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**“Whereas the overall homeownership rate declined by slightly more than one percentage point last decade, rates for all non-elderly age groups fell much more substantially.”**

## A Bad Decade for the American Dream

### Overview

Indications of the housing recession's severity abound and include double-digit house price declines, millions of home foreclosures, and a collapse in new housing production. The 2010 Census recently added another gloomy data point by showing that the national homeownership rate fell from 66.2 percent in 2000 to 65.1 percent in 2010.<sup>1</sup> Although the census' headline homeownership rate data are discouraging, they do not reveal the full extent of homeownership retrenchment during the last decade. Examination of detailed tenure data from the census shows that young households suffered large homeownership rate declines and that favorable age demographics prevented the overall homeownership rate from falling much further.

This *Data Note* uses decennial census data to examine the age dynamics of homeownership attainment between 2000 and 2010. It begins by reviewing national tenure trends to show that homeownership rates fell for all age groups last decade. In addition, a comparison of age-specific homeownership rate changes from the decennial census and the Census Bureau's Housing Vacancy Survey (HVS) finds that declines in homeownership for all age groups were worse than previously indicated by the HVS, which is widely followed by the housing industry as a source of intercensal homeownership data. Next, decomposition of changes in the overall homeownership rate demonstrates that were it not for favorable shifts in the population's age distribution during the last decade, the U.S. homeownership rate would have declined by 2.8

percentage points, rather than the observed 1.1 point decline. Finally, the *Note* examines changes in age-specific homeownership data at the state level and finds that the southeast and California border states were particularly hard-hit by homeownership rate declines last decade.

### Homeownership Rates Tumble for All but the Elderly, Reach Multi-Decade Lows for Young Households

A great advantage of the decennial census is that it provides demographic and housing data from a complete enumeration of the population, thereby generating data that is free from the sampling errors that often confound results obtained from sample survey data.<sup>2</sup> Although the subject content of the 2010 Census was substantially reduced compared with earlier censuses, it still collected information about two important characteristics – population age and housing tenure – that are essential to understanding housing demand and housing market outcomes in the United States.<sup>3</sup>

Census tabulations that combine these key characteristics show that homeownership rates fell for all age groups between 2000 and 2010 (Exhibit 1). Whereas the overall homeownership rate declined by slightly more than one percentage point last decade, rates for all non-elderly age groups fell much more substantially. Particularly hard hit were households headed by those age 25 to 54, who experienced homeownership rate declines ranging from 3.5 to 3.9 percentage points.

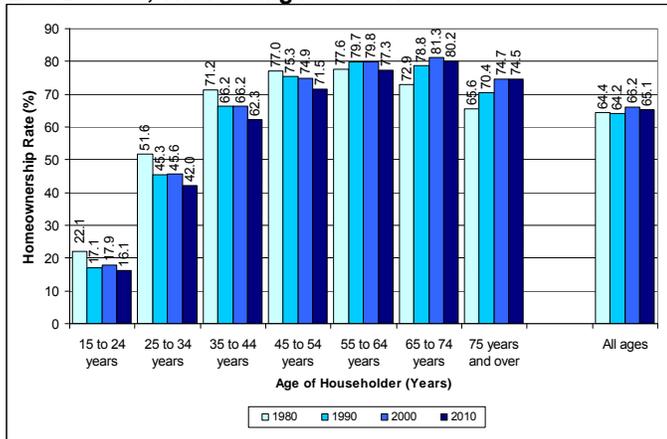
<sup>1</sup> U.S. Census Bureau, *Profile of General Population and Housing Characteristics for the United States: 2010*, released May 26, 2011, and Census 2000, Summary File 1.

<sup>2</sup> Prior to the 2010 Census, some decennial census questions were asked on a sample basis. In this *Data Note*, only the 1980 statistics presented in Exhibit 1 are based on sample data from the decennial census. All other census data presented here are from the complete-count portion of the decennial census and are not subject to sampling error. Non-sampling error, caused by factors such as a respondent misinterpreting a question, is present in all household data collection efforts including the decennial census, with unknown effect on the results presented here.

<sup>3</sup> As part of a move toward “continuous measurement,” the Census Bureau removed many questions from the 2010 Census and shifted data collection for these items to the American Community Survey.

Only the elderly were spared large homeownership rate drops. Households age 65-74 experienced a decline of 1.1 percentage points between 2000 and 2010 and those older than 74 saw virtually no change.

**Exhibit 1. Homeownership Rates Fell for All Age Groups Last Decade, With Young Hardest Hit**



Source: U.S. Census Bureau, Decennial Census of Population and Housing.

