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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES September 2016

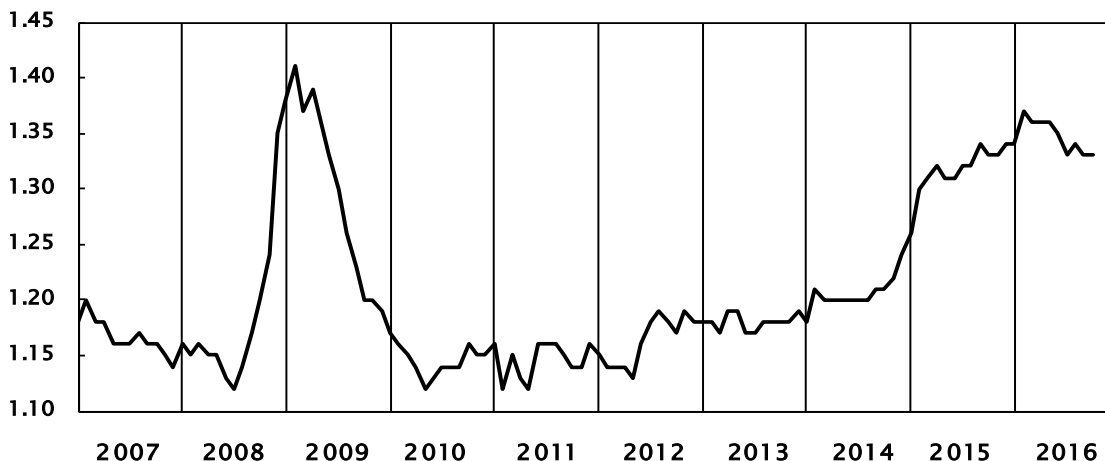
Sales. The U.S. Census Bureau announced today that September 2016 sales of merchant wholesalers, except manufacturers' sales branches and offices, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$444.9 billion, up 0.2 percent (+/-0.4%)* from the revised August level and were up 0.4 percent (+/-1.1%)* from the September 2015 level. The July 2016 to August 2016 percent change was unrevised from the preliminary estimate of up 0.7 percent (+/-0.5%). September sales of durable goods were up 0.2 percent (+/-0.7%)* from last month and were up 0.2 percent (+/-1.8%)* from a year ago. Sales of electrical and electronic goods were up 1.5 percent from August, while sales of hardware, plumbing and heating equipment and supplies were down 2.4 percent. Sales of nondurable goods were up 0.1 percent (+/-0.5%)* from August and were up 0.5 percent (+/-1.2%)* from last September. Sales of petroleum and petroleum products were up 5.0 percent from last month, while sales of farm product raw materials were down 12.0 percent.

Inventories. Total inventories of merchant wholesalers, except manufacturers' sales branches and offices, after adjustment for seasonal variations but not for price changes, were \$590.2 billion at the end of September, up 0.1 percent (+/-0.2%)* from the revised August level. Total inventories are down 0.1 percent (+/-1.9%)* from the revised September 2015 level. The August 2016 to September 2016 percent change was revised from the advance estimate of up 0.2 percent (+/-0.4%)* to up 0.1 percent (+/-0.2%)*. September inventories of durable goods were down 0.4 percent (+/-0.4%)* from last month and were down 1.9 percent (+/-1.6%) from a year ago. Inventories of motor vehicle and motor vehicle parts and supplies were down 1.7 percent from last month. Inventories of nondurable goods were up 0.9 percent (+/-0.4%) from August and were up 2.7 percent (+/-3.3%)* from last September. Inventories of petroleum and petroleum products were up 3.8 percent from last month and inventories of drugs and druggists' sundries were up 3.3 percent.

Inventories/Sales Ratio. The September inventories/sales ratio for merchant wholesalers, except manufacturers' sales branches and offices, based on seasonally adjusted data, was 1.33. The September 2015 ratio was 1.33.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling error. A discussion of the reliability of the estimates and survey methodology can be found at: http://www.census.gov/wholesale/www/how_surveys_are_collected/monthly_methodology.html.

