

FMR Adjustments for Non-Market Units

Introduction

The Section 8 Voucher program is predicated on the concept that voucher holders compete in the rental housing market for market rate units. An acceptable Section 8 unit must meet HUD Housing Quality Standards and is generally a market rate unit.¹ In setting Fair Market Rents (FMRs), HUD tailors the rental unit distribution from which the 40th percentile rent is selected so that it reflects these criteria.² Specifically, HUD eliminates units from the rental housing distribution with sub-standard quality so that the rental unit distribution reflects units that meet HUD's housing quality requirements while also removing units below a certain rent level to ensure the rental unit distribution reflects market-rate units. The resultant rental unit distribution, from which the 40th percentile rent (50th percentile) is then taken, more closely reflects a distribution of units available to and suitable for voucher holders. The majority of the rest of this note outlines the process used to make these adjustments given the available data. Finally, the derived adjustments are measured against American Housing Survey (AHS) data aggregated to the Census regional level to measure the validity of the adjustments. As discussed in detail later, the AHS, while small, contains all the information necessary to make all of the housing quality and non-market unit adjustments necessary for a useful FMR.

Data Sources

There are three nationally representative sources of data on rents, rental units and the characteristics of rental units each with its own strengths and weaknesses:

1. 2000 Decennial census data: the foundation of the latest nation-wide FMR benchmark, the 2000 Decennial Census is a very large reliable survey.³ The decennial census contained two items on housing quality. Question 39 (on the 2000 census questionnaire) asks whether the unit has complete plumbing facilities and question 40 asks if the unit has complete kitchen facilities.⁴ In producing FMRs, HUD eliminates any unit that does not have full kitchen and full plumbing. The Decennial census, however, does not contain any information about the housing assistance status of the unit, so public housing and other types of assisted units cannot be eliminated directly from the rental unit distribution when calculating the 40th and 50th percentile rent for FMRs using Decennial Census data.

¹ Voucher holders are not restricted from renting otherwise subsidized units but are restricted from renting a public housing unit.

² 50th percentile rents are also generated for certain areas. The processes discussed are equivalent for both the 40th and 50th percentile rent.

³ This survey contains over 400,000 observations on rental housing.

⁴ Complete Plumbing: hot and cold piped water, a flush toilet and a bathtub or shower. Complete Kitchen: a sink with piped water, a range or stove and a refrigerator.

2. American Community Survey (ACS): When FMRs were initially set using 2000 Census data, the ACS was not fully implemented. However, ACS comparison surveys from 1999 - 2002 included several questions about housing assistance, including whether or not the unit was a public housing unit and whether or not the rent was reduced due to any other type of government sponsored housing assistance. Because of response and accuracy deficiencies, these questions were dropped from the later (2003 and 2004) experimental and full-implementation (2005 and beyond) ACS. The 2000 ACS PUMS data⁵ included these items and HUD used it during its conversion to 2000 decennial Census data to measure the impact of eliminating assisted housing from the rental unit distribution on the 40th percentile rent. Unfortunately, for the reasons noted above the Census Bureau did not continue to collect these data in the ACS. Because this public housing adjustment was crucial for FMRs, HUD generated a proxy for this impact using HUD administrative data. This proxy, the cut-off rent developed from administrative data and below which units were excluded from the computation of the 40th or 50th percentile rent, was designed to mimic the impact on the 40th or 50th percentile rent of eliminating identified public or subsidized housing units from the rental unit distribution.

3. American Housing Survey (AHS): The AHS has 39 questions relating to the physical conditions of a unit, 25 questions relating to the neighborhood and environment and 8 additional questions that relate to other livability issues along with multiple questions on housing assistance. If it were broader in scope, the AHS would be an ideal source for information on both housing quality and housing assistance. However, in its current form, the AHS is not valid below the multi-state Census-regional level and cannot be used to generate rent adjustments for county- and metropolitan area-based FMR areas. If the AHS sample were larger, it could be used to generate both quality and low rent adjustments for states or individual areas, but here, we use it solely to test the current process at the Census regional level.

