownership leads to geographic immobility, which, in turn, raises unemployment rates. Several economists highlight the high risks of homeownership. Federal Reserve economist Karen Pence is cited by Hilsenrath as arguing that homeownership can be a poor investment because it is indivisible, undiversified, illiquid when prices are falling, and correlated to local job market conditions, and it involves high transaction costs.² In a recent paper, Bayer, Ferreira, and Ross (2013) point to the unusually high foreclosure rates experienced by minority homeowners. If the stereotype before the Great Recession was that low-income and minority

families should own, the stereotype afterward has been that they should not.

Though the cautions are worth noting, the benefits of homeownership are real. No general rule applies to every market situation. Research, nonetheless, has demonstrated individual-, family-, and community-level economic and social benefits associated with homeownership (Lerman and McKernan 2008). In evaluating potential risks and benefits, we suggest that the appropriate comparison is between homeownership and rental housing, not homeownership versus nothing. That is, homeownership involves both a consumption and an investment decision. Owning a home can reduce housing risks by shielding families against increases in rents and therefore lead to less variation or uncertainty in consumption (Sinai and Souleles 2005). Owning a home is also an important form of wealth accumulation, particularly for minority and low-income families. As homeowners' real mortgages go down in value either through inflation or repayment of principal, homeownership becomes an automatic savings vehicle. In this way, homeownership usually helps build financial security in the long run. As the recent drop in home prices demonstrates, the asset value of homes can fall, stay even, or rise in real terms. Still, if individuals remain in the same geographical area or move to areas with similar housing price trends, then even a decline in the value of their home does little to reduce their ability to sustain moderate housing costs.

These advantages might shield homeowners from material hardship. Homeowners may be able to borrow more or draw from their home equity to weather emergencies. Families with lower real mortgages might have more resources after paying for housing to devote to other needs, including emergencies. On the other hand, homeowners that owe more than the value of their homes cannot draw down home equity to overcome liquidity constraints. People who purchased homes recently may have taken out high-interest rate mortgages that they expected to refinance but cannot now do so.

What about the role of public housing and rent subsidies in limiting material hardship? The few studies that examine this issue consider only the relationship between receiving rent subsidies and experiencing housing hardship, but not other forms of hardship. In a random-assignment experiment that provided housing rental vouchers to low-income families eligible for or receiving Temporary Assistance for Needy Families (TANF) in 2001–04, Wood, Turnham, and Mills (2008) find that housing vouchers significantly reduced homelessness, crowded housing, and the incidence of living with relatives or friends.

Our analysis builds on the literature on the role of assets in protecting family from economic hardship. Earlier studies show that assets generally help families weather emergencies and therefore reduce the likelihood of experiencing material hardship, although most evidence comes from liquid assets. Using a survey of

Chicago residents in 1983–85, Mayer and Jencks (1989) find that the ability to borrow \$500 when needed, a measure of liquid assets or access to credit, does as much to reduce hardship as tripling family income, all else equal. Owning a home without a mortgage has the same relationship with hardship reduction as a 33 percent increase in family income. Using the 1996 and 2001 SIPP panels, McKernan, Ratcliffe, and Vinopal (2009) look at the relationship between adverse events (involuntary job loss, onset of a health-related work limitation, or a parent leaving the family through death or divorce) and material hardship. They show that among families that experience an adverse event, asset-poor families (those who do not have enough liquid assets to cover three months consumption at the federal poverty level) are 14 percentage points more likely to experience material hardship than non-asset-poor families, after controlling for income. Using the 2008 SIPP panel, Keating (2012) examines the role of both liquid assets and homeownership in reducing material hardship among families that experience the same type of adverse events as McKernan, Ratcliffe, and Vinopal (2009) studied. She finds that higher incidence of material hardships is associated with higher likelihood of being asset-poor and that this relationship is strongest for families in the bottom third of the income distribution. Keating also finds homeownership is associated with lower hardship rates.

Data and Measures

The study's data come from the 2008 SIPP panel. The SIPP is a continuous series of nationally representative panels that collect detailed information on government program participation, economic well-being, and demographic characteristics. SIPP respondents are interviewed every four months, a period referred to as a wave. The full sample is divided into four approximately equal rotation groups. One rotation group is interviewed in each month of a wave. The SIPP content includes a core module survey instrument used to collect common items over each wave and topical modules that cover special topics in specific waves.³

The core data available in all waves include income, demographic characteristics, homeownership, and an indicator specifying whether the respondent received a rent subsidy or lived in a public housing project. Information on home equity and liquid assets is available from the assets and liabilities module taking place in waves 4 (September–December 2009), 7 (September–December 2010), and 10 (September–December 2011). Material hardship measures come from the adult well-being topical module at waves 6 (May–August 2010) and 9 (May–August 2011). The study sample includes individuals who are either the household reference person or the spouse or unmarried cohabitant of the reference person at wave 4, who are under age 69 at wave 4, and who are continuously observed in the sample between waves 4 and 9.⁴ These criteria yield a total

sample of 32,807 individuals. Among them, 23,854 are non-Hispanic white, 3,335 are non-Hispanic black, and 3,427 are Hispanic (the remaining 2,191 are other races). Because the SIPP oversamples low-income households, we weight all analyses using the longitudinal weight. All dollar values are deflated into December 2009 dollars using the CPI-U-RS.

Housing status measures

The housing status variables are generally measured in wave 4 (September–December 2009). We categorize housing status in four different ways. First, and most straightforward, is homeowners versus all others. We define homeownership as a housing status in which the living quarters are owned or being bought by the respondent or someone else in the household. Second, we divide housing status into four categories: “homeowner”; “subsidized renter”—someone who receives a federal, state, or local government rent subsidy or who lives in public housing project (i.e., owned by a local housing authority or other agency); “unsubsidized renter”—any other renter who pays for housing cost and does not receive government subsidies; and a residual category, “not paying rent.”⁵ Third, we further distinguish homeowners by whether they have negative home equity: “underwater homeowner”—someone with home mortgage debt greater than the home value; “above-water homeowner”—someone without home mortgage debt or with home mortgage debt less than the home value; unsubsidized renter; subsidized

renter; and not paying rent. Last, we further distinguish homeowners by when they purchased their homes: “purchased home 0–4 years ago”—that is, after 2004; “purchased home 5–10 years ago”—that is, between 2000 and 2004; “purchased home 10+ years ago”—that is, before 2000; unsubsidized renter; subsidized renter; and not paying rent. While more recent homebuyers are most likely to experience negative equity, the reason for falling underwater is less linked to unobserved personal characteristics than would be the case with the negative equity variable.

Material hardship measures

Most studies that examine material hardship look at four hardship domains: the ability to pay bills, unmet health problems, food insufficiency, and housing problems (Pilkaukas, Currie, and Garfinkel 2012). We follow this convention and group material hardship measures available in the SIPP topical module into these four domains.⁶ For each domain, we use a dummy variable equaling 1 if the hardship is present and 0 if it is not present.

1. **Inability to pay bills:** We define a household as unable to pay bills if at any time in the past 12 months, a household did not pay the full amount of the rent or mortgage, or gas, oil, or electricity bills; or the telephone company disconnected service because payments were not made.
2. **Unmet medical or dental need:** This variable measures whether in the past 12

months a household member needed to see a doctor or a dentist but did not go.⁷

3. **Food insufficiency:** Food insufficiency occurs if one of three criteria was met in the past four months: sometimes or often the individual did not have enough to eat; adults in the household cut the size of meals or skipped meals because of a lack of money for food; and/or, at one point in the month, adults in the household ate less than they felt they should because there was not enough money to buy food.
4. **Housing problem:** This variable is defined based on dilapidated housing. It equals 1 if three or more of the following seven conditions exist in the home: a problem with pests, such as rats, mice, roaches, or other insects; a leaking roof or ceiling; broken window glass or windows that can't shut; exposed electrical wires in the finished areas of the home; a toilet, hot water heater, or other plumbing that doesn't work; holes in the walls or ceiling, or cracks wider than the edge of a dime; and holes in the floor big enough for someone to catch their foot on. This measure is defined at the time of the interview.

In addition, we use a variable—“any hardship”—that equals 1 if a household experienced any of the above four hardships. Using the longitudinal feature of the data, we also examine entries and exits from material hardship. Entry and exit variables equal 1 if the individual transitioned

into or out of any hardships between May–August 2010 (wave 6) and May–August 2011 (wave 9) and 0 otherwise.⁸

Income and assets

The multivariate regressions control for both the level of income and income instability. The level of income is measured as the average monthly income-to-needs ratio (household income to household poverty threshold) between September–December 2008 (wave 1) and May–August 2010 (wave 6). Income instability is measured as the standard deviation of the monthly income-to-needs ratio between wave 1 and wave 6.

We measure home equity and liquid assets using the September–December 2009 (wave 4) information. Liquid assets are measured as the amount in interest-earning assets held in banking institutions. Monthly rent or monthly mortgage cost is also measured during the same period as home equity. In the multivariate estimates section we describe the demographic characteristics we control in the regression model, and they are measured as of May–August 2011 (wave 9).

Empirical Models

Our empirical models measure the relationship between housing status and material hardship, taking account of liquid assets, income, income variability, race and ethnicity, age, education, and family status.⁹ The seven dependent variables are inability to pay bills, unmet

medical or dental need, food insufficiency, housing problem, any of the four hardships, hardship entry, and hardship exit. We estimate four models for each hardship measure. We report some specifications separately for non-Hispanic whites, non-Hispanic blacks, and Hispanics. Since all outcome variables are binary, we use logistic regression and report the marginal effects of independent variables, estimated at the means of all the other variables. The regression model for individual i is as follows:

$$Y_i = \alpha + \beta_1 Housing_i + \beta_2 LiquidAsset_i + \beta_3 Race_i + \beta_4 I_i + \beta_5 X_i + \varepsilon_i \quad [1]$$

where Y_i indicates incidence of material hardship for individual i at wave 9 (May–August 2011), or transition between wave 6 (May–August 2010) and wave 9.

The key explanatory variable, $Housing_i$, indicates housing status for individual i in wave 4 (September–December 2009).¹⁰ Each regression model (models 1 through 4) corresponds to each one of the housing status measures described on page 5. In addition, we estimate model 4 for non-Hispanic whites, non-Hispanic blacks, and Hispanics separately, so we can explore the disparate relationship between housing status and hardship by race and ethnicity.

The other independent variables include the following: $LiquidAssets_i$ indicates whether household liquid assets reach a certain level in wave 4: no liquid assets, liquid assets under \$2,000, liquid assets between \$2,000 and

\$9,999, and liquid assets over \$10,000.¹¹ Liquid assets are considered a measure of emergency saving, the first financial resource to draw from when needed. $Race_i$ indicates race and ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, and other) in wave 9. I_i includes average monthly household income-to-needs ratio and a measure of income variability, the standard deviation of monthly household income-to-needs ratio between wave 1 (September–December 2008) and wave 6 (May–August 2010). Income and poverty status have been associated with material hardship (Beverly 2000; Mayer and Jencks 1989). In addition, research suggests that higher income variability is associated with higher incidence of material hardship (Lerman 2002; Mills and Amick 2010). X_i is a set of individual and family characteristics in wave 9, including individual's age, age squared, completed education (no high school diploma or GED, a high school diploma or GED, and some college, with a bachelor degree's or higher the excluded category), and family composition (single no child, single with children, and married no children, with married with children the excluded category). Even after controlling for these characteristics, it is possible that some unobserved factor—such as financial capability—accounts for the relationship we find. Therefore, we interpret our results as the association between housing status and material hardship, rather than causal effect from homeownership or rent subsidies.

