

Cohort Momentum and Future Homeownership: The Outlook to 2050

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It would seem preposterous that the national homeownership rate could fall by 20 percentage points or more during the next 35 years. Homeownership is an accumulated status tied to the adult life-cycle and its aggregate changes are very slow moving, unlike indicators such as the unemployment rate. During the past 40 years, excepting the brief bubble interlude of the early 2000s, the U.S. homeownership rate has not varied more than 4 percentage points, ranging from 62 to 66 percent, depending on sources.¹ In addition, after the national rate fell from its bubble peak of 69 percent into its more typical range, analysts were quick to declare that the homeownership rate would now remain constant for the future at its 2013 Housing Vacancy Survey (HVS) level of 65 percent (Gabriel and Rosenthal, 2015). What, then, is to keep the momentum from carrying this decline further?

Only a cataclysmic disruption could produce a very large shift in the homeownership rate, and those changes would need to accumulate over many years. Forecasting to the distant year of 2050, with market conditions unknowable, resembles science fiction. Yet the financial crisis (beginning in 2007), the Great Recession (2008 and 2009), and the prolonged aftermath (through 2012 or even longer) have had cataclysmic impacts on the housing market, and, even if it is unclear how long these effects will linger, their mark may be indelible and long term for at least some cohorts of housing consumers.

A longer view clearly is warranted, one that is built on the forces of cumulative change, rather than on current factors that are unknowable even 5 years into the future. Make no mistake, home purchases occur in the moment, but homeownership is a quasicumulative status acquired over

¹ Four different sources are commonly used to measure homeownership rates, but their estimates vary slightly, and thus the sources are not interchangeable in the analysis of trends. The most frequently cited source of national trends is the Housing Vacancy Survey (HVS) derived from the Current Population Survey (CPS). This source yields the highest estimates and is the source of the widely cited 69.2 percent estimate of the peak homeownership rate in 2004 and 2005. Closely related are the estimates based on the Annual Social and Economic Characteristics (ASEC) file, also derived from the CPS. In 2010, the HVS and ASEC both estimated the nation's homeownership rate at 66.8 percent. In the same year, the American Community Survey (ACS) estimate of the homeownership rate was 65.4 percent, nearly 1.5 percentage points lower. The decennial census of that year yielded another homeownership estimate, 65.1 percent, slightly lower than the ACS. Different studies use the alternative sources, which have different strengths, for different purposes. All are referenced in this article, but we are careful to not confuse trend analysis by combining the data inappropriately.

decades of a housing career, and changes in the national homeownership rate are aggregated over time from many cohorts, most of whom bought their homes more than 10 years earlier. For such a long-range view, a demographic-based approach has particular advantages due to its emphasis on temporal momentum of cohorts. Here we adopt a view of homeownership accumulation that is rooted as much as 80 years in the past and extending 40 years into the future.

Background

A homeownership rate in the low 40-percent range is not unheard of in the United States. That is where the nation stood in 1940, with 43.7 percent homeowners at the end of the decade of the Great Depression. That homeownership rate was surprisingly only 4.1 percentage points lower than the rate reported in the census taken in April 1930—47.8 percent—a rate still reflecting the heights of the 1920s before the effects of the stock market crash in the late fall of 1929 could dislodge many homeowners. If the housing malaise of the depression decade had continued another 25 years, the decline might be extrapolated to 14.4 percentage points, still well short of a prospective 20-point decline in 35 years.

Many forces have worked to expand the nation's homeownership rate in recent decades, and current market and financing conditions, if they continued, could severely undermine the national rate. Yet, because of its nature, that damage would be wrought incrementally and cumulatively across the decades. Older people are a great stabilizing force, while young people are most at risk.

During the past century, at least since 1920, age groups older than 55 have held very high ownership rates, ranging from 60 to 85 percent in recent decades. Older households are relatively impervious to current market conditions, having purchased their homes in earlier decades, and given the accumulation of wealth and Social Security insurance later in life.² Inertia is another powerful force, expressed through the typical reluctance of older people to make any move from a long-time home. Even though homeownership rates continue to rise slowly as cohorts grow older, what has most increased the ownership level of older age groups in recent decades is the entry of former middle-aged cohorts who carry higher homeownership rates accumulated during high prosperity decades of the postwar era. The long-range risk is that this process that has bolstered homeownership at older ages might run in reverse when disadvantaged cohorts from the recent decade begin to arrive at older status in the future.

