Boston College Journal of Law & Social Justice

Volume 37
Issue 2 *Has the Mortgage Pendulum Swung Too Far? Reviving Access to Mortgage Credit*

Article 4

May 2017

Waiting for Homeownership: Assessing the Future of Homeownership

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WAITING FOR HOMEOWNERSHIP: ASSESSING THE FUTURE OF HOMEOWNERSHIP, 2015–2035

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Abstract: The decade-long decline in the homeownership rate in the United States has generated substantial discussion over its future path. In the face of continued uncertainty, this Article seeks to assess what we know and do not know about the sources of the decline and the likely trajectory of the homeownership rate in coming years. The analyses use the Annual Social and Economic Supplement (ASEC) of the Current Population Survey for 1985 to 2015 to examine the determinants of changes in the homeownership rate, using shift-share analyses to measure the extent to which changing demographics explain the observed changes. The results show that demographic trends—aging of the population, increasing racial/ethnic diversity, delayed marriage and childbirth, and related factors—explain only a small portion of the housing market's boom and bust. Instead, the homeownership rate's rise and fall have been due to broader changes in the economy, credit conditions, and housing markets. This Article then presents homeownership projections for 2015 to 2035, describing three scenarios that define a range of homeownership outcomes. The low and high scenarios presented in this Article produce a range for the national homeownership rate of 60.7% to 64.8% by 2035. The analyses describe the implications of each scenario for growth in the number of homeowner households, as well as the distributional implications of lower versus higher homeownership rates for homeownership outcomes by age, race/ethnicity, and family type.

INTRODUCTION

A historic decline in the homeownership rate has generated substantial discussion over the future of homeownership in the United States. After peaking at 69.2% in 2004, the national homeownership rate declined steadi-

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ly to 63.7% in 2015 according to the Housing Vacancy Survey. Although this decline returned the overall homeownership rate to approximately the level it held between 1985 and 1995, the homeownership rates for multiple age cohorts have fallen well below their 1995 levels. For example, the homeownership rate for households between ages 35 and 44 increased from 65.2% in 1995 to 69.3% in 2005 before falling to 58.5% in 2015. The overall homeownership rate has not fallen as far as these age-specific rates only because the aging of the population during this period has increased the number of households in older age cohorts where homeownership rates are highest.

In the face of the decade-long decline in homeownership, considerable uncertainty continues to exist about both the factors that have contributed to the decline and the homeownership rate's future trajectory. Discussions of the homeownership rate's decline point to multiple contributing factors, including high foreclosure rates, tightening credit standards, falling household incomes following the Great Recession, increasing student loan debt, rising rental housing costs, and changes in households' preferences and attitudes toward homeownership and renting. Existing research has not conclusively teased apart the relative contributions of each factor. Instead, the trajectory of the homeownership rate reflects the complex interplay of these factors with other demographic, economic, and housing market trends.

This Article examines the extent to which demographic projections can inform short-term and long-term expectations for homeownership outcomes, discussing what we currently know and do not know about the drivers of the homeownership rate's decline. The first section examines the sources of the rise and fall in the homeownership rate between 1985 and 2015, using shift-share analyses to measure the extent to which changing demographics explain the rise and fall in the homeownership rate. The results show that demographic trends—aging of the population, increasing diversity, delayed marriage and childbirth, and related factors—explain only a small portion of the housing market's boom and bust. Instead, the homeownership rate's rise and fall has been due to changes in the broader economy, mortgage credit conditions, and possibly household attitudes that alter the likelihood that demographically-similar households own a home.

The second section of the Article then presents homeownership projections for 2015 to 2035, describing scenarios that reflect a range of possible homeownership rate trajectories. These scenarios provide insight into the extent to which alternative homeownership rate outcomes alter projections of the demand for homeowner units in coming decades. They also describe the distributional implications of lower versus higher future homeownership rates for homeownership outcomes by age, race/ethnicity, and family type. The final section concludes.

I. Determinants of the Rise and Fall in Homeownership Rates, 1985 to 2015

Constructing and interpreting demographic projections of the homeownership rate requires understanding the factors that influence homeownership outcomes, which include both demographic and non-demographic forces. Models of housing tenure choice define the homeownership decision as a function of households' demand for both the consumption and investment attributes of homeownership. (Flavin & Yamashita 2002, 345; Henderson & Ioannides 1983, 98–9). Consumption demand includes all factors related to households' preferences for the quantity, quality, and location of housing, as well as any preferences for ownership itself, such as the ability to modify a unit through renovations and the right to occupy the home for as long as desired. Conversely, preferences for renting frequently reflect households' desire to avoid the time and costs associated with maintenance of the unit and to reduce the transaction costs associated with moving. Such factors are closely related to both household formation and homeownership (Haurin & Rosenthal 2007, 418), with individuals increasingly forming new households and purchasing homes as they grow older, get married, have children, and otherwise see their needs change. In recent decades, the trends toward delayed marriage and childbirth among young households, as well as the overall aging of the population, have carried implications for the homeownership rate because of the close relationship between homeownership and the life cycle.

Households' consumption demand is also subject to changes in households' budget constraints, making homeownership sensitive to broader economic changes in employment, incomes, and expected lifetime earnings. While broad-based employment and income growth contributed to increases in the homeownership rate during the late 1990s (Gabriel & Rosenthal 2005,104–05), stagnant wages, rising student loan debt, and high levels of unemployment in the wake of the Great Recession may have had the opposite effect in more recent years. Beyond the direct relationship between income and housing demand, income volatility can also affect homeownership to the extent that the volatility is correlated with the housing market cycle, limiting the ability of households to buy homes when prices are most affordable. (Davidoff 2005, 233).

Households' investment demand is influenced by the relative cost of homeownership versus renting, factoring in the financial returns from owning. The upshot is that every factor that affects the level or risk of households' expected returns upon resale carries implications for the relative user cost of homeownership. (Rappaport 2010, 68). Such factors include mortgage interest rates, home price appreciation, property taxes, maintenance

costs, transaction costs associated with buying and selling a home, the opportunity costs of not investing in other assets, and the income tax treatment of these different streams. In practice, the relative user cost of homeownership is highly sensitive to the rate of home price appreciation, allowing household expectations and psychology about future home values to also influence home purchase decisions. (Shiller 2015, 165–67). For example, strong home price appreciation reduced the user costs of homeownership in the early 2000s, contributing to increased homeownership among households who expected such gains to continue. (Himmelberg, Mayer & Sinai 2005, 70). Conversely, household expectations about future rent increases can also influence homeownership decisions to the extent that households are risk averse and use homeownership as a hedge against rising rents. (Sinai & Souleles 2005, 763–64).

Because most households lack sufficient wealth to buy homes outright, the effective demand for homeownership is also affected by the availability of mortgage financing needed to purchase a home and by the supply of homes for sale that are within the purchasing power of would-be homeowners. In recent decades, the expansion of subprime and non-traditional lending during the housing boom and the tightening of credit during the housing bust occurred concurrently with the rise and fall in home prices, making the relative impact of credit access versus home price appreciation and foreclosures difficult to tease apart. (Acolin et al. 2016, 2).

