U.S. Department of Commerce
BUREAU OF THE CENSUS

U.S. Department of Housing
and Urban Development

H-130-79-5
Issued April 1980

Market Absorption of Apartments

ANNUAL: 1979 ABSORPTIONS

(Completions in 1978)

INTRODUCTION

During 1978, completions of privately financed, nonsubsidized, and unfurnished apartments in buildings of five units or more totaled about 228,700. Of these, 82 percent were rented within the first 3 months of completion, 93 percent were rented within 6 months, and 99 percent within 12 months.

New apartments with two bedrooms or more accounted for 51 percent of completions, which was about the same as the 49 percent with less than two bedrooms. Only 19 percent of the new units had monthly rents of less than $200. Those renting for $200 to $249 accounted for 31 percent of new apartments while those renting for $250 or more accounted for 50 percent. The median rent for apartments completed in 1978 was $251; an increase of 8 percent over the $232 median rent for apartments completed in 1977. Approximately two out of five new units (39 percent) included air conditioning in rental payments, while about three out of five new units (59 percent) included swimming pools at no extra cost (see tables 1 and 3).

The majority (89 percent) of these unfurnished apartments were constructed inside standard metropolitan statistical areas, with less than half (40 percent) located inside central cities. A regional comparison of the total shows that about two-fifths (39 percent) of the units were built in the South. The percentages built in the North Central and West regions were about the same, 29 percent and 26 percent, respectively. Only 6 percent of the units were constructed in the Northeast region (see table 2).

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 I and II.[1] These standard errors imply there are about two chances out of three 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 1978, a total of about 362,800 privately financed apartments were completed in buildings with five units or more, of which 63 percent were nonsubsidized unfurnished apartments. Of the remainder, 15 percent were cooperatives and condominiums with a 3-month absorption rate of 77 percent. Cooperatives and condominiums are predominantly two bedrooms or larger (83 percent) and 79 percent were built in the South and West regions of the United States (see tables 6 and 7).

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. While about one-half (47 percent) of all unfurnished units are the two-bedroom type, only about one out of six (14 percent) of the furnished units are the two-bedroom type. The survey indicates that a furnished apartment is likely to be smaller than an unfurnished one, with one and no bedroom categories accounting for 86 percent of the furnished units while these categories are 49 percent of the unfurnished units. Furnished units are also likely to rent for less, as the median rent for these units was $225 compared with $251 for unfurnished units (see tables 1, 4, and 5).

Excluded from the survey are units in federally subsidized properties, built under these programs of the Department of Housing and Urban Development: Senior Citizens Housing direct loans (Section 202), FHA below-market interest rate mortgages (Section 236) and all units in buildings containing apartments in the FHA rent supplement program, which together account for 15 percent. The remainder 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

For sale by Subscriber Services (Publications), Bureau of the Census, Washington, D.C. 20233, or any U.S. Department of Commerce district office. Postage stamps not acceptable; currency submitted at sender's risk. Remittances from foreign countries must be by international money order or by a draft on a U.S. bank. $.50 per copy. Annual subscription $2.50.

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 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 attemps 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.

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

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

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 I and II are approximations to the standard errors of various estimates shown in the report. Table I presents standard errors for estimated totals, and table II 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 I or II can be obtained by linear interpolation.

