Market Absorption of Apartments

ANNUAL 1989 ABSORPTIONS (Apartments Completed in 1988)

H-130-89-5 Issued May 1990

U.S. Department of Commerce BUREAU OF THE CENSUS

U.S. Department of Housing and Urban Development

SUMMARY

During 1988, completions of privately financed, nonsubsidized, unfurnished rental apartments in buildings of five units or more totaled 284,500 units. This represents a decrease of about 18 percent (±5 percent) from the 345,600 units completed in 1987 and is the lowest total of this type of unit completed since 1983. Sixty-six percent of these units were rented (absorbed) within the first 3 months of completion, 84 percent within 6 months, 91 percent within 9 months, and 95 percent were rented within a year of completion (table 1).

Most (98 percent) of the unfurnished apartments built in 1988 are inside metropolitan statistical areas with 43 percent in central cities and 55 percent in suburban areas.

All statistics in this report are limited to apartments in newly-constructed buildings with five units or more. Tables 1 through 4 are restricted to privately financed, nonsubsidized, unfurnished rental apartments. Table 5 is restricted to privately financed, nonsubsidized, cooperative and condominium apartments. Table 6 is restricted to privately financed, nonsubsidized condominium apartments. Table 7 is restricted to privately financed, nonsubsidized, furnished, rental apartments. Table 8 is a summary table which includes all newly-constructed, privately financed apartments in buildings with five units

or more. Absorption rates are based on the first time an apartment offered for rent is rented after completion, or the first time a cooperative or condominium apartment is sold after completion. If apartments intended to be sold as cooperative or condominium units are offered by the builder or building owner for rent, they are counted as rental apartments.

The statistics in this report are based on a sample survey and consequently they are subject to sampling variability.1 Estimates derived from different samples would differ from one another. The standard error of a survey estimate is a measure of the variation among the estimates from all possible samples. Estimates of standard errors can be calculated by using tables A and B. They allow us to construct interval estimates with prescribed confidence that the interval includes the average of the estimates from all possible samples. For all the change statements made in this report, 90 percent confidence intervals for statistical comparisons can be constructed by using the 90 percent deviate shown in parentheses after the change; however, when a 90 percent confidence interval contains zero, we are uncertain whether or not the change has occurred. In addition, some of the statistical findings which are not part of the tables are also provided with a 90 percent deviate.

Table 1. Absorption Rates for Unfurnished Apartments Completed, by Geographic Area: 1988

(Privately financed, nonsubsidized, unfurnished, rental apartments in buildings with five units or more. Data may not add to total due to rounding.)

	Total		Percent absorbed within—			
Geographic areas	Number	Percent	3 months	6 months	9 months	12 months
United States, total. Inside MSAs. In central city. Not in central city. Outside MSAs	284,500 277,500 121,400 156,100 7,000	100 98 43 55	66 65 64 67 87	84 84 82 84	91 91 91 92 96	95 95 95 95 97
Northeast	8,700 60,400 91,700 123,800	3 21 32 44	52 73 58 69	73 86 79 87	88 91 90 93	93 94 95 95

¹See Reliability of Estimates on page 3.

About 3 percent of all new unfurnished rental apartments completed in the United States in 1988 were built in the Northeast, and they were 52 percent absorbed in the first three months on the market. Approximately 21 percent were built in the Midwest and had a three-month absorption rate of about 73 percent; about 32 percent were built in the South with a 58 percent three-month absorption rate; and the 44 percent built in the West were about 69 percent absorbed in three months.

As might be expected, lower-rent units rented faster than higher-rent ones; the 38,900 units asking less than \$400 were absorbed at a three-month rate of about 78 percent while the 245,600 units renting for \$400 or more were about 64 percent absorbed within their first quarter on the market (table 2).

Units renting for \$550 or more accounted for 52 percent of all unfurnished apartments completed in 1988. As in 1987, median asking rents for new apartments completed in 1988 in the Northeast and the West were higher than in the Midwest and South. The median was \$512 for the Midwest, and \$507 for the South, but for the Northeast and the West it was \$550 or more.

