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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES, AUGUST 2017

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Notice: For information on the impact of Hurricanes Harvey and Irma on the compilation of this report, please see the <u>Frequently Asked Questions (FAQs) on our website.</u>

October 6, 2017 — The U.S. Census Bureau announced the following new wholesale trade statistics for August 2017:





Sales

August 2017 sales of merchant wholesalers, except manufacturers' sales branches and offices, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$473.4 billion, up 1.7 percent (±0.4 percent) from the revised July level and were up 7.2 percent (±1.1 percent) from the August 2016 level. The June 2017 to July 2017 percent change was revised from the preliminary estimate of down 0.1 percent (±0.2 percent)* to virtually unchanged (±0.2 percent)*.

Inventories

Total inventories of merchant wholesalers, except manufacturers' sales branches and offices, after adjustment for seasonal variations but not for price changes, were \$608.1 billion at the end of August, up 0.9 percent (\pm 0.2 percent) from the revised July level. Total inventories were up 4.5 percent (\pm 0.7 percent) from the revised August 2016 level. The July 2017 to August 2017 percent change was revised from the advance estimate of up 1.0 percent (\pm 0.2 percent) to up 0.9 percent (\pm 0.2 percent).

Inventories/Sales Ratio

The August inventories/sales ratio for merchant wholesalers, except manufacturers' sales branches and offices, based on seasonally adjusted data, was 1.28. The August 2016 ratio was 1.32.

Data Inquiries

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General Information

The September 2017 Monthly Wholesale Trade Report is scheduled for release on November 9, 2017. View the full schedule in the Economic Briefing Room: www.census.gov/economic-indicators/>.

For additional survey information, including customizable time series estimates by industry, visit <<u>www.census.gov/wholesale/</u>>.

EXPLANATORY NOTES

Reliability of the Estimates

Because the estimates presented 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 sampling frame conducted under the same survey conditions. This error occurs because only a subset of the entire sampling frame 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 sampling error, as used on page 1, gives a range about the estimate, which can be used to construct a 90-percent confidence interval. If, for example, the percent change estimate is ± 1.2 percent and its estimated standard error is 0.8 percent, then the margin of sampling error is $\pm 1.753 \times 0.8$ percent or ± 1.4 percent, and the 90 percent confidence interval is 1.2 ± 1.4 or ± 1.4 or ± 1.4 or ± 1.4 or ± 1.4 percent. If the interval contains 0, then one does not have sufficient statistical evidence to conclude at the 90 percent confidence level that the actual change is different from zero. Estimated changes shown in the text are statistically significant unless otherwise noted. For a monthly total, the estimated coefficient of variation is given. The resulting confidence interval is the estimated monthly total $\pm 1.753 \times \text{CV} \times \text{(the estimated monthly total)}$. The Census Bureau recommends that individuals using estimates in this report incorporate this information into their analyses, as sampling error could affect the conclusions drawn from the estimates.

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 wholesale businesses, mistakes in the recording and coding of data, model error, and other errors of collection, response, coverage, or processing. Although nonsampling error is not measured directly, the Census Bureau employs quality control procedures throughout the process to minimize this type of error.

Description of the Survey

The Census Bureau conducts the Monthly Wholesale Trade Survey to provide national estimates of monthly sales, end-of-month inventories, and inventories-to-sales ratios by kind of business for wholesale firms located in the United States. Specifically, the MWTS covers wholesale merchants who sell goods on their own account and include such businesses as wholesale merchants or jobbers, industrial distributors, exporters, and importers. Sales offices and branches maintained by manufacturing, refining, or mining firms for the purpose of marketing

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their products are not covered in this report. Also excluded is NAICS Industry Group 4251: Wholesale Electronic Markets and Agents and Brokers.