Several of the determinants of homeownership discussed above are also correlated with race and ethnicity through multiple pathways at both the individual and neighborhood levels. For example, differences in credit access and pricing (Calem, Gillen & Wachter 2004, 408; Munnell et al. 1996, 30; Woodward 2008, 81), financial returns from homeownership (Mayock & Spritzer 2015, 3), and other factors have been shown to vary by race and ethnicity and to influence both homeownership entry and sustainability.

Lastly, homeownership is an accumulated characteristic that reflects home purchase decisions made over multiple years or decades. (Myers & Lee 2016, 131–32, 2015, 40; Pitkin & Myers 1994, 241). The homeownership rate of different age cohorts must therefore be interpreted within the context of their histories. For example, the cohort aged 40 to 45 in 2015 experienced the housing boom at an age when first-time home purchases are common, whereas the cohort aged 30 to 35 in 2015 were just 20 to 25 years old at the peak of the housing boom in 2005.

Although the above discussion is an abridged review of the determinants of homeownership, it highlights the complexity of the factors that combine to determine the homeownership rate at any point in time. Additionally, it raises important questions relevant to the development and interpretation of demographic projections. In particular, to what extent do

changes in demographic factors explain (or not explain) the boom and bust in homeownership? Projections of the homeownership rate and demand for homeowner units rely on a small set of demographic factors—in this case, age, race/ethnicity, and family type—that can be projected relatively precisely using the Census Bureau's population projections. Analysis of the relationship between these demographic factors and the homeownership rate therefore provides insight into the precision of future estimates based on demographic projections, given that the homeownership rate is also determined by other non-demographic factors.

A. Changes in the Demographic Profile of U.S. Households

This section uses data from the Current Population Survey's (CPS) Annual Social and Economic Supplement (ASEC) for 1985 to 2015 to describe changes in the demographic characteristics of U.S. households. Although these descriptive analyses reveal several clear trends, the changes frequently place competing pressures on the homeownership rate and partially offset one another. In particular, shift-share analyses suggest that the cumulative effect of demographic characteristics explains relatively little of the rise and fall in the homeownership rate between 1985 and 2015.

First, the aging of the baby boomer generation has increased the number of households in older age cohorts. For example, the number of households headed by an individual age 55 to 59 hovered near 6.5 million from 1985 to 1995 before increasing to 9.8 million in 2005 and 12.3 million in 2015. This shift has put upward pressure on the homeownership rate by increasing the number of households in older age cohorts, which have higher homeownership rates than younger age cohorts. In coming years, the baby boom generation will continue to reshape the profile of U.S. households as they reach the oldest age groups.

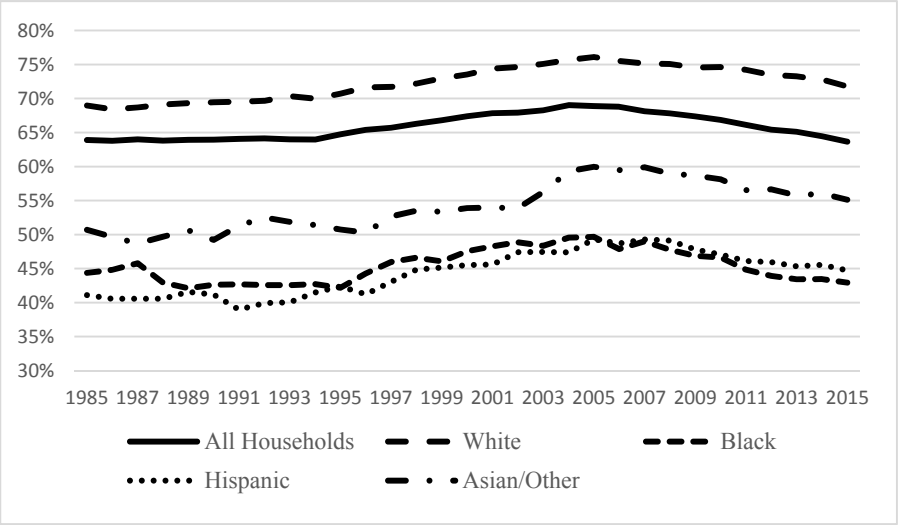
Second, the racial and ethnic makeup of U.S. households is changing. The share of white non-Hispanic households declined from 81.3% in 1985 to 67.6% in 2015. Over the same period, the share of black households increased from 10.8% to 12.5%, the share of Hispanic households more than doubled from 5.6% in 1985 to 13.0% in 2015, and the share of Asian and all other households more than tripled from 2.2% in 1985 to 6.8% in 2015.

The implications of these trends for the homeownership rate depend on whether historical differences in homeownership rates across groups will persist in coming years. Figure 1 displays historical CPS data on the evolution of homeownership rates by race and ethnicity from 1985 to 2015.[1]

[1] Similar figures for age and family type, as well as figures displaying the described evolution of the distribution of U.S. households, are available in the working paper version on the JCHS website: www.jchs.harvard.edu.

These data show that the black-white gap in the homeownership rate fluctuated between 1985 and 2015, widening from 24.6% in 1985 to 28.5% in 1995 before narrowing to 25.8%in 2002 and then widening to 28.8% in 2015. By contrast, the fluctuations in the Hispanic-white and Asian-white homeownership rate gaps are less pronounced. The Hispanic-white gap in the homeownership rate narrowed slightly from 27.9% in 1985 to 27.0% in 2015, and the Asian-white gap in the Homeownership rate narrowed from 18.3% in 1985 to 16.6% in 2015.

Figure 1. Homeownership Rates by Year and Race/Ethnicity



Third, larger numbers of young households are delaying marriage and child birth until later in life, or forgoing them entirely. The share of households headed by a married couple decreased steadily from 58.9% in 1985 to 49.9% in 2015. The reduction is due entirely to decreases in the share of married couples with children, as the share of married couples without children remained approximately constant during this period. Instead, the decline is offset by increases in the share of single person households, unmarried households with children, and other unmarried households.

Shift-share analyses suggest that these demographic trends cumulatively explain very little of the rise and fall in the homeownership rate between 1985 and 2015. Although each of these demographic trends carries implications for the homeownership rate, their cumulative effect is a predicted reduction in the homeownership rate of 1 to 2 percentage points between 1985 and 2015. Instead, the observed homeownership rate increased 4.9 percentage points from 64.3% in 1985 to 69.2% in 2004 before falling 5.5

percentage points to 63.7% in 2015. The upshot is that the rise and fall in the homeownership rate during this period reflect broader changes in household attitudes and economic, mortgage credit, and housing market conditions that alter the likelihood that demographically-similar households own a home.

To illustrate this point, we estimate a series of homeownership regressions using the CPS ASEC data for each year between 1985 and 2015. Each model is estimated with OLS and takes the following form:

$$(1) \quad \text{Homeowner}_h = X_h\beta + e_h$$

where Homeowner_h is an indicator for whether household h owns their home, X_h is a vector of covariates as discussed below, and e_h is a normally-distributed error term. The coefficient estimates β capture the association of each covariate with homeownership, providing the basis for shift-share analyses that predict estimated homeownership rates using different combinations of the covariate values X_h and the coefficient estimates β.