Examining change over multiple decades reveals an even larger disparity in the homeownership rate trajectories of the young and old. Since 1980, rates for 25-34 year-olds and 35-44 year-olds have declined by 9.6 and 9.0 percentage points, respectively, whereas the rate for elderly households increased by 7.4 percentage points.<sup>4</sup>

Because of their complete-count nature, decennial census data also are uniquely suited for measuring the number of owner and renter households, and thus for gauging housing demand growth.<sup>5</sup> The census data reveal that the number of homeowners grew by 6.2 million, or 8.8 percent, between 2000 and 2010, the smallest increment in both numeric and percentage terms in at least three decades. In comparison, owner-occupants increased by 10.8 million, or 18.3 percent, during the 1990s. The number of renters grew by 5.1 million between 2000 and 2010, the largest decadal increment since at least the 1970s. Last decade's 14.2

<sup>4</sup> The business-cycle timing of data collection for each decennial census will affect measured differences across censuses, which reflect not only long-term secular trends in demographic and housing conditions but also short-term fluctuations associated with the business cycle. Whereas data collection for the 1980, 1990, and 2000 Censuses occurred either soon after the peak or in the late stages of long economic expansions, the 2010 Census was conducted less than a year after the trough of a deep and lengthy recession.

<sup>5</sup> In sample surveys such as the Housing Vacancy Survey, American Community Survey, and American Housing Survey, the accuracy of estimated counts are affected by the accuracy of independently developed population or housing unit control totals that are used in the estimation process. These sample surveys are designed principally for estimating the distribution of population and housing characteristics, including the proportion of households residing in owned versus rental units, and not the number of people, households, and housing units.

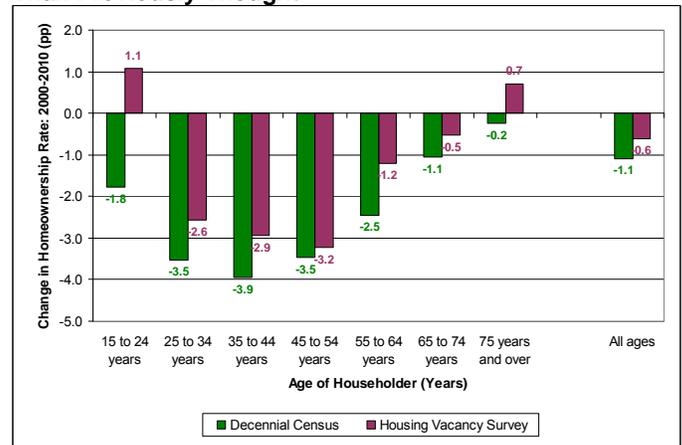
percent increase in renter households far outstripped the 8.3 percent gain of the 1990s and was roughly on par with the growth rate of the 1980s.

**Homeownership Rate Declines Were Larger than Previously Thought**

Release of the decennial census data also enables comparisons with other data sources that are used to track homeownership trends. The most widely followed intercensal source of homeownership rate data is the Census Bureau's quarterly Housing Vacancy Survey (HVS).

Although the HVS also showed broad-based homeownership rate declines last decade, losses were not as large as those recorded in the decennial census (Exhibit 2).<sup>6</sup> The HVS indicated a decline of 0.6 percentage points in the overall homeownership rate between 2000 and 2010, a smaller decrease than the 1.1 point drop recorded in the decennial census. Homeownership rate declines recorded in the HVS were also smaller for all age groups. For 15-24 year-olds, the HVS underestimated the homeownership rate drop by a particularly large 2.9 percentage points.

**Exhibit 2. Homeownership Rate Declines Were Worse Than Previously Thought**



Sources: U.S. Census Bureau, Housing Vacancy Survey and 2000 and 2010 Censuses, Summary File 1. Housing Vacancy Survey data are based on annual averages for 2010 and the average of Q2 and Q3 data for 2000, whereas decennial census data reflect conditions as of April 1.

<sup>6</sup> The HVS and decennial census describe changes during slightly different periods. The census data describe conditions as of April 1 of each census year, whereas the HVS data are annual averages for 2010 and the average of the second and third quarters for 2000. These particular HVS data are used because they provide both age detail and a time series that is consistent with respect to the population controls used to develop estimates.

## The Decline in the Overall Homeownership Rate Could Have Been Much Worse

The preceding results might appear contradictory, in that almost all age groups experienced a larger homeownership rate decline than the overall population. This paradox can be explained by examining the impact of population age shifts on changes in the overall homeownership rate.

