

U.S. Department of Commerce
BUREAU OF THE CENSUS

U.S. Department of Housing
and Urban Development

H-130-80-5
Issued April 1981

Market Absorption of Apartments

ANNUAL: 1980 ABSORPTIONS

(Completions in 1979)

SUMMARY

During 1979, completions of privately financed, nonsubsidized, and unfurnished apartments in buildings of five units or more totaled about 241,200. Of these units, 82 percent were rented within the first 3 months of completion, 93 percent within 6 months, and 99 percent within 12 months.

New unfurnished apartments were about evenly divided between units with two bedrooms or more (51 percent) and units with fewer than two bedrooms (49 percent). Only 10 percent of the new units had monthly rents of less than \$200. Those renting for \$200 to \$299 accounted for 56 percent of new apartments while those renting for \$300 or more accounted for 34 percent. The median rent for apartments completed in 1979 was \$272, an increase of 8 percent over the \$251 median rent for apartments completed in 1978. Approximately half of the new units (51 percent) included air-conditioning in rental payments, while about three out of five new units (63 percent) included swimming pools at no extra cost.

The majority (84 percent) of these unfurnished apartments were constructed inside standard metropolitan statistical areas, with the same percentage located inside central cities as outside central cities (42 percent). A regional comparison shows that 46 percent of the units were built in the South, and 23 percent were built in the West region. Thus, these two regions, which include the area commonly referred to as the "Sun Belt," accounted for 69 percent of these new apartments. The percentage built in the North Central region was 22 percent, while only 8 percent of the units were constructed in the Northeast region.

The data are based on a sample survey and, consequently, the figures cited are subject to sampling variability. Sampling errors (i.e., standard errors) for these figures can be calculated by using tables A and B.¹ These standard errors imply there are about 2 chances out of 3 that a complete count would be contained in the interval around the estimate defined by the standard error.

¹ See Reliability of Estimates.

Throughout all of 1979, a total of about 439,300 privately financed apartments were completed in buildings with five units or more, a 21 percent increase over apartment completions in 1978. Fifty-five percent were nonsubsidized unfurnished apartments. Of the remainder, 21 percent were cooperatives and condominiums with a 3-month absorption rate of 74 percent. Cooperatives and condominiums are predominantly two bedrooms or larger (81 percent) and 73 percent were built in the South and West regions of the United States.

Furnished rental units accounted for 3 percent of the total number of privately financed apartments. Three months after completion, 88 percent of these units were absorbed. Furnished units tended to be smaller than unfurnished units. Apartments with fewer than two bedrooms accounted for 86 percent of the furnished units while only about half (49 percent) of the unfurnished units were in this category. Despite the difference in size, furnished and unfurnished units were likely to rent for about the same amount, with median rents of \$273 and \$272, respectively. Historically, median rents have been higher for unfurnished units.

Federally subsidized properties which account for 20 percent of total units completed are excluded from the survey. 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 the units are excluded for other reasons, including turnkey housing (privately built and sold to local public housing authorities subsequent to completion). The data, however, 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 nonsubsidized and unfurnished privately financed units in buildings with five units or

more are rented (or absorbed). In addition, data on characteristics of the units, such as rent 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 this survey the United States is first divided into primary sampling units (PSU's) which are sampled on the basis of population. Next, a sample of permit-issuing places is selected within each sample PSU. Finally, all buildings within sampled places with five units or more as well as a subsample of buildings with one to four units are selected.

Each quarter all buildings with five housing 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 over all buildings. The final estimate is then obtained by multiplying the unbiased estimate by the following ratio estimate factor:

$$\frac{\text{total units in 5+ buildings in permit-issuing areas as estimated by the SOC for that quarter}}{\text{total units in 5+ buildings as estimated by SOMA for that quarter}}$$

When all the completed 5+ buildings in the SOC are designated for SOMA, as is currently the case, this ratio estimate factor will be close to one. This procedure produces estimates of the units completed in a given quarter which are consistent with the published figures from the Housing Completions Series,³ and also reduces, to some extent, the sampling variability of the estimates of totals. Annual estimates are obtained by summing the four quarterly final 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 comprise 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

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

³ See "Housing Completions," Construction Reports, Series C22.

about all cases, definitional difficulties, differences in the interpretation of questions, inability or unwillingness to provide correct information on the part of respondents, mistakes in recording or coding the data, and other errors of collection, response, processing, coverage, and estimation for missing data.

