

Survey of Market Absorption of New Multifamily Units

ANNUAL 2014 – ABSORPTIONS
(Apartments Completed in 2013)

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INTRODUCTION

For over forty years, the Survey of Market Absorption (SOMA) has been measuring how soon privately financed, nonsubsidized, unfurnished units in buildings with five or more units are rented or sold (absorbed) after completion. In addition, the survey collects data on characteristics such as number of bedrooms, asking rent, and asking price. This publication continues to be 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.

The estimates in this report are based on responses from a sample of the population. As with all surveys, estimates 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.

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

Quarterly Reports are also produced and released 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](#).

HIGHLIGHTS¹

- *NEW CONSTRUCTION – UNFURNISHED APARTMENTS:* In 2013, approximately 134,200 privately financed, nonsubsidized, unfurnished, rental apartments in buildings of five units or more were completed in permit-issuing areas in the United States. This is the approximately 29,700 more units than the previous year (104,500), and the largest number of new rental units constructed since 2009, when approximately 163,000 were reported ([Tables 1](#) and [9](#); [Chart F](#)).
- *ABSORPTION RATES:* Sixty-three percent of the unfurnished rental apartments built in the United States in 2013 were absorbed (rented) within the first three months of completion, 82 percent within six months, 92 percent within nine months, and 96 percent within twelve months ([Table 1](#); [Chart G](#)).
- *REGIONS (RENTALS):* The South region accounted for 49 percent of the new unfurnished rental unit completions in 2013. The West was next with 26 percent, followed by the Northeast and the Midwest (each 13 percent) ([Chart A](#)). There were no significant differences among the 3-month absorption rates for the four regions except between the Midwest (78 percent) and the South (60 percent). The Northeast reported 63 percent absorbed and the West reported 64 percent absorbed within the first 3 months after completion ([Table 1](#)).

¹Details may not sum to totals because of rounding.

- *METROPOLITAN AREAS:* Of the 134,200 newly unfurnished rental apartments units constructed in 2013, there were approximately 129,300 units built inside Core Based Statistical Areas (CBSAs), which accounted for 96 percent of new construction; of those, 65 percent were built inside principal cities of CBSAs.² That 65 percent was higher than the 35 percent reported being built outside principal cities (suburbs). Of the 134,200 privately financed, nonsubsidized, unfurnished, rental apartments in buildings of five units or more, approximately four percent were constructed outside CBSAs ([Table 1](#)).
- The 3-month absorption rates in 2013 reported for units inside CBSAs (63 percent), inside principal cities (63 percent), outside principal cities (63 percent), and those units outside CBSA's (68 percent) did not differ significantly ([Table 1](#)).
- *RENT:* The median asking rent for unfurnished apartments completed in 2013, was \$1,286 ([Tables 2](#) and [3](#); [Chart B](#)). This is \$180 more than the inflation-adjusted median asking rent of \$1,106 from 2012.³ The majority of rental units completed in 2013 were those renting for \$1,350 or more (45 percent). The next highest were the 20 percent renting for less than \$950. Both these percentages were higher than units renting in the \$950 and \$1,049 range (9 percent), \$1,050 - \$1,149 (9 percent), \$1,150 - \$1,249 (9 percent), and \$1,250 - \$1,349 (7 percent) – these three ranges did not differ significantly.

²The term "core based statistical area" (CBSA) became effective in 2000 and refers collectively to metropolitan and micropolitan statistical areas.

³The figure shown for the 2012 median has been adjusted to reflect inflation; the Median Asking Rent, as reported in the 2012 publication, was \$1,090.

The 3-month absorption rates did not differ significantly among each of the rental ranges for the units - \$950 or less (67 percent); \$950 - \$1,049 (60 percent); \$1,050 - \$1,149 (66 percent); \$1,150 - \$1,249 (60 percent); \$1,250 - \$1,349 (62 percent); \$1,350 or more (62 percent).

The same was true for the 12-month absorption rates - \$950 or less (96 percent); \$950 - \$1,049 (97 percent); \$1,050 - \$1,149 (97 percent); \$1,150 - \$1,249 (98 percent); \$1,250 - \$1,349 (97 percent); \$1,350 or more (96 percent) – which did not differ significantly from each other ([Table 3](#)).

➤ *BEDROOMS:* Of the 134,200 units constructed in 2013, one-bedroom units accounted for 46 percent of the total. This figure was not significantly different from the 42 percent reporting 2-bedroom unit construction. These two percentages were both higher than those for the three bedroom apartments (7 percent) and efficiency apartments - no bedrooms (6 percent), which did not differ significantly from each other ([Table 3](#); [Chart C](#)). There were no significant differences among the absorption rates by asking rent category for each number of bedroom categories after three month and twelve months of availability. Overall, after 12 months, 96 percent of all of the newly unfurnished rental apartments units constructed in 2013 were absorbed ([Table 3](#)).