About 52 percent of all new unfurnished apartments were built with two bedrooms and had a median asking rent of \$593. Thirty-nine percent were built with one bedroom with a \$497 median asking rent. Units with no bedrooms (efficiencies) and those with three bedrooms or more accounted for 4 and 5 percent respectively. Although 58 percent of efficiency apartments rented for \$550 or more, about 23 percent rented for less than \$350. The median rent for the three-or-more bedroom apartments was \$650 or more (table 3).

Seventeen percent (±11 percent) fewer cooperatives and condominiums were completed in 1988 (76,200 units) than in 1987 (92,300 units). As in 1987, about two-thirds of all such apartments built in 1988 were built with two bedrooms. Seventeen percent were built with one bedroom and 12 percent with three or more bedrooms. Only one percent were efficiencies (table 5).

The proportion of all cooperatives and condominiums built in the Northeast increased 10 (± 6) percentage points from 35 percent of the total in 1987 to 45 percent in 1988. Eighteen percent of all condos and coops were built in the West, 31 percent in the South, and 7 percent in the Midwest. Sixty-four percent of all cooperative and condominium apartments built in the U.S. in 1988 were absorbed (sold) in three months versus a 3-month absorption rate of 74 percent for those completed in 1987. The 3-month absorption rate was 50 percent in the Northeast (down 30 (± 10) percentage points from 1987), 70 percent in the Midwest, 73 percent in the South, and 83 percent in the West.

The median asking price for all condominium apartments built in 1988 was \$116,400, not significantly higher than the \$114,900 median asking price for similar units completed in 1987. Throughout the year, the higher

priced condominiums, those with an asking price of \$150,000 or more, were sold at a slower rate than those asking less than \$150,000 (table 6).

Completions of apartments in all residential buildings with five units or more decreased by about 85,600 (±25,300) units from 474,200 in 1987 to 388,600 in 1988 (table 8). Seventy-three percent were nonsubsidized, unfurnished rental apartments, 20 percent were cooperatives and condominiums, and about 1 percent were furnished units. About 4 percent of all apartments built in 1988 were in Federally subsidized properties. These units are built under the following programs of the Department of Housing and Urban Development: Low Income Housing Assistance (Section 8), Senior Citizens Housing Direct Loans (Section 202), and all units in buildings containing apartments in the FHA rent supplement program. An additional 2 percent of all newly constructed units include time-sharing units, continuing care retirement units, and turnkey units (privately built for and sold to local public housing authorities subsequent to completion). The data on privately financed units include privately owned housing subsidized by State and local governments.

SAMPLE DESIGN

The Survey of Market Absorption (SOMA) is designed to provide data concerning the rate at which unfurnished, nonsubsidized, privately financed units in buildings with five or more units are rented or sold (absorbed). In addition, data on characteristics of the units, such as rent or price and number of bedrooms, are collected.

The buildings selected for SOMA are those included in the Census Bureau's Survey of Construction (SOC).² For SOC, the United States is first divided into primary sampling units (PSU's) which are sampled on the basis of population and permits. Next, a sample of permit-issuing places is selected within each sample PSU. Finally, all buildings with five units or more within sampled places, as well as a subsample of buildings with one to four units, are selected.

Each quarter, a sample of buildings with five units or more in the SOC sample reported as completed during that quarter come into sample for SOMA. Buildings completed in nonpermit-issuing areas are excluded from consideration. Information on the proportion of units absorbed 3, 6, 9, and 12 months after completion is obtained for units in buildings selected in a given quarter in each of the next four quarters.

ESTIMATION

Unbiased quarterly estimates are formed by multiplying the counts for each building by its base weight (the inverse of its probability of selection) and then summing

²See the January issue of "Housing Starts," Construction Reports, Series C20, for details of this survey.

over all buildings. The final estimate is then obtained by multiplying the unbiased estimate by the following ratio estimate factor:

total units in 5 + buildings in permit-issuing areas as estimated by the SOC for that quarter

total units in 5 + buildings as estimated by SOMA for that quarter

This procedure produces estimates of the units completed in a given quarter which are consistent with unpublished figures from the SOC and also reduces, to some extent, the sampling variability of the estimates of totals. Annual estimates are obtained by computing a weighted average of the four quarterly estimates.

It is assumed that the absorption rates and other characteristics of units not included in the interviewed group or not accounted for are identical to rates for units where data were obtained. The noninterviewed and not-accounted-for cases constitute less than 2 percent of the sample housing units in this survey.

