Third, OMB states that:

In cases where there is no statutory requirement and an agency elects to use the (Metropolitan Area (MA)) definitions in a nonstatistical program, it is the sponsoring agency's responsibility to ensure that the definitions are appropriate for such use.[48]

Strictly speaking, this OMB statement applies only to MAs, but by logical extension it also applies to the central cities within these MAs. The Secretary has examined OMB's definition of central cities, in accordance with this memorandum, and concluded that it alone does not provide a satisfactory definition of all (or a part) of appropriately-defined ''underserved areas.''

Finally, there is substantial regional variation in the portion of state urban populations that are included within central cities. In the Southern and Western parts of the United States, cities have often expanded by annexing adjacent territory. This option was generally not available to cities in the Northeast, which have retained their historical boundaries. Thus, a substantially greater portion of the population lives in central cities in South and West than in the more urbanized Northeastern states. Central cities accounted for more than 50 percent of both GSEs' 1993 purchases in Arizona, New Mexico, and North Dakota. In New Jersey, on the other hand, central cities accounted for only 4 percent of GSE purchases.[49]

For 1995 and beyond, Congress directed that the transition ''central cities goal'' be changed to better emphasize underserved areas. Although Congress did not define ''underserved areas,'' it indicated that they are locations with relatively poor access to mortgage credit. Thus the goal should target those parts of central cities and those parts of rural areas with poor access to mortgage credit, as well as any other areas with problems with access to credit.

Ideally, the definition of areas with poor access to mortgage credit would be based on a clear determination of areas that do not receive the level of mortgage credit they require. Section B reported HUD's analysis of 1993 HMDA data and the main findings of several studies of mortgage lending conducted by community groups, government agencies, and academic researchers. While there is much research left to be done to fully understand mortgage access for different types of persons and neighborhoods, one finding remains clear—minority and low-income neighborhoods have higher mortgage denial rates and lower mortgage origination rates than other neighborhoods.

As mentioned earlier, studies that have controlled for borrower and neighborhood risk characteristics find that racial differentials in denial rates and mortgage flows persist. Recent studies have concluded that characteristics of the applicant and the neighborhood where the property is located are the major determinants of mortgage denials and originations—once these characteristics are accounted for, other influences such as central city location play only a minor role in explaining disparities in mortgage lending.[50] These studies, as well as HUD's own analysis, provide strong support for a targeted approach to identifying underserved areas. In addition, they point to two useful proxy variables for measuring access to mortgage credit—a neighborhood's minority composition and its level of income.

3. Identifying Underserved Areas

To identify areas underserved by the mortgage market, HUD focused on two traditional measures used in a number of HMDA studies:[51] Application denial rates and mortgage origination rates per 100 owner-occupied units.[52] Tables B.1 and B.2 in Section B presented detailed data on denial and origination rates by the racial composition and median income of census tracts for metropolitan areas.[53] Aggregating those data is useful for examining denial and origination rates for broader groupings of census tracts:

Minority composition (percent)	Denial rate (percent)	Origination rate	Tract income (percent)	Denial rate (percent)	Origination rate
0–30	12	13.4	Less than 80	23	5.9
30–50	19	10.1	80–120	15	11.3
50–100	24	6.6	Greater than 120	9	17.7

Two points stand out from these data. First, census tracts with higher percentages of minority residents have higher denial and lower origination rates. Tracts that are over 50 percent minority have twice the denial rate and half the origination rate of tracts that are under 30 percent minority.[54] Second, census tracts with lower incomes have higher denial rates and lower origination rates than higher income tracts. Tracts with income less than or equal to 80 percent of area median have almost three times the denial rate and one-third the origination rate of tracts with income over 120 percent of area median.

HUD chose over 30-percent minority and under 80-percent income as the thresholds for defining underserved areas. There are three advantages to HUD's definition. First, the cutoffs produce sharp differentials in denial and origination rates between served and underserved areas. For instance, the overall denial rate (22.0 percent) in underserved areas is almost double that (11.9 percent) in served areas; and the mortgage origination rate (5.4 per 100 owner occupants) in underserved areas is about half that (10.3 per 100 owner occupants) in served areas. Thus, an advantage of a targeted definition of underserved areas is illustrated by sharp differences in measures of mortgage access between served and underserved areas. The less-than-80-percent income cutoff in HUD's definition has the further advantage of consistency with the Community Reinvestment Act (CRA) definition that applies to depository institutions.

A second advantage is that the minority and income cutoffs are useful for defining mortgage problems in the suburbs as well as in OMB-defined central cities. Underserved areas account for 23 percent of the suburban population, compared with 51 percent of the central city population. The average denial rate in underserved suburban areas is almost twice that in the remaining areas of the suburbs. (See Figure B.1 in Section B.) Thus, the minority and income thresholds in HUD's definition identify those suburban tracts that seem to be experiencing mortgage credit problems.

A third advantage is that the minority and income cutoffs identify tracts that resemble distressed neighborhoods. The socioeconomic characteristics of underserved areas are discussed in the next section.

4. Characteristics of Underserved Areas

The Secretary's definition of central cities, rural areas, and other underserved areas includes 17,337 of the 44,447 census tracts in

[48] Office of Management and Budget, Memorandum M–94–22, May 5, 1994.

[49] For more discussion of this issue, see James A. Johnson, Chairman and Chief Executive Officer, Fannie Mae, testimony before the Committee on Banking, Finance, and Urban Affairs Subcommittee on General Oversight, Investigations and the Resolution of Failed Financial Institutions, U. S. House of Representatives, April 20, 1994, p. 16.

[50] Shear, *et al.*, and Avery, *et al.*

[51] HMDA data have been expanded in 1993 to cover independent mortgage companies that originated 100 or more home purchase loans in the preceding calendar year. HMDA provides no useful information on rural areas. In addition, although HMDA data now include applications to provide some measure of overall loan demand, pre-screening discrimination can discourage would-be homebuyers from applying for a mortgage, leading to an underestimation of demand. Nevertheless, the HMDA data, while not necessarily definitive, are still useful in helping to define underserved areas.

[52] Analysis of application rates are not reported here. Although application rates are sometimes used as a measure of mortgage demand, they provide no additional information beyond that provided by looking at both denial and approval (origination) rates. Although denial rates vary by census tract characteristics, the patterns observed for application rates are still very similar to those observed for approval rates.

[53] As discussed in Section B, no sharp breaks occur in the denial and origination rates across the minority and income deciles given in Table B.1—mostly, the increments are somewhat similar as one moves across the various deciles that account for the major portions of mortgage activity.

[54] The differentials in denial rates are due, in part, to differing risk characteristics of the prospective borrowers in different areas. However, use of denial rates is supported by the findings in the Boston Fed study which found denial rate differentials to persist, even after controlling for risk of the borrower. See Section B for a review of that study.