



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

# Monthly Wholesale Trade

Sales and Inventories

January 1998

BW/98-01

Issued March 1998

## MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES

January 1998

**Intention to Revise Wholesale Estimates:** Monthly wholesale data will be revised based on the results of the 1996 Annual Trade Survey. Unadjusted sales, inventories, and inventories/sales ratios will be revised for January 1993 through February 1998, while corresponding adjusted data will be revised for January 1990 through February 1998. Revised data are scheduled for release May 6.

**Sales.** January 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$213.3 billion, up 0.3 percent (+/-0.7%) from the revised December level and 2.8 percent (+/-0.3%) above the January 1997 level. The December preliminary estimate was revised upward by \$0.1 billion or 0.1 percent. January sales of durable goods increased 1.2 percent (+/-1.0%) from December and were 5.5 percent (+/-1.2%) above last year. Compared to last month, sales of hardware, plumbing, and heating equipment were up 5.3 percent while machinery, equipment and supplies increased 4.2 percent. Among nondurable goods, sales of petroleum and petroleum products fell 7.9 percent from last month, while drugs, drug proprietaries and druggists' sundries rose 4.6 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$271.2 billion at the end of January, down 0.5 percent (+/-0.5%) from the revised December level but were 5.3 percent (+/-1.2%)

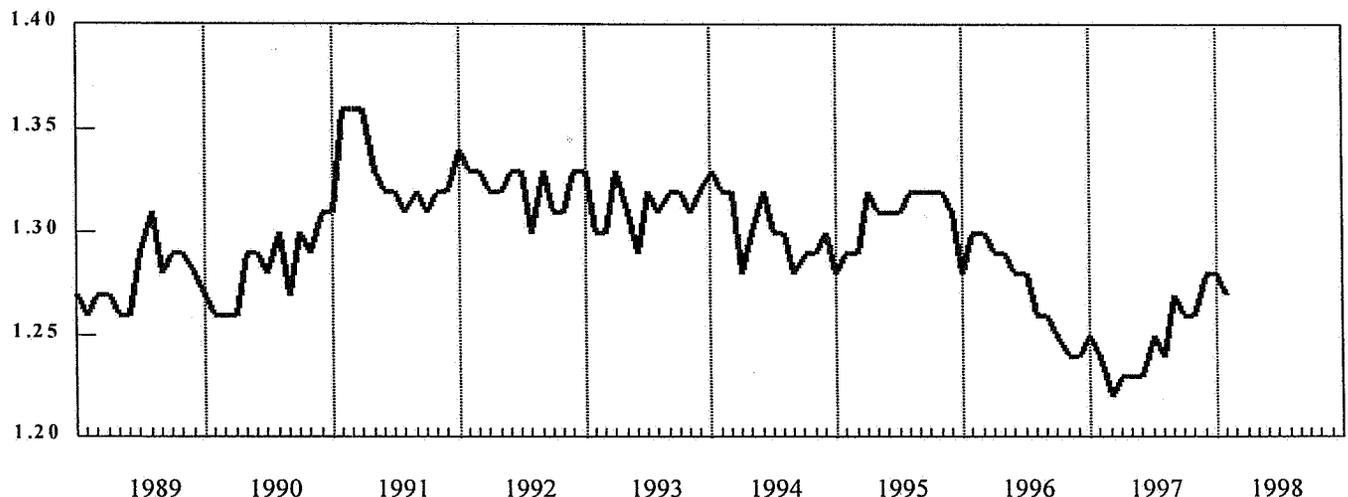
above January 1997. The December preliminary estimate was revised downward by \$0.04 billion. Among durable goods wholesalers, inventories of lumber and other construction materials increased 2.5 percent from December, while electrical goods decreased 1.3 percent. End-of-month inventories of nondurable goods were down 1.8 percent (+/-0.7%) from last month but were 4.4 percent (+/-2.0%) above a year ago. Compared to last month, inventories of farm-product raw materials fell 7.3 percent and paper and paper products decreased 3.2 percent.

**Inventory/Sales Ratio.** The January inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.27. The January 1997 ratio was 1.24.

*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/96-RV Current Business Report.*

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

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



Monthly Wholesale Trade for February is scheduled to be released April 7, 1998 at 10:00 a.m.

Address inquiries concerning this report to Services Division, Bureau of the Census, Washington, DC 20233, or call Ronald Piencykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales ratios		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Jan. 1998 (p)	Dec. 1997 (r)	Jan. 1997 (r)	Jan./ Dec.	Dec./ Nov.	Jan. 98 Jan. 97	Jan. 1998 (p)	Dec. 1997 (r)	Jan. 1997 (r)	Jan./ Dec.	Dec./ Nov.	Jan. 98 Jan. 97	Jan. 1998 (p)	Dec. 1997 (r)	Jan. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	213,341	212,679	207,448	0.3	0.8	2.8	271,231	272,529	257,522	-0.5	0.9	5.3	1.27	1.28	1.24
50	<b>Durable</b>	111,486	110,128	105,624	1.2	1.0	5.5	171,904	171,337	162,352	0.3	1.2	5.9	1.54	1.56	1.54
501	Automotive	18,149	17,523	17,815	3.6	-4.3	1.9	28,430	28,218	27,097	0.8	1.8	4.9	1.57	1.61	1.52
502	Furniture	3,733	3,608	3,649	3.5	2.0	2.3	5,366	5,264	5,269	1.9	0.5	1.8	1.44	1.46	1.44
503	Lumber	7,504	7,413	7,305	1.2	5.4	2.7	7,782	7,590	7,695	2.5	-3.5	1.1	1.04	1.02	1.05
504	Prof. equip.	22,552	22,834	19,842	-1.2	3.2	13.7	24,190	23,851	22,153	1.4	-0.7	9.2	1.07	1.04	1.12
505	Metals	8,911	9,056	8,555	-1.6	-0.6	4.2	13,958	13,812	12,906	1.1	0.3	8.2	1.57	1.53	1.51
506	Electrical	14,700	14,922	14,458	-1.5	3.7	1.7	23,839	24,145	23,259	-1.3	0.9	2.5	1.62	1.62	1.61
507	Hardware	6,677	6,338	6,112	5.3	0.7	9.2	12,640	12,449	12,159	1.5	0.1	4.0	1.89	1.96	1.99
508	Machinery	17,153	16,464	15,549	4.2	1.9	10.3	39,241	39,566	35,923	-0.8	3.0	9.2	2.29	2.40	2.31
509	Other Durable	12,107	11,970	12,339	1.1	-0.8	-1.9	16,458	16,442	15,891	0.1	3.1	3.6	1.36	1.37	1.29
51	<b>Nondurable</b>	101,855	102,551	101,824	-0.7	0.7	0.0	99,327	101,192	95,170	-1.8	0.5	4.4	0.98	0.99	0.93
511	Paper	7,706	7,602	7,309	1.4	-1.2	5.4	9,361	9,668	8,750	-3.2	-0.6	7.0	1.21	1.27	1.20
512	Drugs	11,112	10,622	9,135	4.6	2.4	21.6	16,017	15,768	13,931	1.6	1.1	15.0	1.44	1.48	1.53
513	Apparel	7,640	7,430	7,326	2.8	6.4	4.3	13,200	13,120	12,013	0.6	-0.6	9.9	1.73	1.77	1.64
514	Groceries	27,446	27,425	26,912	0.1	0.5	2.0	17,757	17,658	17,784	0.6	-0.8	-0.2	0.65	0.64	0.66
515	Farm-products	9,580	9,972	9,893	-3.9	-0.9	-3.2	9,720	10,491	9,398	-7.3	-6.7	3.4	1.01	1.05	0.95
516	Chemicals	4,835	4,736	4,528	2.1	2.6	6.8	4,988	4,949	4,735	0.8	-1.6	5.3	1.03	1.04	1.05
517	Petroleum	12,928	14,043	16,795	-7.9	-4.9	-23.0	5,016	5,123	5,593	-2.1	0.3	-10.3	0.39	0.36	0.33
518	Alcohol	4,825	5,145	4,613	-6.2	7.0	4.6	5,207	5,111	4,951	1.9	2.9	5.2	1.08	0.99	1.07
519	Other Nondur.	15,783	15,576	15,313	1.3	2.1	3.1	18,061	19,304	18,015	-6.4	7.2	0.3	1.14	1.24	1.18
<b>Not Adjusted</b>																
														<b>Sales to date</b>		
														1998		1997
	<b>U.S. Total</b>	200,654	216,360	199,249	-7.3	8.0	0.7	276,894	272,751	262,787	1.5	0.1	5.4	200,654	199,249	
50	<b>Durable</b>	102,379	111,269	98,537	-8.0	7.2	3.9	172,105	168,844	162,499	1.9	0.3	5.9	102,379	98,537	
501	Automotive	16,661	17,751	16,390	-6.1	1.7	1.7	28,913	27,174	27,558	6.4	-3.2	4.9	16,661	16,390	
502	Furniture	3,307	3,626	3,299	-8.8	3.4	0.2	5,253	5,117	5,164	2.7	-1.4	1.7	3,307	3,299	
503	Lumber	6,356	6,523	6,341	-2.6	1.5	0.2	7,657	7,461	7,587	2.6	-2.3	0.9	6,356	6,341	
504	Prof. equip.	21,492	24,638	19,346	-12.8	20.1	11.1	24,601	24,066	22,530	2.2	-0.7	9.2	21,492	19,346	
505	Metals	8,581	8,603	8,469	-0.3	3.9	1.3	14,139	13,978	13,074	1.2	4.5	8.1	8,581	8,469	
506	Electrical	13,495	14,847	13,547	-9.1	5.1	-0.4	23,911	23,686	23,306	0.9	0.2	2.6	13,495	13,547	
507	Hardware	5,949	6,002	5,531	-0.9	-1.0	7.6	12,450	12,325	11,964	1.0	0.4	4.1	5,949	5,531	
508	Machinery	15,969	16,974	14,632	-5.9	15.7	9.1	38,888	38,973	35,600	-0.2	2.2	9.2	15,969	14,632	
509	Other Durable	10,569	12,305	10,982	-14.1	-3.2	-3.8	16,293	16,064	15,716	1.4	1.5	3.7	10,569	10,982	
51	<b>Nondurable</b>	98,275	105,091	100,712	-6.5	8.8	-2.4	104,789	103,907	100,288	0.8	-0.2	4.5	98,275	100,712	
511	Paper	7,667	7,693	7,514	-0.3	7.8	2.0	9,539	9,900	8,916	-3.6	-0.2	7.0	7,667	7,514	
512	Drugs	11,401	11,323	9,747	0.7	15.0	17.0	17,298	16,194	15,046	6.8	2.8	15.0	11,401	9,747	
513	Apparel	7,044	6,018	6,894	17.0	-8.8	2.2	13,715	13,146	12,481	4.3	3.4	9.9	7,044	6,894	
514	Groceries	26,842	28,495	26,535	-5.8	6.7	1.2	17,828	17,888	17,855	-0.3	-3.0	-0.2	26,842	26,535	
515	Farm-products	10,174	11,019	10,961	-7.7	12.1	-7.2	12,519	12,694	12,123	-1.4	-8.5	3.3	10,174	10,961	
516	Chemicals	4,622	4,442	4,460	4.1	4.0	3.6	4,948	4,929	4,692	0.4	-0.6	5.5	4,622	4,460	
517	Petroleum	13,148	15,040	17,517	-12.6	7.4	-24.9	4,991	5,338	5,543	-6.5	2.3	-10.0	13,148	17,517	
518	Alcohol	3,788	5,906	3,746	-35.9	23.5	1.1	4,879	4,707	4,644	3.7	-11.8	5.1	3,788	3,746	
519	Other Nondur.	13,589	15,155	13,338	-10.3	13.0	1.9	19,072	19,111	18,988	-0.2	6.8	0.4	13,589	13,338	

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

"Combined Annual and Revised Monthly 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 to previous year cumulative
		Sales	Inv	Sales	Inv	Sales	Inv	Sales	Inv	CY	PY	
		Median	Median	Median	Median	Median	Median	Median	Median			
	<b>U.S. Total</b>	1.0	1.4	1.0	1.4	0.4	0.2	0.8	1.4	1.1	0.2	0.2
<b>50</b>	<b>Durable</b>	2.1	2.2	2.1	2.2	0.7	0.3	1.4	2.1	2.5	2.3	0.7
501	Automotive	4.0	5.4	4.0	5.4	1.2	1.0	3.3	4.1	3.9	3.8	2.2
502	Furniture	5.9	7.3	6.1	7.3	2.3	1.0	4.8	10.3	6.6	5.6	3.6
503	Lumber	5.0	5.8	5.1	5.7	1.2	0.9	4.8	5.5	6.3	5.5	3.4
504	Prof. equip.	5.6	6.5	5.8	6.7	1.4	0.7	4.4	4.6	6.5	6.3	2.4
505	Metals	4.6	9.2	4.6	9.2	1.4	0.7	2.9	10.2	4.7	3.5	2.2
506	Electrical	5.0	4.3	4.9	4.2	1.3	0.5	3.4	2.9	6.8	4.9	2.2
507	Hardware	4.8	4.8	4.8	4.7	1.3	0.5	6.0	5.0	6.0	5.0	2.3
508	Machinery	5.5	4.7	5.6	4.7	1.8	0.5	4.9	5.2	6.0	6.8	3.0
509	Other Durable	4.7	6.8	4.8	6.9	1.5	0.8	2.7	5.9	5.5	4.6	2.8
<b>51</b>	<b>Nondurable</b>	1.9	2.1	1.9	2.0	0.6	0.4	1.3	1.4	1.6	0.2	0.2
511	Paper	3.9	3.7	3.9	3.9	1.0	0.4	3.1	4.4	4.3	0.1	0.0
512	Drugs	5.7	5.2	5.6	5.1	0.5	0.4	3.3	2.2	6.1	5.4	1.2
513	Apparel	5.1	7.8	5.1	7.9	2.1	0.8	3.9	5.5	6.8	6.0	2.3
514	Groceries	3.1	5.2	3.2	5.1	0.9	0.6	1.9	5.0	2.6	2.8	0.9
515	Farm-products	5.4	7.7	5.3	7.4	2.4	1.6	3.1	4.4	4.4	3.9	1.8
516	Chemicals	5.8	5.7	5.7	5.5	1.3	0.6	4.5	3.5	6.1	5.6	2.5
517	Petroleum	6.1	13.9	5.9	14.0	1.0	0.8	3.7	12.6	5.9	5.0	1.9
518	Alcohol	6.4	6.0	6.4	6.1	1.7	1.3	7.7	5.7	6.1	6.7	1.4
519	Other Nondur.	6.0	5.7	5.9	5.7	2.0	0.9	6.0	5.2	6.2	5.6	4.4

