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CB03-190

**MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES  
OCTOBER 2003**

**Intention to Revise Wholesale Estimates:** Monthly wholesale sales, inventories, and inventories/sales ratios will be revised based on the results of the 2002 Annual Trade Survey. Revised unadjusted and corresponding adjusted data are scheduled for release on March 3, 2004.

**Sales.** October 2003 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$246.8 billion, up 2.0 percent (+/-0.6%) from the revised September level and were up 6.6 percent (+/-1.0%) from the October 2002 level. The September preliminary estimate was revised upward \$1.3 billion or 0.5 percent. October sales of durable goods increased 1.8 percent (+/-0.9%) from last month and were up 6.3 percent (+/-1.3%) from a year ago. Compared to last month, sales of electrical goods increased 4.8 percent and sales of computer and computer peripheral equipment and software were up 2.4 percent. October sales of nondurable goods increased 2.2 percent (+/-0.8%) from last month and were up 6.8 percent (+/-1.6%) from last year. Compared to last month, sales of farm product raw materials were up 14.5 percent and sales of beer, wine, and distilled alcoholic beverages increased 4.6 percent.

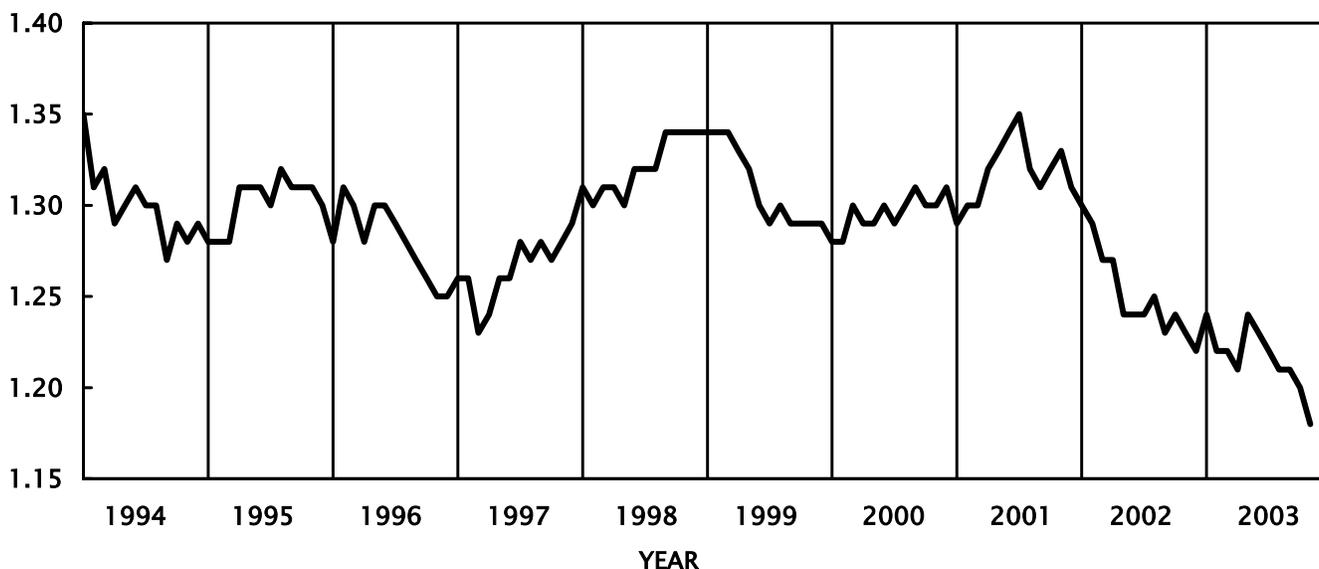
**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variations but not for price changes, were \$291.2 billion at the end of October, up 0.5 percent (+/-0.4%) from last month and were up 1.9 percent (+/-1.3%) from a year ago. The September preliminary estimate was revised downward \$0.1 billion. End-of-month inventories of durable goods increased 0.4 percent (+/-0.4%) from September and were up 0.4 percent (+/-0.8%) from last October. Inventories of motor vehicle and motor vehicle parts and supplies increased 2.7 percent from last month and inventories of lumber and other construction materials increased 1.6 percent. End-of-month inventories of nondurable goods increased 0.8 percent (+/-0.6%) from September and were up 4.1 percent (+/-2.6%) compared to last October. Inventories of farm product raw materials increased 16.4 percent from last month, while apparel, piece goods, and notions decreased 2.3 percent.