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 surveyed under essentially the same general conditions, and an estimate and its estimated standard error were calculated from each sample, then—

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples.
2. Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples.
3. Approximately 95 percent of the interval from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

For very small estimates the lower limit of the confidence interval 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 either is or is not 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 95-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.

USE OF STANDARD ERROR TABLES

Table 1 of this report shows that 15,100 units completed in 1979 rented for \$175 to \$199. Table A shows the standard error

of an estimate of this size to be approximately 1,555. The 68-percent confidence interval as shown by these data is from 13,550 to 16,650. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimate derived from all possible samples lies within the interval from 12,000 to 18,200 (using twice the standard error) with 95 percent confidence.

Table 1 shows the rate of absorption after 3 months for these 15,100 units is 85 percent. Table B shows the standard error on an 85 percent rate on a base of 15,100 to be approximately 3.6 percent. The 68-percent confidence interval for this estimate is from 81.4 to 88.6 percent. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude that the average estimate derived from all possible samples lies within the interval from 77.8 to 92.2 (using twice the standard error) with 95 percent confidence.

Table A. Standard Error of Estimated Totals: January to December 1979 Completions

(1 standard error)

Estimated total	Standard error	Estimated total	Standard error
5,000.....	890	75,000.....	3,550
10,000.....	1,260	100,000.....	4,130
15,000.....	1,550	150,000.....	5,160
20,000.....	1,790	250,000.....	6,900
25,000.....	2,010	350,000.....	8,440
35,000.....	2,380	450,000.....	9,870
50,000.....	2,870	600,000.....	11,900

Table B. Standard Error of Estimated Percentages: January to December 1979 Completions

(1 standard error)

Base of percentage	Estimated percentage					
	98 or 2	95 or 5	90 or 10	80 or 20	75 or 25	50
5,000.....	2.5	3.9	5.3	7.1	7.7	8.9
10,000.....	1.8	2.7	3.8	5.0	5.4	6.2
15,000.....	1.4	2.2	3.1	4.1	4.4	5.1
20,000.....	1.2	1.9	2.7	3.6	3.8	4.4
25,000.....	1.1	1.7	2.4	3.2	3.4	4.0
35,000.....	0.9	1.5	2.0	2.7	2.9	3.4
50,000.....	0.8	1.2	1.7	2.2	2.4	2.8
75,000.....	0.6	1.0	1.4	1.8	2.0	2.3
100,000.....	0.6	0.9	1.2	1.6	1.7	2.0
150,000.....	0.5	0.7	1.0	1.3	1.4	1.6
250,000.....	0.4	0.5	0.8	1.0	1.1	1.3
350,000.....	0.3	0.5	0.6	0.8	0.9	1.1
450,000.....	0.3	0.4	0.6	0.7	0.8	0.9
600,000.....	0.2	0.4	0.5	0.6	0.7	0.8

FIGURE 1.

Percent of Apartments Absorbed, by Quarter of Completion, by Months on the Market: 1979