RELIABILITY OF THE ESTIMATES

There are two types of possible errors associated with data from sample surveys: sampling and nonsampling errors. The following is a description of the sampling and nonsampling errors associated with SOMA.

Nonsampling Errors

In general, nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample; definitional difficulties; differences in interpretation of questions; inability or unwillingness of respondents to provide correct information; and errors made in processing the data. These nonsampling errors also occur in complete censuses. Although no direct measurements of the biases have been obtained, it is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency.

Sampling Errors

The particular sample used for this survey is one of a large number of possible samples of the same size that could have been selected using the same sample design. Even if the same questionnaires, instructions, and interviewers were used, estimates from each of the different samples would differ from each other. The deviation of a sample estimate from the average of all possible samples is defined as the sampling error. The standard error of a survey estimate attempts to provide a measure of this variation among the estimates from the possible

samples and, thus, is a measure of the precision with which an estimate from a sample approximates the average result of all possible samples.

As calculated for this survey, the standard error also partially measures the variation in the estimates due to response and interviewer errors (nonsampling errors), but it does not measure, as such, any systematic biases in the data. Therefore, the accuracy of the estimates depends on both the sampling and nonsampling error measured by the standard error, biases, and some additional nonsampling errors not measured by the standard error. The sample estimate and its estimated standard error enable the user to construct confidence intervals, ranges that would include the average result of all possible samples with a known probability. For example, if all possible samples were selected, each of these were surveyed under essentially the same general conditions, and an estimate and its estimated standard error were calculated from each sample, then:

- Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate (i.e., 68-percent confidence interval) would include the average result of all possible samples.
- Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate (i.e., 90-percent confidence interval) would include the average result of all possible samples.
- Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate (i.e., 95-percent confidence interval) would include the average result of all possible samples.

For very small estimates, the lower limit of the confidence level may be negative. In this case, a better approximation to the true interval estimate can be achieved by restricting the interval estimate to positive values, that is, by changing the lower limit of the interval estimate to zero.

The average result of all possible samples may be contained in any particular computed interval. However, for a particular sample, one can say with specified confidence that the average result of all possible samples is included in the constructed interval.

The conclusions stated in this report are considered significant at the 90-percent confidence level.

The reliability of an estimated absorption rate (i.e., a percentage) computed by using sample data for both the numerator and denominator depends upon both the size of the rate and the size of the total on which the rate is based. Estimated rates of this kind are relatively more reliable than the corresponding estimates of the numerators of the rates, particularly if the rates are 50 percent or more.

The figures presented in tables A and B are approximations to the standard errors of various estimates shown in the report. Table A presents standard errors for estimated totals, and table B presents standard errors of estimated percents. In order to derive standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, the tables of standard errors provide an indication of the order of magnitude of the standard errors rather than the precise standard error for any specific item. Standard errors for values not shown in tables A or B can be obtained by linear interpolation.

ILLUSTRATIVE USE OF STANDARD ERROR TABLES

Table 2 of this report shows that 28,300 units completed in 1988 rented for \$400 to \$449. Table A shows the standard error of an estimate of this size to be approximately 2,865. To obtain a 90 percent confidence interval, multiply 2,865 by 1.6 and add and subtract the result from 28,300 yielding limits of 23,716 and 32,884. The average estimate of units completed in 1988 renting for \$400 to \$449 may or may not be included in this computed interval, but one can say that the average is included in the constructed interval with a specified confidence of 90 percent.

Table 2 also shows that the rate of absorption after 3 months for these units is 67 percent. Table B shows the standard error on a 67 percent rate on a base of 28,300 to be approximately 4.7 percent. Multiply 4.7 by 1.6

(yielding 7.5) and add and subtract the result from 67. The 90 percent confidence interval for the absorption rate of 67 percent is from 59.5 to 74.5.

