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## MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES MAY 2003

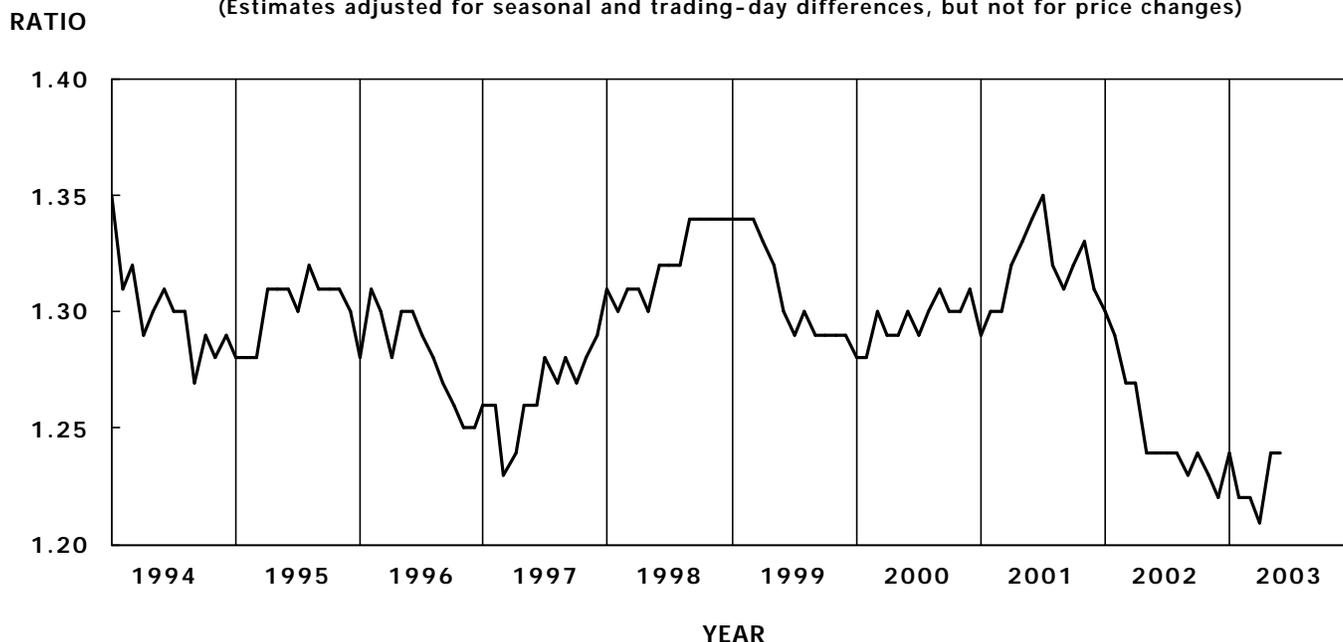
**Sales.** May 2003 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$233.4 billion, down 0.5 percent (+/-0.6%) from the revised April level, but were up 2.6 percent (+/-1.0%) from the May 2002 level. The April preliminary estimate was revised downward \$1.1 billion or 0.5 percent. Among durable goods, sales of computer and computer peripheral equipment and software decreased 3.5 percent from last month. Among nondurable goods, sales of drugs and druggists' sundries were up 2.1 percent from April, while sales of petroleum and petroleum products were down 3.7 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variations but not for price changes, were \$289.3 billion at the end of May, down 0.3 percent (+/-0.4%) from last month, but were up 2.3 percent (+/-0.8%) from a year ago. The April preliminary estimate was revised downward \$0.5 billion or 0.2 percent. Among durable goods, inventories of computer and computer peripheral equipment and software increased 2.5 percent, while inventories of electrical goods decreased 1.3 percent. Among nondurable goods, inventories of petroleum and petroleum products increased 3.7 percent and inventories of drugs and druggists' sundries increased 1.3 percent from last month.

**Inventories/Sales Ratio.** The May inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.24. The May 2002 ratio was 1.24.

