



Monthly Wholesale Trade

Sales and Inventories

August 1998

BW/98-8

Issued October 1998

U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES August 1998

Sales. August 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$211.6 billion, down 1.2 percent (+/-0.7%) from the revised July level but were 2.3 percent (+/-1.0%) above the August 1997 level. The July preliminary estimate was revised downward \$0.3 billion or 0.1 percent. August sales of durable goods decreased 1.0 percent (+/-0.6%) from July but were 4.0 percent (+/-1.7%) above last August. Sales of metals and minerals, except petroleum, decreased 2.7 percent from last month. Sales of nondurable goods decreased 1.5 percent (+/-1.1%) from July but were up 0.4 percent (+/-1.7%) from August 1997. Compared to last month, sales of petroleum and petroleum products declined 9.5 percent and chemicals and allied products fell 1.4 percent.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$280.0 billion at the end of August, up 0.9 percent (+/-0.5%) from the revised July level and were 5.9 percent (+/-1.8%) above August 1997. The July preliminary estimate was revised upward \$0.6 billion

or 0.2 percent. End-of-month inventories of durable goods increased 0.8 percent (+/-0.8%) from last month and were up 5.8 percent (+/-2.3%) from the previous year. Compared to July, inventories of metals and minerals, except petroleum, grew 2.8 percent and lumber and other construction materials increased 1.3 percent. End-of-month inventories of nondurable goods increased 1.2 percent (+/-0.5%) from last month and were 5.9 percent (+/-2.1%) above August 1997. Compared to last month, inventories of farm-product raw materials increased 5.5 percent while petroleum and petroleum products declined 4.1 percent.

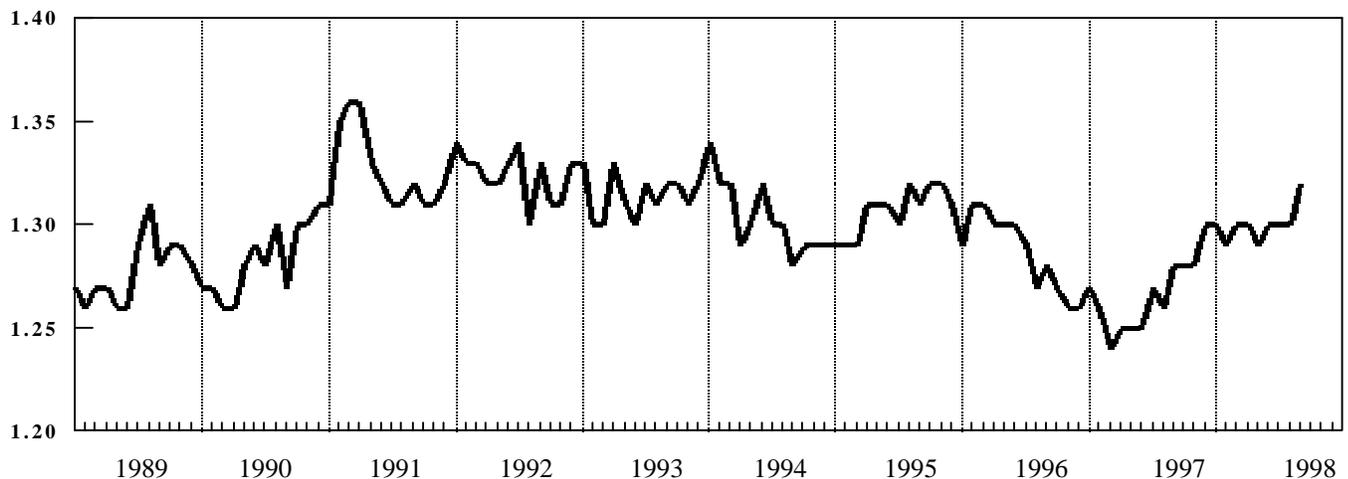
Inventories/Sales Ratio. The August inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.32. The August 1997 ratio was 1.28.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling variability. A discussion of the reliability of the data and general survey methodology appears in BW/97-RV Current Business Reports.