FIGURE A

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

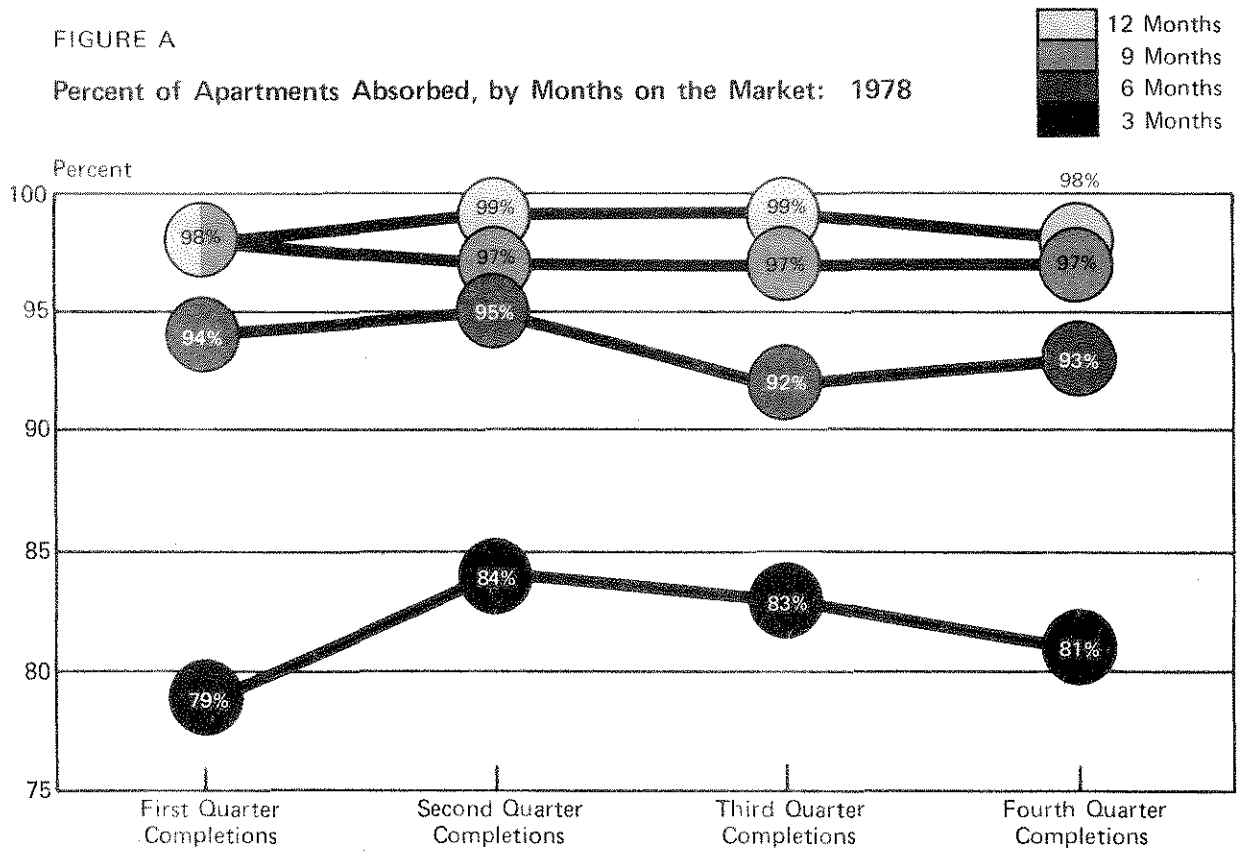

FIGURE B

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

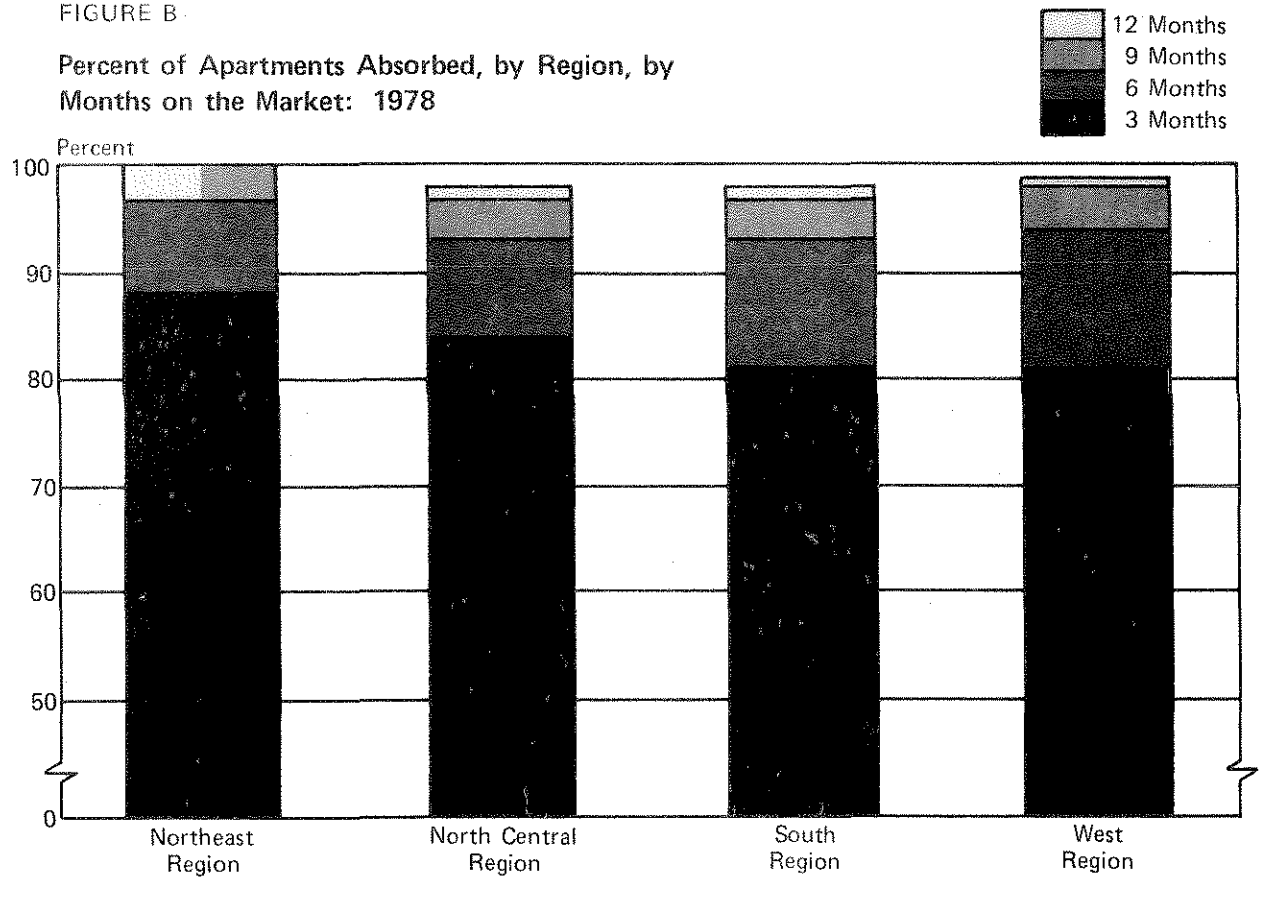

Table 1. Absorption Rates for Apartments Completed During 1978 by Number of Bedrooms and Rent Classes, for the United States

(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.)

Characteristics	Total		Percent absorbed after--			
	Number	Percent	3 months	6 months	9 months	12 months
Total	228,700	100	82	93	97	99
Less than $150	3,600	2	89	97	100	100
$150 to $174	13,100	6	82	96	99	99
$175 to $199	25,200	11	81	93	97	99
$200 to $249	71,600	31	84	95	98	99
$250 to $299	64,800	28	81	93	98	99
$300 or more	50,400	22	79	91	95	97
Median rent	$251	(X)	(X)	(X)	(X)	(X)
No bedroom	8,700	4	84	96	99	100
Less than $150	600	(Z)	67	85	100	100
$150 to $174	1,700	1	92	97	99	100
$175 to $199	1,700	1	82	97	99	100
$200 to $249	2,400	1	82	96	99	100
$250 to $299	700	(Z)	82	96	99	100
$300 or more	1,500	1	89	98	100	100
Median rent	$207	(X)	(X)	(X)	(X)	(X)
1 bedroom	103,900	45	84	94	98	99
Less than $150	1,800	1	91	99	100	100
$150 to $174	10,400	5	82	96	98	99
$175 to $199	17,000	7	83	94	96	98
$200 to $249	42,200	18	86	96	99	99
$250 to $299	23,300	10	83	92	99	100
$300 or more	9,200	4	75	88	94	96
Median rent	$227	(X)	(X)	(X)	(X)	(X)
2 bedrooms	107,800	47	80	93	97	98