Descriptive Results

Macroeconomic context

This analysis of housing status and material hardship tracks the period during and soon after the Great Recession of December 2007 to June 2009, when housing and labor markets were disrupted. By the first wave of the SIPP in late 2008, the unemployment rate had jumped from about 4.5 percent in early 2007 to about 6.5 percent (appendix figure A.1). Over the next several waves, the unemployment rate rose sharply to 10 percent in October 2009 and remained near that level for about a year before starting a modest decline to about 9 percent in mid-2011 and then falling to about 8 percent by mid- to late 2012. The unemployment rates of non-Hispanic blacks and Hispanics reached 16 and 13 percent, respectively, by 2010. Since some measures of material hardship encompass the prior year, respondents were reporting their economic difficulties when unemployment rates were 9–10 percent for all workers, 15–16 percent for non-Hispanic black workers, and 12–13 percent for Hispanic workers.

Home prices began to fall before the first wave of the SIPP 2008 panel and continued to decline over the 10 waves we observe (appendix figure A.2). Our primary hardship measure covers mid-2010 to mid-2011. The decline in home prices by mid-2010 reached over 18 percent from the 2007 peak. Between mid-2010 and mid-2011, prices fell an additional 4 percent.

These employment and housing conditions provide a particularly interesting context for examining the connections between housing status and material hardship. One reason is that high joblessness increases the likelihood that individuals and families would experience one or another hardship, whether homeowners or not. Another is that the sharp declines in home prices were unusually high because they followed a period of rapid (and also unusual) housing prices increases. These factors likely weaken the advantages of homeownership in avoiding hardship much more in the current downturn than in normal times or even normal downturns. Thus, the estimated relationship between owning a home and hardship in our sample period is almost assuredly lower compared with other periods when home prices are rising or stable.

Patterns of housing status by race and ethnicity, 2009–11

A five-status breakdown of homeownership and rental patterns reveals surprisingly little overall change between the last thirds of 2009 and of 2011. In fact, for this sample, the share in households with a homeowner rose slightly from 71.1 percent to 72.0 percent (table 1, column 1–5). At the same time, the share of these homeowners who faced an underwater, negative equity situation rose from 12.0 percent to 14.0 percent. The median underwater homeowner debt remained about 120 percent of the home's value in all three waves (not shown). In all three

periods, about 3.5 percent of the sample individuals lived in subsidized housing. Despite stories indicating that former homeowners were flooding the rental market and driving up rents, the share in unsubsidized rentals actually fell slightly (from 23.5 percent to 22.4 percent).

The housing status of non-Hispanic blacks and Hispanics also changed only slightly. Although initial housing patterns differed dramatically by race and ethnicity—non-Hispanic blacks and Hispanics had homeownership rates 28.0 and 24.9 percentage points, respectively, lower than whites—the changes in housing status were similarly modest across categories. One notable pattern is that the share of homeowners who became underwater owners increased significantly for non-Hispanic blacks, from 16.3 percent to 20.2 percent between late 2009 and late 2011. The share of Hispanics homeowners underwater also increased from 21.8 percent to 23.1 percent. Such higher likelihood of being underwater among families of color may put them at higher risk of not making other ends meet, as they are unable to draw from home equity to weather emergencies. Another pattern: non-Hispanic blacks were nearly four times more likely to live in subsidized rental housing than other race groups.

The dollar amounts spent on housing varied greatly by housing status but not by race within each housing status. Average monthly payments were similar for both underwater and above-water homeowners with mortgages (appendix table A.1). However, since many above-water

Table I. Distribution of Housing Status by Race and Ethnicity

	Underwater homeowner	Above-water homeowner	Subsidized renter	Unsubsidized renter	Other not paying rent	Underwater among homeowners	Subsidized among renters	Homeownership rate
September–December 2009 (wave 4)								
All	8.5%	62.6%	3.4%	23.5%	1.9%	12.0%	12.6%	71.1%
Non-Hispanic white	8.2%	69.9%	1.7%	18.2%	1.9%	10.4%	8.7%	78.1%
Non-Hispanic black	8.2%	41.9%	12.8%	34.8%	2.3%	16.3%	26.9%	50.1%
Hispanic	11.6%	41.6%	4.9%	40.3%	1.6%	21.8%	10.8%	53.2%
September–December 2010 (wave 7)								
All	9.5%	62.1%	3.5%	22.9%	2.1%	13.2%	13.2%	71.6%
Non-Hispanic white	9.2%	69.4%	1.8%	17.6%	2.0%	11.7%	9.3%	78.6%
Non-Hispanic black	9.4%	40.9%	12.4%	34.8%	2.5%	18.6%	26.2%	50.3%
Hispanic	11.8%	41.5%	5.5%	39.6%	1.6%	22.1%	12.3%	53.3%
September–December 2011 (wave 10)								
All	10.1%	61.9%	3.4%	22.4%	2.2%	14.0%	13.2%	72.0%
Non-Hispanic white	9.6%	69.2%	1.8%	17.1%	2.2%	12.2%	9.4%	78.8%
Non-Hispanic black	10.3%	40.9%	12.4%	33.6%	2.8%	20.2%	26.9%	51.3%
Hispanic	12.5%	41.5%	5.3%	39.4%	1.4%	23.1%	11.8%	54.0%

Source: Authors' tabulations of the Survey of Income and Program Participation (SIPP) 2008 panel.

Notes: Data are weighted using SIPP weights.

homeowners were more likely to own property longer and, hence, have less or no mortgage debt, the difference between underwater and all above-water homeowners was nearly \$450 a month. Underwater homeowners spent \$1.50 on average for each \$1.00 spent by above-water homeowners. The gap between unsubsidized and subsidized renters was much larger in absolute and percentage terms. Subsidized renters paid only \$283 a month on average, or about a third of the \$823 paid by unsubsidized renters.

Experience of material hardship by race and ethnicity

Over one in five prime-age individuals reported experiencing at least one hardship (table 2). The most common hardship was an inability to pay bills on time, which usually meant falling behind

on utility bills or rent or mortgage payments. Far less common was having telephone or utilities cut off (3.5 percent or 1.6 percent) or being evicted (0.4 percent). Nearly 7 percent of respondents had at least one indicator of food insufficiency. But the most severe problem—not having enough to eat—affected only about 2.5 percent.

Non-Hispanic blacks and Hispanics were far more likely to experience hardships than non-Hispanic whites. For example, they were twice as likely to experience food insufficiency as whites (12.4 percent for non-Hispanic blacks, 11.0 percent for Hispanics, and 5.2 percent for whites). For the “any hardship” category, the non-Hispanic black rate of 36 percent was almost double the white rate of 19 percent. Living in dilapidated housing was highly unusual for all

Table 2. Experiences in Material Hardship by Race and Ethnicity

	All	Non-Hispanic white	Non-Hispanic black	Hispanic
Behind on bill payment	14.7%	11.6%	28.1%	21.1%
Behind on rent/mortgage payment	7.9%	6.2%	14.3%	12.2%
Behind on utility payment	10.3%	8.2%	20.6%	14.0%
Phone disconnection	3.5%	2.5%	6.8%	6.2%
Evicted	0.4%	0.3%	0.6%	0.8%
Utility cutoff	1.6%	1.1%	3.7%	2.7%
Unmet medical/dental need	12.7%	11.4%	15.5%	17.3%
Unmet medical need	8.1%	7.2%	10.1%	10.9%
Unmet dental need	10.0%	8.8%	12.3%	14.4%
Food insufficiency	6.9%	5.2%	12.4%	11.0%
Not enough to eat	2.5%	1.7%	5.2%	4.5%
Skip meal	5.3%	4.3%	9.7%	7.2%
Eat less	5.6%	4.3%	10.5%	8.7%
Dilapidated housing	1.8%	1.5%	2.6%	2.2%
Any of the four hardships	22.8%	19.0%	36.3%	32.1%
Hardship entry	12.1%	9.9%	22.0%	18.7%
Hardship exit	40.5%	42.3%	36.4%	39.9%

Source: Authors’ tabulations of the Survey of Income and Program Participation (SIPP) 2008 panel.

Notes: Hardships are measured in May–August 2011 (wave 9), and hardship entry and exit are measured between May–August 2010 (wave 6) and May–August 2011 (wave 9). Evicted is asked only among respondents who answered “yes” to whether behind on rent/mortgage payment. Utility cutoff is asked only among respondents who answered “yes” to whether behind on utility payment.

groups, with rates ranging from 1.5 percent for whites to 2.6 percent for non-Hispanic blacks.

About 4 in 10 of those who experienced at least one hardship in wave 6 (May–August 2010) managed to avoid any hardship by wave 9 (May–August 2011). Again, the pattern varied by race and ethnicity. Families of color were twice as likely to move into hardship between 2010 and 2011 than non-Hispanic whites (22.0 percent for non-Hispanic blacks, 18.7 percent for Hispanics, and 9.9 percent for whites). Minorities were also slightly less likely to exit hardship within one year, but movements into and out of hardship were frequent for all groups. Over one-third of non-Hispanic blacks who experienced any hardship in May–August 2010 were no longer in the hardship pool by May–August 2011. On the other hand, over one-fifth of non-Hispanic blacks not experiencing hardship in mid-2010 were doing so in mid-2011.

Relationship between housing status and material hardship

Differences in hardship across homeowners and renters may be more indicative of income than of housing status. Still, tabulations (appendix table A.3) and simple regressions (appendix table A.4) reveal some important patterns. Not surprisingly, material hardship is sharply lower for homeowners for all race groups. Even homeowners who purchased homes just before the bursting of the housing bubble and underwater homeowners experienced less material hardship than did renters. When

looking at food insufficiency—a hardship unrelated to housing—minority underwater homeowners were about 7–8 percent likely to experience food insufficiency, compared with over 20 percent for subsidized renters and 16–17 percent for unsubsidized renters. Despite paying the least for housing, subsidized renters experienced the highest hardship rates, presumably because of their low incomes. Still, it is striking that even after receiving a housing subsidy to reduce rental costs dramatically and probably having access to food stamps, families with rent subsidies experienced the highest rate of food insufficiency.

The above descriptive analyses suggest the following: between late 2008 and late 2011, when the unemployment rate remained high and housing prices continued to decline, non-Hispanic blacks and Hispanics were more likely to experience hardships than non-Hispanic whites. The raw correlation provides some evidence that homeowners, even underwater ones, were better able to avoid material hardship than renters. However, this relationship likely stems from the higher incomes of homeowners. The next section discusses the multivariate models on the role of housing status in reducing material hardship, after controlling for income and other factors that could be related to material hardship, but not controlling for unobserved factors affecting homeownership.

Multivariate Estimates of Housing-Hardship Relationship

The four empirical models yield consistent and suggestive evidence about the association between owning a home and a reduced incidence of material hardship. In model 1, the single housing status variable, homeownership, indicates a large protective role for homeownership, after controlling for income, income variability, race and ethnicity, age, educational attainment, and family status (table 3). The likelihood of experiencing any of the four dimensions of hardships is 5.1 percentage points lower for homeowners than renters (and those not paying rent), a statistically significant reduction of about 25 percent. Similar percentage reductions show up for other individual hardships, with the exception of dilapidated housing, where there is no significant relationship.¹²

One way of interpreting the scale of the relation between homeownership and material hardship is to compare it with other factors that reduce hardship. For example, the 5.1 percentage-point reduction in hardship associated with homeownership is higher than the 4.0-point reduction associated with an increase in income relative to need from two times the poverty level to three times the poverty level. The relationship between owning a home and hardship reduction, moreover, is also larger than the reduction in hardship moving from a high school dropout to a high school graduate (5.1 versus 2.9 percentage points). On the other hand, having more than \$2,000 in liquid assets is

associated with a larger decline in hardship than homeownership. Clearly, savings in any form makes a significant difference. Given the decline in housing values nationwide over this period, liquid assets provide more accessible resources than home equity to avert emergencies and hardships.