**Inventories/Sales Ratio.** The October inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.18. The October 2002 ratio was 1.23.

*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 general survey methodology appears in BW/02-A Current Business Reports.*

**Monthly Inventories/Sales Ratios of Merchant Wholesalers: 1994 to 2003**  
(Estimates adjusted for seasonal and trading-day differences, but not for price changes)

RATIO



**Monthly Wholesale Trade for November is scheduled to be released January 8, 2004 at 10:00 a.m.**

Address inquiries concerning this report to Service Sector Statistics Division, U.S. Census Bureau, Washington, DC 20233, or call Nancy Piesto, (301) 763-2747.

This report is available on day of issue through the Department of Commerce's STAT-USA website; for information, call (202) 482-1986. The data are also available on the internet - <http://www.census.gov/whl>.

**Table 1. Estimated Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers**

[Total sales and inventory estimates are shown in millions of dollars. Estimates are based on data from the Monthly Wholesale Trade Survey, Annual Wholesale Trade Survey, and administrative records. Except for NAICS code 4225, estimates have been adjusted using results of the most recent economic census.]

NAICS <sup>1</sup> code	Kind of Business	Sales						Inventories						Inventories/Sales Ratios		
		Monthly			Percent change			Monthly			Percent change			Ratios		
		Oct. 2003 (p)	Sep. 2003 (r)	Oct. 2002 (r)	Oct./Sep.	Sep./Aug.	Oct. 03/Oct. 02	Oct. 2003 (p)	Sep. 2003 (r)	Oct. 2002 (r)	Oct./Sep.	Sep./Aug.	Oct. 03/Oct. 02	Oct. 2003 (p)	Sep. 2003 (r)	Oct. 2002 (r)
<b>Adjusted<sup>2</sup></b>																
<b>42</b>	<b>U.S. Total</b>	<b>246,835</b>	<b>242,007</b>	<b>231,615</b>	<b>2.0</b>	<b>1.0</b>	<b>6.6</b>	<b>291,201</b>	<b>289,691</b>	<b>285,890</b>	<b>0.5</b>	<b>0.3</b>	<b>1.9</b>	<b>1.18</b>	<b>1.20</b>	<b>1.23</b>
<b>421</b>	<b>Durable</b>	<b>117,700</b>	<b>115,667</b>	<b>110,707</b>	<b>1.8</b>	<b>2.3</b>	<b>6.3</b>	<b>173,435</b>	<b>172,805</b>	<b>172,806</b>	<b>0.4</b>	<b>0.2</b>	<b>0.4</b>	<b>1.47</b>	<b>1.49</b>	<b>1.56</b>
4211	Automotive	18,254	18,165	17,452	0.5	1.2	4.6	25,254	24,600	24,760	2.7	-0.4	2.0	1.38	1.35	1.42
4212	Furniture	3,770	3,774	3,488	-0.1	0.3	8.1	5,443	5,402	5,151	0.8	-0.3	5.7	1.44	1.43	1.48
4213	Lumber	8,295	8,145	6,605	1.8	5.3	25.6	7,415	7,298	7,122	1.6	0.7	4.1	0.89	0.90	1.08
4214	Prof. equip.	20,971	20,771	20,727	1.0	2.6	1.2	24,210	24,239	23,361	-0.1	-0.1	3.6	1.15	1.17	1.13
42143	Comp. equip.	9,437	9,212	9,676	2.4	5.8	-2.5	7,528	7,444	7,597	1.1	-1.3	-0.9	0.80	0.81	0.79
4215	Metals	7,480	7,441	7,603	0.5	1.8	-1.6	13,135	13,127	13,443	0.1	0.5	-2.3	1.76	1.76	1.77
4216	Electrical	18,975	18,111	17,135	4.8	2.5	10.7	22,639	22,850	23,763	-0.9	0.8	-4.7	1.19	1.26	1.39
4217	Hardware	5,587	5,619	5,377	-0.6	1.8	3.9	10,381	10,316	10,135	0.6	0.2	2.4	1.86	1.84	1.88
4218	Machinery	19,756	19,773	18,462	-0.1	-0.3	7.0	44,359	44,529	45,407	-0.4	-0.5	-2.3	2.25	2.25	2.46
4219	Misc. Durable	14,612	13,868	13,858	5.4	6.1	5.4	20,599	20,444	19,664	0.8	2.0	4.8	1.41	1.47	1.42
<b>422</b>	<b>Nondurable</b>	<b>129,135</b>	<b>126,340</b>	<b>120,908</b>	<b>2.2</b>	<b>0.0</b>	<b>6.8</b>	<b>117,766</b>	<b>116,886</b>	<b>113,084</b>	<b>0.8</b>	<b>0.5</b>	<b>4.1</b>	<b>0.91</b>	<b>0.93</b>	<b>0.94</b>
4221	Paper	6,265	6,140	6,162	2.0	4.1	1.7	6,258	6,207	6,048	0.8	-0.4	3.5	1.00	1.01	0.98