Census Long Form based quality adjustments

The long form of the Decennial Census contained two questions that have been used since its inception to address the issue of quality. The questions: 39: Do you have a full kitchen, and 40: Do you have full plumbing, have some impact on rents, but do not go far enough to tailor the rental unit distribution to reflect units available to and suitable for voucher holders; units with functioning full plumbing and kitchen could have myriad other quality problems. In addition to the lack of information on rental subsidy, the Census does not have information on non-arms-length transactions where rents are not set by market forces, such as renting from a relative. Appendix 1 contains a state by state listing of the percentage change in rents due to the elimination of sub-standard quality units from the rental unit distribution. It also contains the percentage change in rents due to the recent mover and the non-market housing adjustments.

⁵ PUMS: Public Use Micro Data. HUD used the ACS 2000 10% PUMS data for this work.

Public and assisted, or “non-market” housing adjustment

There were two steps involved in generating the non-market housing adjustment. First, HUD used ACS PUMS data from 2000 to determine, on a state-by-state basis, the impact on the 40th percentile rent of eliminating identified public and assisted housing directly from the rental unit distribution. Then, HUD generated a cut-off rent from HUD administrative data circa 2000 and used it to adjust the Decennial Census rental unit distribution used to set FMRs. HUD chose a cut-off rent that caused rent increases similar to the rent increases obtained by directly eliminating public and assisted housing from the ACS PUMS rental unit distribution.

Two questions on early ACS questionnaires allowed HUD to measure the impact that assisted housing has on the 40th percentile rent. Question 20 asks: “Is the rent on this house, apartment, or mobile home reduced because the Federal, state, or local government is paying part of the cost?” and Question 21 asks: “Is this house, apartment, or mobile home in a public housing project; that is, is it part of a government housing project for persons with low income?” Calculating the 40th percentile rent on the rental unit distribution with all observations and then re-calculating the 40th percentile rent after eliminating units that responded yes to either of these questions produces a rent differential that can be attributed to the impact of assisted housing on the 40th percentile rent.⁶ Table 1 shows this differential in dollars at the state level. Note that the differential was not universally positive.⁷

Table 1: ACS 2000 PUMS 40th Percentile 2-Bedroom State Rents before and after eliminating identified assisted housing directly by using the assisted housing questions resident on the ACS survey in 2000⁸

State	40th percentile Recent Mover Rent	40 th percentile Recent Mover Rent without assisted housing	Rent Differential
Alabama	\$425	\$461	\$36
Alaska	\$715	\$730	\$15
Arizona	\$670	\$675	\$5
Arkansas	\$465	\$495	\$30
California	\$815	\$830	\$15
Colorado	\$715	\$715	\$0
Connecticut	\$780	\$805	\$25
Delaware	\$675	\$675	\$0
District of	\$595	\$630	\$35

⁶ Both rents were also selected for standard census quality and recent movers.

⁷ Eliminating assisted housing from the rental unit distribution in West Virginia (and to a lesser extent South Carolina) produces a lower, not a higher 40% rent – in other words, units identified as assisted sometimes had higher rents than units not identified as assisted in West Virginia.