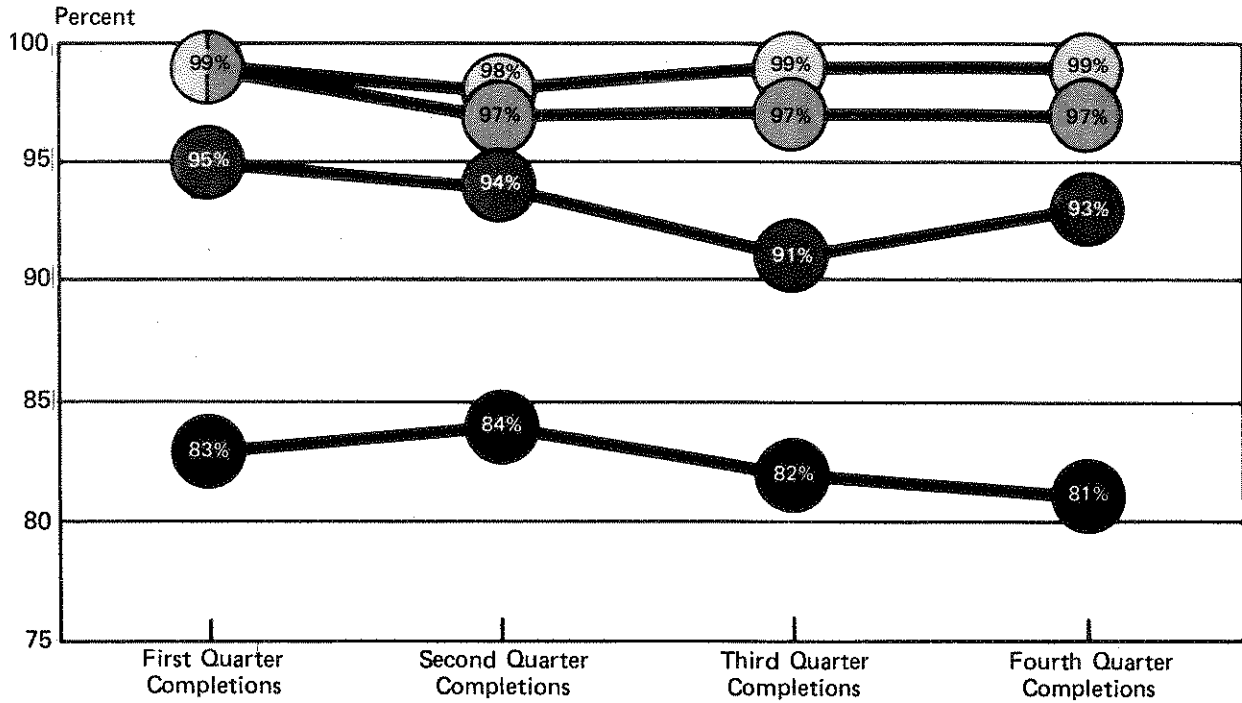
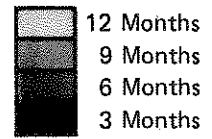


FIGURE 2.