➤ *RENT BY NUMBER OF BEDROOMS:* The median asking rent for all privately financed, nonsubsidized, unfurnished, rental apartments in buildings of five units

or more apartments in 2013 was \$1,286. The median rents for a 1-bedroom unit was \$1,212. This figure was not significantly different than the \$1,316 monthly rent for a 2 bedroom unit in 2013. Then median asking rent for efficiency units was more than \$1,350 and a unit with 3 bedroom or more bedrooms had a median asking rent of \$1,450 or more ([Table 3](#)).

- *NUMBER OF UNITS BY NUMBER OF FLOORS:* The largest percentage of newly built unfurnished rental apartment units in 2013 were those constructed in buildings with three floors. They accounted for 39 percent of construction (approximately 52,600 units). An estimated 37,100 of these 3-floor units contained 20 to 49 units each. Buildings with four or five floors (28 percent) accounted for the next highest percentage of new construction. The lowest percentages were in buildings constructed with one or two floors (17 percent), and those constructed with 6-or-more floors (15 percent) – these two figures did not differ significantly from each other ([Table 4](#)).

- *AMENITIES:* In 2013, of the 134,200 newly built privately financed, nonsubsidized, unfurnished, rental apartments 131,500 came equipped with a dishwasher. Ninety-five percent of the units included air conditioning, and 75 percent had a swimming pool included in the rent to their residents. The cost of electricity was included as part of the asking rent in only five percent of the newly built units. Propane or natural gas was available at an extra cost in 29 percent of the units, and 14 percent charged additional for parking ([Table 5](#); [Chart D](#)).

- *FURNISHED APARTMENT:* In 2013, approximately 3,300 privately financed, nonsubsidized, furnished, rental apartments in buildings of five units or more were completed in permit-issuing areas in the United States. This figure was not significantly different from the 3,700 reported in 2012. The median asking rent exceeded \$1,350 ([Table 9](#)). After three months, 30 percent were absorbed and after 12 months 75 percent of the 3,300 units had been rented. There were no significant differences among the percentages of completions for one bedroom (25), two bedroom (27) and three or more bedroom (46) units. However, the percentage of three or more units was higher than that of the Efficiency (2 percent) units ([Table 8](#)).

- *CONDOMINIUMS AND COOPERATIVE UNITS:* In 2013, approximately 7,400 condominium and co-operative apartments were constructed. This figure is not significantly different than the 6,500 reported in 2012, ([Table 9](#); [Chart H](#)). There were no significant differences in the distribution of construction among the four geographic regions ([Table 6](#)). The Midwest accounted for 36 percent, the West accounted for 24 percent, the South accounted for 22 percent, and the Northeast accounted for 18 percent. There were also no significant differences in the absorption rates among the four geographical regions after three and twelve month periods for 2013. Nationwide, by the end of 12 months, 97 percent of all condominium and cooperative units were absorbed.

- *CONDOMINIUM UNITS ONLY (SELLING PRICE):* There were approximately 6,900

condominium units constructed in 2013 with a median asking price of \$331,500. Of the approximately 6,900 new condominiums, 82 percent had two or more bedrooms. Fewer than 50 of the new condominium units were offered as efficiencies with no bedroom ([Table 7](#)).

- *REGIONS (CONDOMINIUMS ONLY)*: There were no significant differences in the percentages based on the regional distribution of construction. The Midwest accounted for 30 percent, both the South and the West regions made up 24 percent, and the remaining 19 percent of new construction was in the Northeast. There were also no differences in the 3-month and 12-month condominium absorption rates reported among the four regions ([Table 7](#); [Chart A](#)).

- *METROPOLITAN AREAS (CONDOMINIUMS)*: Approximately 91 percent of the new condominium units built in 2013 were constructed inside CBSAs. There was no significant difference between the percent of units built inside principal cities of CBSAs (41 percent) and units built outside principal cities (59 percent). Nine percent of the new condominium units in 2013 were constructed outside CBSAs ([Chart I](#)). The 3-month absorption rate for condominiums built outside of the CBSAs, inside principal cities of CBSAs, and outside principal cities of CBSAs, also did not differ significantly from each other ([Table 7](#)).

- *NEW CONSTRUCTION SUMMARY*: There were 186,200 apartments constructed in buildings with five or more units in 2013, this figure is approximately 28,600 more than those constructed in 2012 ([Table 9](#); [Chart E](#)). Nonsubsidized, unfurnished

rental apartments accounted for 72 percent of 2013 completions; four percent were condominiums and cooperatives; two percent were furnished rental units; and the remaining one percent were not in the scope of the survey.

Approximately 21 percent of the total new units constructed in 2013 were reported as being federally subsidized or receiving some form of tax credit ([Table 9](#); [Chart J](#)).

