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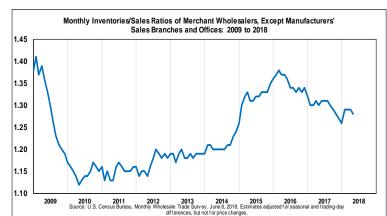
MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES, APRIL 2018

Release Number: CB18-94

Notice of Revision: Monthly Wholesale sales, inventories, and inventories-to-sales ratios were revised to reflect the introduction of a new sample, new seasonal factors, the introduction of 2012 NAICS, and the results of the 2016 Annual Wholesale Trade Survey. Revised adjusted and not adjusted estimates are available on our website. For further information, see <www.census.gov/wholesale/faqs>.

June 8, 2018 — The U.S. Census Bureau announced the following new wholesale trade statistics for April 2018:





Sales

April 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 \$493.3 billion, up 0.8 percent (±0.4 percent) from the revised March level and were up 7.8 percent (±3.3 percent) from the April 2017 level. The February 2018 to March 2018 percent change was unrevised from the Monthly Wholesale Annual Revision Report and is up 0.4 percent (±0.7 percent)*.

Inventories

Total inventories of merchant wholesalers, except manufacturers' sales branches and offices, after adjustment for seasonal variations but not for price changes, were \$630.2 billion at the end of April, up 0.1 percent (\pm 0.2 percent)* from the revised March level. Total inventories were up 5.8 percent (\pm 3.9 percent) from the revised April 2017 level. The March 2018 to April 2018 percent change was revised from the advance estimate of virtually unchanged (\pm 0.2 percent)* to up 0.1 percent (\pm 0.2 percent)*.

Inventories/Sales Ratio

The April inventories/sales ratio for merchant wholesalers, except manufacturers' sales branches and offices, based on seasonally adjusted data, was 1.28. The April 2017 ratio was 1.30.

Data Inquiries

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





General Information

The May 2018 Monthly Wholesale Trade Report is scheduled for release on July 11, 2018. 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 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 60.7 percent provided data for this reporting period, resulting in a total quantity response rate of 62.8 percent for sales and 63.3 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/>.

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.

www.census.gov/developers/

FRED Mobile App



Receive the latest updates on the nation's key economic indicators by downloading the FRED App < https://fred.stlouisfed.org/fred-mobile/> 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.