Change in the overall homeownership rate can be decomposed into two components, one capturing the effects of shifts in the age distribution of the population, and one reflecting changes in homeownership attainment within specific age groups:<sup>7</sup>

$$\Delta R_{t \rightarrow t+n} = \sum_i r_{i,t+n} \Delta p_{i,t \rightarrow t+n} + \sum_i p_{i,t} \Delta r_{i,t \rightarrow t+n}$$

Where

- $\Delta R_{t \rightarrow t+n}$  is the aggregate homeownership rate change between times  $t$  and  $t+n$ ;
- $\sum_i$  indicates summation across the age groups  $i$ ;
- $r_{i,t+n}$  is the homeownership rate of age group  $i$  at time  $t+n$ ;
- $\Delta p_{i,t \rightarrow t+n}$  is the change in the proportion of householders in age group  $i$  between times  $t$  and  $t+n$ ;
- $p_{i,t}$  is the proportion of householders in age group  $i$  at time  $t$ ;
- and  $\Delta r_{i,t \rightarrow t+n}$  is the change in the homeownership rate for age group  $i$  between times  $t$  and  $t+n$ .

The first term on the right-hand side of the equation captures the “age composition effect,” or the change in the overall homeownership rate caused by a shift in the distribution of households across age groups, assuming constant age-specific homeownership rates. The second term shows the “rate effect,” or the change in the aggregate homeownership rate attributable to changes in age-specific rates, holding the household age distribution constant. The hypothetical change in the aggregate homeownership rate absent any shift in the age distribution is obtained by setting  $\Delta p_i$  in the above equation equal to zero, leaving only the rate effect.

Between 2000 and 2010, the age composition effect boosted the homeownership rate by 1.7 percentage points, whereas the rate effect subtracted 2.8 points from growth. That is, had it not been for shifts in the distribution of the population toward older age groups, the overall homeownership rate would have declined by 2.8 percentage points between 2000 and 2010 rather than the 1.1 point decline actually observed. Last

<sup>7</sup> For a fuller explanation of the decomposition technique and a derivation of the equation presented above, see Simmons, Patrick A., “Changes in Minority Homeownership During the 1990s,” *Fannie Mae Foundation Census Note 07*, September 2001.

decade’s large negative rate effect contrasts with that of the 1990s, when changes in age-specific rates boosted the overall homeownership rate by nearly a full percentage point.<sup>8</sup>

## Homeownership Rate Declines Were Geographically Widespread

Release of complete-count data from the decennial census affords an opportunity to develop precise measures of homeownership rate change for sub-national geographies. At the state level, overall homeownership rates fell last decade in all but 9 states and the District of Columbia (Exhibit 3, last page). States in the southeast experienced relatively large homeownership rate declines, whereas most states in the northeast eked out small gains.

States in the southeastern corner of the country experienced particularly large homeownership rate declines among young households. North Carolina, South Carolina, Georgia, Florida, Alabama, and Mississippi recorded rate drops ranging from 5.1 to 7.3 percentage points among households headed by 25-44 year-olds, compared with a decline of 4.3 points nationally for this age group (Exhibit 4, last page). The California border states of Arizona, Nevada, and Oregon also experienced relatively large declines in homeownership rates among young households.

As was the case with the nation, changes in state homeownership rates can be decomposed into components related to population age shifts and to age-specific homeownership rate changes. Were it not for favorable age shifts, every state would have experienced a homeownership rate decline between 2000 and 2010. In contrast, the District of Columbia would have experienced a larger homeownership rate gain had its age distribution remained unchanged during the decade.

## Implications: Preserving Homeownership While Meeting Emerging Rental Demand

Recent media accounts point to the emergence of a “rentership society” in the wake of the housing crisis.<sup>9</sup> Newly released complete-count data from the decennial census enable precise quantification of housing tenure change during the last decade. These data show that homeownership rate declines were larger than previously indicated by the widely followed Housing Vacancy Survey, that losses were experienced by all

<sup>8</sup> Of the 2.0 percentage point gain in the overall homeownership rate between 1990 and 2000, the age composition effect contributed 1.2 percentage points and the rate effect added 0.8 percentage points.

<sup>9</sup> See, for example, Gittelssohn, John, “U.S. Moves Toward Home ‘Rentership Society,’ Morgan Stanley Says.” Bloomberg, July 20, 2011.

age groups and were particularly severe for young and middle-age households, and that the drop in the overall rate would have been substantially worse were it not for favorable shifts in the population's age distribution. The census data also reveal new geographic details of last decade's homeownership rate declines, with southeastern states and California border states exhibiting particularly sharp drops among young households.