Table 2 also shows that the median asking rent in the Midwest for unfurnished rental apartments was \$512. The standard error of this median is about \$18. This estimate is obtained by using the following approximation:

(Standard error of median) = $\sigma 50\%$

[length of interval containing the sample median]

[estimated proportion of the base falling within the interval containing the sample median]

where σ 50% is the estimated standard error of the 50 percent characteristics on the base of the median. In this example, the estimated median, \$512, lies between \$500 and \$549. The length of the interval is \$50. The estimated proportion of the base (total units completed) of 60,400 falling within this rent class is about 10 percent. Table B shows the estimated error of a 50 percent characteristic with the base of 60,400 to be about 3.5 percent. Hence, the standard error of the sample median from the above formula is:

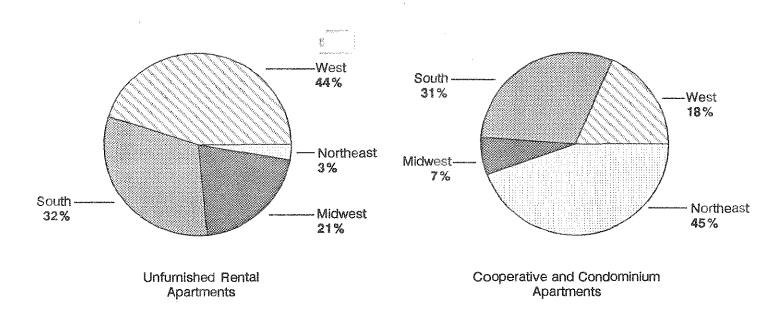
$$3.5 \times 50 = $18$$

Therefore, 1.6 standard errors equals \$29. This means that an approximate 90-percent confidence interval for the median asking rent of \$512 would be between \$483 and \$541 (\$572 plus or minus \$29).

The revised SOMA questionnaire for apartments completed in 1989 includes higher rent ranges and will allow calculations of medians for geographic areas (table 2) and bedroom subgroups (table 3) in the 1990 annual report.

Figure 1.

Percent Distribution of New Unfurnished Rental and New Cooperative and Condominium Units Completed, by Region: 1988



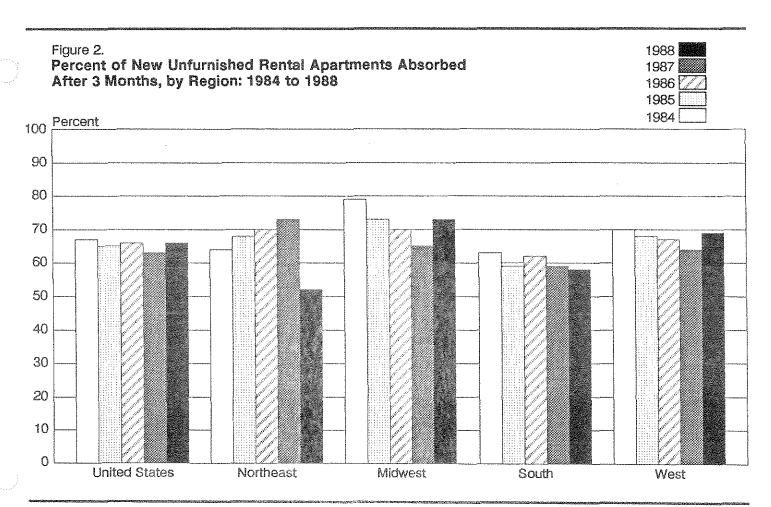


Table 2. Absorption Rates for Unfurnished Apartments Completed, by Rent, for the United States and Regions: 1988

(Privately financed, nonsubsidized, unfurnished, rental apartments in buildings with five units or more. Data regarding asking rent are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