By contrast with the older age group, young people once had very low rates of homeownership attainment but that rapidly increased after 1940. Before the institutional financial innovations of the 1930s and 40s, young people had to save many years to acquire as much as a 50-percent downpayment. Many would grow middle aged before they could buy a home. With new federally insured FHA and VA mortgage programs, however, requiring very low downpayments, the age at which families could buy a home was greatly accelerated (Fetter, 2013; Goodman and Nichols, 1997). In addition, the institutionalization of mortgages amortized over 30 years, rather than the 10 years that was often common, led to monthly carrying costs that were affordable to families

² Current family income also has one-fourth as much influence on tenure choice among people who are between the ages of 50 and 65 as among people who are age 30 (Gabriel and Rosenthal, 2015: Figure 3, panel A).

with more modest incomes. These mortgage innovations, combined with rapid postwar income growth, spurred an 18.3-percentage-point rise in the national homeownership rate by 1960. The sharpest picture of the impact these mortgage innovations had on young people is seen in the increases among 35- to 39-year-olds, whose ownership rate at the end of the Great Depression, 33.5 percent, rose more than 30 percentage points, to 64.6 percent, by 1960. This rate was even higher than the overall national rate at that time. The momentum in the future of these rising cohorts would support a continued rise in the national rate in subsequent decades.

Moving Forward From the Great Recession

Young people have proven to be very vulnerable in recent years. Homeownership for ages 35 to 39 topped out at 69 percent in the 1980 census. From that point forward, homeownership attainment began to very slowly recede, likely under the pressure of growing affordability problems and also the effects of declining marriage and increasing diversity, both of which added people from groups with historically lower homeownership. The decline accelerated dramatically, however, following the financial crisis. Between 2008 and 2015, the homeownership rate of this age group fell from 64.6 to 55.1 percent (-9.5 points). Meanwhile, for those ages 70 to 74, the rate declined only slightly in the same time period, from 81.7 to 80.7 percent (-1.0 point).³ The low rates among today's young adults, unless they were to accelerate well beyond the normal pace of increase in future years, have potential to depress the U.S. homeownership rate as these cohorts begin to replace their elders later in the century.

Young adults are most sensitive to current market conditions because they are newly purchasing homes. In contrast to this young cohort, households with members over the age of 55 typically bought their homes a decade or two earlier, well before the housing bubble. In fact, the first to be impacted by the recent crisis were the new buyers at the height of the boom, households that purchased when prices were most inflated and that had very high debt ratios enabled by a lax regulatory regime that permitted very loose underwriting and even predatory lending. Casualties of the 4.4 million foreclosures from 2007 to 2013 were most concentrated among households that were unfortunate to be the right age to buy homes in this dangerous period. These householders were members of Generation X (born between 1965 and 1979), then aged 25 to 39. Also harmed were minority households and moderate-income families who used life savings to finally enter the ranks of homeowners late in middle age. These groups stretched to purchase homes at the worst possible time, and they suffered the most in the subsequent collapse. When the housing market began to falter and ultimately crashed, these new owners, who were the last to make it in, had very little equity and were the first to be ejected from homeownership. Having lost all their equity and with damaged credit, a significant portion of these cohorts may never rebuild their housing assets.

The Millennials (born between 1980 and 1999) following behind Generation X were much less damaged in the crisis, as noted by Kolko (2014), Emmons and Noeth (2014), and the Joint Center for Housing Studies of Harvard University (2015). That is largely because the Millennials were fortunate they were mostly too young to buy during the bubble and so they avoided equity and

³ These annual homeownership rates are taken from the HVS that is taken in conjunction with the CPS. The historical time series by age group is in Table 12; <http://www.census.gov/housing/hvs/data/histtabs.html>.

credit losses in the foreclosure crisis. Viewing the carnage of homes purchased by older brothers and sisters and suffering their own crises of unemployment might have left the Millennials psychologically risk averse and reluctant to take on the mortgage obligations of homeownership. Available research (Drew and Herbert, 2013) finds that the Millennials' desire for homeownership, as expressed in Fannie Mae surveys, remains strong and their knowledge expressed of the Generation X setbacks does not curb their desire to purchase a home. Nonetheless, their economic resources remain very limited in the post-recession period, and, at the same time, the mortgage underwriting standards are much stricter.⁴ It is too early to say that the Millennials have established a clear track record of home purchase, so any projection of their future is still circumspect.

