U.S. DEPARTMENT OF COMMERCE

Bureau of the Census
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## Market Absorption of Apartments

First Quarter 1979 Absorptions (Completions in Fourth Quarter 1978)

Figure 1. Units in Apartment Buildings Started, Completed, and Absorbed: 1973 to 1978


Note: Limited to building with five units or more in permit-issuing places.

1. Source: Construction Report, C-20-79-2 (February 1979) Table 2.
2. Source: Construction Report, C-22-79-2 (February 1979) Table 1.

Privately financed apartments completed during the October-December 1978 quarter were absorbed after 3 months following completion at an estimated seasonally adjusted rate of 85 percent. There is some evidence that this is slightly higher than the seasonally adjusted rate of 80 percent for apartments completed during the third quarter of 1978. The nonseasonally adjusted rate of 81 percent does not significantly differ from the seasonally adjusted rate, Apartments which have been on the market for 9 months--those completed during April-June 1978 -were 98 percent rented (see table 3 ).

The median asking rent for newly constructed units was $\$ 262$. Apartments renting for less than $\$ 150$ accounted for 1 percent while those renting for $\$ 150$ to $\$ 199$ accounted for 13 percent. In comparison, 28 percent rented for $\$ 200$ to $\$ 249$ and 58 percent rented for $\$ 250$ or more (see table 1 ).

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 85 and 98 percent figures are subject to sampling errors (i.e., standard errors) of 1.9 and 0.8 percentage points, respectively. This means that there are about 2 chances out of 3 that a complete count would be in the range of $85( \pm 1.9)$
percentage points and $98( \pm 0.8)$ percentage points. Sampling errors for the figures that follow are indicated in parenthesis. ${ }^{1}$

A total of $97,000( \pm 4,070)$ apartments were completed during the fourth quarter of 1978 . Of this total, some 56,400 $( \pm 2,140)$ or 58 percent $( \pm 2.0)$ were the type covered by the Survey of Market Absorption (SOMA), i.e., privately financed, unfurnished rental units built without Federa subsidy in buildings with five or more apartments.

Of the remaining 42 percent ( $\pm 2.0$ ), cooperatives and condominiums account for 18 percent $( \pm 1,5)$ of the total with a 3 month absorption rate of 77 percent ( $\pm 4.0$ )-see table 4. Furnished rental units account for 2 percent ( $\pm 0.6$ ). 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 236), and all units in buildings containing apartments in the FHA rent supplement program, which together account for 19 percent $( \pm 1.6)$. The remainder are
${ }^{4}$ See Reliability of Estimates on page 5 .

## Table 1. CHARACTERISTICS OF APARTMENTS COMPLETED DURING THE FOURTH QUARTER OF 1978 AND RENTED WITHIN 3 MONTHS

(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 not seasonally adjusted)

*Standard error within range of about 2 chances out of 3 . (X) Not applicable.

Figure 2. Median Rent of Apartments Completed in the United States: 1975 to 1978

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 SOMA is designed to provide data concerning the rate at which nonsubsidized and unfurnished privately financed units in buildings with five 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 five 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. ${ }^{2}$ 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
${ }^{2}$ See "Housing Stafts," Construction Reports Series C20, for the details of this survey.
proportion of units occupied $3,6,9$, and 12 months after completion.

Each quarter the absorption data for some buildings are received too late for inclusion in the report. These late data will be included in a revised table in the next quarterly report (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 SOMA, 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 SOMA, 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. ${ }^{3}$