⁸ The analysis was done for all bedroom sizes, but only 2 bedrooms are shown

State	40th percentile Recent Mover Rent	40 th percentile Recent Mover Rent without assisted housing	Rent Differential
Columbia			
Florida	\$665	\$677	\$12
Georgia	\$600	\$625	\$25
Hawaii	\$845	\$860	\$15
Idaho	\$470	\$475	\$5
Illinois	\$614	\$625	\$11
Indiana	\$533	\$550	\$17
Iowa	\$535	\$540	\$5
Kansas	\$490	\$525	\$35
Kentucky	\$490	\$505	\$15
Louisiana	\$500	\$515	\$15
Maine	\$510	\$528	\$18
Maryland	\$745	\$775	\$30
Massachusetts	\$790	\$805	\$15
Michigan	\$570	\$575	\$5
Minnesota	\$625	\$655	\$30
Mississippi	\$541	\$541	\$0
Missouri	\$490	\$505	\$15
Montana	\$495	\$515	\$20
Nebraska	\$504	\$535	\$31
Nevada	\$700	\$705	\$5
New Hampshire	\$710	\$765	\$55
New Jersey	\$835	\$860	\$25
New Mexico	\$450	\$460	\$10
New York	\$635	\$665	\$30
North Carolina	\$531	\$538	\$7
North Dakota	\$395	\$432	\$37
Ohio	\$540	\$555	\$15
Oklahoma	\$490	\$494	\$4
Oregon	\$610	\$615	\$5
Pennsylvania	\$541	\$560	\$19
Rhode Island	\$620	\$630	\$10
South Carolina	\$536	\$535	-\$1
South Dakota	\$455	\$475	\$20
Tennessee	\$485	\$505	\$20
Texas	\$605	\$623	\$18
Utah	\$590	\$595	\$5
Vermont	\$575	\$585	\$10
Virginia	\$635	\$675	\$40
Washington	\$650	\$655	\$5
West Virginia	\$455	\$408	-\$47
Wisconsin	\$570	\$585	\$15
Wyoming	\$450	\$454	\$4

Questions in the ACS survey about assistance and public housing status were not included in ACS surveys beginning in 2003. Therefore, a direct approach to eliminating public and assisted housing units from the rental unit distribution is not available going forward. Instead, HUD identified a rent using public housing data such that when units below it are eliminated, the resultant 40th percentile rent is similar to the 40th percentile rent generated by directly eliminating public and or assisted housing from the rental unit distribution. The idea here is that units with rents less than this identified public housing rent are either subsidized, sub-standard or otherwise have rents set in non-market transactions.

To generate this "cut-off" rent, HUD used administrative data on public housing rents from the Multifamily Tenant Characteristics System, otherwise known as MTCS⁹. There are several advantages of using MTCS data to generate the cut-off' rent. First, it is available regularly and reliably within HUD. Regular availability of MTCS data allows HUD to update the cut-off rent annually and use it for processing subsequent ACSs. Second, there is enough MTCS data to generate cut-off rents for various levels of geographic aggregation and by bedroom size. Lack of unit size specific adjustments was a weakness of the pre-2000 re-benchmarking adjustments.

Cut-off rent options were generated for states and HUD defined regions¹⁰ at various rent levels (75th percentile and 80th percentile). The various cut-off rents tested are listed in tables 2 through 5.

Table 2: Regional 75th percentile Public Housing Rents by Bedroom Size (Dollars)

Region	Efficiency 75%ile Rent	One Bedroom 75%ile Rent	Two Bedroom 75%ile Rent	Three Bedroom 75%ile Rent	Four Bedroom 75%ile Rent
New England	237	280	350	426	455
New York/New Jersey	404	273	379	444	486
Mid-Atlantic	215	228	255	321	365
southeast/Caribbean	178	187	221	274	304
Midwest	203	228	255	341	375
Southwest	181	185	216	260	282
Great Plains	212	222	264	328	367
Rocky Mountains	203	223	286	394	440
Pacific/Hawaii	210	227	333	429	460
Northwest/Alaska	203	225	334	450	473

⁹ MTCS data from December, 2000 was extracted for this work.

¹⁰ HUD regions are similar to but not exactly Census Divisions.