The difference between old and young age groups sheds light on the future, but not in the way envisioned by Mankiw and Weil (1989), who assumed age differences would be preserved into the future. Their modeling embedded the assumption that the Baby Boomers (born between 1946 and 1964) were destined to descend to lower housing consumption after 1990, when they began to cross age 45, because that was implied by the current lower status of their elders (observed in 1970 and 1980 census age cross-sections). What is faulted as the "age cohort fallacy" (Pitkin and Myers, 1994) lay at the root of the Mankiw-Weil error and is not a safe guide to the future. Instead, we should rely on cohort legacy and momentum, assessing each generation by its own level and trajectory of homeownership and carefully considering shifts between earlier and later cohorts.⁵ Whereas middle-aged people in 1980 did not *fall* to the level exhibited by their elders when they reached that age in 2005, neither will today's young people necessarily *rise* to their elders' level by 2050. The difference is that today's senior generation has accumulated a legacy of advantage from buying their homes before the rapid gains in house values and before income growth began to stagnate. These economic advantages or disadvantages are accrued by cohorts, and broad generations, and are not fixed in the age groups through which they travel over time.

Insights From a Cohort-Based Projection

Our conclusions on the prospective future homeownership rate of the nation are rooted in the long-term, dynamic perspective just described. We draw on the cohort tradition of forecasting housing demand first developed in the late 1970s and 1980s by George Masnick and John Pitkin at the Joint Center for Housing Studies of Harvard University (Pitkin and Masnick, 1980). Following this tradition and our own extensions of housing demography, we develop a method for long-range, cohort-based projection of homeownership that was first presented in a June 2014 conference hosted by the Lincoln Institute of Land Policy, the research sponsor (Myers and Lee, 2014).⁶ Our method, unlike other demographic-based forecasting models, takes explicit account

⁴ One indication of stricter mortgage credit access is provided by the Mortgage Bankers Association's Mortgage Credit Availability Index, which stood at 126 in September 2015 compared with 850 in 2006 at the height of the bubble and 400 in 2004. <https://www.mba.org/news-research-and-resources/forecasts-data-and-reports/single-family-research/mortgage-credit-availability-index>.

⁵ The general advantages of the cohort-longitudinal approach adopted here are detailed in Myers (1999) and Pitkin and Myers (1994).

⁶ The Myers and Lee (2014) Lincoln study of changing housing and urban demography was later expanded and published in a volume of conference proceedings (Myers and Lee, 2016).

of the housing bubble, the Great Recession, and the prolonged recovery. This article benefits from 2 years of additional source data that reveal continued slow recovery in the housing market, leading us to modify our near-term view and discard previous, overly optimistic scenarios that required faster recovery. The projections also are extended to 2050 for current purposes, and we reestimate the model on the basis of Current Population Survey (CPS)/Annual Social and Economic Characteristics (ASEC) data,⁷ rather than census/American Community Survey (ACS) data, to accommodate the challenge of projecting homeownership decline from the 69-percent peak in the CPS/HVS data. As noted previously, use of census/ACS data would exaggerate homeownership decline relative to the CPS/HVS peak. The CPS/ASEC data also allow us greater flexibility and historical depth in the selection of time periods for measuring cohort progress.

Our method, introduced in Myers and Lee (2014), is built on 5-year segments of cohort progress, measuring the increment in homeownership that is achieved when, for example, a cohort passes between ages 30 to 34 and 35 to 39, as observed in 1995 and 2000. The increments (or decrements) measure the net acquisition of homeownership by each cohort in the passage through time between periods spaced 5 years apart. These segments are observed both during the recession-downturn and aftermath of 2007 to 2012 and in earlier segments back to 1985. We deliberately skip 2 years between our intervals of 1995 to 2000 and 2002 to 2007 because of a significant revision in the source data series in 2002, which could distort calculations that straddle old and new series. The 2002-to-2007 interval corresponds well to the housing bubble commencing after the 2001 recession and ending with the sharp downturn beginning in late 2007.⁸ The 5 years from 2007 to 2012 then serve as our period for market downturn and falling homeownership rates, with 2012 to 2017 marking the period of recovery, slow as it has been, and 2017 to 2022 representing the presumed new period of normalcy. Subsequent periods through 2052 are assumed to yield the same rate of cohort progress as 2017 to 2022.

