

# U.S. Census Bureau News

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## QUARTERLY RETAIL E-COMMERCE SALES 1<sup>st</sup> QUARTER 2014

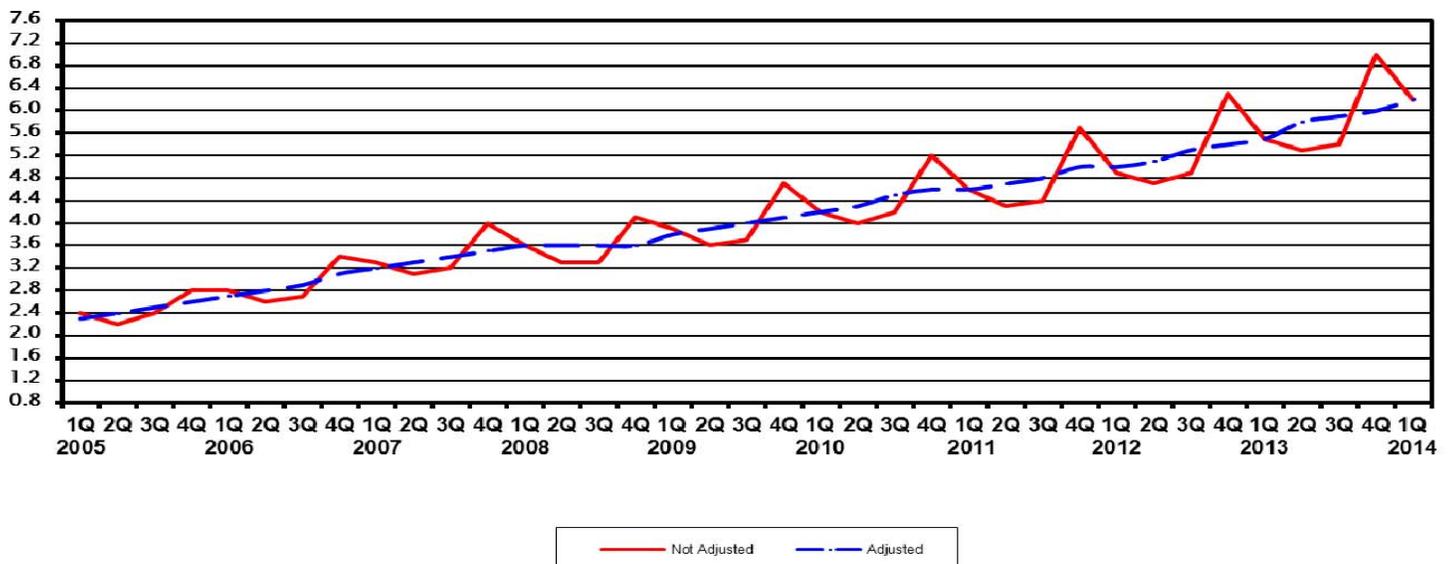
**Notice of Revision:** Quarterly retail e-commerce estimates were revised based on the results of the 2012 Annual Retail Trade Survey. Not adjusted and corresponding adjusted estimates were revised for the fourth quarter 1999 through fourth quarter 2013.

The Census Bureau of the Department of Commerce announced today that the estimate of U.S. retail e-commerce sales for the first quarter of 2014, adjusted for seasonal variation, but not for price changes, was \$71.2 billion, an increase of 2.8 percent ( $\pm 0.7\%$ ) from the fourth quarter of 2013. Total retail sales for the first quarter of 2014 were estimated at \$1,147.4 billion, an increase of 0.2 percent ( $\pm 0.4\%$ )\* from the fourth quarter of 2013. The first quarter 2014 e-commerce estimate increased 15.0 percent ( $\pm 2.3\%$ ) from the first quarter of 2013 while total retail sales increased 2.4 percent ( $\pm 0.4\%$ ) in the same period. E-commerce sales in the first quarter of 2014 accounted for 6.2 percent of total sales.

On a not adjusted basis, the estimate of U.S. retail e-commerce sales for the first quarter of 2014 totaled \$66.9 billion, a decrease of 20.1 percent ( $\pm 0.7\%$ ) from the fourth quarter of 2013. The first quarter 2014 e-commerce estimate increased 14.9 percent ( $\pm 2.3\%$ ) from the first quarter of 2013 while total retail sales increased 2.2 percent ( $\pm 0.4\%$ ) in the same period. E-commerce sales in the first quarter of 2014 accounted for 6.2 percent of total sales.

