MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES, JULY 2018

Release Number: CB18-143

September 11, 2018 — The U.S. Census Bureau announced the following new wholesale trade statistics for July 2018:





Sales

July 2018 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 \$505.6 billion, virtually unchanged (± 0.2 percent)* from the revised June level, but were up 9.8 percent (± 3.5 percent) from the July 2017 level. The May 2018 to June 2018 percent change was revised from the preliminary estimate of down 0.1 percent (± 0.4 percent)* to down 0.2 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 \$636.3 billion at the end of July, up 0.6 percent (\pm 0.2 percent) from the revised June level. Total inventories were up 5.0 percent (\pm 3.9 percent) from the revised July 2017 level. The June 2018 to July 2018 percent change was revised from the advance estimate of up 0.7 percent (\pm 0.2 percent) to up 0.6 percent (\pm 0.2 percent).

Inventories/Sales Ratio

The July inventories/sales ratio for merchant wholesalers, except manufacturers' sales branches and offices, based on seasonally adjusted data, was 1.26. The July 2017 ratio was 1.32.

General Information

The August 2018 Monthly Wholesale Trade Report is scheduled for release on October 10, 2018. View the full schedule in the Economic Briefing Room: <<u>www.census.gov/economic-indicators/</u>>.

Data Inquiries Economic Indicators Division, Wholesale Indicator Branch 301-763-6856 William Abriatis / Nicole Davis eid.wholesale.indicator.branch@census.gov Media Inquiries Public Information Office 301-763-3030 pio@census.gov



U.S. Department of Commerce Economics and Statistics Administration U.S. CENSUS BUREAU **CENSUS.GOV** 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 -0.2 percent to 2.6 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 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

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U.S. Department of Commerce Economics and Statistics Administration U.S. CENSUS BUREAU **CENSUS BUREAU** 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 62.9 percent provided data for this reporting period, resulting in a total quantity response rate of 65.8 percent for sales and 65.5 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: <<u>www.census.gov/wholesale/</u>>.

RESOURCES

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.

FRED Mobile App



Receive the latest updates on the nation's key economic indicators by downloading the FRED App <<u>https://fred.stlouisfed.org/fred-mobile/</u>> for both Apple and Android devices. FRED, the signature database of the Federal Reserve Bank of St. Louis, now incorporates the Census Bureau's 13 economic indicators.