Percent of Apartments Absorbed, by Region, by Months on the Market: 1978

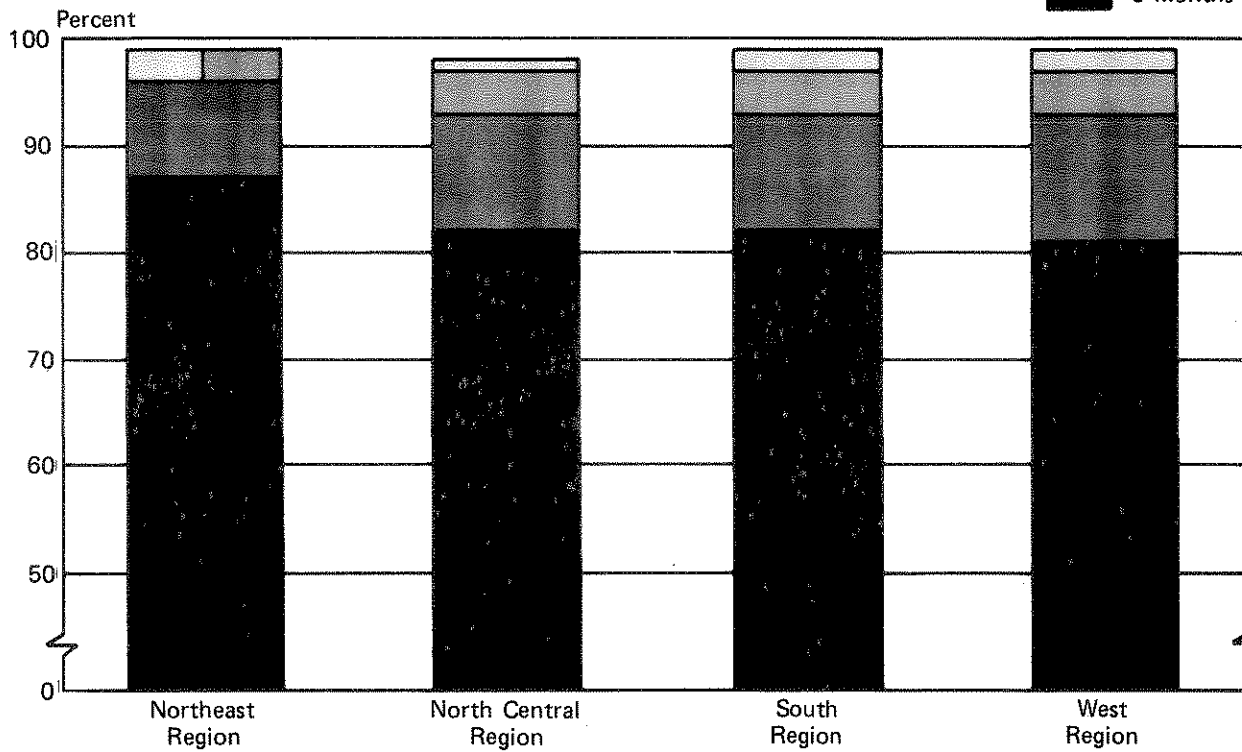
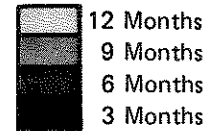


Table 1. Absorption Rates for Unfurnished Apartments Completed During 1979, by Number of Bedrooms and Rent Class

(Privately financed, nonsubsidized, unfurnished 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.)

Characteristic	Number	Percent	Percent absorbed after--			
			3 months	6 months	9 months	12 months
Total.....	241,200	100	82	93	97	99
Less than \$150.....	2,500	1	94	98	99	100
\$150 to \$174.....	6,100	3	96	99	100	100
\$175 to \$199.....	15,100	6	85	95	99	100
\$200 to \$249.....	66,000	27	84	94	98	99
\$250 to \$299.....	69,000	29	82	93	97	99
\$300 or more.....	82,500	34	79	92	96	98
Median rent.....	\$272	(X)	(X)	(X)	(X)	(X)
No bedroom.....	7,800	3	86	95	98	99
Less than \$150.....	(Z)	(Z)	100	100	100	100
\$150 to \$174.....	500	(Z)	96	100	100	100
\$175 to \$199.....	1,400	1	84	99	99	100
\$200 to \$249.....	3,900	2	84	94	97	99
\$250 to \$299.....	800	(Z)	90	97	99	100
\$300 or more.....	1,100	(Z)	86	92	96	98
Median rent.....	\$225	(X)	(X)	(X)	(X)	(X)
1 bedroom.....	111,400	46	84	94	98	99
Less than \$150.....	1,600	1	96	100	100	100
\$150 to \$174.....	3,100	1	96	99	100	100
\$175 to \$199.....	10,500	4	85	96	99	100
\$200 to \$249.....	43,900	18	85	95	98	99
\$250 to \$299.....	28,300	12	82	93	98	99
\$300 or more.....	24,000	10	81	92	97	98
Median rent.....	\$246	(X)	(X)	(X)	(X)	(X)
2 bedrooms.....	113,300	47	80	92	97	98
Less than \$150.....	700	(Z)	89	93	98	100
\$150 to \$174.....	2,400	1	96	100	100	100
\$175 to \$199.....	2,700	1	84	87	100	100
\$200 to \$249.....	17,900	7	83	91	97	99
\$250 to \$299.....	38,300	16	81	93	97	99
\$300 to \$349.....	24,800	10	78	92	97	98
\$350 or more.....	26,600	11	78	91	96	98
Median rent.....	\$293	(X)	(X)	(X)	(X)	(X)
3 bedrooms or more.....	8,700	4	86	94	98	99
Less than \$150.....	200	(Z)	98	100	100	100
\$150 to \$174.....	100	(Z)	100	100	100	100
\$175 to \$199.....	500	(Z)	100	100	100	100
\$200 to \$249.....	300	(Z)	100	100	100	100
\$250 to \$299.....	1,600	1	95	99	100	100
\$300 to \$349.....	1,800	1	78	90	96	99
\$350 or more.....	4,300	2	83	94	97	99
Median rent.....	\$350	(X)	(X)	(X)	(X)	(X)

