

# Survey of Market Absorption of New Multifamily Units

## *Characteristics Report (Apartments Completed in 2014)*

H130/14-C  
Issued September 2015

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. Census Bureau  
U.S. Department of Housing  
and Urban Development

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## INTRODUCTION

Both private industry and government have an urgent 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, nonsubsidized, unfurnished units in buildings with five or more units are rented or sold (absorbed) after completion. The *2014 Characteristics Report* provides details about units constructed in 2014, yet not necessarily absorbed, 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.

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. As with all surveys, estimates may vary from actual values because of sampling variation or other factors. All statements in this report have undergone statistical testing and are significant at the 90-percent confidence level.

## HIGHLIGHTS<sup>1</sup>

- ***NEW CONSTRUCTION, PRIVATE, UNFURNISHED APARTMENT UNITS:*** Preliminary estimates from the Survey of Market Absorption of New Multifamily Units show that, during 2014, a total of 209,100 privately financed, nonsubsidized, unfurnished rental apartments in buildings with five units or more were completed in permit-issuing areas in the United States. This was an increase of approximately 74,900 from the 134,200 units constructed in 2013. The 209,100 units also represents the highest number of completions since 2002, when 204,100 units were constructed ([Tables 1 and 9](#); [Chart A](#)).

One-bedroom units accounted for 45 percent (93,200) of the new rental construction in 2014. This percentage did not differ significantly from the 41 percent (86,500) of new two-bedroom unit construction. These two percentages were higher than both the seven percent designated as an efficiency (no bedroom), and those units constructed with three-or-more bedrooms in 2014. The percent of efficiency units and three-plus units did not differ significantly from each other ([Table 1](#); [Chart B](#)).

- ***ABSORPTIONS (BEDROOMS):*** There were no significant differences among the 3-month absorption rate for efficiencies (64 percent), 1-bedroom (63 percent), 2-bedroom (61 percent), and 3-or-more bedroom (64 percent) units built in 2014 ([Table 2](#)).

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<sup>1</sup>Details may not sum to totals because of rounding.

- **RENT:** The median monthly asking rent for all unfurnished rental apartments completed in 2014 was \$1,372. This figure was not significantly different than the median asking rent of \$1,267 (\$1,288 in 2014 dollars) for unfurnished apartments completed in 2013. The median asking monthly rent for new unfurnished apartments was highest in the Northeast at 2,278. This was followed by the West at \$1,608 and the South at \$1,324. The Midwest had the lowest median asking monthly rent at \$1,029.

The percentage of new construction renting between \$850 to \$1,049, and units in the \$1,250 to \$1,449 range (both 16 percent), and those renting in the \$1,050 to \$1,249 range (15 percent), and those renting for \$2,450 or more (13 percent) did not differ significantly. However, those four percentages were higher than the percentage distributions of each of the remaining six ranges.

Units renting from \$1,450 to \$1,649, and units renting for less than \$850 each accounted for 10 percent of construction and did not differ significantly from each other. They also did not differ significantly from the eight percent available in the \$1,650 to \$1,849 range. However, all three percentages were higher than the units renting in the \$1,850 to \$1,649 range (5 percent), \$2,250 to \$2,449 range (4 percent), and the \$2,050 to \$2,249 range (3 percent) ([Table 1](#)).