*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)



**Monthly Wholesale Trade for June is scheduled to be released August 7, 2003 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		
		May 2003 (p)	Apr. 2003 (r)	May 2002 (r)	May/Apr.	Apr./Mar.	May 03/ May 02	May 2003 (p)	Apr. 2003 (r)	May 2002 (r)	May/Apr.	Apr./Mar.	May 03/ May 02	May 2003 (p)	Apr. 2003 (r)	May 2002 (r)
<b>Adjusted<sup>2</sup></b>																
<b>42</b>	<b>U.S. Total</b>	<b>233,425</b>	<b>234,634</b>	<b>227,446</b>	<b>-0.5</b>	<b>-2.5</b>	<b>2.6</b>	<b>289,339</b>	<b>290,092</b>	<b>282,853</b>	<b>-0.3</b>	<b>-0.3</b>	<b>2.3</b>	<b>1.24</b>	<b>1.24</b>	<b>1.24</b>
<b>421</b>	<b>Durable</b>	<b>111,528</b>	<b>111,927</b>	<b>112,108</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.5</b>	<b>174,399</b>	<b>174,992</b>	<b>170,864</b>	<b>-0.3</b>	<b>-0.2</b>	<b>2.1</b>	<b>1.56</b>	<b>1.56</b>	<b>1.52</b>
4211	Automotive	17,819	17,836	17,508	-0.1	-1.8	1.8	25,328	25,536	23,443	-0.8	0.2	8.0	1.42	1.43	1.34
4212	Furniture	3,644	3,580	3,575	1.8	0.2	1.9	5,395	5,419	5,116	-0.4	1.0	5.5	1.48	1.51	1.43
4213	Lumber	6,855	6,858	6,632	0.0	-0.3	3.4	7,239	7,287	7,055	-0.7	-0.3	2.6	1.06	1.06	1.06
4214	Prof. equip.	20,563	20,917	20,441	-1.7	-0.5	0.6	23,792	23,447	23,527	1.5	-2.1	1.1	1.16	1.12	1.15
42143	Comp. equip.	9,256	9,590	9,610	-3.5	1.7	-3.7	7,705	7,516	8,032	2.5	-2.5	-4.1	0.83	0.78	0.84
4215	Metals	7,337	7,294	7,522	0.6	0.6	-2.5	13,389	13,540	12,774	-1.1	-0.7	4.8	1.82	1.86	1.70
4216	Electrical	17,287	17,498	18,055	-1.2	0.1	-4.3	23,097	23,401	23,220	-1.3	0.1	-0.5	1.34	1.34	1.29
4217	Hardware	5,439	5,439	5,464	0.0	-0.7	-0.5	10,526	10,581	10,175	-0.5	-0.9	3.4	1.94	1.95	1.86
4218	Machinery	18,824	18,620	19,074	1.1	0.7	-1.3	45,449	45,586	46,396	-0.3	-0.1	-2.0	2.41	2.45	2.43
4219	Misc. Durable	13,760	13,885	13,837	-0.9	-2.3	-0.6	20,184	20,195	19,158	-0.1	1.1	5.4	1.47	1.45	1.38
<b>422</b>	<b>Nondurable</b>	<b>121,897</b>	<b>122,707</b>	<b>115,338</b>	<b>-0.7</b>	<b>-4.1</b>	<b>5.7</b>	<b>114,940</b>	<b>115,100</b>	<b>111,989</b>	<b>-0.1</b>	<b>-0.4</b>	<b>2.6</b>	<b>0.94</b>	<b>0.94</b>	<b>0.97</b>
4221	Paper	6,078	6,119	6,098	-0.7	-2.6	-0.3	6,203	6,221	6,165	-0.3	0.0	0.6	1.02	1.02	1.01
4222	Drugs	21,633	21,197	19,205	2.1	1.8	12.6	30,905	30,512	27,462	1.3	1.2	12.5	1.43	1.44	1.43
4223	Apparel	6,958	6,916	7,670	0.6	-0.9	-9.3	12,286	12,388	11,897	-0.8	-0.2	3.3	1.77	1.79	1.55