(X) Not applicable.

(Z) Indicates less than 50 or less than one-half percent.

Table 2. Absorption Rates for Unfurnished Apartments Completed During 1979, by Geographic Area

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

Geographic area	Number	Percent	Percent absorbed after--			
			3 months	6 months	9 months	12 months
United States, total.....	241,200	100	82	93	97	99
Inside SMSA's:						
In central city.....	102,400	42	82	94	98	99
Not in central city.....	100,400	42	80	92	96	98
Outside SMSA's.....	38,300	16	88	95	99	100
Northeast.....	20,500	8	87	96	99	99
North Central.....	54,000	22	82	93	97	98
South.....	111,200	46	82	93	97	99
West.....	55,400	23	81	93	97	99

Table 3. Absorption Rates for Unfurnished Apartments Completed During 1979, by Presence of Air-Conditioning and Swimming Pool

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

Characteristic	Number	Percent	Percent absorbed after--			
			3 months	6 months	9 months	12 months
Total.....	241,200	100	82	93	97	99
AIR-CONDITIONING						
Included in rent.....	124,000	51	82	93	97	99
Available at extra cost.....	96,800	40	84	93	97	99
Not available.....	18,800	8	80	93	98	99
Not reported.....	1,600	1	84	92	99	100
SWIMMING POOL						
Included in rent.....	151,100	63	81	93	97	99
Available at extra cost.....	3,800	2	93	97	98	99
Not available.....	84,800	35	84	94	98	99
Not reported.....	1,500	1	86	92	99	100

Table 4. Furnished Apartments Completed During 1979, by Rent Class and Number of Bedrooms

(Privately financed, nonsubsidized, furnished 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.)

Characteristic	Number	Percent
Total.....	12,100	100
RENT CLASS		
Less than \$150.....	400	3
\$150 to \$174.....	1,000	8
\$175 to \$199.....	700	6
\$200 to \$249.....	2,400	20
\$250 to \$299.....	3,400	28
\$300 or more.....	4,300	36
Median rent.....	\$273	(X)
BEDROOMS		
None.....	3,800	31
1 bedroom.....	6,700	55
2 bedrooms.....	1,600	13
3 bedrooms or more.....	(Z)	(Z)

(X) Not applicable. (Z) Indicates less than 50 or less than one-half percent.

Table 5. Absorption Rates for Furnished Apartments Completed During 1979, by Rent Class and Number of Bedrooms

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

Characteristic	Total	Percent absorbed within--			
		3 months	6 months	9 months	12 months
Total.....	12,100	88	98	99	99
RENT CLASS					
Less than \$150.....	400	82	97	100	100
\$150 to \$174.....	1,000	100	100	100	100
\$175 to \$199.....	700	98	100	100	100
\$200 to \$249.....	2,400	93	99	100	100
\$250 to \$299.....	3,400	85	99	100	100
\$300 or more.....	4,300	85	95	97	98
Median rent.....	\$273	(X)	(X)	(X)	(X)
BEDROOMS					
None.....	3,800	84	96	100	100
1 bedroom.....	6,700	91	98	99	99
2 bedrooms.....	1,600	88	97	98	99
3 bedrooms or more.....	(Z)	40	100	100	100

(X) Not applicable. (Z) Indicates less than 50 or less than one-half percent.

Table 6. Cooperative and Condominium Apartments Completed During 1979, by Number of Bedrooms and Geographic Region

(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.)

