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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES MARCH 2003

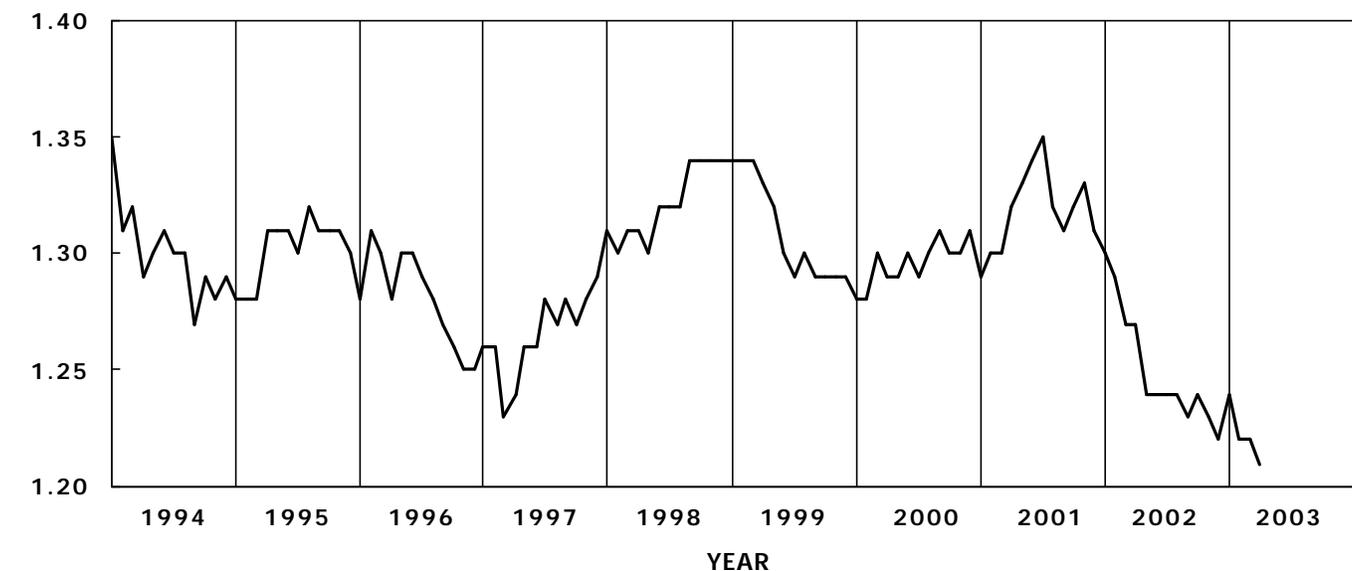
Sales. March 2003 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$240.6 billion, up 1.0 percent (+/-0.6%) from the revised February level and were up 7.6 percent (+/-1.0%) from the March 2002 level. The February preliminary estimate was virtually unchanged. March sales of durable goods increased 2.1 percent (+/-0.9%) from last month and were up 2.6 percent (+/-1.9%) from a year ago. Compared to last month, sales of motor vehicle and motor vehicle parts and supplies increased 6.3 percent. Among nondurable goods, sales of chemicals and allied products increased 3.2 percent from last month, while sales of farm product raw materials decreased 5.8 percent.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variations but not for price changes, were \$291.0 billion at the end of March, up 0.5 percent (+/-0.4%) from last month and were up 2.2 percent (+/-0.8%) from a year ago. The February preliminary estimate was revised upward \$0.1 billion. Among durable goods, inventories of hardware, and plumbing and heating equipment and supplies were up 1.7 percent from February, while lumber and other construction materials decreased 1.6 percent. End-of-month inventories of nondurable goods increased 0.7 percent (+/-0.6%) from February and were up 2.8 percent (+/-1.6%) from last year. Inventories of drugs and druggists' sundries increased 2.3 percent from last month.

Inventories/Sales Ratio. The March inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.21. The March 2002 ratio was 1.27.