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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 change			Ratios			
code	Business	Jul.	Jun.	Jul.	Jul./	Jun./	Jul. 18/	Jul.	Jun.	Jul.	Jul./	Jun./	Jul. 18/	Jul.	Jun.	Jul.	
coue	Busiliess	2018	2018	2017	Jun.	May	Jul. 17	2018	2018	2017	Jun.	May	Jul. 17	2018	2018	2017	
		(p)	(r)	(r)				(p)	(r)	(r)				(p)	(r)	(r)	
<u>Adjuste</u>																	
42	U.S. Total	505,605	505,806	460,512	0.0	-0.2	9.8	636,341	632,717	605,894	0.6	0.1	5.0	1.26	1.25	1.32	
423	.Durable	243,324	243,311	222,100	0.0	0.2	9.6	386,963	384,077	364,587	0.8	0.9	6.1	1.59	1.58	1.64	
4231	Automotive	41,319	41,461	37,696	-0.3	-0.3	9.6	63,024	63,706	63,769	-1.1	-1.2	-1.2	1.53	1.54	1.69	
4232	Furniture	7,060	7,291	6,899	-3.2	4.8	2.3	12,993	12,970	12,591	0.2	0.0	3.2	1.84	1.78		
4233	Lumber	12,268	12,163	11,471	0.9	-1.3	6.9	17,832	17,462	15,552	2.1	1.6	14.7	1.45	1.44		
4234	Prof. equip.	41,594	42,642	40,668	-2.5	-2.3	2.3	45,626	44,930	44,721	1.5	1.3	2.0	1.10	1.05	-	
42343	Comp. equip.	21,412	22,311	20,927	-4.0		2.3	16,905	16,290	16,395	3.8	1.1	3.1	0.79	0.73		
4235	Metals	15,678	15,552	13,237	0.8		18.4	33,500	32,482	27,379	3.1	4.2	22.4	2.14	2.09	-	
4236 4237	Electrical Hardware	52,361 12,283	51,624 12,074	47,754 11,271	1.4 1.7	1.9 0.5	9.6 9.0	55,852 24,701	55,678 24,341	53,262 23,052	0.3 1.5	0.1 -0.3	4.9 7.2	1.07 2.01	1.08 2.02		
4237	Machinery	40,055	39,926	34,054	0.3		9.0 17.6	102,249	101,039	23,032 94,673	1.5	-0.3	8.0	2.01	2.02		
4239	Misc. Durable	20,706	20,578	19,050			8.7	31,186	31,469	29,588	-0.9	2.6		1.51	1.53		
424	.Nondurable	262,281	262,495	238,412	-0.1	-0.6	10.0	249,378	248,640	241,307	0.3	-1.0	3.3	0.95	0.95		
4241		8,317	8,278	8,278		-0.4	0.5	10,250	10,048	9,181	2.0	1.9	11.6	1.23	1.21		
4241	Paper Drugs	59,348	8,278 59,396	6,278 56,953	-0.1	-0.4	0.3 4.2	62,902	62,567	9,181 60,371	2.0	-0.7	4.2	1.23	1.05		
4242	Apparel	12,130	12,960	12,757	-0.1	-0.7	4.2 -4.9	26,075	25,906	27,070	0.3	-0.7	-3.7	2.15	2.00		
4244	Groceries	52,931	52,771	54,422	0.4		-2.7	37,634	37,897	38,109	-0.7	-0.1	-1.2	0.71	0.72		
4245	Farm products	20,099	20,530	16,722	-2.1	1.0	20.2	26,314	25,957	22,572	1.4	-5.5	16.6	1.31	1.26		
4246	Chemicals ³	11,296	11,146	10,102	1.3			12,724	12,569	11,964	1.2	0.8	6.4	1.13	1.13		
4247	Petroleum	63,269	63,565	44,913	-0.5		40.9	23,628	24,043	21,759	-1.7	-2.1	8.6	0.37	0.38	-	
4248	Alcohol	13,080	12,981	12,284	0.8		6.5	16,750	16,560	16,845	1.1	0.1	-0.6	1.28	1.28		
4249	Misc. Nondur.	21,811	20,868	21,981	4.5			33,101	33,093	33,436	0.0	0.0	-1.0	1.52	1.59		
<u>Not Ad</u>	iusted													Sales to date		ate	
<u></u> ,														2018	3 2	2017	
42	U.S. Total	497,311	516,628	440,638	-3.7	-3.5	12.9	628,977	625,935	599,657	0.5	-0.1	4.9	3,439	,040 3	3,158,791	
423	.Durable	238,261	250,234	210,694	-4.8	0.1	13.1	390,336	383,804	367,592	1.7	0.7	6.2	1,645	,885 1	1,506,799	
4231	Automotive	40,369	41,585	35,434	-2.9	-3.3	13.9	62,646	63,196	63,514	-0.9	-0.8	-1.4	284	,121	262,315	
4232	Furniture	6,947	7,189	6,582	-3.4		5.5	13,240	12,866	12,830	2.9	1.3	3.2	46	,588	46,169	
4233	Lumber	12,992	13,136	11,746	-1.1	-4.3	10.6	18,331	17,968	15,987	2.0	0.9	14.7	84	,683	78,713	
4234	Prof. equip.	41,386	45,670	39,651	-9.4	6.1	4.4	46,174	44,705	45,168	3.3	1.9	2.2	288	,047	270,845	
42343	Comp. equip.	22,140	25,144	21,346	-11.9	11.1	3.7	17,192	16,420	16,608	4.7	2.4	3.5		,630	137,997	
4235	Metals	15,537	16,034	12,575	-3.1	-6.2	23.6	33,935	32,450	27,762	4.6	3.9	22.2		,459	91,635	
4236	Electrical	48,905	51,882	43,456		3.9	12.5	56,299	55,288	53,688	1.8	-1.0	4.9		,244	313,498	
4237	Hardware	12,873	13,137	11,406			12.9	24,973	24,633	23,329	1.4	-0.9			,769	79,039	
4238	Machinery	39,374	41,044	32,147	-4.1	-0.8		103,271	101,544	95,430	1.7	0.5	8.2		,256 ,718	235,517 129,068	
4239	Misc. Durable	19,878	20,557	17,697	-3.3			31,467	31,154	29,884	1.0	3.5	5.3				
424	.Nondurable	259,050	266,394	229,944	-2.8		12.7	238,641	242,131	232,065	-1.4	-1.5		1,793		1,651,992	
4241	Paper	8,300	8,361	7,972		-4.5	4.1	10,291	10,068	9,209	2.2	1.7	11.7		,335	56,253	
4242	Drugs	58,576	59,040	54,105	-0.8		8.3	61,770	63,506	59,586	-2.7	3.4	3.7		,525	385,131	
4243 4244	Apparel	12,057 52,931	12,079 52,824	12,349 53,606		-2.9 -6.7		27,744 37,220	26,269 37,101	28,803 37,690	5.6	3.7 0.1	-3.7 -1.2		,372 ,927	81,735 375,533	
4244 4245	Groceries Farm products	52,931 18,270	52,824 19,360	53,606 14,849			-1.3 23.0	37,220 19,130	20,636	37,690 16,523	0.3 -7.3	0.1 -16.4			,927 ,214	375,533 118,078	
	Chemicals	11,352	19,360	9,839			23.0 15.4	19,130	12,569	10,525	-7.5	-10.4	6.4		,214 ,937	70,102	
4/46				-												323,800	
4246 4247	Petroleum	64.091	66.171	45.182	-3.1	-5.7	41.9	23.085	24.860	21.367	-7.1	-3.7	8.0	421	,020		
4246 4247 4248	Petroleum Alcohol	64,091 12,622	66,171 14,565	45,182 11,424	-3.1 -13.3	-5.7 3.2	41.9 10.5	23,085 16,985	24,860 16,610	21,367 17,098	-7.1 2.3	-3.7 -2.4		421 85	,828 ,873	83,212	