- **ABSORPTIONS (RENTS):** After three months on the market, there were no significant differences in the percentage of units rented in each of the rent ranges – Northeast (56), Midwest (60), South (62), and West (68) ([Table 2](#)).
- **RENT (NUMBER OF BEDROOMS):** There were no significant differences in the median monthly asking rent for units with three-or-more bedrooms (\$1,533), a two-bedroom unit (\$1,414), or efficiencies (\$1,347). In addition, the median asking rent for efficiency units did not differ significantly from one-bedroom units renting for \$1,301 per month. However, the median monthly asking rent for a one bedroom unit was lower than that for a two or three-or-more bedroom unit ([Table 2](#)).
- **REGIONS:** In 2014, the South (45 percent) had the highest percentage of new, unfurnished rental completions of any region. The West (26 percent) had the next highest percentage of new rentals followed by the Midwest (17 percent). The Northeast (13 percent) had the least amount of new completions in 2014. ([Table 1](#); [Chart C](#)). The only significant difference in the three month absorption rates was between the West (68 percent) and the Northeast (56 percent). When comparing West and Northeast absorption rates with the South (62 percent) and the Midwest (60 percent), the percentages showed no significant differences ([Table 2](#)).
- **CORE BASED STATISTICAL AREAS (RENTALS):** In 2014, of the 209,100 unfurnished rental units constructed, approximately 198,600 (95 percent) were completed inside Core Based Statistical Areas (CBSAs). Of those units constructed inside CBSA's, approximately 120,900 (61 percent)

of the units were built inside principal cities and 77,700 (39 percent) were built outside principal cities. Only 5 percent (10,500) of new rental units were constructed outside of CBSAs, and 57 percent of those were absorbed (rented) within three months. The 3-month absorption rate for units built inside principal cities (63 percent) did not differ significantly from the 62 percent built outside principal cities ([Table 3](#); [Chart E](#)).

- **UNITS PER FLOOR (RENTALS):** Of the 209,100 new construction completed in 2014, approximately 37 percent (77,200) contained 20 to 49 units. Another 36 percent (74,500) contained 100 or more units. These figures did not differ significantly. Buildings containing 50 to 99 units accounted 13 percent, followed by those with 13 to 19 units (7 percent). The lowest percentages, and not significantly different from each other, were those with 5 to 9 units and 10 to 12 units.

Of the 209,100 total units available in 2014, approximately 40 percent were in buildings with three floors, and 65 percent of those were absorbed after 3-months ([Table 4](#); [Chart F](#)).

- **FURNISHED APARTMENT UNITS:** There were approximately 8,400 furnished apartment units constructed in 2014. This figure was approximately 5,100 more than the 3,300 furnished units reported built in 2013. The 8,400 furnished units were also higher than number of furnished units completed in each of the previous eight years. ([Table 9](#); [Chart G](#)). The median asking rent for a furnished unit in 2014 was \$1,477 and, after 3 months, 76 percent of the 8,400 units had been rented.
- **AMENITIES:** Of the 209,100 unfurnished rental apartments completed in 2014, WiFi or internet service was available in 98 percent of the units and it was included in the monthly rent in 7 percent of those units. Cable or satellite service was available to 99 percent of the units while eight percent had it included in their rent. Approximately 75 percent of the units included parking and approximately 69 percent had a swimming pool included in the rent. ([Table 5A](#)).
- **UTILITIES:** Some utilities were included as part of the monthly rent payment - six percent included electricity, eight percent included gas, 28 percent included water usage, and 35 percent included sewer service. Eighty-five percent provided personal laundry connections in all units while four percent reported both personal and shared (laundry room) hook-ups. Washer and dryers were available in 83 percent of the units while 13 percent reported not having any laundry appliances/facilities available for tenant use ([Table 5B](#)).
- **CONDOS AND CO-OPS:** Approximately 7,600 condominium and cooperative apartments were completed in 2014. This figure did not differ significantly from the 7,400 condo/cooperative completions in 2013, nor the 6,500 completed in 2012 ([Table 9](#); [Chart I](#)). .

