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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES August 2016

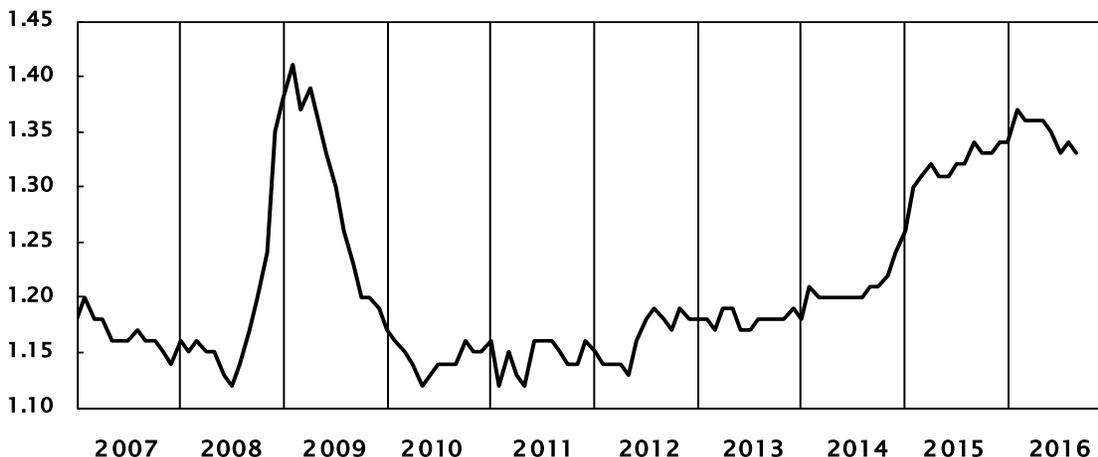
Sales. The U.S. Census Bureau announced today that August 2016 sales of merchant wholesalers, except manufacturers' sales branches and offices, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$444.3 billion, up 0.7 percent (+/-0.5%) from the revised July level and were up 0.6 percent (+/-1.2%)* from the August 2015 level. The June 2016 to July 2016 percent change was revised from the preliminary estimate of down 0.4 percent (+/-0.4%)* to down 0.6 percent (+/-0.4%). August sales of durable goods were down 0.5 percent (+/-0.7%)* from last month, but were up 0.7 percent (+/-1.8%)* from a year ago. Sales of machinery, equipment, and supplies were down 2.7 percent from July. Sales of nondurable goods were up 2.0 percent (+/-0.7%) from July and were up 0.5 percent (+/-1.8%)* from last August. Sales of farm product raw materials were up 6.7 percent from last month and sales of beer, wine, and distilled alcoholic beverages were up 2.2 percent.

Inventories. Total inventories of merchant wholesalers, except manufacturers' sales branches and offices, after adjustment for seasonal variations but not for price changes, were \$589.1 billion at the end of August, down 0.2 percent (+/-0.4%)* from the revised July level. Total inventories are down 0.1 percent (+/-1.8%)* from the revised August 2015 level. The July 2016 to August 2016 percent change was revised from the advance estimate of down 0.1 percent (+/-0.4%)* to down 0.2 percent (+/-0.4%)*. August inventories of durable goods were up 0.2 percent (+/-0.4%)* from last month, but were down 1.9 percent (+/-1.8%) from a year ago. Inventories of computer and computer peripheral equipment and software were up 1.9 percent from last month. Inventories of nondurable goods were down 0.7 percent (+/-0.5%) from July, but were up 2.8 percent (+/-3.0%)* from last August. Inventories of farm product raw materials were down 7.8 percent from last month and inventories of apparel, piece goods, and notions were down 2.1 percent.

Inventories/Sales Ratio. The August inventories/sales ratio for merchant wholesalers, except manufacturers' sales branches and offices, based on seasonally adjusted data, was 1.33. The August 2015 ratio was 1.34.