Table 3: Regional 80th percentile Public Housing Rents by Bedroom Size (Dollars)

Region	Efficiency 80%ile Rent	One Bedroom 80%ile Rent	Two Bedroom 80%ile Rent	Three Bedroom 80%ile Rent	Four Bedroom 80%ile Rent
New England	259	304	392	471	506
New York/New Jersey	440	302	417	485	532
Mid-Atlantic	227	248	292	360	401
southeast/Caribbean	194	203	248	300	333
Midwest	218	249	287	377	408
Southwest	197	203	243	288	311
Great Plains	227	239	288	352	400
Rocky Mountains	215	241	319	432	498
Pacific/Hawaii	215	250	368	472	505
Northwest/Alaska	215	237	375	491	523

Table 4: State 75th percentile Public Housing Rents by Bedroom Size (Dollars)

State	Efficiency 75%ile Rent	One Bedroom 75%ile Rent	Two Bedroom 75%ile Rent	Three Bedroom 75%ile Rent	Four Bedroom 75%ile Rent
Alabama	176	182	204	239	290
Alaska	296	378	444	541	710
Arizona	174	181	235	396	386
Arkansas	176	183	216	248	288
California	210	234	345	433	472
Colorado	205	227	311	437	436
Connecticut	253	286	352	445	451
Delaware	213	227	251	390	373
District of Columbia	209	209	281	338	434
Florida	168	208	250	311	325
Georgia	185	187	228	272	312
Hawaii	186	224	334	434	485
Idaho	220	218	329	427	348
Illinois	200	228	244	301	314
Indiana	187	211	236	314	341
Iowa	214	248	300	401	494
Kansas	218	225	275	305	378
Kentucky	185	186	221	282	310
Louisiana	164	173	203	251	273
Maine	231	251	323	363	416
Maryland	213	230	291	385	395
Massachusetts	227	277	356	439	469
Michigan	224	234	282	349	380

State	Efficiency 75%ile Rent	One Bedroom 75%ile Rent	Two Bedroom 75%ile Rent	Three Bedroom 75%ile Rent	Four Bedroom 75%ile Rent
Minnesota	225	251	319	457	502
Mississippi	183	184	221	263	285
Missouri	198	215	253	309	334
Montana	215	199	229	310	383
Nebraska	237	214	268	407	420
Nevada	215	229	332	427	422
New Hampshire	236	281	441	519	524
New Jersey	240	286	382	458	499
New Mexico	161	198	226	288	317
New York	417	260	375	431	477
North Carolina	193	187	224	281	316
North Dakota	169	205	262	360	422
Ohio	182	212	230	324	340
Oklahoma	175	199	202	244	264
Oregon	196	218	307	431	430
Pennsylvania	217	241	273	329	369
Rhode Island	236	289	283	333	386
South Carolina	180	181	221	307	319
South Dakota	212	241	332	439	490
Tennessee	175	176	206	248	284
Texas	191	187	226	273	285
Utah	402	227	332	407	526
Vermont	243	277	361	431	497
Virginia	205	191	222	280	316
Washington	197	215	332	448	473
West Virginia	193	218	195	261	304
Wisconsin	240	241	328	429	484
Wyoming	161	219	286	320	307
Guam		261	397	368	337
Puerto Rico	62	66	40	54	63

Table 5: State 80th percentile Public Housing Rents by Bedroom Size (Dollars)

State	Efficiency 80%ile Rent	One Bedroom 80%ile Rent	Two Bedroom 80%ile Rent	Three Bedroom 80%ile Rent	Four Bedroom 80%ile Rent
Alabama	183	197	224	267	313
Alaska	296	383	478	575	728
Arizona	186	199	277	438	439
Arkansas	190	200	239	276	324
California	215	265	376	480	518
Colorado	216	248	332	474	494