We estimate a first series of regressions using the set of variables—age, race/ethnicity, and family type—available for the demographic homeownership projections described later in this Article (hereinafter "Series 1 covariates"). These regressions include each variable as defined in Table 1, as well as the full interaction of these terms to allow the age profile to vary for each race/ethnicity by family type combination. To determine the explanatory power of a broader set of household demographic characteristics, we also estimate a second series of regressions that adds a more complete set of the demographic covariates available in the ASEC (hereinafter "Series 2 covariates"). We then use these estimates to conduct shift-share analyses that capture the extent to which changes in the homeownership rate are due to changes over time in the distribution of U.S. households as measured by the covariate values or to other changes in household preferences or broader economic, credit, and housing market conditions as measured by the coefficient estimates.

Table 1. Covariate Definitions for Shift-Share Analyses

Variable	**Definition**
Series 1	
Age	Age of the household head: <25; 25-29; 30-34; 35-39; 40-44; 45-49; 50-54; 55-59; 60-64; 65-69; 70-74; 75-79; 80+
Race/Ethnicity	Race and ethnicity of the household head: non-Hispanic white; non-Hispanic black; Hispanic; non-Hispanic Asian, multi-racial, or other
Family Type	5 categories: Married with children; Married without children; Unmarried with children; Single person household; Other family type
Series 2	
Age	Same as Series 1
Race/Ethnicity	Same as Series 1

Family Type	Same as Series 1 plus indicator variables for whether the household head is divorced, separated, or widowed and for whether the household contains 2 or more children
Education	Highest educational attainment of household head: less than high school diploma; high school diploma or GED; Some college or greater
Income	Total household income (real 2015 dollars) in 10 categories: <$15k; $15-$29k; $30-$44k; $45-$59k; $60-$74k; $75-$89k; $90-$119k; $120-$149k; $150-$249k; $250k+
Employment	4 indicator variables: household head employed full time; household head employed part time; spouse employed full time; spouse employed part time
Veteran	Indicator variable for whether household head is a veteran

The first series of regressions using the Series 1 covariates are equivalent to calculating the homeownership rates in a given year for each of the 260 combinations of the 13 age categories, 4 race/ethnicity categories, and 5 family type categories. These homeownership rates can then be applied to the household counts for the associated 260 categories, using the household counts from either the same year or a different year. For example, applying the homeownership rates specific to 1995 to the household counts for 2000 produces a 'projected' homeownership rate for 2000 as if the homeownership rates for each age, race/ethnicity, and family type category remained at their 1995 levels. Alternatively, the 1995 homeownership rates can also be applied to the household counts for 1985 to compare the actual homeownership rate in 1985 with the projection based on 1995 homeownership rates.

Panel A of Figure 2 displays the results of these calculations, comparing the actual homeownership rate to the projections based on homeownership rates in 1985, 1990, 1995, 2000, 2005, 2010, and 2015.[2] The shape of the actual homeownership rate trajectory from 1985 to 2015 resembles a mountain peak, highlighting the dramatic rise and fall in homeownership rates during this period. By contrast, the trajectories of the projected homeownership rates are flat with a slight downward slope, suggesting that the cumulative effects of changes in the demographic profile of households by age, race/ethnicity, and family type do not explain the boom and bust trend in the actual homeownership rate between 1995 and 2015. The projected homeownership rates instead predict a modest decline in the homeownership rate of about 1 to 2 percentage points between 1995 and 2015, although the overall homeownership level varies sharply across the projections. The differences in the overall level of projected homeownership rates across years reflect variations at different points in time in the coefficient values (i.e., the homeownership rates), which capture unmeasured changes across

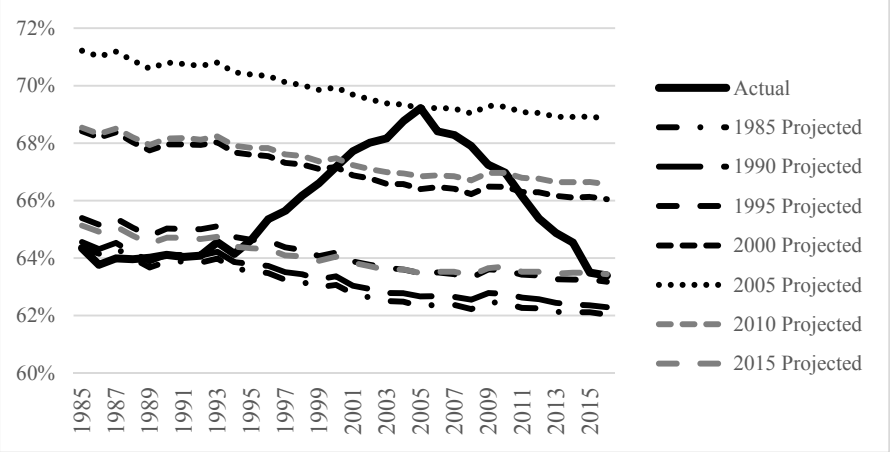
[2] Descriptive statistics and regression results are available upon request. We omit the full regression results because the fully-interacted models include 260 coefficients for each year. Instead, Figure 2 presents the projected homeownership rates based on these coefficient values.

time in other factors such as trends in the broader economy, credit conditions, and housing markets.

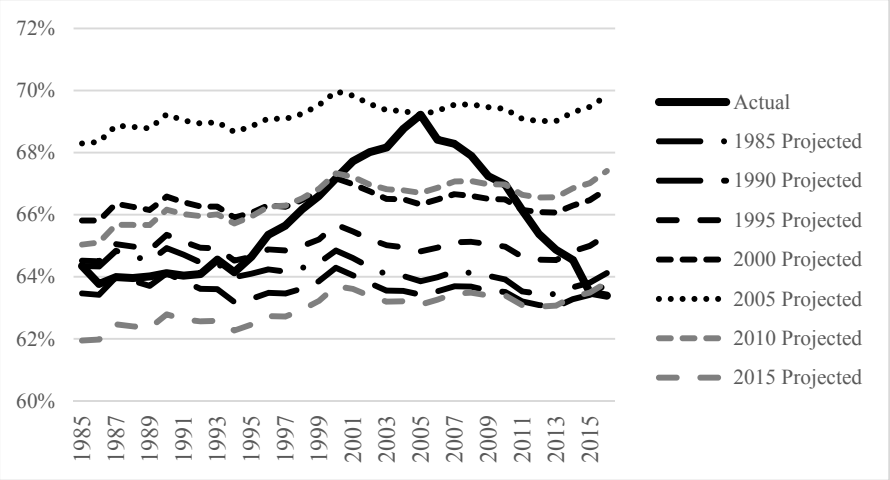
An important upshot of the findings in Figure 2 is that demographic projections based on cross-sectional estimates (e.g., constant homeownership rates) have the greatest reliability when other factors are stable. During periods when housing, credit, and economic conditions are changing, such projections define a demographic baseline across time; however, as the 1995 to 2015 period illustrates, they have less predictive power regarding the homeownership rate's actual trajectory.

Figure 2. Actual vs. Projected Homeownership Rates Using Shift-Share Analyses

Panel A: Projections based on Series 1 Covariates



Panel B: Projections based on Series 2 Covariates



Estimation of the homeownership regressions using the set of Series 2 covariates offers insight about the extent to which observed changes in the homeownership rate reflects changes in households' income, employment, and other characteristics. For each year, the regression models add covariates that reflect household income, employment status of the head and spouse, educational achievement, veteran status, and more detailed measures of marital status and the presence of children in the household.

