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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES, SEPTEMBER 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>

November 9, 2017 — The U.S. Census Bureau announced the following new wholesale trade statistics for September 2017:





Sales

September 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 \$480.5 billion, up 1.3 percent (± 0.4 percent) from the revised August level and were up 8.5 percent (± 1.2 percent) from the September 2016 level. The July 2017 to August 2017 percent change was revised from the preliminary estimate of up 1.7 percent (± 0.4 percent) to up 1.9 percent (± 0.4 percent).

Inventories

Total inventories of merchant wholesalers, except manufacturers' sales branches and offices, after adjustment for seasonal variations but not for price changes, were \$609.5 billion at the end of September, up 0.3 percent $(\pm 0.4 \text{ percent})^*$ from the revised August level. Total inventories were up 4.6 percent $(\pm 0.7 \text{ percent})$ from the revised September 2016 level. The August 2017 to September 2017 percent change was unrevised from the advance estimate of up 0.3 percent $(\pm 0.4 \text{ percent})^*$.

Inventories/Sales Ratio

The September inventories/sales ratio for merchant wholesalers, except manufacturers' sales branches and offices, based on seasonally adjusted data, was 1.27. The September 2016 ratio was 1.32.

Data Inquiries

Economic Indicators Division, Wholesale Indicator Branch 301-763-6856 William Abriatis / Nicole Davis eid.wholesale.indicator.branch@census.gov





General Information

The October 2017 Monthly Wholesale Trade Report is scheduled for release on December 8, 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 <www.census.gov/wholesale/>.

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 $\pm 1.753 \times CV \times ($ 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 63.1 percent provided data for this reporting period, resulting in a total quantity response rate of 65.7 percent for sales and 63.7 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/