State	Efficiency 80%ile Rent	One Bedroom 80%ile Rent	Two Bedroom 80%ile Rent	Three Bedroom 80%ile Rent	Four Bedroom 80%ile Rent
Connecticut	273	315	395	493	517
Delaware	226	251	296	432	395
District of Columbia	219	225	331	383	497
Florida	184	221	284	341	357
Georgia	199	202	250	297	338
Hawaii	204	235	371	478	536
Idaho	234	227	367	444	399
Illinois	215	246	274	332	348
Indiana	201	229	278	348	377
Iowa	231	266	331	432	522
Kansas	235	245	298	332	400
Kentucky	199	204	248	306	338
Louisiana	173	189	232	273	296
Maine	250	275	355	392	449
Maryland	230	257	323	429	441
Massachusetts	248	298	398	487	528
Michigan	243	256	316	378	405
Minnesota	250	275	365	507	550
Mississippi	209	201	248	287	311
Missouri	214	230	272	329	354
Montana	219	217	256	332	419
Nebraska	248	229	295	446	433
Nevada	221	248	371	457	450
New Hampshire	256	309	474	558	574
New Jersey	263	312	435	516	558
New Mexico	189	215	259	323	347
New York	455	284	405	462	509
North Carolina	205	202	264	314	344
North Dakota	184	223	296	402	522
Ohio	204	229	268	359	375
Oklahoma	195	213	231	277	291
Oregon	208	234	340	472	472
Pennsylvania	235	261	303	368	402
Rhode Island	259	317	329	369	430
South Carolina	195	195	249	339	350
South Dakota	228	269	345	477	519
Tennessee	192	194	237	283	314
Texas	204	205	251	301	319
Utah	402	243	371	449	552
Vermont	256	302	397	436	528
Virginia	215	209	262	309	350
Washington	215	227	377	491	524
West Virginia	213	232	225	283	328
Wisconsin	255	260	348	442	516

State	Efficiency 80%ile Rent	One Bedroom 80%ile Rent	Two Bedroom 80%ile Rent	Three Bedroom 80%ile Rent	Four Bedroom 80%ile Rent
Wyoming	220	220	311	325	341
Guam		298	431	397	368
Puerto Rico	101	79	55	73	80

Cut-off rents generated at the state level exhibited more anomalies than did cut-off rents generated at the HUD regional level. An example of an anomaly is an efficiency rent higher than the one bedroom rent. Multiple states showed anomalies, while only the New York/New Jersey region displayed a rent anomaly in the regional specification – and then only for efficiencies. As can be seen in the next table, the differences in impact between the various specifications of cut-off rents were not large. The downside to using the less anomalous cut-off rents calculated over HUD regions was small.

Table 6 shows the rent differentials obtained when 40th percentile 2-bedroom rents were calculated after eliminating rents from the bottom of the rental unit distribution based on the cut-off rents listed in tables 2 through 5.

Table 6: ACS 2000 PUMS 2-bedroom rent differentials using the State and Regional 75th and 80th percentile cut-off rents ¹¹

State	Original Rent Differential	Rent Differential using the State level 75%ile Cut- Off Rent	Rent Differential using the State level 80%ile Cut- Off Rent	Rent Differential using the Regional level 75%ile Cut-Off Rent	Rent Differential using the Regional level 80%ile Cut-Off Rent
Alabama	36	13	13	13	13
Alaska	15	15	20	15	15
Arizona	5	5	5	5	5
Arkansas	30	20	30	20	30
California	15	10	15	10	15
Colorado	0	0	0	0	0
Connecticut	25	25	25	25	25
Delaware	0	0	0	0	0
District of Columbia	35	35	35	35	35
Florida	12	10	10	10	10
Georgia	25	11	15	11	15
Hawaii	15	0	0	0	0
Idaho	5	15	15	15	45
Illinois	11	11	11	11	11
Indiana	17	2	17	2	17
Iowa	5	8	28	8	8
Kansas	35	35	35	35	35

¹¹ Guam and Puerto Rico could not be evaluated because there is no PUMS data for these territories.