The findings in Panel B of Figure 2 show that changes in households' employment characteristics predict greater volatility than the Series 1 covariates, but also that these factors explain very little of the rise and fall in the actual homeownership rate. The one possible exception is the period from 1996 to 2000, during which increases in the projected homeownership rate account for approximately half of the rise in the actual rate. Holding the 2000 coefficients constant, rising incomes and employment from 1996 to 2000 help to explain a portion of the rise in the homeownership rate during the late 1990s. However, these factors are not able to explain the continued rise of the homeownership rate following the 2001 recession or the subsequent bust.[3]

A final finding from the shift-share analyses is that changes in the demographic profile of households do not explain the decline in the homeownership rate between 2005 and 2015. Instead, foreclosures, home price volatility, tight credit markets, and the weakened economy during the Great Recession are likely contributors to the decline, although little research exists to disentangle the relative contributions of each of these factors. The subsection below therefore draws on available data sources to examine the relative role of foreclosure-related homeownership exits and slowed home purchase activity during the period from 2005 to 2015.

B. Foreclosures and Slowed Home Purchase Activity

Because demographic shifts have taken place slowly over time and explain only a small portion of the homeownership rate's rise and fall, much of the decline in the homeownership rate since 2005 is likely due to changes

[3] This conclusion is generally consistent with the findings of Gabriel and Rosenthal (2005, 120–21; 2015, 365–66). Using the Survey of Consumer Finances, Gabriel and Rosenthal (2005, 120–21) conclude that changes in households' demographic and economic characteristics explain the majority of the increase in the homeownership rate between 1992 and 1998. The analyses in this Article using the CPS ASEC find a relationship that is similar in direction but weaker in magnitude, which could be due to differences in samples or model specifications. In addition to the Series 2 covariates, we also replicate the analyses using the CPS ASEC measures of health insurance, presence of a disability that limits work, veteran status, and whether the household head is foreign born in years when these measures are available. The conclusions are similar to Panel B of Figure 2.

in economic, credit, and housing market conditions. In particular, historically-high levels of foreclosures likely played a central role in reducing the homeownership rate. Foreclosure completions, short sales, and deed-in-lieu transactions contributed to the decline in the homeownership rate to the extent that they displaced homeowner households. Understanding the role of foreclosures in reducing the homeownership rate is therefore relevant to forming expectations for the future, as the pace of foreclosures returns to lower levels. Unfortunately, precisely measuring the contribution of foreclosure-related homeownership exits is hampered by data limitations, such as the absence of reliable information about whether properties are owner-occupied at the time of the foreclosure.

According to data from CoreLogic, there were a total of 9.6 million foreclosure completions, deed-in-lieu transactions, and short sales between second quarter (Q2) 2005 and first quarter (Q1) 2015—the period between the 2005 and 2015 CPS/ASEC surveys. However, this total includes both transactions that displaced homeowner households and foreclosures affecting investor-owned properties or second homes. If we apply the Housing Vacancy Survey's estimate that 60.2% of all housing units were owner-occupied in 2005, the CoreLogic data would imply that 5.8 million homeowner households lost their homes during this period. This estimate may slightly understate the number of owner-occupied foreclosures to the extent that multi-unit properties are more likely to be renter-occupied; however, a larger concern is that investment properties are likely to be over-represented among foreclosures. As an alternative, we also apply a more conservative estimate that 50% of foreclosure completions affected homeowner-occupied properties, producing a lower estimate of 4.8 million foreclosures among owner-occupied properties.[4]

Comparing these figures with the size of the decline in the homeownership rate suggests that foreclosures played a major role in the homeownership rate's decline—and underscores the need for attention to continued foreclosure volumes. The CPS estimates that the United States included

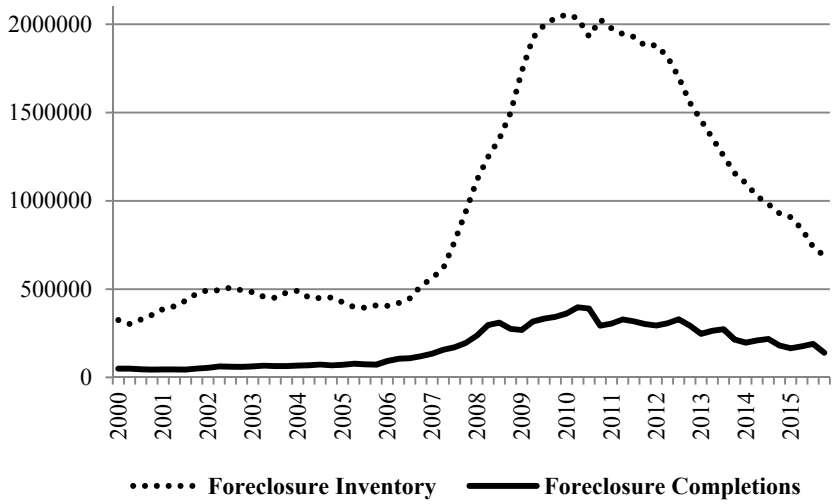
[4] For comparison, the Federal Reserve Bank of New York's Consumer Credit Panel identifies 11.5 million consumer credit reports with a new foreclosure appearing at any point between third quarter (Q3) 2005 and Q2 2015. However, this figure includes individuals with investment properties and second homes, as well as duplicate counts of foreclosures that appear on the records of any cosigners of the mortgage. Raneri's (2016, 45–6) categorization of homeowners, vacation properties, and investment properties suggests that homeowners account for about 78.3% of credit bureau records with a new foreclosure during this period, suggesting that 9.0 million of the new foreclosures affected owner-occupants. Additionally, CPS data suggests that married spouses are present in 60.1% of homeowner households. If we use this figure to approximate the number of cosigners, the data implies that approximately 5.6 million homeowner households experienced a new foreclosure during this period. Although this estimate is a rough approximation, it is consistent with the range of 4.8–5.8 million foreclosure-related homeownership exits described above.

125.7 million households in 2015. The estimates of 4.8 to 5.8 million owner-occupied foreclosures would amount to 3.8 to 4.6% of all 2015 households having experienced a foreclosure at some point in the previous decade. In order to compare these figures to the actual decline in the homeownership rate, the estimates must be adjusted for the presence of homeownership re-entries. Raneri (2016, 44–50) uses Experian data to estimate that approximately 12.6% of homeowners who experienced a foreclosure or short sale between 2007 and 2015 have since re-entered homeownership. Using this estimate, the Low and High estimates of 4.8 and 5.8 million owner-occupied foreclosures would have reduced the number of homeowners by 2015 by 4.2 and 5.0 million households, respectively. These estimates amount to 3.3% and 4.0% of all U.S. households in 2015.

Comparing these figures to the decline in the homeownership rate is not quite apples-to-apples, because the number of households was also changing during this period. Many households moved in with family members or went through other types of household formations and dissolutions during the foreclosure process. Additionally, the estimates described above are very rough approximations and must be treated as such. Nonetheless, this comparison suggests that owner-occupied foreclosures might explain about half or more of the 5.3 percentage point decline in the homeownership rate through 2015.

