b. Improvements to AHS Analysis

The AHS data for both owners and renters differ from those reported in HUD's proposed rule due to several improvements in HUD's methodology. The major changes are as follows:

- The income limits for the 1989–93 surveys are now based on 1990 Census results, and those for the 1985 and 1987 survey are now based on 1980 Census results. Previous versions had used income limits from 1970 Census data for 1985, and from 1980 Census data for all other years. These changes basically use income limits that are more "correct" for each year than was the case in the earlier analysis. The newly available income limits based on 1990 Census data should more accurately describe income distributions in 1989 and 1991 than the ones extrapolated from 1980 Census data.
- A bedroom-size adjustment factor used by HUD for units with four or more bedrooms has been added; this is important because these large-bedroom units represent almost one-fourth of rental units with three or more bedrooms. This change increases accuracy because earlier, the 3-plus bedroom adjustment factor was used for all units with more than three bedrooms.
- Utility payments in the 1985 and 1987 surveys are constrained to independent (lower) estimates so that they are comparable with procedures begun by the Census Bureau for the 1989 AHS. The new Census Bureau procedures were instituted to correct errors in reported utility payments that were known to cause upward bias. This change should also increase accuracy.

The main effects of these changes are higher affordability estimates than

reported in the proposed rule. The portion of the outstanding stock that is affordable at less than area median income goes up by only 3–6 percentage points across the five survey years; however, the portion of the recently completed stock shows increases from 5 to 20 percentage points. The portion of the outstanding stock affordable at the very-low-income level rises from 4 to 14 percent in four of the survey years and declines in the other one.⁶¹

3. Size of the Low- and Moderate-Income Mortgage Market

a. Market Estimates

This section provides estimates for the size of the low- and moderateincome mortgage market. Three alternative sets of projections about property shares and property low- and moderate-income percentages are given in Table D.6. Case 1 projections represent the baseline and intermediate case; it assumes that investors account for 10 percent of the single-family mortgage market. Case 2 assumes a lower investor share (7 percent) based on HMDA data and slightly more conservative low- and moderate-income percentages for single-family rental and multifamily properties (80 percent and 85 percent, respectively). Case 3 assumes a higher investor share (12 percent) consistent with Follain and Blackley's suggestions.

The low- and moderate-income percentage for owners is the most important determinant of the market

estimates. Thus, Table D.7 provides market estimates for different owner percentages as well as for different sizes of the multifamily market—the \$30 billion baseline projection bracketed by \$23 and \$35 billion. Most low- and moderate-income estimates reported for the baseline projections are around 50 percent. The market estimate is 53 percent if the owner percentage is at its 1994 level (40 percent), and it is 51 percent if the owner percentage is at its 1993 level (37 percent). If the low- and moderate-income percentage for owners falls to 32 percent (about its 1992 level), the overall market estimate falls to 48 percent. Under HUD's baseline projections, the owner percentage can fall to as low as 30 percent—about ten (seven) percentage points lower than its 1994 (1993) level—and the low- and moderate-income market share would still be at 46 percent.

The size of the multifamily market is also an important determinant of the low- and moderate-income market share. The market estimates increase by about a percentage point as multifamily volume moves from \$23 billion to \$35 billion. The market estimates for Case 2 and Case 3 bracket those for Case 1. The smaller rental market and lower low-and moderate-income percentages for rental properties result in the Case 2 estimates being almost three percentage points below the Case 1 estimates.

The various market estimates presented in Table D.7 are not all equally likely. Most of them equal or exceed 48 percent, suggesting that this is a reasonable lower bound for the size of the low- and moderate-income market.

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⁶¹ Except for 1991, which showed an increase from 31 to 36 percent in the percentage of borrowers with less than median income, the income percentages for owners showed only slight increases or no increases at all.