Less than $150	1,100	(Z)	100	100	100	100
$150 to $174	1,100	(Z)	72	100	100	100
$175 to $199	6,400	3	75	89	98	100
$200 to $249	26,600	12	82	94	97	98
$250 to $299	39,700	17	81	93	98	99
$300 to $349	20,600	9	83	94	98	99
$350 or more	12,300	5	74	86	90	93
Median rent	$274	(X)	(X)	(X)	(X)	(X)
3 bedrooms or more	8,300	4	77	90	94	97
Less than $150	(Z)	(Z)	100	100	100	100
$150 to $174	-	-	-	-	-	-
$175 to $199	-	-	-	-	-	-
$200 to $249	300	(Z)	67	72	74	87
$250 to $299	1,100	(Z)	71	87	92	98
$300 to $349	2,300	1	81	94	100	100
$350 or more	4,500	2	78	90	93	97
Median rent	$350+	(X)	(X)	(X)	(X)	(X)

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

Table 2. Absorption Rates for Apartments Completed During 1978, 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 areas	Total		Percent absorbed after--			
	Number	Percent	3 months	6 months	9 months	12 months
United States, total...	228,700	100	82	93	97	99
Inside SMSA's:						
In central city.....	91,700	40	84	95	98	99
Not in central city.....	111,500	49	80	93	97	99
Outside SMSA's.....	25,500	11	83	91	96	96
Northeast.....	13,400	6	88	97	100	100
North Central.....	66,800	29	84	93	97	98
South.....	89,500	39	81	93	97	98
West.....	59,000	26	81	94	98	99

Table 3. Absorption Rates for Apartments Completed During 1978, by Presence of Air Conditioning and Swimming Pool, for the United States

(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.)