State	Original Rent Differential	Rent Differential using the State level 75%ile Cut-Off Rent	Rent Differential using the State level 80%ile Cut-Off Rent	Rent Differential using the Regional level 75%ile Cut-Off Rent	Rent Differential using the Regional level 80%ile Cut-Off Rent
Kentucky	15	7	7	7	7
Louisiana	15	15	15	15	15
Maine	18	18	18	18	25
Maryland	30	10	10	10	10
Massachusetts	15	30	40	30	40
Michigan	5	5	5	0	5
Minnesota	30	30	30	30	30
Mississippi	0	0	0	0	0
Missouri	15	10	10	10	10
Montana	20	10	10	10	20
Nebraska	31	21	26	21	26
Nevada	5	0	0	0	0
New Hampshire	55	55	55	35	35
New Jersey	25	20	20	20	20
New Mexico	10	10	10	10	10
New York	30	25	30	25	30
North Carolina	7	14	20	14	20
North Dakota	37	30	35	30	40
Ohio	15	10	15	10	15
Oklahoma	4	4	14	14	14
Oregon	5	5	5	5	5
Pennsylvania	19	14	19	14	14
Rhode Island	10	10	10	10	10
South Carolina	-1	0	0	0	0
South Dakota	20	25	30	25	25
Tennessee	20	13	13	13	13
Texas	18	10	10	10	10
Utah	5	55	55	40	55
Vermont	10	10	10	10	10
Virginia	40	24	24	24	24
Washington	5	5	5	5	5
West Virginia	-47	0	0	0	0
Wisconsin	15	15	15	11	15
Wyoming	4	0	0	0	0

Ultimately, the regional 75th percentile cut-off rent was selected to adjust the rental unit distribution. This choice was conservative, but as can be seen above, most of the cut-off rent specifications had similar impacts on the final rent. The next section uses AHS data to measure the impact of the cut-off rent against the impact of directly eliminating public and assisted housing from the rental unit distribution.

Using AHS housing data to verify the HUD Cut-off Rent Adjustment

Because of the richness of its content, AHS data can be used as a resource to measure the impact of eliminating poor quality and public and assisted housing from the rental unit distribution on computed rents. However, because of its small size, these tests can only be done for areas aggregated to the Census regional level or above. As mentioned earlier, the AHS has 39 questions relating to the physical conditions of a unit, 25 questions relating to the neighborhood and environment and 8 additional questions that relate to other livability issues along with multiple questions on housing assistance.

Quality Adjustments in the 2000 ACS PUMS and AHS¹² at the Census Region Level:

The impact of eliminating low quality units from the rental unit distribution can be computed using AHS data with all units and with units that meet the “ZADEQ” standard in the AHS.¹³ “ZADEQ” is an AHS code designed to reflect HUD housing quality standards. Table 7 shows the impact of the quality adjustment using the Decennial Census quality standard (questions 29 and 30) and the quality adjustment using the AHS quality standard, ZADEQ. It also shows the recent mover adjustment for both data sets. The recent mover bonus is the rent differential produced when all units whose occupants moved into the unit more than 1 year ago are eliminated from the rental unit distribution. By regulation, recent mover rents are the standard for computing FMRs.

Table 7: ACS and AHS 2 Bedroom Standard Quality and Recent Mover Rent Differentials for Census Regions

	1. ACS 2000 PUMS 40%ile Unadjusted Rent	2. ACS 2000 PUMS 40%ile Standard Quality Rent	3. ACS 2000 PUMS 40%ile Recent Mover Rent	4. ACS Quality Adjustment Rent Differential	5. ACS Recent Mover Rent Differential	6. AHS 40%ile Unadjusted Rent	7. AHS ZADEQ Adjusted Rent	8. AHS ZADEQ Adjusted Recent Mover Rent	9. AHS ZADEQ Adjustment Rent Differential	10. AHS Recent Mover Rent Differential
Northeast	\$625	\$625	\$655	0.0%	4.8%	\$600	\$601	\$627	0.2%	4.5%
Midwest	\$520	\$519	\$537	-0.2%	3.3%	\$514	\$511	\$531	-0.6%	3.3%
South	\$525	\$525	\$565	0.0%	7.6%	\$513	\$522	\$548	1.8%	6.8%
West	\$665	\$665	\$670	0.0%	0.8%	\$646	\$643	\$643	-0.5%	-0.5%

As can be seen in Table 7, rent changes due to applying the quality adjustment and the recent mover adjustment to both the ACS PUMS data and the AHS data are very similar at the Census Region level. For these small data sources, the quality adjustment is almost nil in both the ACS PUMS and the AHS (columns 4 and 9). Additionally, for both sources, the recent mover bonus is very similar for each region (columns 5 and 10).