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 April is scheduled to be released June 9, 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		
		Mar. 2003 (p)	Feb. 2003 (r)	Mar. 2002 (r)	Mar./ Feb.	Feb./ Jan.	Mar. 03 Mar. 02	Mar. 2003 (p)	Feb. 2003 (r)	Mar. 2002 (r)	Mar./ Feb.	Feb./ Jan.	Mar. 03 Mar. 02	Mar. 2003 (p)	Feb. 2003 (r)	Mar. 2002 (r)
Adjusted²																
42	U.S. Total	240,569	238,193	223,530	1.0	0.5	7.6	291,035	289,680	284,642	0.5	0.3	2.2	1.21	1.22	1.27
421	Durable	112,497	110,215	109,634	2.1	-1.4	2.6	175,366	174,784	172,163	0.3	0.7	1.9	1.56	1.59	1.57
4211	Automotive	18,237	17,159	17,370	6.3	-5.2	5.0	25,461	25,156	23,182	1.2	1.0	9.8	1.40	1.47	1.33
4212	Furniture	3,586	3,596	3,599	-0.3	1.1	-0.4	5,348	5,288	5,108	1.1	1.8	4.7	1.49	1.47	1.42
4213	Lumber	6,896	6,813	6,761	1.2	-2.6	2.0	7,326	7,444	7,002	-1.6	2.0	4.6	1.06	1.09	1.04
4214	Prof. equip.	20,999	20,777	20,031	1.1	0.2	4.8	23,981	23,862	23,474	0.5	0.6	2.2	1.14	1.15	1.17
42143	Comp. equip.	9,404	9,394	9,222	0.1	-0.2	2.0	7,701	7,705	7,941	-0.1	0.7	-3.0	0.82	0.82	0.86
4215	Metals	7,183	7,051	7,039	1.9	-1.3	2.0	13,660	13,571	12,719	0.7	1.4	7.4	1.90	1.92	1.81
4216	Electrical	17,401	17,179	17,286	1.3	0.1	0.7	23,362	23,285	23,280	0.3	-0.6	0.4	1.34	1.36	1.35
4217	Hardware	5,468	5,372	5,588	1.8	-1.4	-2.1	10,691	10,511	10,170	1.7	0.9	5.1	1.96	1.96	1.82
4218	Machinery	18,482	18,267	18,532	1.2	-2.4	-0.3	45,628	45,735	47,742	-0.2	0.6	-4.4	2.47	2.50	2.58
4219	Misc. Durable	14,245	14,001	13,428	1.7	0.6	6.1	19,909	19,932	19,486	-0.1	0.5	2.2	1.40	1.42	1.45
422	Nondurable	128,072	127,978	113,896	0.1	2.2	12.4	115,669	114,896	112,479	0.7	-0.2	2.8	0.90	0.90	0.99
4221	Paper	6,302	6,133	6,036	2.8	-1.2	4.4	6,195	6,252	6,141	-0.9	2.0	0.9	0.98	1.02	1.02
4222	Drugs	20,767	20,436	19,086	1.6	1.9	8.8	30,140	29,455	28,093	2.3	2.6	7.3	1.45	1.44	1.47
4223	Apparel	7,056	7,043	7,634	0.2	-3.3	-7.6	12,413	12,236	12,246	1.4	-0.7	1.4	1.76	1.74	1.60
4224	Groceries	35,324	35,300	33,965	0.1	1.4	4.0	22,783	22,956	21,715	-0.8	0.0	4.9	0.64	0.65	0.64
4225	Farm products	9,646	10,241	8,499	-5.8	-4.9	13.5	9,221	9,297	10,708	-0.8	-1.7	-13.9	0.96	0.91	1.26
4226	Chemicals	5,461	5,291	4,850	3.2	-0.6	12.6	5,985	6,024	5,946	-0.6	-1.2	0.7	1.10	1.14	1.23
4227	Petroleum	22,606	22,412	13,699	0.9	12.6	65.0	4,502	4,587	4,569	-1.9	-6.3	-1.5	0.20	0.20	0.33
4228	Alcohol	7,088	7,044	6,748	0.6	0.9	5.0	7,480	7,463	7,002	0.2	-1.1	6.8	1.06	1.06	1.04