4224	Groceries	35,896	35,758	33,731	0.4	1.2	6.4	22,010	22,327	22,164	-1.4	-1.5	-0.7	0.61	0.62	0.66
4225	Farm products	9,744	9,890	8,769	-1.5	2.7	11.1	9,314	9,298	10,281	0.2	0.5	-9.4	0.96	0.94	1.17
4226	Chemicals	5,241	5,337	5,212	-1.8	-1.7	0.6	5,972	5,960	5,950	0.2	-0.2	0.4	1.14	1.12	1.14
4227	Petroleum	16,150	16,764	14,425	-3.7	-25.8	12.0	4,322	4,166	4,466	3.7	-6.3	-3.2	0.27	0.25	0.31
4228	Alcohol	7,124	7,063	6,738	0.9	-0.2	5.7	7,544	7,483	7,101	0.8	-0.2	6.2	1.06	1.06	1.05
4229	Misc. Nondur.	13,073	13,663	13,490	-4.3	-1.3	-3.1	16,384	16,745	16,503	-2.2	-1.1	-0.7	1.25	1.23	1.22
<b>Not Adjusted</b>																
													<b>Sales to date</b>			
													<b>2003</b>		<b>2002</b>	
<b>42</b>	<b>U.S. Total</b>	<b>236,711</b>	<b>238,667</b>	<b>236,555</b>	<b>-0.8</b>	<b>-2.0</b>	<b>0.1</b>	<b>285,987</b>	<b>290,759</b>	<b>279,623</b>	<b>-1.6</b>	<b>-0.3</b>	<b>2.3</b>	<b>1,164,922</b>	<b>1,112,361</b>	
<b>421</b>	<b>Durable</b>	<b>112,483</b>	<b>113,491</b>	<b>115,979</b>	<b>-0.9</b>	<b>-1.1</b>	<b>-3.0</b>	<b>175,122</b>	<b>176,909</b>	<b>171,597</b>	<b>-1.0</b>	<b>0.9</b>	<b>2.1</b>	<b>544,346</b>	<b>544,029</b>	
4211	Automotive	18,033	18,871	18,156	-4.4	0.8	-0.7	25,303	26,047	23,443	-2.9	0.7	7.9	87,746	86,446	
4212	Furniture	3,659	3,559	3,654	2.8	-1.7	0.1	5,379	5,300	5,090	1.5	1.6	5.7	17,386	17,505	
4213	Lumber	7,376	7,256	7,415	1.7	6.1	-0.5	7,427	7,527	7,245	-1.3	-0.1	2.5	33,747	33,253	
4214	Prof. equip.	20,028	20,248	20,543	-1.1	-6.6	-2.5	23,578	23,705	23,292	-0.5	0.4	1.2	99,673	96,931	
42143	Comp. equip.	8,719	9,072	9,370	-3.9	-6.6	-6.9	7,705	7,681	7,992	0.3	2.6	-3.6	44,415	44,278	
4215	Metals	7,520	7,527	7,981	-0.1	4.2	-5.8	13,255	13,472	12,672	-1.6	-0.5	4.6	35,907	36,672	
4216	Electrical	16,959	17,306	18,037	-2.0	-2.7	-6.0	23,005	23,237	23,104	-1.0	2.0	-0.4	83,941	85,603	
4217	Hardware	5,716	5,640	5,879	1.3	3.3	-2.8	10,673	10,782	10,307	-1.0	-0.3	3.6	26,801	27,742	
4218	Machinery	19,859	19,477	20,657	2.0	2.8	-3.9	46,358	46,543	47,324	-0.4	0.6	-2.0	92,176	93,810	
4219	Misc. Durable	13,333	13,607	13,657	-2.0	-5.9	-2.4	20,144	20,296	19,120	-0.7	3.1	5.4	66,969	66,067	
<b>422</b>	<b>Nondurable</b>	<b>124,228</b>	<b>125,176</b>	<b>120,576</b>	<b>-0.8</b>	<b>-2.8</b>	<b>3.0</b>	<b>110,865</b>	<b>113,850</b>	<b>108,026</b>	<b>-2.6</b>	<b>-2.1</b>	<b>2.6</b>	<b>620,576</b>	<b>568,332</b>	