Data Inquiries

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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	Apr. 2018	Mar. 2018	Apr. 2017	Apr./ Mar.	Mar./ Feb.	Apr. 18/ Apr. 17	Apr. 2018	Mar. 2018	Apr. 2017	Apr./ Mar.	Mar./ Feb.	Apr. 18/ Apr. 17	Apr. 2018	Mar. 2018	Apr. 2017
		(p)	(r)	(r)				(p)	(r)	(r)				(p)	(r)	(r)
<u>Adjusted</u>	<u>d</u> 2															
42	U.S. Total	493,298	489,608	457,801	0.8	0.4	7.8	630,171	629,230	595,717	0.1	0.2	5.8	1.28	1.29	1.30
423	.Durable	238,871	237,012	221,179	0.8	-0.1	8.0	379,915	379,028	357,822	0.2	0.7	6.2	1.59	1.60	1.62
4231	Automotive	40,409	40,683	38,039	-0.7	-1.2	6.2	65,609	65,327	62,320	0.4	0.1	5.3	1.62	1.61	1.64
4232	Furniture	6,944	6,836	6,785	1.6	-1.9	2.3	12,931	13,096	12,553	-1.3	0.3	3.0	1.86	1.92	1.85
4233	Lumber	12,177	11,751	11,217	3.6	-1.9	8.6	17,070	16,804	15,506	1.6	1.3	10.1	1.40	1.43	1.38
4234	Prof. equip.	41,732	41,434	40,000	0.7	-0.7	4.3	44,014	43,852	44,248	0.4	-0.4	-0.5	1.05	1.06	1.11
42343	Comp. equip.	21,804	21,543	20,540	1.2			15,936	15,800	16,102	0.9		-1.0	0.73	0.73	0.78
4235	Metals	15,902	15,389	13,199	3.3			31,440	30,855	26,174	1.9		20.1	1.98	2.01	1.98
4236	Electrical	50,792	51,571	47,874	-1.5			56,416	56,282	52,445	0.2	1.0	7.6	1.11	1.09	1.10
4237	Hardware	11,576	11,778	11,333	-1.7			24,469	24,211	22,599	1.1	0.9	8.3	2.11	2.06	1.99
4238 4239	Machinery Misc. Durable	38,094 21,245	37,401	33,898 18,834	1.9 5.3		12.4 12.8	97,840 30,126	97,837 30,764	92,789 29,188	0.0 -2.1	0.2 1.6	5.4 3.2	2.57 1.42	2.62 1.53	2.74 1.55
			20,169													
424	.Nondurable	254,427	252,596	236,622	0.7	0.8		250,256	250,202	237,895	0.0	-0.6	5.2	0.98	0.99	1.01
4241	Paper	8,314	8,266	8,106	0.6			9,616	9,739	9,197	-1.3	0.8	4.6	1.16	1.18	1.13
4242	Drugs	58,548	57,877	55,051	1.2			61,614	62,972	61,559	-2.2	-3.5		1.05	1.09	1.12
4243	Apparel	12,643	13,024	12,146	-2.9			26,631	26,783	26,927	-0.6		-1.1	2.11	2.06	2.22
4244 4245	Groceries	53,050	53,397	54,500	-0.6	-0.6 5.7		37,720	37,411	38,048 20,461	0.8		-0.9	0.71	0.70 1.50	0.70 1.23
	Farm products	19,563	18,169	16,640	7.7			28,232	27,339	,	3.3	4.6		1.44		
4246	Chemicals ³	11,064	10,843	9,819	2.0			12,273	12,440	12,029	-1.3		2.0	1.11	1.15	1.23
4247 4248	Petroleum Alcohol	57,161	56,299	46,741	1.5			24,051	23,332	22,410	3.1	1.2	7.3	0.42	0.41 1.31	0.48
4248 4249	Misc. Nondur.	12,592 21,492	12,731 21,990	12,365 21,254	-1.1 -2.3	1.9 -0.6		16,758 33,361	16,678 33,508	16,519 30,745	0.5 -0.4	-0.9 -0.3		1.33 1.55	1.51	1.34 1.45
	•	21,732	21,550	21,234	2.3	0.0	1	33,301	33,300	30,7 43	0.4	0.5	0.5		les to da	
Not Adj	<u>ustea</u> I													2018		017
42	U.S. Total	487,505	504,379	440,864	-3.3	15.9	10.6	631,980	635,545	597,199	-0.6	0.4	5.8	1,888		,756,777
423	.Durable	234,128	245,670	210,121	-4.7	18.0		380,169	377,812	358,119	0.6	0.6	6.2		,347	833,807
4231	Automotive	40,773	42,921	37,278	-5.0			65,937	66,307	62,694	-0.6		5.2		,245	148,549
4231	Furniture	6,520	6,610	6,242	-3.0 -1.4			12,543	12,742	12,164	-0.6 -1.6				,398	25,679
4233	Lumber	12,372								16,142	2.8				.808	41,739
4234	Prof. equip.	39,145	43,630	36,720	-10.3		6.6	43,486	42,668	43,761	1.9		-0.6	157	,244	148,350
42343	Comp. equip.	20,169	22,426	18,753	-10.1	30.6	7.6	15,458		15,635	1.1	-2.7	-1.1		,199	73,295
4235	Metals	16,045	16,266	12,882	-1.4	15.2	24.6	31,377	30,793	26,122	1.9	4.4	20.1	60	,840	51,073
4236	Electrical	47,998	51,880	44,236	-7.5	20.4	8.5	56,021	54,875	52,025	2.1	0.8	7.7	189	,973	172,996
4237	Hardware	11,368	11,966	10,812	-5.0			24,934	24,429	23,051	2.1	2.5	8.2		,802	42,526
4238	Machinery	39,427	40,057	33,627	-1.6			98,427	98,620	93,439	-0.2		5.3		,415	130,667
4239	Misc. Durable	20,480	20,613	17,365	-0.6	10.3	17.9	29,674	30,087	28,721	-1.4	1.1	3.3		3,622	72,228
424	.Nondurable	253,377	258,709	230,743	-2.1	14.0	9.8	251,811	257,733	239,080	-2.3	0.1	5.3	981	,464	922,970
4241	Paper	8,198	8,357	7,612	-1.9			9,731	9,720	9,317	0.1	0.4	4.4	31	,922	30,998
4242	Drugs	57,201	59,266	51,583	-3.5			60,751	63,980	60,820	-5.0				,794	213,395
4243	Apparel	10,582	12,803	10,093	-17.3			25,299	25,203	25,608	0.4				,622	45,790
4244	Groceries	52,360	54,945	52,865	-4.7			37,003	36,738	37,325	0.7				7,712	207,605
4245	Farm products	19,426	18,859	16,124	3.0			29,192	31,331	20,911	-6.8				,778	69,366 39,667
4246 4247	Chemicals Petroleum	10,942 57,675	11,363 56,018	9,495 46,881	-3.7 3.0			12,273 24,773	12,440 23,845	12,029 23,127	-1.3 3.9		2.0 7.1		,786 ,808	185,849
4247	Alcohol	11,912	12,667	11,499	-6.0			17,026		16,800	2.9		1.3		,574	43,495
4249	Misc. Nondur.	25,081	24,431	24,591	2.7			35,763	37,931	33,143	-5.7				3,468	86,805
Footnotes		- /	, , ,	,				,	- ,	,					I	