4229	Misc. Nondur.	13,822	14,078	13,379	-1.8	1.5	3.3	16,950	16,626	16,059	1.9	-2.1	5.5	1.23	1.18	1.20
Not Adjusted																
Sales to date																
2003																
2002																
42	U.S. Total	243,657	217,552	226,710	12.0	-4.8	7.5	291,572	290,551	285,298	0.4	-0.6	2.2	689,724	645,488	
421	Durable	114,721	99,072	111,983	15.8	-5.2	2.4	175,171	174,760	172,040	0.2	1.3	1.8	318,342	314,951	
4211	Automotive	18,729	15,460	18,100	21.1	-7.2	3.5	25,843	25,911	23,576	-0.3	3.0	9.6	50,845	49,765	
4212	Furniture	3,640	3,244	3,621	12.2	-1.8	0.5	5,220	5,188	4,985	0.6	1.8	4.7	10,188	10,208	
4213	Lumber	6,834	5,893	6,700	16.0	-7.7	2.0	7,538	7,451	7,205	1.2	4.0	4.6	19,113	18,649	
4214	Prof. equip.	21,713	18,346	20,612	18.4	-5.3	5.3	23,549	23,647	23,051	-0.4	-0.2	2.2	59,425	57,372	
42143	Comp. equip.	9,761	8,163	9,526	19.6	-6.6	2.5	7,462	7,559	7,671	-1.3	-0.1	-2.7	26,668	26,484	
4215	Metals	7,176	6,543	7,173	9.7	-7.8	0.0	13,537	13,503	12,630	0.3	1.1	7.2	20,812	20,944	
4216	Electrical	17,766	15,667	17,718	13.4	-3.4	0.3	22,778	23,006	22,745	-1.0	-1.4	0.1	49,651	50,103	
4217	Hardware	5,441	4,824	5,566	12.8	-6.5	-2.2	10,809	10,490	10,272	3.0	1.8	5.2	15,424	15,993	
4218	Machinery	18,963	16,312	18,958	16.3	-7.2	0.0	46,267	45,552	48,363	1.6	2.4	-4.3	52,856	53,053	
4219	Misc. Durable	14,459	12,783	13,535	13.1	0.0	6.8	19,630	20,012	19,213	-1.9	0.5	2.2	40,028	38,864	
422	Nondurable	128,936	118,480	114,727	8.8	-4.4	12.4	116,401	115,791	113,258	0.5	-3.3	2.8	371,382	330,537	
4221	Paper	6,277	5,618	6,006	11.7	-9.7	4.5	6,145	6,221	6,098	-1.2	2.3	0.8	18,119	17,654	
4222	Drugs	20,850	19,026	19,162	9.6	-9.1	8.8	30,683	29,219	28,486	5.0	-4.0	7.7	60,799	56,103	
4223	Apparel	7,642	7,015	8,306	8.9	2.7	-8.0	11,830	12,114	11,683	-2.3	-4.7	1.3	21,487	22,705	
4224	Groceries	35,960	31,982	34,033	12.4	-4.6	5.7	22,510	22,474	21,476	0.2	-2.2	4.8	101,465	97,485	
4225	Farm products	9,607	10,005	8,474	-4.0	-16.1	13.4	9,839	10,580	11,425	-7.0	-7.8	-13.9	31,541	26,655	
4226	Chemicals	5,548	4,968	4,942	11.7	-7.5	12.3	6,015	6,030	5,982	-0.2	-0.5	0.6	15,889	14,784	
4227	Petroleum	22,041	20,821	13,767	5.9	1.9	60.1	4,421	4,527	4,496	-2.3	-8.7	-1.7	63,299	38,493	
4228	Alcohol	6,719	5,868	6,471	14.5	5.4	3.8	7,398	7,202	6,911	2.7	-0.2	7.0	18,152	17,223	
4229	Misc. Nondur.	14,292	13,177	13,566	8.5	0.1	5.4	17,560	17,424	16,701	0.8	-2.1	5.1	40,631	39,435	

^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	1.2	1.6	1.3	1.6	0.4	0.2	0.6	0.5	1.1	1.1	0.6