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998		1997			1997	1998		1997			1997
		Feb.	Jan.r	Dec.r	Nov.	Oct.	Jan.r	Feb.	Jan.r	Dec.r	Nov.	Oct.	Jan.r
	<b>U.S. Total<sup>1</sup></b>	<b>0.913</b>	<b>0.942</b>	<b>1.017</b>	<b>0.949</b>	<b>1.079</b>	<b>0.961</b>	<b>1.013</b>	<b>1.021</b>	<b>1.003</b>	<b>1.008</b>	<b>1.006</b>	<b>1.021</b>
50	<b>Durable</b>	<b>0.903</b>	<b>0.915</b>	<b>1.008</b>	<b>0.949</b>	<b>1.091</b>	<b>0.932</b>	<b>1.002</b>	<b>1.000</b>	<b>0.986</b>	<b>0.994</b>	<b>0.998</b>	<b>1.000</b>
501	Automotive	0.910	0.918	1.013	0.953	1.046	0.920	1.041	1.017	0.963	1.013	0.996	1.017
502	Furniture	0.891	0.886	1.005	0.992	1.123	0.904	0.981	0.979	0.972	0.990	0.997	0.980
503	Lumber	0.844	0.847	0.880	0.914	1.121	0.868	1.015	0.984	0.983	0.971	0.957	0.986
504	Prof. equip.	0.911	0.953	1.079	0.927	1.068	0.975	0.989	1.017	1.009	1.009	1.008	1.017
505	Metals	0.944	0.963	0.950	0.909	1.062	0.990	0.990	1.013	1.012	0.972	0.983	1.013
506	Electrical	0.911	0.918	0.995	0.982	1.119	0.937	1.000	1.003	0.981	0.988	0.985	1.002
507	Hardware	0.856	0.891	0.947	0.963	1.126	0.905	0.996	0.985	0.990	0.987	0.995	0.984
508	Machinery	0.920	0.931	1.031	0.908	1.058	0.941	1.000	0.991	0.985	0.992	1.002	0.991
509	Other Durable	0.885	0.873	1.028	1.054	1.171	0.890	0.972	0.990	0.977	0.993	1.030	0.989
51	<b>Nondurable</b>	<b>0.926</b>	<b>0.968</b>	<b>1.026</b>	<b>0.946</b>	<b>1.066</b>	<b>0.987</b>	<b>1.032</b>	<b>1.059</b>	<b>1.031</b>	<b>1.033</b>	<b>1.022</b>	<b>1.059</b>
511	Paper	0.945	0.995	1.012	0.927	1.067	1.028	1.003	1.019	1.024	1.020	1.008	1.019
512	Drugs	0.917	1.026	1.066	0.949	1.096	1.067	1.021	1.080	1.027	1.010	1.016	1.080
513	Apparel	0.999	0.922	0.810	0.945	1.175	0.941	1.012	1.039	1.002	0.963	0.983	1.039
514	Groceries	0.902	0.978	1.039	0.978	1.052	0.986	0.967	1.004	1.013	1.036	1.062	1.004
515	Farm-products	0.976	1.062	1.105	0.977	1.074	1.108	1.227	1.288	1.210	1.233	1.083	1.290
516	Chemicals	0.937	0.956	0.938	0.926	1.039	0.985	1.022	0.992	0.996	0.986	0.974	0.991
517	Petroleum	0.960	1.017	1.071	0.948	1.043	1.043	0.981	0.995	1.042	1.022	1.033	0.991
518	Alcohol	0.810	0.785	1.148	0.995	1.077	0.812	0.951	0.937	0.921	1.074	1.100	0.938
519	Other Nondur.	0.895	0.861	0.973	0.879	1.018	0.871	1.058	1.056	0.990	0.994	0.980	1.054



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.



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**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$274.3 billion at the end of February, up 1.1 percent (+/-0.5%) from the revised January level and were 6.5 percent (+/-0.9%) above February 1997. The January preliminary estimate was revised downward by \$0.04 billion. End-of-month inventories of durable goods increased 1.2 percent (+/-0.6%) from last month

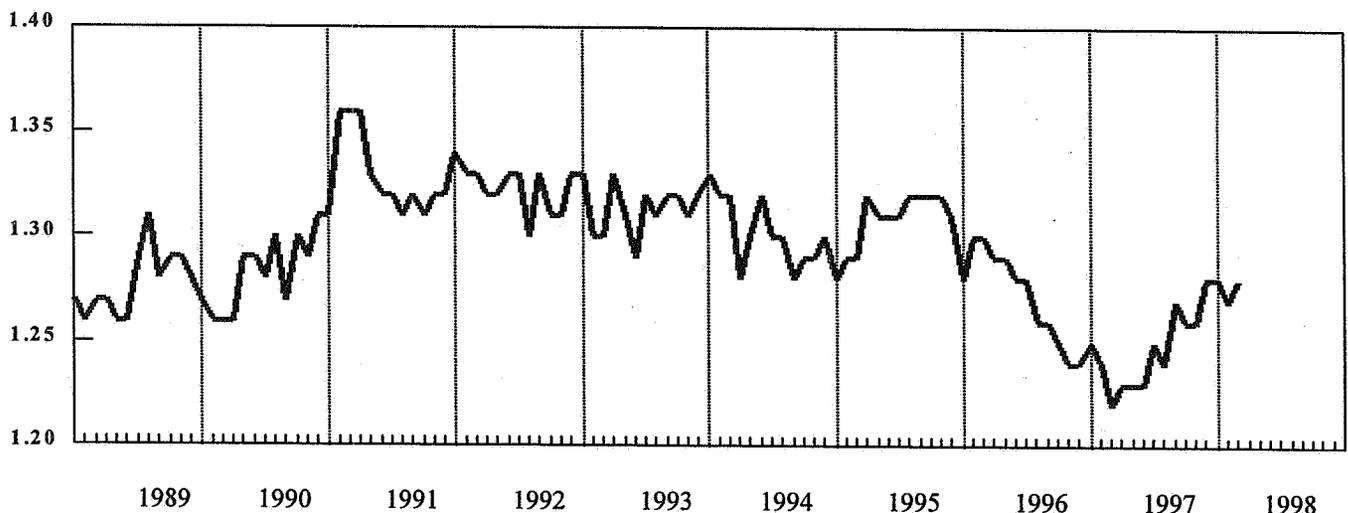
and were 6.9 percent (+/-1.1%) above February 1997. Compared to last month, inventories of hardware, plumbing, and heating equipment increased 2.0 percent, while lumber and other construction materials decreased 1.0 percent. End-of-month inventories of nondurable goods were up 1.1 percent (+/-0.6%) from last month and were 5.7 percent (+/-1.4%) above a year ago. Compared to last month, inventories of paper and paper products rose 4.3 percent, while farm-product raw materials fell 5.7 percent.

**Inventories/Sales Ratio.** The February inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.28. The February 1997 ratio was 1.22.

*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/96-RV Current Business Report.*

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

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



Monthly Wholesale Trade for March is scheduled to be released May 7, 1998 at 10:00 a.m.

Address inquiries concerning this report to Services Division, Bureau of the Census, Washington, DC 20233, or call Ronald Piencykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales ratios		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Feb. 1998 (p)	Jan. 1998 (r)	Feb. 1997 (r)	Feb./ Jan.	Jan./ Dec.	Feb. 98 Feb. 97	Feb. 1998 (p)	Jan. 1998 (r)	Feb. 1997 (r)	Feb./ Jan.	Jan./ Dec.	Feb. 98 Feb. 97	Feb. 1998 (p)	Jan. 1998 (r)	Feb. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	213,901	212,760	211,087	0.5	0.0	1.3	274,306	271,188	257,630	1.1	-0.5	6.5	1.28	1.27	1.22
<b>50</b>	<b>Durable</b>	111,556	110,914	108,278	0.6	0.7	3.0	174,034	171,975	162,755	1.2	0.4	6.9	1.56	1.55	1.50
501	Automotive	18,198	18,034	18,120	0.9	2.9	0.4	28,441	28,294	26,644	0.5	0.3	6.7	1.56	1.57	1.47
502	Furniture	3,637	3,718	3,802	-2.2	3.0	-4.3	5,345	5,334	5,103	0.2	1.3	4.7	1.47	1.43	1.34
503	Lumber	7,347	7,400	7,508	-0.7	-0.2	-2.1	7,671	7,750	7,804	-1.0	2.1	-1.7	1.04	1.05	1.04
504	Prof. equip.	22,479	22,184	20,710	1.3	-2.8	8.5	24,696	24,311	22,425	1.6	1.9	10.1	1.10	1.10	1.08
505	Metals	8,847	8,822	8,777	0.3	-2.6	0.8	14,172	13,951	13,302	1.6	1.0	6.5	1.60	1.58	1.52
506	Electrical	14,893	14,749	14,635	1.0	-1.2	1.8	24,179	23,903	23,313	1.2	-1.0	3.7	1.62	1.62	1.59
507	Hardware	6,678	6,710	6,192	-0.5	5.9	7.8	13,022	12,769	12,212	2.0	2.6	6.6	1.95	1.90	1.97
508	Machinery	17,328	17,186	16,023	0.8	4.4	8.1	39,668	39,149	35,990	1.3	-1.1	10.2	2.29	2.28	2.25
509	Other Durable	12,149	12,111	12,511	0.3	1.2	-2.9	16,840	16,514	15,962	2.0	0.4	5.5	1.39	1.36	1.28
<b>51</b>	<b>Nondurable</b>	102,345	101,846	102,809	0.5	-0.7	-0.5	100,272	99,213	94,875	1.1	-2.0	5.7	0.98	0.97	0.92
511	Paper	7,632	7,736	7,467	-1.3	1.8	2.2	9,769	9,364	8,788	4.3	-3.1	11.2	1.28	1.21	1.18
512	Drugs	11,608	11,125	9,387	4.3	4.7	23.7	16,434	16,048	13,749	2.4	1.8	19.5	1.42	1.44	1.46
513	Apparel	7,834	7,747	7,412	1.1	4.3	5.7	12,619	13,124	12,060	-3.8	0.0	4.6	1.61	1.69	1.63
514	Groceries	28,261	27,487	27,237	2.8	0.2	3.8	18,444	17,835	17,685	3.4	1.0	4.3	0.65	0.65	0.65
515	Farm-products	9,008	9,524	10,188	-5.4	-4.5	-11.6	9,319	9,885	9,588	-5.7	-5.8	-2.8	1.03	1.04	0.94
516	Chemicals	4,775	4,829	4,567	-1.1	2.0	4.6	4,822	4,973	4,710	-3.0	0.5	2.4	1.01	1.03	1.03
517	Petroleum	13,008	13,022	15,978	-0.1	-7.3	-18.6	4,947	5,000	5,446	-1.1	-2.4	-9.2	0.38	0.38	0.34
518	Alcohol	4,882	4,802	4,685	1.7	-6.7	4.2	5,205	5,205	4,897	0.0	1.8	6.3	1.07	1.08	1.05
519	Other Nondur.	15,337	15,574	15,888	-1.5	0.0	-3.5	18,713	17,779	17,952	5.3	-7.9	4.2	1.22	1.14	1.13
<b>Not Adjusted</b>																
														<b>Sales to date</b>		
														1998	1997	
	<b>U.S. Total</b>	195,994	199,799	193,344	-1.9	-7.7	1.4	277,649	276,409	261,022	0.4	1.3	6.4	395,793	392,593	
<b>50</b>	<b>Durable</b>	101,223	101,598	98,118	-0.4	-8.7	3.2	174,566	171,888	163,282	1.6	1.8	6.9	202,821	196,655	
501	Automotive	16,651	16,465	16,580	1.1	-7.2	0.4	29,607	28,718	27,736	3.1	5.7	6.7	33,116	32,970	
502	Furniture	3,241	3,302	3,384	-1.8	-8.9	-4.2	5,243	5,195	5,011	0.9	1.5	4.6	6,543	6,683	
503	Lumber	6,201	6,246	6,329	-0.7	-4.2	-2.0	7,748	7,618	7,890	1.7	2.1	-1.8	12,447	12,670	
504	Prof. equip.	20,546	21,075	18,908	-2.5	-14.5	8.7	24,449	24,651	22,201	-0.8	2.4	10.1	41,621	38,254	
505	Metals	8,378	8,478	8,294	-1.2	-1.5	1.0	14,158	14,091	13,275	0.5	0.8	6.7	16,856	16,763	
506	Electrical	13,597	13,525	13,347	0.5	-8.9	1.9	24,227	23,951	23,360	1.2	1.1	3.7	27,122	26,894	
507	Hardware	5,723	5,985	5,313	-4.4	-0.3	7.7	12,996	12,590	12,188	3.2	2.2	6.6	11,708	10,844	
508	Machinery	16,098	15,949	14,853	0.9	-6.0	8.4	39,668	38,758	36,026	2.3	-0.6	10.1	32,047	29,485	
509	Other Durable	10,788	10,573	11,110	2.0	-14.1	-2.9	16,470	16,316	15,595	0.9	1.6	5.6	21,361	22,092	
<b>51</b>	<b>Nondurable</b>	94,771	98,201	95,226	-3.5	-6.6	-0.5	103,083	104,521	97,740	-1.4	0.6	5.5	192,972	195,938	
511	Paper	7,243	7,721	7,064	-6.2	0.4	2.5	9,759	9,551	8,797	2.2	-3.5	10.9	14,964	14,578	
512	Drugs	10,703	11,392	8,645	-6.0	0.6	23.8	16,746	17,300	14,024	-3.2	6.8	19.4	22,095	18,392	
513	Apparel	7,912	7,143	7,471	10.8	18.7	5.9	12,745	13,662	12,169	-6.7	3.9	4.7	15,055	14,365	
514	Groceries	25,661	26,745	24,704	-4.1	-6.1	3.9	17,928	17,853	17,190	0.4	-0.2	4.3	52,406	51,239	
515	Farm-products	8,666	10,219	9,811	-15.2	-7.3	-11.7	11,332	12,593	11,697	-10.0	-0.8	-3.1	18,885	20,772	
516	Chemicals	4,469	4,621	4,275	-3.3	4.0	4.5	4,894	4,948	4,785	-1.1	0.4	2.3	9,090	8,735	
517	Petroleum	12,488	13,191	15,307	-5.3	-12.3	-18.4	4,863	4,985	5,348	-2.4	-6.6	-9.1	25,679	32,824	
518	Alcohol	3,979	3,760	3,809	5.8	-36.3	4.5	4,924	4,872	4,647	1.1	3.5	6.0	7,739	7,555	
519	Other Nondur.	13,650	13,409	14,140	1.8	-11.5	-3.5	19,892	18,757	19,083	6.1	-1.9	4.2	27,059	27,478	