Characteristic	Number	Percent
Total.....	91,800	100
BEDROOMS		
None.....	400	(Z)
1 bedroom.....	17,000	19
2 bedrooms.....	63,300	69
3 bedrooms or more.....	11,000	12
REGION		
Northeast.....	3,300	4
North Central.....	21,000	23
South.....	38,900	42
West.....	28,600	31

(Z) Indicates less than 50 or less than one-half percent.

Table 7. Absorption Rates for Cooperative and Condominium Apartments Completed During 1979, by Number of Bedrooms and Geographic Region

(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.)

Characteristic	Total	Percent absorbed within--			
		3 months	6 months	9 months	12 months
Total.....	91,800	74	84	90	93
BEDROOMS					
None.....	400	76	87	95	96
1 bedroom.....	17,000	81	89	94	96
2 bedrooms.....	63,300	72	83	89	92
3 bedrooms or more.....	11,000	77	84	90	93
REGION					
Northeast.....	3,300	83	93	97	98
North Central.....	21,000	60	72	80	83
South.....	38,900	80	90	95	97
West.....	28,600	76	84	91	93

2

0

5

current housing reports

Data on housing vacancies
and housing characteristics

U.S. Department of Commerce
BUREAU OF THE CENSUS

CURRENT DATA ON HOUSING

HOUSING VACANCIES (SERIES H-111):

Current statistics on housing vacancies, based on a scientifically selected sample. This series of four quarterly reports and one annual report provide rental vacancy rates and homeowner vacancy rates for the United States, each of the four regions, and inside and outside standard metropolitan statistical areas. The statistics for the current quarter are compared with data for the same quarter in the preceding year. Percent distributions are presented for rental vacancies and homeowner vacancies by the following housing characteristics:

- Number of rooms
- Number of bedrooms
- Number of housing units in the structure
- Duration of vacancy
- Plumbing facilities
- Monthly rent and sale price asked
- Year structure built

Also shown are percent distributions of all vacant housing units by year-round and seasonal status, figures on occupancy and vacancy rates based on the total housing inventory, and the home ownership rate. The annual report, in addition to the above, presents percent distributions of housing characteristics for both renter- and owner-occupied units.

HOUSING CHARACTERISTICS (H-121):

This series of reports is published on an irregular schedule. Individual reports present data for the United States, regions, or local areas on one or more selected housing characteristics. (Publications in this series include 15 reports on television ownership, 1 report on second homes and 1 report on housing units by plumbing facilities and condition, and a special study on housing characteristics classified by the 1959 income of occupants.) Stocks of these reports are exhausted. Photo copies only are available. For information write to: Housing Division, Bureau of the Census, Washington, D.C. 20233

HOW TO ORDER

Both series of current housing reports described in this announcement are available from the Superintendent of Documents in a combined subscription for \$5 per year (individual copies vary in price). Use the order form furnished below.

RELATED REPORTS

The Bureau of the Census also issues several series of monthly reports on the construction industry. Subjects covered include housing starts, construction activity, building permits, and housing sales. An announcement and order form covering these reports is available free of charge upon request to: Subscriber Services Section (Publications), Bureau of the Census, Washington, D.C. 20233

(please detach here)

SUBSCRIPTION ORDER FORM

C3.215: H-111

Please enter my subscription to CURRENT HOUSING REPORTS (Series H-111 and H-121) at \$6 per year. Add \$1.50 for foreign mailing.

CHR

Remittance Enclosed
(Make checks payable
to Superintendent of
Documents)

Charge to my Deposit
Account No.

Send Subscription to:

NAME--FIRST, LAST

COMPANY NAME OR ADDITIONAL ADDRESS LINE

STREET ADDRESS

CITY

STATE

ZIP CODE

MAIL ORDER FORM TO:
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

PLEASE PRINT

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

FIRST-CLASS MAIL
POSTAGE & FEES PAID
CENSUS
PERMIT No. G-58

Official Business
Penalty for Private Use, \$300

