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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES AUGUST 2003

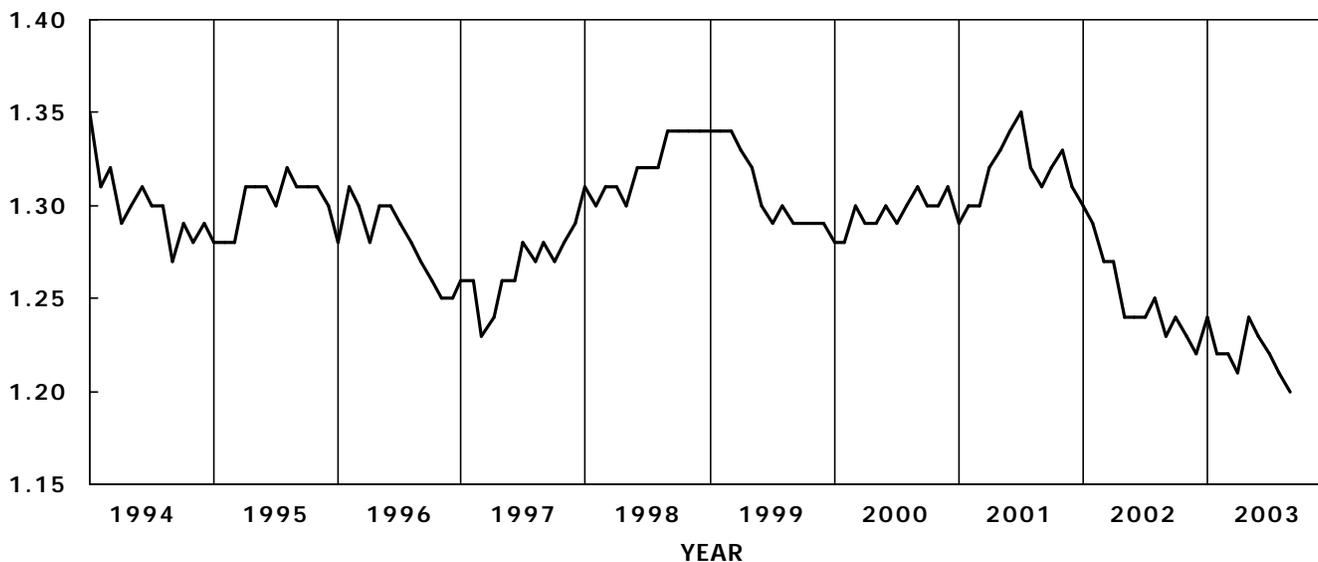
Sales. August 2003 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$239.9 billion, up 0.4 percent (+/-0.6%) from the revised July level, and were up 3.3 percent (+/-1.0%) from the August 2002 level. The July preliminary estimate was revised upward \$0.2 billion or 0.1 percent. August sales of durable goods decreased 0.7 percent (+/-0.9%) from last month, but were virtually unchanged (+/-1.3%) from a year ago. Compared to last month, sales of lumber and other construction materials increased 1.8 percent (+/-2.0%), while sales of computer and computer peripheral equipment and software decreased 4.9 percent. August sales of nondurable goods increased 1.5 percent (+/-0.8%) from last month and were up 6.4 percent (+/-1.6%) from last year. Compared to last month, sales of petroleum and petroleum products were up 5.0 percent and sales of farm product raw materials increased 2.5 percent (+/-3.5%).

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variations but not for price changes, were \$288.6 billion at the end of August, down 0.2 percent (+/-0.4%) from last month, but were up 0.7 percent (+/-1.0%) from a year ago. The July preliminary estimate was virtually unchanged. End-of-month inventories of durable goods decreased 0.5 percent (+/-0.4%) from July, and were down 0.6 percent (+/-0.9%) from last year. Inventories of motor vehicle and motor vehicle parts and supplies decreased 1.7 percent from last month and inventories of hardware, and plumbing and heating equipment and supplies decreased 1.4 percent. End-of-month inventories of nondurable goods increased 0.3 percent (+/-0.6%) from July and were up 2.7 percent (+/-2.0%) from last year. Inventories of petroleum and petroleum products increased 4.5 percent from last month, while inventories of chemicals and allied products decreased 1.9 percent.