Looking forward, this conclusion offers two insights about the future trajectory of the homeownership rate. First, slowing foreclosures may reduce downward pressure on the homeownership rate in coming years. Although the 2015 volume of 670,000 foreclosure completions is down from a high of 1.4 million foreclosure completions in 2010, it remains well above the pre-crisis average of 228,000 foreclosure completions per year from 2000 to 2004. (Figure 3). Similarly, the backlog of properties in the foreclosure inventory according to Mortgage Bankers Association data declined from about 930,000 properties in the last quarter of 2014 to 680,000 properties at the end of 2015, but also remains above pre-crisis levels. The upshot is that foreclosures are likely to continue to put downward pressure on the homeownership rate into 2017, but will eventually taper off as the backlog of foreclosure inventory clears.

Figure 3. Quarterly Volume of Foreclosure Compilations and Remaining Foreclosure Inventory

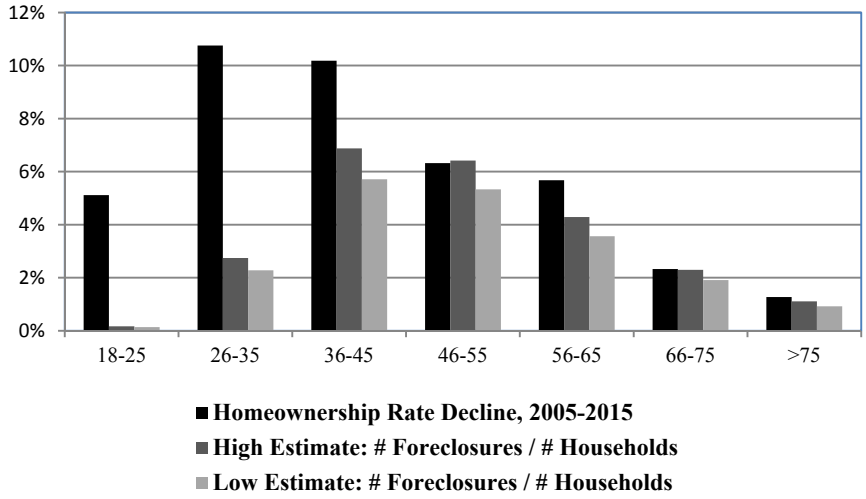


Source: JCHS tabulations. Foreclosure completions include foreclosure sales, short sales, and deed-in-lieu transactions from CoreLogic data. Foreclosure inventory from Mortgage Bankers Association data.

The second insight from the measure of foreclosure-related homeownership exits is that foreclosures cannot explain the observed declines in homeownership attainment among young households. Figure 4 separates the measure of foreclosure-related homeownership exits by age group, apportioning the High (5.0 million) and Low (4.2 million) estimates across age groups using the age categories in Li and Goodman (2016, 6–21). The resulting age distribution reveals that foreclosure-related homeownership exits better explain the reduction in age-specific homeownership rates among older age cohorts than among younger age cohorts.

The High and Low estimates are roughly proportional to the observed homeownership rate decline for several age groups older than age 45. In contrast, these estimates amount to only about half the size of the homeownership rate decline among households aged 36 to 45, and only a small share of the homeownership rate decline among households younger than 36. Because 35-year-olds in 2015 were only 25 at the peak of the housing boom in 2005 and thus were less likely to own homes that year than their older cohorts, this pattern is perhaps not surprising. Nonetheless, it highlights that the decline in the overall homeownership rate is due both to foreclosure-related homeownership exits and to reduced homeownership entries among young households.

Figure 4. Homeownership Rate Declines and Foreclosure-Related Homeownership Exits by Age Group

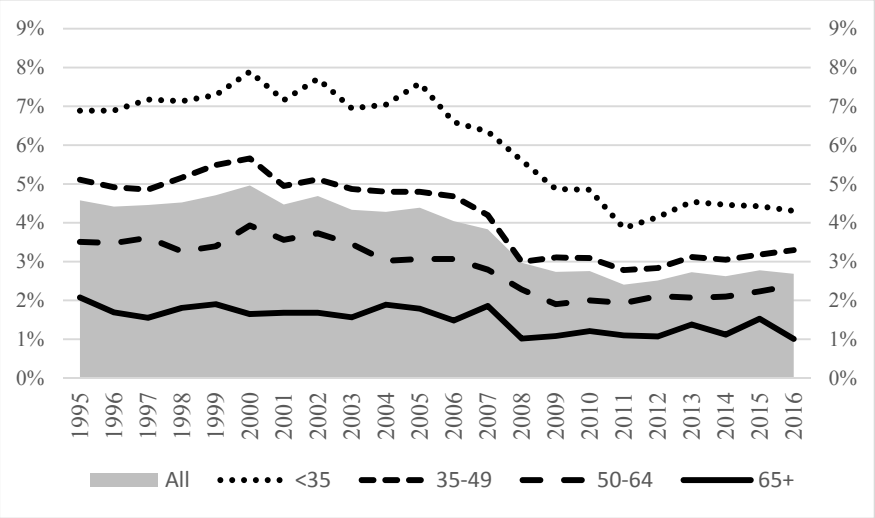


Sources: JCHS tabulations of Current Population Survey data and CoreLogic data on foreclosure completions.

Although the foreclosure inventory remains a concern in the short term, slowed home purchase activity among young households likely carries larger long-term implications. Figure 5 displays trends in home purchase activity, showing the share of households in each age cohort who moved into an owned home in the past year.[5] These estimates reinforce the importance of young households to home purchase volumes, with households under age 35 showing both the highest home purchase volumes and the largest falloff from 2005 to 2015.

[5] Home purchase is defined as moving in the past year and currently being a homeowner. The figures are nearly identical if we remove instances in which the household head moved in with a significant other who previously owned the home—defined as cases in which the household head moved in the previous year but a married spouse or unmarried partner within the household did not move in the previous year. CPS data does not allow us to remove instances in which a household moved into a second home or vacation property; however, such moves are likely to be a very small portion of moves by owner-occupants.

Figure 5. Share of Households that Purchased Homes in the Previous Year



Note: Home purchases equal the number of homeowners that moved in the preceding year.
Source: JCHS tabulations of CPS ASEC.

Taken together, these estimates suggest that the homeownership rate's future trajectory will be sensitive to trends in both homeownership re-entries among households who lost their home to foreclosure and first-time home purchases among young households. Looking forward, the upshot is that both types of trends should be tracked closely.

II. Homeownership Projections, 2015 to 2035

The homeownership rate's dependence on non-demographic factors is reflected in the range of existing projections for the future. For example, the Urban Institute's projections develop scenarios based on the cohort trends observed within Census data, presenting a slow scenario in which the homeownership rate declines to 60.2% by 2030 and a fast scenario that sees a decline to 62.2%. (Goodman, Pendall & Zhu 2015, 9). By contrast, the Mortgage Bankers Association's projections anticipate the homeownership rate recovering to between 64.8 and 66.5% by 2020, based on headship and homeownership projections that anticipate continued recovery in unemployment and the broader economy. (Fisher & Woodwell 2015, 14). The range in these homeownership projections is mirrored in other estimates and illustrates the extent of uncertainty about the homeownership rate's future trajectory. (Acolin, Goodman & Wachter 2016, 151; Haurin 2016, 160–61; Myers & Lee 2016, 138, 2015, 53; Nelson 2016, 128).