The MWTS sample was selected using a stratified, one-stage design with strata defined by kind of business (e.g., Automotive, Furniture, Lumber, etc.) and annual sales size. The sample includes firms of all sizes and is updated on a quarterly basis to account for new wholesale firms, deaths, and other changes to the wholesale universe. Each month, questionnaires are mailed to employer firms selected in a probability sample of approximately 4,200. For surveyed companies, approximately 63.7 percent provided data for this reporting period, resulting in a total quantity response rate of 66.0 percent for sales and 66.4 percent for inventories.

Monthly sales and inventories estimates are obtained by summing weighted data (either reported or imputed). The monthly estimates are benchmarked to annual survey estimates and are adjusted for seasonal variation and trading-day differences. Individuals who use estimates in this report to create new estimates should cite the Census Bureau as the source of only the original estimates. Additional information on the MWTS can be found on the Census Bureau website at: www.census.gov/wholesale/>.

API

The Census Bureau's application programming interface lets developers create custom apps to reach new users and makes key demographic, socio-economic and housing statistics more accessible than ever before. www.census.gov/developers/>



* The 90 percent confidence interval includes zero. There is insufficient evidence to conclude that the actual change is different from zero.

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Table 1. Estimates of Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers, Except **Manufacturers' Sales Branches and Offices**

[Total sales and inventories estimates are shown in millions of dollars. Estimates are based on data from the Monthly Wholesale Trade Survey.]