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

"Combined Annual and Revised Monthly 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			
	<b>U.S. Total</b>	1.0	1.4	1.1	1.4	0.4	0.2	0.7	1.4	1.0	0.4	0.2
<b>50</b>	<b>Durable</b>	2.1	2.2	2.1	2.2	0.7	0.3	1.4	2.0	2.3	2.5	0.7
501	Furniture	4.0	5.4	4.1	5.4	1.2	1.0	3.3	4.1	4.3	3.8	2.0
502	Furniture	6.1	7.2	6.2	7.3	2.2	1.0	4.6	10.3	6.7	5.6	2.9
503	Lumber	4.9	5.8	5.1	5.9	1.2	0.9	4.5	5.5	5.4	5.7	2.8
504	Prof. equip.	5.6	6.5	5.8	6.7	1.4	0.7	4.2	4.5	6.2	6.1	2.3
505	Metals	4.6	9.2	4.6	9.2	1.3	0.7	2.8	10.2	4.5	4.1	1.5
506	Electrical	5.0	4.4	5.0	4.3	1.4	0.5	3.4	2.9	6.1	4.8	1.9
507	Hardware	5.0	4.8	4.8	4.7	1.3	0.5	6.0	5.0	5.5	4.7	1.8
508	Machinery	5.6	4.8	5.6	4.8	1.7	0.5	4.8	5.2	6.2	6.5	2.5
509	Other Durable	4.7	6.9	4.9	6.9	1.5	0.8	2.6	5.7	5.6	4.7	2.1
<b>51</b>	<b>Nondurable</b>	1.9	2.1	1.9	2.1	0.6	0.3	1.3	1.4	1.7	0.3	0.3
511	Paper	3.9	3.7	4.1	3.9	1.1	0.4	3.5	4.7	4.5	0.1	0.1
512	Drugs	5.7	5.1	5.6	5.1	0.6	0.4	3.3	2.1	6.2	5.4	1.8
513	Apparel	5.3	7.8	5.1	7.9	2.1	0.8	3.7	5.4	6.1	5.1	2.3
514	Groceries	3.1	5.2	3.2	5.1	0.9	0.6	1.8	4.9	2.9	2.9	0.9
515	Farm-products	5.4	8.0	5.3	7.8	2.4	1.6	3.1	4.4	4.2	4.0	1.8
516	Chemicals	5.9	5.7	5.9	5.5	1.3	0.6	4.4	3.3	6.0	5.6	2.1
517	Petroleum	6.1	13.9	5.9	14.0	1.0	1.0	3.7	12.2	5.8	5.0	1.7
518	Alcohol	6.4	6.0	6.4	6.1	1.7	1.3	7.6	5.6	6.4	6.8	1.1
519	Other Nondur.	6.0	5.7	6.0	5.7	2.0	0.9	5.6	5.2	6.8	6.0	3.1

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998			1997		1997	1998			1997		1997
		Mar.	Feb.r	Jan.r	Dec.	Nov.	Feb.r	Mar.	Feb.r	Jan.r	Dec.	Nov.	Feb.r
	<b>U.S. Total<sup>1</sup></b>	<b>1.035</b>	<b>0.915</b>	<b>0.940</b>	<b>1.017</b>	<b>0.949</b>	<b>0.915</b>	<b>1.005</b>	<b>1.013</b>	<b>1.021</b>	<b>1.003</b>	<b>1.008</b>	<b>1.013</b>
<b>50</b>	<b>Durable</b>	<b>1.050</b>	<b>0.905</b>	<b>0.913</b>	<b>1.008</b>	<b>0.949</b>	<b>0.904</b>	<b>0.998</b>	<b>1.002</b>	<b>0.999</b>	<b>0.986</b>	<b>0.994</b>	<b>1.003</b>
501	Automotive	1.094	0.915	0.913	1.013	0.953	0.915	0.998	1.041	1.015	0.963	1.013	1.041
502	Furniture	1.032	0.891	0.888	1.005	0.992	0.890	0.997	0.981	0.974	0.972	0.990	0.982
503	Lumber	1.003	0.844	0.844	0.880	0.914	0.843	1.038	1.010	0.983	0.983	0.971	1.011
504	Prof. equip.	1.057	0.914	0.950	1.079	0.927	0.913	0.996	0.990	1.014	1.009	1.009	0.990
505	Metals	1.074	0.947	0.961	0.950	0.909	0.945	1.010	0.999	1.010	1.012	0.972	0.998
506	Electrical	1.044	0.913	0.917	0.995	0.982	0.912	0.974	1.002	1.002	0.981	0.988	1.002
507	Hardware	0.968	0.857	0.892	0.947	0.963	0.858	1.011	0.998	0.986	0.990	0.987	0.998
508	Machinery	1.084	0.929	0.928	1.031	0.908	0.927	1.006	1.000	0.990	0.985	0.992	1.001
509	Other Durable	1.014	0.888	0.873	1.028	1.054	0.888	0.956	0.978	0.988	0.977	0.993	0.977
<b>51</b>	<b>Nondurable</b>	<b>1.025</b>	<b>0.927</b>	<b>0.968</b>	<b>1.026</b>	<b>0.946</b>	<b>0.927</b>	<b>1.018</b>	<b>1.028</b>	<b>1.059</b>	<b>1.031</b>	<b>1.033</b>	<b>1.029</b>
511	Paper	1.032	0.949	0.998	1.012	0.927	0.946	1.001	0.999	1.020	1.024	1.020	1.001
512	Drugs	1.021	0.922	1.024	1.066	0.949	0.921	0.995	1.019	1.078	1.027	1.010	1.020
513	Apparel	1.096	1.010	0.922	0.810	0.945	1.008	0.970	1.010	1.041	1.002	0.963	1.009
514	Groceries	1.010	0.908	0.973	1.039	0.978	0.907	0.982	0.972	1.001	1.013	1.036	0.972
515	Farm-products	1.062	0.962	1.073	1.105	0.977	0.963	1.117	1.216	1.274	1.210	1.233	1.220
516	Chemicals	1.043	0.936	0.957	0.938	0.926	0.936	1.021	1.015	0.995	0.996	0.986	1.016
517	Petroleum	0.999	0.960	1.013	1.071	0.948	0.958	0.966	0.983	0.997	1.042	1.022	0.982
518	Alcohol	0.947	0.815	0.783	1.148	0.995	0.813	0.978	0.946	0.936	0.921	1.074	0.949
519	Other Nondur.	1.056	0.890	0.861	0.973	0.879	0.890	1.055	1.063	1.055	0.990	0.994	1.063



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.



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

# Monthly Wholesale Trade

Sales and Inventories

March 1998

BW/98-3  
Issued May 1998

## MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES March 1998

**Notice of Revised Data:** Monthly wholesale data were revised based on the results of the 1996 Annual Trade Survey. The Annual Benchmark Report for Wholesale Trade showing the revised data was released on May 6, 1998.

**Sales.** March 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$213.6 billion, up 1.1 percent (+/- 0.7%) from the revised February level and were 2.9 percent (+/- 0.8%) above the March 1997 level. The February preliminary estimate was revised upward by \$0.01 billion. March sales of durable goods increased 1.3 percent (+/- 1.2%) from February and were 5.8 percent (+/- 1.3%) above last year. Sales of professional and commercial equipment and supplies were up 3.1 percent. Sales of nondurable goods increased 0.9 percent (+/- 0.5%) from last month but were down 0.1 percent (+/- 1.5%) from a year ago. Compared to last month, sales of beer, wine, and distilled alcoholic beverages rose 4.4 percent, while chemicals and allied products fell 2.7 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$277.1 billion at the end of March, up 0.5 percent (+/- 0.3%) from the revised February level and were 6.7 percent (+/- 1.2%) above March 1997. The February preliminary estimate was revised upward

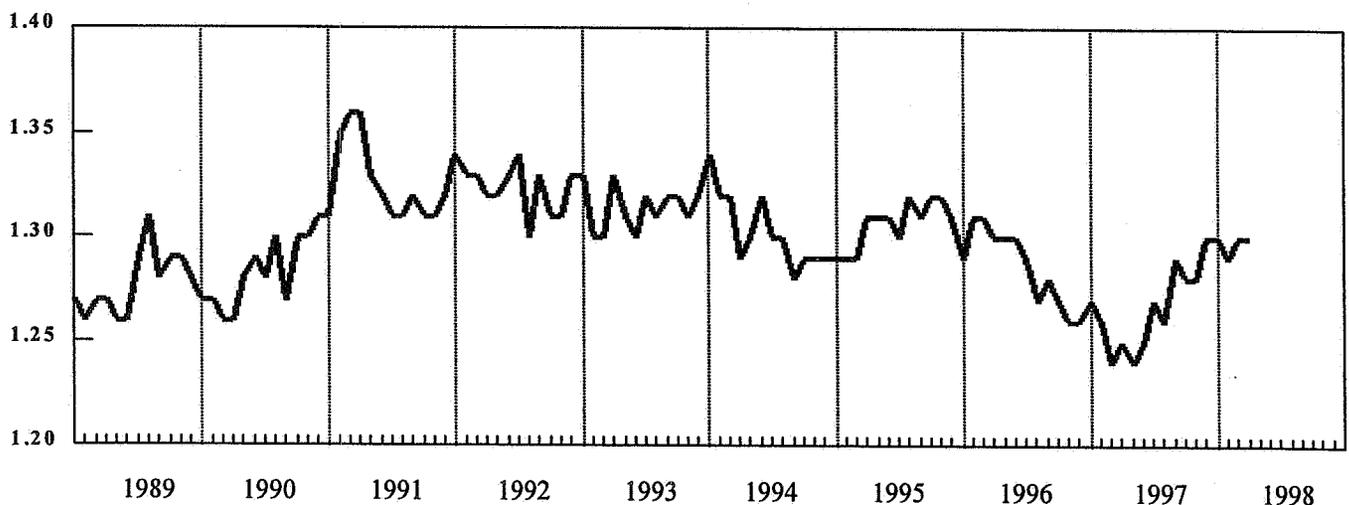
by \$0.6 billion or 0.2 percent. End-of-month inventories of durable goods increased 0.6 percent (+/- 0.4%) from last month and were 7.1 percent (+/- 1.3%) above March 1997. Compared to last month, inventories of electrical goods increased 2.2 percent, while furniture and home furnishings declined 1.8 percent. Among nondurable goods, inventories of beer, wine, and distilled alcoholic beverages increased 3.2 percent from last month, and drugs, drug proprietaries and druggists' sundries were up 3.0 percent. However, farm-product raw materials were down 2.4 percent from February.

**Inventories/Sales Ratio.** The March inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.30. The March 1997 ratio was 1.25.

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

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



Monthly Wholesale Trade for April is scheduled to be released June 9, 1998 at 10:00 a.m.