h	Total	SEA COLOR OF THE C	Percent absorbed within—			
Item	Number	Percent	3 months	6 months	9 months	12 month
Total	284,500	100	66	84	91	9!
Less than \$350	16,800	6	83	94	98	99
\$350 to \$399	22,100	8	74	89	93	9.
\$400 to \$449	28,300	10	67	85	93	9
\$450 to \$499	36,600	13	67	84	91	9
\$500 to \$549	31,900	11	64	84	92	9
\$550 or more	148,800	52	63	82	90	9
Median asking rent	\$550+	(X)	(X)	(X)	(X)	(×
Northeast	8,700	100	52	73	88	9
.ess than \$350	600	7	79	79	79	7
\$350 to \$399	400	5	(Z)	(Z)	21	10
\$400 to \$449	100	1	33	92	100	10
450 to \$499	100	1	84	97	98	9
5500 to \$549	600	7	27	47	98	1C
\$550 or more	6,900	79	55	78	91	g
Median asking rent	\$550+	(X)	(×)	(X)	(×)	()
Midwest	60,400	100	73	86	91	9
ess than \$350	6,800	11	92	97	99	10
350 to \$399	7,000	12	89	97	98	9
400 to \$449	6,100	10	77	92	96	9
450 to \$499	8,700	14	76	90	95	:
5500 to \$549	6,300	10	64	83	89	4
550 or more	25,500	42	64	77	85	9
Median asking rent	\$512	(X)	(X)	(X)	(X)	(.
South	91,700	100	58	79	90	9
.ess than \$350	6,700	7	74	92	98	10
3350 to \$399	8,400	9	60	84	90	ę
3400 to \$449	12,900	14	62	80	91	9
450 to \$499	15,800	17	56	76	88	9
5500 to \$549	13,700	15	57	80	90	ţ
5550 or more	34,200	37	56	77	88	ş
Median asking rent	\$507	(X)	(X)	(X)	(X)	()
West	123,800	100	69	87	93	•
.ess than \$350	2,700	2	84	95	98	- 5
\$350 to \$399	6,200	5	82	93	97	9
\$400 to \$449	9,300	8	69	87	94	ę
\$450 to \$499	12,000	10	75	89	93	ç
\$500 to \$549	11,400	9	73	91	97	
\$550 or more	82,200	66	66	85	92	ç
Median asking rent	\$550+	(X)	(X)	(X)	(X)	C.

X Not applicable. Z Indicates fewer than fifty units or less than one percent.

Table 3. Absorption Rates for Unfurnished Apartments Completed, by Number of Bedrooms and Rent, for the United States: 1988

(Privately financed, nonsubsidized, unfurnished, rental apartments in buildings with five units or more. Data regarding number of bedrooms and asking rent are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

John grann	Total		Percent absorbed within—			
ltem	Number	Percent	3 months	6 months	9 months	12 month
Total	284,500	100	66	84	91	9
Less than \$350	16,800	6	83	94	98	9
350 to \$399	22,100	8	74	89 (93	9
\$400 to \$449	28,300	10	67	85	93	9
\$450 to \$499	36,600	13	67	84	91	9
\$500 to \$549	31,900	71	64	84	92	9
3550 or more	148,800	52	63	82	90	. 9
Median asking rent	\$5 50 +	(X)	(X)	(X)	(X)	(>
No Bedroom	11,700	100	. 60	77	89	S
.ess than \$350	2,700	23	68	90	98	Ę
350 to \$399	600	5	79	93	97	9
400 to \$449	600	5	71	87	93	10
6450 to \$499	200	2	54	79	91	9
500 to \$549	800	7	53	80	80	9
5550 or more	6,700	58	55	70	86	8
Vledian asking rent	\$550+	(X)	(X)	(X)	(X)	()
1 Bedroom	112,300	100	67	83	90	
ess than \$350	9,000	8	84	94	99	10
350 to \$399	11,500	10	71	87	93	Ş
400 to \$449	19,500	17	65	83	93	g
450 to \$499	17,100	15	65	84	91	ę
500 to \$549	9,400	8	73	88	94	ξ
550 or more	45,700	41	63	79	86	8
Median asking rent	\$497	(X)	(X)	(X)	(X)	()
2 Bedrooms	147,800	100	66	84	92	. 6
ess than \$350	4,800	3	91	99	100	10
350 to \$399	9,900	7	77	90	93	9
400 to \$449	7,800	5	74	89	94	9
450 to \$499	18,500	13	69	83	90	۶
5500 to \$549	20,800	14	60	82	92	ę
550 to \$649	27,300	18	.65	84	93	٤
650 or more	58,500	40	62	83	91	9
Median asking rent	\$593	(X)	(X)	(X)	(X)	()
3 Bedrooms or more	12,800	100	68	88	95	ę
ess than \$350	300	3	58	58	58	Ę
350 to \$399	100	1	96	100	100	· 10
3400 to \$449	300	3	74	94	99	9
450 to \$499	800	6	73	98	99	10
5500 to \$549	900	7	58	87	93	ę
550 to \$649	2,200	17	63	84	96	ç
\$650 or more	8,300	65	69	89	96	g
Median asking rent	\$650+	(X)	(X)	(X)	(X)	Ö

X Not applicable.