The pattern of results in table 3 reveals that the experience of hardship depends on many factors beyond family income level. More income variability increases hardship, as does being unmarried, being less educated (compared with having a college degree or more), and being African American or non-Hispanic other race. On the other hand, hardship is no higher among Hispanics than non-Hispanic whites, controlling for the other independent variables. The associations of these control variables with material hardship are consistent across models.

Comparing homeownership to all renters misses important distinctions. In particular, some renters receive rent subsidies that substantially reduce their housing costs and should therefore lower their chances of experiencing hardships, especially compared to other renters with the same incomes. As model 2 shows (top panel, table 4), renters with government subsidies experience less material hardship than unsubsidized renters, but the estimate is not significant for food insufficiency or hardship entry or exit, and the estimate is small for unmet medical/dental need or housing problem. This reduction in hardship overturns the unadjusted increases in hardship linked to rent subsidies in

Table 3. The Determinants of Material Hardship (Model 1)

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Housing status							
Homeowner	-0.018*** (0.004)	-0.033*** (0.004)	-0.018*** (0.002)	0.001 (0.001)	-0.051*** (0.006)	-0.031*** (0.005)	0.037** (0.015)
Liquid assets (omitted: liquid assets over \$10,000)							
No liquid assets	0.092*** (0.008)	0.055*** (0.007)	0.033*** (0.005)	0.007*** (0.002)	0.104*** (0.009)	0.052*** (0.008)	-0.060** (0.026)
Liquid assets \$1–\$1,999	0.089*** (0.009)	0.058*** (0.007)	0.030*** (0.005)	0.006*** (0.002)	0.108*** (0.009)	0.051*** (0.008)	-0.061** (0.025)
Liquid assets \$2,000–\$9,999	0.032*** (0.008)	0.024*** (0.007)	0.007 (0.005)	0.002 (0.002)	0.035*** (0.010)	0.011 (0.007)	-0.015 (0.029)
Race and ethnicity (omitted: non-Hispanic white)							
Non-Hispanic black	0.048*** (0.007)	-0.019*** (0.004)	0.004 (0.002)	0.000 (0.001)	0.037*** (0.008)	0.035*** (0.008)	0.005 (0.019)
Hispanic	-0.002 (0.005)	-0.010** (0.005)	-0.000 (0.002)	-0.001 (0.001)	-0.005 (0.007)	0.002 (0.006)	0.025 (0.020)
Non-Hispanic other race	0.013* (0.007)	0.007 (0.006)	0.007** (0.003)	0.004* (0.002)	0.028*** (0.010)	0.015* (0.008)	-0.054** (0.026)
Individual and family characteristics							
Monthly income-to-needs ratio							
Average wave 1–6	-0.023*** (0.001)	-0.023*** (0.001)	-0.011*** (0.000)	-0.003*** (0.000)	-0.040*** (0.001)	-0.016*** (0.001)	0.054*** (0.005)
Standard deviation wave 1–6	0.012*** (0.002)	0.013*** (0.001)	0.002* (0.001)	-0.001 (0.001)	0.019*** (0.002)	0.009*** (0.001)	-0.012 (0.008)
Age							
Age	0.011*** (0.001)	0.010*** (0.001)	0.003*** (0.000)	0.000 (0.000)	0.018*** (0.001)	0.008*** (0.001)	-0.027*** (0.004)
Age squared	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000* (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000*** (0.000)
Education (omitted: college degree and above)							
No high school diploma or GED	0.063*** (0.009)	0.043*** (0.008)	0.018*** (0.004)	0.002 (0.002)	0.093*** (0.011)	0.070*** (0.011)	-0.022 (0.024)
High school diploma or GED	0.051*** (0.007)	0.029*** (0.006)	0.011*** (0.003)	0.003 (0.002)	0.064*** (0.008)	0.036*** (0.007)	-0.049** (0.021)
Some college	0.064*** (0.006)	0.040*** (0.005)	0.016*** (0.003)	0.002 (0.001)	0.078*** (0.007)	0.040*** (0.006)	-0.080*** (0.019)
Family composition (omitted: married, children)							
Single, no child	0.017*** (0.006)	0.010** (0.005)	0.013*** (0.003)	0.000 (0.002)	0.032*** (0.007)	0.022*** (0.006)	-0.039** (0.020)
Single, children	0.053*** (0.008)	0.004 (0.006)	0.014*** (0.004)	0.000 (0.002)	0.066*** (0.011)	0.042*** (0.010)	-0.062*** (0.023)
Married, no child	0.018*** (0.005)	-0.007 (0.005)	0.003 (0.003)	-0.002 (0.001)	0.015** (0.007)	0.014*** (0.005)	-0.010 (0.019)
Observations	32,807	32,807	32,807	32,807	32,807	25,370	7,437
Mean of hardship	14.7%	12.7%	6.9%	1.8%	22.8%	12.1%	40.5%

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid asset are measured as of September–December 2009 (wave 4). Race and ethnicity and individual and family characteristics are measured as of wave 9, unless otherwise noted.

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

Table 4. How Housing Status Relates to Material Hardship

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Model 2							
Homeowner	-0.023*** (0.004)	-0.038*** (0.005)	-0.019*** (0.002)	0.001 (0.001)	-0.056*** (0.006)	-0.035*** (0.006)	0.041*** (0.015)
Subsidized renter	-0.023*** (0.006)	-0.030*** (0.005)	-0.002 (0.003)	-0.003* (0.002)	-0.021** (0.010)	-0.011 (0.008)	0.037 (0.028)
Not paying rent	-0.018** (0.008)	-0.012 (0.009)	-0.012*** (0.003)	0.005 (0.004)	-0.027** (0.013)	-0.026*** (0.010)	-0.008 (0.041)
Model 3							
Underwater homeowner	-0.016*** (0.005)	-0.016*** (0.005)	-0.010*** (0.002)	-0.000 (0.002)	-0.001 (0.008)	-0.004 (0.007)	0.007 (0.024)
Above-water homeowner	-0.041*** (0.004)	-0.041*** (0.004)	-0.019*** (0.002)	0.002 (0.001)	-0.068*** (0.006)	-0.041*** (0.006)	0.050*** (0.016)
Subsidized renter	-0.031*** (0.005)	-0.031*** (0.005)	-0.002 (0.003)	-0.003* (0.002)	-0.021** (0.009)	-0.012 (0.008)	0.037 (0.028)
Not paying rent	-0.012 (0.009)	-0.012 (0.009)	-0.012*** (0.003)	0.005 (0.004)	-0.027** (0.012)	-0.026*** (0.010)	-0.007 (0.041)
Model 4							
Purchased home 0–4 years ago	-0.011** (0.005)	-0.032*** (0.004)	-0.012*** (0.002)	-0.002* (0.001)	-0.040*** (0.006)	-0.018*** (0.005)	0.057*** (0.021)
Purchased home 5–10 years ago	-0.019*** (0.004)	-0.026*** (0.004)	-0.011*** (0.002)	-0.004*** (0.001)	-0.041*** (0.006)	-0.030*** (0.005)	0.001 (0.021)
Purchased home 10+ years ago	-0.033*** (0.004)	-0.045*** (0.004)	-0.017*** (0.002)	-0.002 (0.001)	-0.070*** (0.006)	-0.042*** (0.005)	0.055*** (0.019)
Subsidized renter	-0.022*** (0.006)	-0.029*** (0.005)	0.000 (0.003)	-0.004*** (0.001)	-0.018* (0.010)	-0.010 (0.008)	0.033 (0.027)
Not paying rent	-0.017** (0.008)	-0.011 (0.009)	-0.011*** (0.003)	0.002 (0.003)	-0.024* (0.013)	-0.025** (0.010)	-0.012 (0.040)
Observations	32,807	32,807	32,807	32,807	32,807	25,370	7,437
Mean of hardship	14.7%	12.7%	6.9%	1.8%	22.8%	12.1%	40.5%

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid asset are measured as of September–December 2009 (wave 4). The omitted category of all models is unsubsidized renter. Other control variables include no liquid assets, liquid assets \$1–\$1,999, liquid asset \$2,000–\$9,999, average monthly income-to-needs ratio, standard deviation of monthly income-to-needs ratio, age, age squared, no high school diploma, high school diploma only, some college, single without a child, single with children, married without a child.

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

the descriptive analysis. Net of other factors, subsidized renters have a 2.1 percent lower probability of experiencing any hardship than unsubsidized renters. Relative to the mean levels of this hardship measure, this represents about a 10 percent decline. This reduction is less than half the decline in “any hardship” associated with homeownership.

The bursting of the housing bubble cast a dark shadow on the presumed benefits of homeownership. Underwater homeowners faced especially serious problems during the downturn. They did not have equity in their homes to draw upon when faced with an adverse shock to income, such as a job loss. In addition, having an underwater position in their homes may have limited their geographic mobility. For both reasons, we expect underwater homeowners to be far less protected against material hardship than other homeowners, but the differences with subsidized renters are unclear conceptually. As model 3 reveals (middle panel, table 4), homeowners who have negative equity still did better than unsubsidized renters in avoiding hardship of inability to pay bills, unmet medical/dental need, and food insufficiency, although not for “any hardship” or hardship entry or exit. One reason for this surprising outcome may be that monthly mortgage payments, even for underwater homeowners, are still low compared to monthly rents. Another possibility is that homeownership reflects the lack of controls for unobserved factors such as financial capability. Even homeowners with

negative equity may have better financial management skills than renters, making them more likely to make ends meet.

Homeowners with positive equity in their homes are least associated with material hardship across all housing status measures. Even after accounting for liquid assets, income, income variability, age, race/ethnicity, education, and family status, these homeowners had a 6.8 percentage-point lower likelihood of experiencing any hardship than unsubsidized renters. This decline represents a nearly 30 percent reduction from the mean hardship level. The differential in hardship by home equity is not surprising, given the enormous gap in net equity relative to home values. The median net equity-to-home value ratio was -21 percent for underwater homeowners and nearly 80 percent for above-water homeowners (not shown).

Some uncontrolled factors, such as weak financial literacy, weak local housing and employment conditions, or variable mortgage rate across different areas, may account for both underwater status on a mortgage and material hardship.¹³ Although endogeneity is hard to avoid, the timing of the home purchase may be linked to declines in home equity but have no direct association with hardship. In model 4 (bottom panel, table 4), we capture the timing by dividing the homeownership variable into three periods: purchasing the home 0–4, 5–10, and more than 10 years ago. As expected, the largest reductions in hardship occur among those with the longest home tenures. But even among those

who bought homes during the housing bubble, incidence of hardship is lower than among unsubsidized renters with similar socioeconomic characteristics.

Alternative specifications

In an alternative specification, we separate “purchased home 0–4 years ago” into two categories: purchased home less than two years ago—that is, after the home price start to fall in 2007; and purchased home 3–4 years ago—that is, during the housing boost between 2005 and 2006. Individuals who purchased homes after 2007, when home price started to fall, are significantly less likely to experience hardship than unsubsidized renters for all hardship measures. Individuals who purchased homes between 2005 and 2006—those likely to have high mortgages and thus be underwater, as they purchased when prices were at their peak—are still significantly associated with less hardship incidence for unmet medical/dental need, food insufficiency, or any, but not significant for the other four hardship measures.