Inventories/Sales Ratio. The August inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.20. The August 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)



Monthly Wholesale Trade for September is scheduled to be released November 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 ¹ code	Kind of Business	Sales						Inventories						Inventories/Sales Ratios		
		Monthly			Percent change			Monthly			Percent change			Ratios		
		Aug. 2003 (P)	Jul. 2003 (r)	Aug. 2002 (r)	Aug./Jul.	Jul./Jun.	Aug. 03/ Aug. 02	Aug. 2003 (P)	Jul. 2003 (r)	Aug. 2002 (r)	Aug./Jul.	Jul./Jun.	Aug. 03/ Aug. 02	Aug. 2003 (P)	Jul. 2003 (r)	Aug. 2002 (r)
Adjusted²																
42	U.S. Total	239,942	238,919	232,373	0.4	0.5	3.3	288,589	289,061	286,685	-0.2	0.0	0.7	1.20	1.21	1.23
421	Durable	112,711	113,520	112,745	-0.7	0.2	0.0	172,084	172,939	173,202	-0.5	-0.6	-0.6	1.53	1.52	1.54
4211	Automotive	17,930	18,093	18,477	-0.9	-1.0	-3.0	24,717	25,134	23,719	-1.7	-2.4	4.2	1.38	1.39	1.28
4212	Furniture	3,756	3,797	3,537	-1.1	2.9	6.2	5,420	5,348	5,166	1.3	-0.9	4.9	1.44	1.41	1.46
4213	Lumber	7,663	7,531	6,573	1.8	4.0	16.6	7,259	7,215	7,069	0.6	-0.2	2.7	0.95	0.96	1.08
4214	Prof. equip.	20,100	20,638	20,873	-2.6	-0.1	-3.7	24,250	24,098	24,331	0.6	0.7	-0.3	1.21	1.17	1.17
42143	Comp. equip.	8,708	9,156	9,977	-4.9	-1.1	-12.7	7,558	7,630	8,274	-0.9	-1.6	-8.7	0.87	0.83	0.83
4215	Metals	7,264	7,375	7,586	-1.5	1.8	-4.2	13,023	13,087	13,253	-0.5	-1.3	-1.7	1.79	1.77	1.75
4216	Electrical	17,645	17,838	17,347	-1.1	-0.3	1.7	22,535	22,672	23,669	-0.6	-0.8	-4.8	1.28	1.27	1.36
4217	Hardware	5,467	5,501	5,537	-0.6	-0.1	-1.3	10,302	10,448	10,156	-1.4	0.1	1.4	1.88	1.90	1.83
4218	Machinery	19,904	19,593	18,403	1.6	2.0	8.2	44,571	44,777	46,262	-0.5	-0.6	-3.7	2.24	2.29	2.51
4219	Misc. Durable	12,982	13,154	14,412	-1.3	-3.0	-9.9	20,007	20,160	19,577	-0.8	0.7	2.2	1.54	1.53	1.36
422	Nondurable	127,231	125,399	119,628	1.5	0.8	6.4	116,505	116,122	113,483	0.3	1.0	2.7	0.92	0.93	0.95
4221	Paper	5,917	6,028	6,164	-1.8	-1.9	-4.0	6,230	6,240	6,114	-0.2	0.4	1.9	1.05	1.04	0.99
4222	Drugs	22,731	22,393	19,377	1.5	3.0	17.3	31,600	31,242	27,304	1.1	2.9	15.7	1.39	1.40	1.41
4223	Apparel	6,883	6,872	7,644	0.2	0.0	-10.0	12,305	12,377	12,606	-0.6	-0.2	-2.4	1.79	1.80	1.65
4224	Groceries	36,268	36,109	34,722	0.4	0.7	4.5	22,321	22,130	22,842	0.9	1.1	-2.3	0.62	0.61	0.66
4225	Farm products	9,967	9,727	9,508	2.5	-7.5	4.8	9,398	9,441	10,566	-0.5	-1.6	-11.1	0.94	0.97	1.11
4226	Chemicals	5,245	5,360	5,232	-2.1	0.7	0.2	5,904	6,017	5,971	-1.9	0.2	-1.1	1.13	1.12	1.14
4227	Petroleum	19,044	18,145	15,896	5.0	2.9	19.8	4,613	4,413	4,285	4.5	-0.3	7.7	0.24	0.24	0.27
4228	Alcohol	7,400	7,373	6,848	0.4	3.4	8.1	7,461	7,590	6,970	-1.7	0.5	7.0	1.01	1.03	1.02
4229	Misc. Nondur.	13,776	13,392	14,237	2.9	1.4	-3.2	16,673	16,672	16,825	0.0	0.7	-0.9	1.21	1.24	1.18
Not Adjusted																
Sales to date																
															2003	2002
42	U.S. Total	238,949	244,277	237,904	-2.2	1.5	0.4	284,575	287,763	282,668	-1.1	0.5	0.7	1,888,773	1,811,145	
421	Durable	113,211	117,163	116,468	-3.4	0.0	-2.8	172,282	175,148	173,476	-1.6	0.3	-0.7	891,773	888,750	
4211	Automotive	17,894	18,545	18,828	-3.5	-0.3	-5.0	23,555	24,883	22,652	-5.3	-2.1	4.0	142,781	140,911	
4212	Furniture	3,857	3,869	3,781	-0.3	2.7	2.0	5,615	5,525	5,352	1.6	1.3	4.9	28,885	28,572	
4213	Lumber	8,245	8,382	7,290	-1.6	7.8	13.1	7,252	7,273	7,069	-0.3	-1.7	2.6	58,147	54,516	
4214	Prof. equip.	19,698	21,216	21,103	-7.2	-2.4	-6.7	24,396	24,556	24,404	-0.7	3.2	0.0	162,330	160,476	
42143	Comp. equip.	8,673	9,367	10,157	-7.4	-5.4	-14.6	7,618	7,928	8,307	-3.9	2.6	-8.3	72,358	74,860	
4215	Metals	7,569	7,877	8,049	-3.9	5.3	-6.0	13,101	13,218	13,333	-0.9	0.0	-1.7	58,844	60,684	
4216	Electrical	17,733	18,230	17,902	-2.7	0.8	-0.9	22,963	23,012	24,095	-0.2	0.3	-4.7	137,993	138,722	
4217	Hardware	5,615	5,793	5,836	-3.1	-1.2	-3.8	10,364	10,573	10,227	-2.0	0.1	1.3	44,049	44,924	
4218	Machinery	19,605	19,965	18,734	-1.8	-1.3	4.6	44,749	45,807	46,493	-2.3	-0.2	-3.8	151,959	150,897	
4219	Misc. Durable	12,995	13,286	14,945	-2.2	-2.1	-13.0	20,287	20,301	19,851	-0.1	1.9	2.2	106,785	109,048	
422	Nondurable	125,738	127,114	121,436	-1.1	2.8	3.5	112,293	112,615	109,192	-0.3	0.9	2.8	997,000	922,395	
4221	Paper	6,012	6,167	6,441	-2.5	-0.4	-6.7	6,137	6,215	6,022	-1.3	0.0	1.9	48,501	48,646	
4222	Drugs	21,413	22,348	18,912	-4.2	4.3	13.2	29,767	30,617	25,802	-2.8	2.3	15.4	168,761	151,843	
4223	Apparel	7,420	7,250	8,462	2.3	10.0	-12.3	12,810	12,909	13,110	-0.8	1.7	-2.3	55,660	60,734	
4224	Groceries	36,304	37,517	35,729	-3.2	4.2	1.6	22,321	21,754	22,796	2.6	0.6	-2.1	284,140	272,128	
4225	Farm products	8,791	8,881	8,662	-1.0	-6.1	1.5	7,349	7,298	8,189	0.7	-4.2	-10.3	77,722	69,119	
4226	Chemicals	5,240	5,564	5,415	-5.8	1.8	-3.2	5,863	6,077	5,929	-3.5	0.9	-1.1	43,089	41,445	
4227	Petroleum	19,539	18,054	16,278	8.2	2.2	20.0	4,641	4,351	4,306	6.7	1.1	7.8	153,839	115,682	
4228	Alcohol	7,629	7,941	7,300	-3.9	6.1	4.5	7,349	7,689	6,886	-4.4	0.6	6.7	55,754	52,717	
4229	Misc. Nondur.	13,390	13,392	14,237	0.0	0.3	-5.9	16,056	15,705	16,152	2.2	0.9	-0.6	109,534	110,081	