- *SENIOR HOUSING UNITS*: Of the total privately financed, nonsubsidized, unfurnished units completed (134,200) in 2013, SOMA reported 12,800 units restricted and intended for individuals 55 years of age or older. Of these units, 2,500 provided meals, transportation and housekeeping, 2,300 provided some help with finances, shopping, and telephone, and 1,300 provided at least some help with bathing, eating, mobility, dressing and toileting ([Table 10](#)).

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 credit 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. Starting with the 2013 Annual Report, SOMA introduced a new data table.⁴ [Table 6](#) is restricted to privately financed, nonsubsidized condominium and cooperative apartments, while [Table 7](#) is limited to privately financed, nonsubsidized condominium apartments. [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.

NOTE TO DATA USERS

The SOMA adopted new ratio estimation procedures in 1990 to derive more accurate estimates of completions.⁵ This new procedure was used for the first time in processing annual data for 1990. 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.

⁴ The new Table 4 reports on “Absorption Rates for Unfurnished Apartments Completed by Units in Building by Number of Floors in Building for the United States”.

⁵ See ESTIMATION section below.

Buildings for the survey came from those included in the Census Bureau's Survey of Construction (SOC).⁶ 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. Finally, 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 were 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 basis 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 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 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

⁶ See http://www.census.gov/construction/nrc/how_the_data_are_collected/soc.html for further details on the SOC sample design.

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.

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 estimates 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 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 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 differ from one another. The standard error of a survey estimate is a measure of the variation among the estimates from all possible samples. The methodology for calculating standard errors is explained in the section on Accuracy of the Estimates.

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

sampling errors.

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 interpretation of questions, inability or unwillingness of the respondents to provide correct information, and errors made in processing the data. Although no direct measurements of the biases have 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 each of the different samples would likely differ from each other. The deviation of a sample estimate from the average 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.

As calculated for this survey, the standard error also partially measures the variation in the estimates due to errors in responses and by the interviewers (nonsampling errors), but it does not measure, as such, any systematic biases in the data. Therefore, the accuracy of the estimates depends on the standard error, biases, and some additional nonsampling errors not measured by the standard error. As a result, confidence intervals around estimates based on this sample reflect only a portion of the uncertainty that actually exists. Nonetheless, such intervals are extremely useful because they capture all of the effect of sampling error and, in

this case, some nonsampling error as well.

If all possible samples were selected, if each of them was surveyed under the same general conditions, if there were no systematic biases, 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.

[Tables A-1 and B-1](#) present approximations to the standard errors of various estimates shown in the report. Table A presents standard errors for estimated totals, and Table B presents

standard errors of estimated percents. 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-1 to A-5 or B-1 to B-5 can be obtained by linear interpolation.

ILLUSTRATIVE USE OF THE STANDARD ERROR TABLES

[Table 3](#) of this report indicates there were 61,300 units constructed with one bedroom in 2013. [Table A-1](#) shows that the standard error of an estimate of this size to be approximately 4,072 (see [Test A-1](#)). To obtain a 90-percent confidence interval, multiply 4,072 by 1.645 (yielding 6,699), and add and subtract the result from 61,300, yielding limits of 54,601 and 67,999. The actual population value of these units may or may not be included in this computed interval, but one can say that the actual value is included in the constructed interval with a specified confidence of 90 percent.

Table 3 also shows that the rate of absorption after 9 months for those 61,300 one bedroom units in 2013 was 92 percent. [Table B-1](#) shows the standard error on a 92 percent rate on a base of 61,300 to be approximately 2.16 percent (see [Test B-1](#)). Multiply 2.16 by 1.645 (yielding 3.6), and add and subtract the result from 92. The 90-percent confidence interval for the absorption rate of 92 percent is from 88.4 percent to 95.6 percent.

The median asking rent for these 61,300 one bedroom unfurnished rental apartments in 2013 was \$1,212. The standard error of this median is about \$82.

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, 61,300.

- The estimated standard error from Table B-1 of a 50-percent characteristic on the base of the median ($\sigma_{50\%}$). In this example (see [Test B-2](#)), the estimated standard error of a 50-percent characteristic with the base of 61,300 is about 4.0 percent.
- The length of the interval that contains the median. In this example, the median lies between \$1,150 and \$1,249. The length of the interval is \$100.
- The estimated proportion of the base falling in the interval that contains the median--in this example is 8 percent. The standard error of the median is obtained by using the following approximation:

$$\text{Standard error of median} = \sigma_{50\%} \times \frac{\text{Length of interval contain the sample median}}{\text{Estimated portion of the base falling within the interval containing the sample median}}$$

For this example, the standard error of the median of \$1,212 is:

$$4.0 \times 100/8 = 50$$

Therefore, 1.645 standard errors equal \$82 (\$50 x 1.645). Consequently, an approximate 90-percent confidence interval for the median asking rent of \$1,212 is between \$1,130 and \$1,294 (\$1,212 plus or minus \$82).