- **CONDOS (BEDROOMS):** In 2014, more condominium units were constructed with two bedrooms (53 percent) than with those offering fewer than two bedrooms (19 percent) or those with 3-plus bedrooms (27 percent). The percentage of units with fewer than two bedrooms and the percentage for 3 or more bedrooms did not differ significantly from each other. Eighty-one percent of all new condominiums constructed in 2014 offered two or more bedrooms; of those, 76% were sold (absorbed) within three months ([Table 7](#) and [Chart K](#)).
- **CONDOS (REGIONS):** The percent of the total condominium and cooperative apartment completions in 2014 among the South (33 percent), West (28 percent), and the Northeast region (27 percent) did not differ significantly from each other. However, they were all higher than the 12 percent reported in the Midwest. ([Table 7](#) and [Chart J](#))
- **CONDOS (ASKING PRICE):** The median asking price for all new condominium apartments built in 2014 was \$390,900. This figure did not differ significantly from the \$338,800 reported in 2013. The cost for a new condominium built in 2014 was highest in the Northeast with a median selling price of \$651,000. The next highest-selling condominium units were those in the West, selling for \$417,200. These were followed by construction in the South at \$345,900 per unit. The median asking price for condominiums constructed in the Midwest sold in the “less than \$200,000” category, and therefore could not be statistically tested against the other regions. ([Table 7](#) and [Chart L](#)).
- **ALL APARTMENTS:** In 2014, there were approximately 255,600 apartments constructed in residential buildings with five units or more. This number is 69,400 units greater than the 186,200 reported in 2013, and is the largest number since 2009 when, although not significantly different, 259,700 units were reported ([Chart M](#)). Of the 255,600 units, 82 percent were unsubsidized, unfurnished rental apartments; 11 percent were subsidized and tax credit units; 3 percent were condominiums and cooperatives; 3 percent were furnished rental units; and the remaining 1 percent were not in the scope of the survey ([Table 9](#)).

## 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 subsidized and tax credited are those built under two Department of Housing and Urban Development programs (Section 8, Low Income Housing Assistance and Section 202, Senior Citizens Housing Direct Loans) and all units in buildings containing apartments in the Federal Housing Administration (FHA) rent supplement program. 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 through 5 are restricted to privately financed, nonsubsidized, unfurnished rental apartments. Table 6 is restricted to privately financed, nonsubsidized, condominium and cooperative apartments, while Table 7 is limited to privately financed, nonsubsidized condominium apartments only. Table 8 covers privately financed, nonsubsidized, furnished rental apartments and Table 9 is a historical summary of the totals for all types of newly constructed apartments in buildings with five units or more. Estimates published in this report are preliminary and are subject to revision in the H-130, Market Absorption of Apartments annual report.

Additionally, SOMA tabulates and reports absorption rates for units based on their **Core Based Statistical Area (CBSA)**. CBSA's 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 CBSA's 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.<sup>2</sup> This new procedure was used for the first time in processing annual data for 1990. Please use caution when comparing 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 came from those included in the Census Bureau's Survey of

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<sup>2</sup>See ESTIMATION section below.

Construction (SOC).<sup>3</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 the SOMA, the Census Bureau selects, each quarter, 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 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.

## **ESTIMATION**

Beginning with data on completions in the fourth quarter of 1990 (which formed the base for absorptions in the first quarter of 1991), the Census Bureau modified the estimation procedure and applied the new estimation procedure to data for the other 3 quarters of 1990 so that annual estimates using the same methodology for 4 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 quarterly 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 provides the following estimate:

Total Units in Buildings with Five Units or More in permit-issuing areas as estimated by the SOC for that quarter DIVIDED by Total Units in Buildings with Five Units or More as estimated by the SOMA for that quarter.

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 required when comparing data from 2001 and forward to any estimates prior to 2001.

In the modified estimation procedure, instead of applying a single ratio-estimate factor for the

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<sup>3</sup>See <http://www.census.gov/const/www/newresconstdoc.html#sample> for further details on the SOC sample design.

entire country, the Census Bureau computes separate ratio-estimate factors for each of the four geographic regions. Multiplying the unbiased regional estimates by the corresponding ratio-estimate factors provides the final estimates for regions. The Census Bureau obtains the final estimates 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 published figures from the SOC and reduces, to some extent, the sampling variability of the estimates of totals. Annual absorption rates are obtained by computing a weighted average of the four quarterly estimates.