### Estimated Quarterly U.S. Retail E-commerce Sales as a Percent of Total Quarterly Retail Sales: 1<sup>st</sup> Quarter 2005 – 1<sup>st</sup> Quarter 2014

Percent of Total



The Quarterly Retail E-Commerce sales estimate for the second quarter of 2014 is scheduled for release on August 15, 2014 at 10:00 A.M. EDT.

For information, including estimates from 4<sup>th</sup> quarter 1999 forward, visit the Census Bureau's Web site at <http://www.census.gov/retail>. For additional information about Census Bureau e-business measurement programs and plans visit <http://www.census.gov/estats>.

\* The 90% confidence interval includes zero. The Census Bureau does not have sufficient statistical evidence to conclude that the actual change is different from zero.

**Table 1. Estimated Quarterly U.S. Retail Sales: Total and E-commerce<sup>1</sup>**  
(Estimates are based on data from the Monthly Retail Trade Survey and administrative records.)

Quarter	Retail Sales (millions of dollars)		E-commerce as a Percent of Total	Percent Change From Prior Quarter		Percent Change From Same Quarter A Year Ago	
	Total	E-commerce		Total	E-commerce	Total	E-commerce
<b>Adjusted</b>							
1st quarter 2014(p)	1,147,388	71,188	6.2	0.2	2.8	2.4	15.0
4th quarter 2013(r)	1,144,544	69,244	6.0	0.6	3.0	3.8	15.7
3rd quarter 2013	1,137,327	67,250	5.9	1.0	3.5	4.7	17.6
2nd quarter 2013	1,125,990	64,962	5.8	0.5	4.9	4.8	17.9
1st quarter 2013(r)	1,120,085	61,911	5.5	1.5	3.4	4.1	15.1
<b>Not Adjusted</b>							
1st quarter 2014(p)	1,078,559	66,917	6.2	-9.9	-20.1	2.2	14.9
4th quarter 2013(r)	1,197,402	83,709	7.0	5.5	35.3	3.7	15.7
3rd quarter 2013	1,135,418	61,857	5.4	-0.4	2.2	5.4	17.5
2nd quarter 2013	1,140,006	60,498	5.3	8.0	3.9	4.7	18.0
1st quarter 2013	1,055,389	58,215	5.5	-8.6	-19.5	3.1	15.1

(p) Preliminary estimate. (r) Revised estimate.

<sup>1</sup> E-commerce sales are sales of goods and services where an order is placed by the buyer or price and terms of sale are negotiated over an Internet, extranet, Electronic Data Interchange (EDI) network, electronic mail, or other online system. Payment may or may not be made online.

<sup>2</sup> Estimates are adjusted for seasonal variation, but not for price changes. Total sales estimates are also adjusted for trading-day differences and moving holidays.

Note: Table 2 provides estimated measures of sampling variability. For information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions, see [http://www.census.gov/retail/mrts/how\\_surveys\\_are\\_collected.html](http://www.census.gov/retail/mrts/how_surveys_are_collected.html).

**Table 2. Estimated Measures of Sampling Variability for Quarterly U.S. Retail Sales**  
**Estimates: Total and E-commerce**  
(Estimates are shown as percents and are based on data from the Monthly Retail Trade Survey.)

Quarter	Coefficient of Variation (CV)		Standard Error (SE) for E-commerce as a Percent of Total	SE for Percent Change From Prior Quarter		SE for Percent Change From Same Quarter A Year Ago	
	Total	E-commerce		Total	E-commerce	Total	E-commerce
1st quarter 2014(p)	0.4	1.2	0.1	0.2	0.4	0.2	1.3
4th quarter 2013(r)	0.4	1.2	0.1	0.1	0.9	0.6 <sup>1</sup>	2.1 <sup>1</sup>
3rd quarter 2013	0.5	1.3	0.1	0.1	0.6	1.0 <sup>1</sup>	3.3 <sup>1</sup>
2nd quarter 2013	0.4	1.5	0.1	0.1	1.3	1.1 <sup>1</sup>	3.3 <sup>1</sup>
1st quarter 2013	0.9	2.2	0.1	0.2	0.8	0.3	0.9

(p) Preliminary estimate. (r) Revised estimate. (Z) Estimate is less than 0.05%.

<sup>1</sup>Standard errors may be larger than those previously published because the estimated totals used to produce the percent changes are derived from different samples.

Note: Estimated measures of sampling variability are based on data not adjusted for seasonal variation, trading-day differences, or moving holidays, and are used to make confidence statements about both adjusted and not adjusted estimates. For information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions, see [http://www.census.gov/retail/mrts/how\\_surveys\\_are\\_collected.html](http://www.census.gov/retail/mrts/how_surveys_are_collected.html).

