U.S. Department of Commerce BUREAU OF THE CENSUS
U.S. Department of Housing and Urban Development

## Market Absorption of Apartments

Second Quarter 1987-Absorptions (Completions in First Quarter 1987)

Figure 1.
Units in Apartment Buildings Started, Completed, and Absorbed: 1982 to 1987


Note: Limited to bulldings with five of more in permit-issuing places.

1. Source: Construction Reports, C20-87-2 (May 1987) table 2.
2. Source: Construction Reports, C22-87-2 (May 1987) table 2.
3. Privated financed, nonsubsidized, unfurished apartments.

Questions regarding these data maybe drected to Housing Division, Telephone 301-763-2866.
For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

## SUMMMARY

Privately financed, nonsubsidized, unfurnished rental apartments completed in buildings with 5 units or more during the January-March 1987 quarter were 60 percent absorbed (seasonally adjusted) 3 months after their completion. This is about the same as the revised 3 -month seasonally adjusted rate of 64 percent for apartments completed during the fourth quarter 1986. The not seasonally adjusted 3 -month rate of 58 percent continues the downward trend during the first quarter of the year that has been evident since 1984. Apartments which have been on the market for 9 months, those completed during July September 1986 were 92 percent absorbed.

The data are based on a sample survey and consequently the figures cited above are subject to sampling variability. As shown in the table 3 , the 60,58 , and 92 percent figures are subject to sampling errors (i.e., standard errors) of $1.8,1.8$, and 1.0 percentage points, respectively. This means that there are about 2 chances out of 3 that a complete count would be in the range of $60( \pm 1.8)$ percentage points, $58( \pm 1.8)$ percentage points, and $92( \pm 1.0)$ percentage points. Sampling errors for the figures that follow are indicated in parenthesis. ${ }^{1}$

A total of $126,500( \pm 8,000)$ apartments were completed during the first quarter of 1987. The number of privately financed, nonsubsidized, unfurnished apart-
${ }^{1}$ See Reliability of Estimates on page 4.
ments completed was $98,300( \pm 3,680)$, about $78( \pm$ 2.9 ) percent of total apartment completions during the quarter.

The median rent asked for unfurnished newly constructed units was $\$ 514( \pm 8.0)$ in the first quarter of 1987. This was significantly higher than the $\$ 4781 \pm$ 5.9) median rent asked for apartments completed in the fourth quarter. Apartments renting for less than $\$ 350$ accounted for $7( \pm 1.8)$ percent of unfurnished rental unit completions, while apartments renting for between $\$ 350$ and $\$ 549$ accounted for about one-half of these total completions. Higher priced apartments, those renting for $\$ 550$ or more, accounted for $42( \pm 3.4)$ percent of unfurnished rental completions, about the same percentage as for apartments renting for $\$ 500$ or more in the fourth quarter of 1986 . Just under half, $49( \pm 3.5)$ percent, of all newly constructed aparments were built with fewer than two bedrooms, $49( \pm 3.5)$ percent had two bedrooms. About $3( \pm 1.2)$ percent were built with three bedrooms or more.

The total number of unfumished units completed in the last 12 months reported as rented in the second quarter of 1987 was $90,500( \pm 6,010)$. The median rent asked for these units was $\$ 491( \pm 10.3)$. The total number of similar apartments remaining for rent at the end of the second quarter was $75,200( \pm 3,250)$ with a median asking rent of $\$ 494$ or more ( $\pm 11.6$ ).

Approximately $20,300( \pm 2,920)$ cooperative and condominium apartments were completed in the first quarter of 1987. This is significantly lower than the number of like apartments completed in the fourth quarter of

Table 1. Characteristics of Apartments Completed During First Quarter of 1987 and Rented Within 3 Months Not Seasonally Adjusted
(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 may not add to total due to rounding. Medians are computed using unrounded data.)


[^0]Figure 2.
Median Rent of Apartments Completed in the United States: 1984 to 1987


Figure 3.
Cooperative and Condominium Apartment Completions as Percent of Total Apartment Completions: 1984 to 1987


Note: Limited to Bulldings with five or more unlts in permit-issulng places.

1986, but not much different than the number built in the first quarter of 1986. Cooverative and condominum apartments accounted for about $16( \pm 5,2)$ percent of total first quarter 1987 completions. The 3 -month absorption rate for cooparative and condominium apartments was $79( \pm 5.8)$ percent. Of all newly constructed condominium apartments, nearly three quarters, or $74( \pm 5.6)$ percent, had 2 bedrooms. The median asking price for condominium units was $\$ 109,700( \pm 9,940)$, about the same as the median of $\$ 99,300( \pm 7,230)$ in the fourth quartar.