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 non-interviewed 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 differ from these.

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

### **Non-sampling Errors**

In general, non-sampling errors can be attributed to many sources: inability to obtain information about all cases in the sample, difficulties with definitions, differences in interpretation of 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 non-sampling errors has been obtained, the Census Bureau thinks that most 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 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 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate (i.e., the 68-percent confidence interval) would include the average result from all possible samples.
- 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.
- Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate (i.e., the 95-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.

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 reliability of an estimated absorption rate (i.e., a percentage) computed by using sample data for both the numerator and denominator depends on both the size of the rate and the size of the total on which the rate is based. Estimated rates of this kind are relatively more reliable than the corresponding estimates of the numerators of the rates, particularly if the rates are 50 percent or more.

In this report, Tables A, B, and C present approximations to the standard errors of various estimates shown. Table A presents standard errors for estimated totals, and Tables B and C present standard errors for estimated percentages for rental apartments and condominiums, respectively. To derive standard errors that would be applicable to a wide variety of items and could be prepared at moderate cost, a number of approximations were required. As a result, the tables of standard errors provide an indication of the order of magnitude of the standard errors rather than the precise standard error for any specific item. Standard errors for values not shown in Tables A, B, or C can be obtained by linear interpolation.

## **ILLUSTRATIVE USE OF THE STANDARD ERROR TABLES**

Table 3 of this report shows that in 2014, there were approximately 27,200 new privately

financed, nonsubsidized, unfurnished rental apartments in buildings with five units or more were completed in permit-issuing areas in the United States built in the United States renting for \$2,250 or more. Table A shows the standard error of an estimate of this size to be approximately 2,963 using linear interpolation (see [Example A-1](#)). To obtain a 90-percent confidence interval, multiply 2,963 by 1.645, and add and subtract the result (4,874) from 27,200, yielding limits of 22,326 and 32,074. The average estimate of these units completed in 2014 may or may not be included in this computed interval, but one can say that the average is included in the constructed interval with a specified confidence of 90 percent.

Table 3 also shows that the rate of absorption after 3 months for these units renting for \$2,250 or more is 60 percent. Table B shows the standard error on a 60 percent rate on a base of 27,200 to be approximately 5.75 percent using linear interpolation (see [Example B-1](#)). Multiply 5.75 by 1.645, and add and subtract the result (9) from 60. The 90-percent confidence interval for the absorption rate of 60 percent is from 51 percent to 69 percent.

Table 3 also illustrates that the median asking rent for all new privately financed, nonsubsidized, unfurnished rental apartments in buildings with five units or more built in the United States to be \$1,372. The standard error of this median is about \$27.

Several statistics are needed to calculate the standard error of a median.

- The base of the median--the estimated number of units for which the median has been calculated. In this example, 209,100
- The estimated standard error from Table B1 of a 50-percent characteristic on the base of the median ( $\sigma_{50\%}$ ). In this example (see [Example B-2](#)), the estimated standard error of a 50-percent characteristic with the base of 209,100 is about 2.14 percent.
- The length of the interval that contains the median. In this example, the median lies between \$1,250 to \$1,449. The length of the interval is \$200.
- The estimated proportion of the base falling in the interval that contains the median: in this example, 15.59 percent (32,600 units renting for \$1,150 to \$1,249 divided by 209,100 total units times 100 = 15.59 percent).

The standard error of the median is obtained by using the following approximation:

$$\text{Standard error of median} = \frac{\sigma_{50\%} \times \text{length of interval containing the sample median}}{\text{estimated proportion of the base falling within the interval containing the sample median}}$$

For this example, the standard error of the median of \$1,372 is:

$$2.14 \times 200/15.59 = \$27$$

Therefore, 1.645 standard errors ( $27 \times 1.645$ ), equal \$44. Consequently, an approximate 90-percent confidence interval for the median asking rent of \$1,372 is between \$1,328 and \$1,416 (\$1,372 plus or minus \$44).