Address inquiries concerning this report to Services Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienycoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Mar. 1998 (p)	Feb. 1998 (r)	Mar. 1997 (r)	Mar./ Feb.	Feb./ Jan.	Mar. 98 Mar. 97	Mar. 1998 (p)	Feb. 1998 (r)	Mar. 1997 (r)	Mar./ Feb.	Feb./ Jan.	Mar. 98 Mar. 97	Mar. 1998 (p)	Feb. 1998 (r)	Mar. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	213,620	211,312	207,522	1.1	0.5	2.9	277,136	275,750	259,786	0.5	1.3	6.7	1.30	1.30	1.25
50	<b>Durable</b>	113,589	112,168	107,365	1.3	0.7	5.8	181,941	180,926	169,819	0.6	1.4	7.1	1.60	1.61	1.58
501	Automotive	18,585	18,279	17,937	1.7	2.1	3.6	30,150	29,633	28,111	1.7	1.5	7.3	1.62	1.62	1.57
502	Furniture	3,467	3,417	3,422	1.5	-4.1	1.3	5,392	5,489	5,206	-1.8	-1.3	3.6	1.56	1.61	1.52
503	Lumber	7,365	7,391	7,546	-0.4	-2.1	-2.4	7,694	7,740	7,907	-0.6	-1.1	-2.7	1.04	1.05	1.05
504	Prof. equip.	21,495	20,856	18,984	3.1	1.8	13.2	26,921	26,664	23,567	1.0	1.4	14.2	1.25	1.28	1.24
505	Metals	8,992	8,931	8,485	0.7	-0.4	6.0	13,987	14,140	13,458	-1.1	0.8	3.9	1.56	1.58	1.59
506	Electrical	17,115	16,933	16,595	1.1	1.6	3.1	26,314	25,760	25,342	2.2	1.3	3.8	1.54	1.52	1.53
507	Hardware	6,666	6,734	6,307	-1.0	0.6	5.7	12,896	13,105	11,894	-1.6	3.5	8.4	1.93	1.95	1.89
508	Machinery	18,486	18,359	16,570	0.7	0.1	11.6	42,549	42,285	38,635	0.6	1.8	10.1	2.30	2.30	2.33
509	Other Durable	11,418	11,268	11,519	1.3	0.9	-0.9	16,038	16,110	15,699	-0.4	1.8	2.2	1.40	1.43	1.36
51	<b>Nondurable</b>	100,031	99,144	100,157	0.9	0.3	-0.1	95,195	94,824	89,967	0.4	1.1	5.8	0.95	0.96	0.90
511	Paper	7,506	7,280	6,993	-3.1	-1.0	7.3	9,196	9,109	8,209	1.0	5.0	12.0	1.23	1.25	1.17
512	Drugs	11,096	10,872	9,118	2.1	2.9	21.7	14,526	14,103	12,003	3.0	3.5	21.0	1.31	1.30	1.32
513	Apparel	7,466	7,394	6,861	1.0	0.9	8.8	12,025	11,903	11,345	1.0	-2.6	6.0	1.61	1.61	1.65
514	Groceries	28,485	28,262	28,033	0.8	4.1	1.6	16,309	16,481	15,781	-1.0	3.7	3.3	0.57	0.58	0.56
515	Farm-products	9,163	9,289	10,044	-1.4	-7.9	-8.8	10,794	11,056	10,921	-2.4	-4.1	-1.2	1.18	1.19	1.09
516	Chemicals	4,590	4,717	4,553	-2.7	-1.9	0.8	4,804	4,795	4,732	0.2	-3.6	1.5	1.05	1.02	1.04
517	Petroleum	11,963	11,939	14,408	0.2	-0.5	-17.0	4,514	4,507	5,192	0.2	-4.7	-13.1	0.38	0.38	0.36
518	Alcohol	4,854	4,648	4,589	4.4	2.0	5.8	5,359	5,195	4,486	3.2	3.9	19.5	1.10	1.12	0.98
519	Other Nondur.	14,908	14,743	15,558	1.1	-1.9	-4.2	17,668	17,675	17,298	0.0	3.2	2.1	1.19	1.20	1.11
<b>Not Adjusted</b>														<b>Sales to date</b>		
														1998		1997
	<b>U.S. Total</b>	222,656	193,114	210,848	15.3	-2.2	5.6	278,445	279,086	261,001	-0.2	0.6	6.7	613,282	598,929	
50	<b>Durable</b>	119,775	101,437	109,989	18.1	-0.6	8.9	181,763	181,251	169,534	0.3	1.7	7.2	323,222	307,427	
501	Automotive	20,518	16,652	19,211	23.2	2.0	6.8	30,452	30,729	28,336	-0.9	3.7	7.5	53,500	51,911	
502	Furniture	3,571	3,007	3,422	18.8	-4.6	4.4	5,327	5,363	5,149	-0.7	-1.1	3.5	9,729	9,857	
503	Lumber	7,291	6,238	7,214	16.9	-2.0	1.1	7,940	7,825	8,176	1.5	1.7	-2.9	19,894	20,138	
504	Prof. equip.	22,720	19,000	19,762	19.6	-2.4	15.0	26,786	26,317	23,449	1.8	-1.2	14.2	61,187	55,122	
505	Metals	9,523	8,413	8,774	13.2	-2.8	8.5	14,113	14,154	13,579	-0.3	-0.1	3.9	26,594	25,721	
506	Electrical	17,988	15,409	16,877	16.7	0.8	6.6	25,893	25,760	24,886	0.5	1.1	4.0	48,684	47,159	
507	Hardware	6,399	5,791	5,853	10.5	-3.2	9.3	13,089	13,079	12,061	0.1	4.8	8.5	18,175	16,810	
508	Machinery	20,039	17,000	17,415	17.9	-0.1	15.1	42,847	42,285	38,905	1.3	2.8	10.1	54,060	48,883	
509	Other Durable	11,726	9,927	11,461	18.1	1.9	2.3	15,316	15,739	14,993	-2.7	0.7	2.2	31,399	31,826	
51	<b>Nondurable</b>	102,881	91,677	100,859	12.2	-4.0	2.0	96,682	97,835	91,467	-1.2	-1.4	5.7	290,060	291,502	
511	Paper	7,821	6,872	7,000	13.8	-6.4	11.7	9,224	9,100	8,234	1.4	2.8	12.0	22,034	20,861	
512	Drugs	11,418	10,024	8,945	13.9	-7.4	27.6	14,511	14,343	11,979	1.2	-2.3	21.1	32,267	26,422	
513	Apparel	8,123	7,438	7,238	9.2	9.7	12.2	11,628	11,998	10,993	-3.1	-5.6	5.8	22,340	20,872	
514	Groceries	28,941	25,662	28,285	12.8	-3.0	2.3	16,032	16,036	15,497	0.0	0.8	3.5	81,068	79,461	
515	Farm-products	9,502	8,945	10,134	6.2	-17.0	-6.2	11,917	13,356	12,089	-10.8	-9.2	-1.4	29,224	32,116	
516	Chemicals	4,737	4,434	4,585	6.8	-3.5	3.3	4,910	4,872	4,831	0.8	-1.5	1.6	13,765	13,269	
517	Petroleum	12,119	11,402	14,221	6.3	-6.1	-14.8	4,392	4,412	5,047	-0.5	-6.5	-13.0	35,668	44,304	
518	Alcohol	4,611	3,779	4,208	22.0	5.9	9.6	5,252	4,930	4,392	6.5	5.6	19.6	11,960	11,380	
519	Other Nondur.	15,609	13,121	16,243	19.0	0.9	-3.9	18,816	18,788	18,405	0.1	4.2	2.2	41,734	42,817	

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			
	<b>U.S. Total</b>	1.0	1.4	1.0	1.4	0.4	0.2	0.7	1.3	0.9	0.5	0.3
<b>50</b>	<b>Durable</b>	2.1	2.1	2.1	2.2	0.7	0.3	1.3	2.0	2.0	2.4	0.7
501	Automotive	4.1	5.4	4.1	5.4	1.2	1.0	3.1	4.1	4.2	3.7	2.1
502	Furniture	6.3	7.4	6.3	7.4	2.2	1.0	4.6	10.1	6.2	5.3	2.5
503	Lumber	4.9	5.8	5.1	5.9	1.2	0.8	4.2	5.3	5.2	5.6	2.5
504	Prof. equip.	5.5	6.4	5.6	6.6	1.4	0.7	3.8	4.4	4.8	5.8	2.7
505	Metals	4.6	9.2	4.6	9.2	1.3	0.7	2.8	10.2	4.4	4.2	1.5
506	Electrical	5.1	4.5	5.0	4.5	1.4	0.5	3.4	2.8	6.0	4.5	2.0
507	Hardware	5.0	4.8	5.0	4.8	1.2	0.5	6.0	5.0	5.1	4.4	1.5
508	Machinery	5.8	5.0	5.7	4.8	1.8	0.5	4.5	5.2	6.4	6.3	2.6
509	Other Durable	4.8	7.3	4.9	7.0	1.5	0.8	2.6	5.6	5.5	4.6	2.1
<b>51</b>	<b>Nondurable</b>	1.9	2.1	1.9	2.1	0.5	0.4	1.3	1.4	1.8	0.5	0.4
511	Paper	4.1	3.7	4.2	3.9	1.1	0.4	4.0	4.8	5.1	0.2	0.1
512	Drugs	5.8	5.1	5.7	5.0	0.6	0.4	3.4	2.1	6.3	5.5	2.5
513	Apparel	5.4	7.8	5.3	7.9	2.1	0.8	3.5	5.2	5.5	4.5	2.4
514	Groceries	3.0	5.3	3.0	5.3	0.8	0.5	1.8	4.8	2.9	3.0	0.8
515	Farm-products	5.3	8.1	5.3	7.9	2.4	1.6	3.1	4.4	4.4	4.2	1.9
516	Chemicals	5.9	5.7	6.0	5.5	1.3	0.6	4.3	3.1	6.0	6.1	1.8
517	Petroleum	6.1	13.9	5.9	14.0	1.0	0.8	3.4	11.8	5.6	5.1	1.2
518	Alcohol	6.3	6.1	6.4	6.1	1.7	1.3	7.4	5.5	6.1	6.8	1.1
519	Other Nondur.	6.0	5.9	6.0	5.8	1.8	0.9	5.5	5.0	6.7	6.0	2.7

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998				1997	1997	1998				1997	1997
		Apr.	Mar.r	Feb.r	Jan	Dec.	Mar.r	Apr.	Mar.r	Feb.r	Jan.	Dec.	Mar.r
	<b>U.S. Total<sup>1</sup></b>	<b>1.005</b>	<b>1.034</b>	<b>0.916</b>	<b>0.940</b>	<b>1.018</b>	<b>1.012</b>	<b>1.010</b>	<b>1.006</b>	<b>1.013</b>	<b>1.021</b>	<b>1.003</b>	<b>1.006</b>
50	<b>Durable</b>	<b>0.997</b>	<b>1.047</b>	<b>0.904</b>	<b>0.913</b>	<b>1.009</b>	<b>1.022</b>	<b>1.008</b>	<b>0.998</b>	<b>1.002</b>	<b>0.999</b>	<b>0.985</b>	<b>0.998</b>
501	Automotive	1.033	1.104	0.911	0.912	1.018	1.071	1.019	1.010	1.037	1.015	0.963	1.008
502	Furniture	1.010	1.030	0.880	0.884	1.004	1.000	0.979	0.988	0.977	0.975	0.973	0.989
503	Lumber	1.006	0.990	0.844	0.843	0.883	0.956	1.023	1.032	1.011	0.983	0.982	1.034
504	Prof. equip.	0.958	1.057	0.911	0.950	1.083	1.041	1.003	0.995	0.987	1.013	1.006	0.995
505	Metals	1.046	1.059	0.942	0.966	0.950	1.034	1.010	1.009	1.001	1.010	1.010	1.009
506	Electrical	0.958	1.051	0.910	0.917	0.990	1.017	0.995	0.984	1.000	1.002	0.981	0.982
507	Hardware	0.979	0.960	0.860	0.894	0.947	0.928	1.012	1.015	0.998	0.985	0.989	1.014
508	Machinery	1.032	1.084	0.926	0.928	1.028	1.051	1.019	1.007	1.000	0.990	0.985	1.007
509	Other Durable	0.939	1.027	0.881	0.873	1.026	0.995	0.990	0.955	0.977	0.988	0.976	0.955
51	<b>Nondurable</b>	<b>1.018</b>	<b>1.029</b>	<b>0.926</b>	<b>0.968</b>	<b>1.028</b>	<b>1.011</b>	<b>1.014</b>	<b>1.017</b>	<b>1.032</b>	<b>1.062</b>	<b>1.034</b>	<b>1.017</b>
511	Paper	0.988	1.042	0.944	0.998	1.013	1.001	1.017	1.003	0.999	1.020	1.022	1.003
512	Drugs	1.015	1.029	0.922	1.025	1.062	0.981	0.998	0.999	1.017	1.077	1.024	0.998
513	Apparel	0.954	1.088	1.006	0.925	0.813	1.055	0.966	0.967	1.008	1.040	1.003	0.969
514	Groceries	0.993	1.016	0.908	0.975	1.037	1.009	0.985	0.983	0.973	1.001	1.010	0.982
515	Farm-products	0.988	1.037	0.963	1.069	1.124	1.009	1.026	1.104	1.208	1.276	1.223	1.107
516	Chemicals	1.047	1.032	0.940	0.955	0.941	1.007	1.001	1.022	1.016	0.995	0.998	1.021
517	Petroleum	0.999	1.013	0.955	1.012	1.073	0.987	0.995	0.973	0.979	0.998	1.044	0.972
518	Alcohol	1.008	0.950	0.813	0.783	1.149	0.917	1.002	0.980	0.949	0.934	0.926	0.979
519	Other Nondur.	1.144	1.047	0.890	0.865	0.984	1.044	1.080	1.065	1.063	1.053	0.990	1.064



r Revised

<sup>1</sup> 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.