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 September is scheduled to be released November 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		
		Aug. 2016 (p)	Jul. 2016 (r)	Aug. 2015 (r)	Aug./Jul.	Jul./Jun.	Aug. 16/Aug. 15	Aug. 2016 (p)	Jul. 2016 (r)	Aug. 2015 (r)	Aug./Jul.	Jul./Jun.	Aug. 16/Aug. 15	Aug. 2016 (p)	Jul. 2016 (r)	Aug. 2015 (r)
Adjusted²																
42	U.S. Total	444,258	440,977	441,598	0.7	-0.6	0.6	589,101	590,191	589,556	-0.2	-0.1	-0.1	1.33	1.34	1.34
423	.Durable	213,223	214,363	211,665	-0.5	-0.2	0.7	356,474	355,909	363,221	0.2	0.3	-1.9	1.67	1.66	1.72
4231	..Automotive	35,850	35,349	36,425	1.4	0.0	-1.6	65,400	64,950	65,228	0.7	0.2	0.3	1.82	1.84	1.79
4232	..Furniture	7,343	7,319	6,933	0.3	1.6	5.9	11,079	11,036	10,929	0.4	0.6	1.4	1.51	1.51	1.58
4233	..Lumber	10,104	10,085	9,561	0.2	1.0	5.7	14,691	14,650	14,237	0.3	0.8	3.2	1.45	1.45	1.49
4234	..Prof. equip.	37,268	37,598	36,393	-0.9	0.1	2.4	39,457	39,225	38,890	0.6	1.6	1.5	1.06	1.04	1.07
42343	...Comp. equip.	18,210	18,514	18,591	-1.6	-0.9	-2.0	15,154	14,865	15,698	1.9	1.1	-3.5	0.83	0.80	0.84
4235	..Metals	11,559	11,515	12,598	0.4	0.2	-8.2	25,716	25,688	30,354	0.1	1.1	-15.3	2.22	2.23	2.41
4236	..Electrical	46,870	47,077	45,849	-0.4	0.0	2.2	46,262	46,310	48,382	-0.1	-0.1	-4.4	0.99	0.98	1.06
4237	..Hardware	11,609	11,525	11,071	0.7	-1.9	4.9	22,918	23,004	22,482	-0.4	-0.4	1.9	1.97	2.00	2.03
4238	..Machinery	34,019	34,952	34,477	-2.7	-1.6	-1.3	104,814	104,564	105,476	0.2	0.1	-0.6	3.08	2.99	3.06
4239	..Misc. Durable	18,601	18,943	18,358	-1.8	0.0	1.3	26,137	26,482	27,243	-1.3	-0.4	-4.1	1.41	1.40	1.48
424	.Nondurable	231,035	226,614	229,933	2.0	-1.0	0.5	232,627	234,282	226,335	-0.7	-0.8	2.8	1.01	1.03	0.98
4241	..Paper	8,201	8,174	8,071	0.3	1.2	1.6	8,275	8,257	8,124	0.2	-0.9	1.9	1.01	1.01	1.01
4242	..Drugs	55,194	54,565	51,970	1.2	-0.5	6.2	60,767	61,463	55,732	-1.1	-1.3	9.0	1.10	1.13	1.07
4243	..Apparel	13,966	13,639	13,920	2.4	-0.3	0.3	29,909	30,539	30,282	-2.1	-0.7	-1.2	2.14	2.24	2.18
4244	..Groceries	49,774	49,315	51,026	0.9	-1.4	-2.5	34,860	34,391	34,851	1.4	1.8	0.0	0.70	0.70	0.68
4245	..Farm products	19,536	18,314	17,763	6.7	5.1	10.0	22,144	24,009	22,356	-7.8	-6.4	-0.9	1.13	1.31	1.26
4246	..Chemicals ³	10,065	9,904	10,156	1.6	-0.9	-0.9	12,711	12,648	13,015	0.5	1.3	-2.3	1.26	1.28	1.28
4247	..Petroleum	40,627	39,847	44,228	2.0	-3.9	-8.1	18,982	18,537	18,255	2.4	-0.1	4.0	0.47	0.47	0.41
4248	..Alcohol	11,288	11,041	11,450	2.2	-4.1	-1.4	15,459	15,079	15,631	2.5	-1.8	-1.1	1.37	1.37	1.37
4249	..Misc. Nondur.	22,384	21,815	21,349	2.6	-0.6	4.8	29,520	29,359	28,089	0.5	1.4	5.1	1.32	1.35	1.32
Not Adjusted																
Sales to date																
2016 2015																
42	U.S. Total	466,429	423,263	437,127	10.2	-9.4	6.7	578,792	585,232	579,333	-1.1	0.1	-0.1	3,471,787	3,522,643	
