U.S. Department of Commerce BUREAU OF THE CENSUS

# Market Absorption of Apartments

U.S. Department of Housing and Urban Development H-130-77-01 Issued June 1977

First Quarter 1977 Absorptions (Completions in Fourth Quarter 1976)



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Privately financed apartments completed during the October-December 1976 quarter were absorbed after 3 months following completion at an estimated seasonally adjusted rate of 83 percent. During this same period last year, the seasonally adjusted rate of 81 percent was about the same. See Table 3. The nonseasonally adjusted rate of 77 percent was not significantly different from the seasonally adjusted rate, and the medain asking rent was \$212 for these units. Apartments which have been on the market for 9 months (those completed during April-June 1976) were 98 percent rented.

Apartments renting for less than \$150 accounted for 5 percent of the fourth quarter completions. Apartments renting for \$300 or more accounted for about the same at 7 percent of the completions.

The data are based on a sample survey and consequently the figures cited above are subject to sampling variability. As shown in Table 3, the 83 and 98 percent figures are subject to sampling errors (i.e., standard errors) of 2.3 and 0.9 percentage points, respectively. This means that there are about 2 chances out of 3 that a complete count would be in the range of  $83 \pm 2.3$  percentage points and  $98 \pm 0.9$  percentage points. Sampling errors for the figures that follow are indicated in parentheses.<sup>1</sup>

A total of  $68,200 (\pm 1,710)$  apartments were completed during the fourth quarter of 1976. From this total, some 42,070 ( $\pm 1,760$ ) or 62 percent ( $\pm 2.3$ ) were of the type covered by the Survey of Market Absorption (SOMA), i.e., privately financed, unfurnished rental units built without Federal subsidy in buildings with 5 or more apartments.

Of the remaining 38 percent ( $\pm$  2.3) cooperative and condominiums account for 17 percent ( $\pm$  1.8) of the total, with a 3-month absorption rate of 54 percent ( $\pm$  2.4). See Table 4. Furnished rental units account for 3 percent ( $\pm$  0.8). Also 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 221 BMIR), FHA interest supplements on

<sup>1</sup> See Reliability of Estimates on page 4.

## Table 1. CHARACTERISTICS OF APARTMENTS COMPLETED DURING THE FOURTH QUARTER OF 1976 AND RENTED WITHIN 3 MONTHS

(Privately finances, nonsubsidized, unfurnished apartments. Data regarding number of bedrooms and asking rent are collected at the initial interview, i.e., 3 months following completion. Data are not season-ally adjusted.)

	Total unit	s completed	Percen u	t of total inits	Percen within	t rented 3 months
Item	Number	Sampling error*	Percent	Sampling error* (percentage points)	Percent	Sampling error* (percentage points)
Total	42,070	1,760	100	(X)	77	2.6
Less than \$150 \$150 to \$174 \$175 to \$199 \$200 to \$249 \$250 to \$299 \$300 or more Median asking rent NUMBER OF BEDROOMS	2,182 4,435 10,735 14,915 6,876 2,927 \$212	580 820 1,220 1,400 1,000 670 4.4	5 11 26 35 16 7 (X)	1.3 1.9 2.7 2.9 2.2 1.6 (X)	76 76 82 73 82 74 (X)	11.5 8.1 4.7 4.6 5.8 10.2 (X)
Less than 2 2 3 or more	20,770 20,009 1,292	1,580 1,560 450	49 48 3	3.1 3.1 1.0	83 72 65	3.3 4.0 16.7

(X) Not applicable.

\*Standard error with range about 2 chances out of 3.



rental mortgages (Section 236), and all units in buildings containing apartments in the FHA rent supplement program, which together account for 10 percent ( $\pm$  1.4). 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 Market Absorption Survey (SOMA) is designed to provide data concerning the rate at which nonsubsidized and unfurnished privately financed units in buildings with 5 or more units are rented (or absorbed). In addition, data on characteristics of the units, such as rent and number of bedrooms, are collected. In each quarter, a sample of about 2,000 buildings with 5 or more units completed during that quarter, is selected. The sample is selected from buildings reported as completed in a sample of building permits in the Census Bureau's Housing Starts Survey.<sup>2</sup> Buildings completed in nonpermit-issuing areas are excluded from consideration in this survey.