Footnotes:

^p Preliminary estimate.

^r Revised estimate.

 $^{-1}$ For a full description of the NAICS codes used in this table, see the 2012 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, September 11, 2018.

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.]

NAICS code	Kind of Business	Proliminan						or monthly	variation	Standard error for percent change Current year sales to date to		
		rienniary	estimates (Final estimates		Ratio o consecutiv		Current r current m ye	onth last		Sales to date	
		Sales	Inv.	Sales	Inv.	Sales	Inv.	Sales	Inv.	Current year	Previous year	previous year sales to date
42 U	J.S. Total	1.2	1.4	1.2	1.4	0.1	0.1	2.0	2.2	1.1	1.1	1.9
423 .[Durable	1.6	2.2	1.6	2.1	0.2	0.2	3.0	3.0	1.5	1.5	2.8
4231	.Automotive	2.5	2.7	2.5	2.5	0.6	0.3	5.3	4.6	2.3	4.0	4.4
	.Furniture	4.9	8.2	4.2	8.7	2.0	0.8	14.7	20.4	4.1	6.1	13.6
4233	.Lumber	4.1	5.5	3.8	5.5	0.9	0.3	8.8	5.7	3.6	5.0	8.1
	.Prof. equip.	3.0	5.7	3.4	5.8	0.9	0.3	3.9	6.0	3.2	3.7	3.6
	Comp. equip.	3.2	6.1	4.8	5.9	1.1	0.4	4.4	9.0	4.3	4.6	5.5
	.Metals	4.8	4.6	4.9	4.4	0.9	0.5	9.0	8.9	4.7	4.9	8.5
	.Electrical	3.2	4.4	2.9	4.6	0.5	0.4	4.8	5.4	3.0	2.5	4.4
	.Hardware	6.1	9.6	6.3	9.4	0.6	0.4	10.9	14.3	5.7	3.3	7.8
	.Machinery	3.4	4.3	3.3	4.2	0.9	0.3	7.2	6.3	3.0	2.8	5.6
4239	.Misc. Durable	4.6	8.9	4.3	9.1	1.2	0.5	9.9	14.8	4.6	5.1	8.0
424 .N	Nondurable	1.2	1.3	1.2	1.4	0.3	0.2	2.3	2.0	1.1	1.7	2.2
4241	.Paper	6.1	10.2	5.8	10.3	1.1	0.3	8.8	13.2	5.8	4.7	8.8
4242	.Drugs	2.8	3.5	2.7	3.3	0.3	0.3	3.7	5.0	2.6	2.4	3.4
4243	.Apparel	4.0	4.1	5.3	4.1	1.6	0.5	9.9	8.9	4.3	7.2	9.5
4244	.Groceries	3.2	3.8	3.1	3.6	0.5	0.5	4.9	10.1	2.9	4.2	5.2
4245	.Farm products	3.4	5.2	3.6	5.8	1.3	1.4	6.2	10.4	3.2	3.5	4.9
	.Chemicals	5.4	8.7	5.9	8.5	1.0	0.5	6.4	11.8	5.1	3.4	5.9
4247	.Petroleum	3.1	2.4	3.0	2.4	0.4	0.3	7.7	5.7	2.8	5.2	6.3
4248	.Alcohol	6.2	8.4	7.3	8.4	1.2	0.8	9.8	12.3	6.2	5.3	8.9
4249	.Misc. Nondur.	5.2	4.9	4.7	4.8	0.7	0.7	7.3	9.4	4.4	3.1	6.0