Characteristics	Total		Percent absorbed after--			
	Number	Percent	3 months	6 months	9 months	12 months
Unfurnished total.....	228,700	100	82	93	97	99
AIR CONDITIONING						
Included in rent.....	89,800	39	83	94	97	99
Available at extra cost.....	105,400	46	80	92	97	98
Not available.....	33,300	15	85	95	99	100
Not reported.....	200	(Z)	98	100	100	100
SWIMMING POOL						
Included in rent.....	135,300	59	81	93	97	99
Available at extra cost.....	2,700	1	95	97	99	99
Not available.....	90,500	40	83	93	98	98
Not reported.....	200	(Z)	98	100	100	100

(Z) Indicates less than one-half of one percent.

Table 4. Furnished Apartments Completed During 1978, by Number of Bedrooms and Rent Classes, for the United States

(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.)

Characteristics	Total	
	Number	Percent
Total	11,200	100
RENT CLASSES		
Less than $150	100	1
$150 to $174	1,000	9
$175 to $199	2,700	24
$200 to $249	3,600	32
$250 or more	3,800	34
Median	$225	(X)
BEDROOMS		
None	4,900	44
1 bedroom	4,700	42
2 bedrooms	1,600	14
3 bedrooms or more	100	1

(X) Not applicable.

Table 5. Absorption Rates for Furnished Apartments Completed During 1978, by Rent Classes and Bedrooms, for the United States

(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.)

Characteristics	Total	Percent absorbed within--			
		3 months	6 months	9 months	12 months
Total	11,200	88	99	100	100
RENT CLASSES					
Less than $150	100	100	100	100	100
$150 to $174	1,000	79	98	98	98
$175 to $199	2,700	92	99	100	100
$200 to $249	3,600	93	99	100	100
$250 or more	3,800	83	98	100	100
Median	$225	(X)	(X)	(X)	(X)
BEDROOMS					
None	4,900	92	99	100	100
1 bedroom	4,700	84	98	100	100
2 bedrooms	1,600	89	99	100	100
3 bedrooms or more	100	100	100	100	100

(X) Not applicable.

Table 6. Cooperative and Condominium Apartments Completed During 1978, by Number of Bedrooms and Geographic Regions, for the United States

(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.)

Characteristics	Total	
	Number	Percent
Total	54,500	100
BEDROOMS		
None	400	1
1 bedroom	9,000	17
2 bedrooms	36,900	68
3 bedrooms or more	8,200	15
REGION		
Northeast	2,400	4
North Central	8,900	16
South	22,300	41
West	20,900	38

Table 7. Absorption Rates for Cooperative and Condominium Apartments Completed During 1978, by Number of Bedrooms and Geographic Regions, for the United States

(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.)

Characteristics	Total	Percent absorbed with--			
		3 months	6 months	9 months	12 months
Total	54,500	77	89	95	97
BEDROOMS					
None	400	82	84	86	89
1 bedroom	9,000	77	92	96	98
2 bedrooms	36,900	77	88	94	97
3 bedrooms or more	8,200	82	92	96	98
REGION					
Northeast	2,400	74	82	82	88
North Central	8,900	72	86	92	96
South	22,300	76	87	93	97
West	20,900	81	94	98	99

ILLUSTRATIVE USE OF STANDARD ERROR TABLES

Table 1 of this report shows that 25,200 units completed in 1978 rented for $175 to $199. Table I shows the standard error of an estimate of this size to be approximately 2,020. The 68 percent confidence interval as shown by these data is from 23,180 to 27,220. 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 21,240 to 29,160 (using twice the standard error) with 95 percent confidence.

Table 1 shows the rate of absorption after 3 months for these 25,200 units is 81 percent. Table II shows the standard error on an 81 percent rate on a base of 25,200 to be approximately 3.1 percent. The 68 percent confidence interval for this estimate is from 77.9 to 84.1 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 74.8 to 87.2 (using twice the standard error) with 95 percent confidence.

Table I. Standard Error of Estimated Totals: January to December 1978 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 II. Standard Error of Estimated Percentages: January to December 1978 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

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

PLEASE PRINT

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

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

Official Business
Penalty for Private Use, $300

Postage and Fees Paid
U.S. Department
of Commerce

COM-202

First Class Mail