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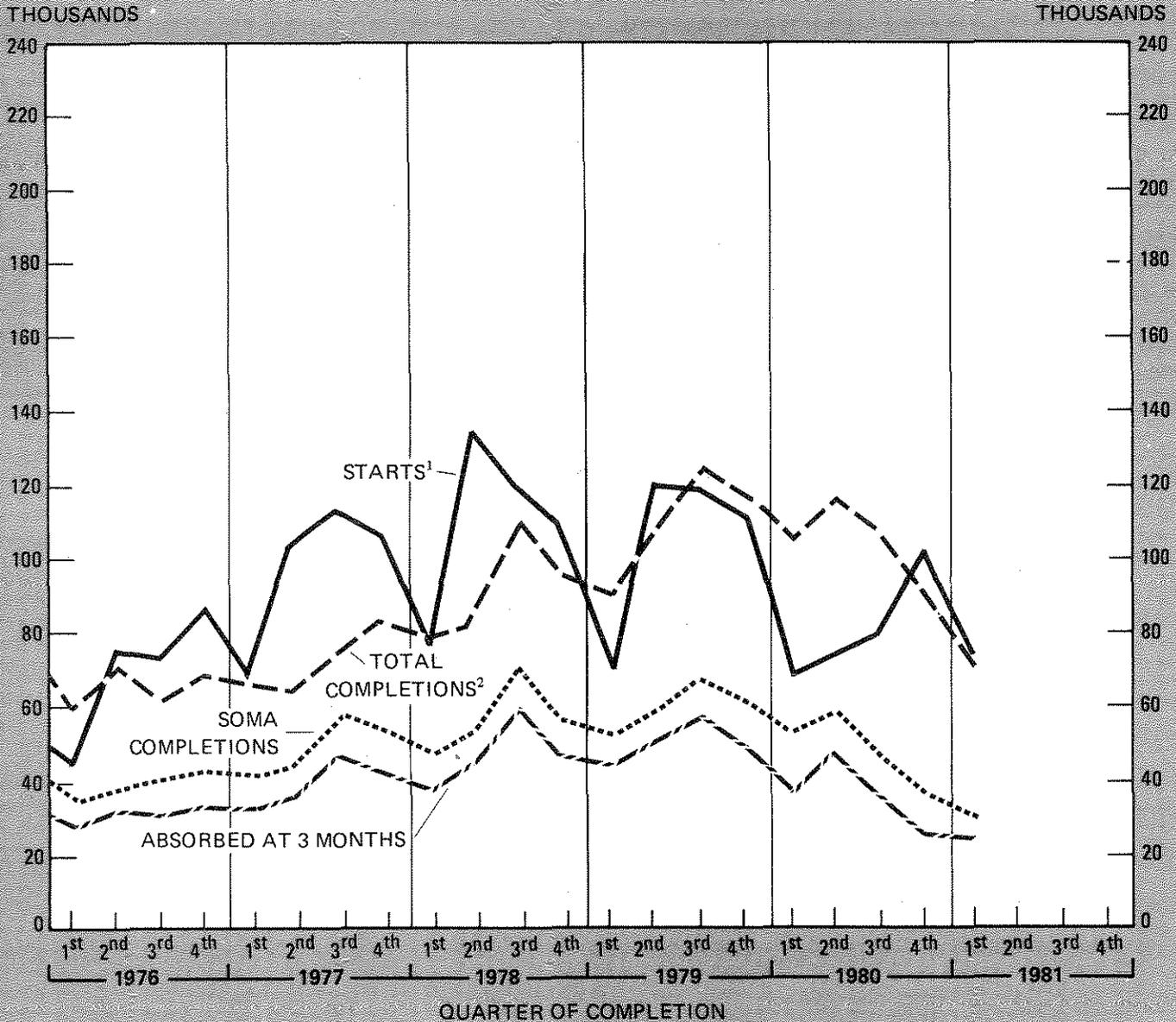
Market Absorption of Apartments

U.S. Department of Housing
and Urban Development

Second Quarter 1981 Absorptions
(Completions in First Quarter 1981)

H-130-81-Q2
Issued September 1981

Figure 1. Units in Apartment Buildings Started, Completed, and Absorbed: 1976 to 1981



Note: Limited to buildings with five units or more in permit-issuing places.
1. Source: Construction Report, C20-81-5 (May 1981) table 2.
2. Source: Construction Report, C22-81-5 (May 1981) table 1.