4222	Drugs	22,858	22,298	19,650	2.5	-1.1	16.3	30,635	30,948	28,357	-1.0	-1.5	8.0	1.34	1.39	1.44
4223	Apparel	7,025	7,090	7,170	-0.9	2.3	-2.0	11,735	12,015	12,476	-2.3	-1.6	-5.9	1.67	1.69	1.74
4224	Groceries	35,932	36,108	34,966	-0.5	0.3	2.8	22,348	22,557	22,513	-0.9	1.5	-0.7	0.62	0.62	0.64
4225	Farm products	12,055	10,532	10,025	14.5	4.9	20.2	11,436	9,823	9,274	16.4	4.1	23.3	0.95	0.93	0.93
4226	Chemicals	5,365	5,356	5,186	0.2	1.5	3.5	5,913	5,945	6,024	-0.5	0.4	-1.8	1.10	1.11	1.16
4227	Petroleum	18,682	18,417	17,472	1.4	-1.9	6.9	4,698	4,743	4,185	-0.9	2.3	12.3	0.25	0.26	0.24
4228	Alcohol	7,487	7,158	6,720	4.6	-2.8	11.4	7,550	7,544	7,254	0.1	0.9	4.1	1.01	1.05	1.08
4229	Misc. Nondur.	13,466	13,241	13,557	1.7	-2.3	-0.7	17,193	17,104	16,953	0.5	2.4	1.4	1.28	1.29	1.25
<b>Not Adjusted</b>																
<b>Sales to date</b>																
															<b>2003</b>	<b>2002</b>
<b>42</b>	<b>U.S. Total</b>	<b>264,305</b>	<b>247,867</b>	<b>248,546</b>	<b>6.6</b>	<b>4.0</b>	<b>6.3</b>	<b>294,515</b>	<b>287,125</b>	<b>288,730</b>	<b>2.6</b>	<b>0.9</b>	<b>2.0</b>	<b>2,400,275</b>	<b>2,290,135</b>	
<b>421</b>	<b>Durable</b>	<b>127,373</b>	<b>121,331</b>	<b>120,106</b>	<b>5.0</b>	<b>7.3</b>	<b>6.1</b>	<b>173,061</b>	<b>172,146</b>	<b>172,378</b>	<b>0.5</b>	<b>-0.2</b>	<b>0.4</b>	<b>1,140,327</b>	<b>1,122,459</b>	
4211	Automotive	19,367	17,820	18,586	8.7	-0.6	4.2	25,532	23,985	24,983	6.4	1.8	2.2	179,996	176,407	
4212	Furniture	4,173	4,019	3,879	3.8	4.1	7.6	5,536	5,575	5,244	-0.7	-0.7	5.6	37,080	36,084	
4213	Lumber	9,307	8,699	7,378	7.0	5.6	26.1	7,215	7,232	6,923	-0.2	-0.2	4.2	76,147	68,698	
4214	Prof. equip.	22,187	22,910	22,095	-3.2	16.5	0.4	24,476	24,287	23,665	0.8	-0.5	3.4	207,401	205,280	
42143	Comp. equip.	10,022	10,456	10,344	-4.2	20.9	-3.1	7,603	7,399	7,696	2.8	-3.3	-1.2	92,810	96,309	
4215	Metals	8,123	7,724	8,257	5.2	2.0	-1.6	13,043	13,180	13,349	-1.0	0.6	-2.3	74,691	76,437	
4216	Electrical	20,948	19,306	18,934	8.5	9.0	10.6	22,730	23,147	23,834	-1.8	0.8	-4.6	178,223	175,531	
4217	Hardware	6,095	5,827	5,882	4.6	3.8	3.6	10,132	10,244	9,902	-1.1	-1.1	2.3	55,971	56,204	
4218	Machinery	20,764	20,603	19,477	0.8	5.6	6.6	43,427	43,950	44,499	-1.2	-2.3	-2.4	193,225	189,151	
4219	Misc. Durable	16,409	14,423	15,618	13.8	11.2	5.1	20,970	20,546	19,979	2.1	1.4	5.0	137,593	138,667	
<b>422</b>	<b>Nondurable</b>	<b>136,932</b>	<b>126,536</b>	<b>128,440</b>	<b>8.2</b>	<b>1.1</b>	<b>6.6</b>	<b>121,454</b>	<b>114,979</b>	<b>116,352</b>	<b>5.6</b>	<b>2.6</b>	<b>4.4</b>	<b>1,259,948</b>	<b>1,167,676</b>	
4221	Paper	6,772	6,392	6,661	5.9	6.6	1.7	6,283	6,108	6,078	2.9	-0.9	3.4	61,651	61,532	
4222	Drugs	24,275	22,855	21,045	6.2	7.4	15.3	30,911	30,546	28,697	1.2	2.6	7.7	215,758	192,378	
4223	Apparel	8,065	7,778	8,360	3.7	4.8	-3.5	11,747	12,484	12,488	-5.9	-2.5	-5.9	71,507	76,852	
4224	Groceries	37,262	35,891	36,330	3.8	-0.1	2.6	23,153	22,670	23,323	2.1	2.7	-0.7	356,924	342,312	
4225	Farm products	13,634	9,932	11,579	37.3	12.3	17.7	13,334	8,114	10,795	64.3	10.2	23.5	101,342	89,509	
4226	Chemicals	5,665	5,393	5,487	5.0	2.4	3.2	5,807	5,880	5,916	-1.2	0.0	-1.8	54,172	52,069	
4227	Petroleum	19,691	18,122	17,979	8.7	-6.9	9.5	4,787	4,919	4,248	-2.7	6.1	12.7	191,572	149,412	
4228	Alcohol	7,981	6,958	7,184	14.7	-8.7	11.1	8,033	7,718	7,718	4.1	4.8	4.1	70,687	66,268	
4229	Misc. Nondur.	13,587	13,215	13,815	2.8	-1.3	-1.7	17,399	16,540	17,089	5.2	3.2	1.8	136,335	137,344	