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, September 11, 2018.

Table 3. Combined¹ 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			Sa	les		Inventories						
code	Business	2018					2017	2018					2017
		Aug.	Jul.r	Jun.r	Мау	Apr.	Jul.r	Aug.	Jul.r	Jun.r	May	Apr.	Jul.r
42	U.S. Total ²	1.044	0.983	1.023	1.052	0.983	0.956	0.985	0.991	0.990	0.992	1.002	0.991
423	.Durable	1.052	0.976	1.028	1.029	0.975	0.946	1.007	1.010	0.999	1.001	1.000	1.009
4231	Automotive	1.048	0.977	1.003	1.034	1.004	0.940	0.958	0.994	0.992	0.988	1.008	0.996
4232	Furniture	1.105	0.984	0.986	1.015	0.941	0.954	1.029	1.019	0.992	0.979	0.970	1.019
4233	Lumber	1.135	1.059	1.080	1.114	1.013	1.024	1.018	1.028	1.029	1.036	1.042	1.028
4234	Prof. equip.	1.007	0.995	1.071	0.986	0.938	0.975	1.019	1.012	0.995	0.989	0.988	1.010
42343	Comp. equip.	0.987	1.034	1.127	0.967	0.921	1.020	1.030	1.017	1.008	0.995	0.971	1.013
4235	Metals	1.066	0.991	1.031	1.078	1.008	0.950	1.016	1.013	0.999	1.002	1.002	1.014
4236	Electrical	1.025	0.934	1.005	0.985	0.939	0.910	1.025	1.008	0.993	1.004	0.991	1.008
4237	Hardware	1.111	1.048	1.088	1.084	0.982	1.012	1.006	1.011	1.012	1.018	1.019	1.012
4238	Machinery	1.068	0.983	1.028	1.067	1.032	0.944	1.006	1.010	1.005	1.011	1.005	1.008
4239	Misc. Durable	1.079	0.960	0.999	1.032	0.963	0.929	1.020	1.009	0.990	0.981	0.984	1.010
424	.Nondurable	1.035	0.987	1.018	1.078	0.989	0.967	0.951	0.960	0.974	0.978	1.004	0.961
4241	Paper	1.095	0.998	1.010	1.053	0.986	0.963	0.982	1.004	1.002	1.004	1.011	1.003
4242	Drugs	1.055	0.987	0.994	1.044	0.972	0.950	0.975	0.982	1.015	0.974	0.986	0.987
4243	Apparel	1.166	0.994	0.932	0.955	0.843	0.968	1.071	1.064	1.014	0.967	0.953	1.064
4244	Groceries	1.046	1.000	1.001	1.069	0.986	0.985	1.002	0.989	0.979	0.977	0.982	0.989
4245	Farm products	0.913	0.909	0.943	1.040	0.983	0.888	0.645	0.727	0.795	0.898	1.037	0.732
4246	Chemicals ³	1.065	1.005	1.026	1.040	0.992	0.974	1.000	1.000	1.000	1.000	1.000	1.000
4247	Petroleum	1.021	1.013	1.041	1.101	0.990	1.006	0.952	0.977	1.034	1.051	1.027	0.982
4248	Alcohol	1.090	0.965	1.122	1.103	0.945	0.930	0.995	1.014	1.003	1.028	1.018	1.015
4249	Misc. Nondur.	0.936	0.956	1.081	1.287	1.163	0.938	0.912	0.897	0.922	0.968	1.081	0.892
Footnotes:													

Footnotes:

^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-ofbusiness levels are obtained by summing adjusted estimates at the appropriate detailed levels. Combined factors shown for broad kind-ofbusiness 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.

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, September 11, 2018.