Monthly Inventories/Sales Ratios of Merchant Wholesalers, Except Manufacturers'
Sales Branches and Offices: 2007 to 2016
(Estimates adjusted for seasonal and trading-day differences, but not for price changes)



Monthly Wholesale Trade for October is scheduled to be released December 9, 2016 at 10:00 a.m. EST.

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

To receive the latest updates on the nation's key economic indicators, download the America's Economy app for Apple and Android smartphones and tablets.

The U.S. Census Bureau updated its Application Programming Interface (API) with monthly and quarterly economic indicators. The API allows developers to combine Census Bureau statistics with other data sets to create tools for research on a variety of topics. For more information, visit <http://www.census.gov/developers>.

* The 90 percent 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. 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.]

NAICS ¹ code	Kind of Business	Sales						Inventories ⁴						Inventories/Sales Ratios		
		Monthly			Percent change			Monthly			Percent change			Ratios		
		Sep. 2016 (p)	Aug. 2016 (r)	Sep. 2015 (r)	Sep./Aug.	Aug./Jul.	Sep. 16/ Sep. 15	Sep. 2016 (p)	Aug. 2016 (r)	Sep. 2015 (r)	Sep./Aug.	Aug./Jul.	Sep. 16/ Sep. 15	Sep. 2016 (p)	Aug. 2016 (r)	Sep. 2015 (r)
Adjusted²																
42	U.S. Total	444,945	444,135	443,269	0.2	0.7	0.4	590,176	589,449	590,631	0.1	-0.1	-0.1	1.33	1.33	1.33
423	.Durable	213,667	213,183	213,168	0.2	-0.6	0.2	354,860	356,131	361,593	-0.4	0.1	-1.9	1.66	1.67	1.70
4231	..Automotive	36,438	35,918	37,011	1.4	1.6	-1.5	64,021	65,142	65,838	-1.7	0.3	-2.8	1.76	1.81	1.78
4232	..Furniture	7,307	7,340	6,837	-0.4	0.3	6.9	11,158	11,106	11,022	0.5	0.6	1.2	1.53	1.51	1.61
4233	..Lumber	10,092	10,095	9,705	0.0	0.1	4.0	14,829	14,702	14,199	0.9	0.4	4.4	1.47	1.46	1.46
4234	..Prof. equip.	37,683	37,307	36,656	1.0	-0.8	2.8	39,593	39,453	38,546	0.4	0.6	2.7	1.05	1.06	1.05
42343	...Comp. equip.	18,362	18,218	19,181	0.8	-1.6	-4.3	15,310	15,135	15,376	1.2	1.8	-0.4	0.83	0.83	0.80
4235	..Metals	11,505	11,576	12,283	-0.6	0.5	-6.3	25,340	25,703	29,538	-1.4	0.1	-14.2	2.20	2.22	2.40
4236	..Electrical	47,635	46,918	46,991	1.5	-0.3	1.4	46,039	46,226	48,086	-0.4	-0.2	-4.3	0.97	0.99	1.02
4237	..Hardware	11,286	11,562	11,127	-2.4	0.3	1.4	23,183	22,956	22,563	1.0	-0.2	2.7	2.05	1.99	2.03
4238	..Machinery	33,945	33,992	34,599	-0.1	-2.7	-1.9	104,463	104,746	104,391	-0.3	0.2	0.1	3.08	3.08	3.02
4239	..Misc. Durable	17,776	18,475	17,959	-3.8	-2.5	-1.0	26,234	26,097	27,410	0.5	-1.5	-4.3	1.48	1.41	1.53
424	.Nondurable	231,278	230,952	230,101	0.1	1.9	0.5	235,316	233,318	229,038	0.9	-0.4	2.7	1.02	1.01	1.00
4241	..Paper	8,121	8,183	8,092	-0.8	0.1	0.4	8,351	8,283	8,159	0.8	0.3	2.4	1.03	1.01	1.01
4242	..Drugs	55,642	55,239	52,645	0.7	1.2	5.7	62,699	60,669	56,657	3.3	-1.3	10.7	1.13	1.10	1.08
4243	..Apparel	13,835	13,982	14,209	-1.1	2.5	-2.6	29,421	29,960	30,898	-1.8	-1.9	-4.8	2.13	2.14	2.17