**Table 3. Estimated Quarterly U.S. Retail Sales (Adjusted<sup>1</sup>): Total and E-commerce<sup>2</sup>**  
 (Estimates are based on data from the Monthly Retail Trade Survey and administrative records.)

Quarter	Retail Sales (millions of dollars)		E-commerce as a Percent of Total	Percent Change From Prior Quarter		Percent Change From Same Quarter A Year Ago	
	Total	E-commerce		Total	E-commerce	Total	E-commerce
1st quarter 2014(p)	1,147,388	71,188	6.2	0.2	2.8	2.4	15.0
4th quarter 2013(r)	1,144,544	69,244	6.0	0.6	3.0	3.8	15.7
3rd quarter 2013	1,137,327	67,250	5.9	1.0	3.5	4.7	17.6
2nd quarter 2013	1,125,990	64,962	5.8	0.5	4.9	4.8	17.9
1st quarter 2013(r)	1,120,085	61,911	5.5	1.5	3.4	4.1	15.1
4th quarter 2012	1,103,156	59,862	5.4	1.5	4.7	4.4	13.7
3rd quarter 2012	1,086,483	57,196	5.3	1.2	3.8	4.7	15.8
2nd quarter 2012	1,073,961	55,095	5.1	-0.2	2.4	4.5	14.2
1st quarter 2012	1,075,649	53,788	5.0	1.8	2.2	6.3	15.5
4th quarter 2011	1,056,364	52,628	5.0	1.8	6.6	6.9	16.9
3rd quarter 2011	1,037,304	49,384	4.8	0.9	2.4	8.2	14.9
2nd quarter 2011	1,027,575	48,243	4.7	1.6	3.6	7.7	17.8
1st quarter 2011	1,011,436	46,555	4.6	2.3	3.4	7.8	18.9
4th quarter 2010	988,286	45,006	4.6	3.1	4.7	6.9	18.0
3rd quarter 2010	958,871	42,997	4.5	0.5	5.0	4.4	16.4
2nd quarter 2010	954,073	40,944	4.3	1.6	4.6	6.5	16.8
1st quarter 2010	938,619	39,147	4.2	1.6	2.6	5.2	14.8
4th quarter 2009	924,159	38,155	4.1	0.7	3.3	1.1	15.0
3rd quarter 2009	918,093	36,951	4.0	2.5	5.4	-8.4	3.0
2nd quarter 2009	895,914	35,043	3.9	0.4	2.8	-11.7	-3.5
1st quarter 2009	892,643	34,103	3.8	-2.3	2.8	-11.5	-5.3
4th quarter 2008	914,045	33,188	3.6	-8.8	-7.5	-10.0	-7.5
3rd quarter 2008	1,002,075	35,874	3.6	-1.2	-1.2	-0.2	3.9
2nd quarter 2008	1,014,565	36,322	3.6	0.6	0.9	1.9	8.9
1st quarter 2008	1,008,211	36,011	3.6	-0.7	0.3	2.2	13.6
4th quarter 2007	1,015,228	35,888	3.5	1.1	3.9	4.2	19.0
3rd quarter 2007	1,004,122	34,539	3.4	0.9	3.6	3.1	20.6
2nd quarter 2007	995,375	33,345	3.3	0.9	5.2	2.9	22.3
1st quarter 2007	986,300	31,695	3.2	1.2	5.1	2.3	20.1
4th quarter 2006	974,676	30,148	3.1	0.1	5.2	3.9	24.1
3rd quarter 2006	973,859	28,649	2.9	0.7	5.1	4.3	21.7
2nd quarter 2006	967,513	27,264	2.8	0.4	3.3	5.5	23.2
1st quarter 2006	964,133	26,388	2.7	2.7	8.6	7.3	27.2
4th quarter 2005	938,329	24,292	2.6	0.5	3.2	5.3	24.0
3rd quarter 2005	934,004	23,540	2.5	1.9	6.3	7.5	27.9
2nd quarter 2005	916,851	22,137	2.4	2.0	6.7	7.2	26.8
1st quarter 2005	898,438	20,742	2.3	0.8	5.9	6.2	24.5

NA Not available. (p) Preliminary. (r) Revised.

<sup>1</sup> Estimates are adjusted for seasonal variation, but not for price changes. Total sales estimates are also adjusted for trading-day differences and moving holidays.

<sup>2</sup> E-commerce sales are sales of goods and services where an order is placed by the buyer or price and terms of sale are negotiated over an Internet, extranet, Electronic Data Interchange (EDI) network, electronic mail, or other online system. Payment may or may not be made online.

