

Survey of Market Absorption of New Multifamily Units

***Fourth Quarter 2015 – ABSORPTIONS
(Completions in Third Quarter 2015)***

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U.S. Census Bureau
U.S. Department of Housing
and Urban Development

Questions regarding these data, or for further information on the **Survey of Market Absorption of Apartments Data**, may be directed to **Social, Economic, and Housing Statistics Division (SEHSD)**, Telephone 301-763-3199 or Contact George Boyd at george.t.boyd@census.gov.

INTRODUCTION

Both private industry and government need information on the nature of the demand for rental housing. For over forty years, the Survey of Market Absorption of New Multifamily Units (SOMA) has measured how soon privately financed, non-subsidized, unfurnished units in buildings with five or more units are rented or sold (absorbed) after completion. In addition, the survey has collected data on characteristics such as number of bedrooms, asking rent, and asking price. This publication is of value to builders, bankers, market analysts, land planners, and government officials trying to measure the needs for federal, state and local assistance in providing better housing.

SOMA produces and releases Quarterly Reports three months after the end of the absorption quarter. For example, units completed/constructed in the First Quarter (January, February, and March) will have their initial absorptions recorded in the Second quarter (April, May, and June). In July and August, the data are analyzed and a report is released to the public the first week of September. For additional information, see [SAMPLE DESIGN](#).

In early April, an Annual Report is released that details information on all privately financed, nonsubsidized, unfurnished units in buildings with five or more units *absorbed* in the previous year. This report provides details on all construction and breaks down absorption in 3-month, 6-month, 9-month, and 12-month categories. Additionally, every five years, a comprehensive report is produced that includes ten (10) additional tables. These additional tables also provide historical data as restricted to privately financed, nonsubsidized, unfurnished rental apartments and condominium/cooperative units.

In early July, a Characteristics (Semi-Annual) Report is released which provides an overview of all privately financed, nonsubsidized, unfurnished units in buildings with five or more units *constructed* in the previous year. The report, along with construction data, includes details exclusive to the 3-month absorption rates for all of those units.

These statistics are based on a survey conducted by the U.S. Census Bureau, U.S. Department of Commerce, for the Department of Housing and Urban Development. The estimates in these reports are based on responses from a sample of the population. As with all surveys, estimates may vary from actual values because of sampling variation or other factors. All comparisons made in this report have undergone statistical testing and are significant at the 90-percent confidence level.

Seasonally Adjusted Data

The construction of new housing units is typically higher during certain times of the year as opposed to others. For example, construction in the Northeast is lowest in December, January and February, when it is curtailed due to weather conditions (cold, snow, etc.). In contrast, new construction tends to rise during the summer.

These seasonal changes in the number of new constructions reflect typical weather

patterns that have a tendency to be repeated year after year. These changes make it difficult to determine whether changes from one month to the next are a measurement of normal seasonal patterns or to varying economic conditions. To adjust for these seasonal changes, a statistical technique called “seasonal adjustment” is used. Seasonally adjusting brings into play the previous history of the series to identify the seasonal movements and to calculate the size and direction of these movements. A seasonal adjustment factor is then developed and applied to the estimates to eliminate the effects of regular seasonal fluctuations on the data. When a statistical series has been seasonally adjusted, the normal seasonal fluctuations are smoothed out and data for any month may be more meaningfully compared with data from any other month or with an annual average. Many time series that are based on monthly data are seasonally adjusted.

HIGHLIGHTS¹

- *NEW CONSTRUCTION, PRIVATE, UNFURNISHED:* There were approximately 83,500 privately financed, nonsubsidized, unfurnished, rental apartments completed in buildings with five units or more in the third quarter of 2015. That figure was 15,900 more than the revised estimate of 67,600 units constructed in the previous quarter. The 83,500 completions in the third quarter of 2015 represents the largest number of completions in the third quarter in over 25 years. In the third quarter of 1989 approximately 92,300 units built - these two numbers did not differ significantly ([Table 1](#) and [Table 11](#); [Figures 4](#) and [5](#)).

Of the 251,700 total number of new unfurnished rental construction in buildings with five units or more completed in the past four quarters, 132,500 units were rented prior to the fourth quarter of 2015. There were 72,200 units rented in the fourth quarter of 2015 with approximately 47,000 units remaining in the market for rent at the end of the fourth quarter ([Tables 9](#) and [9a](#)).