4244	..Groceries	50,384	49,984	51,350	0.8	1.4	-1.9	34,570	34,832	34,656	-0.8	1.3	-0.2	0.69	0.70	0.67
4245	..Farm products	16,684	18,958	18,465	-12.0	3.5	-9.6	22,962	22,927	23,821	0.2	-4.5	-3.6	1.38	1.21	1.29
4246	..Chemicals ³	10,188	10,063	10,212	1.2	1.6	-0.2	12,620	12,666	12,759	-0.4	0.1	-1.1	1.24	1.26	1.25
4247	..Petroleum	42,975	40,937	42,236	5.0	2.7	1.7	19,868	19,141	18,089	3.8	3.3	9.8	0.46	0.47	0.43
4248	..Alcohol	11,408	11,301	11,478	0.9	2.4	-0.6	15,376	15,391	15,533	-0.1	2.1	-1.0	1.35	1.36	1.35
4249	..Misc. Nondur.	22,041	22,305	21,414	-1.2	2.2	2.9	29,449	29,449	28,466	0.0	0.3	3.5	1.34	1.32	1.33
Not Adjusted																
Sales to date																
2016 2015																
42	U.S. Total	456,614	466,126	454,186	-2.0	10.1	0.5	586,428	579,136	586,758	1.3	-1.0	-0.1	3,928,098	3,976,829	
423	.Durable	225,036	225,887	223,636	-0.4	10.5	0.6	355,938	357,081	362,787	-0.3	-0.4	-1.9	1,903,877	1,900,922	
4231	..Automotive	36,110	37,893	36,900	-4.7	11.5	-2.1	62,613	62,862	64,455	-0.4	-3.3	-2.9	323,499	329,210	
4232	..Furniture	7,621	8,096	7,145	-5.9	16.1	6.7	11,604	11,461	11,474	1.2	1.6	1.1	63,805	60,260	
4233	..Lumber	10,829	11,599	10,287	-6.6	11.7	5.3	14,755	14,937	14,071	-1.2	-1.2	4.9	92,923	86,956	
4234	..Prof. equip.	41,075	37,307	39,662	10.1	2.4	3.6	40,147	39,887	39,086	0.7	1.4	2.7	330,205	323,674	
42343	...Comp. equip.	20,235	17,562	20,984	15.2	-6.1	-3.6	15,739	15,256	15,853	3.2	1.9	-0.7	160,966	167,154	
4235	..Metals	12,011	12,571	12,799	-4.5	12.9	-6.2	25,467	25,934	29,627	-1.8	0.1	-14.0	105,074	121,844	
4236	..Electrical	51,636	48,232	50,844	7.1	12.1	1.6	47,282	47,613	49,384	-0.7	1.9	-4.3	408,190	404,174	
4237	..Hardware	11,692	13,054	11,561	-10.4	10.9	1.1	23,160	23,048	22,540	0.5	-1.1	2.8	103,618	99,293	
4238	..Machinery	34,828	36,813	35,222	-5.4	10.8	-1.1	103,941	104,746	103,973	-0.8	-0.3	0.0	312,885	311,248	
4239	..Misc. Durable	19,234	20,322	19,216	-5.4	15.7	0.1	26,969	26,593	28,177	1.4	-0.6	-4.3	163,678	164,263	
424	.Nondurable	231,578	240,239	230,550	-3.6	9.8	0.4	230,490	222,055	223,971	3.8	-2.0	2.9	2,024,221	2,075,907	
4241	..Paper	8,365	8,952	8,399	-6.6	15.0	-0.4	8,201	8,126	8,012	0.9	-2.2	2.4	73,927	72,085	
4242	..Drugs	56,699	58,056	53,751	-2.3	12.9	5.5	62,824	59,092	56,827	6.3	-3.8	10.6	486,883	452,367	
4243	..Apparel	15,744	16,359	16,269	-3.8	21.9	-3.2	31,392	32,087	32,999	-2.2	-1.0	-4.9	121,867	121,808	
4244	..Groceries	51,140	52,283	51,966	-2.2	8.1	-1.6	35,089	34,658	35,141	1.2	1.9	-0.1	451,526	456,413	
4245	..Farm products	14,949	17,252	16,803	-13.3	9.3	-11.0	17,704	14,673	18,223	20.7	-18.1	-2.8	147,014	161,340	
4246	..Chemicals	10,422	10,948	10,437	-4.8	12.2	-0.1	12,620	12,666	12,759	-0.4	0.1	-1.1	91,678	94,826	
4247	..Petroleum	42,674	43,475	41,687	-1.8	4.2	2.4	19,967	19,141	18,125	4.3	0.3	10.2	348,530	421,181	
4248	..Alcohol	11,682	12,103	11,880	-3.5	16.0	-1.7	15,453	15,314	15,611	0.9	0.3	-1.0	100,463	98,011	
4249	..Misc. Nondur.	19,903	20,811	19,358	-4.4	3.6	2.8	27,240	26,298	26,274	3.6	2.5	3.7	202,333	197,876	