Projections launch from observed values in 2012 that pertain to each cohort at its given age in that year. The strength of cohort projections is that the method builds on the accumulated status unique to each cohort at their age in the launch year, building on the established base. A weakness of cohort projections, however, is in regard to cohorts that have not yet entered young adulthood and, therefore, for whom no cohort observations exist on which to build. In the special case of these entry-level cohorts, cross-sectional comparison of 15- to 24-year-olds is made across survey

⁷ The analysis in this article is based specifically on the ASEC file issued each March from the CPS (also the source for the HVS widely used by housing analysts). The Joint Center for Housing Studies of Harvard University (McCue, Masnick, and Herbert, 2015) found this source to be the most reliable for analysis with a long time series. The previous Lincoln model (Myers and Lee, 2014) relied on ACS data linked to decennial census data, creating some small discrepancies and posing difficulty in creating 5-year cohort intervals before 2000. A total population universe was estimated from the ASEC file based on the ratios of age-specific total population to civilian household resident population from the 2000 census. In addition, 3-year moving averages were used for headship and homeownership rates to smooth year-to-year fluctuations.

⁸ More specific matters of timing may be relevant. The ASEC data are collected in March of each year, but we use a 3-year moving average centered on the designated year. Data from March 2008 accordingly form a portion of the 2007 estimate. Although this date is past the peak of the housing bubble, it precedes the onset of the recession and sharp homeownership declines. Moreover, tenure status recoded in March 2008 lags tenure choices made the previous year. In the second quarter of 2008, the national homeownership rate was still 68.1 percent (HVS).

years from 1985 to the present, and adjustments are made for the changing demographic mix of the cohort occupying the age group in future years, as projected by the U.S. Census Bureau. The large Millennial generation currently occupies this entry position, and the unusual degree of uncertainty about the housing and economic behaviors that can be expected of this group in the next several years makes analysis challenging.⁹ Added to the uncertainty for projection purposes is a growing discrepancy between data sources with regard to the homeownership status of the 15-to-24 and, to a lesser extent, the 25-to-29 age groups.¹⁰

We contrast three scenarios for estimating the future homeownership gains to be added to each cohort as it passes through successive age groups in future time periods.

Scenario A assumes that household formation and homeownership increase within cohorts at close to the same pace as the average of 1985 to 2007; that is, before the Great Recession. In the initial recovery period of 2012 to 2017, the model uses a weight of 25 percent prerecession cohort progress and 75 percent based on 2007 to 2012, which seems to track experience to date. From 2017 to 2022 (and beyond), rather than assume a full return to boom times, the model uses a weight of 75 percent prerecession and 25 percent based on the 2007-to-2012 period. This scenario is both bullish and moderately restrained.

Scenario B assumes a more modest return to the former pace of homeownership growth within cohorts, adopting the same assumption in the recovery period as Scenario A, but imposing a post-2017 mix of cohort progress that is equally weighted between recession and pre-2007 boom periods. This scenario affords a distinctly more cautious or even pessimistic outlook for the long-term future.

Scenario C assumes no recovery from the recession period. The cohort gains in the 2007-to-2012 period are repeated every 5 years through 2052. The one adjustment is that negative net gains within cohorts are transformed to zero change (as they are in other scenarios). Rather than compound expected losses in each interval, the explanation given is that the negative progress in older ages is assumed to be an adjustment to the excessive expansion in the immediately preceding bubble period. Such adjustments would not be warranted in the absence of a bubble in future forecast periods and so we have not projected these negatives. Nonetheless, the assumption of no recovery from the recession-era housing market and no increases in the rate of homeownership acquisition in future periods, and the results portrayed here, are both extremely pessimistic and very unrealistic.