Some of the observed changes in homeownership rates are caused by long-term social shifts unrelated to the housing crisis. For example, longer educational careers and delayed marriage and child bearing have shifted first-time home purchase to later in the life cycle, thereby contributing to declines in homeownership attainment among young households.<sup>10</sup>

However, the results presented here also point to the significant tenure consequences of the housing crisis and the need for continuing efforts to support existing homeowners who are having difficulties making their mortgage payments and to ease the transition to renting in cases where homeownership cannot be sustained. They also highlight the need for expanded rental housing options in many parts of the nation, and particularly in the southeast and California border states that experienced large shifts toward renting among young households. In these areas, rental market support might include not only traditional multifamily rental finance, but also enhanced efforts to fund single-family investment properties.<sup>11</sup>

The unique suitability of decennial census data for measuring homeownership rates and the numbers of owners and renters, particularly at sub-national geographies, also creates opportunities for improving housing demand and mortgage performance models. Regional models that rely on historical data depicting homeownership rates or numbers of households by tenure can now be benchmarked to the 2010 Census' complete-count data, thereby improving their predictive capabilities and their ability to provide insights into how shifting demand in the rental and ownership markets affects credit risk.

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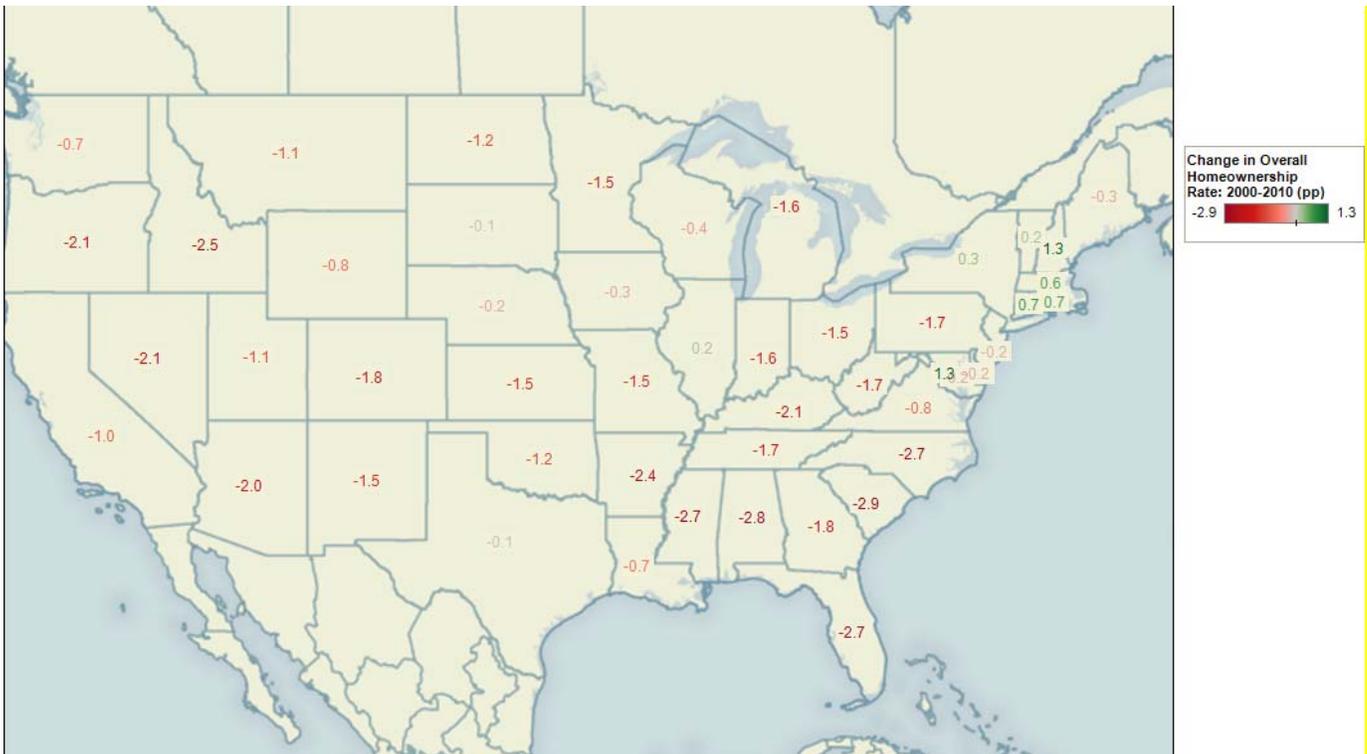
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<sup>10</sup> According to the Census Bureau's Current Population Survey (CPS-ASEC), the percent of the population age 18-34 enrolled in college increased from 19.8 percent to 23.5 percent between 2000 and 2009 and the estimated median age at first marriage increased from 26.8 years to 28.2 years for men and 25.1 years to 26.1 years for women between 2000 and 2010. According to the Centers for Disease Control and Prevention, the average age of the mother at first live birth increased from 24.9 years to 25.1 years between 2000 and 2008.