	Kind of	Sales							Inventories ⁴							Inventories/Sales		
NAICS ¹			Monthly	Percent change				Percent change			Ratios							
code	Business	Aug.	Jul.	Aug.	Aug./	Jul./	Aug. 17/	Aug.	Monthly Jul.	Aug.	Aug./	Jul./	Aug. 17/	Aug.	Jul.	Aug.		
code	Dusiness	2017	2017	2016	Jul.	Jun.	Aug. 16	2017	2017	2016	Jul.	Jun.	Aug. 16	2017	2017	2016		
	2	(p)	(r)	(r)				(p)	(r)	(r)				(p)	(r)	(r)		
<u>Adjusted</u>																		
42	U.S. Total	473,383	465,485	441,518	1.7	0.0	7.2	608,083	602,377	581,910	0.9	0.6		1.28	1.29	1.32		
423	.Durable	228,524	224,143	209,706	2.0	0.3	9.0	371,911	368,910	354,487	0.8	1.0	4.9	1.63	1.65	1.69		
4231	Automotive	39,591	37,982	34,952	4.2	-0.7	13.3	69,739	68,250	65,762	2.2	0.4	6.0	1.76	1.80	1.88		
4232	Furniture	6,903	6,910	6,978	-0.1	1.2	-1.1	11,507	11,469	10,986	0.3	-0.3		1.67	1.66	1.57		
4233	Lumber	11,178	11,219	10,403	-0.4	0.9	7.4	16,523	16,298	15,438	1.4	0.9		1.48	1.45	1.48		
4234	Prof. equip.	41,751	40,649	38,293	2.7	2.8	9.0	44,097	43,908	40,937	0.4	-0.2		1.06	1.08 0.88	1.07		
42343 4235	Comp. equip.	20,657 13,651	19,693 13,514	18,430 11,685	4.9 1.0	1.8 0.2	12.1 16.8	17,566 28,383	17,241 27,736	15,474 25,933	1.9 2.3	-0.3 2.4	13.5 9.4	0.85 2.08	2.05	0.84 2.22		
4233	Electrical	49,968	48,894	46,113	2.2	-0.4	8.4	50,418	50,350	46,022	0.1	2.4	9.6	1.01	1.03	1.00		
4237	Hardware	11,300	11,233	11,406	0.6	-1.0	-0.9	23,470	23,297	22,627	0.7	0.1	3.7	2.08	2.07	1.98		
4238	Machinery	34,712	34,439	31,994	0.8	0.3	8.5	100,451	100,419	100,646	0.0	1.2	1	2.89	2.92	3.15		
4239	Misc. Durable	19,470	19,303	17,882	0.9	-0.6	8.9	27,323	27,183	26,136	0.5	0.9		1.40	1.41	1.46		
424	.Nondurable	244,859	241,342	231,812	1.5	-0.2	5.6	236,172	233,467	227,423	1.2	0.0	3.8	0.96	0.97	0.98		
4241	Paper	8,133	8,206	7.993	-0.9	-0.1	1.8	8.501	8,351	8.179	1.8	-0.8		1.05	1.02	1.02		
4242	Drugs	56,987	57,018	53,954	-0.1	-0.6	5.6	60,083	57,959	57,683	3.7	-3.7		1.05	1.02	1.07		
4243	Apparel	12,833	12,801	13,658	0.2	1.9	-6.0	26,071	26,360	28,193	-1.1	-0.1	-7.5	2.03	2.06	2.06		
4244	Groceries	53,736	53,764	52,010	-0.1	-1.1	3.3	36,584	36,301	35,354	0.8	-0.1	3.5	0.68	0.68	0.68		
4245	Farm products	17,505	17,200	18,755	1.8	-1.6	-6.7	25,950	25,613	23,014	1.3	3.8	12.8	1.48	1.49	1.23		
4246	Chemicals ³	10,139	10,207	9,470	-0.7	4.0	7.1	11,748	11,736	11,538	0.1	0.9	1.8	1.16	1.15	1.22		
4247	Petroleum	51,502	48,546	43,111	6.1	0.1	19.5	20,724	20,381	19,524	1.7	2.0	6.1	0.40	0.42	0.45		
4248	Alcohol	11,852	11,763	11,467	0.8	-4.1	3.4	15,647	15,675	15,658	-0.2	1.0	-0.1	1.32	1.33	1.37		
4249	Misc. Nondur.	22,172	21,837	21,394	1.5	2.6	3.6	30,864	31,091	28,280	-0.7	2.4	9.1	1.39	1.42	1.32		
Not Adj	<u>usted</u>													Sales to date				
														2017		2016		
42	U.S. Total	497,180	445,966	462,575	11.5	-9.0	7.5	596,945	595,959	571,984	0.2	0.5	4.4	3,698		,445,362		
423	.Durable	242,241	213,202	221,740	13.6	-10.7	9.2	373,124	371,713	355,553	0.4	1.7	4.9	1,768	•	,649,281		
4231	Automotive	41,808	35,817	36,944	16.7	-9.9	13.2	67,228	68,182	63,460	-1.4	0.7	5.9		5,719	280,593		
4232	Furniture	7,649	6,585	7,676	16.2	-4.5	-0.4	11,852	11,687	11,316	1.4	2.3	4.7		,827	53,075		
4233	Lumber	12,810	11,589	11,870	10.5	-9.0	7.9	16,754	16,705	15,639	0.3	-0.1	7.1		,721	84,023		
4234 42343	Prof. equip.	42,169	39,511	38,370 17,932	6.7	-9.6 -10.2	9.9 13.6	44,538	44,084	41,346 15,629	1.0 2.5	1.0 -0.2	1		,635 ,679	296,693 144,009		
42343	Comp. equip.	20,368 14,825	19,988 12,879	12,585	1.9 15.1	-10.2	17.8	17,742 28,667	17,310 28,097	26,140	2.5	3.0	1		3,878	93,407		
4236	Electrical	51,817	44,640	47,496	16.1	-10.7	9.1	51,880	50,904	47,357	1.9	4.3	1		,456	351,299		
4237	Hardware	12,769	11,469	12,854	11.3	-10.7	-0.7	23,611	23,577	22,763	0.1	0.0			,227	90,475		
4238	Machinery	37,211	32,683	34,489	13.9	-11.0	7.9	100,752	101,022	100,847	-0.3	1.4	-0.1	276	,441	262,121		
4239	Misc. Durable	21,183	18,029	19,456	17.5	-11.7	8.9	27,842	27,455	26,685	1.4	2.9	4.3	153	,022	137,595		
424	.Nondurable	254,939	232,764	240,835	9.5	-7.3	5.9	223,821	224,246	216,431	-0.2	-1.4	3.4	1,930	,019 1	,796,081		
4241	Paper	8,881	7,870	8,768	12.8	-7.8	1.3	8,356	8,359	8,048	0.0	-1.6	3.8	64	,407	64,094		
4242	Drugs	59,722	53,939	56,760	10.7	-8.4	5.2	58,701	57,611	56,472	1.9	-6.0	3.9	444	,019	421,067		
4243	Apparel	15,336	12,571	16,035	22.0	5.0	-4.4	28,000	28,152	30,279	-0.5	4.9	-7.5		3,400	105,276		
4244	Groceries	56,208	53,119	54,506	5.8	-4.0	3.1	36,547	35,829	35,248	2.0	1.1	3.7		3,324	416,375		
4245	Farm products	16,070	15,222	17,086	5.6	-8.8	-5.9	16,738	18,851	14,637	-11.2	-4.9			,668	130,132		
4246	Chemicals	10,889	9,982	10,199	9.1	-3.6	6.8	11,748	11,736	11,538	0.1	0.9			,079 i,301	76,298 316,424		
4247 4248	Petroleum Alcohol	53,871 12,788	48,497 10,928	45,094 12,212	11.1 17.0	-4.8 -22.6	19.5 4.7	20,061 15,584	20,096 15,910	19,036 15,580	-0.2 -2.0	-1.8 1.7	1		2,460	89,691		
4248 4249	Misc. Nondur.	21,174	20,636	20,175	2.6	-22.6 -15.1	5.0	28,086	27,702	25,593	-2.0 1.4	-0.1	9.7		,361	176,724		
Footnotes:		21,174	20,030	۷,۱/3	2.0	13.1	5.0	20,000	21,102	دور,دے	1.4	-0.1	3.1	.,,		,,,,		