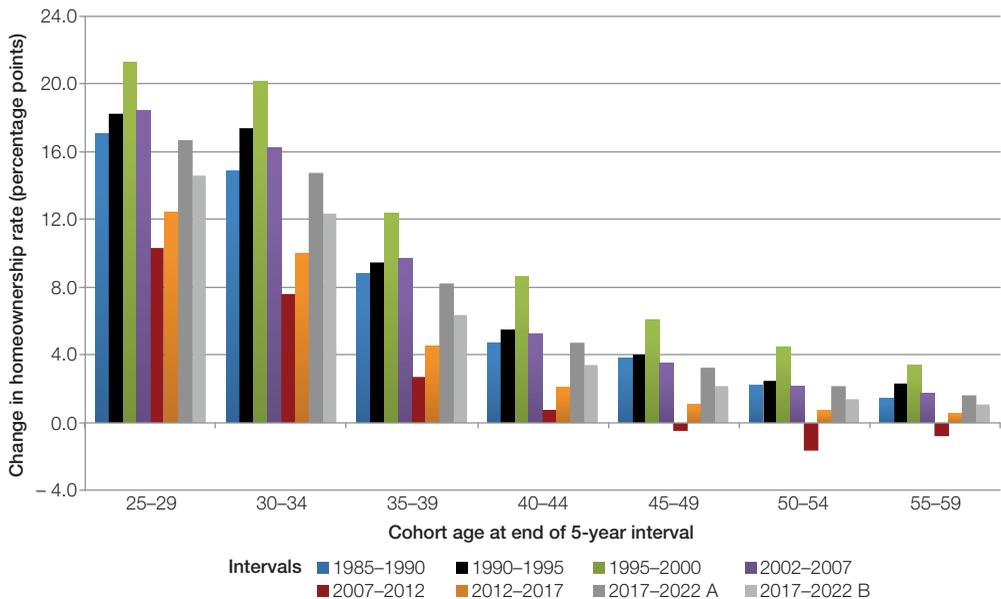
The key insight into these alternative projections is supplied in exhibit 1. The pace of homeownership accumulation is much more rapid when cohorts pass through young ages and it steadily declines through middle age. (Ages older than 59 are not shown for reasons of space.) This pace has not been constant in all historic periods but quickens in every age group simultaneously under favorable conditions (such as better prices and financing terms, stronger investment expectations,

⁹ The unexpectedly long recovery from the Great Recession has created the greatest uncertainty for the Millennial generation, with great debate over how much of its current behavior represents new preferences by young people versus temporary economic disruptions because of the recession (Myers and Lee, 2016).

¹⁰ The ACS and ASEC data reveal very different levels of homeownership and a growing divergence between 2010 and 2014. The percentage of homeowners in 2014 was 21.3 in ASEC but only 12.6 in ACS. Between 2010 and 2014, the ASEC homeownership rate declined by 0.4 and the ACS rate declined by 2.1 percentage points. A modeling decision was made to “borrow” the ACS trend and apply it to the ASEC data for the 15-to-24 age group.

Exhibit 1

Five-Year Increments of Homeownership Progression by Cohorts in Different Historic Intervals



Notes: Includes projection alternatives of Scenario A (strong recovery) and Scenario B (moderate recovery); see text for definitions. The data deliberately skip 2 years between the intervals of 1995-2000 and 2002-2007 because of revisions in the source data series in 2002, which could distort calculations that straddle old and new series.

Source: Authors' analysis based on the 1984-2013 Current Population Survey/Annual Social and Economic Characteristics

and greater economic optimism), while slowing in others. As shown in exhibit 1, the cohort passing to ages 30 to 34 from ages 25 to 29 in each interval made the greatest gains in the interval of 1995 to 2000 (20.2 percentage points added to their homeownership rate). The pace of accumulation had quickened since 1985, but it actually slowed during the housing bubble (16.2-point gain) and slumped badly during the recession interval (7.6-point gain). We project a 10.0-point gain in this age interval through 2017, after which we project a 14.8-point gain under Scenario A and a 12.4-point gain under Scenario B. Scenario C assumes the same gain as in the recession (7.6 points in this age interval). The same pattern of acceleration and deceleration of homeownership accumulation in the different time periods is played out synchronically across successive age groups. In sum, exhibit 1 shows the dynamics of cohort gains that are greater when passing through younger than older age groups, and that are greater in some time intervals than others, with anticipated postrecession recoveries that vary by scenario.