One possibility is that homeownership is a proxy for high net worth, conditional on the other independent variables. If so, the reduced hardship levels linked to homeownership might simply result from having more wealth. (Of course, some of the added wealth might stem from the induced savings linked to homeownership.) To examine this issue, we estimate one specification that controls for net worth and separates net worth into liquid assets and net

worth excluding all liquid assets. The results show continuing and significant relationships between owning a home and material hardships. The links are smaller than in the standard specification. The estimates linking homeownership to hardship outcomes are -0.041 for any hardship, -0.028 for hardship entry, and 0.032 for hardship exit; without net worth, the homeownership variable shows impacts of -0.051, -0.031, and 0.037, respectively.

In another test, we add indicators of public transfers, specifically whether the individual received SNAP, TANF, and/or unemployment insurance (UI) benefit, all defined as of September–December 2009 (wave 4) (not shown). Controlling for receiving public transfers does little to change the relationship between homeownership and hardship, but it increases the relationship between government rent subsidy and hardship. Being a subsidized renter is associated with 4.1 percentage-point reduction in any hardship after controlling for the selected public transfer benefits, compared with an 1.8 percentage-point reduction in any hardship in the original model 4 (bottom panel in table 4). We did not include these indicators of public transfers in our main regression model, as they are likely to suffer from endogeneity problems.¹⁴ For example, people falling behind on bill payments are likely to turn to public programs for help.¹⁵

As material hardship is most likely to occur among low-income individuals, we also examine the relationship between housing status and

hardship, restricting our sample to individuals whose average monthly income-to-needs ratio is below 2.0. The relationship between homeownership and hardship avoidance is larger than the relationship found for the main study sample. For example, purchasing a home 0–4 years ago is associated with a 10.0 percentage-point reduction on any hardship. With a mean of 44.0 percent, this is equivalent to about a 22.7 percent reduction. For the main study sample, the estimate is 17.5 percent.

Our main models primarily examine housing status in September–December 2009 (wave 4), the first time home equity and year purchased home were reported in the SIPP. We also examine the robustness of results using housing status at September–December 2008 (wave 1). We compare the regression including homeownership at wave 1, without controlling for liquid assets (as it is also first available at wave 4), with the regression including homeownership at wave 4 without controlling for liquid assets. The former exhibits slightly smaller gains from homeownership. For example, owning a home in wave 1 is associated with a 5.0 percentage-point reduction on any hardship, compared with a 6.0 percentage-point reduction for owning a home in wave 4. This exercise also shows the difference between model 1 and the same model without controlling for liquid assets: the role of homeownership is larger when not controlling for liquid assets.

Controlling for state fixed effects, which partly controls for variation in home price

declines across areas, does not change results significantly. In one specification we include state dummies to control for geographic differences. The marginal effects of the relationship between housing status and hardship are by and large the same as the main model, except for the hardship of “unable to pay bills,” where the estimate is relatively smaller when controlling for state fixed effects. This result does not indicate hardships were similar across states, only that the link between housing status and hardships remained even after controlling for state differences.

Overall, the multivariate analyses indicate a significant role for homeownership in averting material hardship. The patterns vary modestly with the specification of housing status, but lower levels of hardship are associated with homeownership even among individuals with similar socioeconomic characteristics.

Do the gains from homeownership extend to non-Hispanic black and Hispanic families?

Families of color face a higher risk of material hardship than do non-Hispanic white families, in part because of their lower income and asset levels. The proportion of non-Hispanic blacks and Hispanics experiencing food insufficiency is more than double the share for non-Hispanic whites. However, after controlling for economic, individual, and household characteristics, the hardship gap is insignificant between Hispanics and non-Hispanic whites (e.g., table 3). Racial

disparities remain for non-Hispanic blacks, who are 3.7 percentage points more likely to experience one of the four hardships than non-Hispanic whites.

A separate issue is whether housing status relates to hardship in different ways by race and Hispanic origin. The results in table 5 indicate a beneficial, but varying role for homeownership among non-Hispanic blacks and Hispanics. Non-Hispanic blacks show the biggest decline in “any hardship” among those purchasing a home 5–10 years ago. Reductions in food insufficiency are large and significant among all non-Hispanic black homeowners, regardless of when they purchased homes. Hardships among Hispanic households are particularly sensitive to homeownership. Again, independent of income, assets, and other characteristics, Hispanic homeowners are much less likely to experience various hardships than Hispanic unsubsidized renters. Compared with non-Hispanic whites, where purchasing a home more than 10 years ago is associated with 6.7 percentage points less incidence of any hardship, the relationship is larger for Hispanics (8.3 percentage points) and smaller for non-Hispanic blacks (4.4 percentage points).

Surprisingly, rent subsidies are associated with lower material hardship only among non-Hispanic whites (except for unmet

medical/dental need). Why these subsidies do not lower hardship among non-Hispanic blacks and Hispanics is unclear, especially in light of the significantly lower housing costs borne by recipients of housing subsidies. The lack of a subsidy relationship might be the result of the small sample size for non-Hispanic blacks and Hispanics, or unobserved differences between those who receive rental housing subsidies and those who do not.

A few interesting results emerge from variables other than housing status. One example is education. Net of income, assets, and other factors, non-Hispanic blacks with some college face higher levels of material hardship than non-Hispanic blacks with less education (appendix table A.9). This result does not hold for Hispanics (appendix table A.10). Increases in hardship associated with single parenthood are large among non-Hispanic whites and non-Hispanic blacks but not among Hispanics.

In summary, the benefits of homeownership for reduced hardship holds for families of color as well as for non-Hispanic whites. In some cases, the benefits for families of color exceed the benefits for non-Hispanic whites. For example, owning a home for over 10 years provides a larger protection against all hardships (except dilapidated housing) for Hispanics than non-Hispanic whites.

Table 5. How Housing Status Relates to Material Hardship Differently by Race and Ethnicity

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Non-Hispanic white, model 4							
Purchased home 0–4 years ago	-0.016*** (0.004)	-0.029*** (0.004)	-0.008*** (0.002)	-0.001 (0.001)	-0.040*** (0.006)	-0.019*** (0.005)	0.075*** (0.027)
Purchased home 5–10 years ago	-0.016*** (0.004)	-0.025*** (0.004)	-0.006*** (0.002)	-0.004*** (0.001)	-0.035*** (0.006)	-0.026*** (0.005)	-0.031 (0.027)
Purchased home 10+ years ago	-0.031*** (0.004)	-0.046*** (0.004)	-0.011*** (0.002)	-0.002 (0.001)	-0.067*** (0.006)	-0.041*** (0.005)	0.061** (0.024)
Subsidized renter	-0.012* (0.006)	-0.022*** (0.006)	0.001 (0.003)	-0.004*** (0.002)	-0.020* (0.011)	-0.018** (0.009)	0.058 (0.040)
Not paying rent	-0.013* (0.007)	-0.009 (0.009)	-0.006* (0.002)	0.000 (0.003)	-0.022* (0.012)	-0.030*** (0.008)	-0.038 (0.050)
Observations	23,854	23,854	23,854	23,854	23,854	19,242	4,612
Mean of hardship	11.6%	11.4%	5.2%	1.5%	19.0%	9.9%	42.3%
Non-Hispanic black, model 4							
Purchased home 0–4 years ago	0.072** (0.034)	-0.034* (0.019)	-0.029* (0.015)	-0.015*** (0.004)	0.015 (0.034)	0.017 (0.034)	-0.004 (0.058)
Purchased home 5–10 years ago	-0.023 (0.032)	-0.063*** (0.018)	-0.043*** (0.014)	0.005 (0.007)	-0.086*** (0.032)	-0.087*** (0.028)	0.091 (0.064)
Purchased home 10+ years ago	0.024 (0.025)	-0.023 (0.017)	-0.057*** (0.012)	0.002 (0.005)	-0.044* (0.026)	-0.041 (0.026)	-0.003 (0.051)
Subsidized renter	-0.036 (0.025)	-0.034** (0.017)	-0.008 (0.013)	-0.004 (0.003)	-0.007 (0.030)	0.040 (0.035)	0.076 (0.049)
Not paying rent	-0.046 (0.047)	-0.065** (0.027)	-0.033 (0.021)	0.015 (0.014)	-0.084 (0.053)	-0.036 (0.054)	0.167* (0.097)
Observations	3,335	3,335	3,335	3,335	3,335	2,183	1,152
Mean of hardship	28.1%	15.5%	12.4%	2.6%	36.3%	22.0%	36.4%
Hispanic, model 4							
Purchased home 0–4 years ago	-0.000 (0.022)	-0.072*** (0.016)	-0.027** (0.011)	-0.004 (0.005)	-0.065*** (0.025)	-0.031 (0.023)	0.088 (0.054)
Purchased home 5–10 years ago	-0.037* (0.019)	-0.021 (0.018)	-0.035*** (0.010)	-0.003 (0.005)	-0.053** (0.025)	-0.036* (0.022)	0.032 (0.054)
Purchased home 10+ years ago	-0.051*** (0.019)	-0.064*** (0.015)	-0.045*** (0.011)	-0.002 (0.005)	-0.083*** (0.023)	-0.042** (0.021)	0.081 (0.051)
Subsidized renter	-0.012 (0.031)	-0.063*** (0.019)	0.005 (0.018)	-0.003 (0.006)	0.006 (0.040)	-0.014 (0.037)	-0.069 (0.064)
Not paying rent	-0.098*** (0.034)	0.002 (0.052)	-0.024 (0.022)	0.018 (0.022)	-0.050 (0.065)	0.001 (0.060)	-0.257*** (0.085)
Observations	3,427	3,427	3,427	3,427	3,427	2,264	1,163
Mean of hardship	21.1%	17.3%	11.0%	2.2%	32.1%	18.7%	39.9%

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid asset are measured as of September–December 2009 (wave 4). Other control variables include no liquid assets, liquid assets \$1–\$1,999, liquid assets \$2,000–\$9,999, average monthly income-to-needs ratio, standard deviation of monthly income-to-needs ratio, age, age squared, no high school diploma, high school diploma only, some college, single without a child, single with children, married without a child.

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

Conclusion

A family's housing status reflects a range of factors, including income, wealth, job location, the relative prices of renting and owning homes, the availability of housing subsidies, and preferences for owning versus renting. Homeownership offers residential stability, reduces risks by locking in monthly housing costs, and generally helps individuals accumulate savings automatically as they build equity in their homes through paying back mortgages and home price appreciation. However, the dramatic declines in home prices as well as the sharp increases in home foreclosures have raised questions about the potential risks of homeownership, especially for families of color and low-income Americans.

Assets that yield high rates of return come with risks. From a pure asset perspective, homeownership is no exception. However, owner-occupied housing is distinctive in limiting future increases in the costs of housing except among those leaving an area where prices have declined to an area where prices have increased. Put another way, owner-occupied housing is a type of insurance that generally reduces risks. At the same time, the paper gains in home values do not necessarily translate into higher living standards unless the household moves from a high-cost to a low-cost location. Thus, the financial risks and returns of homeownership are often exaggerated.

This paper investigates the interactions between housing status—especially

homeownership—and material hardship right after a serious economic downturn. The Great Recession saw especially sharp declines in income, employment, and asset prices, thereby raising the likelihood of material hardship. The paper asks whether, even in this period, homeownership can shield families from various hardships and whether gains from homeownership apply to families of color.

The results are broadly positive for homeownership. Using a wide variety of specifications of housing status, homeownership is associated with lower material hardship, even when comparing families with the same incomes, income instability, liquid assets, age, race, and education. The benefits depend partly on the ability of families to retain positive equity in their home and on the timing of their home purchase. However, even those who are underwater on their mortgages and those who purchased homes a few years before prices plummeted experience lower material hardship than renters who pay market rates.