Monthly Wholesale Trade for September is scheduled to be released November 10, 1998 at 10:00 a.m.

Monthly Inventories/Sales Ratios of Merchant Wholesalers: 1989 to 1998

(Data adjusted for seasonal and trading-day differences, but not for price changes)



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This report is available on day of issue through the Department of Commerce's online Economic Bulletin Board (202-482-1986). The data are also available on the internet - <http://www.census.gov/svsd/www/mwts.html>.

Table 1. Estimated Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: 1998 and 1997

[In millions of dollars]

SIC ¹ code	Kind of business	Sales						Inventories						Inventories/Sales ratios		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Aug. 1998 (p)	Jul. 1998 (r)	Aug. 1997 (r)	Aug./ Jul.	Jul./ Jun.	Aug. 98 Aug. 97	Aug. 1998 (p)	Jul. 1998 (r)	Aug. 1997 (r)	Aug./ Jul.	Jul./ Jun.	Aug. 98 Aug. 97	Aug. 1998 (p)	Jul. 1998 (r)	Aug. 1997 (r)
Adjusted²																
	U.S. Total	211,585	214,229	206,868	-1.2	0.2	2.3	280,007	277,466	264,516	0.9	0.0	5.9	1.32	1.30	1.28
50	Durable	113,355	114,552	108,994	-1.0	0.1	4.0	183,357	181,975	173,232	0.8	-0.2	5.8	1.62	1.59	1.59
501	Automotive	19,421	19,072	17,688	1.8	2.0	9.8	27,841	27,313	28,952	1.9	-1.7	-3.8	1.43	1.43	1.64
502	Furniture	3,544	3,467	3,287	2.2	-1.1	7.8	5,659	5,681	5,416	-0.4	1.5	4.5	1.60	1.64	1.65
503	Lumber	7,697	7,813	7,481	-1.5	4.0	2.9	7,980	7,876	8,239	1.3	1.4	-3.1	1.04	1.01	1.10
504	Prof. equip.	21,609	21,523	19,520	0.4	-0.8	10.7	25,498	25,786	24,515	-1.1	-1.4	4.0	1.18	1.20	1.26
505	Metals	8,647	8,891	9,077	-2.7	1.3	-4.7	14,560	14,166	13,827	2.8	0.1	5.3	1.68	1.59	1.52
506	Electrical	17,130	17,216	17,089	-0.5	-0.7	0.2	26,944	26,859	25,723	0.3	-0.2	4.7	1.57	1.56	1.51
507	Hardware	6,598	6,716	6,311	-1.8	-0.9	4.5	13,483	13,491	12,291	-0.1	-0.5	9.7	2.04	2.01	1.95
508	Machinery	18,220	18,629	17,350	-2.2	-1.5	5.0	45,219	45,033	39,109	0.4	1.2	15.6	2.48	2.42	2.25
509	Other Durable	10,489	11,225	11,191	-6.6	0.6	-6.3	16,173	15,770	15,160	2.6	-0.9	6.7	1.54	1.40	1.35
51	Nondurable	98,230	99,677	97,874	-1.5	0.2	0.4	96,650	95,491	91,284	1.2	0.3	5.9	0.98	0.96	0.93
511	Paper	7,599	7,524	7,116	1.0	-1.3	6.8	9,317	9,236	8,812	0.9	-0.1	5.7	1.23	1.23	1.24
512	Drugs	10,984	11,043	9,739	-0.5	2.2	12.8	14,808	14,850	12,895	-0.3	-0.3	14.8	1.35	1.34	1.32
513	Apparel	6,847	6,747	6,942	1.5	-1.2	-1.4	12,395	12,061	11,769	2.8	0.2	5.3	1.81	1.79	1.70
514	Groceries	28,810	28,981	27,188	-0.6	1.2	6.0	16,471	16,354	15,398	0.7	-0.3	7.0	0.57	0.56	0.57