The total number of condominium apartments completed in the last 12 months reported as sold in the second quarter of 1987 was $21,000( \pm 3,100)$. The median price asked for these units was over $\$ 100,000$ $( \pm 3,500)$. The total number of condominium apartments remaining for sale at the end of the first quarter was only $15,700( \pm 2,550)$. These units also had a median asking price of over $\$ 100,000( \pm 3,500)$.

Units in federally subsidized properties buit under programs of the Department of Housing and Uiban Development llow 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) accounted for only 3 $( \pm 1,0)$ percent of total completions.

Furnished rental units accounted for just over $1( \pm 0.6)$ percent of apartment completions. The remaining units, $2( \pm 0.9)$ parcent, are not in the scope of the survey and include time-shaping units, continuing care retirement units, and turnkey housing (pivately built for and sold to local public housing authorities subsequent to completion). The data on privately financed units include priyately owned housing subsidized by State and local government.

## GAMPLE 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.

[^1]Each quarter, a sample of 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 obrained for units in buildings selected in a given quarter in each of the next tour quarters.

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 yeport. (See table 2. )

## ESTMATION

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 buldings. The tinal estimate is then obtained by multiplying the unbiased estimate by the following ratio estimate factor:
total units in $5+$ buildings in permit-issuing areas
as estimated by the SOC for that quarter
total units in $5+$ buldings as estimated by SOMA for that quarter

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.

It is assumed that the absorption rates and other char acteristics of units not included in the interviewed group of not accounted for are identical to rates for units where data were obtained. The noninterviewed and not-accounted-for cases constitute less that 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 assoclated 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

[^2]information on the part of respondents, mistakes in record" ing or coding the data, and other arrors of collection, response, processing, coverage, and estimation for missing data.

## Sampling Errors

The particular sample used for this survey is one of a lerge 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. Therefors, the accuracy of the estimates depends on both the sampling and nonsampling error measured by the standard error, blases, 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 sam-
ples 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 1 standard error below the estimate to 1 standard error above the estimate would include the average resuit 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 inolude the average result of all possible samples.
3. Approximately 95 percent of the intervals from 2 standard arrors below the estimate to 2 standard errors above the estimate would include the average result of all possible samples.

For very small estimates, the lower limit of the confin dence level maybe negative. In this case, a better approximation to the true interval estimate can be achieved by restricting the intervel 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. Howeyer, for a particular sample, one can say with specified confidence that the average result of all possible samples is included in the constructed interval.

Table 2. Characteristics of Apartments Completed During Fourth Ouarter of 1986 and Rented Within 3 Months (Revised)
Not Seasonally Adjusted
 i.a., 3 months following completion. Data may not add to total due to pounding. Modans are combuted using unvounded data. )

| hem | Total units completed |  | Percert of total units |  | Percent rented within 3 months |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Standard arror* | Percent | Standard arror* (percentage points) | Percent | Standard errof* (parcentige points) |
| Total <br> RENT CLASSES | 107,800 | 4,140 | 100 | (X) | 61 | 1.8 |
| Less than $\$ 300$ | 6,000 | 1,660 | 6 | 1.6 | 69 | 12.7 |
| \$300 to \$349 | 6,900 | 1,780 | 6 | 1.6 | 70 | 11.7 |
| \$350 to \$399 | 16,600 | 2,680 | 15 | 2.4 | 57 | 7.9 |
| \$400 to \$449 | 15,000 | 2,570 | 14 | 2.3 | 58 | 8.3 |
| \$450 to \$499 | 16,700 | 2,700 | 15 | 2.4 | 59 | 7.8 |
| \$500 or more. | 46,700 | 4,090 | 4.3 | 3.3 | 62 | 3.9 |
| Median asking rent . . . . . . . . . . . . . | \$478 | 5.9 | (X) | (X) | (x) | (X) |
| NUPREER OF BEDROOMS |  |  |  |  |  |  |
| Less than 2 . . . . . . . . . . . . . . . . . . . . . . . . . . . | 49,400 | 4,160 | 46 | 3.3 | 62 | 3.7 |
| 2. | 54,800 | 4,290 | 51 | 3.3 | 60 | 3.4 |
| 3 or more . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 3,500 | 1,280 | 3 | 1.1 | 69 | 16.8 |

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

The conclusions stated in this repont are considered significant at the 90 percent confidence tevel.

For example, table 1 of this report shows that there were 47,700 apartments with two bedrooms completed in the first quarter of 1987. The standard error of this estimate is 3,990 . The 68 percent confidence interval as shown by these data is from 43,710 to 51,690. Therefore, a conclusion that the average estimate derived from all
possible samples lies within a range computed in thisway would be correct for roughly 68 percent of all possible samples. Similarly, we could conchude that the average estmate derved from all possible samples lies within the interval from 41,316 to 54,084 (using 1.6 times the standard emron with 90 percent confidence.