SUMMARY OF FINDINGS

Privately financed, nonsubsidized, unfurnished apartments completed during the January-March 1981 quarter were 79 percent absorbed (seasonally adjusted) 3 months after their completion. This is about the same as both the seasonally adjusted 3-month rate of 74 percent for apartments completed during the fourth quarter of 1980 and the seasonally adjusted rate of 74 percent for first quarter 1980 completions. Apartments which have been on the market for 9 months, those completed during July-September 1980, were 95 percent absorbed.

The median asking rent for newly constructed units was \$328 in the first quarter which was about the same as the \$323 median in the fourth quarter of 1980. Apartments renting for less than \$200 accounted for 1 percent of the total, while those renting for \$200-\$299 accounted for 34 percent. In comparison, 43 percent rented for \$300-\$399 and 21 percent rented for \$400 or more.

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 79 and 95 percent figures are subject to sampling errors (i.e., standard errors) of 2.9 and 1.3 percentage points, respectively. This means that there are about 2 chances out of 3 that a complete count would be in the range of 79 (± 2.9) percentage points and 95 (± 1.3) percentage points. Sampling errors for the figures that follow are indicated in parenthesis.¹

¹See reliability of estimates on page 5.

A total of 70,600 ($\pm 3,430$) apartments were completed during the first quarter of 1981. Of the total, 31,500 ($\pm 1,780$) or 45 percent (± 2.4) were the type covered by the Survey of Market Absorption (SOMA); i.e., privately financed, unfurnished rental units built without Federal subsidy in buildings with five or more apartments. This represents a decrease of about 15 percent from SOMA completions in the fourth quarter of 1980 and a 39-percent decrease from completions in the first quarter of 1980. This is also the third quarter in a row in which SOMA completions have been less than one-half of total completions.

Of the remaining 55 percent (± 2.4), cooperatives and condominiums account for 33 percent (± 2.2) of the total with a 3-month absorption rate of 68 percent (± 3.8). Cooperative and condominium apartments continue to make up a large segment of total apartment completions.

Furnished rental units account for 2 percent (± 1.0). Also excluded from the survey are units in federally subsidized properties built under these 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. Together these units account for 13 percent (± 1.6) of the total.

The remainder are excluded for other reasons, including turn-key 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.

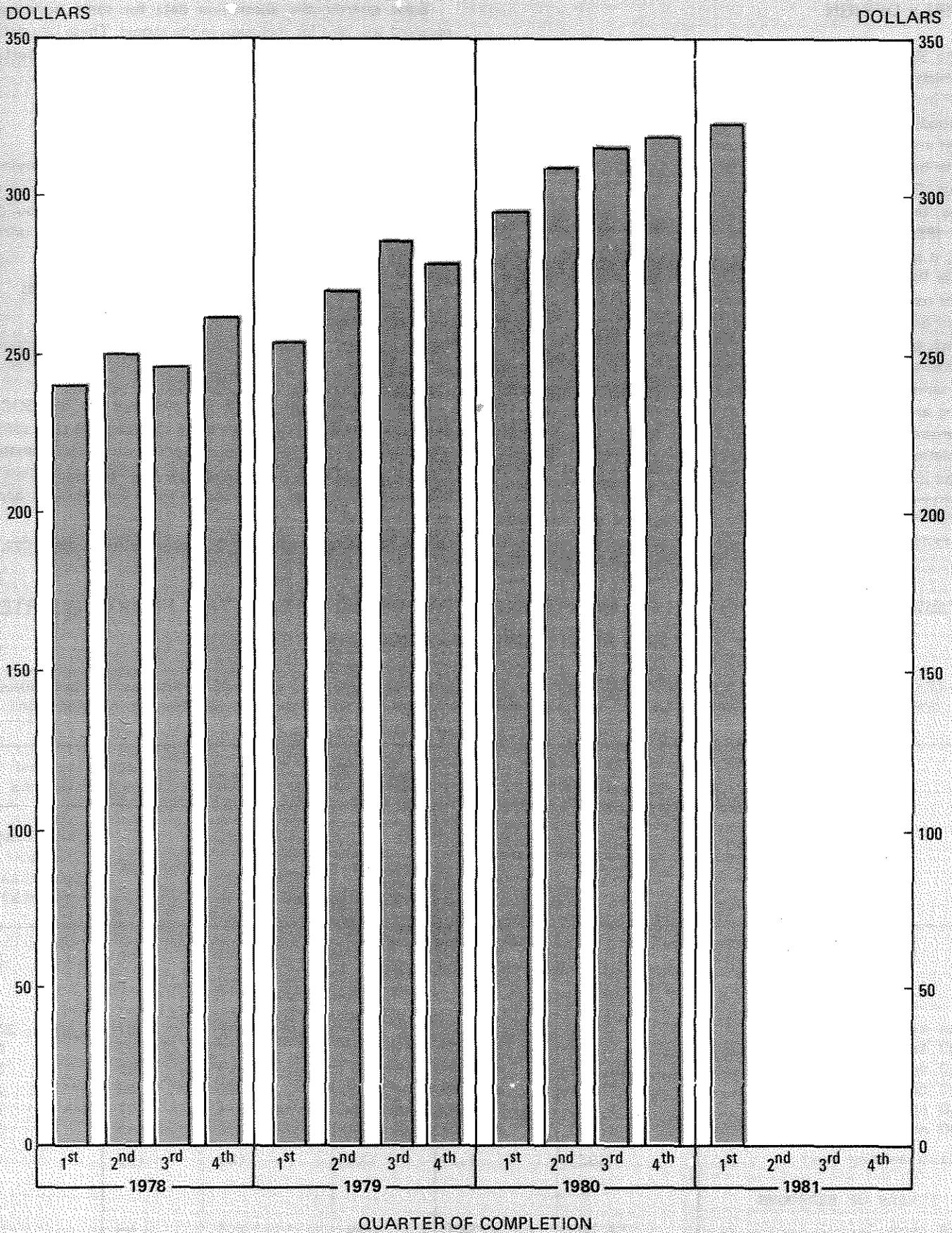
Table 1. CHARACTERISTICS OF APARTMENTS COMPLETED DURING THE FIRST QUARTER OF 1981 AND RENTED WITHIN 3 MONTHS