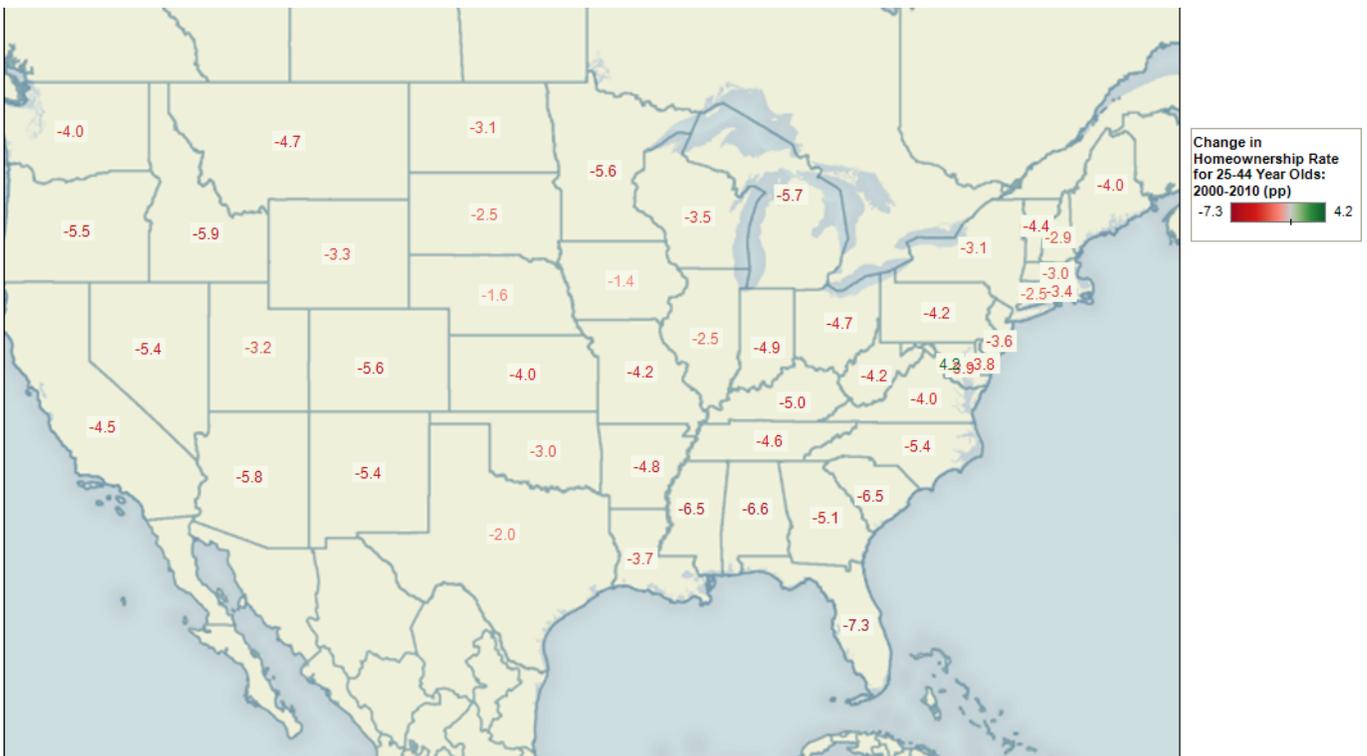
<sup>11</sup> See, for example, Fannie Mae's *Second Quarter 2011 National Housing Survey*, which found that more than 50 percent of renters report living in single-family homes and that 53 percent of single-family renters would continue renting were they to move (<http://www.fanniemae.com/newsreleases/2011/5469.jhtml;jsessionid=LUPUKP115MUJ1J2FQSI5FGQ>).

**Exhibit 3. Outside of the Northeast, Homeownership Rate Declines Were Nearly Universal**



Source: U.S. Census Bureau, 2000 and 2010 Censuses, Summary File 1. Not depicted are data for Alaska (+0.6pp) and Hawaii (+1.2pp).

**Exhibit 4. Homeownership Rates for the Young Fell Sharply, Particularly in California Border States and the Southeast**



Source: U.S. Census Bureau, 2000 and 2010 Censuses, Summary File 1. Not depicted are data for Alaska (-2.9pp) and Hawaii (-1.7pp).