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## Table 2. CHARACTERISTICS OF APARTMENTS COMPLETED DURING THE THIRD QUARTER OF 1978 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 not seasonally adjusted)

| Item | Total units completed |  | Percent of total units |  | Percent rented within 3 months |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Sampling error* | Percent | Sampling error* (percentage points) | Percent | Sampling error* (percentage points) |
| Total. | 71,500 | 2,220 | 100 | (X) | 83 | 1.8 |
| Less than \$150. | 2,900 | 670 | 4 | 0.9 | 87 | 7.8 |
| \$150 to \$174. | 4,600 | 840 | 6 | 1.1 | 86 | 6.4 |
| \$175 to \$199. | 7,300 | 1,050 | 10 | 1.4 | 81 | 5.8 |
| \$200 to \$249. | 22,200 | 1,730 | 31 | 2.2 | 88 | 2.7 |
| \$250 to \$299. | 17,900 | 1,580 | 25 | 2.0 | 78 | 3.9 |
| \$300 or more. | 16,600 | 1,530 | 23 | 2.0 | 80 | 3.9 |
| Median asking rent. | \$247 | 3.8 | (X) | (X) | (X) | (X) |
| Less than 2. | 34,900 | 2,050 | 49 | 2.3 | 84 | 2.5 |
| 2. | 34,200 | 2,030 | 48 | 2.3 | 82 | 2.6 |
| 3 or more | 2,400 | 610 | 3 | 0.8 | 74 | 11.2 |

*Standard error within range of about 2 chances out of 3 . (X) Not applicable.

## Table 3. ABSORPTION RATES OF PRIVATELY FINANCED NONSUBSIDIZED UNFURNISHED APARTMENTS: 1975 TO 1978

| Quarter of completion | Total <br> units completed |  | Seasonally adjusted rented within 3 months |  | Not seasonally adjusted - rented within-- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 3 months | 6 months |  | 9 months |  | 12 months |  |
|  | Number | $\begin{aligned} & \text { Sam- } \\ & \text { pling } \\ & \text { exror: } \end{aligned}$ |  |  | Percent | $\begin{gathered} \text { Sampling } \\ \text { error* } \\ \text { (per- } \\ \text { centage } \\ \text { points) } \end{gathered}$ | Percent | $\begin{gathered} \text { Sampling } \\ \text { error* } \\ \text { (per- } \\ \text { centage } \\ \text { points) } \end{gathered}$ | Percent | ```Sampling error* (per- centage points)``` | $\begin{aligned} & \text { Per- } \\ & \text { cent } \end{aligned}$ | ```Sampling error* (per- centage points)``` | Percent | $\begin{aligned} & \text { Sampling } \\ & \text { error* } \\ & \text { (per- } \\ & \text { centage } \\ & \text { points) } \end{aligned}$ |
| 1975 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March. | 65,600 | 2,320 | 66 | 2.8 | 61 | 2.8 | 80 | 2.3 | 90 | 1.7 | 93 | 1.5 |
| April-June. . | 62,100 | 1,930 | 68 | 2.8 | 72 | 2.7 | 86 | 2.1 | 91 | 1.7 | 94 | 1.2 |
| July-September. | 49,800 | 1,910 | 69 | 3.1 | 75 | 2.8 | 86 | 2.3 | 92 | 1.5 | 97 | 1.0 |
| October-December. | 45,600 | 1,900 | 81 | 2.3 | 75 | 2.5 | 91 | 1.7 | 96 | 1.1 | 98 | 0.8 |
| 1976 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March. | 35,300 | 1,660 | 85 | 2.4 | 79 | 2.7 | 92 | 1.8 | 96 | 1.3 | 97 | 1.1 |
| April-June. . . | 38,300 | 1,730 | 81 | 2.6 | 86 | 2.3 | 96 | 1.3 | 98 | 0.9 | 99 | 0.6 |
| July-September | 40,300 | 1,610 | 75 | 2.7 | 79 | 2.6 | 92 | 1.7 | 96 | 1.2 | 99 | 0.6 |
| October-December. | 43,200 | 1,750 | 84 | 2.2 | 78 | 2.5 | 92 | 1.7 | 98 | 0.9 | 99 | 0.6 |
| 1977 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March... | 41,700 | 1,730 | 81 | 2.4 | 77 | 2.6 | 92 | 1.7 | 97 | 1.1 | 97 | 1.0 |
| April-June... | 43,100 | 1,670 | 78 | 2.5 | 83 | 2.3 | 97 | 1.0 | 98 | 0.8 | 99 | 0.6 |
| July-September. | 56,000 | 1,680 | 79 | 2.2 | 83 | 2.0 | 93 | 1.4 | 97 | 0.9 | 99 | 0.5 |
| October-December. | 54,800 | 1,940 | 82 | 2.1 | 78 | 2.2 | 94 | 1.3 | 98 | 0.8 | 99 | 0.5 |
| 1978 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March... | 47,200 | 1,880 | 82 | 2.2 | 79 | 2.4 | 94 | 1.4 | 98 | 0.8 | 98 | 0.8 |
| April-June..... | 53,600 | 1,890 | 80 | 2.2 | 84 | 2.0 | 95 | 1.2 | 98 | 0.8 | (NA) | (NA) |
| July-September ${ }^{\text {r }}$. | 71,500 | 2,220 | 80 | 1.9 | 83 | 1.8 | 92 | 1.3 | (NA) | (NA) | (NA) | (NA) |
| october-December. | 56,400 | 2,140 | 85 | 1.9 | 81 | 2.1 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) |