421	Durable	1.3	1.5	1.4	1.5	0.6	0.3	0.8	0.6	1.1	1.4	0.7
4211	Automotive	3.7	4.5	3.5	4.5	0.9	0.8	1.1	1.4	3.8	4.0	0.6
4212	Furniture	5.0	7.0	4.7	6.9	1.6	0.7	2.9	1.3	5.9	5.0	2.1
4213	Lumber	4.9	6.2	4.9	6.3	1.1	0.7	1.9	2.4	5.0	5.1	1.9
4214	Prof. equip.	4.9	6.5	4.8	6.5	1.3	0.6	1.9	1.7	4.7	5.0	2.1
42143	Comp. equip.	8.9	7.2	8.9	7.2	2.1	1.2	2.7	4.1	7.7	7.4	2.4
4215	Metals	6.8	9.4	6.8	9.4	1.7	0.7	2.8	3.4	5.6	5.4	2.2
4216	Electrical	3.5	5.1	3.5	5.1	1.1	0.6	1.6	1.7	3.7	3.6	1.6
4217	Hardware	7.9	10.9	7.9	10.9	1.3	0.5	2.4	1.8	7.9	8.3	2.2
4218	Machinery	3.4	3.2	3.6	3.2	1.6	0.4	2.2	1.2	3.2	3.1	2.0
4219	Misc. Durable	4.7	7.3	4.6	7.4	1.8	0.7	2.8	2.6	4.7	5.6	2.7
422	Nondurable	1.8	2.5	1.9	2.5	0.5	0.4	0.8	1.0	1.7	1.4	0.7
4221	Paper	4.3	3.4	4.3	3.3	1.0	0.7	1.2	1.5	4.2	4.2	0.8
4222	Drugs	5.4	5.6	5.4	5.6	0.9	0.4	1.8	1.8	5.7	5.8	1.2
4223	Apparel	4.9	4.9	5.0	5.1	2.3	0.9	2.8	2.0	4.5	5.4	2.3
4224	Groceries	3.9	6.2	3.7	6.1	0.7	0.8	1.6	1.9	4.0	3.6	1.6
4225	Farm products	6.6	9.0	6.5	9.7	2.1	1.8	2.9	3.8	7.0	5.9	2.4
4226	Chemicals	5.1	7.1	5.2	7.1	1.1	0.8	1.7	1.8	4.8	4.7	2.0
4227	Petroleum	6.4	7.0	6.3	6.9	0.7	1.1	1.7	1.9	6.7	5.5	2.8
4228	Alcohol	4.1	5.3	4.1	5.3	1.0	0.6	1.1	1.1	3.8	3.8	1.0
4229	Misc. Nondur.	7.5	8.2	7.5	8.2	2.0	1.1	2.8	1.9	6.7	7.4	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.

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	2002	2003				2002	2002
		Apr.	Mar.r	Feb.r	Jan.	Dec.	Mar.r	Apr.	Mar.r	Feb.r	Jan.	Dec.	Mar.r
42	U.S. Total ¹	1.014	1.012	0.913	0.962	0.990	1.012	1.002	1.002	1.004	1.013	1.004	1.003
421	Durable	1.009	1.023	0.902	0.936	0.974	1.021	1.008	0.998	0.999	0.995	0.986	0.998
4211	Automotive	1.063	1.027	0.901	0.920	1.002	1.042	1.017	1.015	1.030	1.010	0.992	1.017
4212	Furniture	1.001	1.015	0.902	0.929	0.939	1.006	0.975	0.976	0.981	0.981	0.979	0.976
4213	Lumber	1.062	0.991	0.865	0.913	0.821	0.991	1.032	1.029	1.001	0.982	0.955	1.029
4214	Prof. equip.	0.956	1.034	0.883	0.934	1.056	1.029	1.018	0.982	0.991	0.999	0.989	0.982
42143	Comp. equip.	0.925	1.038	0.869	0.929	1.088	1.033	1.039	0.969	0.981	0.989	0.981	0.966
4215	Metals	1.031	0.999	0.928	0.993	0.885	1.019	0.990	0.991	0.995	0.998	1.017	0.993
4216	Electrical	0.983	1.021	0.912	0.945	0.967	1.025	0.988	0.975	0.988	0.997	0.986	0.977
4217	Hardware	1.044	0.995	0.898	0.947	0.888	0.996	1.017	1.011	0.998	0.989	0.983	1.010
4218	Machinery	1.050	1.026	0.893	0.939	1.000	1.023	1.019	1.014	0.996	0.978	0.979	1.013
4219	Misc. Durable	0.980	1.015	0.913	0.919	0.957	1.008	1.000	0.986	1.004	1.004	0.978	0.986
422	Nondurable	1.014	1.010	0.921	0.986	1.002	1.007	0.990	1.008	1.010	1.044	1.040	1.008
4221	Paper	0.995	0.996	0.916	1.003	0.971	0.995	1.007	0.992	0.995	0.992	1.015	0.993
4222	Drugs	1.015	1.004	0.931	1.043	1.048	1.004	1.000	1.018	0.992	1.061	1.058	1.014
4223	Apparel	0.973	1.083	0.996	0.938	0.778	1.088	0.950	0.953	0.990	1.032	0.992	0.954
4224	Groceries	0.989	1.018	0.906	0.963	1.004	1.002	0.983	0.988	0.979	1.001	1.013	0.989
4225	Farm products	0.983	0.996	0.977	1.108	1.119	0.997	0.959	1.067	1.138	1.213	1.215	1.067
4226	Chemicals	1.029	1.016	0.939	1.009	0.910	1.019	1.006	1.005	1.001	0.994	1.002	1.006
4227	Petroleum	1.059	0.975	0.929	1.027	0.991	1.005	0.983	0.982	0.987	1.013	1.031	0.984
4228	Alcohol	1.006	0.948	0.833	0.797	1.161	0.959	1.018	0.989	0.965	0.956	0.923	0.987
4229	Misc. Nondur.	1.072	1.034	0.936	0.949	0.983	1.014	1.001	1.036	1.048	1.048	1.050	1.040

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/>.