Footnotes:

^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 <http://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.

Note:

Estimates have not been adjusted for price changes. Table 2 provides estimated measures of sampling variability. Additional information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions may be found at http://www.census.gov/wholesale/www/how_surveys_are_collected/monthly_methodology.html.

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	Coefficient of variation for monthly total				Standard error for monthly total				Coefficient of variation for total		Standard error for percent change
		Preliminary estimates		Final estimates		Ratio of two consecutive months		Current month to current month last year		Sales to date		Current year sales to date to previous year sales to date
		Sales	Inv.	Sales	Inv.	Sales	Inv.	Sales	Inv.	Current year	Previous year	
42	U.S. Total	1.2	1.5	1.2	1.6	0.2	0.1	0.6	1.1	1.1	0.9	0.6
423	..Durable	1.6	1.7	1.5	1.7	0.4	0.2	1.0	0.9	1.5	1.1	0.9
4231	..Automotive	3.7	4.3	3.9	4.5	0.8	0.4	1.6	2.2	3.7	3.0	1.4
4232	..Furniture	7.1	7.3	7.1	7.0	2.1	0.8	3.6	2.9	7.3	6.8	2.2
4233	..Lumber	5.0	5.8	5.2	5.8	1.3	0.5	2.7	1.9	5.1	5.2	2.2
4234	..Prof. equip.	4.0	3.6	3.4	3.6	1.7	0.5	2.0	2.2	3.5	3.4	2.0
42343	...Comp. equip.	6.2	5.5	4.6	5.6	3.0	0.8	2.1	1.5	4.6	4.0	1.8
4235	..Metals	4.6	7.5	5.2	7.9	1.3	0.5	2.0	2.2	5.0	4.8	1.7
4236	..Electrical	2.4	3.2	2.5	3.3	0.5	0.4	1.6	1.5	2.7	2.5	0.7
4237	..Hardware	3.0	4.0	3.3	4.0	1.2	0.7	1.4	1.1	3.0	2.4	1.3
4238	..Machinery	3.2	3.5	3.1	3.5	1.6	0.3	3.5	1.8	2.7	2.8	2.5
4239	..Misc. Durable	5.8	5.0	6.1	5.2	1.5	0.5	2.7	1.8	5.0	3.9	2.0
424	..Nondurable	1.8	2.3	1.7	2.4	0.3	0.2	0.7	1.9	1.8	1.7	0.9
4241	..Paper	5.4	6.1	5.2	6.1	0.6	0.7	1.5	2.4	5.1	4.6	1.1
4242	..Drugs	3.8	7.5	3.5	7.8	0.4	0.2	1.8	4.8	3.4	2.9	1.6
4243	..Apparel	7.6	6.6	7.3	6.5	0.9	0.6	3.0	1.9	6.8	7.0	2.3
4244	..Groceries	3.9	5.9	3.7	6.1	0.6	0.7	1.5	2.5	3.6	3.3	1.4
4245	..Farm products	2.5	7.1	2.1	6.5	0.8	2.3	3.1	4.0	2.3	2.7	2.3
4246	..Chemicals	3.8	5.3	3.9	5.6	0.8	0.7	1.6	1.9	3.7	3.9	1.4
4247	..Petroleum	5.4	4.1	5.6	4.4	0.6	0.6	1.2	1.5	5.5	6.1	1.4
4248	..Alcohol	5.0	5.7	4.7	5.9	0.9	0.7	1.8	3.3	4.8	4.8	1.8
4249	..Misc. Nondur.	2.8	5.8	3.1	5.6	0.8	0.5	2.0	1.6	3.2	3.7	1.6

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 http://www.census.gov/wholesale/www/how_surveys_are_collected/monthly_methodology.html.