¹² National AHS data from 1999 and 2001 were used for these calculations.

¹³ A unit is considered adequate (i.e. ZADEQ = 1) when it is neither severely nor moderately inadequate. By AHS standards, an adequate unit has: kitchen and plumbing facilities, limited equipment and toilet breakdowns, electricity and wall sockets in every room and limited other physical deficiencies. Full details on AHS unit quality can be found in the AHS Codebook at: http://www.huduser.org/Datasets/ahs/AHS_Codebook.pdf

Assisted and Public Housing Adjustments in the ACS and AHS at the Census Region Level:

Eliminating assisted and/or public housing has an additional upward impact on rents. Table 8 shows the impact on recent mover rents of eliminating either all rents below the cut-off rent (ACS process) or all units identified in the AHS as being public housing or having a housing subsidy.¹⁴

Table 8: ACS PUMS and AHS Assisted/Public Housing Rent Differentials

	1. ACS 2000 PUMS 40%ile Recent Mover Rent	2. ACS 2000 PUMS Cut-off Rent Adjusted Rent (Regional 75%ile Cut-off Rent)	3. ACS Cut-off Rent Differential	4. ACS2000 PUMS Total Adjustments (Recent Mover, Standard Quality, and Cut-off Rent)	5. AHS ZADEQ Adjusted Recent Mover Rent	6. AHS ZADEQ Public and Assisted Housing Adjusted Rent	7. AHS Public and Assisted Housing Adjusted Rent	8. AHS Total Adjustments (Recent Mover, ZADEQ, and Public and Assisted Housing)
Northeast	\$655	\$680	3.80%	8.8%	\$627	\$646	3.00%	7.7%
Midwest	\$537	\$550	2.40%	5.8%	\$531	\$541	1.90%	5.3%
South	\$565	\$575	1.80%	9.5%	\$548	\$559	2.00%	9%
West	\$670	\$680	1.50%	2.3%	\$643	\$646	0.50%	0%

As can be seen in Table 8, the impact on rents of the HUD generated cut-off rent adjustment and eliminating public and assisted housing directly, as can be done with AHS data have very similar results (Columns 3 and 7). Columns 4 and 8 show the effect of all FMR adjustments (quality, recent mover, sub-standard and assisted housing) when applied to both data sources. These, too, are very similar between the two sources of rental information.

The next section shows the impact of all the FMR adjustments made during the latest implementation using full Decennial Census data (2000 data).

Adjustments to FMRs generated using adjusted Decennial Census Data:

This last table, Table 9, shows the impact of the quality adjustment and the public/assisted housing adjustment at the region level on actual rents using full Decennial Census 2000 data. As can be seen below, the actual adjustments made to FMRs during implementation of 2000 Decennial Census data were larger for most regions than the original tests would have predicted. As can be seen in table 9, the impact of eliminating units without full kitchens and full plumbing had a larger impact on Decennial Census data than was predicted by ACS PUMS data. The recent mover and sub-standard and

¹⁴ Five criteria from the AHS were used to identify public and/or assisted housing. If the household reports their income to a PHA or landlord, if the government subsidizes the rent, if the household receives a voucher to help pay rent, if the family applied and got into public housing or if the building is owned by a PHA then the unit was considered subsidized or to be public housing.

assisted housing adjustments, though were very similar to those predicted by either the ACS PUMS or the AHS, making the total adjustment using Decennial Census data somewhat larger than was predicted. State level adjustments are available in Appendix 1.

Table 9: Decennial Census 2000 Region Level 2 Bedroom Successive Rent Differentials

Region	Quality Adjustment	Recent Mover Adjustment	Public and Assisted Housing Adjustment (Cut-off Regional 75% Rent)	Full Adjustment
Northeast	2.3	3.9	3.6	10.2
Midwest	2.0	3.1	2.3	7.6
South	5.0	5.3	2.4	13.3
West	2.2	.9	1.9	5.1

Annual Adjustments using the Cut-Off rent

Cut-off rents are re-computed every year based on current administrative public housing rent data (now known as PIC). These new cut-off rents are submitted to Census and new ACS unit rent distributions are adjusted using these updated cut-off rents. No current cut-off rent is allowed to be lower than any historical cut-off rent – that is, cut-off rents are “held harmless”.