*Standard error within range of about 2 chances out of 3 .
(NA) Not available. ${ }^{\text {Revised. }}$

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 larger 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, between 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 $21 / 2$ times the standard error. For example, the chances are 95 out of 100 that the number of two-bedroom apartments $(25,900)$ would be no lower than 22,300 or no higher than 29,500 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: 1975 TO 1978
(Privately financed, nonsubsidized apartments in buildings with five or more units. Data not seasonally adjusted)

| $\begin{gathered} \text { Quarter } \\ \text { of } \\ \text { completion } \end{gathered}$ | Total units completed |  | Percent of all $5+$ units |  | Absorbed within 3 months |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | $\begin{aligned} & \text { Sampling } \\ & \text { error* } \end{aligned}$ | Percent | Sampling error* (percentage points) | Percent | Samp1ing error* (percentage points) |
| 1975 |  |  |  |  |  |  |
| January-March | 30,300 | 1,960 | 26 | 1.9 | 40 | 4.2 |
| April-June. | 17,200 | 1,530 | 19 | 1.9 | 46 | 5.6 |
| July-September | 22,300 | 1,670 | 26 | 2.3 | 49 | 5.1 |
| October-December | 14,900 | 1,420 | 19 | 2.1 | 41 | 6.0 |
| 1976 |  |  |  |  |  |  |
| January-March | 13,700 | 1,340 | 23 | 2.1 | 56 | 5.2 |
| April-June. | 11,000 | 1,230 | 17 | 1.8 | 53 | 6.0 |
| July-September | 9,500 | 1,150 | 15 | 1.8 | 48 | 6.6 |
| October-December. | 12,000 | 1,280 | 17 | 1.8 | 54 | 5.8 |
| .. 1977 |  |  |  |  |  |  |
| January-March | 10,200 | 1,200 | 15 | 1.7 | 74 | 5.5 |
| April-June... | 9,200 | 1,140 | 15 | 1.8 | 77 | 5.5 |
| July-September | 9,700 | 1,180 | 13 | 1.5 | 59 | 6.2 |
| October-December | 13,900 | 1,390 | 17 | 1.6 | 76 | 4.6 |
| 1978 |  |  |  |  |  |  |
| January-March.. | 8,900 | 1,140 | 12 | 1.9 | 74 | 5.8 |
| April-June.... | 14,300 | 1,400 | 18 | 1.7 | 75 | 4.5 |
| July-September ${ }^{\text {r }}$. | 13,600 | 1,440 | 12 | 1.2 | 81 | 4.2 |
| October-December | 17,500 | 1,550 | 18 | 1.5 | 77 | 4.0 |

*Standard error within range of about 2 chances out of 3 . ${ }^{r}$ Revised.

# CURRENT CONSTRUCTION REPORTS 

## CONSTRUCTION accounts

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[^0]:    ${ }^{3}$ See "Housing Completions," Construction Reports, Series C22.