<sup>p</sup> Preliminary estimate. <sup>r</sup> Revised.

<sup>1</sup> For a full description of the NAICS codes used in this table, see <http://www.census.gov/svsd/www/naicsdef.html>.

<sup>2</sup> Estimates are adjusted for seasonal variations and, in the case of sales, also for trading-day differences. See Table 3 for the seasonal adjustment factors used. Cumulative seasonally adjusted sales estimates are not tabulated.

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/svsd/www/mwtsreliability.html>.

**Table 2. Coefficients of Variation and Standard Errors for Sales and Inventories Estimates**

[Estimates are shown as percents. Estimates are based on data from the Monthly Wholesale Trade Survey and administrative records.]

NAICS code	Kind of Business	Median coefficients of variation for level (%)				Median standard errors for trend				Coefficients of variation for level (%)		Standard errors for trend
		Preliminary estimates		Final estimates		Ratio of two consecutive months		Year-to-year estimates		Cumulative sales estimates		Current year cumulative
		Sales	Inv.	Sales	Inv.	Sales	Inv.	Sales	Inv.	Current year	Previous year	to previous year cumulative
<b>42</b>	<b>U.S. Total</b>	<b>1.1</b>	<b>1.6</b>	<b>1.1</b>	<b>1.6</b>	<b>0.3</b>	<b>0.2</b>	<b>0.6</b>	<b>0.8</b>	<b>1.1</b>	<b>1.1</b>	<b>0.4</b>
<b>421</b>	<b>Durable</b>	<b>1.2</b>	<b>1.5</b>	<b>1.2</b>	<b>1.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.8</b>	<b>0.5</b>	<b>1.2</b>	<b>1.2</b>	<b>0.6</b>
4211	Automotive	3.6	4.4	3.7	4.4	1.0	0.7	1.0	1.3	3.6	3.7	0.6
4212	Furniture	6.1	7.8	6.1	7.7	2.0	0.7	2.3	2.6	6.1	5.2	1.4
4213	Lumber	5.0	5.8	5.0	5.8	1.2	0.8	1.9	1.9	4.8	4.9	1.4
4214	Prof. equip.	4.9	6.8	4.9	6.8	1.2	0.6	2.0	1.8	4.9	4.9	1.7
42143	Comp. equip.	8.0	8.2	8.0	7.9	1.9	1.5	3.0	3.6	7.7	8.2	2.3
4215	Metals	7.2	10.2	7.1	10.2	1.5	0.6	2.4	2.2	7.0	6.6	1.7
4216	Electrical	3.4	5.0	3.4	5.0	1.2	0.5	1.6	1.5	3.3	3.2	1.0
4217	Hardware	7.9	10.6	7.9	10.6	1.2	0.7	2.2	1.7	7.8	7.7	1.8
4218	Machinery	3.9	3.2	3.8	3.2	1.7	0.4	2.0	1.2	3.7	3.4	1.1
4219	Misc. Durable	4.5	7.4	4.5	7.4	1.8	0.7	2.6	2.5	4.2	4.8	2.0
<b>422</b>	<b>Nondurable</b>	<b>1.9</b>	<b>2.5</b>	<b>1.9</b>	<b>2.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.9</b>	<b>1.6</b>	<b>1.8</b>	<b>1.5</b>	<b>0.7</b>
4221	Paper	4.5	3.6	4.4	3.6	0.9	0.6	1.0	1.3	4.3	4.3	0.5
4222	Drugs	5.8	5.6	5.8	5.6	0.9	0.4	1.7	1.6	5.7	5.9	1.2
4223	Apparel	5.0	5.0	5.1	5.1	2.4	0.9	2.6	1.7	4.7	4.7	1.5
4224	Groceries	3.9	8.0	3.9	8.1	0.8	0.7	1.8	2.2	3.8	3.5	1.4
4225	Farm products	7.4	8.3	7.1	8.2	2.2	2.1	2.6	4.2	7.1	5.7	1.6
4226	Chemicals	4.8	7.1	4.9	7.1	1.0	0.7	1.8	2.1	4.7	4.9	1.4
4227	Petroleum	6.9	8.1	6.8	7.9	0.8	1.2	2.1	2.0	6.8	6.2	1.8
4228	Alcohol	3.8	5.1	3.8	5.1	1.0	0.6	1.2	1.1	3.8	3.8	1.0
4229	Misc. Nondur.	7.3	8.5	7.1	8.3	2.1	0.9	3.9	3.7	7.2	7.4	2.9