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

# Monthly Wholesale Trade

Sales and Inventories

April 1998

BW/98-4

Issued June 1998

## MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES April 1998

**Sales.** April 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$214.0 billion, up 0.1 percent (+/- 0.7%) from the revised March level and were 3.1 percent (+/-1.2%) above the April 1997 level. The March preliminary estimate was revised upward by \$0.2 billion or 0.1 percent. April sales of durable goods increased 1.0 percent (+/-0.8%) from March and were 5.2 percent (+/-1.7%) above last year. Compared to last month, sales of lumber and other construction materials were up 2.8 percent, while metals and minerals, except petroleum, declined 2.4 percent. Sales of nondurable goods decreased 0.9 percent (+/-0.8%) from last month but were up 0.7 percent (+/-1.9%) from a year ago. Compared to last month, sales of farm-product raw materials fell 4.2 percent, and apparel, piece goods and notions declined 3.0 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$275.8 billion at the end of April, down 0.6 percent (+/-0.5%) from the revised March level but were 6.3 percent (+/-1.3%)

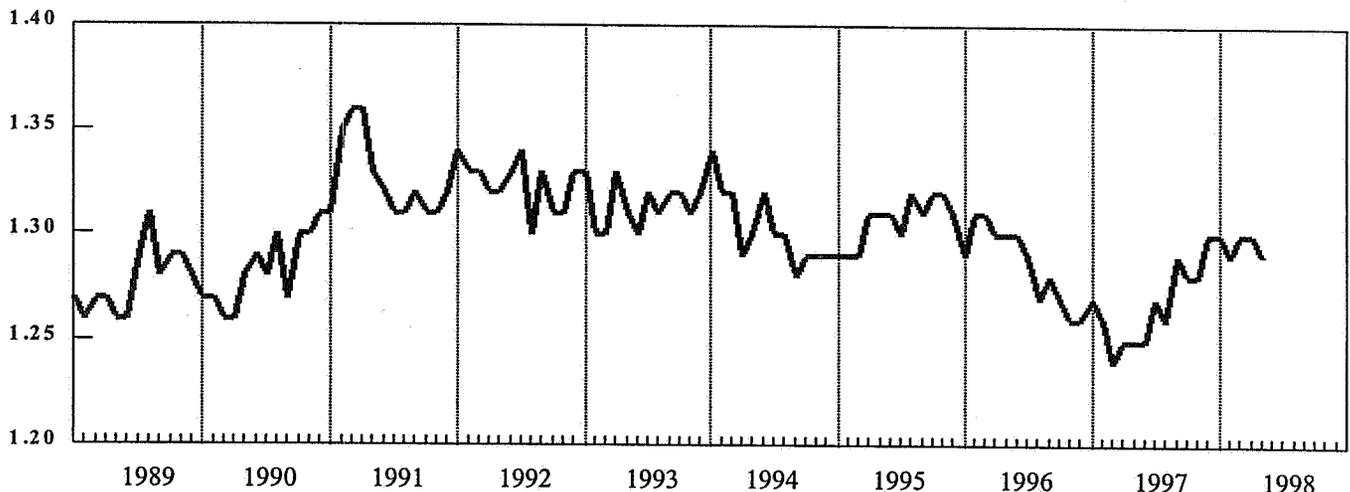
above April 1997. The March preliminary estimate was revised upward by \$0.5 billion or 0.2 percent. Among durable goods, inventories of motor vehicles and automotive equipment decreased 4.7 percent from March, while furniture and home furnishings increased 2.9 percent. End-of-month inventories of nondurable goods declined 1.6 percent (+/- 0.9%) from last month but were 4.8 percent (+/- 1.7%) above the April 1997 level. Compared to last month, inventories of farm-product raw materials were down 8.2 percent, and beer, wine, and distilled alcoholic beverages fell 4.6 percent.

**Inventories/Sales Ratio.** The April inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.29. The April 1997 ratio was 1.25.

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

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



Monthly Wholesale Trade for May is scheduled to be released July 8, 1998 at 10:00 a.m.

Address inquiries concerning this report to Services Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales ratios		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Apr. 1998 (p)	Mar. 1998 (r)	Apr. 1997 (r)	Apr./ Mar.	Mar./ Feb.	Apr. 98 Apr. 97	Apr. 1998 (p)	Mar. 1998 (r)	Apr. 1997 (r)	Apr./ Mar.	Mar./ Feb.	Apr. 98 Apr. 97	Apr. 1998 (p)	Mar. 1998 (r)	Apr. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	213,997	213,781	207,649	0.1	1.2	3.1	275,831	277,624	259,404	-0.6	0.7	6.3	1.29	1.30	1.25
50	<b>Durable</b>	114,866	113,732	109,236	1.0	1.4	5.2	182,526	182,822	170,355	-0.2	1.0	7.1	1.59	1.61	1.56
501	Automotive	19,167	18,800	17,829	2.0	2.9	7.5	29,188	30,612	27,619	-4.7	3.3	5.7	1.52	1.63	1.55
502	Furniture	3,416	3,473	3,431	-1.6	1.6	-0.4	5,528	5,371	5,451	2.9	-2.1	1.4	1.62	1.55	1.59
503	Lumber	7,543	7,337	7,676	2.8	-0.7	-1.7	7,879	7,712	8,087	2.2	-0.4	-2.6	1.04	1.05	1.05
504	Prof. equip.	21,796	21,478	19,551	1.5	3.0	11.5	27,258	26,972	24,220	1.1	1.2	12.5	1.25	1.26	1.24
505	Metals	8,755	8,974	8,957	-2.4	0.5	-2.3	14,088	14,111	13,569	-0.2	-0.2	3.8	1.61	1.57	1.51
506	Electrical	17,235	17,110	16,660	0.7	1.0	3.5	26,551	26,269	25,044	1.1	2.0	6.0	1.54	1.54	1.50
507	Hardware	6,616	6,622	6,477	-0.1	-1.7	2.1	13,268	13,016	12,289	1.9	-0.7	8.0	2.01	1.97	1.90
508	Machinery	18,818	18,506	17,062	1.7	0.8	10.3	42,945	42,774	39,066	0.4	1.2	9.9	2.28	2.31	2.29
509	Other Durable	11,520	11,432	11,593	0.8	1.5	-0.6	15,821	15,985	15,010	-1.0	-0.8	5.4	1.37	1.40	1.29
51	<b>Nondurable</b>	99,131	100,049	98,413	-0.9	0.9	0.7	93,305	94,802	89,049	-1.6	0.0	4.8	0.94	0.95	0.90
511	Paper	7,383	7,528	7,072	-1.9	3.4	4.4	9,126	9,241	8,156	-1.2	1.4	11.9	1.24	1.23	1.15
512	Drugs	10,774	11,081	9,167	-2.8	1.9	17.5	14,821	14,513	11,826	2.1	2.9	25.3	1.38	1.31	1.29
513	Apparel	7,089	7,311	7,136	-3.0	-1.1	-0.7	12,019	11,979	11,370	0.3	0.6	5.7	1.70	1.64	1.59
514	Groceries	28,475	28,419	27,244	0.2	0.6	4.5	16,368	16,092	15,447	1.7	-2.4	6.0	0.57	0.57	0.57
515	Farm-products	8,739	9,118	10,474	-4.2	-1.8	-16.6	9,847	10,725	11,075	-8.2	-3.0	-11.1	1.13	1.18	1.06
516	Chemicals	4,529	4,547	4,574	-0.4	-3.6	-1.0	4,877	4,775	4,669	2.1	-0.4	4.5	1.08	1.05	1.02
517	Petroleum	11,845	11,979	13,147	-1.1	0.3	-9.9	4,467	4,513	5,043	-1.0	0.1	-11.4	0.38	0.38	0.38
518	Alcohol	4,778	4,833	4,407	-1.1	4.0	8.4	5,132	5,381	4,684	-4.6	3.6	9.6	1.07	1.11	1.06
519	Other Nondur.	15,519	15,233	15,192	1.9	3.3	2.2	16,648	17,583	16,779	-5.3	-0.5	-0.8	1.07	1.15	1.10
<b>Not Adjusted</b>																
													<b>Sales to date</b>			
													1998	1997		
	<b>U.S. Total</b>	216,058	222,363	209,445	-2.8	15.1	3.2	278,205	279,048	261,637	-0.3	0.0	6.3	829,047	808,374	
50	<b>Durable</b>	114,636	119,747	109,408	-4.3	18.1	4.8	183,939	182,652	171,609	0.7	0.8	7.2	437,830	416,835	
501	Automotive	19,972	20,605	18,667	-3.1	23.7	7.0	29,422	30,826	27,868	-4.6	0.3	5.6	73,559	70,578	
502	Furniture	3,433	3,591	3,424	-4.4	19.4	0.3	5,406	5,317	5,337	1.7	-0.9	1.3	13,182	13,281	
503	Lumber	7,641	7,242	7,922	5.5	16.1	-3.5	8,076	7,943	8,289	1.7	1.5	-2.6	27,486	28,060	
504	Prof. equip.	21,077	22,638	18,847	-6.9	19.1	11.8	27,340	26,864	24,293	1.8	2.1	12.5	82,182	73,969	
505	Metals	9,105	9,638	9,378	-5.5	14.6	-2.9	14,215	14,280	13,705	-0.5	0.9	3.7	35,814	35,099	
506	Electrical	16,546	17,965	16,060	-7.9	16.6	3.0	26,524	25,849	24,969	2.6	0.3	6.2	65,207	63,219	
507	Hardware	6,451	6,364	6,393	1.4	9.9	0.9	13,494	13,159	12,486	2.5	0.6	8.1	24,591	23,203	
508	Machinery	19,571	19,986	17,796	-2.1	17.6	10.0	43,847	43,116	39,847	1.7	2.0	10.0	73,578	66,679	
509	Other Durable	10,840	11,718	10,921	-7.5	18.0	-0.7	15,615	15,298	14,815	2.1	-2.8	5.4	42,231	42,747	
51	<b>Nondurable</b>	101,422	102,616	100,037	-1.2	11.9	1.4	94,266	96,396	90,028	-2.2	-1.5	4.7	391,217	391,539	
511	Paper	7,309	7,844	7,065	-6.8	14.1	3.5	9,226	9,287	8,254	-0.7	2.1	11.8	29,366	27,926	
512	Drugs	10,849	11,436	9,314	-5.1	14.1	16.5	14,806	14,498	11,814	2.1	1.1	25.3	43,134	35,736	
513	Apparel	6,735	7,991	6,751	-15.7	7.4	-0.2	11,682	11,548	11,018	1.2	-3.8	6.0	28,943	27,623	
514	Groceries	28,333	28,675	26,944	-1.2	11.7	5.2	16,139	15,802	15,231	2.1	-1.5	6.0	109,135	106,405	
515	Farm-products	8,529	9,501	10,338	-10.2	6.2	-17.5	9,955	11,915	11,197	-16.4	-10.8	-11.1	37,752	42,454	
516	Chemicals	4,710	4,697	4,771	0.3	5.9	-1.3	4,950	4,861	4,734	1.8	-0.2	4.6	18,435	18,040	
517	Petroleum	12,141	12,039	13,463	0.8	5.6	-9.8	4,458	4,387	5,028	1.6	-0.6	-11.3	47,729	57,767	
518	Alcohol	4,783	4,606	4,376	3.8	21.9	9.3	5,153	5,284	4,698	-2.5	7.2	9.7	16,738	15,756	
519	Other Nondur.	18,033	15,827	17,015	13.9	20.6	6.0	17,897	18,814	18,054	-4.9	0.1	-0.9	59,985	59,832	

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			
	<b>U.S. Total</b>	1.0	1.3	1.0	1.4	0.4	0.2	0.7	1.1	0.9	0.6	0.3
50	<b>Durable</b>	2.1	2.1	2.1	2.2	0.7	0.3	1.2	1.5	2.0	2.4	0.7
501	Automotive	4.1	5.4	4.1	5.4	1.2	0.8	2.8	3.8	4.2	3.8	2.0
502	Furniture	6.4	7.6	6.4	7.4	2.2	1.0	4.6	6.7	6.3	5.3	2.5
503	Lumber	4.9	5.8	5.0	5.9	1.2	0.8	3.7	4.2	5.0	5.6	2.3
504	Prof. equip.	5.5	6.4	5.5	6.5	1.4	0.7	3.4	4.0	4.5	5.6	2.6
505	Metals	4.6	9.2	4.5	9.2	1.3	0.7	2.7	6.7	4.5	4.4	1.3
506	Electrical	5.2	4.7	5.2	4.5	1.4	0.5	2.9	2.3	6.0	4.6	1.8
507	Hardware	5.0	4.8	5.0	4.8	1.2	0.5	4.3	3.4	5.0	4.6	1.1
508	Machinery	5.8	5.4	5.8	5.1	1.7	0.5	4.3	3.7	6.4	6.2	2.5
509	Other Durable	5.1	7.6	5.0	7.2	1.5	0.7	2.6	4.7	5.7	4.7	2.2
51	<b>Nondurable</b>	1.9	2.1	1.9	2.2	0.5	0.4	1.2	1.4	1.8	0.5	0.5
511	Paper	4.3	3.9	4.3	3.9	1.1	0.4	4.3	4.9	5.0	0.3	0.2
512	Drugs	5.8	5.0	5.7	5.0	0.7	0.4	3.3	1.7	6.3	5.6	2.4
513	Apparel	5.4	7.7	5.3	7.8	2.1	0.8	3.1	4.4	5.2	4.5	2.2
514	Groceries	3.0	5.4	2.9	5.4	0.8	0.5	1.8	4.0	2.9	3.1	0.8
515	Farm-products	5.3	8.1	5.3	8.1	2.3	1.6	2.9	4.4	4.3	4.1	1.9
516	Chemicals	5.9	5.7	5.9	5.5	1.3	0.6	3.5	2.8	5.8	5.9	1.7
517	Petroleum	5.9	13.9	5.9	14.2	1.0	0.8	2.5	6.7	5.7	5.4	1.2
518	Alcohol	6.3	6.2	6.4	6.1	1.7	1.3	4.7	5.5	6.2	6.9	1.2
519	Other Nondur.	6.1	6.0	6.0	5.9	1.8	1.0	5.3	5.0	6.5	5.7	2.6