Information is obtained for the units in the buildings selected in a given quarter in each of the next four quarters on the proportion of units occupied, 3, 6, 9, and 12 months after completion.

 $<sup>^2\,\</sup>text{See}$  "Housing Starts," Construction Reports Series C20, for the details of this survey.

## Table 2. CHARACTERISTICS OF APARTMENTS COMPLETED DURING THE THIRD OUARTER OF 1976 AND RENTED WITHIN 3 MONTHS (REVISED)

(Privately financed, nonsubsidized, unfurnished apartments. Data regarding number of bedrooms and asking rent are collected at the initial interview, i.e., 3 months following completion. Data are not seasonally adjusted)

	Total unit	s completed	Percent u	t of total nits	Percen within	t rented 3 months
Item	Number	Sampling error*	Percent	Sampling error* (percentage points)	Percent	Sampling error* (percentage points)
Total	39,799	1,610	100	(X)	79	2.6
RENT CLASSES						
Less than \$150 \$150 to \$174 \$175 to \$199 \$200 to \$249 \$250 to \$299 \$300 or more Median asking rent NUMBER OF BEDROOMS	1,526 3,240 8,560 13,951 8,528 3,995 \$224	490 700 1,100 1,350 1,100 770 4.5	4 8 22 35 21 10 (X)	1.2 1.7 2.6 3.0 2.6 1.9 (X)	86 86 83 80 74 74 (X)	11.2 7.7 5.1 4.3 6.0 8.7 (X)
Less than 2 2 3 or more	19,123 18,256 2,421	1,510 1,480 610	48 46 6	3.1 3.1 1.5	88 76 35	3.0 4.0 12.2

(X) Not applicable.

\*Standard error with range about 2 chances out of 3.

An improved tabulating method effective with the data for year 1973 now permits the revision of the data for previous quarters of completion. Each quarter the absorption data for some buildings are received too late for inclusion in the report. With the new technique it is now possible to revise the data for the previous quarter to reflect these buildings. See table 2.

#### **ESTIMATION**

The estimation procedure used in the survey involves, as a final step, the inflation of the weighted sample results to the quarterly estimates of housing completions obtained from the Housing Completions Survey. As the Housing Completions Survey is based on a larger sample than the Market Absorption Survey, it provides a more stable set of controls for estimates which can be obtained from both surveys. In addition to reducing the sampling variability of the estimates of totals from the Market Absorption Survey, the ratio estimation procedure, as a useful byproduct, produces estimates of the units completed in a given quarter which are consistent with the published figures from the Housing Completions series.<sup>3</sup>

The absorption rates assume that the absorption rates 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 ESTIMATES**

The sample used for this survey is only one of a large number of possible samples of the same size that could have been selected using the same sample design, sample selection, and measurement procedures. Estimates derived from these samples would differ from each other.

The standard error of a survey estimate is a measure of the variation among the estimates from all possible samples and is, therefore, a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. As calculated for this report, the standard error also partially measures the effect of certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples, be-

<sup>&</sup>lt;sup>3</sup> See "Housing Completions," Construction Reports, Series C22.