^p Preliminary estimate.

r Revised estimate.

 $^{^{1} \} For \ a \ full \ description \ of \ the \ NAICS \ codes \ used \ in \ this \ table, see \ the \ 2007 \ NAICS \ manual \ or \ < www.census.gov/eos/www/naics>.$

² Except where indicated, sales and inventories estimates are adjusted for seasonal variation. Estimates of sales are also adjusted for trading-day differences and moving holidays. See Table 3 for the combined adjustment factors. Adjusted sales-to-date estimates are not tabulated.

³ No significant seasonal pattern for this NAICS code was detected in the latest annual review of the seasonal adjustment for inventories. Consequently, the "Adjusted" inventories estimates are equal to the "Not Adjusted" estimates.

⁴ Adjusted and not adjusted inventories for aggregate NAICS levels 42, 423, and 424 are revised from the Advance Economic Indicators Report. Data adjusted for seasonality but not price changes. Explanations of confidence intervals and sampling variability can be found on our website at $<\!www.census.gov/wholesale/www/how_surveys_are_collected/monthly_methodology.html>.$ Source: U.S. Census Bureau, Monthly Wholesale Trade Survey, October 6, 2017.

Table 2. Estimated Measures of Sampling Variability of Monthly Wholesale Sales and Inventory Estimates

[Estimates are shown as percents and are based on data from the Monthly Wholesale Trade Survey.]