^P Preliminary estimate. ^r Revised.

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

² 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
42	U.S. Total	1.1	1.6	1.2	1.6	0.3	0.2	0.6	0.6	1.1	1.1	0.4
421	Durable	1.3	1.5	1.3	1.5	0.5	0.3	0.8	0.6	1.2	1.3	0.6
4211	Automotive	3.7	4.4	3.7	4.5	0.9	0.7	1.0	1.3	3.6	3.8	0.6
4212	Furniture	6.1	7.4	5.8	7.3	1.6	0.7	2.5	2.2	6.0	5.2	1.5
4213	Lumber	5.0	5.8	5.0	6.0	1.2	0.8	1.7	2.0	4.8	4.9	1.3
4214	Prof. equip.	4.8	6.7	4.8	6.6	1.3	0.7	2.0	1.8	4.8	4.9	1.9
42143	Comp. equip.	8.3	7.7	8.1	7.5	2.0	1.4	2.9	3.9	7.8	8.2	2.4
4215	Metals	7.2	10.0	7.1	9.9	1.6	0.6	2.7	2.4	6.8	6.4	1.8
4216	Electrical	3.5	5.0	3.5	5.1	1.2	0.6	1.5	1.5	3.4	3.2	1.0
4217	Hardware	7.9	10.6	7.9	10.6	1.3	0.7	2.4	1.7	7.7	7.8	1.9
4218	Machinery	3.5	3.2	3.6	3.2	1.7	0.4	2.1	1.2	3.6	3.5	1.1
4219	Misc. Durable	4.5	7.3	4.7	7.4	1.8	0.7	2.7	2.6	4.4	4.9	2.0
422	Nondurable	1.9	2.5	1.9	2.5	0.5	0.4	0.9	1.2	1.8	1.4	0.7
4221	Paper	4.4	3.6	4.3	3.6	1.0	0.6	1.1	1.4	4.3	4.2	0.5
4222	Drugs	5.7	5.6	5.7	5.6	0.9	0.4	1.7	1.5	5.7	5.9	1.2
4223	Apparel	5.0	5.1	4.9	5.2	2.5	0.9	2.7	1.8	4.7	4.7	1.6
4224	Groceries	3.9	8.0	3.9	8.1	0.7	0.8	1.7	2.0	3.7	3.4	1.4
4225	Farm products	7.0	8.1	6.8	8.2	2.1	2.1	2.9	4.5	7.0	5.4	1.9
4226	Chemicals	4.9	7.1	4.9	7.2	1.0	0.7	1.8	2.1	4.7	4.9	1.5
4227	Petroleum	6.8	7.6	6.8	7.6	0.8	1.2	2.1	2.0	6.7	5.9	1.9
4228	Alcohol	3.8	5.1	3.9	5.1	1.0	0.6	1.1	1.1	3.8	3.8	1.0
4229	Misc. Nondur.	7.3	8.3	7.2	8.2	2.0	0.9	3.7	2.2	7.0	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.