The homeownership rate projections presented in this section therefore describe three scenarios that examine the consequences of alternative homeownership rate trajectories. The projections build on the household projections in McCue and Herbert (2016, 14–26), and Spader and Herbert (2016, 10–19) provides a more detailed discussion of the methodology used to construct the homeownership projections.

- Scenario 1 (the "base scenario")—Constant homeownership rates. The base scenario applies the 2015 homeownership rates by age, race/ethnicity, and family type to the projected household counts for each year. This scenario therefore describes the likely outcomes if homeownership rates stabilize near their current levels. By holding homeownership rates constant, this scenario also reveals the implications of changes in the distribution of U.S. households by age, race/ethnicity, and family type for the future homeownership rate.
- Scenario 2 (the "low scenario")—Continued decline through 2020 followed by constant homeownership rates. The starting point for the low scenario is the set of 2015 homeownership rates for each age, race/ethnicity, and family type category. The low scenario then projects the 2020 rates for each category by applying the 5-year cohort trends observed from 2010 to 2015, when homeownership rates declined. The 2020 homeownership rates for each age, race/ethnicity, and family type category are then held constant to project the homeownership rates for 2025, 2030, and 2035. This scenario describes the likely homeownership outcomes if the homeownership rate's ongoing decline continues for several more years before stabilizing.
- Scenario 3 (the "high scenario")—Homeownership rates return to pre-boom levels. The third scenario applies constant homeownership rates determined by the maximum of the 1995 and the 2015 rate for each age, race/ethnicity, and family type category. This scenario uses the 1995 homeownership rates to define the pre-boom levels that might reflect a longer-term equilibrium. It then adjusts the rates upward to the 2015 rates for older households and other groups for whom longer-term upward trends have kept the 2015 rates above their 1995 levels. The resulting homeownership rates therefore define a high scenario in which homeownership rates increase to levels slightly above their 1995 levels; however, such levels may be conservative for a high scenario to the extent that these homeownership rates remain well below the mid-2000s peaks. Although homeownership rate increases may be more plausible over longer-term periods than in the next few years, the high scenario applies these rates to all time periods, providing esti-

mates of homeowner growth if the rates are realized within each time horizon.

In each case, the homeownership rates are calculated using the Integrated Public Use Microdata Series (IPUMS) data for the Current Population Survey's (CPS) Annual Social and Economic Supplement (ASEC). (Flood et al. 2015).

Table 2 displays the projected homeownership rates and number of homeowner households produced by each scenario. The base scenario shows that changes in the distribution of households by age, race/ethnicity, and family type will not substantially alter the homeownership rate between 2015 and 2035. The projected homeownership rate increases slightly from 63.5% in 2015 to 63.7% in 2025 before falling to 63.3% in 2035. Because the base scenario holds the rates for each age, race/ethnicity, and family type category constant at their 2015 levels, the changes (or lack thereof) reflect the cumulative effect of trends in the profile of U.S. households, such as population aging, increased racial and ethnic diversity, and delayed marriage and childbirth. The upshot is that these trends largely offset one another, affecting the overall homeownership rate only minimally. Instead, increases in the number of homeowners are driven by household growth, producing 8.9 million additional homeowner households by 2025 and 15.7 million additional homeowner households by 2035.

While the base scenario's projections halt the decade-long decline in the homeownership rate, the projected homeownership rates remain below the levels observed from 1985 to 2015. This partial recovery reflects the possibility that slowing foreclosures and a strengthening economy will ease the downward pressure on the homeownership rate in coming years, while also allowing for the foreclosure crisis and Great Recession to carry some lasting impacts. The relative importance of these offsetting pressures will only be known with time, so the base scenario's projections should be interpreted as a reference point for homeownership outcomes if the overall rate stabilizes around its 2015 level.

The low scenario describes the consequences of continued declines through 2020 before the homeownership rate stabilizes. Under this scenario, the projected homeownership rate falls from 63.5% in 2015 to 60.7% in 2020 before leveling off at 60.8% in 2025 and 60.6% in 2035. The homeowner growth figures show that the continuation of the 2010–2015 cohort trend implies minimal growth in the number of homeowner households, adding just 755,471 additional homeowner households through 2020. In subsequent years, the eventual stabilization of the homeownership rate at 2020 levels allows household growth to add 4.9 million homeowner households through 2025 and 11.6 million homeowner households through 2035.

The projected declines in the homeownership rate through 2020 reflect the replication of recent cohort trends from the starting point of cohorts' already-low 2015 homeownership rates. The projected 2020 rates therefore assume a continuation of the foreclosure-related homeownership exits, tight credit conditions, weak incomes, altered preferences for owning, and other factors that likely contributed to the homeownership rate's recent declines. Additionally, they assume the absence of any catch-up growth due to pent up demand among households unable to buy a home in recent years or to homeownership reentries among households who experienced a foreclosure. The low scenario therefore defines a trajectory that reflects the continuation of recent declines for several more years before the homeownership rate stabilizes.

In contrast, the high scenario's projections describe homeownership outcomes under assumptions that project a reversal of recent declines that returns homeownership rates to levels slightly above the pre-boom period. The projected homeownership rates for the high scenario increase from 63.5% in 2015 to 64.9% in 2020, before leveling off at 65.0% in 2025 and 64.7% in 2035. This higher homeownership rate trajectory implies the addition of 10.6 million homeowner households by 2025 and 17.6 million homeowner households by 2035.

The higher homeownership rates produced by this scenario reflect the combination of 1995 homeownership rates with an adjustment for longer-term upward trends in the homeownership attainment of certain groups, particularly older households. Although there is no clear "normal" equilibrium for the homeownership rate, this scenario adopts the 1995 rates as the most recent year that precedes the housing boom and bust. Additionally, it assumes that any groups with higher levels of homeownership attainment in 2015 compared to 1995 will sustain the higher 2015 levels into the future. This assumption implies an uptick in cohort trends that fully catches up to the level defined by the maximum of the 1995 or 2015 rate. This result may be particularly tenuous for middle-aged households, who experienced the most severe effects of foreclosures and may not reach the homeownership rates of prior cohorts. To the extent that the foreclosure crisis and Great Recession have had significant impacts for some cohorts, this scenario therefore assumes that such effects will be offset by broader changes in the economy, credit conditions, or housing markets over time.

Table 2. Summary of Projected Homeowner Households and Homeownership Rates by Scenario and Year

	Actual	Projected			
	2015	2020	2025	2030	2035
Total Households	124,866,458	131,882,624	138,443,767	144,594,687	149,920,633
Base Scenario					
Total Homeowners	79,278,638	83,842,989	88,156,431	91,883,067	94,956,008
Homeowner Growth 2015-	-	4,564,351	8,877,793	12,604,429	15,677,369
Homeownership Rate	63.5%	63.6%	63.7%	63.5%	63.3%
Low Scenario					
Total Homeowners	79,278,638	80,015,994	84,196,539	87,819,729	90,805,814
Homeowner Growth 2015-	-	737,355	4,917,901	8,541,091	11,527,176
Homeownership Rate	63.5%	60.7%	60.8%	60.7%	60.6%
High Scenario					
Total Homeowners	79,278,638	85,537,999	89,953,547	93,783,665	96,955,339
Homeowner Growth 2015-	-	6,259,361	10,674,908	14,505,026	17,676,701
Homeownership Rate	63.5%	64.9%	65.0%	64.9%	64.7%

Because the homeownership rate's recent rise and fall reflects influences beyond changes in the demographic profile of U.S. households, none of the scenarios are likely to precisely capture the complex interplay of factors that will combine to determine the homeownership rate in future years. Instead, each scenario provides a reference point for understanding the size of changes to the homeownership rate and number of homeowners that are likely to result from each set of assumptions. Together, the scenarios also provide a useful range against which to compare the homeownership rate's trajectory in future years.