- *ABSORPTION - SEASONALLY ADJUSTED:* There was no significant difference in the seasonally adjusted absorption rate of the new completed, unfurnished rental apartments built in the third quarter of 2015 and the figure from the previous quarter, nor the same quarter in 2014. In the third quarter of 2015, approximately 61 were rented (absorbed) within three months of completion, compared to the 63 percent in the previous quarter and 62 percent in the third quarter of 2014 ([Table 1](#)).
- *ABSORPTION - NOT SEASONALLY ADJUSTED:* The not-seasonally-adjusted 3-month absorption rate of 63 percent for apartments completed in the third quarter of 2015 was five percentage points lower than the previous quarter (68 percent). There was no significant difference between the 2015 third quarter not-seasonally-adjusted 3-month absorption rate and the 64 percent reported in the third quarter of 2014 ([Table 1](#)).

- *RENT:* The median asking rent in the third quarter of 2015 for all privately financed, nonsubsidized, unfurnished rental units completed in buildings with five units or more was \$1,331. This figure did not differ significantly from the revised median asking rent of \$1,386, in the previous quarter. The median asking rent in the third quarter of 2015 was \$83 lower than the median asking rent of \$1,414 (\$1,418 in 2015 dollars) in the third quarter of 2014 ([Tables 2, 2a, and 3](#)).
- *NUMBER OF BEDROOMS:* During the third quarter of 2015, one bedroom (43 percent) and the two bedroom (42 percent) units accounted for the two largest percentages of the new unfurnished rental construction in buildings with five units or more. These percentages did not differ significantly from each other but were both higher than the estimated six percent of efficiency (no bedroom) units and the eight percent units rented with of three-or-more bedrooms. Both these numbers did not differ from each other ([Table 2; Figure 5](#)).

REGIONS: In the third quarter of 2015, the largest percentage of new unfurnished rental construction in buildings with five units or more was the 40 percent produced in the South. The Midwest (25 percent) and the West (26 percent) did not differ significantly. The Northeast comprised the smallest percentage with nine percent of the nation's new construction ([Table 4](#)).

- *CONDOMINIUMS AND CO-OPS:* An estimated 3,800 condominium and cooperative apartments in buildings with five units or more were completed in the third quarter of 2015. This figure did not differ statistically from the revised estimate of 2,700 units in the previous quarter. The 3,800 condominium and cooperative units constructed in the third quarter of 2015 was approximately 1,900 more than the units constructed in the third quarter of 2014. Condominium and cooperative units accounted for approximately four percent of all completions in buildings with five units or more during the third quarter in 2015 ([Tables 5 and Table 11; Figures 2 and 6](#)).
- *CONDOMINIUM ABSORPTION:* Of the 3,800 condominium apartments completed in the third quarter of 2015, approximately 52 percent were sold within three months of completion. This figure did not differ significantly from the revised three-month absorption rate of 63 percent in the previous quarter. The \$314,400 median asking price for new condominiums built in the third quarter of 2015 was approximately \$233,000 less than the revised median asking price of \$547,000 for units built in the previous quarter ([Tables 6 and 7](#)).

Of the 9,700 total number of new unfurnished condominium construction in buildings with five units or more completed in the past four quarters, 4,600 units were rented prior to the fourth quarter of 2015. There were 2,800 units rented in the fourth quarter of 2015 and approximately 2,300 units remained on the market for sale at the end of the fourth quarter ([Tables 10 and 10a](#)).

- *ALL APARTMENTS:* An estimated 99,700 apartments were constructed in buildings with five units or more in the third quarter of 2015. This is approximately 18,800 units more than the 80,900 number of units built in the previous quarter. The 99,700 units constructed in the third quarter of 2015 represents the largest number of completions in the third quarter since 2004 when 85,900 (not significantly different) were built ([Table 11](#); [Figure 3](#)).
- *OTHER UNITS:* Of the remaining apartments completed in all buildings with five units or more in the third quarter of 2015, approximately 4,700 were available as furnished units, 7,600 units were federally subsidized or receiving a tax credit ([Figure 7](#)), and about 100 units did not fall within the scope of the survey ([Table 11](#); [Figure 8](#)).

