occupied dwelling units financed by mortgages in a particular year that are occupied by households with incomes below the area median).

(3) Multiplying the four percentages in (2) by their corresponding market shares in (1), thus arriving at an estimate (weighted average) of the overall share of dwelling units financed by mortgages that are occupied by low- and moderate-income families.

The four property types are analyzed separately because of their differences in low-mod occupancy; rental properties tend to have much higher percentages of low-income occupants than owner-occupied properties. It is often necessary to distinguish between purchase and refinance mortgages because purchase mortgages are more apt to finance units occupied by low-income occupants.

Unfortunately, complete and consistent mortgage data are not readily available to easily carry out the above three steps. Therefore, HUD had to combine information from several data sources in order to estimate the market shares. Two approaches were taken—one based on American Housing Survey and Residential Finance Survey data and one based on 1993 HMDA data and projections of the mortgage market for 1995 and 1996. HUD also relied on the mortgage purchase data for 1993 supplied by the GSEs. The following sections explain HUD's methodology and present results of several sensitivity analyses of the estimated size of the low-mod market.

a. American Housing Survey/Residential Finance Survey Method

To obtain an overall perspective of the mortgage market, data from the American Housing Surveys for 1985, 1987, 1989, and 1991 were analyzed. This data showed that, overall, 30 percent of those families who recently purchased or refinanced their homes, and who obtained conventional mortgages below the conforming loan limits, had incomes below the area median. Restricting the American Housing Survey (AHS) analysis to 1991 (the latest year that for which data is available) yields about the same estimate (31 percent) for the low-mod share of single-family owner-occupied properties.

The AHS does not include data on mortgages for rental properties (1–4 properties including (b) and (c) above and multifamily); rather, it includes data on the characteristics of the existing housing stock and recently completed rental properties. Current data on the income of prospective or actual tenants has also not been readily available for rental properties. Where such income information is not available, the Act provides that a rent level is affordable if it does not exceed 30 percent of the maximum income level for the low-income or moderate-income category, with appropriate adjustments for unit size as measured by the number of bedrooms.

Analysis of the same four American Housing Surveys shows that for 1–4 unit unsubsidized rental properties ((b) and (c) properties are combined], 90 percent of all units, and 69 percent of units constructed in the preceding three years had gross rent (contract rent plus the cost of all utilities) less than or equal to 30 percent of area median family income. For multifamily unsubsidized rental properties, the corresponding figures are 92 percent of all units, and 83 percent of units constructed in the preceding three years. Restricting the analysis to 1991 gave similar results—91 percent and 68 percent for 1–4 properties and 92 percent and 83 percent for multifamily properties. It should be noted that data for recently completed units probably underestimate the low- and moderate-income percentage of rental housing under the Act's definition, because they exclude purchase and refinance transactions on older buildings, which generally charge lower rents than newly-constructed buildings.

The GSEs' 1993 purchase data for rental properties also provides a useful reference point. Freddie Mac's data suggest a 66 percent low-mod share for rental 1–4 properties and Fannie Mae's data suggest a 73 percent low-mod share.[40] The GSE percentages are similar to the AHS low-mod share (69 percent) for recently completed 1–4 properties. On the multifamily side, Fannie Mae's data suggest a 95 percent low-mod share which is about the same as the AHS estimate for existing properties. Freddie Mac's multifamily business is too small to provide reliable data.

To calculate the size of the potential market for mortgages financing housing for low- and moderate-income families, data on the number of owner-occupied dwelling units, rental units in 1–4 unit properties, and rental units in multifamily properties are necessary. In determining the proportions of dwelling units in these three different types of properties, HUD used data from the Residential Finance Survey (RFS) on the number of properties with conventional conforming mortgages acquired during the 1987–91 period, and the total number of dwelling units for each type of property, derived from the same source. Based on this data, HUD estimated that, of total dwelling units in properties financed by recently acquired conventional conforming mortgages, 56.5 percent were owner-occupied units, 17.9 percent were in 1–4 family rental properties, and 25.6 percent were located in multifamily rental properties.[41] Applying the AHS percentages of affordable dwelling units (30 percent of owner-occupied dwelling units, 69 percent of single-family recently completed rental units, and 83 percent of recently completed multifamily rental units) to these percentages of properties results in an estimate that 51 percent of the dwelling units secured by conventional mortgages, eligible for purchase by the GSEs, are affordable to low- and moderate-income families.[42]

The 51 percent fIgure is based on the percentage estimates for newly-constructed affordable rental units rather than the higher estimates for all affordable rental units and GSE purchases. Using the AHS low-mod estimates for the existing stock (90 percent for 1–4 properties and 92 percent for multifamily properties) increases the low-mod share to 57 percent. Using the low-mod percentages of Fannie Mae's 1993 rental purchases (75 percent for 1–4 properties and 95 percent for multifamily properties) suggests a 54 percent low-mod share.

One concern with the Residential Finance Survey data is the seemingly high percentage share of multifamily units, given that multifamily mortgage originations have declined from their high levels in the mid- to late-1980s. Between 1987 and 1991, annual multifamily conventional mortgage originations averaged $32 billion, representing 8.8 percent of total conventional mortgage originations. In 1993, conventional multifamily originations stood at $28.5 billion and, because of the record trillion dollars in single-family mortgage originations, the multifamily share had dropped to 3 percent. Based on estimates provided by the GSEs, multifamily originations are expected to be about 7 percent of conventional mortgage originations in 1995 and 1996. This increase in the multifamily share for 1995 and 1996 is mainly due to the projected decline in single family originations caused by the collapse of the refinance market. Conventional multifamily originations are expected to be about $35 billion in 1995 and 1996.

Sensitivity analysis can show the effect of shifting the relative market importance of the different property categories. For example, reducing the multifamily weight from 25.6 percent to 20 percent, and assuming the owner category is 65 percent and the rental 1–4 category is 15 percent, yields the following estimates of the low-mod share of the market: 46 percent using AHS data for recently completed rental properties, 51 percent using AHS data for existing rental properties, and 50 percent using Fannie Mae data to estimate the low-mod shares for rental 1–4 and multifamily properties.

b. HMDA/Market Projection Method

HUD's second approach for estimating the low-mod share more explicitly considers the relative importance of the various property types in the 1995 and 1996 mortgage market. This second approach uses 1993 HMDA data and projections of mortgage originations for 1995 and 1996 including shifts in the mortgage market, such as a reduction in refinance activity.[43] The mortgage origination

[40] Disaggregating the rental 1–4 category into its two components, Freddie Mac's data showed a 54 percent low-mod share for rental 2–4's and a 85 percent low-mod share for 1–4 investment properties. Fannie Mae's data showed a 62 percent low-mod share for rental 2–4's and a 86 percent low-mod share for 1–4 investment properties. The low-mod percentages were practically the same for purchase and refinance mortgages.

[41] Restricting the RFS analysis to 1991 resulted in only minor changes to the market shares.

[42] The 51 percent figure was derived by adding the following: (1) 16.95% (percentage of owner-occupied units [56.5%] times percentage of those units that are affordable to low- and moderate-income families [30%]); (2) 12.35% (percentage of rental units in 1–4 family properties [17.9%] times percentage of those units that are affordable to low- and moderate-income families [69%]); and (3) 21.25% (percentage of rental units in multi-family properties [25.6%] times percentage of those units that are affordable to low- and moderate-income families [83%]).

[43] The HMDA data were mainly needed because its census tract level information was necessary for estimating the size of the underserved area market

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