515	Farm-products	8,628	8,577	9,325	0.6	-2.7	-7.5	11,091	10,514	11,094	5.5	1.9	0.0	1.29	1.23	1.19
516	Chemicals	4,505	4,570	4,712	-1.4	1.0	-4.4	4,970	5,087	4,912	-2.3	4.6	1.2	1.10	1.11	1.04
517	Petroleum	11,576	12,790	14,219	-9.5	0.9	-18.6	4,380	4,567	4,708	-4.1	-2.4	-7.0	0.38	0.36	0.33
518	Alcohol	4,682	4,737	4,592	-1.2	2.0	2.0	5,467	5,307	4,707	3.0	-1.5	16.1	1.17	1.12	1.03
519	Other Nondur.	14,599	14,708	14,041	-0.7	-1.8	4.0	17,751	17,515	16,989	1.3	0.7	4.5	1.22	1.19	1.21
Not Adjusted																
	U.S. Total	210,425	216,434	205,591	-2.8	-2.7	2.4	275,896	276,448	260,251	-0.2	0.7	6.0	Sales to date		
														1998	1997	
50	Durable	112,650	115,553	108,565	-2.5	-4.1	3.8	184,508	184,246	174,159	0.1	0.9	5.9	1,688,729	1,646,437	
501	Automotive	18,664	19,396	17,034	-3.8	-2.2	9.6	27,312	27,231	28,344	0.3	-1.0	-3.6	150,053	143,957	
502	Furniture	3,512	3,401	3,257	3.3	-5.5	7.8	5,868	5,800	5,611	1.2	2.0	4.6	26,971	26,451	
503	Lumber	8,359	8,579	8,192	-2.6	2.6	2.0	8,036	7,931	8,272	1.3	-0.5	-2.9	60,414	60,686	
504	Prof. equip.	21,285	21,501	19,247	-1.0	-5.9	10.6	25,549	26,147	24,540	-2.3	1.7	4.1	167,235	152,059	
505	Metals	8,612	8,731	9,059	-1.4	-5.1	-4.9	14,575	14,322	13,841	1.8	0.4	5.3	71,058	71,496	
506	Electrical	17,404	17,491	17,397	-0.5	-1.8	0.0	27,698	27,584	26,443	0.4	0.9	4.7	134,421	131,279	
507	Hardware	6,638	7,280	6,456	-8.8	-3.2	2.8	13,470	13,478	12,291	-0.1	-1.3	9.6	52,642	49,838	
508	Machinery	17,582	18,443	16,587	-4.7	-8.5	6.0	45,309	45,573	39,187	-0.6	2.2	15.6	148,668	136,313	
509	Other Durable	10,594	10,731	11,336	-1.3	-3.6	-6.5	16,691	16,180	15,630	3.2	1.7	6.8	84,894	86,481	
51	Nondurable	97,775	100,881	97,026	-3.1	-1.1	0.8	91,388	92,202	86,092	-0.9	0.5	6.2	792,373	787,877	
511	Paper	7,789	7,532	7,344	3.4	-1.4	6.1	9,084	9,236	8,574	-1.6	2.1	5.9	59,517	55,312	
512	Drugs	10,446	11,065	9,233	-5.6	2.3	13.1	14,438	14,687	12,547	-1.7	2.3	15.1	85,534	72,927	
513	Apparel	7,381	7,267	7,483	1.6	7.4	-1.4	12,643	12,447	12,028	1.6	1.2	5.1	56,130	55,155	
514	Groceries	28,954	29,966	27,079	-3.4	1.9	6.9	16,076	16,272	15,013	-1.2	0.3	7.1	226,358	218,095	
515	Farm-products	8,214	7,882	8,840	4.2	-5.1	-7.1	7,886	8,054	7,866	-2.1	-2.7	0.3	70,642	79,794	
516	Chemicals	4,519	4,643	4,707	-2.7	-4.8	-4.0	4,985	5,077	4,932	-1.8	3.7	1.1	37,142	37,327	
517	Petroleum	11,483	12,624	14,262	-9.0	1.2	-19.5	4,384	4,412	4,722	-0.6	-0.5	-7.2	97,102	112,643	
518	Alcohol	4,813	5,106	4,739	-5.7	-0.3	1.6	5,472	5,413	4,712	1.1	-0.8	16.1	36,702	35,105	
519	Other Nondur.	14,176	14,796	13,339	-4.2	-11.1	6.3	16,420	16,604	15,698	-1.1	-0.9	4.6	123,246	121,519	

p Preliminary estimate. r Revised.