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* 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			Monthly Percent ch								Ju. 100		
code	Business	Sep.	Aug.	Sep.	Sep./	Aug./	Sep. 17/	Sep.	Aug.	Sep.	Sep./	Aug./	Sep. 17/	Sep.	Aug.	Sep.	
code	business	2017	2017	2016	Aug.	Jul.	Sep. 16	2017	2017	2016	Aug.	Jul.	Sep. 16	2017	2017	2016	
	.2	(p)	(r)	(r)				(p)	(r)	(r)				(p)	(r)	(r)	
<u>Adjusted</u>																	
42	U.S. Total	480,524	474,487	442,791	1.3	1.9	8.5	609,535	607,470	582,472	0.3	0.8		1.27	1.28	1.32	
423	.Durable	230,747	229,200	210,201	0.7	2.3	9.8	372,838	371,624	352,765	0.3	0.7	5.7	1.62	1.62	1.68	
4231	Automotive	39,938	39,660	35,736	0.7	4.4	11.8	69,476	69,687	64,421	-0.3	2.1	7.8	1.74	1.76	1.80	
4232	Furniture	6,882	6,902	6,993	-0.3	-0.1	-1.6	11,576	11,534	11,039	0.4	0.6		1.68	1.67	1.58	
4233	Lumber	11,460	11,226	10,378	2.1	0.1	10.4	16,566	16,491	15,553	0.5	1.2		1.45	1.47 1.05	1.50	
4234 42343	Prof. equip.	40,461	41,615	39,004 18,741	-2.8	2.4 4.5	3.7	43,408	43,872	41,162	-1.1	-0.1	5.5	1.07	0.85	1.06	
42343	Comp. equip.	19,808 14,200	20,586 13,728	11,635	-3.8 3.4	1.6	5.7 22.0	17,019 28,365	17,448 28,179	15,722 25,414	-2.5 0.7	1.2 1.6	1	0.86 2.00	2.05	0.84 2.18	
4236	Electrical	51,118	50,321	46,320	1.6	2.9	10.4	51,109	50,628	46,051	1.0	0.6		1.00	1.01	0.99	
4237	Hardware	11,531	11,356	11,110	1.5	1.1	3.8	23,654	23,481	22,880	0.7	0.8		2.05	2.07	2.06	
4238	Machinery	35,544	34,866	32,050	1.9	1.2	10.9	100,495	100,248	100,148	0.2	-0.2	1	2.83	2.88	3.12	
4239	Misc. Durable	19,613	19,526	16,975	0.4	1.2	15.5	28,189	27,504	26,097	2.5	1.2		1.44	1.41	1.54	
424	.Nondurable	249,777	245,287	232,590	1.8	1.6	7.4	236,697	235,846	229,707	0.4	1.0	3.0	0.95	0.96	0.99	
4241	Paper	7,760	8,070	7,940	-3.8	-1.7	-2.3	8,615	8,523	8,253	1.1	2.1	4.4	1.11	1.06	1.04	
4242	Drugs	56,030	56,823	54,304	-1.4	-0.3	3.2	60,754	60,144	59,275	1.0	3.8	1	1.08	1.06	1.09	
4243	Apparel	12,788	12,813	13,648	-0.2	0.1	-6.3	26,112	26,064	27,685	0.2	-1.1	-5.7	2.04	2.03	2.03	
4244	Groceries	52,821	53,610	52,578	-1.5	-0.3	0.5	36,533	36,491	35,243	0.1	0.5	3.7	0.69	0.68	0.67	
4245	Farm products	17,105	17,237	16,638	-0.8	0.2	2.8	25,868	25,918	23,499	-0.2	1.2	10.1	1.51	1.50	1.41	
4246	Chemicals ³	10,337	10,168	9,599	1.7	-0.4	7.7	11,872	11,745	11,519	1.1	0.1	3.1	1.15	1.16	1.20	
4247	Petroleum	59,219	52,581	45,073	12.6	8.3	31.4	21,163	20,543	20,145	3.0	0.8	5.1	0.36	0.39	0.45	
4248	Alcohol	11,789	11,859	11,566	-0.6	0.8	1.9	15,444	15,608	15,655	-1.1	-0.4	-1.3	1.31	1.32	1.35	