^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, June 8, 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.]

	Kind of Business	Coefficie	nt of variation	on for mon	thly total	Stan	dard error f	or monthly	Coeffic variation	Standard error for percent change		
NAICS code		Preliminary	/ estimates	Final estimates			of two ve months	current n	month to nonth last ear	Sales to date		Current year sales to date to
		Sales	Inv.	Sales	lnv.	Sales	Inv.	Sales	Inv.	Current year	Previous year	previous year sales to date
42	U.S. Total	1.1	1.4	1.1	1.4	0.2	0.1	1.9	2.2	1.1	1.1	1.9
423	.Durable	1.3	2.1	1.6	2.1	0.4	0.1	2.5	2.9	1.5	1.5	2.7
4231	Automotive	2.2	2.4	2.3	2.2	0.5	0.3	3.8	5.1	2.2	3.7	4.0
4232	Furniture	4.1	8.2	4.3	8.0	1.2	0.4	16.3	19.3	4.0	6.0	13.8
4233	Lumber	3.8	5.5	3.9	5.6	1.3	0.5	9.3	5.5	3.6	5.0	8.0
4234	Prof. equip.	3.2	5.8	3.3	5.7	1.1	0.4	3.8	5.9	3.4	3.7	3.5
42343	Comp. equip.	3.6	5.9	5.1	6.2	1.9	0.5	5.2	8.3	4.9	4.7	5.9
4235	Metals	4.7	4.4	4.7	4.5	1.4	0.5	9.4	9.2	4.6	4.9	8.4
4236	Electrical	2.7	4.6	3.3	4.6	0.7	0.4	4.0	5.1	3.1	2.4	4.4
4237	Hardware	5.9	9.2	5.2	9.2	1.1	0.3	8.4	13.6	5.5	3.1	7.2
4238	Machinery	3.0	4.2	3.4	4.2	0.9	0.3	5.1	5.6	3.0	2.6	5.2
4239	Misc. Durable	4.8	8.8	4.9	8.7	0.8	0.5	8.8	13.9	4.8	5.2	7.8
424	.Nondurable	1.1	1.4	1.0	1.5	0.3	0.2	2.3	2.1	1.0	1.8	2.2
4241	Paper	5.6	10.2	5.6	10.4	1.5	0.3	9.1	12.5	5.8	4.8	9.1
4242	Drugs	2.8	3.6	2.5	3.4	0.3	0.2	3.6	4.9	2.5	2.3	3.3
4243	Apparel	4.6	4.1	4.5	4.3	0.7	0.4	10.6	8.5	4.1	7.2	9.6
4244	Groceries	3.1	3.4	3.0	3.3	0.5	0.7	5.3	10.4	2.8	4.3	5.4
4245	Farm products	3.6	6.3	3.4	6.3	1.2	0.5	6.5	15.4	3.2	3.0	4.1
4246	Chemicals	5.4	8.5	5.2	8.2	1.0	0.8	6.4	11.6	4.9	3.3	5.7
4247	Petroleum	3.0	2.5	2.7	2.3	0.9	0.4	6.0	4.9	2.8	5.2	5.7
4248	Alcohol	6.8	8.7	6.0	8.9	1.9	0.3	9.2	12.1	5.8	5.4	8.6
4249	Misc. Nondur.	4.2	4.3	4.3	4.3	1.0	0.6	5.6	9.2	4.4	3.0	5.9