Appendix 1
 Percentage Changes in Rents due to Quality, Recent Mover, and Public and Assisted
 Housing Adjustments in Decennial Census Data

State	Percentage Change in Rents due to the Standard Quality Adjustment	Percentage Change in Rents due to the Recent Mover Adjustment	Percentage Change in Rents due to the Public and Assisted Housing Adjustment	Total Percentage Change in Rents due to all Adjustments ¹⁵
Alabama	7.4	6.6	4.4	19.5
Alaska	5.0	2.1	1.1	8.4
Arizona	2.2	4.3	1.7	8.4
Arkansas	6.1	3.4	2.3	12.2
California	2.0	3.0	1.5	6.6
Colorado	1.3	5.6	1.5	8.4
Connecticut	1.7	4.3	1.9	8.0
Delaware	1.5	3.4	1.3	6.2
District of Columbia	1.6	12.8	7.0	22.7
Florida	2.0	4.2	0.9	7.3
Georgia	4.1	7.8	2.1	14.5
Hawaii	10.3	5.8	1.7	18.7
Idaho	3.5	2.9	4.7	11.5
Illinois	2.0	4.1	2.5	8.8
Indiana	2.2	4.7	1.9	9.1
Iowa	2.4	4.0	3.1	9.8
Kansas	2.8	3.0	2.5	8.5
Kentucky	6.3	4.8	3.9	15.7
Louisiana	6.9	6.2	3.0	17.0
Maine	3.8	5.1	5.4	15.1
Maryland	1.6	5.6	1.7	9.1
Massachusetts	2.1	9.3	4.5	16.7
Michigan	2.1	4.7	1.4	8.4
Minnesota	1.8	4.1	3.4	9.5
Mississippi	9.0	7.7	4.9	23.1
Missouri	2.9	2.6	2.7	8.4
Montana	4.5	6.4	3.6	15.3
Nebraska	1.9	3.2	2.7	8.0
Nevada	0.7	2.5	1.0	4.2
New Hampshire	1.3	4.3	1.8	7.5
New Jersey	1.5	6.9	1.6	10.2
New Mexico	5.9	3.2	3.1	12.6
New York	2.2	2.5	5.5	10.4
North Carolina	4.5	7.6	1.7	14.3
North Dakota	2.3	4.0	5.8	12.5

¹⁵ May not total due to rounding.

State	Percentage Change in Rents due to the Standard Quality Adjustment	Percentage Change in Rents due to the Recent Mover Adjustment	Percentage Change in Rents due to the Public and Assisted Housing Adjustment	Total Percentage Change in Rents due to all Adjustments ¹⁵
Ohio	1.8	4.0	2.5	8.5
Oklahoma	5.4	3.0	2.3	11.0
Oregon	1.0	2.5	1.3	5.0
Pennsylvania	3.0	4.1	2.7	10.2
Rhode Island	2.2	3.3	4.0	9.8
South Carolina	6.0	7.6	2.2	16.5
South Dakota	4.4	5.2	5.8	16.3
Tennessee	4.5	5.4	2.7	13.1
Texas	3.2	4.4	1.8	9.6
Utah	1.4	2.0	2.3	5.8
Vermont	2.6	5.6	3.4	12.1
Virginia	3.2	6.5	2.2	12.3
Washington	1.8	2.1	1.9	5.8
West Virginia	10.5	4.5	5.1	21.3
Wisconsin	1.3	2.1	1.3	4.8
Wyoming	3.5	2.2	3.5	9.5
Guam	21.2	-0.7	2.6	23.5
Puerto Rico	102.5	13.6	17.8	170.8
Virgin Islands	15.4	15.0	4.7	39.0