423	.Durable	225,829	204,494	210,686	10.4	-10.6	7.2	357,009	358,539	363,617	-0.4	1.0	-1.8	1,678,783	1,677,286	
4231	..Automotive	37,893	33,970	36,534	11.5	-7.5	3.7	62,849	65,015	62,684	-3.3	0.8	0.3	287,389	292,310	
4232	..Furniture	8,092	6,975	7,190	16.0	-5.7	12.5	11,456	11,279	11,290	1.6	3.4	1.5	56,180	53,115	
4233	..Lumber	11,610	10,388	10,249	11.8	-9.8	13.3	14,970	15,119	14,451	-1.0	0.1	3.6	82,105	76,669	
4234	..Prof. equip.	37,343	36,432	34,501	2.5	-12.7	8.2	39,930	39,343	39,279	1.5	2.7	1.7	289,166	284,012	
42343	...Comp. equip.	17,591	18,699	17,122	-5.9	-12.2	2.7	15,306	14,969	15,839	2.3	1.2	-3.4	140,760	146,170	
4235	..Metals	12,542	11,135	12,711	12.6	-8.4	-1.3	25,845	25,919	30,445	-0.3	2.0	-15.1	93,034	109,045	
4236	..Electrical	48,370	43,028	44,794	12.4	-12.0	8.0	47,557	46,727	49,688	1.8	1.6	-4.3	356,692	353,330	
4237	..Hardware	13,037	11,767	11,613	10.8	-11.1	12.3	23,033	23,303	22,594	-1.2	-0.2	1.9	91,909	87,732	
4238	..Machinery	36,741	33,239	34,718	10.5	-11.8	5.8	104,709	105,087	105,371	-0.4	0.1	-0.6	277,985	276,026	
4239	..Misc. Durable	20,201	17,560	18,376	15.0	-10.2	9.9	26,660	26,747	27,815	-0.3	1.6	-4.2	144,323	145,047	
424	.Nondurable	240,600	218,769	226,441	10.0	-8.3	6.3	221,783	226,693	215,716	-2.2	-1.3	2.8	1,793,004	1,845,357	
4241	..Paper	8,956	7,782	8,232	15.1	-6.4	8.8	8,126	8,307	7,994	-2.2	-1.2	1.7	65,566	63,686	
4242	..Drugs	58,009	51,400	50,359	12.9	-8.2	15.2	59,066	61,402	54,506	-3.8	-1.6	8.4	430,137	398,616	
4243	..Apparel	16,354	13,421	15,215	21.9	0.8	7.5	31,883	32,402	32,311	-1.6	4.1	-1.3	106,118	105,539	
4244	..Groceries	52,163	48,378	51,536	7.8	-4.9	1.2	34,616	34,013	34,537	1.8	2.8	0.2	400,266	404,447	
4245	..Farm products	17,719	15,787	14,921	12.2	-5.4	18.8	14,571	17,911	14,509	-18.6	-13.2	0.4	132,532	144,537	
4246	..Chemicals	10,981	9,755	10,369	12.6	-8.5	5.9	12,711	12,648	13,015	0.5	1.3	-2.3	81,289	84,389	
4247	..Petroleum	43,512	41,720	45,466	4.3	-5.1	-4.3	19,096	19,075	18,292	0.1	-3.3	4.4	305,893	379,494	
4248	..Alcohol	12,089	10,434	11,129	15.9	-20.7	8.6	15,382	15,275	15,553	0.7	-1.9	-1.1	88,767	86,131	
4249	..Misc. Nondur.	20,817	20,092	19,214	3.6	-21.5	8.3	26,332	25,660	24,999	2.6	-2.0	5.3	182,436	178,518	

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	1.6	1.1	1.6	0.3	0.2	0.7	1.0	1.1	0.9	0.6
423	..Durable	1.5	1.7	1.4	1.8	0.4	0.2	1.0	1.0	1.4	1.1	0.9
4231	..Automotive	3.9	4.5	3.9	4.7	0.5	0.3	1.5	2.3	3.7	3.0	1.4
4232	..Furniture	7.1	7.0	7.5	6.9	1.8	0.8	3.7	2.9	7.4	6.8	2.2
4233	..Lumber	5.2	5.8	5.3	5.8	1.1	0.3	3.1	2.0	5.1	5.1	2.2
4234	..Prof. equip.	3.4	3.6	3.5	3.8	1.0	0.4	2.3	1.7	3.4	3.4	2.0
42343	...Comp. equip.	4.6	5.6	5.0	5.4	1.5	0.7	2.0	1.4	4.4	3.9	1.8
4235	..Metals	5.2	7.9	5.2	8.0	1.0	0.4	2.7	2.1	5.1	4.9	1.7
4236	..Electrical	2.6	3.3	2.7	3.3	0.9	0.4	1.1	1.5	2.7	2.5	0.8
4237	..Hardware	3.4	4.0	3.7	3.9	1.9	0.5	1.8	0.8	3.0	2.4	1.3
4238	..Machinery	3.1	3.5	3.1	3.7	0.9	0.4	3.8	2.0	2.6	2.8	2.5