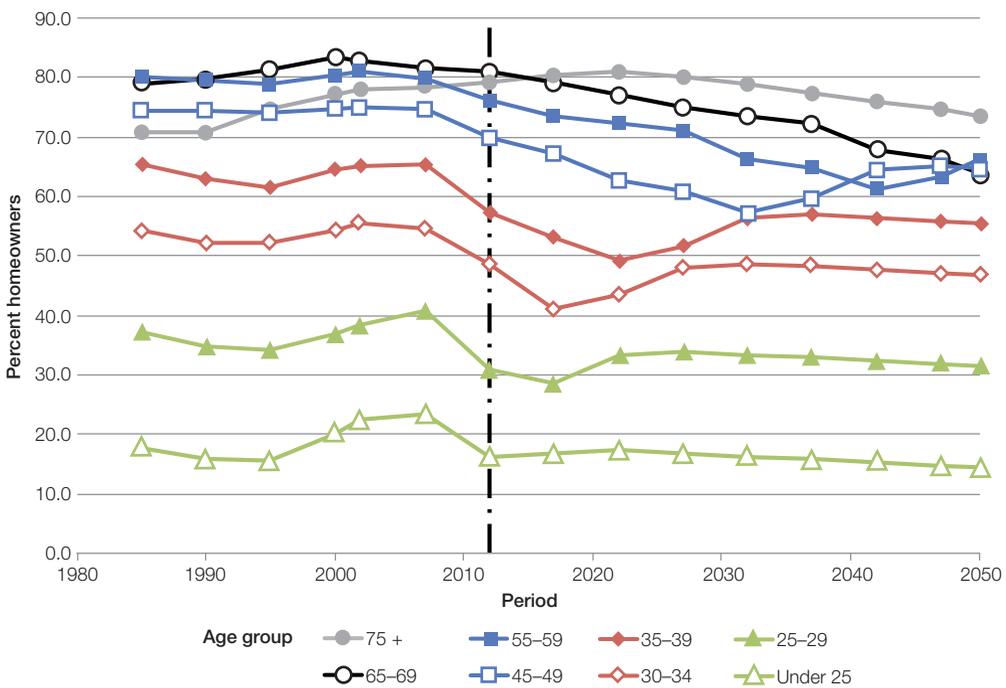
An alternate view of the projection results and actual data for preceding time periods is the age cross-section of homeownership rates recorded or projected in different periods. These projected rates emerge from the cohort modeling that launches from the 2012 observed data and applies the Scenario A schedule of incremental advancement as each cohort passes through successive age groups in the future. (For greater clarity, some of the older age groups are not shown in the exhibit.)

Noteworthy in exhibit 2 is the upward bulge in homeownership rates that occurred in all ages younger than 45 during the late 1990s and the 2000s' housing bubble. This bulge was followed by a sharp drop in these age groups between 2007 and 2012, creating a downward "notch" in the time series of each age group. The notch broadens in middle age groups to include 2017 and 2022 in our projections because cohorts entering the age in 2017 and 2022 arrive bearing a diminished amount of homeownership that accrued during the recession when they were younger. In effect, cohort momentum carries the losses of the past into older age groups in later periods. According to these projections, the homeownership rate will continue to decline at ages 45 to 49 until 2032 and at ages 55 to 59 until 2042. The rate may also decline until 2022 at ages 35 to 39, but cohorts passing into this age group could rapidly respond to new policies and more favorable economic incentives.

Effects of the recovery toward normalcy in the housing market, anticipated after 2017, are greatest for the youngest age group because entering cohorts bear less handicap of historical legacy. The homeownership status of young cohorts is most uncertain because they are most responsive to current economic incentives and policies, as witnessed with the new housing programs after World War II, but such are unknown in future years. Unexpected policy changes or major new economic opportunities could once again accelerate the pace of homeownership attainment of young people relative to those who are older.

Exhibit 2

Homeownership Rates of Selected Age Groups, Actual and Projected, Across Periods



Note: Based on the Scenario A (strong recovery) projection; see text for definition. To preserve clarity, the exhibit presents the homeownership rates of selected age groups, omitting every other group beginning with ages 40-44.
 Source: Authors' analysis based on the 1984-2013 Current Population Survey/Annual Social and Economic Characteristics

