

Survey of Market Absorption of New Multifamily Units

***Fourth Quarter 2014 – ABSORPTIONS
(Completions in Third Quarter 2014)***

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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 have seen the need for 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 for everyone.

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

In April of 2014, the Survey of Market Absorption of New Multifamily Units (SOMA) began using interviewing software on laptop computers to collect data for January 2014 completions. At the same time, we revised the cost ranges for residential buildings containing five or more units, and modified items associated with the utilities and building amenities. The SOMA data for units completed in 2013 will continue to be interviewed using paper questionnaires. Due to changes in some questions, modifications have been made to the September 2014 SOMA report and tables in order to incorporate data from all interviews for the quarterly reports.

The 2015 Second Quarter Absorptions (First Quarter Completions) report, scheduled for release in September 2015, will contain the new tables and revised data based on laptop interviewing.

- **NEW CONSTRUCTION, PRIVATE, UNFURNISHED:** There were approximately 66,700 privately financed, nonsubsidized, unfurnished, rental apartments completed in buildings with five units or more in the third quarter of 2014. This figure represents the largest number of completions since the third quarter in 2002, when 61,700 units were reported. The 66,700 units construction in the third quarter of 2014 was approximately 16,400 units greater than the revised estimate of unfurnished units completed in the previous quarter (50,300). The 66,700 completions in the third quarter of 2014 were approximately 23,600 units greater than the number of completions (43,100) reported in the same quarter of 2013 ([Table 1](#) and [11](#)).
- **ABSORPTION - SEASONALLY ADJUSTED:** An estimated 63 percent (seasonally adjusted) of the new completed, unfurnished apartments built in the third quarter of 2014 were rented (absorbed) within three months of completion. This estimate did not differ significantly from the seasonally adjusted figure of 61 percent reported in the previous quarter. The 2014 third quarter seasonally adjusted

percent also did not differ significantly from the 62 percent three-month seasonally adjusted figure in the third quarter of 2013 ([Table 1](#)).

- *ABSORPTION - NOT SEASONALLY ADJUSTED:* The not-seasonally-adjusted 3-month absorption rate of 65 percent for apartments completed in the third quarter of 2014, did not differ significantly from the 66 percent absorption rate from the previous quarter. Nor did the 2014 third quarter rate differ significantly from the 64 percent absorption rate reported during the same quarter in 2013 ([Table 1](#)).
- *RENT:* The median asking rent in the third quarter of 2014 for all privately financed, nonsubsidized, unfurnished rental units completed in buildings with five units or more exceeded the SOMA upper range of \$1,250 or more. The revised estimate of median asking rent for units completed in the second quarter of 2014, also exceeded the SOMA upper range. The median asking rent in the third quarter of 2013 was \$1,238 ([Tables 2](#), [2a](#), and [3](#)).
- *NUMBER OF BEDROOMS:* During the third quarter of 2014, one-bedroom units accounted for 44 percent of the new unfurnished rental construction in buildings with five units or more. This figure did not differ significantly different from the 42 percent of the units constructed with two-bedroom in the same quarter. These one-bedroom and two-bedroom unit percentages were higher than both the six percent designated as efficiencies (no bedroom units), and the nine percent designated as three-bedroom-or-more units in the same quarter. The efficiency unit and three-plus unit percentages were significantly different from each other ([Table 2](#)).
- *REGIONS:* In the third quarter of 2014, the South led the nation in new unfurnished rental construction with 45 percent. New construction in the West accounted for 20 percent of the U.S. total. This figure did not differ significantly from construction in the Midwest and Northeast, both reporting 18 percent ([Table 4](#)).
- *CONDOMINIUMS AND CO-OPS:* An estimated 2,000 condominium and cooperative apartments in buildings with five units or more were completed in the third quarter of 2014. This estimate did not differ significantly from revised estimate of 1,600 units in the previous quarter, or from the 1,400 units constructed in the third quarter of the previous year. Condominium and cooperative units accounted for approximately two percent of all completions in buildings with five units or more during the third quarter in 2014 ([Tables 5](#) and [11](#)).
- *CONDOMINIUM ABSORPTION:* Of the 2,000 condominium apartments completed in the third quarter of 2014, approximately 59 percent were sold within three months of completion. This figure was lower than the revised three-month absorption rate in the previous quarter (78 percent). The median asking price for new condominiums built in the third quarter of 2014 was \$385,700, whereas the revised median asking price for units built in the previous quarter exceeded SOMA's upper limit of \$450,000 ([Tables 6](#) and [7](#)).

- *ALL APARTMENTS:* An estimated 82,400 apartments were completed in buildings with five units or more in the third quarter of 2014. This estimate of completions represents the largest number reported since 2008, when 77,200 units were constructed in the fourth of that year. The third quarter of 2014 figure is approximately 26,000 units greater than the number of units built in the previous quarter (56,400), and 24,900 more than the 57,500 constructed in the same quarter of the previous year ([Table 11](#)).
- *OTHER UNITS:* Of the remaining apartments completed in all buildings with five units or more in the third quarter of 2014, approximately 4,400 were available as furnished units, 8,800 units were federally subsidized or receiving a tax credit, and about 600 units that did not fall within the scope of the survey. ([Table 11](#)).

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 U.S. 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 significance⁴. 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 1](#) of this report shows that during the first quarter of 2014, approximately 66,700 unfurnished rental apartment units were. The 90-percent confidence interval around this estimate is 66,700 +/- 4,170. Thus, the 90-percent confidence interval shown by these data is from 62,530 to 70,870. 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.

End

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.
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