Note: Estimated measures of sampling variability are based on estimates unadjusted for seasonal variation or trading-day differences.

Medians are computed using final monthly estimates for the latest 12 months. Additional information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions may be found at [www.census.gov/svsd/www/mwtsreliability.html](http://www.census.gov/svsd/www/mwtsreliability.html).

### Reliability of Estimates

There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling.

Sampling errors occur because observations are made on a sample, not on the entire population, and different samples could have led to different estimates. Standard errors and coefficients of variation, as calculated for this report, are measures of sampling variation. The margin of sampling error, as used on page 1, gives a range about the estimate which is a 90% confidence interval. If, for example, the percent change estimate is up 1.2% and the standard error is 0.9%, then the margin of sampling error is  $\pm 1.65 \times 0.9\%$  or  $\pm 1.5\%$ , and the 90% confidence interval is  $-0.3\%$  to  $+2.7\%$ . If the interval contains zero, then we do not have sufficient evidence to conclude the estimated change was statistically different from zero. For monthly totals, the coefficient of variation (CV) is given. The resulting confidence interval is the estimated value  $\pm 1.65 \times CV \times$  (the estimated value).

Nonsampling errors can occur because of nonresponse, insufficient coverage of the universe of wholesale businesses, mistakes in the recording and coding of data, and response errors. Imputed data accounts for approximately 28% of the sales estimates and 31% of the inventories estimates. Additionally, estimates of sales and inventories prior to March 2001 have been restated from SIC-based estimates. The restatement methodology may have introduced additional nonsampling error. The calculated median standard errors of year-to-year change estimates may also be influenced by the methodology used to impute historical data for units in the NAICS sample. The effect of this historic imputation methodology on published estimates will decrease as more data from the NAICS sample is accumulated. Precautionary steps are taken to minimize nonsampling errors, but their magnitude is not directly measured.

Further information regarding the reliability of estimates can be found on the Internet on our web page at <http://www.census.gov/svsd/www/mwtsreliability.html>.

**Table 3. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers**

[Seasonal adjustment factors are computed using the Census Bureau's X-12 ARIMA program and are based on data from the Monthly Wholesale Trade Survey, Annual Wholesale Trade Survey, and administrative records.]

