

# Survey of Market Absorption of New Multifamily Units

***First Quarter 2014 – ABSORPTIONS  
(Completions in Fourth Quarter 2013)***

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BUREAU OF THE CENSUS  
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and Urban Development

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# INTRODUCTION

Since the construction boom of the early 1970's, 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) continues to measure 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 Third 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 Bureau of the Census, 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.

## HIGHLIGHTS<sup>1</sup>

- *NEW CONSTRUCTION, PRIVATE, UNFURNISHED:* There were approximately 33,600 privately financed, nonsubsidized, unfurnished, rental apartments completed in buildings with five units or more in the fourth quarter of 2013. This estimate was approximately 9,800 units fewer than the revised estimate of unfurnished units completed in the previous quarter (43,400). There was no statistical difference between the estimated number units constructed in fourth quarter 2013 and the 31,100 reported in the fourth quarter of 2012. ([Table 1](#) and [11](#)).
- *ABSORPTION - SEASONALLY ADJUSTED:* An estimated 64 percent (seasonally adjusted) of the new completed, unfurnished apartments built in the fourth quarter of 2013 were rented (absorbed) within three months of completion. This estimate was not statistically different from both the revised three month seasonally adjusted absorption figure of 63 percent reported in the previous quarter, and the 61 percent reported in fourth quarter of 2012 ([Table 1](#)).
- *ABSORPTION - NOT SEASONALLY ADJUSTED:* The not-seasonally-adjusted 3-month absorption rate of 60 percent for new apartments completed in the fourth quarter of 2013, was lower than the revised estimate of 64 percent reported in the previous quarter. However, there was no statistical difference between the not-seasonally-adjusted 3-month absorption rate for the fourth quarter 2013 and the 58 percent reported in the fourth quarter of 2012 ([Table 1](#)).
- *RENT:* In the fourth quarter of 2013, the median asking rent for all privately financed, nonsubsidized, unfurnished rental units completed in buildings with five units or more was \$1,314. This estimate did not differ significantly from the median asking rent of \$1,239, for units completed in the third quarter of 2013 ([Tables 2](#) and [3](#)). The fourth quarter 2013 median asking rent was about \$234 higher than the \$1,080 median asking rent (\$1,096 in 2013 dollars) reported for completions in the fourth quarter of 2012 ([Table 2a](#)).

- *NUMBER OF BEDROOMS:* During the fourth quarter of 2013, two bedroom units accounted for 45 percent of the new unfurnished rental construction. Units containing one bedroom comprised the next largest group accounting for 40 percent. Units classified as efficiencies (seven percent) and units renting with 3-or-more bedrooms (eight percent) did not differ statistically. However, both were lower than the one and two bedroom unit percentages ([Table 2](#)).
- *REGIONS:* In the fourth quarter of 2013, the South led the nation with 58 percent of the new unfurnished rental construction. New construction in the West was next highest, accounting for 22 percent of the U.S. total followed by the Midwest with 14 percent. The Northeast, with five percent, reported the least amount of new construction in the fourth quarter ([Table 4](#)).
- *CONDOMINIUMS AND CO-OPS:* An estimated 2,100 condominium and cooperative apartments in buildings with five units or more were completed in the fourth quarter of 2013. This figure did not differ statistically from either the 1,500 units reported in the previous quarter nor the 1,900 reported during the fourth quarter in 2012. Condominium and cooperative units accounted for approximately four percent of all completions in buildings with five units or more during the fourth quarter in 2013 ([Tables 5](#) and [11](#)).
- *CONDOMINIUM ABSORPTION:* Of the approximately 2,100 condominium apartments completed in the fourth quarter of 2013, approximately 71 percent sold within three months of completion. This rate was about 16 percentage points lower than the 87 percent absorption rate in the previous quarter. The median asking price of \$409,400 for new condominiums built in the fourth quarter of 2013 was not statistically different from the \$372,200 median asking price for units built in the third quarter of 2013 ([Tables 6](#) and [7](#)).
- *ALL APARTMENTS:* There were an estimated 50,900 apartments completed in buildings with five units or more during the fourth quarter of 2013. This estimate is 6,600 units fewer than the number completed in the previous quarter (57,500), However the 50,900 units were 8,800 more than the estimated 42,100 reported in the fourth quarter of 2012 ([Table 11](#)).
- *OTHER UNITS:* Of the remaining apartments completed in all buildings with five units or more in the fourth quarter of 2013, approximately 200 were available as furnished units, 15,000 units were federally subsidized or receiving a tax credit, and fewer than 50 units were out of scope. ([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 [10 A](#) 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) <sup>2</sup>. 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.<sup>4</sup> 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, [Table11](#) of this report shows that the total number of apartments constructed during the fourth quarter of 2013, was 50,900. The 90-percent confidence interval around this estimate is 4,700 +/- 50,900. Thus, the 90-percent confidence interval shown by these data is from 46,200 to 55,600. 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.

## Footnotes

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](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](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.