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 (CV), 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.

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 code	Kind of Business	Sales						Inventories					
		2016					2015	2016					2015
		Oct.	Sep.r	Aug.r	Jul.	Jun.	Sep.r	Oct.	Sep.r	Aug.r	Jul.	Jun.	Sep.r
42	U.S. Total²	1.017	1.026	1.050	0.964	1.054	1.024	1.012	0.994	0.984	0.992	0.990	0.994
423	..Durable	1.023	1.053	1.057	0.955	1.064	1.050	1.008	1.005	1.005	1.008	1.001	1.005
4231	..Automotive	1.005	0.991	1.055	0.961	1.038	0.997	1.005	0.978	0.965	1.001	0.995	0.979
4232	..Furniture	1.072	1.043	1.103	0.953	1.027	1.045	1.028	1.040	1.032	1.022	0.994	1.041
4233	..Lumber	1.031	1.073	1.149	1.030	1.153	1.060	0.963	0.995	1.016	1.032	1.039	0.991
4234	..Prof. equip.	1.020	1.090	1.000	0.969	1.111	1.082	1.023	1.014	1.011	1.003	0.992	1.014
42343	...Comp. equip.	1.064	1.102	0.964	1.010	1.140	1.094	1.027	1.028	1.008	1.007	1.006	1.031
4235	..Metals	1.002	1.044	1.086	0.967	1.058	1.042	0.992	1.005	1.009	1.009	1.000	1.003
4236	..Electrical	1.076	1.084	1.028	0.914	1.038	1.082	1.028	1.027	1.030	1.009	0.992	1.027
4237	..Hardware	1.006	1.036	1.129	1.021	1.126	1.039	0.988	0.999	1.004	1.013	1.011	0.999
4238	..Machinery	0.979	1.026	1.083	0.951	1.062	1.018	0.995	0.995	1.000	1.005	1.005	0.996
4239	..Misc. Durable	1.010	1.082	1.100	0.927	1.032	1.070	1.036	1.028	1.019	1.010	0.990	1.028
424	..Nondurable	1.014	1.001	1.042	0.973	1.050	1.001	1.021	0.977	0.950	0.966	0.974	0.976
4241	..Paper	1.022	1.030	1.094	0.952	1.030	1.038	0.999	0.982	0.981	1.006	1.009	0.982
4242	..Drugs	0.986	1.019	1.051	0.942	1.021	1.021	1.005	1.002	0.974	0.999	1.003	1.003
4243	..Apparel	1.163	1.138	1.170	0.984	0.973	1.145	1.010	1.067	1.071	1.061	1.013	1.068
4244	..Groceries	1.013	1.015	1.046	0.981	1.017	1.012	1.037	1.015	0.995	0.989	0.979	1.014
4245	..Farm products	1.110	0.896	0.910	0.862	0.958	0.910	1.146	0.771	0.640	0.746	0.805	0.765
4246	..Chemicals ³	0.971	1.023	1.088	0.985	1.067	1.022	1.000	1.000	1.000	1.000	1.000	1.000
4247	..Petroleum	0.985	0.993	1.062	1.047	1.060	0.987	0.994	1.005	1.000	1.029	1.063	1.002
4248	..Alcohol	0.982	1.024	1.071	0.945	1.143	1.035	1.028	1.005	0.995	1.013	1.014	1.005
4249	..Misc. Nondur.	0.952	0.903	0.933	0.921	1.166	0.904	0.961	0.925	0.893	0.874	0.904	0.923

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-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.

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 <http://www.census.gov/srd/www/x13as/>.

Description of the Survey

The Census Bureau conducts the Monthly Wholesale Trade Survey (MWTS) 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 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 65.4% provided data for this reporting period, resulting in a total quantity response rate of 65.1% for sales and 65.3% 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: <http://www.census.gov/wholesale>.