4221	Paper	5,969	6,070	6,196	-1.7	-2.8	-3.7	6,308	6,308	6,264	0.0	2.5	0.7	30,126	29,863	
4222	Drugs	21,244	21,515	19,531	-1.3	3.1	8.8	29,607	30,512	26,309	-3.0	-0.4	12.5	103,577	95,189	
4223	Apparel	6,360	6,660	7,202	-4.5	-12.1	-11.7	11,942	11,793	11,611	1.3	-0.2	2.9	34,443	37,134	
4224	Groceries	37,511	35,615	35,687	5.3	-0.7	5.1	21,504	21,880	21,699	-1.7	-2.6	-0.9	174,512	166,840	
4225	Farm products	9,150	9,841	8,418	-7.0	2.4	8.7	7,917	8,945	8,739	-11.5	-9.1	-9.4	50,539	43,893	
4226	Chemicals	5,466	5,492	5,587	-0.5	-0.6	-2.2	6,044	5,978	6,021	1.1	-0.4	0.4	26,822	25,635	
4227	Petroleum	17,135	18,055	15,853	-5.1	-18.0	8.1	4,175	4,074	4,314	2.5	-7.8	-3.2	98,453	69,868	
4228	Alcohol	7,509	7,063	7,398	6.3	5.2	1.5	7,574	7,565	7,144	0.1	1.8	6.0	32,721	31,298	
4229	Misc. Nondur.	13,884	14,865	14,704	-6.6	4.0	-5.6	15,794	16,795	15,925	-6.0	-4.4	-0.8	69,383	68,612	

<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>	1.2	1.6	1.3	1.6	0.4	0.2	0.6	0.5	1.1	1.1	0.5
<b>421</b>	<b>Durable</b>	1.3	1.5	1.4	1.5	0.6	0.3	0.8	0.6	1.2	1.3	0.6
4211	Automotive	3.7	4.5	3.7	4.4	0.9	0.8	1.1	1.3	3.7	3.8	0.7
4212	Furniture	5.3	7.0	5.0	6.9	1.6	0.7	2.8	1.5	6.0	5.2	1.5
4213	Lumber	4.9	6.2	4.9	6.2	1.1	0.7	1.7	2.1	4.7	5.0	1.3
4214	Prof. equip.	4.8	6.6	4.8	6.6	1.2	0.6	2.0	1.7	4.7	4.9	2.1
42143	Comp. equip.	8.6	7.3	8.9	7.3	2.0	1.3	2.9	4.1	7.8	7.9	2.5
4215	Metals	7.3	9.7	7.2	9.6	1.8	0.7	2.6	3.0	6.2	5.7	1.9
4216	Electrical	3.5	5.1	3.5	5.1	1.1	0.6	1.6	1.7	3.5	3.4	1.2
4217	Hardware	7.9	10.8	7.9	10.8	1.4	0.5	2.4	1.8	7.7	8.0	2.2
4218	Machinery	3.4	3.2	3.4	3.2	1.6	0.4	2.2	1.2	3.6	3.3	1.4
4219	Misc. Durable	4.9	7.3	4.8	7.4	1.8	0.7	2.8	2.6	4.7	5.1	2.2
<b>422</b>	<b>Nondurable</b>	1.8	2.6	1.9	2.6	0.5	0.3	0.8	1.1	1.7	1.4	0.7
4221	Paper	4.3	3.5	4.3	3.4	0.9	0.7	1.1	1.4	4.2	4.2	0.6
4222	Drugs	5.5	5.6	5.5	5.6	0.9	0.4	1.7	1.5	5.7	5.9	1.2
4223	Apparel	4.9	5.0	4.9	5.1	2.4	0.9	2.7	1.9	4.3	4.7	1.7
4224	Groceries	3.9	6.4	3.9	6.3	0.6	0.8	1.6	2.0	3.9	3.4	1.5
4225	Farm products	6.7	8.1	6.7	8.2	2.1	1.8	2.9	3.9	6.7	5.4	2.0
4226	Chemicals	5.1	7.1	5.1	7.1	1.0	0.8	1.8	1.9	4.7	4.8	1.7
4227	Petroleum	6.8	7.6	6.6	7.6	0.8	1.2	2.0	1.9	6.8	5.7	2.2
4228	Alcohol	3.9	5.3	4.0	5.3	1.1	0.6	1.1	1.1	3.8	3.8	0.9
4229	Misc. Nondur.	7.4	8.2	7.2	8.2	2.0	1.1	2.8	2.0	6.9	7.3	2.8

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
		Jun.	May r	Apr.r	Mar.	Feb.	May r	Jun.	May r	Apr.r	Mar.	Feb.	May r