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, June 8, 2018.

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			Sa	les		Inventories						
code	Business			2018			2017	2018					2017
		May	Apr.r	Mar.r	Feb.	Jan.	Apr.r	May	Apr.r	Mar.r	Feb.	Jan.	Apr.r
42	U.S. Total ²	1.047	0.988	1.029	0.891	0.953	0.964	0.992	1.002	1.010	1.007	1.009	1.003
423	.Durable	1.025	0.978	1.034	0.879	0.945	0.951	1.002	1.000	0.997	0.996	0.991	1.001
4231	Automotive	1.031	1.009	1.055	0.906	0.941	0.980	0.988	1.005	1.015	1.025	1.005	1.006
4232	Furniture	1.029	0.939	0.967	0.863	0.933	0.920	0.978	0.970	0.973	0.986	1.000	0.969
4233	Lumber	1.102	1.016	0.998	0.852	0.881	0.977	1.039	1.041	1.029	1.006	0.971	1.041
4234	Prof. equip.	0.978	0.938	1.053	0.843	0.935	0.918	0.991	0.988	0.973	0.991	1.006	0.989
42343	Comp. equip.	0.954	0.925	1.041	0.792	0.898	0.913	0.996	0.970	0.968	0.973	0.996	0.971
4235	Metals	1.068	1.009	1.057	0.935	0.997	0.976	1.005	0.998	0.998	0.993	0.989	0.998
4236	Electrical	0.991	0.945	1.006	0.849	0.937	0.924	1.007	0.993	0.975	0.977	0.982	0.992
4237	Hardware	1.080	0.982	1.016	0.872	0.933	0.954	1.017	1.019	1.009	0.994	0.980	1.020
4238	Machinery	1.066	1.035	1.071	0.886	0.934	0.992	1.011	1.006	1.008	1.002	0.988	1.007
4239	Misc. Durable	1.027	0.964	1.022	0.924	0.954	0.922	0.985	0.985	0.978	0.983	1.000	0.984
424	.Nondurable	1.068	0.997	1.025	0.906	0.964	0.978	0.976	1.004	1.027	1.024	1.037	1.005
4241	Paper	1.050	0.986	1.011	0.893	0.993	0.939	1.000	1.012	0.998	1.002	1.021	1.013
4242	Drugs	1.040	0.977	1.024	0.900	1.017	0.937	0.974	0.986	1.016	0.962	1.017	0.988
4243	Apparel	0.952	0.837	0.983	0.938	0.893	0.831	0.967	0.950	0.941	0.973	1.007	0.951
4244	Groceries	1.068	0.987	1.029	0.907	0.968	0.970	0.977	0.981	0.982	0.980	1.000	0.981
4245	Farm products	1.034	0.993	1.038	0.920	1.054	0.969	0.877	1.034	1.146	1.230	1.252	1.022
4246	Chemicals ³	1.047	0.989	1.048	0.943	1.034	0.967	1.000	1.000	1.000	1.000	1.000	1.000
4247	Petroleum	1.058	1.009	0.995	0.922	0.975	1.003	1.042	1.030	1.022	1.004	1.004	1.032
4248	Alcohol	1.102	0.946	0.995	0.834	0.775	0.930	1.030	1.016	0.992	0.982	0.978	1.017
4249	Misc. Nondur.	1.240	1.167	1.111	0.880	0.886	1.157	0.973	1.072	1.132	1.119	1.063	1.078

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, June 8, 2018.

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.