Note: For information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions, see [http://www.census.gov/retail/mrts/how\\_surveys\\_are\\_collected.html](http://www.census.gov/retail/mrts/how_surveys_are_collected.html).

**Table 4. Estimated Quarterly U.S. Retail Sales (Not Adjusted): Total and E-commerce<sup>1</sup>**  
 (Estimates are based on data from the Monthly Retail Trade Survey and administrative records.)

Quarter	Retail Sales (millions of dollars)		E-commerce as a Percent of Total	Percent Change From Prior Quarter		Percent Change From Same Quarter A Year Ago	
	Total	E-commerce		Total	E-commerce	Total	E-commerce
1st quarter 2014(p)	1,078,559	66,917	6.2	-9.9	-20.1	2.2	14.9
4th quarter 2013(r)	1,197,402	83,709	7.0	5.5	35.3	3.7	15.7
3rd quarter 2013	1,135,418	61,857	5.4	-0.4	2.2	5.4	17.5
2nd quarter 2013	1,140,006	60,498	5.3	8.0	3.9	4.7	18.0
1st quarter 2013	1,055,389	58,215	5.5	-8.6	-19.5	3.1	15.1
4th quarter 2012	1,154,244	72,361	6.3	7.1	37.5	4.4	13.9
3rd quarter 2012	1,077,244	52,643	4.9	-1.1	2.6	4.1	15.6
2nd quarter 2012	1,088,805	51,285	4.7	6.3	1.4	4.4	14.1
1st quarter 2012	1,023,847	50,589	4.9	-7.4	-20.4	7.7	15.4
4th quarter 2011	1,105,739	63,549	5.7	6.9	39.5	6.6	17.7
3rd quarter 2011	1,034,463	45,545	4.4	-0.8	1.3	8.1	14.4
2nd quarter 2011	1,042,473	44,948	4.3	9.7	2.5	7.8	17.6
1st quarter 2011	950,321	43,841	4.6	-8.4	-18.8	7.9	19.0
4th quarter 2010	1,037,091	54,014	5.2	8.4	35.7	6.7	18.4
3rd quarter 2010	956,616	39,809	4.2	-1.1	4.1	4.4	16.0
2nd quarter 2010	966,868	38,230	4.0	9.8	3.8	6.2	16.6
1st quarter 2010	880,879	36,842	4.2	-9.4	-19.2	5.8	14.5
4th quarter 2009	972,110	45,617	4.7	6.1	32.9	1.2	15.5
3rd quarter 2009	916,048	34,317	3.7	0.7	4.7	-8.7	2.8
2nd quarter 2009	910,007	32,789	3.6	9.3	1.9	-11.7	-4.0
1st quarter 2009	832,243	32,185	3.9	-13.4	-18.5	-12.6	-5.8
4th quarter 2008	960,717	39,498	4.1	-4.2	18.3	-9.5	-6.1
3rd quarter 2008	1,002,944	33,396	3.3	-2.7	-2.3	0.2	3.6
2nd quarter 2008	1,030,586	34,170	3.3	8.2	0.0	1.6	8.5
1st quarter 2008	952,159	34,169	3.6	-10.3	-18.8	3.3	12.7
4th quarter 2007	1,061,748	42,063	4.0	6.1	30.4	4.4	20.0
3rd quarter 2007	1,001,108	32,248	3.2	-1.3	2.4	2.5	20.4
2nd quarter 2007	1,014,251	31,493	3.1	10.0	3.9	2.9	22.4
1st quarter 2007	922,149	30,322	3.3	-9.3	-13.5	3.0	19.3
4th quarter 2006	1,017,242	35,056	3.4	4.2	30.8	3.3	25.0
3rd quarter 2006	976,445	26,793	2.7	-0.9	4.1	4.0	21.3
2nd quarter 2006	985,254	25,734	2.6	10.1	1.3	5.8	23.3
1st quarter 2006	895,144	25,411	2.8	-9.1	-9.4	7.2	26.5
4th quarter 2005	985,026	28,047	2.8	4.9	27.0	5.2	24.8
3rd quarter 2005	938,943	22,083	2.4	0.9	5.8	7.7	27.6
2nd quarter 2005	930,877	20,869	2.2	11.4	3.9	7.0	27.0
1st quarter 2005	835,316	20,081	2.4	-10.8	-10.6	5.1	24.5

NA Not available. (p) Preliminary. (r) Revised.

<sup>1</sup> E-commerce sales are sales of goods and services where an order is placed by the buyer or price and terms of sale are negotiated over an Internet, extranet, Electronic Data Interchange (EDI) network, electronic mail, or other online system. Payment may or may not be made online.