The data in this report are preliminery and subject to slight changes in the annual repot.

Table 3. Absorption Rates of Privacely Financed Nonsubsitwed Unfumished Aparmants: 1984
(Structures with five units or more.)

| Quarter of completion | Total units completed |  | Seasonaly adiusted-- rented within 3 months |  | Not seasonaly adjusted-- rented within- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 3 months | 6 months |  | 9 months |  | 12 months |  |
|  | Number | Standard arro** |  |  | Percent | Stane ard errof ${ }^{*}$ (percentage points) | Percent | Stand ard error" (percentage points) | Percent | Standard efror* (percentage points) | Percent | Standard orror* (percentage points) | Percent | Standard error* (percentage points) |
| 1364 |  | 2,620 | 71 | 2.6 | 68 | 2.7 | 88 | 1.9 | $\begin{aligned} & 94 \\ & 04 \end{aligned}$ | 1.4 | 96 | 1.10.9 |
| Jenuary-March. | 68,900 |  |  |  |  |  |  |  |  |  |  |  |
| Apm-june........... | 84,800 | 3,790 | 68 | 2.5 | 72 | 2.4 | 88 | 1.7 |  | 1.3 |  |  |
| Juhy-Septomber . . . . . | 72,200 | 3,700 | 63 | $\begin{aligned} & 2.2 \\ & 2.0 \end{aligned}$ | 64 | 2.2 | 82 | 1.9 | 91 | 1.4 | 96 0.9 <br> 96 0.8 |  |
| October-December ... | 87,400 | 3,730 |  |  |  |  | 81 | 1.6 | 90 | 1.0 | 94 | 0.8 |
| 1985 |  |  | 66 | $2.0$ | 64 | 2.0 |  |  |  |  |  |  |
| January-March. . . . . . | 74,300 | 3,260 | 65 | 1.5 | 64 | 2.1 | 84 | 1.6 | 91 | 1.2 | 94 | 1.2 |
| April-June. . . . . . . . . | 94,200 | 4,080 |  | 2.0 | 68 | 2.0 | 85 | 4.5 | 92 | 1.1 | 95 | 0.9 |
| July-September . . . . . | 97,100 | 3,900 | 64 | 1.9 | 65 | 1.9 | 8382 | $\begin{aligned} & 1.5 \\ & 1.3 \end{aligned}$ | $91$ | 1.1 | 96 | 0.8 |
| October-Dacamber ... | 98,300 | 3,420 |  | 1.6 |  | 1.6 |  |  | $93$ | 0.9 | 96 | 0.7 |
| 1986 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March. . . . . . | 92,700 | 3,430 | 67 | 1.7 | 65 | 1.7 | 86 | 1.3 | 93 | 0.9 | 96 | 0.8 |
| April-June . . . . . . . . . | 99,600 | 4,020 | 63 | 1.9 | 66 | 1.9 | 84 | 1.4 | 81 | 1.11.0 | (NA) | 0.8(NA)(NA) |
| July-September . . . . . | 107,600 | 4,170 | 69 | 1.7 | 71 | 1.7 | 85 | 1.3 | 92 |  |  |  |
| October-December ${ }^{\text {a }}$. | 107,800 | 4,140 | 64 | 1.8 | 61 | 1.8 | 81 | 1.5 | (NA) | (NA) | (NA) |  |
| 1987 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March. . . . . . | 98,300 | 3,680 | 60 | 1.8 | 58 | 1.8 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) |
| April-June . . . . . . . . . |  |  |  |  |  |  |  |  |  |  |  |  |
| October-December . . . |  |  |  |  |  |  |  |  |  |  |  |  |

"Standard error within range of about 2 chances out of $3 . \quad$ (NA) Not available. revised.

Table 4. Absorption Rates of Cooperative and Condominium Apartments: 1984 to 1987
Not Seasonally Adjusted
Structures with five units or more)

*Standard error within range of about 2 chances out of 3 (NA) Not available. 'Revised.

## Table 5. Characterlstics of Condominhm Aparment Completed During First Ouartor of 1987 and Sold Withim 3 Months <br> \section*{Not Seasonally Adjusted}

(Frivety financed, nonsubsidized aparments. Deta regarding number of bedrooms and asking price are collected at thas initial intarviaw, l, s. 3 months following completion. Data may not add to total due to rounding. Modians tre computed using unrounded data.)

"Standard error within tange of about 2 chances out of 3 . (X) Not applicable.