CHARACTERISTICS OF THE DATA

All statistics from the SOMA refer to apartments in newly constructed buildings with five units or more. Absorption rates reflect the first time an apartment is rented after completion or the first time a condominium or cooperative apartment is sold after completion. If apartments initially intended to be sold as condominium or cooperative units are, instead, offered by the builder or building owner for rent, they are counted as rental apartments. Units categorized as federally subsidized or receiving tax credits include the units subsidized under the following Department of Housing and Urban Development (HUD) or Federal Housing Administration (FHA) programs --Sections 8, 202, 811, 221(d)(3) or 221 (d)(4). In addition, units receiving Low Income Housing Tax Credit (LIHTC) through the Internal Revenue Service program are included in this category. The data on privately financed units include privately-owned housing subsidized by state and local governments. Time-share units, continuing-care retirement units, and turnkey units (privately built for and sold to local public housing authorities after completion) are outside the scope of the survey.

[Tables 1, 2, 2a, 3, 4, 9](#) and [9a](#) provide information about privately financed, nonsubsidized, unfurnished, rental apartments. Table 5 provides information about privately financed, nonsubsidized condominium and cooperative apartments, while [Tables 6, 7, 8, 10](#), and [10a](#) provide information about condominium apartments only. [Table 11](#) summarizes the totals for all types of newly constructed apartments in buildings with five units or more.

Additionally, SOMA tabulates and reports absorption rates for units based on their **Core Based Statistical Area** (CBSA). CBSAs include an urban center of at least 10,000 people and adjacent areas that are socioeconomically tied to the urban center by commuting. The term "CBSA" refers collectively to both metropolitan statistical areas and micropolitan areas. Micropolitan areas are based around Census Bureau-defined urban clusters of at least 10,000 and fewer than 50,000 people. Absorption rates within the CBSAs are further divided into Inside Principal City and Outside Principal City.

Principal Cities of a CBSA are the largest incorporated places with a population of at least 10,000 in the CBSA. If there is no such place present in the CBSA, the largest incorporated place or census designated place (CDP) in the CBSA is termed the Principal City. Principal cities also include any additional incorporated place or CDP with a population of at least 250,000 or in which 100,000 or more persons work.

NOTE TO DATA USERS

The SOMA adopted new ratio estimation procedures in 1990 to derive more accurate estimates of completions (See [ESTIMATION](#) below). Please use caution when comparing the number of completions in 1990 and following years with those in earlier years.

SAMPLE DESIGN

The Census Bureau designed the survey to provide data concerning the rate at which privately financed, nonsubsidized, unfurnished units in buildings with five or more units are rented or sold (absorbed). In addition, the survey collects data on characteristics such as number of bedrooms, asking rent, and asking price.

Buildings for the survey come from those included in the Census Bureau's Survey of Construction (SOC).² For the SOC, the United States is first divided into primary sampling units (PSUs), which are stratified based on population and building permits. The PSUs to be used for the survey are then randomly selected from each stratum. Next, a sample of geographic locations that issue permits is chosen within each of the selected PSUs. All newly constructed buildings with five units or more within sampled places and a subsample of buildings with one to four units are included in the SOC.

For SOMA, each quarter the Census Bureau selects a sample of buildings with five or more units that have been reported in the SOC sample as having been completed during that quarter. The SOMA does not include buildings completed in areas that do not issue permits.

In each of the subsequent four quarters, the proportion of units in the quarterly sample that are sold or rented (absorbed) are recorded, providing data for absorption rates 3, 6, 9, and 12 months after completion.

An annual SOMA report is produced at the end of the first quarter of every year and details absorption information for all privately financed, nonsubsidized, unfurnished units in buildings with five or more units from the previous year. Additionally, every five years a comprehensive report is produced that includes ten (10) additional tables that provide historical data as restricted to privately financed, nonsubsidized, unfurnished rental apartments and condominium/cooperative units.

ESTIMATION

The Census Bureau publishes preliminary estimates for a given quarter and may revise these estimates in ensuing quarters. Each quarter, some of the absorption data for some buildings arrive after the deadline for that quarter's report; these late data appear in a revised table in the next quarterly report. Final data appear in the Census Bureau's H-130 report series, *Market Absorption of Apartments* annual report.