4249	Misc. Nondur.	21,928	22,126	21,244	-0.9	1.3	3.2	30,336	30,810	28,433	-1.5	-0.9	6.7	1.38	1.39	1.34	
Not Adj	<u>usted</u>														les to da		
														2017		2016	
42	U.S. Total	478,270	497,125	453,484	-3.8	11.5	5.5	606,112	596,553	579,261	1.6	0.1	4.6	4,177	,160	,898,846	
423	.Durable	234,834	242,316	221,028	-3.1	13.7	6.2	374,692	373,191	354,435	0.4	0.4	5.7	2,003	•	,870,309	
4231	Automotive	38,580	41,802	35,379	-7.7	16.7	9.0	68,156	67,248	63,197	1.4	-1.4	7.8		,293	315,972	
4232	Furniture	6,861	7,654	7,224	-10.4	16.2	-5.0	12,016	11,868	11,470	1.2	1.5	4.8		,693	60,299	
4233	Lumber	11,678	12,809	11,073	-8.8	10.5	5.5	16,433	16,755	15,429	-1.9	0.3			,398	95,096	
4234	Prof. equip.	42,565	42,073	42,319	1.2	6.5	0.6	43,842	44,486	41,615	-1.4	0.9	1		,104	339,012	
42343 4235	Comp. equip.	21,353	20,318	20,671	5.1	1.7	3.3	17,393	17,692	16,147	-1.7	2.2	1		,982 ,953	164,680 105,426	
4235	Metals Electrical	14,129 54,134	14,771 51,982	12,019 50,304	-4.3 4.1	14.7 16.4	17.6 7.6	28,564 52,489	28,574 52,096	25,541 47,248	0.0 0.8	1.7 2.3	11.8 11.1		3,755	401.603	
4237	Hardware	11,600	12,798	11,543	-9.4	11.6	0.5	23,678	23,598	22,903	0.3	0.1	3.4		,856	102,018	
4238	Machinery	35,046	37,202	32,851	-5.8		6.7	100,395	100,649	100,048	-0.3	-0.4	0.3		,478	294,972	
4239	Misc. Durable	20,241	21,225	18,316	-4.6		10.5	29,119	27,917	26,984	4.3	1.7	7.9		,305	155,911	
424	.Nondurable	243,436	254,809	232,456	-4.5	9.5	4.7	231,420	223,362	224,826	3.6	-0.4	2.9	2,173	,325 2	,028,537	
4241	Paper	7,776	8,861	8,178	-12.2	12.6	-4.9	8,512	8,344	8,146	2.0	-0.2	4.5	72	.163	72,272	
4242	Drugs	55,134	59,721	55,444	-7.7	10.7	-0.6	61,848	58,701	60,164	5.4	1.9		499	,152	476,511	
4243	Apparel	14,425	15,247	15,709	-5.4	21.3	-8.2	27,861	27,993	29,568	-0.5	-0.6	-5.8	112	,736	120,985	
4244	Groceries	52,610	56,237	53,209	-6.4	5.9	-1.1	37,154	36,455	35,807	1.9	1.7	3.8	480	,963	469,584	
4245	Farm products	14,847	15,772	14,741	-5.9	3.6	0.7	19,582	16,665	17,577	17.5	-11.6	11.4	149	,217	144,873	
4246	Chemicals	10,234	10,890	9,724	-6.0	9.1	5.2	11,872	11,745	11,519	1.1	0.1	3.1		,314	86,022	
4247	Petroleum	57,679	54,053	44,397	6.7	11.5	29.9	20,676	19,783	19,742	4.5	-1.6			,162	360,821	
4248	Alcohol	11,412	12,831	11,786	-11.1	17.4	-3.2	15,490	15,577	15,718	-0.6	-2.1	-1.5		,915	101,477	
4249	Misc. Nondur.	19,319	21,197	19,268	-8.9	2.7	0.3	28,425	28,099	26,585	1.2	1.4	6.9	198	3,703	195,992	
Footnotes																	