After controlling for income and other characteristics, renters with government subsidies have a 2.1 percent lower probability of experiencing any hardship than unsubsidized renters. Relative to the mean levels of this hardship measure, this represents about a 10 percent decline. Still, this reduction is less than half the decline in “any hardship” associated with homeownership.

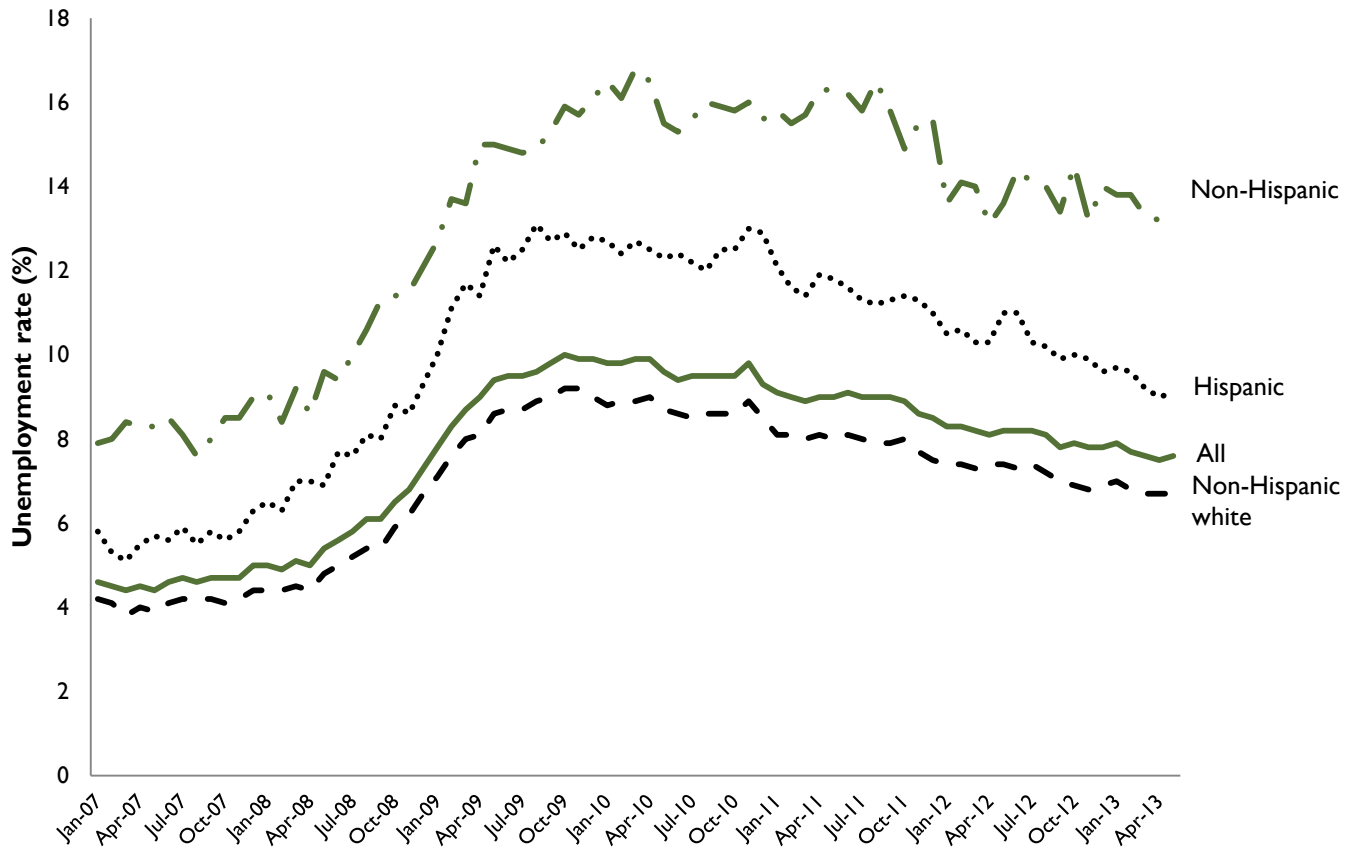
Notwithstanding our efforts to control for characteristics other than housing status, the

possibility remains that some unobserved factor—such as financial literacy—is responsible for both a higher likelihood of homeownership and a lower likelihood of hardship. Still, the results for homeownership look sufficiently positive to raise questions about the recent skepticism concerning homeownership for low-income and minority families. Certainly, homeownership was encouraged excessively before the downturn, when market prices were high relative to income and the carrying costs of

homes were high relative to rents. Still, the subsequent weakening of efforts to encourage homeownership is mistimed, coming when home affordability in many areas is at an all-time high relative to incomes and to renting.

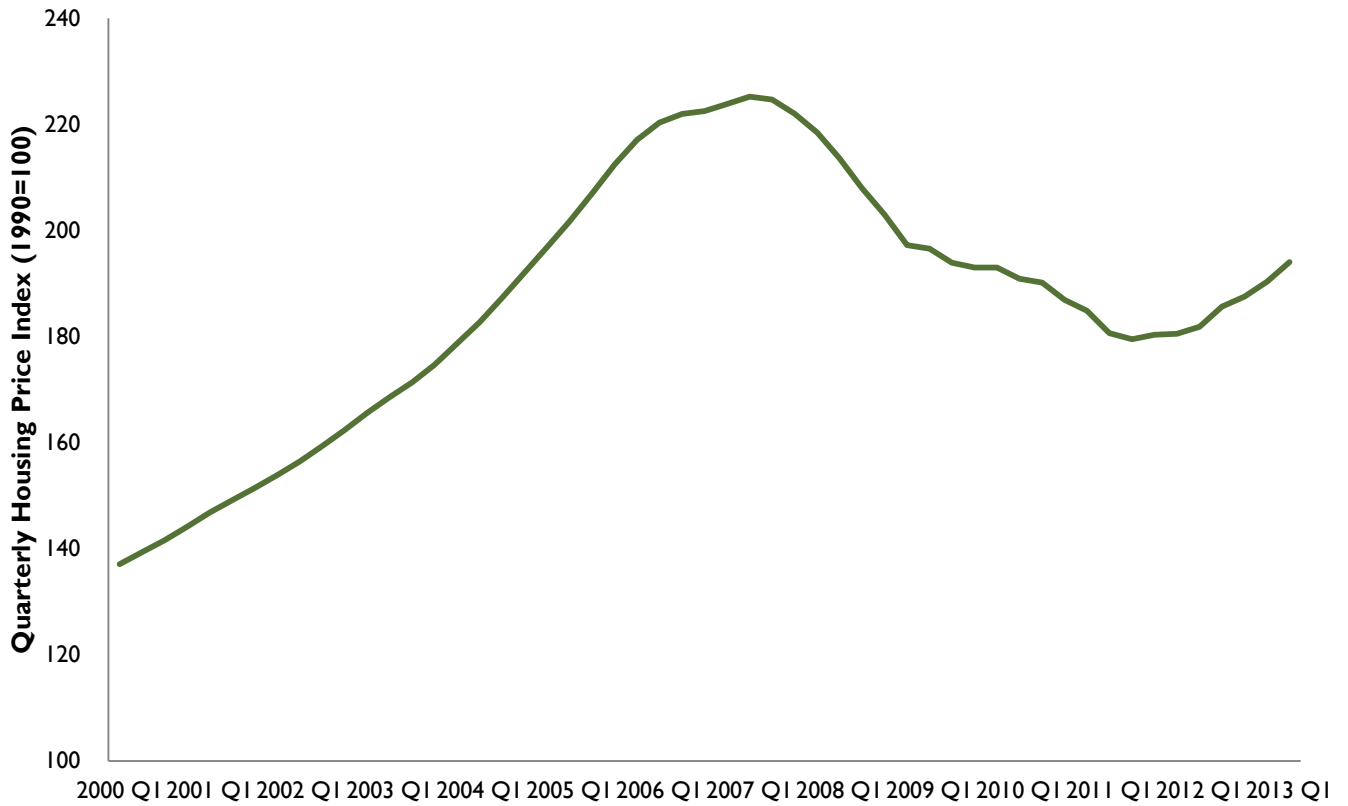
More research will be necessary before we can fully attribute reductions in hardship to homeownership itself. Meanwhile, policymakers should be cautious about initiatives aimed at cutting back homeownership.

Appendix Figure A.I. Monthly Unemployment Rate by Race and Ethnicity, 2007–13



Source: US Bureau of Labor Statistics.

Appendix Figure A.2. Quarterly House Price Index, Q1 2000–Q1 2013



Source: Federal Housing Finance Agency House Price Index.

Appendix Table A.1. Average Monthly Rent or Mortgage, September–December 2009

	Underwater homeowner	Above-water homeowner	Above-water homeowner with a mortgage	Subsidized renter	Unsubsidized renter
All	\$1,291	\$842	\$1,223	\$283	\$823
Non-Hispanic white	\$1,278	\$844	\$1,216	\$262	\$819
African American	\$1,188	\$709	\$1,088	\$260	\$753
Hispanic	\$1,355	\$782	\$1,233	\$351	\$826

Source: Authors' tabulations of the Survey of Income and Program Participation 2008 panel.

Notes: Monthly rent or mortgage is measured as of September–December 2009 (wave 4).

Appendix Table A.2. Summary Statistics (Means and Frequencies) by Race and Ethnicity

	All	Non-Hispanic white	Non-Hispanic black	Hispanic
Material hardships				
Inability to pay bills	0.147	0.116	0.281	0.211
Unmet medical or dental need	0.127	0.114	0.155	0.173
Food insufficiency	0.069	0.052	0.124	0.110
Housing problem	0.018	0.015	0.026	0.022
Any of the four hardships	0.228	0.190	0.363	0.321
Hardship entry	0.121	0.099	0.220	0.187
Hardship exit	0.405	0.423	0.364	0.399
Housing status				
Homeowner	0.711	0.781	0.501	0.532
Underwater homeowner	0.085	0.082	0.082	0.116
Above-water homeowner	0.626	0.699	0.419	0.416
Subsidized renter	0.034	0.017	0.128	0.049
Unsubsidized renter	0.235	0.182	0.348	0.403
Other not paying rent	0.019	0.019	0.023	0.016
Purchased home 0–4 years ago	0.177	0.188	0.125	0.143
Purchased home 5–10 years ago	0.166	0.180	0.101	0.145
Purchased home over–10 years ago	0.326	0.370	0.240	0.192
Liquid assets				
No liquid assets	0.317	0.256	0.504	0.518
Liquid asset \$1–\$1,999.9	0.260	0.256	0.281	0.265
Liquid asset \$2,000–\$9,999.9	0.180	0.201	0.112	0.122
Liquid asset \$10,000 and more	0.244	0.287	0.104	0.095
Income				
Average monthly income-to-needs ratio	4.320	4.784	3.024	2.664
Standard deviation monthly income-to-needs ratio	1.128	1.232	0.833	0.746
Demographic characteristics				
Non-Hispanic white	0.710	-	-	-
Non-Hispanic black	0.101	-	-	-
Hispanic	0.128	-	-	-
Other race non-Hispanic	0.061	-	-	-
Age	47.67	48.60	47.17	43.66
Less than high school or GED	0.100	0.052	0.118	0.356
High school graduate or GED	0.227	0.222	0.257	0.249
Some college	0.345	0.354	0.413	0.269
College degree and above	0.329	0.371	0.211	0.126
Single without a child	0.229	0.228	0.333	0.167
Single with child(ren)	0.096	0.075	0.218	0.129
Married without a child	0.273	0.314	0.166	0.153
Married with child(ren)	0.402	0.383	0.283	0.551

Source: Authors' tabulations of the Survey of Income and Program Participation (SIPP) 2008 panel.