Racial change is a demographic factor of which many are aware (Frey, 2014), and it has the effect of slowly declining the homeownership rate. On average, homeownership rates are much higher for non-Hispanic White people than for others. And the White share of the population will decline, for example, at ages 25 to 29, from 56.8 to 42.3 percent of the population between 2014 and 2050, according to Census Bureau projections. If race-specific homeownership rates at this age are held constant at their level observed in 2014, and only racial shares of the population are allowed to shift, the homeownership rate at this age would decline by 2.1 percentage points over 36 years. To account for differences in household formation that underlie the homeownership rate (Yu and Myers, 2010), we have elected to assume an even greater racial shift effect on homeownership of 3.6 percentage points in our new cohorts entering young-adult age groups. Based on this long-term expected decline in the young homeownership rate due to racial mix, we impose a slow homeownership rate decline of 0.1 percentage point per year on the young age groups, and that begins to dominate after the presumed recovery period from recession-related decline. For older ages, the cohort structure of the model already embeds actual racial composition of the existing cohorts. Racial shift occurs at older ages through the aging of these existing cohorts and their replacement of older cohorts that are relatively more White.

The bottom line questions are these: How do all these changes add up for the overall homeownership rate? Is it possible that the U.S. homeownership could decline 20 points or by some other large amount by 2050? Our model may shed light on this possibility. Beginning with the 2014 National Population Projections produced by the Census Bureau, we populate the size of each cohort, run it through household formation and homeownership schedules projected for that cohort, aggregate all cohorts in each period, and then compute a total homeownership rate for each period.¹¹ The findings on the overall U.S. homeownership rate are portrayed in exhibit 3, showing both the historical trend since 1950 and our three projections stretching out to 2050.

Our most dire projection, Scenario C, assumes zero recovery will occur from the slow homeownership acquisition during the Great Recession, stunting overall homeownership accumulation to a greater degree each passing year. Using these assumptions, the homeownership rate is driven down to 43.0 percent by 2050, and this rate would be even lower, by 3.7 percentage points, if the aggregate population had not shifted its weight to older age groups that have higher ownership rates. Scenario C indicates what might be required to approach a 20-point decline in the national homeownership rate.

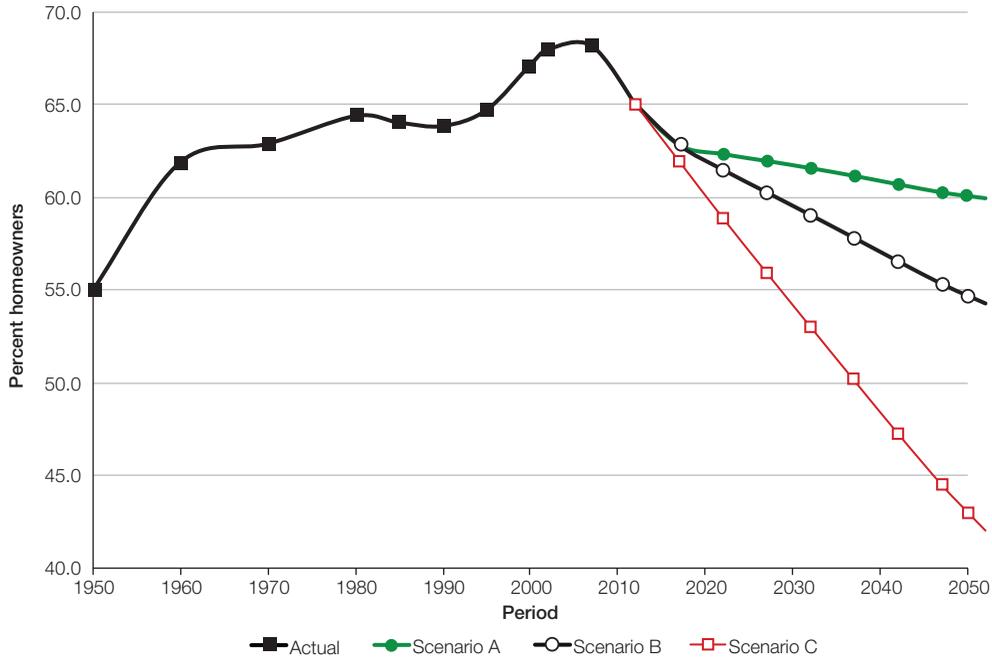
A more realistic model, Scenario B, produces a national homeownership rate of 54.7 percent, falling another 2.6 percentage points lower if not for population aging. This outcome results from following the assumption of only halfway recovery between the slow homeownership gains by cohorts in the recession and the average pace of the 20 years preceding the Great Recession.