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998					1997	1998					1997
		May	Apr.r	Mar.r	Feb.	Jan.	Apr.r	May	Apr.r	Mar.r	Feb.	Jan.	Apr.r
	<b>U.S. Total<sup>1</sup></b>	<b>0.986</b>	<b>1.007</b>	<b>1.034</b>	<b>0.916</b>	<b>0.940</b>	<b>1.008</b>	<b>0.995</b>	<b>1.008</b>	<b>1.008</b>	<b>1.013</b>	<b>1.021</b>	<b>1.008</b>
<b>50</b>	<b>Durable</b>	<b>0.977</b>	<b>0.996</b>	<b>1.048</b>	<b>0.904</b>	<b>0.913</b>	<b>1.000</b>	<b>1.007</b>	<b>1.007</b>	<b>1.000</b>	<b>1.002</b>	<b>0.999</b>	<b>1.007</b>
501	Automotive	1.007	1.042	1.096	0.911	0.912	1.047	1.011	1.008	1.007	1.037	1.015	1.009
502	Furniture	0.978	1.005	1.034	0.880	0.884	0.998	1.007	0.978	0.990	0.977	0.975	0.979
503	Lumber	1.036	1.013	0.987	0.844	0.843	1.032	1.023	1.025	1.030	1.011	0.983	1.025
504	Prof. equip.	0.942	0.967	1.054	0.911	0.950	0.964	0.989	1.003	0.996	0.987	1.013	1.003
505	Metals	1.006	1.040	1.074	0.942	0.966	1.047	1.002	1.009	1.012	1.001	1.010	1.010
506	Electrical	0.945	0.960	1.050	0.910	0.917	0.964	0.999	0.999	0.984	1.000	1.002	0.997
507	Hardware	0.979	0.975	0.961	0.860	0.894	0.987	1.023	1.017	1.011	0.998	0.985	1.016
508	Machinery	0.996	1.040	1.080	0.926	0.928	1.043	1.015	1.021	1.008	1.000	0.990	1.020
509	Other Durable	0.948	0.941	1.025	0.881	0.873	0.942	1.005	0.987	0.957	0.977	0.988	0.987
<b>51</b>	<b>Nondurable</b>	<b>0.993</b>	<b>1.018</b>	<b>1.028</b>	<b>0.926</b>	<b>0.968</b>	<b>1.015</b>	<b>0.971</b>	<b>1.010</b>	<b>1.019</b>	<b>1.032</b>	<b>1.062</b>	<b>1.010</b>
511	Paper	0.942	0.990	1.042	0.944	0.998	0.999	0.986	1.011	1.005	0.999	1.020	1.012
512	Drugs	0.939	1.007	1.032	0.922	1.025	1.016	0.945	0.999	0.999	1.017	1.077	0.999
513	Apparel	0.815	0.950	1.093	1.006	0.925	0.946	0.971	0.972	0.964	1.008	1.040	0.969
514	Groceries	1.013	0.995	1.009	0.908	0.975	0.989	0.984	0.986	0.982	0.973	1.001	0.986
515	Farm-products	0.972	0.976	1.042	0.963	1.069	0.987	0.875	1.011	1.111	1.208	1.276	1.011
516	Chemicals	1.034	1.040	1.033	0.940	0.955	1.043	1.015	1.015	1.018	1.016	0.995	1.014
517	Petroleum	0.994	1.025	1.005	0.955	1.012	1.024	0.998	0.998	0.972	0.979	0.998	0.997
518	Alcohol	1.019	1.001	0.953	0.813	0.783	0.993	0.974	1.004	0.982	0.949	0.934	1.003
519	Other Nondur.	1.101	1.162	1.039	0.890	0.865	1.120	1.020	1.075	1.070	1.063	1.053	1.076



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.



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

# Monthly Wholesale Trade

Sales and Inventories  
May 1998

BW/98-5  
Issued July 1998

## MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES May 1998

**Sales.** May 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$213.2 billion, down 0.3 percent (+/- 0.9%) from the revised April level but were 2.5 percent (+/-1.2%) above the May 1997 level. The April preliminary estimate was revised downward by \$0.1 billion. May sales of durable goods decreased 1.1 percent (+/-0.8%) from April but were 3.9 percent (+/-1.6%) above last year. Compared to last month, sales of professional and commercial equipment and supplies declined 3.5 percent. Among nondurable goods, sales of petroleum and petroleum products increased 2.7 percent from the April level.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$277.5 billion at the end of May, up 0.6 percent (+/-0.3%) from the revised April level and were 6.6 percent (+/-1.7%) above May 1997. The April preliminary estimate was

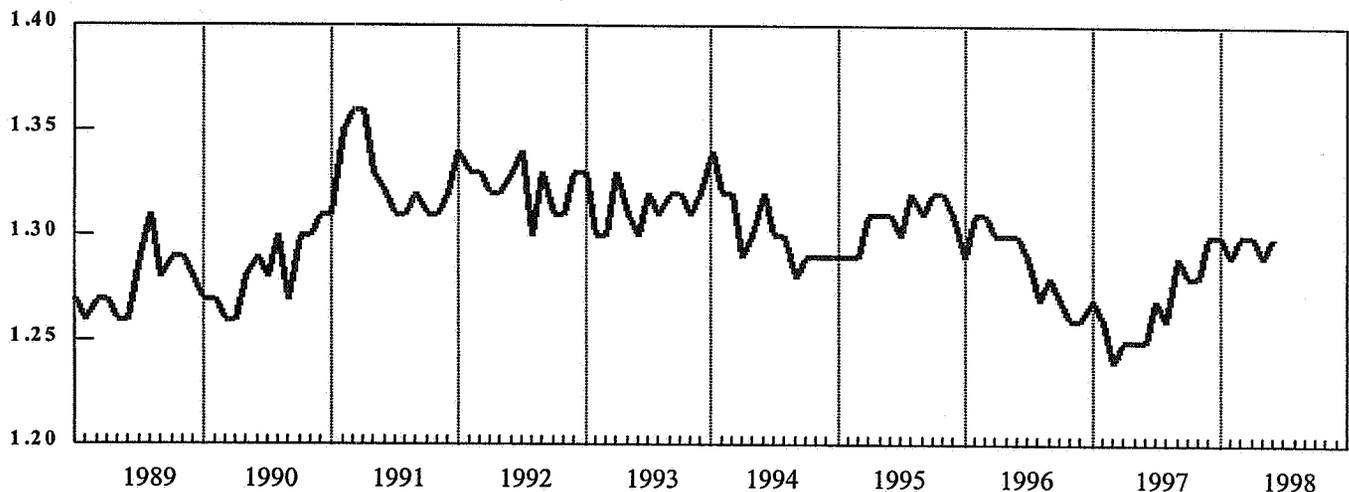
revised upward by \$0.1 billion. Among durable goods, inventories of machinery, equipment, and supplies increased 1.6 percent from April, while motor vehicles and automotive equipment decreased 2.2 percent. End-of-month inventories of nondurable goods increased 1.1 percent (+/-0.8%) from last month, and were 6.3 percent (+/-2.0%) above the May 1997 level. Compared to last month, inventories of drugs, drug proprietaries and druggists' sundries rose 2.9 percent, and beer, wine, and distilled alcoholic beverages increased 2.8 percent.

**Inventories/Sales Ratio.** The May inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.30. The May 1997 ratio was 1.25.

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

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



Monthly Wholesale Trade for June is scheduled to be released August 7, 1998 at 10:00 a.m.

Address inquiries concerning this report to Services Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienycoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		May 1998 (p)	Apr. 1998 (r)	May 1997 (r)	May/ Apr.	Apr./ Mar.	May 98 May 97	May 1998 (p)	Apr. 1998 (r)	May 1997 (r)	May/ Apr.	Apr./ Mar.	May 98 May 97	May 1998 (p)	Apr. 1998 (r)	May 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	213,246	213,900	207,970	-0.3	0.1	2.5	277,540	275,933	260,258	0.6	-0.6	6.6	1.30	1.29	1.25
<b>50</b>	<b>Durable</b>	113,055	114,325	108,803	-1.1	0.5	3.9	183,125	182,548	171,402	0.3	-0.1	6.8	1.62	1.60	1.58
501	Automotive	19,007	18,914	18,022	0.5	0.6	5.5	28,487	29,131	27,977	-2.2	-4.8	1.8	1.50	1.54	1.55
502	Furniture	3,378	3,408	3,302	-0.9	-1.9	2.3	5,529	5,532	5,465	-0.1	3.0	1.2	1.64	1.62	1.66
503	Lumber	7,434	7,538	7,477	-1.4	2.7	-0.6	7,786	7,882	8,177	-1.2	2.2	-4.8	1.05	1.05	1.09
504	Prof. equip.	20,798	21,546	19,534	-3.5	0.3	6.5	27,210	27,229	24,516	-0.1	1.0	11.0	1.31	1.26	1.26
505	Metals	8,696	8,733	8,843	-0.4	-2.7	-1.7	14,247	14,108	13,634	1.0	0.0	4.5	1.64	1.62	1.54
506	Electrical	17,329	17,249	16,936	0.5	0.8	2.3	26,895	26,536	25,187	1.4	1.0	6.8	1.55	1.54	1.49
507	Hardware	6,747	6,617	6,352	2.0	-0.1	6.2	13,285	13,276	12,303	0.1	2.0	8.0	1.97	2.01	1.94
508	Machinery	18,820	18,850	17,044	-0.2	1.9	10.4	43,742	43,048	39,602	1.6	0.6	10.5	2.32	2.28	2.32
509	Other Durable	10,846	11,470	11,293	-5.4	0.3	-4.0	15,944	15,806	14,541	0.9	-1.1	9.6	1.47	1.38	1.29
<b>51</b>	<b>Nondurable</b>	100,191	99,575	99,167	0.6	-0.5	1.0	94,415	93,385	88,856	1.1	-1.5	6.3	0.94	0.94	0.90
511	Paper	7,532	7,453	6,791	1.1	-1.0	10.9	9,074	9,126	8,327	-0.6	-1.2	9.0	1.20	1.22	1.23
512	Drugs	10,814	10,747	9,411	0.6	-3.0	14.9	15,181	14,753	12,070	2.9	1.7	25.8	1.40	1.37	1.28
513	Apparel	6,996	7,070	6,962	-1.0	-3.3	0.5	12,085	12,001	11,517	0.7	0.2	4.9	1.73	1.70	1.65
514	Groceries	28,501	28,470	27,595	0.1	0.2	3.3	16,567	16,382	15,600	1.1	1.8	6.2	0.58	0.58	0.57
515	Farm-products	8,748	8,777	10,307	-0.3	-3.7	-15.1	9,611	9,835	10,665	-2.3	-8.3	-9.9	1.10	1.12	1.03
516	Chemicals	4,527	4,510	4,542	0.4	-0.8	-0.3	5,024	4,937	4,546	1.8	3.4	10.5	1.11	1.09	1.00
517	Petroleum	12,469	12,142	13,650	2.7	1.4	-8.7	4,663	4,545	5,022	2.6	0.7	-7.1	0.37	0.37	0.37
518	Alcohol	4,794	4,772	4,555	0.5	-1.3	5.2	5,269	5,126	4,586	2.8	-4.7	14.9	1.10	1.07	1.01
519	Other Nondur.	15,810	15,634	15,354	1.1	2.6	3.0	16,941	16,680	16,523	1.6	-5.1	2.5	1.07	1.07	1.08
<b>Not Adjusted</b>																
<b>Sales to date</b>																
1998      1997																
	<b>U.S. Total</b>	210,289	216,001	211,130	-2.6	-2.9	-0.4	276,265	278,205	259,109	-0.7	-0.3	6.6	1,039,279	1,019,504	
<b>50</b>	<b>Durable</b>	110,062	114,331	108,970	-3.7	-4.5	1.0	184,393	183,970	172,726	0.2	0.7	6.8	547,587	525,805	
501	Automotive	19,102	19,614	18,743	-2.6	-4.8	1.9	28,715	29,422	28,229	-2.4	-4.6	1.7	92,303	89,321	
502	Furniture	3,290	3,435	3,325	-4.2	-4.3	-1.1	5,573	5,405	5,509	3.1	1.7	1.2	16,474	16,606	
503	Lumber	7,687	7,644	7,903	0.6	5.6	-2.7	7,950	8,087	8,349	-1.7	1.8	-4.8	35,176	35,963	
504	Prof. equip.	19,446	20,964	18,753	-7.2	-7.4	3.7	26,802	27,338	24,173	-2.0	1.8	10.9	101,515	92,722	
505	Metals	8,670	9,100	9,038	-4.7	-5.6	-4.1	14,304	14,235	13,689	0.5	-0.3	4.5	44,479	44,137	
506	Electrical	16,359	16,576	16,343	-1.3	-7.7	0.1	26,895	26,483	25,212	1.6	2.5	6.7	81,596	79,562	
507	Hardware	6,619	6,452	6,377	2.6	1.4	3.8	13,577	13,502	12,586	0.6	2.6	7.9	31,211	29,580	
508	Machinery	18,726	19,661	17,624	-4.8	-1.6	6.3	44,617	43,866	40,394	1.7	1.7	10.5	92,394	84,303	
509	Other Durable	10,163	10,885	10,864	-6.6	-7.1	-6.5	15,960	15,632	14,585	2.1	2.2	9.4	52,439	53,611	
<b>51</b>	<b>Nondurable</b>	100,227	101,670	102,160	-1.4	-0.9	-1.9	91,872	94,235	86,383	-2.5	-2.2	6.4	491,692	493,699	
511	Paper	7,088	7,401	6,540	-4.2	-5.6	8.4	8,920	9,245	8,177	-3.5	-0.5	9.1	36,546	34,466	
512	Drugs	10,154	10,768	9,100	-5.7	-5.8	11.6	14,331	14,723	11,406	-2.7	1.6	25.6	53,207	44,836	
513	Apparel	5,681	6,759	5,848	-15.9	-15.4	-2.9	11,831	11,629	11,241	1.7	0.7	5.2	34,648	33,471	
514	Groceries	28,872	28,356	28,782	1.8	-1.1	0.3	16,352	16,136	15,382	1.3	2.1	6.3	138,030	135,187	
515	Farm-products	8,503	8,540	10,194	-0.4	-10.1	-16.6	8,352	9,953	9,268	-16.1	-16.5	-9.9	46,266	52,648	
516	Chemicals	4,690	4,686	4,828	0.1	-0.2	-2.9	5,124	4,972	4,641	3.1	2.3	10.4	23,101	22,868	
517	Petroleum	12,581	12,348	14,019	1.9	2.6	-10.3	4,682	4,522	5,042	3.5	3.1	-7.1	60,517	71,786	
518	Alcohol	4,919	4,786	4,915	2.8	3.9	0.1	5,085	5,157	4,439	-1.4	-2.4	14.6	21,660	20,671	
519	Other Nondur.	17,739	18,026	17,934	-1.6	13.9	-1.1	17,195	17,898	16,787	-3.9	-4.9	2.4	77,717	77,766	