Notes: Data are weighted using SIPP weights. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid asset are measured as of September–December 2009 (wave 4). Income is measured between September–December 2008 (wave 1) and May–August 2010 (wave 6). Demographic characteristics are measured as of May–August 2011 (wave 9).

Appendix Table A.3. The Relationship between Housing Status and Material Hardship, by Race and Ethnicity

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Non-Hispanic white							
Underwater homeowner	17.8%	13.1%	5.1%	1.6%	24.8%	14.0%	43.2%
Above-water homeowner	7.8%	8.4%	3.2%	1.3%	13.9%	7.6%	46.7%
Purchased home 0–4 years ago	9.7%	8.5%	3.3%	1.3%	15.4%	9.3%	51.5%
Purchased home 5–10 years ago	9.9%	9.6%	3.7%	0.9%	16.6%	8.5%	40.0%
Purchased home 10+ years ago	6.6%	7.2%	2.6%	1.0%	12.0%	6.5%	49.5%
Subsidized renter	27.2%	23.3%	21.3%	2.4%	42.6%	22.2%	34.7%
Unsubsidized renter	21.0%	19.9%	11.0%	2.1%	32.4%	18.2%	37.0%
Not paying rent	19.7%	20.6%	9.9%	3.4%	31.5%	12.3%	30.3%
Non-Hispanic black							
Underwater homeowner	28.8%	14.1%	7.1%	1.0%	32.3%	20.5%	47.5%
Above-water homeowner	22.6%	12.0%	6.8%	2.5%	28.2%	16.8%	39.2%
Purchased home 0–4 years ago	29.3%	12.0%	8.6%	0.2%	33.8%	22.3%	38.3%
Purchased home 5–10 years ago	19.8%	8.6%	6.3%	2.7%	24.0%	12.0%	46.9%
Purchased home 10+ years ago	21.9%	13.2%	5.5%	2.5%	27.0%	15.9%	40.7%
Subsidized renter	35.6%	18.3%	21.3%	3.4%	50.2%	36.1%	34.7%
Unsubsidized renter	31.6%	19.1%	17.1%	2.5%	41.7%	25.4%	31.9%
Not paying rent	31.2%	12.5%	13.6%	6.9%	37.5%	23.8%	44.4%
Hispanic							
Underwater homeowner	29.2%	16.3%	8.2%	1.7%	36.4%	18.7%	34.8%
Above-water homeowner	14.4%	11.9%	5.6%	1.5%	22.6%	13.6%	47.4%
Purchased home 0–4 years ago	19.8%	10.1%	6.9%	1.2%	25.1%	14.8%	46.7%
Purchased home 5–10 years ago	16.9%	15.9%	6.1%	1.4%	26.8%	14.1%	39.3%
Purchased home 10+ years ago	14.2%	10.8%	4.8%	1.5%	22.5%	12.8%	42.4%
Subsidized renter	28.8%	17.2%	22.2%	3.6%	45.5%	27.5%	28.6%
Unsubsidized renter	25.2%	22.9%	16.1%	2.9%	39.1%	24.1%	38.7%
Not paying rent	12.4%	21.6%	9.4%	5.1%	31.6%	22.6%	16.8%

Source: Authors' tabulations of the Survey of Income and Program Participation (SIPP) 2008 panel.

Notes: Data are weighted using SIPP weights. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status is measured as of September–December 2009 (wave 4).

Appendix Table A.4. The Relationship between Housing Status and Material Hardship

	Model A		Model B		Model C	
	Food insufficiency	Any hardship	Food insufficiency	Any hardship	Food insufficiency	Any hardship
Own home	-0.097*** (0.004)	-0.189*** (0.006)	-0.090*** (0.005)	-0.178*** (0.007)		
Subsidized renter			0.046*** (0.008)	0.092*** (0.015)		
Not paying rent			-0.015** (0.006)	-0.016 (0.016)		
Purchased home 0–4 years ago					-0.049*** (0.002)	-0.134*** (0.005)
Purchased home 5–10 years ago					-0.048*** (0.002)	-0.130*** (0.005)
Purchased home 10+ years ago					-0.070*** (0.003)	-0.183*** (0.005)
Observations	32,808 6.9%	32,808 22.8%	32,808 6.9%	32,808 22.8%	32,808 6.9%	32,808 22.8%

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Material hardships are measured as of May–August 2011 (wave 9). Housing status is measured as of September–December 2009 (wave 4). The omitted category is all renters in model A and unsubsidized renters for models B and C.

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

Appendix Table A.5. How Housing Status Relates to Material Hardship (Model 2)

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Housing status							
(omitted: unsubsidized renter)							
Own home	-0.023*** (0.004)	-0.038*** (0.005)	-0.019*** (0.002)	0.001 (0.001)	-0.056*** (0.006)	-0.035*** (0.006)	0.041*** (0.015)
Subsidized renter	-0.023*** (0.006)	-0.030*** (0.005)	-0.002 (0.003)	-0.003* (0.002)	-0.021** (0.010)	-0.011 (0.008)	0.037 (0.028)
Not paying rent	-0.018** (0.008)	-0.012 (0.009)	-0.012*** (0.003)	0.005 (0.004)	-0.027** (0.013)	-0.026*** (0.010)	-0.008 (0.041)
Liquid assets							
(omitted: liquid assets over \$10,000)							
No liquid assets	0.091*** (0.008)	0.054*** (0.007)	0.033*** (0.005)	0.007*** (0.002)	0.104*** (0.009)	0.051*** (0.008)	-0.059** (0.026)
Liquid assets \$1–\$1,999	0.087*** (0.009)	0.057*** (0.007)	0.029*** (0.005)	0.006*** (0.002)	0.107*** (0.009)	0.050*** (0.008)	-0.060*** (0.025)
Liquid assets \$2,000–\$9,999	0.031*** (0.008)	0.024*** (0.007)	0.007 (0.005)	0.002 (0.002)	0.034*** (0.010)	0.011 (0.007)	-0.014 (0.029)
Race and ethnicity							
(omitted: non-Hispanic white)							
Black non-Hispanic	0.050*** (0.007)	-0.016*** (0.005)	0.003 (0.002)	0.001 (0.001)	0.038*** (0.008)	0.036*** (0.008)	0.002 (0.019)
Hispanic	-0.003 (0.005)	-0.011** (0.005)	-0.001 (0.002)	-0.001 (0.001)	-0.006 (0.007)	0.002 (0.006)	0.026 (0.020)
Other race non-Hispanic	0.013* (0.007)	0.007 (0.006)	0.007** (0.003)	0.004* (0.002)	0.028*** (0.010)	0.015* (0.008)	-0.055** (0.026)
Individual and family characteristics							
Monthly income-to-needs ratio							
Average wave 1–6	-0.023*** (0.001)	-0.023*** (0.001)	-0.011*** (0.000)	-0.003*** (0.000)	-0.040*** (0.001)	-0.016*** (0.001)	0.055*** (0.005)
Std Dev wave 1–6	0.012*** (0.002)	0.013*** (0.002)	0.002* (0.001)	-0.001 (0.001)	0.019*** (0.002)	0.009*** (0.001)	-0.012 (0.008)
Age							
Age	0.011*** (0.001)	0.010*** (0.001)	0.003*** (0.000)	0.000 (0.000)	0.018*** (0.001)	0.007*** (0.001)	-0.027*** (0.004)
Age squared	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000* (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000*** (0.000)
Education (omitted: college degree and above)							
No high school diploma	0.064*** (0.009)	0.044*** (0.008)	0.017*** (0.004)	0.002 (0.002)	0.094*** (0.011)	0.070*** (0.011)	-0.023 (0.024)
High school diploma only	0.051*** (0.006)	0.029*** (0.006)	0.011*** (0.003)	0.003* (0.002)	0.064*** (0.008)	0.036*** (0.007)	-0.050** (0.021)
Some college	0.064*** (0.006)	0.040*** (0.005)	0.016*** (0.003)	0.002 (0.001)	0.078*** (0.007)	0.040*** (0.006)	-0.080*** (0.019)
Family composition (omitted: married, children)							
Single, no child	0.018*** (0.006)	0.011** (0.005)	0.013*** (0.003)	0.001 (0.001)	0.033*** (0.007)	0.023*** (0.006)	-0.040** (0.020)
Single, children	0.056*** (0.008)	0.007 (0.006)	0.014*** (0.004)	0.001 (0.002)	0.068*** (0.011)	0.042*** (0.010)	-0.065*** (0.023)
Married, no child	0.018*** (0.005)	-0.007 (0.005)	0.003 (0.003)	-0.002 (0.001)	0.015** (0.007)	0.014*** (0.005)	-0.010 (0.019)
Observations	32,807	32,807	32,807	32,807	32,807	25,370	7,437

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid asset are measured as of September–December 2009 (wave 4). Race and ethnicity, individual and family characteristics are measured as of May–August 2011 (wave 9), unless otherwise noted.

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

Appendix Table A.6. How Housing Status Relates to Material Hardship(Model 3)

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Housing status							
(omitted: unsubsidized renter)							
Underwater homeowner	0.022*** (0.007)	-0.016*** (0.005)	-0.010*** (0.002)	-0.000 (0.002)	-0.001 (0.008)	-0.004 (0.007)	0.007 (0.024)
Above-water homeowner	-0.034*** (0.004)	-0.041*** (0.004)	-0.019*** (0.002)	0.002 (0.001)	-0.068*** (0.006)	-0.041*** (0.006)	0.050*** (0.016)
Subsidized renter	-0.023*** (0.005)	-0.031*** (0.005)	-0.002 (0.003)	-0.003* (0.002)	-0.021** (0.009)	-0.012 (0.008)	0.037 (0.028)
Not paying rent	-0.018** (0.008)	-0.012 (0.009)	-0.012*** (0.003)	0.005 (0.004)	-0.027** (0.012)	-0.026*** (0.010)	-0.007 (0.041)
Liquid assets							
(omitted: liquid assets over \$10,000)							
No liquid assets	0.087*** (0.008)	0.053*** (0.007)	0.032*** (0.005)	0.007*** (0.002)	0.100*** (0.009)	0.049*** (0.007)	-0.056** (0.026)
Liquid assets \$1–\$1,999	0.082*** (0.009)	0.055*** (0.007)	0.029*** (0.005)	0.006*** (0.002)	0.102*** (0.009)	0.048*** (0.008)	-0.056** (0.025)
Liquid assets \$2,000–\$9,999	0.029*** (0.008)	0.023*** (0.007)	0.007 (0.005)	0.002 (0.002)	0.033*** (0.010)	0.010 (0.007)	-0.013 (0.029)
Race and ethnicity							
(omitted: non-Hispanic white)							
Black non-Hispanic	0.047*** (0.006)	-0.017*** (0.005)	0.003 (0.002)	0.001 (0.001)	0.037*** (0.008)	0.034*** (0.008)	0.003 (0.019)
Hispanic	-0.005 (0.005)	-0.012** (0.005)	-0.001 (0.002)	-0.001 (0.001)	-0.008 (0.007)	0.000 (0.006)	0.028 (0.020)
Other race non-Hispanic	0.013* (0.007)	0.007 (0.006)	0.007** (0.003)	0.004* (0.002)	0.027*** (0.010)	0.014* (0.008)	-0.056** (0.026)
Individual and family characteristics							
Monthly income-to-needs ratio							
Average wave 1–6	-0.023*** (0.001)	-0.023*** (0.001)	-0.011*** (0.000)	-0.003*** (0.000)	-0.040*** (0.001)	-0.016*** (0.001)	0.055*** (0.005)
Std Dev wave 1–6	0.011*** (0.002)	0.013*** (0.002)	0.002* (0.001)	-0.001 (0.001)	0.019*** (0.002)	0.009*** (0.001)	-0.013 (0.008)
Age							
Age	0.010*** (0.001)	0.010*** (0.001)	0.003*** (0.000)	0.000 (0.000)	0.017*** (0.001)	0.007*** (0.001)	-0.027*** (0.004)
Age squared	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000* (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000*** (0.000)
Education (omitted: college degree and above)							
No high school diploma	0.063*** (0.009)	0.043*** (0.008)	0.017*** (0.004)	0.002 (0.002)	0.092*** (0.011)	0.070*** (0.011)	-0.023 (0.024)
High school diploma only	0.050*** (0.006)	0.029*** (0.006)	0.011*** (0.003)	0.003* (0.002)	0.063*** (0.008)	0.035*** (0.007)	-0.050** (0.021)
Some college	0.062*** (0.006)	0.040*** (0.005)	0.016*** (0.003)	0.002 (0.001)	0.077*** (0.007)	0.039*** (0.006)	-0.080*** (0.019)
Family composition (omitted: married, children)							
Single, no child	0.017*** (0.005)	0.011** (0.005)	0.013*** (0.003)	0.001 (0.001)	0.031*** (0.007)	0.022*** (0.006)	-0.039* (0.020)
Single, children	0.054*** (0.008)	0.007 (0.006)	0.013*** (0.004)	0.001 (0.002)	0.066*** (0.010)	0.041*** (0.010)	-0.064*** (0.023)
Married, no child	0.016*** (0.005)	-0.008* (0.005)	0.003 (0.003)	-0.002 (0.001)	0.013** (0.007)	0.014** (0.005)	-0.008 (0.019)
Observations	32,807	32,807	32,807	32,807	32,807	25,370	7,437