Tabla 6. Housing Huts Complated in Buidings Whth Five Units or More: 1984101987
(Data may not add to total due to rounding.)

| Quartar of complation | Total |  | Unfurnished apartments |  | Furnished apartments |  | Cooperatives an condominiums |  | Federaly subsidiagod |  | Other ${ }^{\text { }}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | "Standard arror" | Number | $\begin{aligned} & \text { Stand } \\ & \text { ard } \\ & \text { error** } \end{aligned}$ | Nurnber | Stand <br> ard errot" | Number | Stand ard error* | Number | Standard arror* | Number | Standared arror* |
| 1984 |  |  |  |  |  |  |  |  |  |  |  |  |
| Janumamarch. | 104,400 | 5,110 | 68,900 | 2,620 | 1,700 | 630 | 23,600 | 2,150 | 6,200 | 1,980 | 4,000 | 960 |
| Aprildunge. | 138,100 | 7,260 | 84,800 | 3,790 | 2,700 | 970 | 38,500 | 3,290 | 8,000 | 1,750 | 3,100 | 1,040 |
| July-Saptember | 128,900 | 6,940 | 72,200 | 3,700 | 1,700 | 770 | 43,200 | 3,360 | 3,000 | 1,740 | 800 | 530 |
| October-December ... | 136,600 | 7,220 | 87,400 | 3,730 | 3,700 | 1,140 | 38,400 | 3,280 | 4,300 | 1,220 | 2,800 | 990 |
| T985 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March...... | 117,900 | 6,290 | 74,800 | 3,260 | 1,100 | 590 | 32,700 | 2,850 | 2,500 | 880 | 6,800 | 1,430 |
| April-June . . . . | 138,300 | 8,040 | 94,200 | 4,060 | 1,700 | 850 | 36,600 | 3,670 | 3,300 | 1,190 | 2,500 | 1,030 |
| July-September | 144,500 | 7.850 | 97,100 | 3,990 | 2,100 | 890 | 39,000 | 3,550 | 2,400 | 970 | 3,900 | 1.010 |
| October-December | 132,600 | 7,110 | 98,300 | 3,420 | 2,500 | 940 | 27,400 | 2,870 | 3,800 | 1,160 | 600 | 480 |
| 1986 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March. . . . . . | 123,400 | 7,220 | 92,700 | 3,430 | 1,400 | 710 | 23,300 | 2,830 | 5,300 | 1,440 | 700 | 530 |
| April-June .... . | 135,500 | 8,300 | 99,600 | 4,020 | 4,600 | 1,460 | 23,700 | 3,130 | 6,600 | 1,740 | 900 | 680 |
| July-September.. | 145,900 | 8,640 | 107,600 | 4,170 | 3,100 | 1,200 | 26,500 | 3,300 | 6,900 | 1,780 | 1,600 | 870 |
| October-December'... | 145,400 | 8,620 | 107,800 | 4,140 | 2,500 | 1.080 | 28,200 | 3,390 | 4,400 | 1,430 | 2,600 | 1,100 |
| 1987 |  |  |  |  |  |  |  |  |  |  |  |  |
| January-March....... | 126,500 | 8,000 | 98,300 | 3,680 | 1,400 | 810 | 20,300 | 2,920 | 3,700 | 1,310 | 2,900 | 1,160 |
| July-September ...... October-December .. |  |  |  |  |  |  |  |  |  |  |  |  |

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

Table 7. Characteristics of Unturnished Aparments Completed in Last 4 Ousters and Reported as Ranted and
Pemaning For Rent ln Sacond Quarter of 1987
(Privately financed, nonsubsidized, unfurnished apartmenta. Date fegarding rumber of bedrooms and asking pent are collected at the initial interview, i.e., z months following complation. Data may not add to total due to rounding. Medians are computed using unpounded data.)


* Whandard entor whin range of about 2 chances out of 3 .

Noterthese data are for second, thits and fourth quarter 1986 and first quater 1987 completiones.

Trablo 8. Charactaristics of Condominhmm Aparmente Complated in tase atuarers and Reportod as Sold and Remaining For Salo in Second Cumer of 1987
(Privately financed, nonsubsidized apartments. Data regarding number of bedroons and asking price are collected at the intial interview, i.e.; 3 months following complation. Data may not add to total due to rounding. Wedians are computed using unrounded data.)

*Standard error within pange of about 2 chances out of 3 .
Note:These data are for second, third and fourth quarter 1986 and first quarter 1987 completions.

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[^0]:    *Standard error within range of about 2 chances out of 3 . (X) Not applicable.

[^1]:    ${ }^{2}$ See "Housing Starts," Construction Reports, Series C20, for details of this survey.

[^2]:    ${ }^{3}$ See "Housing Completions," Construction Reports, Series C22.