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			
	<b>U.S. Total</b>	<b>1.0</b>	<b>1.3</b>	<b>1.0</b>	<b>1.4</b>	<b>0.4</b>	<b>0.2</b>	<b>0.7</b>	<b>1.0</b>	<b>0.9</b>	<b>0.6</b>	<b>0.3</b>
<b>50</b>	<b>Durable</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>0.6</b>	<b>0.3</b>	<b>1.1</b>	<b>1.1</b>	<b>2.0</b>	<b>2.4</b>	<b>0.8</b>
501	Automotive	4.1	5.4	4.1	5.4	1.2	0.8	2.7	3.2	4.2	4.0	1.8
502	Furniture	6.4	7.6	6.5	7.5	2.2	0.8	4.6	3.2	6.3	5.4	2.7
503	Lumber	4.8	5.9	5.0	5.9	1.2	0.8	2.9	2.9	4.9	5.3	1.8
504	Prof. equip.	5.5	6.4	5.5	6.4	1.4	0.6	3.1	3.5	4.5	5.6	2.6
505	Metals	4.6	9.2	4.5	9.2	1.3	0.7	2.7	3.1	4.4	4.3	1.2
506	Electrical	5.3	5.0	5.4	4.6	1.4	0.5	2.3	1.9	6.0	4.9	1.6
507	Hardware	5.1	4.8	5.0	4.8	1.2	0.5	2.5	2.0	5.2	4.5	1.2
508	Machinery	5.9	5.5	5.8	5.4	1.7	0.5	3.9	2.2	6.3	6.2	2.4
509	Other Durable	5.4	7.6	5.3	7.5	1.5	0.8	2.7	3.6	5.8	4.8	2.2
<b>51</b>	<b>Nondurable</b>	<b>1.9</b>	<b>2.2</b>	<b>1.9</b>	<b>2.2</b>	<b>0.5</b>	<b>0.4</b>	<b>1.2</b>	<b>1.4</b>	<b>1.8</b>	<b>0.6</b>	<b>0.5</b>
511	Paper	4.4	4.2	4.4	4.1	1.1	0.5	4.5	4.9	4.8	0.4	0.2
512	Drugs	5.8	5.0	5.7	5.0	0.7	0.5	3.0	1.5	6.3	5.5	2.3
513	Apparel	5.4	7.7	5.3	7.8	2.1	0.8	2.9	3.6	5.1	4.5	1.9
514	Groceries	3.0	5.6	3.0	5.5	0.8	0.5	1.6	2.7	3.0	3.2	0.8
515	Farm-products	5.1	8.1	5.2	8.1	2.3	1.7	2.9	4.4	4.2	4.4	2.0
516	Chemicals	5.9	5.7	5.9	5.6	1.3	0.6	2.7	2.4	5.8	5.8	1.4
517	Petroleum	6.0	13.9	5.9	14.2	1.0	0.7	1.9	1.8	5.7	5.5	1.2
518	Alcohol	6.3	6.2	6.4	6.2	1.6	1.3	2.1	5.5	6.3	6.9	1.2
519	Other Nondur.	6.1	6.0	6.1	5.9	1.8	1.0	5.2	4.8	6.2	5.5	2.4

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998						1997					
		Jun.	May.r	Apr.r	Mar.	Feb.	May.r	Jun.	May.r	Apr.r	Mar.	Feb.	May.r
	<b>U.S. Total<sup>1</sup></b>	<b>1.038</b>	<b>0.986</b>	<b>1.009</b>	<b>1.034</b>	<b>0.916</b>	<b>1.014</b>	<b>0.984</b>	<b>0.995</b>	<b>1.007</b>	<b>1.008</b>	<b>1.013</b>	<b>0.996</b>
<b>50</b>	<b>Durable</b>	<b>1.046</b>	<b>0.975</b>	<b>1.001</b>	<b>1.048</b>	<b>0.904</b>	<b>1.000</b>	<b>0.999</b>	<b>1.007</b>	<b>1.008</b>	<b>1.000</b>	<b>1.002</b>	<b>1.007</b>
501	Automotive	1.062	1.005	1.037	1.096	0.911	1.040	0.996	1.008	1.010	1.007	1.037	1.009
502	Furniture	1.014	0.974	1.008	1.034	0.880	1.007	1.014	1.008	0.977	0.990	0.977	1.008
503	Lumber	1.113	1.034	1.014	0.987	0.844	1.057	1.027	1.021	1.026	1.030	1.011	1.021
504	Prof. equip.	1.044	0.935	0.973	1.054	0.911	0.960	0.989	0.985	1.004	0.996	0.987	0.986
505	Metals	1.050	0.997	1.042	1.074	0.942	1.022	1.009	1.004	1.009	1.012	1.001	1.004
506	Electrical	1.026	0.944	0.961	1.050	0.910	0.965	1.013	1.000	0.998	0.984	1.000	1.001
507	Hardware	1.102	0.981	0.975	0.961	0.860	1.004	1.001	1.022	1.017	1.011	0.998	1.023
508	Machinery	1.066	0.995	1.043	1.080	0.926	1.034	0.999	1.020	1.019	1.008	1.000	1.020
509	Other Durable	1.005	0.937	0.949	1.025	0.881	0.962	1.000	1.001	0.989	0.957	0.977	1.003
<b>51</b>	<b>Nondurable</b>	<b>1.026</b>	<b>0.998</b>	<b>1.018</b>	<b>1.028</b>	<b>0.926</b>	<b>1.029</b>	<b>0.958</b>	<b>0.973</b>	<b>1.009</b>	<b>1.019</b>	<b>1.032</b>	<b>0.972</b>
511	Paper	1.001	0.941	0.993	1.042	0.944	0.963	0.977	0.983	1.013	1.005	0.999	0.982
512	Drugs	1.004	0.939	1.002	1.032	0.922	0.967	0.965	0.944	0.998	0.999	1.017	0.945
513	Apparel	1.000	0.812	0.956	1.093	1.006	0.840	1.018	0.979	0.969	0.964	1.008	0.976
514	Groceries	1.023	1.013	0.996	1.009	0.908	1.043	0.990	0.987	0.985	0.982	0.973	0.986
515	Farm-products	0.945	0.972	0.973	1.042	0.963	0.989	0.789	0.869	1.012	1.111	1.208	0.869
516	Chemicals	1.076	1.036	1.039	1.033	0.940	1.063	1.008	1.020	1.007	1.018	1.016	1.021
517	Petroleum	0.984	1.009	1.017	1.005	0.955	1.027	0.952	1.004	0.995	0.972	0.979	1.004
518	Alcohol	1.117	1.026	1.003	0.953	0.813	1.079	0.990	0.965	1.006	0.982	0.949	0.968
519	Other Nondur.	1.114	1.122	1.153	1.039	0.890	1.168	0.966	1.015	1.073	1.070	1.063	1.016



r Revised

<sup>1</sup> 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.



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

# Monthly Wholesale Trade

Sales and Inventories

June 1998

BW/98-6

Issued August 1998

## MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES June 1998

**Sales.** June 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$214.0 billion, up 0.3 percent (+/- 0.8%) from the revised May level and were 2.6 percent (+/- 1.3%) above the June 1997 level. The May preliminary estimate was revised upward by \$0.2 billion or 0.1 percent. June sales of durable goods increased 1.1 percent (+/- 1.0%) from May and were 4.1 percent (+/- 2.0%) above last June. Compared to last month, sales of professional and commercial equipment and supplies increased 4.1 percent, and furniture and home furnishings rose 3.3 percent. Among nondurable goods, sales of beer, wine, and distilled alcoholic beverages decreased 3.0 percent from May, while petroleum and petroleum products increased 1.5 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$277.9 billion at the end of June, up 0.1 percent (+/- 0.2%) from the revised May level and were 4.9 percent (+/- 1.6%) above June 1997. The May preliminary estimate was revised upward by \$0.2 billion or 0.1 percent. End-of-

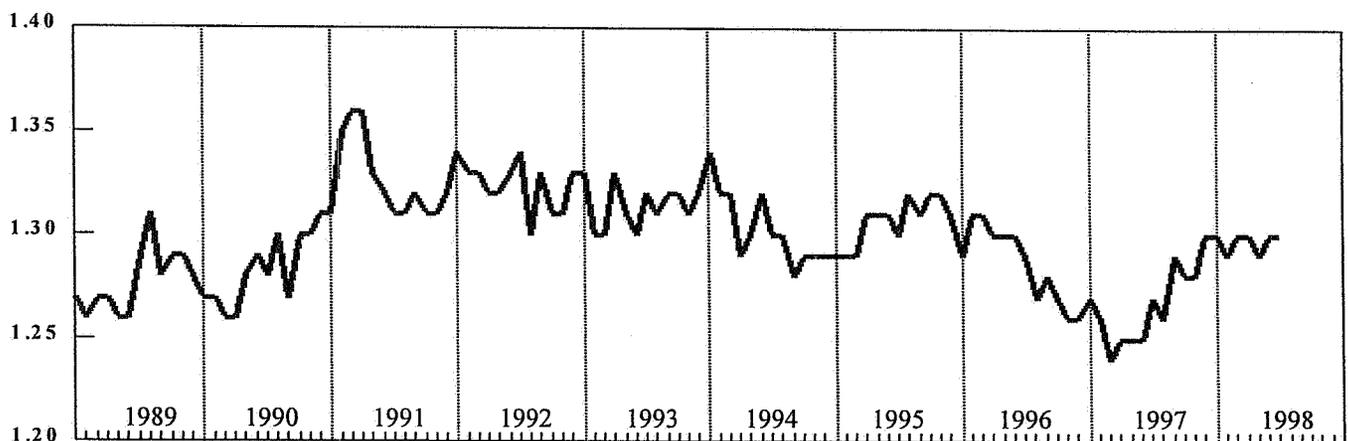
month inventories of durable goods decreased 0.4 percent (+/- 0.3%) from last month but were 3.9 percent (+/- 2.2%) above June 1997. Compared to last month, inventories of professional and commercial equipment and supplies fell 3.6 percent, while hardware, plumbing, and heating equipment grew 1.8 percent. End-of-month inventories of nondurable goods increased 1.1 percent (+/- 0.5%) from last month, and were 6.8 percent (+/- 1.6%) above the June 1997 level. Compared to last month, inventories of farm-product raw materials increased 5.6 percent, and beer, wine, and distilled alcoholic beverages rose 2.5 percent.

**Inventories/Sales Ratio.** The June inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.30. The June 1997 ratio was 1.27.

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

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



Monthly Wholesale Trade for July is scheduled to be released September 9, 1998 at 10:00 a.m.