Scenario A is also a realistic possibility for the future, producing a national homeownership rate of 60.1 percent in 2050, falling to 58.0 percent, except for the 2.1-percentage-point boost due to population aging. This model assumes a three-fourths recovery from the pace of housing progress of each cohort during the recession to the average pace of the 20 years before. The question

¹¹ We modeled homeownership after first translating population into households or, alternatively, by modeling homeowners per capita. In communicating our analysis for present purposes, however, we express findings in terms of the conventional homeowners per household.

Exhibit 3

A Century of Actual and Possible U.S. Homeownership Rates



Notes: Scenario A assumes a strong recovery, closing three-fourths of the difference between the average rate of cohort homeownership accumulation in the 20 years before the recession and the period of 2007–12. Scenario B assumes a moderate recovery, closing one-half of the difference. Scenario C assumes no recovery, with the slow accumulation during the recession continued perpetually.

Source: Authors' analysis and projections based on input data from the 1950 through 1980 decennial censuses, 1984–2013 Current Population Survey/Annual Social and Economic Characteristics, and the 2014 National Population Projections

might be—Why should we not expect a full recovery to what was normal before? A multitude of factors make housing acquisition likely to be more difficult than earlier, ranging from higher prices and faltering incomes to weaker availability of credit and an uncertain future structure of mortgage finance. Increasing immigration in future decades may also slow gains in the future but to a lesser degree than sometimes assumed, given the rapid improvements in homeownership attainment among Latinos over time, even net of income gains (Myers, Megbolugbe, and Lee, 1998) and given the greater future weight of Asians who have higher prospects for homeownership. Overall, caution is advised in assuming that homeownership trends will fully bounce back to those of an easier time.

From Projections to Policies

Scenarios A and B should be considered both realistic and probable. Further research directed toward their assumptions could help us better understand the sensitivity of homeownership rates to alternative factors, as referenced previously. Policymakers can learn from the implied outcomes

emerging from our projection model built on the track records of the past and the model's emphasis on the future information implied by cohort momentum. The next step is to choose the most likely assumptions and make judgments about most likely outcomes in order to transform this modeling from a set of alternative *projections* to a *forecast*.

Whether maintaining a higher homeownership rate is a desired goal for the nation is not addressed in this analysis. Demographic considerations will be paramount. What is to be done about the eventual, massive sell-off by the Baby Boomer homeowners who (or whose estates) will all be looking for buyers among the younger generation (Myers and Ryu, 2008)? How should the growing diversity of the younger generation be managed; do we help neglected minorities to achieve more equal access to homeownership, and how necessary is that for enough young people to qualify to purchase 54 million homes from so many Baby Boomer and older sellers? Following public discussion and debate about these factors and others, we ultimately require a *policy choice* of which path is preferred, followed by development of a *plan* for how to ensure the achievement of that outcome over the other possibilities (Isserman, 1984). Projections cannot make policy choices or devise strategic plans, but counting things up in the most plausible way possible is an essential part of the evidence base.

Conclusion

Cohort momentum has a powerful impact in homeownership accumulation, and the effects of the Great Recession are projected to echo forward for decades. Yet we also find enormous stability built into the nation's homeownership rate because of the aggregation across many cohorts and with increasing weight placed on older ages that typically have high accumulation.

The overall conclusion is that massive change in the homeownership rate appears highly unlikely, unless the nation were to fall unintentionally into perpetual recession for 35 years, as in Scenario C, or, more radically, by intention, if the federal government rolled back its Great Depression-inspired housing policy innovations and thus erased much of the gain in homeownership after 1940 (Chambers, Garriga, and Schlagenhauf, 2014). Neither of these events is likely to occur.

Important questions for research should be addressed around key assumptions in our projection model, which might inform the choice between the two realistic scenarios, A and B. First, how much can now-middle-aged Generation X households bounce back and make up for deficits sustained when their cohort was 10 to 15 years younger? Second, how much will the diverse Millennials recover from the slow start in their economic careers and translate that into accelerated accumulation of homeownership as they move into middle-age years? Finally, how might policy be designed to assist these groups and move the national homeownership more on the path of Scenario A, or better, than Scenario B? The future ahead of homeownership, because it is quasicumulative, is built on the momentum of today, not easily modified by last-minute programs to correct deficiencies at some distant date, and certainly not wished for out of whole cloth. The projections offered here provide an outlook to build on.

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