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## Survey Description

Retail e-commerce sales are estimated from the same sample used for the Monthly Retail Trade Survey (MRTS) to estimate preliminary and final U.S. retail sales. Advance U.S. retail sales are estimated from a subsample of the MRTS sample that is not of adequate size to measure changes in retail e-commerce sales.

A stratified simple random sampling method is used to select approximately 12,500 retail firms whose sales are then weighted and benchmarked to represent the complete universe of over two million retail firms. The MRTS sample is probability based and represents all employer firms engaged in retail activities as defined by the North American Industry Classification System (NAICS). Coverage includes all retailers whether or not they are engaged in e-commerce. Online travel services, financial brokers and dealers, and ticket sales agencies are **not** classified as retail and are **not** included in either the total retail or retail e-commerce sales estimates. Nonemployers are represented in the estimates through benchmarking to prior annual survey estimates that include nonemployer sales based on administrative records. E-commerce sales are included in the total monthly sales estimates.

The MRTS sample is updated on an ongoing basis to account for new retail employer businesses (including those selling via the Internet), business deaths, and other changes to the retail business universe. Firms are asked each month to report e-commerce sales separately. For each month of the quarter, data for nonresponding sampling units are imputed from responding sampling units falling within the same kind of business and sales size category. Responding firms account for approximately 72 percent of the e-commerce sales estimate and about 70 percent of the estimate of U.S. retail sales for any quarter.

For each month of the quarter, estimates are obtained by summing weighted sales (either reported or imputed). The monthly estimates are benchmarked to prior annual survey estimates. Estimates for the quarter are obtained by summing the monthly benchmarked estimates. The estimate for the most recent quarter is a preliminary estimate. Therefore, the estimate is subject to revision. Data users who create their own estimates using data from this report should cite the Census Bureau as the source of the input data only.

## Adjusted Estimates

This report publishes estimates that have been adjusted for seasonal variation and holiday and trading-day differences, but not for price changes. We used quarterly e-commerce sales estimates for 4<sup>th</sup> quarter 1999 to the current quarter as input to the X-13ARIMA-SEATS program to derive the adjusted estimates. For sales, we derived quarterly adjusted estimates by summing adjusted monthly sales estimates for each respective quarter. Seasonal adjustment of estimates is an approximation based on current and past experiences.

The X-13ARIMA-SEATS software improves upon the X-12 ARIMA seasonal adjustment software by providing enhanced diagnostics as well as incorporating an enhanced version of the Bank of Spain's SEATS (Signal Extraction in ARIMA Time Series) software, which uses an ARIMA model-based procedure instead of the X-11 filter-based approach to estimate seasonal factors. The X-13ARIMA-SEATS and X-12 ARIMA software produce identical results when using X-13ARIMA-SEATS with the X-11 filter-based adjustments. The X-13ARIMA-SEATS software and additional information on the X-13ARIMA-SEATS program may be found at <http://www.census.gov/srd/www/x13as/>.

Note that the retail estimates continue to be adjusted using the X-11 filter-based adjustment procedure.

## Reliability of Estimates

Because the estimates in this report are based on a sample survey, they contain sampling error and nonsampling error.

Sampling error is the difference between the estimate and the result that would be obtained from a complete enumeration of the population conducted under the same survey conditions. This error occurs because only a subset of the entire population is measured in a sample survey. Standard errors and coefficients of variation, as given in Table 2 of this report, are estimated measures of sampling variation.

The margin of error, as used on page 1, gives a range about the estimate which is a 90 percent confidence interval. If, for example, the estimated percent change is -11.4% and its estimated standard error is 1.2%, then the margin of error is  $\pm 1.753 \times 1.2\%$  or 2.1%, and the 90 percent confidence interval is -13.5% to -9.3%. Confidence intervals are computed based on the particular sample selected and canvassed. If one repeats the process of drawing all possible samples and forming all corresponding confidence intervals, approximately 90 percent of these individual confidence intervals would contain the estimate computed from a complete enumeration of all units on the sampling frame. If the confidence interval contains 0%, then one does not have sufficient evidence to conclude at the 90 percent confidence level that the change is different from zero.

Nonsampling error encompasses all other factors that contribute to the total error of a sample survey estimate. This type of error can occur because of nonresponse, insufficient coverage of the universe of retail businesses with e-commerce sales, mistakes in the recording and coding of data, and other errors of collection, response, coverage, or processing. Although not directly measured, precautionary steps are taken to minimize the effects of nonsampling error.