Additionally, the projection scenarios provide insight into the distributional consequences of alternative homeownership outcomes by age, race/ethnicity, and family type. Table 3 presents the projected number of households by age, race/ethnicity, and family type for each scenario and year. Table 4 then describes changes in the distribution of homeowners across each of these categories between 2015 and the projected outcomes in 2025 and 2035.

The projected figures show the projected number and share of older homeowners increase considerably over time under all three scenarios. These increases reflect the aging of the population as the baby boom generation follows a comparatively smaller generation. Instead, the largest differ-

ences between scenarios appear among younger households. For households aged 35 to 44, the low scenario's projection amounts to just 87% of the high scenario's projection, compared to 98 to 99% among households aged 70 to 79. The projected age distribution of homeowners in Table 4 further shows that the high scenario increases the share of homeowners in the younger age groups. These patterns reflect the disproportionate consequences of low homeownership trajectories for young households.

The figures in Tables 3 and 4 also highlight the presence of increasing diversity under all three projection scenarios. Under the base scenario, the share of projected homeowners who are white decreases from 76.6% in 2015 to 72.9% in 2025 and 68.8% in 2035. This decline is partially offset by consistent increases in the Hispanic and Asian/Other shares of homeowner households. The Hispanic share increases from 9.2% in 2015 to 11.1% in 2025 and 13.3% in 2035. At the same time, the share of homeowner households who are Asian, multiracial, or identify with some other race increases from 5.8% in 2015 to 7.2% in 2025 and 8.5% in 2035. In each case, the gains are slightly larger under the high scenario and slightly smaller under the low scenario.

The differences between scenarios are larger for the black share of homeowner households. In particular, the low scenario projects that the black share of homeowner households will remain flat at 8.4% between 2015 and 2025, before increasing to 9.0% by 2035. The initial lack of growth between 2015 and 2025 appears because the low scenario's initial period of continued homeownership rate declines disproportionately affects black households, offsetting increases in the black share of the broader population. The potential growth from increasing diversity in the broader population is instead reflected by the base scenario's projection that that the black share of homeowner households will increase from 8.4% in 2015 to 8.8% in 2025 and 9.0% in 2035.

Table 3: Projected Number of Homeowner Households by Age, Race/Ethnicity, and Family Type.

	2015	2025				2035			
	Actual	Low	Base	High	Low/High	Low	Base	High	Low/High
Total	79,278,638	84,196,539	88,156,431	89,953,547	94%	90,805,814	94,956,008	96,955,339	94%
<25	1,369,090	1,346,120	1,346,120	1,365,211	99%	1,348,079	1,348,079	1,367,004	99%
25-29	2,936,320	2,770,307	2,956,769	2,983,196	93%	2,710,494	2,889,577	2,918,891	93%
30-34	4,846,080	4,831,933	5,295,222	5,446,967	89%	4,616,704	5,057,231	5,204,407	89%
35-39	5,835,191	6,112,970	6,649,912	7,006,572	87%	6,134,259	6,680,673	7,049,812	87%
40-44	6,,765,091	6,593,866	7,322,199	7,593,473	87%	7,251,819	8,063,307	8,380,603	87%
45-49	7,646,230	6,841,023	7,330,908	7,555,198	91%	7,833,745	8,405,963	8,673,544	90%
50-54	8,743,601	7,228,028	7,620,615	7,809,004	93%	7,901,742	8,332,255	8,539,521	93%
55-59	9,158,968	8,000,717	8,300,737	8,521,705	94%	7,762,012	8,038,801	8,298,391	94%
60-64	8,495,638	8,903,636	9,249,524	9,439,977	94%	7,773,571	8,112,166	8,309,109	94%
65-69	7,692,144	9,115,738	9,411,792	9,469,757	96%	8,334,391	8,625,538	8,682,099	96%
70-74	5,778,140	8,081,932	8,243,659	8,275,021	98%	8,926,955	9,096,776	9,136,140	98%
75-79	4,099,308	6,499,120	6,557,825	6,595,378	99%	8,150,512	8,244,112	8,297,878	98%
80Plus	5,912,837	7,871,149	7,871,149	7,892,088	100%	12,061,530	12,061,530	12,097,939	100%
White	60,743,282	61,929,183	64,252,916	64,907,145	95%	63,087,432	65,317,644	65,959,517	96%
Black	6,625,884	7,023,729	7,742,841	8,275,189	85%	8,128,582	8,898,968	9,497,739	86%
Hispanic	7,322,143	9,213,425	9,785,788	10,136,238	91%	11,936,876	12,660,001	13,094,614	91%
Asian/Other	4,587,329	6,030,202	6,374,886	6,634,975	91%	7,652,924	8,079,393	8,403,469	91%
Married with Children	17,632,152	16,992,223	18,326,106	18,921,851	90%	17,801,857	19,210,921	19,847,454	90%
Married without Children	30,973,811	34,080,199	35,103,993	35,594,097	96%	35,814,189	36,851,419	37,413,169	96%
Unmarried with Children	3,761,766	3,588,685	3,882,499	4,089,625	88%	3,861,264	4,182,100	4,409,325	88%
Single Person	17,665,653	20,046,901	20,926,282	21,157,792	95%	22,753,303	23,656,335	23,915,923	95%
Other Family Type	9,245,256	9,488,531	9,917,552	10,190,181	93%	10,575,200	11,055,232	11,369,469	93%

Table 4. Distribution of Projected Homeowner Households by Age, Race/Ethnicity, and Family Type

	2015	2025			2035		
	Actual	Low	Base	High	Low	Base	High
<25	1.7%	1.6%	1.5%	1.5%	1.5%	1.4%	1.4%
25-29	3.7%	3.3%	3.4%	3.3%	3.0%	3.0%	3.0%
30-34	6.1%	5.7%	6.0%	6.1%	5.1%	5.3%	5.4%
35-39	7.4%	7.3%	7.5%	7.8%	6.8%	7.0%	7.3%
40-44	8.5%	7.8%	8.3%	8.4%	8.0%	8.5%	8.6%
45-49	9.6%	8.1%	8.3%	8.4%	8.6%	8.9%	8.9%
50-54	11.0%	8.6%	8.6%	8.7%	8.7%	8.8%	8.8%
55-59	11.6%	9.5%	9.4%	9.5%	8.5%	8.5%	8.6%
60-64	10.7%	10.6%	10.5%	10.5%	8.6%	8.5%	8.6%
65-69	9.7%	10.8%	10.7%	10.5%	9.2%	9.1%	9.0%
70-74	7.3%	9.6%	9.4%	9.2%	9.8%	9.6%	9.4%
75-79	5.2%	7.7%	7.4%	7.3%	9.0%	8.7%	8.6%
80Plus	7.5%	9.3%	8.9%	8.8%	13.3%	12.7%	12.5%
White	76.6%	73.6%	72.9%	72.2%	69.5%	68.8%	68.0%
Black	8.4%	8.3%	8.8%	9.2%	9.0%	9.4%	9.8%
Hispanic	9.2%	10.9%	11.1%	11.3%	13.1%	13.3%	13.5%
Asian/Other	5.8%	7.2%	7.2%	7.4%	8.4%	8.5%	8.7%
Married with Children	22.2%	20.2%	20.8%	21.0%	19.6%	20.2%	20.5%
Married without Children	39.1%	40.5%	39.8%	39.6%	39.4%	38.8%	38.6%
Unmarried with Children	4.7%	4.3%	4.4%	4.5%	4.3%	4.4%	4.5%
Single Person	22.3%	23.8%	23.7%	23.5%	25.1%	24.9%	24.7%
Other Family Type	11.7%	11.3%	11.2%	11.3%	11.6%	11.6%	11.7%