	Kind of Business		nt of variati				dard error f		Coeffic variation	Standard error for percent change		
NAICS code		Preliminar	y estimates	Final estimates			of two ve months	Current month to current month last year		Sales to date		Current year sales to date to
		Sales	Inv.	Sales	Inv.	Sales	lnv.	Sales	lnv.	Current year	Previous year	previous year sales to date
42	U.S. Total	1.1	1.5	1.2	1.5	0.2	0.1	0.6	0.4	1.1	1.1	0.5
423	.Durable	1.5	1.7	1.6	1.7	0.5	0.1	0.6	0.7	1.5	1.4	0.5
4231	Automotive	4.2	4.4	4.8	4.6	1.5	0.4	1.5	1.9	4.0	3.7	1.2
4232	Furniture	6.4	7.4	6.6	7.4	1.9	0.5	3.8	2.0	6.1	7.4	4.1
4233	Lumber	5.0	5.3	4.9	5.3	0.6	0.3	1.5	1.4	5.0	5.1	1.1
4234	Prof. equip.	4.4	3.8	3.8	4.0	1.1	0.4	2.2	1.5	3.8	3.4	1.6
42343	Comp. equip.	4.5	5.4	4.2	5.9	1.1	0.7	1.9	1.4	4.6	4.4	1.2
4235	Metals	5.1	6.7	4.9	6.7	1.3	0.7	2.0	1.8	4.9	5.1	2.0
4236	Electrical	2.5	3.5	2.6	3.5	0.8	0.4	1.6	2.9	2.5	2.7	1.9
4237	Hardware	3.6	4.0	3.9	4.0	1.2	0.3	1.7	1.0	3.3	3.0	1.5
4238	Machinery	3.2	3.9	3.3	3.9	1.4	0.3	2.3	2.2	2.9	2.6	1.7
4239	Misc. Durable	6.6	5.2	5.5	5.2	2.0	0.5	3.2	1.9	5.3	4.9	2.1
424	.Nondurable	1.8	1.9	1.7	2.1	0.3	0.3	1.0	1.0	1.7	1.8	0.8
4241	Paper	4.8	5.4	4.7	5.3	1.2	0.3	1.4	1.7	4.7	5.0	1.4
4242	Drugs	2.4	5.2	2.6	5.4	0.3	0.3	1.5	1.6	2.4	3.4	1.5
4243	Apparel	7.5	7.2	7.9	7.3	1.9	0.5	2.3	1.4	7.2	6.7	1.7
4244	Groceries	4.4	6.3	4.0	6.3	1.0	1.3	2.5	2.4	4.2	3.6	1.7
4245	Farm products	4.5	7.5	4.0	8.1	1.2	0.8	2.9	3.3	3.6	2.4	2.3
4246	Chemicals	3.6	5.1	3.7	5.1	1.4	0.8	2.3	1.7	3.4	3.7	2.1
4247	Petroleum	5.6	5.4	5.7	5.2	0.4	0.3	1.9	2.0	5.3	5.5	1.7
4248	Alcohol	5.3	6.3	5.4	6.4	0.9	0.4	1.4	1.2	5.3	4.8	1.1
4249	Misc. Nondur.	3.3	6.8	3.7	6.2	1.4	0.8	2.2	2.1	3.1	3.3	1.7

Note:

Estimated measures of sampling variability are based on estimates not adjusted for seasonal variation, trading-day differences, or moving holidays. Additional information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions may be found at <www.census.gov/wholesale/www/how_surveys_are_collected/monthly_methodology.html>.

Data adjusted for seasonality but not price changes. Explanations of confidence intervals and sampling variability can be found on our website at <www.census.gov/wholesale/www/how_surveys_are_collected/monthly_methodology.html>.

Source: U.S. Census Bureau, Monthly Wholesale Trade Survey, October 6, 2017.

Table 3. Combined Adjustment Factors for Monthly Wholesale Sales and Inventory Estimates

[Combined adjustment factors are computed using the Census Bureau's X-13 ARIMA-SEATS program and are based on data from the Monthly Wholesale Trade Survey.]

