	1994 HMDA (per- cent)	1987– 91 RFS (per- cent)	HUD's pro- posed rule (per- cent)	Blackley/ Follain alter- native (percent)
SF-0	85.4	73.8	83.0	80.6
SF 2–4 Renter	(est.) 2.4	2.7	2.4	2.3
SF Investor	(est.) 10.3	21.4	12.7	15.2
Total SF-Rental	100.0 12.7	100.0 24.1	100.0 15.1	100.0 17.5

Three points should be made about these data. First, notice that the "SF-Rental" row highlights the share of the single-family mortgage market accounted for by all rental units.

Second, notice that the rental categories represent a larger share of the unit-based market than they did of the mortgage-based market reported earlier. This, of course, follows directly from applying the loan-per-unit expansion factors.

Third, notice that the rental share under HMDA's unit-based distribution is again about one-half of the rental share under the RFS's distribution. The rental share in HUD's proposed rule is slightly larger than that reported by HMDA. The rental share in the "Blackley-Follain" alternative is slightly above that in HUD's proposed rule.²⁸

4. Conclusions

This section has reviewed data and analyses related to determining the rental share of the single-family mortgage market. There are two main conclusions:

(1) The analytical findings do not support public commenters who argued that HUD had overestimated the singlefamily rental market in its proposed rule. While there is uncertainty concerning the relative size of this market, the projections made by HUD appear reasonable and, in fact, are

²⁸ Blackley and Follain say that 10 or 12 percent are reasonable estimates. Since HUD's proposed rule was approximately 10 percent, the "Blackley-Follain" alternative assumes that investors account for 12 percent of all single-family mortgages. below one set of the "best estimates" provided by Blackley and Follain.

(2) HMDA likely underestimates the single-family rental mortgage market. Thus, this part of the HMDA data are not considered reliable enough to use in computing the market shares for the housing goals. HMDA's rental data are included, however, in various sensitivity analyses of the market shares conducted in Sections F, G, and H. These analyses will show the effects on the overall market estimates of the different projections about the size of the single-family rental market.

E. HUD's Market Share Model

This section integrates findings from the previous two sections about the absolute size of the multifamily mortgage market and the relative distribution of single-family owner and rental mortgages into a single model of the mortgage market. The section provides the basic equations for HUD's market share model and identifies the remaining parameters that must be estimated.

The output of this section is a unitbased distribution for the four property types discussed in Section B.²⁹ Sections F–H will apply goal percentages to this property distribution in order to determine the size of the mortgage market for each of the three housing goals.

1. Basic Equations for Determining Units Financed in the Mortgage Market

The model first estimates the number of dwelling units financed by conventional conforming mortgage originations for each of the four property types. It then determines each property type's share of the total number of dwelling units financed.

a. Single-Family Units

This section estimates that 5.11 million single-family units will be financed in the conventional conforming market in 1996, where single-family units (SF–UNITS) are defined as:

SF-UNITS = SF-O + SF 2-4 + SF-INVESTOR

First, we estimate the dollar volume of conventional conforming singlefamily mortgages (CCSFM\$):

(1) CCSFM\$ = CONF% * CONV% *
SFORIG\$

Where:

- CONF% = conforming mortgage originations as a percent (measured in dollars) of conventional singlefamily originations; estimated to be $83\%.^{30}$
- CONV% = conventional mortgage originations as a percent of total mortgage originations; forecasted to 78% by industry and GSEs.³¹
- SFORIG\$ = dollar volume of singlefamily one-to-four unit mortgages; projected to be \$700 billion³² in 1996 based on industry and GSE market forecasts.³³

Substituting these values into (1) yields an estimate for CCSFM\$ of \$453 billion.

³² Single-family mortgage originations are estimated to be \$700 billion in 1996, a reduction of \$310 billion from the record setting \$1,010 billion in 1993 and a reduction of \$70 billion from the \$770 billion in 1994. These reductions are due to the decline in refinance activity which is projected to fall from almost 60 percent of originations in 1993 to 25 percent in 1996.

³³ Fannie Mae, Freddie Mac, and the Mortgage Bankers Association have provided HUD with projections of 1996 single-family originations. Because the 1997 market is expected to be similar to the 1996 market, the discussion focuses on the 1996 market. The various market estimates reported in Sections E, F, and G for the 1996 market serve as a proxy for the 1997 market.

²⁷ Notice that the SF 2–4 category has been divided into its owner and renter subcomponents. This is easily done based on the assumption of 2.25 units per SF 2–4 mortgage. For each mortgage, one unit represents the owner occupant and 1.25 additional units represent renter occupants. The owner-occupant is included in the SF–O category in this Appendix. This is necessary because different data sources are used to estimate the owner's income and the affordability of the rental units. The income of owners of 2–4 properties are included in the borrower income data reported by HMDA. The AHS will be used to estimate the affordability of the rental units.

²⁹ The property distribution reported in Section A is an example of the output of the market share model. Thus, this section completes Step 1 of the three-step procedure outlined in Section A.

³⁰ The model projects that the conventional market share will increase slightly over its 81.4 percent of total mortgage originations in 1994.

³¹ Data provided by Fannie Mae show that conforming loans have been about 78 percent of total conventional loans over the past few years.