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
		Sep.	Aug.r	Jul.r	Jun.	May	Aug.r	Sep.	Aug.r	Jul.r	Jun.	May	Aug.r
42	U.S. Total ¹	1.028	0.994	1.019	1.012	1.014	1.024	0.990	0.986	0.996	0.991	0.989	0.986
421	Durable	1.050	1.001	1.031	1.034	1.007	1.033	0.996	1.002	1.013	1.003	1.004	1.002
4211	Automotive	0.981	0.998	1.025	1.017	1.009	1.019	0.978	0.953	0.990	0.987	0.998	0.955
4212	Furniture	1.062	1.027	1.019	1.021	1.003	1.069	1.034	1.036	1.033	1.011	0.997	1.036
4213	Lumber	1.055	1.076	1.113	1.074	1.065	1.109	0.997	0.999	1.008	1.023	1.024	1.000
4214	Prof. equip.	1.102	0.980	1.028	1.052	0.975	1.011	1.000	1.006	1.019	0.994	0.990	1.003
42143	Comp. equip.	1.133	0.996	1.023	1.070	0.943	1.018	0.997	1.008	1.039	0.997	0.998	1.004
4215	Metals	1.034	1.042	1.068	1.032	1.027	1.061	1.004	1.006	1.010	0.997	0.991	1.006
4216	Electrical	1.074	1.005	1.022	1.011	0.974	1.032	1.010	1.019	1.015	1.004	0.998	1.018
4217	Hardware	1.024	1.027	1.053	1.065	1.046	1.054	0.995	1.006	1.012	1.012	1.015	1.007
4218	Machinery	1.039	0.985	1.019	1.053	1.051	1.018	0.986	1.004	1.023	1.019	1.022	1.005
4219	Misc. Durable	1.040	1.001	1.010	1.001	0.969	1.037	1.003	1.014	1.007	0.995	0.997	1.014
422	Nondurable	1.004	0.986	1.013	0.994	1.024	1.015	0.982	0.963	0.969	0.968	0.965	0.962
4221	Paper	1.039	1.016	1.023	1.008	0.982	1.045	0.990	0.985	0.996	1.000	1.019	0.985
4222	Drugs	1.033	0.942	0.998	0.985	0.983	0.976	0.985	0.942	0.980	0.986	0.963	0.945
4223	Apparel	1.084	1.078	1.055	0.959	0.912	1.107	1.037	1.041	1.043	1.023	0.970	1.040
4224	Groceries	0.993	1.001	1.039	1.004	1.042	1.029	1.000	1.000	0.983	0.988	0.979	0.998
4225	Farm products	0.973	0.882	0.913	0.899	0.928	0.911	0.850	0.782	0.773	0.794	0.846	0.775
4226	Chemicals	1.001	0.999	1.038	1.026	1.043	1.035	0.988	0.993	1.010	1.003	1.012	0.993
4227	Petroleum	0.991	1.026	0.995	1.002	1.048	1.024	1.013	1.006	0.986	0.972	0.960	1.005
4228	Alcohol	0.986	1.031	1.077	1.049	1.054	1.066	1.022	0.985	1.013	1.012	1.005	0.988
4229	Misc. Nondur.	1.013	0.972	1.000	1.011	1.061	1.000	0.965	0.963	0.942	0.940	0.964	0.960

r Revised.

¹Adjusted 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/>.