NAICS	Kind of	Sales							Inventories						
code	Business			2017			2016	2017					2016		
		Sep.	Aug.r	Jul.r	Jun.	May	Aug.r	Sep.	Aug.r	Jul.r	Jun.	May	Aug.r		
42	U.S. Total ²	0.995	1.051	0.958	1.053	1.049	1.047	0.994	0.983	0.989	0.990	0.991	0.983		
423	.Durable	1.016	1.061	0.950	1.066	1.024	1.055	1.004	1.004	1.008	1.000	1.002	1.004		
4231	Automotive	0.964	1.056	0.943	1.039	1.035	1.057	0.982	0.964	0.999	0.996	0.991	0.965		
4232	Furniture	0.999	1.108	0.953	1.010	1.021	1.100	1.037	1.030	1.019	0.993	0.977	1.030		
4233	Lumber	1.014	1.146	1.033	1.146	1.101	1.141	0.993	1.014	1.025	1.035	1.038	1.013		
4234	Prof. equip.	1.057	1.010	0.972	1.105	0.973	1.002	1.012	1.010	1.004	0.992	0.988	1.010		
42343	Comp. equip.	1.085	0.986	1.015	1.151	0.939	0.973	1.027	1.010	1.004	1.003	0.988	1.010		
4235	Metals	0.990	1.086	0.953	1.069	1.054	1.077	1.006	1.010	1.013	1.007	1.006	1.008		
4236	Electrical	1.055	1.037	0.913	1.045	0.992	1.030	1.026	1.029	1.011	0.995	1.007	1.029		
4237	Hardware	1.002	1.130	1.021	1.132	1.080	1.127	1.000	1.006	1.012	1.013	1.015	1.006		
4238	Machinery	0.980	1.072	0.949	1.069	1.072	1.078	0.999	1.003	1.006	1.004	1.010	1.002		
4239	Misc. Durable	1.031	1.088	0.934	1.052	1.027	1.088	1.029	1.019	1.010	0.991	0.985	1.021		
424	.Nondurable	0.974	1.044	0.967	1.044	1.069	1.039	0.980	0.949	0.959	0.974	0.974	0.949		
4241	Paper	1.006	1.092	0.959	1.040	1.047	1.097	0.986	0.983	1.001	1.009	1.006	0.984		
4242	Drugs	0.988	1.048	0.946	1.026	1.047	1.052	1.016	0.977	0.994	1.019	0.973	0.979		
4243	Apparel	1.122	1.195	0.982	0.953	0.954	1.174	1.068	1.074	1.068	1.017	0.967	1.074		
4244	Groceries	1.000	1.046	0.988	1.018	1.068	1.048	1.017	0.999	0.987	0.975	0.974	0.997		
4245	Farm products	0.873	0.918	0.885	0.954	1.011	0.911	0.757	0.645	0.736	0.804	0.857	0.636		
4246	Chemicals ³	0.986	1.074	0.978	1.055	1.053	1.077	1.000	1.000	1.000	1.000	1.000	1.000		
4247	Petroleum	0.969	1.046	0.999	1.050	1.069	1.046	0.977	0.968	0.986	1.024	1.046	0.975		
4248	Alcohol	0.974	1.079	0.929	1.151	1.092	1.065	1.007	0.996	1.015	1.008	1.030	0.995		
4249	Misc. Nondur.	0.885	0.955	0.945	1.141	1.251	0.943	0.941	0.910	0.891	0.913	0.973	0.905		

Footnotes:

Note:

The seasonal adjustment factors shown are estimates derived from a model that uses sample survey data as input. Therefore, these estimates may contain sampling error and nonsampling error. Additional information on the general form of the model and the X-13 ARIMA-SEATS program may be found at <www.census.gov/srd/www/x13as/>.

Data adjusted for seasonality but not price changes. Explanations of confidence intervals and sampling variability can be found on our website at <www.census.gov/wholesale/www/how_surveys_are_collected/monthly_methodology.html>.

Source: U.S. Census Bureau, Monthly Wholesale Trade Survey, October 6, 2017.

r Revised factors

¹ Combined factors for sales include the effects of seasonal variation, trading day differences, and moving holidays. Combined factors for inventories include only the effects of seasonal variation.

² Adjusted sales and inventories estimates for detailed kind-of-business levels in Table 1 are computed by dividing each "Not Adjusted" estimate by the combined adjustment factor for the corresponding kind of business and month. Adjusted estimates for broad kind-of-business levels are obtained by summing adjusted estimates at the appropriate detailed levels. Combined factors shown for broad kind-of-business levels may be used to approximate adjusted estimates at these levels, but the resulting estimates may differ slightly from the published estimates.

³ No significant seasonal pattern for this NAICS code was detected in the latest annual review of the seasonal adjustment for inventories. Therefore, the combined adjustment factors for inventories are set to one for this NAICS code.