(a) A commercial banks figure of \$7–8 billion is more plausible than SMLA's \$18.8 billion for 1993. Comparison of HMDA and SMLA data on loans purchased in 1993 indicates that HMDA missed a significant volume of multifamily loan originations; thus the \$4.8 billion HMDA figure is too low. A \$7–8 billion figure is implied by combining the HMDA and SMLA data. 15

(b) The SMLA overestimate for banks is offset by underestimation of multifamily loans for some lender categories, particularly mortgage bankers, loans by individuals, and life

insurance companies.16

(c) A conclusion that HMDA underreports multifamily originations is supported by a comparison between HMDA and Fannie Mae data. Loans reported in HMDA as sold to Fannie Mae in 1993 tend to be smaller in size than Fannie Mae's 1993 multifamily originations as shown in the Fannie Mae data base. In addition, 41 percent of Fannie Mae's 1993 multifamily mortgage purchases were found to be in tracts where HMDA reported no multifamily originations. It appears that larger multifamily loans tend not to be reported in HMDA. Further evidence of the poor quality of the HMDA multifamily data is the fact that it reported that in 1993 more multifamily loans were sold to Freddie Mac than to Fannie Mae, when in fact Freddie Mac's purchases were only a small fraction of Fannie Mae's purchases.

(d) In addition, the HMDA data base does not cover a number of important categories of multifamily lenders such as life insurance companies and State housing finance agencies, providing another reason that the HMDA data understates the size of the multifamily

market.

(e) The conclusion regarding HMDA is further supported by an analysis of RFS data, projecting loan terminations for to 1993 based on RFS's estimates of loans outstanding by maturity in 1991, using a hazard modeling framework.¹⁷

The SMLA figures, with the adjustments for 1993 discussed above, indicate a volume of multifamily mortgage originations of at least \$30 billion around 1990, dropping to around \$25 billion in the early 1990s. The inconsistency between the revised SMLA estimate and the HMDA 1993 estimate is the result of HMDA's

The estimate of \$25–30 billion annual lending volume for 1993 and other years in the early 1990s represents around 10 percent of the aggregate value of multifamily mortgage debt outstanding, which was estimated by RFS at \$329 billion as of Spring 1991. 18 Such an originations-to-outstanding debt ratio is consistent with the value of this ratio during the preceding several years, which provides further support both for the conclusion regarding 1993 and for HUD's extrapolation to 1996 and beyond.

3. Projections for 1996 and Beyond

Of the three data bases described above, the greatest confidence appears warranted for the RFS. The Urban Institute researchers therefore developed a model to project multifamily origination volumes from the 1991 survey date forward, based on RFS data on mortgages by year since origination. They applied a statistical model of mortgage terminations based on Freddie Mac's experience from the mid-1970s to around 1990. While mortgage characteristics in 1990 are not wholly similar to the characteristics of these historical mortgages financed by Freddie Mac, nevertheless the prepayment propensities of contemporary mortgages may at least be approximated by the prepayment experience of these historical mortgages. The research methodology took account of the influence of interest rate fluctuations on prepayments of the historical mortgages; the projections assumed that prepayments are motivated mainly by property sales.¹⁹

The analysis began with the \$273 billion of outstanding first mortgage debt shown by RFS for 1991. Forecast mortgage origination volumes based on mortgages existing in 1991 were: \$27 billion for 1993 (providing a useful point of comparison with the HMDA and SMLA figures referenced earlier), \$37 billion for 1996 and \$40 billion for 1997, the years to which this rulemaking applies. New construction was projected to add slightly less than \$7 billion of mortgage lending volume each year to these figures.

Based on this analysis, \$30-\$35 billion per year are reasonable projections of multifamily mortgage origination volumes for 1996. Urban Institute analysis indicates an increasing level in 1997 and beyond.²⁰

particular basis for excluding them.

D. Single-Family Owner and Rental Mortgage Market Shares

1. Available Data

HUD projects that originations for single-family properties will total \$700 billion in 1996. Because this projection is based on HUD's Survey of Mortgage Lending Activity, it combines mortgage originations for the three different types of single-family properties: owneroccupied, one-unit properties (SF-O); 2-4 unit rental properties (SF 2-4); and 1-4 unit rental properties owned by investors (SF-Investor). The fact that the goal percentages are much higher for the two rental categories argues strongly for disaggregating single-family mortgage originations by property type. This section discusses available data for estimating the relative size of the singlefamily rental mortgage market.

The RFS and HMDA are the two data sources for estimating the relative size of the single-family rental market. The RFS provides mortgage origination estimates for each of the three single-family property types. HMDA divides single-family mortgage originations into two property types: ²¹

- (1) Owner-occupied originations, which include both SF–O and SF 2–4.
- (2) Non-owner-occupied mortgage originations, which include SF Investor.

The percentage distributions of mortgages from these data sources are as follows:

underestimation for commercial banks and mortgage companies, and omission of several important lending categories shown in SMLA and RFS.

These analyses imply an aggregate volume approaching \$40 billion for the whole multifamily market in 1996. To derive an estimate of the market relevant to Fannie Mae and Freddie Mac, we exclude (a) FHA-insured loans, and (b) loans insured by State bonding agencies and held by State and local credit agencies. Other categories of mortgages, considering the type of insurer, servicer, or holder, do not tend to have mortgage characteristics that differ substantially from the multifamily mortgages that are purchased by Fannie Mae and Freddie Mac. There is thus no

¹⁵ "Estimating the Volume of Multifamily Mortgage Originations for Commercial Banks."

¹⁶ "What We Know About Mortgage Originations," p. 20.

¹⁷ "An Alternative Methodology to Estimate the Volume of Multifamily Mortgage Originations."

¹⁸ SMLA's figure is \$245 billion as of the end of 1992. SMLA's coverage is less than RFS's. This figure is based on call reports and not subject to the methodological comments concerning SMLA's bank origination volume estimates.

¹⁹ This is the methodology used to construct the 1993 RFS-based estimate cited above.

²⁰ "An Alternative Methodology to Estimate the Volume of Multifamily Mortgage Originations."

²¹ This ignores the HMDA loans with "non-applicable" for owner type.