NAICS code	Kind of Business	Sales						Inventories					
		2003					2002	2003					2002
		Nov.	Oct.r	Sep.r	Aug.	Jul.	Oct.r	Nov.	Oct.r	Sep.r	Aug.	Jul.	Oct.r
<b>42</b>	<b>U.S. Total</b> <sup>1</sup>	<b>0.947</b>	<b>1.070</b>	<b>1.025</b>	<b>0.993</b>	<b>1.019</b>	<b>1.073</b>	<b>1.008</b>	<b>1.009</b>	<b>0.989</b>	<b>0.986</b>	<b>0.996</b>	<b>1.009</b>
<b>421</b>	<b>Durable</b>	<b>0.938</b>	<b>1.078</b>	<b>1.050</b>	<b>0.997</b>	<b>1.031</b>	<b>1.083</b>	<b>0.993</b>	<b>0.997</b>	<b>0.995</b>	<b>1.000</b>	<b>1.013</b>	<b>0.997</b>
4211	Automotive	0.963	1.061	0.981	0.998	1.025	1.065	1.020	1.011	0.975	0.954	0.990	1.009
4212	Furniture	0.983	1.107	1.065	1.026	1.019	1.112	0.990	1.017	1.032	1.036	1.033	1.018
4213	Lumber	0.885	1.122	1.068	1.065	1.113	1.117	0.967	0.973	0.991	1.000	1.008	0.972
4214	Prof. equip.	0.923	1.058	1.103	0.972	1.028	1.066	1.003	1.011	1.002	1.006	1.019	1.013
42143	Comp. equip.	0.890	1.062	1.135	0.993	1.023	1.069	1.000	1.010	0.994	1.015	1.039	1.013
4215	Metals	0.900	1.086	1.038	1.035	1.068	1.086	0.992	0.993	1.004	1.003	1.010	0.993
4216	Electrical	0.969	1.104	1.066	1.002	1.022	1.105	1.001	1.004	1.013	1.013	1.015	1.003
4217	Hardware	0.917	1.091	1.037	1.017	1.053	1.094	0.970	0.976	0.993	1.006	1.012	0.977
4218	Machinery	0.895	1.051	1.042	0.983	1.019	1.055	0.974	0.979	0.987	1.006	1.023	0.980
4219	Misc. Durable	1.025	1.123	1.040	0.992	1.010	1.127	0.994	1.018	1.005	1.011	1.007	1.016
<b>422</b>	<b>Nondurable</b>	<b>0.949</b>	<b>1.068</b>	<b>1.002</b>	<b>0.985</b>	<b>1.013</b>	<b>1.070</b>	<b>1.034</b>	<b>1.027</b>	<b>0.981</b>	<b>0.962</b>	<b>0.969</b>	<b>1.027</b>
4221	Paper	0.945	1.081	1.041	1.017	1.023	1.081	1.011	1.004	0.984	0.989	0.996	1.005
4222	Drugs	0.945	1.062	1.025	0.944	0.998	1.071	0.998	1.009	0.987	0.947	0.980	1.012
4223	Apparel	0.962	1.148	1.097	1.071	1.055	1.166	0.954	1.001	1.039	1.049	1.043	1.001
4224	Groceries	0.972	1.037	0.994	0.998	1.039	1.039	1.031	1.036	1.005	0.993	0.983	1.036
4225	Farm products	1.059	1.131	0.943	0.881	0.913	1.155	1.256	1.166	0.826	0.780	0.773	1.164
4226	Chemicals	0.897	1.056	1.007	0.998	1.038	1.058	0.995	0.982	0.989	0.993	1.010	0.982
4227	Petroleum	0.909	1.054	0.984	1.036	0.995	1.029	1.039	1.019	1.037	1.000	0.986	1.015
4228	Alcohol	0.973	1.066	0.972	1.035	1.077	1.069	1.039	1.064	1.023	0.985	1.013	1.064
4229	Misc. Nondur.	0.906	1.009	0.998	0.988	1.000	1.019	1.031	1.012	0.967	0.959	0.942	1.008

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<sup>1</sup>Adjusted sales and inventory estimates for detailed kind-of-business levels in Table 1 are computed by dividing each unadjusted estimate by the seasonal 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. Seasonal 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.

Note: The seasonal adjustment factors shown are estimates derived from a model that uses sample survey data as input. Therefore, these estimates may contain model error, sampling error, and nonsampling error. Additional information on the general form of the model and the X-12 ARIMA program may be found at <http://www.census.gov/srd/www/x12a/>.