Table 4. Absorption Rates for Unfurnished Apartments Completed, by Presence of Selected Features and Utilities, for the United States: 1988

(Privately financed, nonsubsidized, unfurnished, rental apartments in buildings with five units or more. Data regarding features and utilities are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding.)

The same of the sa	Total		ak material principal di serie de la companya de l	Percent absorbed within—			
Item	Number	Percent	3 months	6 months	9 months	12 months	
Total	284,500	100	66	84	91	95	
SELECTED FEATURES	ment and a contract of contrac		- Carefare	1			
Swimming pool Available Included in rent At extra cost. Not available	197,000	69	63	82	91	95	
	2,200	1	66	85	92	95	
	85,400	30	72	87	93	96	
Parking Available Included in rent	274,600	97	66	83	91	95	
	5,300	2	74	91	95	96	
	4,600	2	68	85	92	96	
Air-conditioning Available	240,600	85	65	83	91	95	
	43,900	15	72	87	92	95	
Dishwasher Available Not available	260,000	90	66	84	92	95	
	24,600	10	64	80	87	90	
UTILITIES				 			
Electricity Included in rent Not included in rent	15,900	6	44	55	62	67	
	268,600	94	67	85	93	97	
Gas Available Included in rent At extra cost. Not available	29,200	10	64	77	83	87	
	112,700	40	68	87	94	97	
	142,600	50	65	83	91	95	

Table 5. Absorption Rates for Cooperative and Condominium Apartments Completed, by Number of Bedrooms and Regions: 1988

(Privately financed, nonsubsidized apartments in buildings with five units or more. Data regarding number of bedrooms are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding.)

hb	Total		Percent absorbed within			
Item	Number	Percent	3 months	6 months	9 months	12 months
Total	76,200	100	64	76	83	86
BEDROOMS						
No bedroom 1 bedroom 2 bedrooms 3 bedrooms or more	900 12,700 53,300 9,300	1 17 70 12	48 61 66 61	73 71 78 72	86 76 85 78	89 79 88 84
REGION						
Northeast	34,200 5,200 23,400 13,400	45 7 31 18	50 70 73 83	64 81 82 94	72 89 88 97	77 93 91 98

Table 6. Absorption Rates for Condominium Apartments Completed, by Asking Price and Number of Bedrooms, for the United States: 1988

(Privately financed, nonsubsidized apartments in buildings with five units or more. Data regarding number of bedrooms and asking price are collected at the initial interview, i.e., 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

£4	Total	1	Percent absorbed within—				
ltem	Number	Percent	3 months	6 months	9 months	12 months	
Total	74,000	100	66	78	82	86	
PRICE CLASS							
Less than \$50,000 \$50,000 to \$74,999 \$75,000 to \$99,999 \$100,000 to \$149,999 \$150,000 to \$199,999 \$200,000 or more Median asking price	2,900 12,700 16,100 16,100 12,500 13,700 \$116,400	4 17 22 22 22 17 19 (X)	67 73 68 75 53 56 (X)	79 85 80 84 64 75 (X)	87 90 85 88 68 78 (X)	90 94 87 91 74 81 (X)	
BEDROOMS							
No bedroom	800 12,400 51,700 9,100	1 17 7 0 12	49 62 67 63	73 72 80 74	86 76 85 78	89 80 88 83	

X Not applicable.

Table 7. Absorption Rates for Furnished Apartments Completed, by Rent and Number of Bedrooms, for the United States: 1988

(Privately financed, nonsubsidized, furnished, rental apartments in buildings with five units or more. Data regarding number of bedrooms and asking rent are collected at the initial interview, i.e, 3 months following completion. Data may not add to total due to rounding. Medians are computed using unrounded data.)

h	Total		Percent absorbed within—			
Item	Number	Percent	3 months	6 months	9 months	12 months
Total	4,300	100	92	96	99	100
RENT CLASS			мериализана			
Less than \$350 \$350 to \$399 \$400 to \$449 \$450 to \$499 \$500 to \$549 \$550 or more. Median asking rent.	300 100 300 300 (Z) 3,300 \$550 +	7 2 7 6 (Z) 77 (X)	92 53 59 84 (Z) 97 (X)	99 88 71 91 (Z) 99 (X)	99 100 91 98 (Z) 100 (X)	100 100 100 100 (Z) 100 (X)
BEDROOMS	}		ner de constitue			
No bedroom	700 1,300 1,400 800	18 31 32 19	81 90 97 98	92 95 98 100	98 98 100 100	100 100 100 100

X Not applicable. Z Indicates fewer than fifty units or less than one percent.