4239	..Misc. Durable	6.2	5.2	5.5	5.1	1.8	0.4	2.7	1.7	4.9	3.9	2.0
424	..Nondurable	1.7	2.4	1.8	2.3	0.4	0.3	1.0	1.7	1.8	1.7	0.9
4241	..Paper	5.2	6.1	5.2	6.0	1.2	0.4	1.9	2.4	5.0	4.6	1.1
4242	..Drugs	3.5	7.8	3.4	7.4	0.3	0.2	1.8	3.7	3.4	2.9	1.6
4243	..Apparel	7.4	6.5	6.6	6.2	1.8	1.0	2.5	2.3	6.8	6.9	2.4
4244	..Groceries	3.7	6.1	3.6	6.4	1.1	0.7	1.7	2.5	3.6	3.2	1.5
4245	..Farm products	2.0	5.9	2.5	5.7	1.1	1.1	3.2	3.4	2.3	2.6	2.2
4246	..Chemicals	4.0	5.6	3.5	5.2	1.1	0.8	2.4	1.9	3.7	4.0	1.4
4247	..Petroleum	5.6	4.4	5.4	4.2	0.3	0.5	1.2	1.4	5.5	6.2	1.4
4248	..Alcohol	4.7	6.1	4.9	5.7	1.0	0.7	2.0	3.2	4.8	4.9	1.8
4249	..Misc. Nondur.	3.1	5.6	3.4	5.6	1.3	0.5	2.7	1.4	3.3	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
		Sep.	Aug.r	Jul.r	Jun.	May	Aug.r	Sep.	Aug.r	Jul.r	Jun.	May	Aug.r
42	U.S. Total²	1.026	1.051	0.964	1.054	1.024	0.992	0.994	0.984	0.992	0.990	0.993	0.984
423	..Durable	1.053	1.057	0.955	1.064	0.994	0.995	1.006	1.003	1.008	1.001	1.002	1.003
4231	..Automotive	0.988	1.057	0.961	1.038	1.013	1.003	0.984	0.961	1.001	0.995	0.994	0.961
4232	..Furniture	1.049	1.102	0.953	1.027	1.010	1.037	1.039	1.034	1.022	0.994	0.980	1.033
4233	..Lumber	1.075	1.149	1.030	1.153	1.073	1.072	0.995	1.019	1.032	1.039	1.039	1.015
4234	..Prof. equip.	1.086	1.002	0.969	1.111	0.935	0.948	1.014	1.012	1.003	0.992	0.992	1.010
42343	...Comp. equip.	1.100	0.966	1.010	1.140	0.899	0.921	1.027	1.010	1.007	1.006	0.992	1.009
4235	..Metals	1.044	1.085	0.967	1.058	1.020	1.009	1.004	1.005	1.009	1.000	1.003	1.003
4236	..Electrical	1.079	1.032	0.914	1.038	0.971	0.977	1.029	1.028	1.009	0.992	0.997	1.027
4237	..Hardware	1.046	1.123	1.021	1.126	1.043	1.049	0.998	1.005	1.013	1.011	1.012	1.005
4238	..Machinery	1.031	1.080	0.951	1.062	1.027	1.007	0.995	0.999	1.005	1.005	1.010	0.999
4239	..Misc. Durable	1.093	1.086	0.927	1.032	0.985	1.001	1.029	1.020	1.010	0.990	0.981	1.021
424	..Nondurable	1.000	1.043	0.973	1.050	1.051	0.990	0.975	0.952	0.966	0.974	0.978	0.952
4241	..Paper	1.033	1.092	0.952	1.030	1.007	1.020	0.981	0.982	1.006	1.009	1.004	0.984
4242	..Drugs	1.019	1.051	0.942	1.021	1.009	0.969	1.000	0.972	0.999	1.003	0.987	0.978
4243	..Apparel	1.136	1.171	0.984	0.973	0.920	1.093	1.069	1.066	1.061	1.013	0.965	1.067
4244	..Groceries	1.012	1.048	0.981	1.017	1.038	1.010	1.016	0.993	0.989	0.979	0.982	0.991
4245	..Farm products	0.915	0.907	0.862	0.958	0.977	0.840	0.752	0.658	0.746	0.805	0.869	0.649
4246	..Chemicals ³	1.018	1.091	0.985	1.067	1.016	1.021	1.000	1.000	1.000	1.000	1.000	1.000
4247	..Petroleum	0.988	1.071	1.047	1.060	1.082	1.028	0.996	1.006	1.029	1.063	1.044	1.002
4248	..Alcohol	1.023	1.071	0.945	1.143	1.054	0.972	1.005	0.995	1.013	1.014	1.029	0.995
4249	..Misc. Nondur.	0.910	0.930	0.921	1.166	1.240	0.900	0.926	0.892	0.874	0.904	0.985	0.890

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 66.1% for sales and 66.0% 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>.