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, November 9, 2017.

^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.

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.]

<u>[EStimate</u>	Kind of Business		nt of variati					or monthly	Coeffic variation	Standard error for percent change			
NAICS code		Preliminar	y estimates	Final estimates			of two ve months	current n	month to nonth last ear	Sales to date		Current year sales to date to	
		Sales	lnv.	Sales	Inv.	Sales	lnv.	Sales	lnv.	Current year	Previous year	previous year sales to date	
42	U.S. Total	1.1	1.5	1.1	1.5	0.2	0.2	0.7	0.4	1.1	1.1	0.5	
423	.Durable	1.5	1.7	1.5	1.7	0.3	0.2	0.8	0.6	1.5	1.5	0.5	
4231	Automotive	4.0	4.8	4.2	4.4	0.8	0.6	1.6	1.9	3.9	3.7	1.1	
4232	Furniture	5.9	7.6	6.3	7.4	1.3	0.6	2.5	1.9	6.0	7.3	3.7	
4233	Lumber	5.1	5.1	5.0	5.3	0.4	0.3	1.9	1.6	5.0	5.1	1.1	
4234	Prof. equip.	4.1	3.9	4.4	3.9	0.5	0.4	1.9	1.5	3.8	3.5	1.5	
42343	Comp. equip.	4.2	5.4	4.5	5.4	0.6	0.5	1.9	1.5	4.5	4.6	1.0	
4235	Metals	4.8	7.2	5.0	6.6	1.3	0.8	1.6	1.7	4.9	5.0	1.8	
4236	Electrical	2.3	3.5	2.5	3.5	0.8	0.5	1.5	3.0	2.4	2.7	1.8	
4237	Hardware	3.4	4.1	3.6	4.0	1.1	0.3	2.1	0.8	3.3	3.0	1.5	
4238	Machinery	3.1	4.0	3.2	3.9	0.8	0.3	2.3	2.3	2.9	2.7	1.8	
4239	Misc. Durable	6.7	5.4	6.6	5.3	1.8	0.4	3.7	2.3	5.4	5.0	2.1	
424	.Nondurable	1.8	1.9	1.8	1.9	0.3	0.3	1.1	1.0	1.7	1.8	0.8	
4241	Paper	5.0	5.6	5.0	5.5	1.0	0.3	1.2	1.6	4.8	5.1	1.3	
4242	Drugs	2.3	4.9	2.4	5.2	0.4	0.4	1.8	1.6	2.4	3.4	1.6	
4243	Apparel	7.2	7.4	7.5	7.2	1.4	0.8	2.1	1.6	7.2	6.8	1.7	
4244	Groceries	4.2	6.0	4.4	6.3	0.8	0.6	2.3	1.9	4.2	3.6	1.8	
4245	Farm products	3.8	8.7	4.6	7.5	1.1	1.3	2.3	3.7	3.7	2.3	2.3	
4246	Chemicals	3.9	4.9	3.6	5.1	1.7	1.3	2.9	1.9	3.4	3.7	2.1	
4247	Petroleum	5.6	5.4	5.6	5.5	0.5	0.4	1.9	1.9	5.3	5.5	1.7	
4248	Alcohol	5.6	6.3	5.3	6.3	1.4	0.6	1.2	1.0	5.3	4.8	1.1	
4249	Misc. Nondur.	3.3	7.4	3.3	6.8	0.6	0.6	1.7	2.2	3.1	3.2	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, November 9, 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			
		Oct.	Sep.r	Aug.r	Jul.	Jun.	Sep.r	Oct.	Sep.r	Aug.r	Jul.	Jun.	Sep.r		
42	U.S. Total ²	1.049	0.997	1.049	0.958	1.053	1.024	1.010	0.993	0.983	0.989	0.990	0.993		
423	.Durable	1.055	1.018	1.059	0.950	1.066	1.051	1.006	1.004	1.005	1.008	1.000	1.004		
4231	Automotive	1.038	0.966	1.054	0.943	1.039	0.990	1.004	0.981	0.965	0.999	0.996	0.981		
4232	Furniture	1.105	0.997	1.109	0.953	1.010	1.033	1.030	1.038	1.029	1.019	0.993	1.039		
4233	Lumber	1.063	1.019	1.141	1.033	1.146	1.067	0.963	0.992	1.016	1.025	1.035	0.992		
4234	Prof. equip.	1.041	1.052	1.011	0.972	1.105	1.085	1.019	1.010	1.014	1.004	0.992	1.011		
42343	Comp. equip.	1.075	1.078	0.987	1.015	1.151	1.103	1.023	1.022	1.014	1.004	1.003	1.027		
4235	Metals	1.037	0.995	1.076	0.953	1.069	1.033	0.989	1.007	1.014	1.013	1.007	1.005		
4236	Electrical	1.110	1.059	1.033	0.913	1.045	1.086	1.029	1.027	1.029	1.011	0.995	1.026		
4237	Hardware	1.039	1.006	1.127	1.021	1.132	1.039	0.988	1.001	1.005	1.012	1.013	1.001		
4238	Machinery	1.021	0.986	1.067	0.949	1.069	1.025	0.995	0.999	1.004	1.006	1.004	0.999		
4239	Misc. Durable	1.040	1.032	1.087	0.934	1.052	1.079	1.038	1.033	1.015	1.010	0.991	1.034		
424	.Nondurable	1.041	0.977	1.040	0.967	1.044	1.000	1.018	0.979	0.948	0.959	0.974	0.978		
4241	Paper	1.046	1.002	1.098	0.959	1.040	1.030	1.001	0.988	0.979	1.001	1.009	0.987		
4242	Drugs	1.027	0.984	1.051	0.946	1.026	1.021	0.991	1.018	0.976	0.994	1.019	1.015		
4243	Apparel	1.219	1.128	1.190	0.982	0.953	1.151	1.015	1.067	1.074	1.068	1.017	1.068		
4244	Groceries	1.017	0.996	1.049	0.988	1.018	1.012	1.038	1.017	0.999	0.987	0.975	1.016		
4245	Farm products	1.162	0.868	0.915	0.885	0.954	0.886	1.143	0.757	0.643	0.736	0.804	0.748		
4246	Chemicals ³	1.004	0.990	1.071	0.978	1.055	1.013	1.000	1.000	1.000	1.000	1.000	1.000		
4247	Petroleum	1.038	0.974	1.028	0.999	1.050	0.985	0.976	0.977	0.963	0.986	1.024	0.980		
4248	Alcohol	1.021	0.968	1.082	0.929	1.151	1.019	1.033	1.003	0.998	1.015	1.008	1.004		
4249	Misc. Nondur.	0.944	0.881	0.958	0.945	1.141	0.907	0.966	0.937	0.912	0.891	0.913	0.935		

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, November 9, 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.