1 For a full description of the SIC Codes shown above see the "1987 Standard Industrial Classification Manual" or the Current Business Reports

"Annual Benchmark Report for Wholesale Trade" publication.

2 Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences. See Table 3 for seasonal adjustment factors used.

Table 2. Coefficients of Variation and Standard Error for Sales and Inventories

SIC code	Kind of business	Coefficients of variation for level (x 100)				Standard error for trend				Coefficients of variation for level (x 100)		Standard error 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	CY	PY	to previous year cumulative
		Median	Median	Median	Median	Median	Median	Median	Median			
	U.S. Total	1.0	1.3	1.0	1.4	0.4	0.2	0.7	1.0	0.9	0.7	0.3
50	Durable	2.1	2.2	2.1	2.2	0.6	0.3	1.0	1.1	2.0	2.4	0.8
501	Automotive	4.1	5.3	4.1	5.3	1.2	0.8	2.4	2.2	4.1	4.1	1.5
502	Furniture	6.5	7.7	6.6	7.6	2.0	0.7	4.0	2.4	6.3	5.7	2.6
503	Lumber	4.7	5.8	4.9	5.9	1.1	0.7	2.3	2.4	4.9	5.3	1.6
504	Prof. equip.	5.0	6.3	4.9	6.2	1.3	0.7	3.0	3.2	4.5	5.3	2.6
505	Metals	4.6	9.2	4.5	9.1	1.3	0.7	1.8	3.0	4.4	4.3	1.0
506	Electrical	5.8	5.5	5.8	5.5	1.4	0.5	2.2	1.9	6.1	5.2	1.5
507	Hardware	5.2	4.9	5.2	4.9	1.2	0.5	1.9	1.9	5.4	4.7	1.0
508	Machinery	6.3	5.8	6.1	5.8	1.7	0.6	3.1	2.1	6.3	6.0	2.1
509	Other Durable	5.7	7.7	5.6	7.8	1.7	0.9	2.6	3.1	5.9	5.0	1.7
51	Nondurable	1.9	2.2	1.8	2.2	0.5	0.4	1.1	1.2	1.7	0.8	0.6
511	Paper	4.9	4.8	4.7	4.5	1.1	0.5	4.7	4.9	4.9	0.5	0.4
512	Drugs	6.0	4.9	6.0	4.9	0.8	0.5	2.3	1.5	6.2	5.6	2.1
513	Apparel	5.4	7.7	5.3	7.7	2.1	0.9	2.8	2.8	4.7	4.5	2.0
514	Groceries	3.0	5.4	3.0	5.5	0.8	0.6	1.5	1.6	3.0	3.1	1.0
515	Farm-products	5.8	8.4	5.5	8.4	2.4	1.7	3.0	4.0	4.9	4.7	2.1
516	Chemicals	5.9	5.7	6.0	5.7	1.3	0.6	2.3	2.0	5.7	5.8	1.2
517	Petroleum	5.9	15.1	5.8	14.8	0.9	0.8	1.8	1.7	5.6	5.7	1.2
518	Alcohol	6.3	7.3	6.3	7.4	1.5	1.3	1.8	5.7	6.2	6.7	1.0
519	Other Nondur.	6.3	6.2	6.2	6.1	2.0	1.0	4.1	4.0	5.8	5.2	2.5

Note: The median measures of variability are based on the most recent 12 months of data.

Sample Design and Reliability of Data

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 trend 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 0, it cannot be stated with certainty whether there was an increase or decrease. For monthly level, 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 are usually attributed to many possible sources: (1) coverage error - failure to accurately represent all population units in the sample, (2) inability to obtain

information about all sample cases, (3) response errors, possibly due to definitional difficulties or misreporting, (4) mistakes in recording or coding the data obtained, and (5) other errors of collection or processing, or in imputing for missing or inconsistent data. Coverage error has an effect on the accuracy of estimates for this survey to the extent that the administrative records system, which forms the basis of our survey universe frame, does not contain all legal businesses. A major source of nonsampling error in the published estimates is due to the need to impute data for nonrespondents and for late and inconsistent reports. For all kinds of businesses combined, imputed data amount to about 26 percent of the total monthly wholesale sales estimates and 28 percent of the total monthly wholesale inventories estimates.