(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)

| 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..... | 31,500 | 1,780 | 100 | (X) | 78 | 2.9 |
| RENT CLASSES | | | | | | |
| Less than \$200..... | 200 | 180 | 1 | 0.7 | 97 | 15.2 |
| \$200 to \$249..... | 3,200 | 700 | 10 | 2.1 | 85 | 7.9 |
| \$250 to \$299..... | 7,600 | 1,050 | 24 | 3.0 | 86 | 5.0 |
| \$300 to \$349..... | 8,200 | 1,090 | 26 | 3.1 | 78 | 5.7 |
| \$350 to \$399..... | 5,400 | 900 | 17 | 2.7 | 68 | 8.0 |
| \$400 or more..... | 6,700 | 990 | 21 | 2.9 | 71 | 7.0 |
| Median asking rent..... | \$328 | 6.8 | (X) | (X) | (X) | (X) |
| NUMBER OF BEDROOMS | | | | | | |
| Less than 2..... | 14,800 | 1,400 | 47 | 3.5 | 79 | 4.2 |
| 2..... | 15,000 | 1,410 | 48 | 3.5 | 77 | 4.3 |
| 3 or more..... | 1,600 | 500 | 5 | 1.5 | 74 | 13.8 |

*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: 1978 to 1981



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

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.

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 or more units as well as a subsample of buildings with one to four units are selected.

Each quarter, all buildings with five or more housing units 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.

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

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

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:

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

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 1. 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

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

Table 2. CHARACTERISTICS OF APARTMENTS COMPLETED DURING THE FOURTH QUARTER OF 1980 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..... | 37,000 | 1,990 | 100 | (X) | 70 | 3.0 |
| RENT CLASSES | | | | | | |
| Less than \$200..... | 400 | 250 | 1 | 0.6 | 82 | 24.1 |
| \$200 to \$249..... | 4,900 | 860 | 13 | 2.2 | 83 | 6.7 |
| \$250 to \$299..... | 10,000 | 1,210 | 27 | 2.9 | 69 | 5.8 |
| \$300 to \$349..... | 7,200 | 1,040 | 19 | 2.6 | 67 | 7.0 |
| \$350 to \$399..... | 5,800 | 940 | 16 | 2.4 | 72 | 7.4 |
| \$400 or more..... | 8,800 | 1,160 | 24 | 2.8 | 65 | 6.4 |
| Median asking rent..... | \$323 | 9.1 | (X) | (X) | (X) | (X) |
| NUMBER OF BEDROOMS | | | | | | |
| Less than 2..... | 18,100 | 1,560 | 49 | 3.3 | 69 | 4.3 |
| 2..... | 17,300 | 1,530 | 47 | 3.3 | 71 | 4.3 |
| 3 or more..... | 1,600 | 500 | 4 | 1.3 | 68 | 14.7 |