## Table 3. ABSORPTION RATES OF PRIVATELY FINANCED, NONSUBSIDIZED, AND UNFURNISHED APARTMENTS: 1973 TO 1976

	То	tal	Seasonall	y adjust-	ę	Not	season:	lly adjust	ed - rei	nted within	L	
	units c	ompleted	ed rent in 3 m	ed with- lonths	3 m	onths	6 m	onths	9 m	onths	12 n	nonths
Quarter of completion	Number	Sam- pling error*	Per- cent	Sampling error* (per- centage points)	Per- cent	Sampling error* (per- centage points)	Per- cent	Sampling error* (per- centage points)	Per- cent	Sampling error* (per- centage points)	Per- cent	Sampling error* (per- centage points)
1973												
January-March April-June July-September October-December	113,194 129,314 129,755 121,916	2,600 2,870 3,051 2,900	68 70 70 68	2.0 1.9 1.9 2.0	64 74 76 63	2.0 1.7 1.8 2.0	83 89 87 82	1.6 1.3 1.3 1.6	92 94 94 92	1.2 1.0 0.9 1.1	95 97 97 96	1.0 0.7 0.7 0.8
1974												
January-March April-June July-September October-December	98,934 99,489 96,682 96,631	2,850 2,840 2,740 2,750	72 69 67 65	2.1 2.2 2.2 2.3	67 73 72 60	2.1 2.0 2.0 2.3	86 86 85 78	1.5 1.6 1.6 2.0	92 91 90 88	1.3 1.4 1.4 1.5	95 94 95 93	1.0 1.1 1.0 1.2
1975												
January-March April-June July-September October-December	63,604 59,103 ,48,327 44,163	2,270 1,900 1,850 1,900	66 68 69 81	2.8 2.8 3.1 2.3	61 72 75 75	2.8 2.7 2.8 2.5	80 86 86 91	2.3 2.1 2.3 1.7	90 91 92 96	1.7 1.7 1.5 1.1	93 94 97 98	1.5 1.2 1.0 8
1976										*****		
January-March April-June July-September <sup>r</sup> October-December	35,513 37,056 39,799 42,070	1,650 1,730 1,610 1,760	85 81 75 83	2.3 2.6 2.7 2.3	79 86 79 77	2.7 2.3 2.6 2.6	92 96 92 (NA)	1.8 1.3 1.7 (NA)	96 98 (NA) (NA)	1.3 0.9 (NA) (NA)	97 (NA) (NA) (NA)	1.1 (NA) (NA) (NA)

(Structures with 5 or more units)

(NA) Not available. <sup>r</sup>Revised.

\*Standard error with range about 2 chances out of 3.

tween the estimate and the desired value. The accuracy of a survey result depends upon the sampling and nonsampling errors, measured by the standard error, and the bias and other types of nonsampling error, not measured by the standard error.

The estimate and its associated standard error may be used to construct a confidence interval, that is, 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 approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average value of all possible samples.

The average value of all possible samples may or may not be contained in any particular computed interval. But for a particular sample, one can say with specified confidence that the average of all possible samples is included in the constructed interval. Similarly, the chances are about two out of three that the survey estimate will differ from the average result of all possible samples by less than one standard error, and 99 out of 100 that the survey estimate will differ from the average result by less than 2 1/2 times the standard error. For example, the chances are 95 out of 100 that the number of two-bedroom apartments (20,009) would be no lower than 16,889 or no higher than 23,129 if the data were collected in a complete census. The conclusions stated in this report are considered significant at the 95 percent confidence level.

In addition to sampling error, sample surveys are subject to response and processing errors similar to those experienced in censuses. The data in this report are preliminary and subject to slight changes in the annual report.

# Table 4. COOPERATIVE AND CONDOMINIUM APARTMENTS: TOTAL COMPLETED, PERCENT OF ALL 5+ UNITS AND ABSORBED WITHIN 3 MONTHS: 1974 TO 1976

Quantan	Total unit:	s completed	Percent of	all 5+ units	Absorbe 3 mon	d within hs
of completion	Number	Sampling error*	Percent	Sampling error* (percentage points)	Percent	Sampling error* (percentage points)
1974						
January-March April-June July-September October-December 1975 January-March	40,700 36,997 35,538 39,820 29,577	2,230 2,150 2,110 2,220	25 22 23 24 26	1.6 1.5 1.6 1.6	64 64 58 41 40	3.5 3.7 3.7 3.6 4.2
April-JuneJuly-September October-December 1976	16,567 21,737 14,400	1,440 1,590 1,330	19 26 19	1.9 2.3 2.1	46 49 41	5.6 5.1 6.0
January-March April-June July-September <sup>r</sup> October-December	13,989 10,694 9,103 11,677	1,340 1,210 1,130 1,270	23 17 15 17	2.1 1.8 4.7 4.4	56 53 48 54	5.2 6.0 6.6 5.8

(Privately financed, nonsubsidized apartments in buildings with 5 or more units. Data are not seasonally adjusted)

(NA) Not available. <sup>r</sup>Revised.

\*Standard error with range about 2 chances out of 3.



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