Table 8. Apartments Completed in Buildings With Five Units or More: 1970 to 1988

(Number of units. Data may not add to total due to rounding.)

Year	Total	Unfurnished apartments	Furnished apartments	Cooperative and condo- minium apartments	Federally subsidized apartments	Other ¹
1970 1971 1972 1973 1974	526,000 583,400 718,200 774,800 685,400	328,400 334,400 497,900 531,700 405,500	48,200 32,200 37,700 36,200 20,700	72,500 49,100 57,300 98,100 159,000	55,900 104,800 93,800 82,000 75,400	21,000 63,000 31,400 26,800 25,000
1975	258,200 289,400 362,700	228,700	11,100 12,800 16,200 11,200 12,100	84,600 46,300 43,000 54,500 91,800	32,000	10,000 8,700
1980 1981 1982 1983	332,500	196,100 135,400 117,000 191,500 313,200	9,700 6,000 5,400 4,700 9,800	122,800 112,600 107,900 111,800 143,600	79,900 66,100 48,000 47,700 28,500	10,500 12,500 10,000 15,100 10,700
1985 1986 1987 1988	633,300 650,200 474,200 388,600	364,500 407,600 345,600 284,500	7,400 11,600 7,900 4,300	135,800 101,700 92,300 76,200	12,000 23,300 17,000 15,200	11,300

¹Other includes time-sharing units, continuing care retirement units, and turnkey housing (privately built for and sold to local public housing authorities subsequent to completion).

Table A. Standard Errors of Estimated Totals: Completions in 1988

(2 chances out of 3)

Estimated total	Sta ndard error	Estimated total	Standard error
1,000 2,000 3,000 4,000 5,000 10,000 15,000 20,000 25,000	800 900 1,100 1,200 1,700 2,100 2,400	35,000 50,000 75,000 100,000 150,000 250,000 350,000 450,000 600,000	3,800 4,700 5,400 6,600 8,500 10,100 11,400

Note: See page 3 for information on the use of this table.

Table B. Standard Errors of Estimated Percentages: Completions in 1988

(2 chances out of 3)

Base of percentage	98 or 2	9 5 or 5	90 or 10	80 or 20	75 or 25	60 or 40	50
1,000	7.5	11.7	16.1	21,5	2 3.3	26.3	26.9
2,000	5.3	8.3	11.4	15.2	16.5	18.6	19.0
3,000	4.3	6.8	9.3	12.4	13.4	15.2	15.5
4,000	3.8	5.9	8.1	10.8	11.6	13.2	13.4
5,000	3.4	5.2	7.2	9.6	10.4	11.8	12.0
10,000	2.4	3.7	5.1	6.8	7.4	8.3	8.5
15,000	1,9	3.0	4.2	5.6	6.0	6.8	6.9
20,000	1.7	2.6	3.6	4.8	5.2	5.9	6.0
25,000	1.5	2.3	3.2	4.3	4.7	5.3	5.4
35,000	1.3	2.0	2.7	3. 6	3.9	4.5	4.5
50,000	1.1	1.7	2.3	3.0	3.3	3.7	3.8
75,000	0.9	1.4	1.9	2.5	2.7	3.0	3.1
100,000	0.8	1.2	1.6	2.2	2.3	2.6	2.7
150,000	0.6	1.0	1.3	1.8	1.9	2.2	2.2
250,000	0.5	0.7	1.0	1.4	1.5	1.7	1.7
350,000	0.4	0.6	0.9	1.1	1.2	1.4	1.4
450,000	0.4	0.6	8,0	1.0	1.1	1.2	1.3
600,000	0.3	0.5	0.7	0.9	1.0	1.1	1.1

Note: See page 3 for information on the use of this table.

^{*}U.S. GOVERNMENT PRINTING OFFICE: 1990-261-928/20020

U.S. Department of Commerce BUREAU OF THE CENSUS Washington, D.C. 20233

Official Business Penalty for Private Use, \$300 FIRST-CLASS MAIL POSTAGE & FEES PAID CENSUS PERMIT No. G-58