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid assets are measured as of September–December 2009 (wave 4). Race and ethnicity, individual, and family characteristics are measured as of May–August 2011 (wave 9), unless otherwise noted.

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

Appendix Table A.7. How Housing Status Relates to Material Hardship (Model 4)

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Housing status (omitted: unsubsidized renter)							
Purchased home 0–4 years ago	-0.011** (0.005)	-0.032*** (0.004)	-0.012*** (0.002)	-0.002* (0.001)	-0.040*** (0.006)	-0.018*** (0.005)	0.057*** (0.021)
Purchased home 5–10 years ago	-0.019*** (0.004)	-0.026*** (0.004)	-0.011*** (0.002)	-0.004*** (0.001)	-0.041*** (0.006)	-0.030*** (0.005)	0.001 (0.021)
Purchased home 10+ years ago	-0.033*** (0.004)	-0.045*** (0.004)	-0.017*** (0.002)	-0.002 (0.001)	-0.070*** (0.006)	-0.042*** (0.005)	0.055*** (0.019)
Subsidized renter	-0.022*** (0.006)	-0.029*** (0.005)	0.000 (0.003)	-0.004*** (0.001)	-0.018* (0.010)	-0.010 (0.008)	0.033 (0.027)
Not paying rent	-0.017** (0.008)	-0.011 (0.009)	-0.011*** (0.003)	0.002 (0.003)	-0.024* (0.013)	-0.025** (0.010)	-0.012 (0.040)
Liquid assets (omitted: liquid assets over \$10,000)							
No liquid assets	0.089*** (0.008)	0.051*** (0.007)	0.032*** (0.005)	0.006** (0.002)	0.100*** (0.009)	0.049*** (0.007)	-0.056** (0.026)
Liquid assets \$1–\$1,999	0.085*** (0.009)	0.054*** (0.007)	0.028*** (0.005)	0.006** (0.002)	0.104*** (0.009)	0.048*** (0.008)	-0.058** (0.025)
Liquid assets \$2,000–\$9,999	0.030*** (0.008)	0.023*** (0.007)	0.007 (0.005)	0.002 (0.002)	0.033*** (0.010)	0.010 (0.007)	-0.012 (0.029)
Race and ethnicity (omitted: non-Hispanic white)							
Black non-Hispanic	0.050*** (0.007)	-0.016*** (0.005)	0.004* (0.002)	0.000 (0.001)	0.040*** (0.008)	0.036*** (0.008)	-0.001 (0.019)
Hispanic	-0.002 (0.005)	-0.010** (0.005)	-0.000 (0.002)	-0.002 (0.001)	-0.005 (0.007)	0.002 (0.006)	0.025 (0.020)
Other race non-Hispanic	0.013* (0.007)	0.007 (0.006)	0.007** (0.003)	0.004* (0.002)	0.027*** (0.010)	0.014* (0.008)	-0.056** (0.026)
Individual and family characteristics							
Monthly income-to-needs ratio							
Average wave 1–6	-0.023*** (0.001)	-0.023*** (0.001)	-0.011*** (0.000)	-0.003*** (0.000)	-0.040*** (0.001)	-0.016*** (0.001)	0.054*** (0.005)
Std Dev wave 1–6	0.012*** (0.002)	0.013*** (0.001)	0.002** (0.001)	-0.001 (0.001)	0.019*** (0.002)	0.009*** (0.001)	-0.012 (0.008)
Age							
Age	0.011*** (0.001)	0.010*** (0.001)	0.003*** (0.000)	0.001* (0.000)	0.017*** (0.001)	0.008*** (0.001)	-0.027*** (0.004)
Age squared	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000*** (0.000)
Education (omitted: college degree and above)							
No high school diploma	0.062*** (0.009)	0.040*** (0.008)	0.016*** (0.004)	0.001 (0.002)	0.089*** (0.011)	0.067*** (0.011)	-0.021 (0.024)
High school diploma only	0.051*** (0.006)	0.028*** (0.006)	0.010*** (0.003)	0.002 (0.002)	0.063*** (0.008)	0.035*** (0.007)	-0.049** (0.021)
Some college	0.063*** (0.006)	0.039*** (0.005)	0.016*** (0.003)	0.002 (0.001)	0.077*** (0.007)	0.039*** (0.006)	-0.079*** (0.019)
Family composition (omitted: married, children)							
Single, no child	0.017*** (0.006)	0.010** (0.005)	0.014*** (0.003)	0.000 (0.001)	0.031*** (0.007)	0.021*** (0.006)	-0.039** (0.020)
Single, children	0.055*** (0.008)	0.007 (0.006)	0.014*** (0.004)	0.000 (0.002)	0.068*** (0.011)	0.042*** (0.010)	-0.066*** (0.023)
Married, no child	0.018*** (0.005)	-0.007 (0.005)	0.003 (0.003)	-0.002 (0.001)	0.015** (0.007)	0.015*** (0.005)	-0.010 (0.019)
Observations	32,807	32,807	32,807	32,807	32,807	25,370	7,437

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid asset are measured as of September–December 2009 (wave 4). Race and ethnicity, individual, and family characteristics are measured as of May–August 2011 (wave 9), unless otherwise noted.

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

Appendix Table A.8. How Housing Status Relates to Material Hardship (Model 4, Non-Hispanic White)

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Housing status (omitted: unsubsidized renter)							
Purchased home 0–4 years ago	-0.016*** (0.004)	-0.029*** (0.004)	-0.008*** (0.002)	-0.001 (0.001)	-0.040*** (0.006)	-0.019*** (0.005)	0.075*** (0.027)
Purchased home 5–10 years ago	-0.016*** (0.004)	-0.025*** (0.004)	-0.006*** (0.002)	-0.004*** (0.001)	-0.035*** (0.006)	-0.026*** (0.005)	-0.031 (0.027)
Purchased home 10+ years ago	-0.031*** (0.004)	-0.046*** (0.004)	-0.011*** (0.002)	-0.002 (0.001)	-0.067*** (0.006)	-0.041*** (0.005)	0.061** (0.024)
Subsidized renter	-0.012* (0.006)	-0.022*** (0.006)	0.001 (0.003)	-0.004*** (0.001)	-0.020* (0.011)	-0.018** (0.009)	0.058 (0.040)
Not paying rent	-0.013* (0.007)	-0.009 (0.009)	-0.006** (0.002)	0.000 (0.003)	-0.022* (0.012)	-0.030*** (0.008)	-0.038 (0.050)
Liquid assets (omitted: liquid assets over \$10,000)							
No liquid assets	0.071*** (0.008)	0.053*** (0.007)	0.023*** (0.004)	0.006** (0.003)	0.096*** (0.010)	0.045*** (0.008)	-0.084*** (0.031)
Liquid assets \$1–\$1,999	0.067*** (0.008)	0.054*** (0.007)	0.020*** (0.004)	0.006** (0.002)	0.095*** (0.009)	0.042*** (0.007)	-0.091*** (0.030)
Liquid assets \$2,000–\$9,999	0.018*** (0.007)	0.018*** (0.007)	0.004 (0.004)	0.001 (0.002)	0.023*** (0.009)	0.005 (0.006)	-0.031 (0.034)
Individual and family characteristics							
Monthly income-to-needs ratio							
Average wave 1–6	-0.017*** (0.001)	-0.019*** (0.001)	-0.008*** (0.000)	-0.003*** (0.000)	-0.032*** (0.001)	-0.013*** (0.001)	0.062*** (0.007)
Std Dev wave 1–6	0.008*** (0.001)	0.011*** (0.001)	0.000 (0.001)	-0.000 (0.001)	0.015*** (0.002)	0.008*** (0.001)	-0.014 (0.009)
Age							
Age	0.010*** (0.001)	0.011*** (0.001)	0.003*** (0.000)	0.001** (0.000)	0.017*** (0.001)	0.008*** (0.001)	-0.030*** (0.005)
Age squared	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000*** (0.000)
Education (omitted: college degree and above)							
No high school diploma	0.078*** (0.012)	0.044*** (0.010)	0.011*** (0.004)	0.002 (0.002)	0.106*** (0.014)	0.060*** (0.013)	-0.091*** (0.032)
High school diploma only	0.042*** (0.006)	0.020*** (0.006)	0.006** (0.002)	0.001 (0.001)	0.047*** (0.008)	0.025*** (0.006)	-0.044* (0.026)
Some college	0.052*** (0.005)	0.032*** (0.005)	0.011*** (0.002)	0.001 (0.001)	0.067*** (0.007)	0.036*** (0.005)	-0.086*** (0.023)
Family composition (omitted: married, children)							
Single, no child	0.016*** (0.005)	0.010** (0.005)	0.009*** (0.002)	0.002 (0.002)	0.032*** (0.007)	0.025*** (0.006)	-0.038 (0.024)
Single, children	0.056*** (0.009)	0.011 (0.007)	0.012*** (0.004)	0.000 (0.002)	0.072*** (0.012)	0.053*** (0.011)	-0.071** (0.030)
Married, no child	0.019*** (0.005)	-0.005 (0.005)	0.000 (0.002)	0.001 (0.002)	0.015** (0.006)	0.016*** (0.005)	-0.005 (0.024)
Observations	23,854	23,854	23,854	23,854	23,854	19,242	4,612

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid assets are measured as of September–December 2009 (wave 4). Race and ethnicity, individual, and family characteristics are measured as of May–August 2011 (wave 9), unless otherwise noted.