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

Table 3. ABSORPTION RATES OF PRIVATELY FINANCED NONSUBSIDIZED UNFURNISHED APARTMENTS: 1978 TO 1981

(Structures with five units or more).

| Quarter of completion | Total units completed | | Seasonally adjusted rented within 3 months | | Not seasonally adjusted - rented within-- | | | | | | | |
|------------------------------------|-----------------------|------------------|--|---------------------------------------|---|---------------------------------------|----------|---------------------------------------|----------|---------------------------------------|-----------|---------------------------------------|
| | | | | | 3 months | | 6 months | | 9 months | | 12 months | |
| | Number | Sam-pling error* | Per-cent | Sam-pling error* (per-centage points) | Per-cent | Sam-pling error* (per-centage points) | Per-cent | Sam-pling error* (per-centage points) | Per-cent | Sam-pling error* (per-centage points) | Per-cent | Sam-pling error* (per-centage points) |
| 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 | 99 | 0.5 |
| July-September..... | 71,500 | 2,220 | 80 | 1.9 | 83 | 1.8 | 92 | 1.3 | 97 | 0.8 | 99 | 0.5 |
| October-December..... | 56,400 | 2,140 | 85 | 1.9 | 81 | 2.1 | 93 | 1.2 | 97 | 0.9 | 98 | 0.7 |
| 1979 | | | | | | | | | | | | |
| January-March..... | 53,900 | 2,060 | 86 | 1.9 | 83 | 2.0 | 95 | 1.2 | 99 | 0.5 | 99 | 0.5 |
| April-June..... | 59,900 | 2,260 | 80 | 2.1 | 84 | 1.9 | 94 | 1.2 | 97 | 0.9 | 98 | 0.7 |
| July-September..... | 66,700 | 2,430 | 81 | 1.9 | 82 | 1.9 | 91 | 1.4 | 97 | 0.8 | 99 | 0.5 |
| October-December..... | 60,600 | 2,360 | 84 | 1.9 | 81 | 2.0 | 93 | 1.3 | 97 | 0.9 | 99 | 0.5 |
| 1980 | | | | | | | | | | | | |
| January-March..... | 51,900 | 2,220 | 74 | 2.4 | 72 | 2.5 | 89 | 1.7 | 95 | 1.2 | 97 | 0.9 |
| April-June..... | 58,800 | 2,340 | 76 | 2.2 | 79 | 2.1 | 93 | 1.3 | 96 | 1.0 | 98 | 0.7 |
| July-September..... | 46,300 | 2,200 | 75 | 2.5 | 76 | 2.5 | 90 | 1.8 | 95 | 1.3 | (NA) | (NA) |
| October-December ^r | 37,000 | 1,990 | 74 | 2.8 | 70 | 3.0 | 86 | 2.3 | (NA) | (NA) | (NA) | (NA) |
| 1981 | | | | | | | | | | | | |
| January-March..... | 31,500 | 1,780 | 79 | 2.9 | 78 | 2.9 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) |
| April-June..... | | | | | | | | | | | | |
| July-September..... | | | | | | | | | | | | |
| October-December..... | | | | | | | | | | | | |

*Standard error within range of about 2 chances out of 3.

(NA) Not available.

^r Revised.

and also reduces, to some extent, the sampling variability of the estimates of totals.

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, 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 were 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 intervals from two standard errors below the estimate to two standard error 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.

For example, table 1 of this report shows that there were 15,000 apartments with two bedrooms in the first quarter of 1981. The standard error of this estimate is 1,410. The 68 percent confidence interval as shown by these data is from 13,590 to 16,410. 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 12,180 to 17,820 (using twice the standard error) with 95 percent confidence.

