Second, we estimate the number of conventional conforming single-family mortgages (CCSFM#):

(2) CCSFM# = CCSFM\$/SFLOAN\$ Where:

SFLOANS = the average conventional conforming mortgage amount for single-family properties; estimated to be \$94,000.<sup>34</sup>

Substituting this value into (2) yields an estimate of 4.82 million mortgages in 1996.

Third, we estimate the total number of single-family mortgages among the three single-family property types. Using the 88/2/10 percentage distribution for single-family mortgages from HUD's proposed rule (see Section C), the following results are obtained:

- (3a) SF-OM# = .88 \* CCSFM# = number of owner-occupied, one-unit mortgages = 4.24 million.
- (3b) SF-2-4M# = .02 \* CCSFM# = number of owner-occupied, two-tofour unit mortgages = .10 million.
  (3c) SF-INVM# = .10 \* CCSFM# =
- (3c) SF-INVM# = .10 \* CCSFM# = number of one-to-four unit investor mortgages = .48 million.

Fourth, we determine the number of dwelling units financed by these single-family mortgages:

- (4a) SF-O = SF-OM# + SF-2-4M# = number of owner-occupied dwelling units financed = 4.34 million.
- (4b) SF 2-4 = 1.25 \* SF-2-4M# =number of rental units in 2-4properties where a owner occupies one of the units = .12 million.<sup>35</sup>

<sup>35</sup> Based on the RFS, there is an average of 2.25 housing units per mortgage for 2–4 properties. 1.25

 (4c) SF-INVESTOR = 1.35 \* SF-INVM#
 = number of single-family investor dwelling units financed = .65 million.

Summing equations 4a–4c gives 5.11 million for the projected number of newly-mortgaged single-family units (SF–UNITS).

b. Multifamily Units

The number of dwelling units financed by conventional conforming multifamily originations is:

(5) MF–UNITS = CCMFM\$/MFLOAN\$ Where:

- CCMFM\$ = conventional conforming mortgage originations, which are projected to be \$30 billion; as discussed in Section C, alternative estimates of the multifamily market will be included in the analysis.
- MFLOANS = average loan amount per housing unit in multifamily properties = \$30,000.<sup>36</sup>

Substituting these values into (5) yields a projection for MF–UNITS of 1.0 million.

## c. Total Units Financed

The total number of dwelling units financed by the conventional conforming mortgage market (TOTAL) can be expressed in three useful ways: (6a) TOTAL = SF-UNITS + MF-UNITS

- = 6.11 million (6b) TOTAL = SF-O + SF 2-4 + SF-
- (6c) TOTAL = SF-O + SF-RENTAL + MF-UNITS
- Where SF–RENTAL equals SF–2–4 plus SF–INVESTOR.

## 2. Property Distributions

The next step is to express the number of dwelling units financed for each property type as a percentage of the total number of units financed by conventional conforming mortgage originations.<sup>37</sup>

 $^{\rm 37}$  The share of the mortgage market accounted for by owner occupants is (SF–O)/TOTAL; the share of

The projections used above in equations (1)–(6) produce the following distributions of financed units by property type:

	Per- cent share		Per- cent share
SF-0 SF 2-4 SF INVES- TOR.	71.0 2.0 10.6	SF-O SF- RENTE- R.	<sup>38</sup> 71.8 12.6
MF-UNITS	16.4	MF-UNITS	16.4
Total .	100.0		100.0

Sections C and D discussed alternative projections for the volume of the multifamily originations and the investor share of single-family mortgages. The analysis in this appendix will consider three multifamily origination levels—\$23 billion, \$30 billion, and \$35 billion and three projections about the investor share of single-family mortgages—7 percent, 10 percent, and 12 percent. The middle values (\$30 billion and 10 percent) will be considered the "baseline" projections throughout the Appendix.

Table D.3 reports the unit-based distributions produced by HUD's market share model for different combinations of these projections. The effects of the different projections can best be seen by examining the owner category which varies by 9 percentage points, from a low of 67.2 percent (multifamily originations of \$35 billion coupled with an investor mortgage share of 12 percent) to a high of 76.0 percent (multifamily originations of \$23 billion coupled with an investor mortgage share of 7 percent). The owner share under the baseline projections (\$30 billion and 10 percent) is 71.0 percent.

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<sup>38</sup> Owners of 2–4 properties account for 1.6 percentage points of the 71.0 percent for SF–O.

<sup>&</sup>lt;sup>34</sup> The Federal Housing Finance Board's 1994 Mortgage Interest Rate Survey (MIRS) reported an average loan size of \$109,900 for one-unit, owneroccupied conventional mortgages. Assuming that 78 percent of the dollar volume of conventional singlefamily originations is conforming and that 90 percent of the number of conventional originations are conforming, the average loan amount for oneunit, owner-occupied mortgages in the conforming market is obtained by multiplying \$109,900 by (.78/ .90); this produces \$95,246. A small adjustment (based on GSE data) is applied to this figure to reflect the fact that SFORIGS includes a relatively small volume of mortgages for two-to-four-unit and investor properties (see Section C above). This produces an average loan size of about \$94,000 for the conventional conforming market.

is used here because one (i.e., the owner occupant) of the 2.25 units is allocated to the SF–O category. The RFS is also the source of the 1.35 used in (4c).

<sup>&</sup>lt;sup>36</sup>Blackley and Follain, *op. cit.*, p. 10.

the market accounted for by all single-family rental units is SF-RENTAL/TOTAL; and so on.