Beginning with data on completions in the fourth quarter of 1990 (which formed the basis for absorptions in the first quarter of 1991), the Census Bureau modified the estimation procedure and applied the new procedure to the data for the other three quarters of 1990, so that annual estimates using the same methodology for four quarters could be derived. The Census Bureau did not perform any additional re-estimation of past data.

Using the original estimation procedure, the Census Bureau created design-unbiased estimates by multiplying the counts for each building by its base weight (the inverse of its probability of selection) and then summing over all buildings. Multiplying the design-unbiased estimate by the following ratio estimate factor for the country as a whole provided the final estimate:

$$\frac{\text{(Total units in buildings with five or more units in permit-issuing areas as estimated by the SOC for that quarter)}^3}{\text{(Total units in building with five or more units as estimated by the SOMA for that quarter)}}$$

In the modified estimation procedure, instead of applying a single ratio-estimate factor for the entire country, the Census Bureau computes separate ratio-estimate factors for each of the four census regions. Multiplying the unbiased regional estimates by the corresponding ratio-estimate factors provides the final estimate for regions. The Census Bureau obtains the final estimate for the country by summing the final regional estimates.

This procedure produces estimates of the units completed in a given quarter that are consistent with the published figures from the SOC and reduces, to some extent, the sampling variability of the estimates of totals.

Absorption rates and other characteristics of units not included in the interviewed group or not accounted for are assumed to be identical to rates for units about which data were obtained. The noninterviewed and not accounted for cases constitute less than 2 percent of the sample housing units in this survey.

ACCURACY OF THE ESTIMATES

The SOMA is a sample survey and consequently all statistics in this report are subject to sampling variability. Estimates derived from different samples would likely differ from these.

Two types of possible errors are associated with data from sample surveys: nonsampling and sampling.

Nonsampling Errors

In general, nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample, difficulties with definitions, differences in interpreting questions, inability or unwillingness of the respondents to provide correct information, and data processing errors. Although no direct measurements of any bias that might result from nonsampling errors have been obtained, the Census Bureau thinks that many of the important response and operational errors were detected during review of the data for reasonableness and consistency.

Sampling Errors

The particular sample used for this survey is one of many possible samples of the same size that could have been selected using the same design. Even if the same questionnaires, instructions, and interviewers were used, estimates from different samples would likely differ from each other. The deviation of a sample estimate from the average of estimates from all possible samples is defined as the sampling error. The standard error of a survey estimate provides a measure of this variation and, thus, is a measure of the precision with which an estimate from a sample approximates the average result from all possible samples.

If all possible samples were selected, if each was surveyed under the same general conditions, and if an estimate and its estimated standard error were calculated from each sample, then:

Approximately 90 percent of the intervals from 1.645 standard errors below the estimate to 1.645 standard errors above the estimate (i.e., the 90 percent confidence interval) would include the average result from all possible samples.

This report uses a 90-percent confidence level as its standard for statistical significance.⁴ The estimates in this report show the totals, percents, and medians with the 90-percent confidence interval.

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 from 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 from all possible samples is included in the constructed interval.

For example, [Table 2](#) of this report illustrates that during the third quarter of 2015, there were approximately 15,400 apartments with an asking rent between \$1,050 and \$1,249. The 90-percent confidence interval around this estimate is 15,400+/- 2,426. Thus, the 90-percent confidence interval shown by these data is from 12,974 to 17,826. A conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 90 percent of all possible samples.

1. Details may not sum to totals because of rounding.
2. See Section V (sample design)
http://www.census.gov/construction/nrc/how_the_data_are_collected/soc.html for further details on the SOC sample design.
3. Beginning with January 2001 completions, the SOC revised its methodology for estimating the number of units completed for 5+ multi-unit structures. See http://www.census.gov/ftp/pub/const/www/new_methodology_const.html for these changes. Thus, caution is advised when comparing data from 2001 and forward to any estimates prior to 2001.
4. Beginning with data for completions in the third quarter of 1999, the Census Bureau implemented a new procedure for computing standard errors. The new procedure may result in differences in standard errors derived using the prior methodology, so standard errors were revised back to the third quarter of 1998.