<b>42</b>	<b>U.S. Total</b> <sup>1</sup>	<b>1.011</b>	<b>1.015</b>	<b>1.013</b>	<b>1.014</b>	<b>0.913</b>	<b>1.040</b>	<b>0.991</b>	<b>0.989</b>	<b>1.003</b>	<b>1.003</b>	<b>1.004</b>	<b>0.990</b>
<b>421</b>	<b>Durable</b>	<b>1.032</b>	<b>1.010</b>	<b>1.013</b>	<b>1.021</b>	<b>0.902</b>	<b>1.035</b>	<b>1.001</b>	<b>1.005</b>	<b>1.010</b>	<b>0.999</b>	<b>0.999</b>	<b>1.005</b>
4211	Automotive	1.014	1.012	1.058	1.031	0.901	1.037	0.981	0.999	1.020	1.015	1.030	1.000
4212	Furniture	1.025	1.004	0.994	1.013	0.902	1.022	1.009	0.997	0.978	0.972	0.981	0.995
4213	Lumber	1.076	1.076	1.058	0.994	0.865	1.118	1.016	1.026	1.033	1.031	1.001	1.027
4214	Prof. equip.	1.057	0.974	0.968	1.032	0.883	1.005	0.997	0.991	1.011	0.986	0.991	0.990
42143	Comp. equip.	1.071	0.942	0.946	1.030	0.869	0.975	0.997	1.000	1.022	0.972	0.981	0.995
4215	Metals	1.042	1.025	1.032	0.996	0.928	1.061	0.996	0.990	0.995	0.992	0.995	0.992
4216	Electrical	1.001	0.981	0.989	1.018	0.912	0.999	1.001	0.996	0.993	0.974	0.988	0.995
4217	Hardware	1.064	1.051	1.037	0.997	0.898	1.076	1.015	1.014	1.019	1.012	0.998	1.013
4218	Machinery	1.051	1.055	1.046	1.025	0.893	1.083	1.019	1.020	1.021	1.014	0.996	1.020
4219	Misc. Durable	0.997	0.969	0.980	1.017	0.913	0.987	0.995	0.998	1.005	0.985	1.004	0.998
<b>422</b>	<b>Nondurable</b>	<b>0.992</b>	<b>1.025</b>	<b>1.021</b>	<b>1.014</b>	<b>0.921</b>	<b>1.050</b>	<b>0.970</b>	<b>0.965</b>	<b>0.989</b>	<b>1.009</b>	<b>1.010</b>	<b>0.966</b>
4221	Paper	1.001	0.982	0.992	0.994	0.916	1.016	1.002	1.017	1.014	0.990	0.995	1.016
4222	Drugs	0.989	0.982	1.015	1.002	0.931	1.017	0.991	0.958	1.000	1.016	0.992	0.958
4223	Apparel	0.960	0.914	0.963	1.086	0.996	0.939	1.022	0.972	0.952	0.952	0.990	0.976
4224	Groceries	1.004	1.045	0.996	1.015	0.906	1.058	0.991	0.977	0.980	0.991	0.979	0.979
4225	Farm products	0.884	0.939	0.995	0.998	0.977	0.960	0.790	0.850	0.962	1.064	1.138	0.850
4226	Chemicals	1.028	1.043	1.029	1.017	0.939	1.072	1.003	1.012	1.003	1.005	1.001	1.012
4227	Petroleum	0.988	1.061	1.077	0.974	0.929	1.099	0.966	0.966	0.978	0.994	0.987	0.966
4228	Alcohol	1.059	1.054	1.000	0.949	0.833	1.098	1.015	1.004	1.011	0.991	0.965	1.006
4229	Misc. Nondur.	1.014	1.062	1.088	1.033	0.936	1.090	0.940	0.964	1.003	1.038	1.048	0.965

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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/>.