Nonsampling errors also occur in complete censuses. Although no direct measures of these errors have been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

Official Business

Penalty for Private Use, \$300

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

SIC code	Kind of business	Sales					Inventories						
		1998					1997		1998				1997
		Sep.	Aug.r	Jul.r	Jun.	May	Aug.r	Sep.	Aug.r	Jul.r	Jun.	May	Aug.r
	U.S. Total¹	1.022	0.995	1.011	1.038	0.985	0.993	0.978	0.981	0.994	0.986	0.995	0.980
50	Durable	1.048	0.997	1.014	1.054	0.969	0.998	0.994	1.003	1.013	1.001	1.008	1.003
501	Automotive	0.969	0.961	1.017	1.061	1.006	0.963	0.978	0.981	0.997	0.990	1.008	0.979
502	Furniture	1.067	0.991	0.981	1.027	0.969	0.991	1.034	1.037	1.021	1.016	1.006	1.036
503	Lumber	1.076	1.086	1.098	1.112	1.032	1.095	0.995	1.007	1.007	1.026	1.022	1.004
504	Prof. equip.	1.071	0.985	0.999	1.054	0.935	0.986	0.981	1.002	1.014	0.983	0.988	1.001
505	Metals	1.028	0.996	0.982	1.048	0.988	0.998	0.986	1.001	1.011	1.008	1.005	1.001
506	Electrical	1.100	1.016	1.016	1.027	0.945	1.018	1.004	1.028	1.027	1.016	1.001	1.028
507	Hardware	1.089	1.006	1.084	1.109	0.981	1.023	1.001	0.999	0.999	1.007	1.022	1.000
508	Machinery	0.988	0.965	0.990	1.066	0.997	0.956	0.982	1.002	1.012	1.003	1.018	1.002
509	Other Durable	1.109	1.010	0.956	0.997	0.939	1.013	1.025	1.032	1.026	1.000	1.002	1.031
51	Nondurable	0.993	0.994	1.011	1.023	0.998	0.987	0.949	0.940	0.961	0.959	0.970	0.940
511	Paper	1.048	1.025	1.001	1.002	0.940	1.032	0.979	0.975	1.000	0.979	0.983	0.973
512	Drugs	1.025	0.951	1.002	1.001	0.941	0.948	0.993	0.975	0.989	0.964	0.948	0.973
513	Apparel	1.135	1.078	1.077	0.991	0.819	1.078	1.018	1.020	1.032	1.022	0.976	1.022
514	Groceries	0.993	1.005	1.034	1.027	1.014	0.996	1.014	0.976	0.995	0.989	0.989	0.975
515	Farm-products	0.948	0.952	0.919	0.943	0.961	0.948	0.712	0.711	0.766	0.803	0.859	0.709
516	Chemicals	0.995	1.003	1.016	1.078	1.032	0.999	0.977	1.003	0.998	1.006	1.017	1.004
517	Petroleum	0.973	0.992	0.987	0.984	1.001	1.003	1.005	1.001	0.966	0.948	1.000	1.003
518	Alcohol	0.998	1.028	1.078	1.102	1.030	1.032	1.051	1.001	1.020	1.013	0.963	1.001
519	Other Nondur.	0.954	0.971	1.006	1.111	1.126	0.950	0.919	0.925	0.948	0.964	1.013	0.924

r Revised



¹ Adjusted sales and inventories data shown in table 1 are obtained by dividing the unadjusted data by the adjustment factors shown above for the corresponding group. Adjusted data for the totals are obtained by adding the durable and nondurable goods. Seasonal factors shown for the totals will provide an approximation of the adjusted estimates, but may show small differences from the published data.

Note: The seasonal factors shown have been computed based on monthly estimates through the current month preliminary estimates.