Note: Homeowner shares sum to 100% down each column for age, for race/ethnicity, and for family type. For example, the white share for the 2025 base scenario projections is the ratio of the projected number of white homeowners to the projected number of total homeowners implied by the 2025 base scenario. The denominator therefore varies across columns.

Surprisingly, the increasing diversity of homeowner households and the aging of the broader population do not produce substantial changes in the share of homeowner households by family type. The figures in Table 4 show slight decreases in the share of married households with children, slight increases in the share of single person households, and no clear trends in the other categories. Moreover, the observed changes are quite small compared to the trends by race and ethnicity. Although the longer-term trends toward delayed marriage and childbirth should not be ignored, these results suggest that they will not reshape the profile of U.S. homeowners in coming years. Instead, such factors are likely to be most influential in analyses that focus specifically on subpopulations of younger households.

Lastly, Table 5 displays the homeownership rates by age, race/ethnicity, and family type that are produced by each scenario. These homeownership rates are a direct artifact of the assumptions associated with each projection scenario, so care must be taken in interpreting the changes in these rates across time. For example, the homeownership rates associated with the base scenario increase slightly from 2015 to 2025 and 2035 for each race/ethnicity. Because the base scenario holds homeownership rates constant at their 2015 levels for each age, race/ethnicity, and family type combination, these increases reflect changes over time in the distribution of households by age and family type—i.e., the increases are due primarily to the aging of the population within each race/ethnicity group. Nonetheless, we present these homeownership rates for reference as they provide additional detail about the homeownership rate outcomes associated with each projection scenario.

Table 5. Projected Homeownership Rates by Age, Race/Ethnicity, and Year

	2015	2025			2035		
	Actual	Low	Base	High	Low	Base	High
<25	20.4%	20.4%	20.4%	20.7%	20.4%	20.4%	20.6%
25-29	31.9%	29.7%	31.7%	32.0%	28.9%	30.8%	31.1%
30-34	46.1%	41.5%	45.5%	46.8%	40.7%	44.6%	45.9%
35-39	55.1%	50.6%	55.0%	58.0%	49.6%	54.0%	56.9%
40-44	62.6%	55.9%	62.1%	64.4%	54.7%	60.9%	63.3%
45-49	67.5%	61.6%	66.0%	68.1%	60.9%	65.4%	67.5%
50-54	70.8%	65.6%	69.2%	70.9%	64.9%	68.5%	70.2%
55-59	74.2%	70.1%	72.8%	74.7%	68.7%	71.2%	73.5%
60-64	76.4%	72.5%	75.3%	76.8%	70.4%	73.4%	75.2%
65-69	79.3%	75.9%	78.4%	78.9%	74.4%	77.0%	77.5%
70-74	80.6%	78.1%	79.7%	80.0%	77.0%	78.5%	78.9%
75-79	79.0%	77.8%	78.5%	78.9%	76.8%	77.7%	78.2%
80Plus	75.5%	74.9%	74.9%	75.1%	74.5%	74.5%	74.7%
White	71.9%	70.1%	72.7%	73.5%	70.6%	73.1%	73.8%
Black	42.6%	40.1%	44.2%	47.2%	41.6%	45.6%	48.6%
Hispanic	44.5%	43.8%	46.5%	48.2%	45.0%	47.8%	49.4%
Asian/Other	54.8%	52.2%	55.2%	57.5%	52.8%	55.8%	58.0%
Married with Children	71.8%	64.6%	69.7%	72.0%	64.3%	69.4%	71.7%
Married without Children	81.9%	79.4%	81.8%	82.9%	78.7%	81.0%	82.2%
Unmarried with Children	35.2%	32.2%	34.8%	36.7%	32.5%	35.2%	37.1%
Single Person	52.6%	51.6%	53.8%	54.4%	52.1%	54.2%	54.8%
Other Family Type	50.9%	49.4%	51.7%	53.1%	49.9%	52.1%	53.6%

DISCUSSION AND CONCLUSIONS

The decade-long decline in the homeownership rate has generated substantial discussion about the future of homeownership in the United States. In the face of continued uncertainty, this Article seeks to assess what we know and do not know about the sources of the decline and the likely trajectory of the homeownership rate in coming years. First, shift-share analyses suggest that households' demographic characteristics explain only a small share of the rise and fall in the homeownership rate between 1995 and 2015. Instead, economic, mortgage credit, and housing market conditions, as well as foreclosure-related homeownership exits, contributed to the observed changes.

Because demographics are not strongly predictive of recent changes in the homeownership rate, demographic projections must be interpreted with room for error. Nonetheless, demographic projections of the homeownership rate reveal several insights about the future of homeownership in the United States. First, changes in the distribution of U.S. households by age, race/ethnicity, and family type will cumulatively affect the homeownership rate only minimally in coming years. Instead, changes in the national homeownership rate will involve shifts in the homeownership rates achieved by different groups. The low and high scenarios presented in this Article produce a range of 60.7% to 64.8% by 2035, although it is possible that the homeownership rate may extend outside this range if economic, credit, or housing market conditions change considerably in coming years.

A final implication of the demographic projections is that the differences between lower and higher homeownership rates disproportionately affect the homeownership outcomes of young households and minority households. Specifically, continued declines in the homeownership rate will have the greatest impact on homeownership among black households, and subsequent gains in the homeownership rate are positively associated with gains in homeownership among young households and among black, Hispanic, and other minority households. Although the increasing diversity of the U.S. population results in increased diversity of homeowner households under all three scenarios, the increases are slowest under the low scenario and highest under the high scenario. These disparities highlight the potential for the homeownership rate's future trajectory to carry distributional implications.

In coming years, the homeownership rate's actual trajectory will depend on how quickly the foreclosure backlog clears, how many foreclosed households re-enter homeownership, how long mortgage credit conditions remain tight, and whether young households' slowed rates of homeownership entry persist. Additionally, any major changes in the broader economy,

housing finance system, or households' attitudes toward homeownership may also influence homeownership rates to the extent that they alter households' demand or access to homeownership. The analyses in this Article suggest that each of these factors should be tracked closely, with consideration given to the implications for both the overall homeownership rate and the distributional implications for different groups.

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