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: 1978 TO 1981

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

| Quarter of completion | Total units completed | | Percent of all 5+ units | | Absorbed within 3 months | |
|-------------------------------------|-----------------------|-----------------|-------------------------|-------------------------------------|--------------------------|-------------------------------------|
| | Number | Sampling error* | Percent | Sampling error* (percentage points) | Percent | Sampling error* (percentage points) |
| 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..... | 13,600 | 1,440 | 12 | 1.2 | 81 | 4.2 |
| October-December..... | 17,500 | 1,550 | 18 | 1.5 | 77 | 4.0 |
| 1979 | | | | | | |
| January-March..... | 16,700 | 1,510 | 18 | 1.6 | 80 | 3.9 |
| April-June..... | 23,200 | 1,760 | 22 | 1.6 | 73 | 3.6 |
| July-September..... | 23,300 | 1,790 | 19 | 1.4 | 76 | 3.4 |
| October-December..... | 28,600 | 1,930 | 24 | 1.6 | 72 | 3.3 |
| 1980 | | | | | | |
| January-March..... | 28,400 | 1,900 | 27 | 1.7 | 73 | 3.3 |
| April-June..... | 32,600 | 2,020 | 28 | 1.7 | 72 | 3.1 |
| July-September..... | 34,800 | 2,040 | 32 | 1.8 | 72 | 3.0 |
| October-December ^x | 28,100 | 1,840 | 31 | 1.9 | 70 | 3.4 |
| 1981 | | | | | | |
| January-March..... | 23,300 | 1,650 | 33 | 2.2 | 68 | 3.8 |
| April-June..... | | | | | | |
| July-September..... | | | | | | |
| October-December..... | | | | | | |

*Standard error within range of about 2 chances out of 3.

^xRevised.

Table 5. HOUSING UNITS COMPLETED IN BUILDINGS WITH FIVE UNITS OR MORE: 1979 TO 1981

(Limited to buildings in permit-issuing places)

| Quarter of completion | Total | | Unfurnished apartments | | Furnished apartments | | Cooperatives and condominiums | | Federally subsidized | | Other ¹ | |
|-----------------------------------|---------|-----------------|------------------------|-----------------|----------------------|-----------------|-------------------------------|-----------------|----------------------|-----------------|--------------------|-----------------|
| | Number | Sampling error* | Number | Sampling error* | Number | Sampling error* | Number | Sampling error* | Number | Sampling error* | Number | Sampling error* |
| 1979 | | | | | | | | | | | | |
| January-March..... | 91,000 | 3,930 | 53,900 | 2,060 | 3,500 | 730 | 16,700 | 1,510 | 14,800 | 1,440 | 2,000 | 560 |
| April-June..... | 107,600 | 4,300 | 59,900 | 2,260 | 1,900 | 540 | 23,200 | 1,760 | 21,700 | 1,710 | 900 | 380 |
| July-September..... | 123,400 | 4,630 | 66,700 | 2,430 | 3,700 | 760 | 23,300 | 1,790 | 27,100 | 1,900 | 2,600 | 640 |
| October-December.... | 117,300 | 4,510 | 60,600 | 2,360 | 3,000 | 680 | 28,600 | 1,930 | 23,900 | 1,800 | 1,200 | 430 |
| 1980 | | | | | | | | | | | | |
| January-March..... | 105,200 | 4,250 | 51,900 | 2,220 | 3,200 | 700 | 28,400 | 1,900 | 20,300 | 1,660 | 1,400 | 470 |
| April-June..... | 115,600 | 4,470 | 58,800 | 2,340 | 2,800 | 660 | 32,600 | 2,020 | 20,200 | 1,670 | 1,200 | 430 |
| July-September..... | 107,700 | 4,300 | 46,300 | 2,200 | 1,500 | 480 | 34,800 | 2,040 | 19,800 | 1,650 | 5,300 | 900 |
| October-December ² ... | 90,500 | 3,920 | 37,000 | 1,990 | 2,300 | 600 | 28,100 | 1,840 | 20,300 | 1,640 | 2,800 | 660 |
| 1981 | | | | | | | | | | | | |
| January-March..... | 70,600 | 3,430 | 31,500 | 1,780 | 1,400 | 470 | 23,300 | 1,650 | 9,500 | 1,160 | 5,000 | 870 |
| April-June..... | | | | | | | | | | | | |
| July-September..... | | | | | | | | | | | | |
| October-December.... | | | | | | | | | | | | |

*Standard error within range of about 2 chances out of 3.

²Revised.¹Other includes turnkey housing (privately built and sold to local public housing authorities subsequent to completion).

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