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

Appendix Table A.9. How Housing Status Relates to Material Hardship (Model 4, Non-Hispanic Black)

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Housing status (omitted: unsubsidized renter)							
Purchased home 0–4 years ago	0.072** (0.034)	-0.034* (0.019)	-0.029* (0.015)	-0.015*** (0.004)	0.015 (0.034)	0.017 (0.034)	-0.004 (0.058)
Purchased home 5–10 years ago	-0.023 (0.032)	-0.063*** (0.018)	-0.043*** (0.014)	0.005 (0.007)	-0.086*** (0.032)	-0.087*** (0.028)	0.091 (0.064)
Purchased home 10+ years ago	0.024 (0.025)	-0.023 (0.017)	-0.057*** (0.012)	0.002 (0.005)	-0.044* (0.026)	-0.041 (0.026)	-0.003 (0.051)
Subsidized renter	-0.036 (0.025)	-0.034** (0.017)	-0.008 (0.013)	-0.004 (0.003)	-0.007 (0.030)	0.040 (0.035)	0.076 (0.049)
Not paying rent	-0.046 (0.047)	-0.065** (0.027)	-0.033 (0.021)	0.015 (0.014)	-0.084 (0.053)	-0.036 (0.054)	0.167* (0.097)
Liquid assets (omitted: liquid assets over \$10,000)							
No liquid assets	0.154*** (0.040)	0.033 (0.031)	0.038 (0.029)	0.009 (0.009)	0.119*** (0.042)	0.088** (0.041)	-0.108 (0.082)
Liquid assets \$1–\$1,999	0.147*** (0.048)	0.041 (0.034)	0.026 (0.032)	0.010 (0.012)	0.123*** (0.046)	0.065 (0.046)	-0.109 (0.076)
Liquid assets \$2,000–\$9,999	0.088 (0.056)	-0.013 (0.034)	-0.025 (0.028)	0.013 (0.017)	0.050 (0.052)	0.061 (0.051)	-0.007 (0.092)
Individual and family characteristics							
Monthly income-to-needs ratio							
Average wave 1–6	-0.051*** (0.007)	-0.030*** (0.005)	-0.027*** (0.004)	-0.005*** (0.001)	-0.062*** (0.008)	-0.026*** (0.007)	0.046*** (0.014)
Std Dev wave 1–6	0.037*** (0.009)	0.022*** (0.008)	0.018*** (0.007)	-0.005* (0.003)	0.036*** (0.010)	0.010 (0.011)	-0.031* (0.016)
Age							
Age	0.006 (0.005)	0.003 (0.004)	0.003 (0.003)	0.001 (0.001)	0.008 (0.006)	-0.001 (0.006)	-0.007 (0.010)
Age squared	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Education (omitted: college degree and above)							
No high school diploma	0.000 (0.034)	-0.014 (0.025)	0.014 (0.022)	0.014 (0.014)	-0.003 (0.037)	0.041 (0.042)	0.111 (0.068)
High school diploma only	0.042 (0.030)	0.006 (0.023)	0.003 (0.019)	0.012 (0.010)	0.041 (0.032)	0.054 (0.035)	0.018 (0.059)
Some college	0.084*** (0.027)	0.044** (0.021)	0.021 (0.018)	0.010 (0.008)	0.079*** (0.029)	0.052* (0.030)	-0.079 (0.051)
Family composition (omitted: married, children)							
Single, no child	0.049 (0.030)	0.039* (0.024)	0.037* (0.022)	-0.005 (0.004)	0.058* (0.032)	-0.035 (0.031)	-0.235*** (0.046)
Single, children	0.071** (0.035)	0.015 (0.026)	0.023 (0.024)	0.001 (0.006)	0.068* (0.037)	-0.017 (0.035)	-0.182*** (0.049)
Married, no child	-0.015 (0.030)	0.031 (0.024)	0.027 (0.023)	-0.002 (0.005)	0.012 (0.033)	-0.005 (0.031)	-0.075 (0.052)
Observations	3,335	3,335	3,335	3,335	3,335	2,183	1,152

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid asset are measured as of September–December 2009 (wave 4). Race and ethnicity, individual, and family characteristics are measured as of May–August 2011 (wave 9), unless otherwise noted.

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

Appendix Table A.10. How Housing Status Relates to Material Hardship (Model 4, Hispanic)

	Inability to pay bills	Unmet medical/dental need	Food insufficiency	Housing problem	Any hardship	Hardship entry	Hardship exit
Housing status (omitted: unsubsidized renter)							
Purchased home 0–4 years ago	-0.000 (0.022)	-0.072*** (0.016)	-0.027** (0.011)	-0.004 (0.005)	-0.065*** (0.025)	-0.031 (0.023)	0.088 (0.054)
Purchased home 5–10 years ago	-0.037* (0.019)	-0.021 (0.018)	-0.035*** (0.010)	-0.003 (0.005)	-0.053** (0.025)	-0.036* (0.022)	0.032 (0.054)
Purchased home 10+ years ago	-0.051*** (0.019)	-0.064*** (0.015)	-0.045*** (0.011)	-0.002 (0.005)	-0.083*** (0.023)	-0.042** (0.021)	0.081 (0.051)
Subsidized renter	-0.012 (0.031)	-0.063*** (0.019)	0.005 (0.018)	-0.003 (0.006)	0.006 (0.040)	-0.014 (0.037)	-0.069 (0.064)
Not paying rent	-0.098*** (0.034)	0.002 (0.052)	-0.024 (0.022)	0.018 (0.022)	-0.050 (0.065)	0.001 (0.060)	-0.257*** (0.085)
Liquid assets (omitted: liquid assets over \$10,000)							
No liquid assets	0.055 (0.035)	0.006 (0.030)	0.040* (0.024)	0.000 (0.008)	0.042 (0.039)	0.019 (0.032)	0.206* (0.106)
Liquid assets \$1–\$1,999	0.037 (0.038)	0.008 (0.031)	0.033 (0.030)	-0.002 (0.008)	0.051 (0.042)	0.021 (0.035)	0.200* (0.118)
Liquid assets \$2,000–\$9,999	-0.012 (0.039)	0.018 (0.036)	0.018 (0.033)	0.002 (0.010)	0.002 (0.045)	-0.037 (0.034)	0.177 (0.127)
Individual and family characteristics							
Monthly income-to-needs ratio							
Average wave 1–6	-0.039*** (0.006)	-0.038*** (0.006)	-0.027*** (0.004)	-0.008*** (0.001)	-0.058*** (0.008)	-0.032*** (0.006)	0.021 (0.016)
Std Dev wave 1–6	0.013 (0.009)	0.010 (0.009)	0.010* (0.006)	0.000 (0.002)	0.015 (0.012)	0.018** (0.009)	0.049* (0.027)
Age							
Age	0.015*** (0.005)	0.011** (0.004)	0.001 (0.003)	-0.001 (0.001)	0.020*** (0.005)	0.009* (0.005)	-0.024** (0.010)
Age squared	-0.000*** (0.000)	-0.000*** (0.000)	-0.000 (0.000)	0.000 (0.000)	-0.000*** (0.000)	-0.000* (0.000)	0.000** (0.000)
Education (omitted: college degree and above)							
No high school diploma	0.083** (0.035)	0.053* (0.030)	0.074** (0.030)	-0.008 (0.005)	0.085** (0.038)	0.082** (0.037)	-0.005 (0.067)
High school diploma only	0.107*** (0.040)	0.073** (0.033)	0.076** (0.035)	-0.001 (0.006)	0.105*** (0.039)	0.059 (0.038)	-0.105 (0.065)
Some college	0.082** (0.037)	0.037 (0.030)	0.052* (0.031)	-0.007 (0.005)	0.040 (0.037)	0.006 (0.033)	-0.024 (0.067)
Family composition (omitted: married, children)							
Single, no child	-0.001 (0.029)	-0.018 (0.024)	0.034 (0.024)	-0.007* (0.004)	-0.011 (0.034)	0.042 (0.035)	0.155** (0.066)
Single, children	0.030 (0.032)	-0.015 (0.025)	0.023 (0.023)	-0.006 (0.004)	0.030 (0.038)	0.019 (0.035)	0.002 (0.065)
Married, no child	0.009 (0.025)	-0.038* (0.022)	0.013 (0.017)	-0.017** (0.007)	-0.003 (0.030)	-0.006 (0.027)	0.010 (0.056)
Observations	3,427	3,427	3,427	3,427	3,427	2,264	1,163

Source: Authors' calculations from the Survey of Income and Program Participation 2008 panel.

Notes: Weighted logistic regression marginal effects are reported with robust standard errors in parentheses. Four material hardships and any hardship are measured as of May–August 2011 (wave 9). Hardship entry and exit are measured as changes between May–August 2010 (wave 6) and May–August 2011 (wave 9). Housing status and liquid asset are measured as of September–December 2009 (wave 4). Race and ethnicity, individual, and family characteristics are measured as of May–August 2011 (wave 9), unless otherwise noted.

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

Notes

1. See Richard Florida, “Homeownership Is Overrated,” *Wall Street Journal*, June 7, 2010, 17; and Dean Baker, “Owning vs. Renting,” *Spotlight on Poverty and Opportunity*, August 24, 2009, <http://www.spotlightonpoverty.org/ExclusiveCommentary.aspx?id=a8140bde-9499-4384-a603-cccf7af500fd>
2. See Jon Hilsenrath, “Fed Economist: Housing Is a Lousy Investment,” *Real-Time Economics (Wall Street Journal blog)*, January 5, 2010, <http://blogs.wsj.com/economics/2010/01/05/fed-economist-housing-is-a-lousy-investment/>.
3. For more information, see http://www.census.gov/sipp/usrguide/ch2_nov20.pdf.
4. We follow individuals because a change in households is likely to accompany foreclosure or eviction. Also, following individuals allows us to capture the potential hardships faced by people who have to leave their household of origin. We limit the ages of individuals to between 25 and 69 in recognition of the normally high residential instability among youth and the high stability among older individuals.
5. As housing status in the SIPP is only reported at the household level, all individuals living in the same household report the same housing status. Therefore, a doubled-up young adult would report his or her housing status as own home. The “not paying rent” category does not include individuals whose rent is fully subsidized by government. These individuals are in the “subsidized renter” category.
6. We measure some domains of hardships following Nelson (2011), such as dilapidated housing.
7. The SIPP does not ask explicitly whether a household member missed doctor or dentist visits because of lack of monetary resources.
8. Transition into any hardship is defined as having none of the four hardships in May–August 2010 (wave 6) and having at least one hardship at May–August 2011 (wave 9). Transition out of any hardship is defined as having at least one hardship out of the four in May–August 2010, and having no hardship in May–August 2011.
9. Likely other unmeasured factors remain and we interpret our results cautiously.
10. We measure housing status in wave 4, when underwater status and year purchased home are first available in the SIPP 2008 panel.
11. We use amount of liquid assets regardless of household size. As discussed in Mills and Amick (2010), this is a more attainable level of savings compared with alternative measures such as liquid-asset-poor, which accounts for household size.
12. One potential explanation is that renters often do not pay to fix housing problems. Landlords or building managers might provide such services for free, while homeowners must generally pay to repair their homes.
13. For example, after a legislative experiment in Illinois mandated financial counseling for mortgage loan applicants with low credit scores, Agarwal et al. (2009) found that the legislation caused much lower default rates and better loan choices for those counseled borrowers in the market.
14. Pilkauskas, Currie, and Garfinkel (2012) find that SNAP, UI, TANF, Medicaid are all significantly associated with the unemployment rate, while public housing is not.
15. Although a housing subsidy is a form of public transfer, it is less likely to have the simultaneity/endogeneity problems as other transfers, since it takes a much longer time to apply for and receive a housing subsidy than to receive benefits from other public transfer programs, such as TANF, SNAP, or UI.

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