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Piencykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Jun. 1998 (p)	May 1998 (r)	Jun. 1997 (r)	Jun./ May	May/ Apr.	Jun. 98 Jun. 97	Jun. 1998 (p)	May 1998 (r)	Jun. 1997 (r)	Jun./ May	May/ Apr.	Jun. 98 Jun. 97	Jun. 1998 (p)	May 1998 (r)	Jun. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	214,029	213,413	208,544	0.3	-0.2	2.6	277,934	277,699	265,008	0.1	0.6	4.9	1.30	1.30	1.27
50	<b>Durable</b>	114,423	113,164	109,963	1.1	-1.0	4.1	182,360	183,150	175,538	-0.4	0.3	3.9	1.59	1.62	1.60
501	Automotive	18,612	18,837	18,588	-1.2	-0.4	0.1	28,086	28,486	29,279	-1.4	-2.2	-4.1	1.51	1.51	1.58
502	Furniture	3,491	3,379	3,293	3.3	-0.9	6.0	5,574	5,532	5,382	0.8	0.0	3.6	1.60	1.64	1.63
503	Lumber	7,426	7,392	7,633	0.5	-1.9	-2.7	7,753	7,802	8,264	-0.6	-1.0	-6.2	1.04	1.06	1.08
504	Prof. equip.	21,740	20,880	19,901	4.1	-3.1	9.2	26,107	27,081	25,182	-3.6	-0.5	3.7	1.20	1.30	1.27
505	Metals	8,809	8,810	9,093	0.0	0.9	-3.1	14,189	14,259	13,783	-0.5	1.1	2.9	1.61	1.62	1.52
506	Electrical	17,358	17,434	16,887	-0.4	1.1	2.8	27,008	26,872	25,623	0.5	1.3	5.4	1.56	1.54	1.52
507	Hardware	6,780	6,741	6,339	0.6	1.9	7.0	13,525	13,285	12,376	1.8	0.1	9.3	1.99	1.97	1.95
508	Machinery	19,048	18,867	17,361	1.0	0.1	9.7	44,195	43,891	40,619	0.7	2.0	8.8	2.32	2.33	2.34
509	Other Durable	11,159	10,824	10,868	3.1	-5.6	2.7	15,923	15,942	15,030	-0.1	0.9	5.9	1.43	1.47	1.38
51	<b>Nondurable</b>	99,606	100,249	98,581	-0.6	0.7	1.0	95,574	94,549	89,470	1.1	1.2	6.8	0.96	0.94	0.91
511	Paper	7,639	7,555	6,833	1.1	1.4	11.8	9,251	9,118	8,215	1.5	-0.1	12.6	1.21	1.21	1.20
512	Drugs	10,757	10,795	9,443	-0.4	0.4	13.9	14,915	15,121	12,398	-1.4	2.5	20.3	1.39	1.40	1.31
513	Apparel	6,801	7,020	6,752	-3.1	-0.7	0.7	12,118	12,058	11,657	0.5	0.5	4.0	1.78	1.72	1.73
514	Groceries	28,557	28,478	27,659	0.3	0.0	3.2	16,435	16,557	15,614	-0.7	1.1	5.3	0.58	0.58	0.56
515	Farm-products	8,789	8,818	10,094	-0.3	0.5	-12.9	10,271	9,722	10,716	5.6	-1.1	-4.2	1.17	1.10	1.06
516	Chemicals	4,601	4,546	4,635	1.2	0.8	-0.7	5,088	5,039	4,857	1.0	2.1	4.8	1.11	1.11	1.05
517	Petroleum	12,760	12,574	13,829	1.5	3.6	-7.7	4,721	4,673	4,898	1.0	2.8	-3.6	0.37	0.37	0.35
518	Alcohol	4,636	4,780	4,493	-3.0	0.2	3.2	5,409	5,279	4,761	2.5	3.0	13.6	1.17	1.10	1.06
519	Other Nondur.	15,066	15,683	14,843	-3.9	0.3	1.5	17,366	16,982	16,354	2.3	1.8	6.2	1.15	1.08	1.10
<b>Not Adjusted</b>																
	<b>U.S. Total</b>	222,645	210,362	210,350	5.8	-2.6	5.8	274,741	276,348	261,692	-0.6	-0.7	5.0	1,261,997	1,229,854	
50	<b>Durable</b>	120,540	110,142	112,049	9.4	-3.7	7.6	182,558	184,470	175,603	-1.0	0.3	4.0	668,207	637,854	
501	Automotive	19,729	18,950	18,885	4.1	-3.4	4.5	27,637	28,714	28,811	-3.8	-2.4	-4.1	111,880	108,206	
502	Furniture	3,592	3,274	3,286	9.7	-4.7	9.3	5,674	5,565	5,468	2.0	3.0	3.8	20,050	19,892	
503	Lumber	8,302	7,629	8,167	8.8	-0.2	1.7	7,962	7,974	8,479	-0.2	-1.4	-6.1	43,420	44,130	
504	Prof. equip.	22,914	19,523	20,379	17.4	-6.9	12.4	25,768	26,756	24,829	-3.7	-2.1	3.8	124,506	113,101	
505	Metals	9,258	8,704	9,275	6.4	-4.4	-0.2	14,303	14,330	13,893	-0.2	0.7	3.0	53,771	53,412	
506	Electrical	17,792	16,475	16,887	8.0	-0.6	5.4	27,386	26,899	25,982	1.8	1.6	5.4	99,504	96,449	
507	Hardware	7,519	6,613	6,770	13.7	2.5	11.1	13,593	13,577	12,426	0.1	0.6	9.4	38,724	36,350	
508	Machinery	20,286	18,810	17,760	7.8	-4.3	14.2	44,328	44,681	40,700	-0.8	1.9	8.9	112,764	102,063	
509	Other Durable	11,148	10,164	10,640	9.7	-6.6	4.8	15,907	15,974	15,015	-0.4	2.2	5.9	63,588	64,251	
51	<b>Nondurable</b>	102,105	100,220	98,301	1.9	-1.4	3.9	92,183	91,878	86,089	0.3	-2.5	7.1	593,790	592,000	
511	Paper	7,631	7,102	6,635	7.4	-4.0	15.0	9,047	8,963	8,034	0.9	-3.1	12.6	44,191	41,101	
512	Drugs	10,779	10,158	9,103	6.1	-5.7	18.4	14,333	14,335	11,914	0.0	-2.6	20.3	63,990	53,939	
513	Apparel	6,726	5,749	6,502	17.0	-14.9	3.4	12,421	11,769	11,925	5.5	1.2	4.2	41,442	39,973	
514	Groceries	29,328	28,877	27,687	1.6	1.8	5.9	16,221	16,375	15,427	-0.9	1.5	5.1	167,363	162,874	
515	Farm-products	8,297	8,474	9,266	-2.1	-0.8	-10.5	8,330	8,351	8,637	-0.3	-16.1	-3.6	54,534	61,914	
516	Chemicals	5,006	4,691	4,871	6.7	0.1	2.8	5,139	5,125	4,906	0.3	3.1	4.7	28,108	27,739	
517	Petroleum	12,581	12,587	13,276	0.0	1.9	-5.2	4,471	4,673	4,658	-4.3	3.3	-4.0	73,104	85,062	
518	Alcohol	5,109	4,923	4,767	3.8	2.9	7.2	5,463	5,084	4,790	7.5	-1.4	14.1	26,773	25,438	
519	Other Nondur.	16,648	17,659	16,194	-5.7	-2.0	2.8	16,758	17,203	15,798	-2.6	-3.9	6.1	94,285	93,960	

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			
	<b>U.S. Total</b>	1.0	1.3	1.0	1.4	0.4	0.2	0.7	1.0	0.9	0.7	0.3
50	<b>Durable</b>	2.1	2.1	2.1	2.1	0.6	0.2	1.1	1.1	2.0	2.4	0.8
501	Automotive	4.1	5.4	4.1	5.4	1.2	0.8	2.6	2.8	4.2	4.0	1.6
502	Furniture	6.5	7.7	6.5	7.5	2.2	0.8	4.6	2.6	6.4	5.6	2.6
503	Lumber	4.7	5.9	5.0	5.9	1.2	0.8	2.5	2.6	4.8	5.3	1.7
504	Prof. equip.	5.3	6.4	5.3	6.4	1.4	0.6	3.1	3.4	4.5	5.6	2.8
505	Metals	4.5	9.2	4.5	9.2	1.3	0.7	2.4	3.1	4.3	4.3	1.1
506	Electrical	5.6	5.3	5.4	5.1	1.3	0.5	2.2	1.9	5.9	5.0	1.4
507	Hardware	5.1	4.8	5.1	4.8	1.2	0.5	2.3	2.0	5.4	4.7	1.1
508	Machinery	6.1	5.6	5.8	5.6	1.7	0.5	3.3	2.1	6.3	6.1	2.4
509	Other Durable	5.5	7.7	5.5	7.7	1.6	0.8	2.7	3.4	5.9	4.9	2.3
51	<b>Nondurable</b>	1.9	2.2	1.9	2.2	0.5	0.4	1.2	1.3	1.8	0.7	0.5
511	Paper	4.5	4.4	4.4	4.3	1.1	0.5	4.7	5.0	4.8	0.4	0.3
512	Drugs	5.9	4.9	5.7	4.9	0.7	0.5	2.5	1.5	6.3	5.5	2.2
513	Apparel	5.4	7.7	5.3	7.8	2.1	0.8	2.8	3.2	4.9	4.5	1.9
514	Groceries	3.0	5.6	3.0	5.5	0.8	0.5	1.5	2.3	3.0	3.2	0.9
515	Farm-products	5.1	8.3	5.1	8.1	2.3	1.7	2.9	4.4	4.3	4.5	2.1
516	Chemicals	5.9	5.6	6.0	5.6	1.3	0.6	2.4	2.1	5.7	5.7	1.2
517	Petroleum	6.0	14.1	5.9	14.2	1.0	0.7	1.9	1.7	5.8	5.7	1.2
518	Alcohol	6.3	6.2	6.4	6.2	1.6	1.3	2.0	5.6	6.2	6.8	1.1
519	Other Nondur.	6.1	6.1	6.1	6.0	1.8	1.0	4.8	4.4	6.0	5.3	2.3

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998						1997					
		Jul.	Jun.r	May.r	Apr.	Mar.	Jun.r	Jul.	Jun.r	May.r	Apr.	Mar.	Jun.r
	<b>U.S. Total<sup>1</sup></b>	<b>1.006</b>	<b>1.038</b>	<b>0.985</b>	<b>1.009</b>	<b>1.034</b>	<b>1.007</b>	<b>0.996</b>	<b>0.986</b>	<b>0.995</b>	<b>1.007</b>	<b>1.008</b>	<b>0.985</b>
50	<b>Durable</b>	<b>1.007</b>	<b>1.056</b>	<b>0.969</b>	<b>1.001</b>	<b>1.048</b>	<b>1.021</b>	<b>1.014</b>	<b>0.999</b>	<b>1.008</b>	<b>1.008</b>	<b>1.000</b>	<b>0.999</b>
501	Automotive	1.015	1.060	1.006	1.037	1.096	1.016	1.002	0.984	1.008	1.010	1.007	0.984
502	Furniture	0.986	1.029	0.969	1.008	1.034	0.998	1.018	1.018	1.006	0.977	0.990	1.016
503	Lumber	1.077	1.118	1.032	1.014	0.987	1.070	1.003	1.027	1.022	1.026	1.030	1.026
504	Prof. equip.	0.998	1.054	0.935	0.973	1.054	1.024	1.021	0.987	0.988	1.004	0.996	0.986
505	Metals	0.972	1.051	0.988	1.042	1.074	1.020	1.013	1.008	1.005	1.009	1.012	1.008
506	Electrical	1.001	1.025	0.945	0.961	1.050	1.000	1.028	1.014	1.001	0.998	0.984	1.014
507	Hardware	1.080	1.109	0.981	0.975	0.961	1.068	0.999	1.005	1.022	1.017	1.011	1.004
508	Machinery	0.988	1.065	0.997	1.043	1.080	1.023	1.010	1.003	1.018	1.019	1.008	1.002
509	Other Durable	0.934	0.999	0.939	0.949	1.025	0.979	1.037	0.999	1.002	0.989	0.957	0.999
51	<b>Nondurable</b>	<b>1.010</b>	<b>1.023</b>	<b>0.998</b>	<b>1.018</b>	<b>1.028</b>	<b>0.995</b>	<b>0.961</b>	<b>0.961</b>	<b>0.970</b>	<b>1.009</b>	<b>1.019</b>	<b>0.961</b>
511	Paper	1.011	0.999	0.940	0.993	1.042	0.971	1.004	0.978	0.983	1.013	1.005	0.978
512	Drugs	0.999	1.002	0.941	1.002	1.032	0.964	0.989	0.961	0.948	0.998	0.999	0.961
513	Apparel	1.082	0.989	0.819	0.956	1.093	0.963	1.034	1.025	0.976	0.969	0.964	1.023
514	Groceries	1.020	1.027	1.014	0.996	1.009	1.001	0.998	0.987	0.989	0.985	0.982	0.988
515	Farm-products	0.921	0.944	0.961	0.973	1.042	0.918	0.761	0.811	0.859	1.012	1.111	0.806
516	Chemicals	0.998	1.088	1.032	1.039	1.033	1.051	0.993	1.010	1.017	1.007	1.018	1.010
517	Petroleum	0.990	0.986	1.001	1.017	1.005	0.960	0.981	0.947	1.000	0.995	0.972	0.951
518	Alcohol	1.074	1.102	1.030	1.003	0.953	1.061	1.025	1.010	0.963	1.006	0.982	1.006
519	Other Nondur.	1.017	1.105	1.126	1.153	1.039	1.091	0.951	0.965	1.013	1.073	1.070	0.966



r Revised

<sup>1</sup> 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.



# Monthly Wholesale Trade

Sales and Inventories

July 1998

BW/98-7

Issued September 1998

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

## MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES July 1998

**Sales.** July 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$214.5 billion, up 0.3 percent (+/- 0.6%) from the revised June level and were 2.7 percent (+/- 1.1%) above the July 1997 level. The June preliminary estimate was revised downward \$0.1 billion or 0.1 percent. Among durable goods, sales of lumber and other construction materials increased 4.1 percent from last month, and metals and minerals, except petroleum grew 1.4 percent. Among nondurable goods, sales of beer, wine, and distilled alcoholic beverages increased 2.8 percent from June, and petroleum and petroleum products rose 1.7 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$276.9 billion at the end of July, down 0.2 percent (+/- 0.4%) from the revised June level and were 5.1 percent

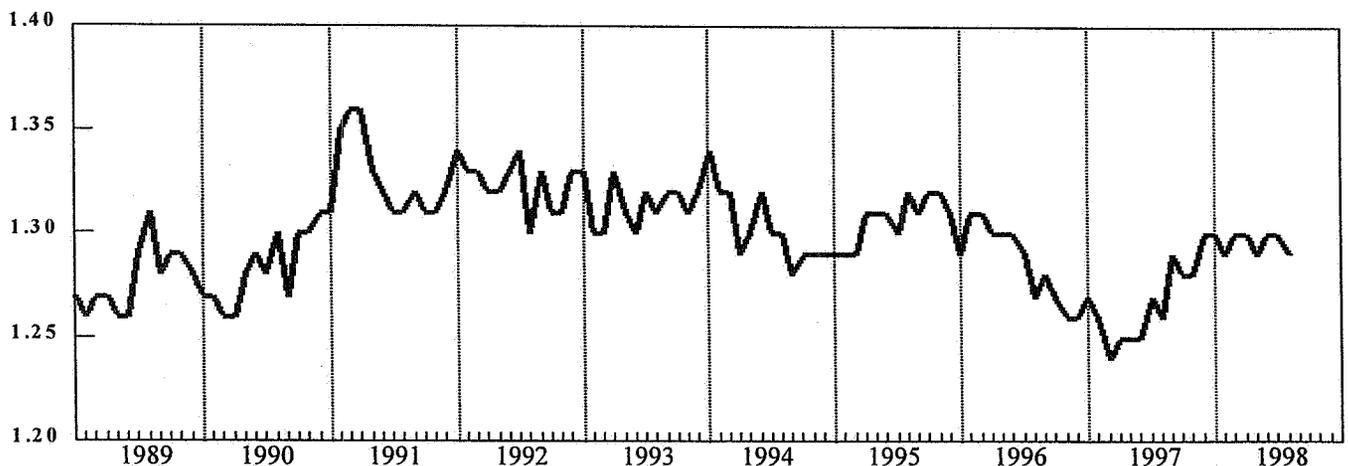
(+/- 1.8%) above July 1997. The June preliminary estimate was revised downward \$0.4 billion or 0.1 percent. Among durable goods, inventories of motor vehicles and automotive equipment decreased 2.3 percent from last month, while lumber and other construction materials increased 1.5 percent. Within the nondurable goods trade group, inventories of chemicals and allied products rose 4.3 percent from June, while beer, wine, and distilled alcoholic beverages fell 2.9 percent.

**Inventories/Sales Ratio.** The July inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.29. The July 1997 ratio was 1.26.

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

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



Monthly Wholesale Trade for August is scheduled to be released October 8, 1998 at 10:00 a.m.

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Piencykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Jul. 1998 (p)	Jun. 1998 (r)	Jul. 1997 (r)	Jul./ Jun.	Jun./ May	Jul. 98 Jul. 97	Jul. 1998 (p)	Jun. 1998 (r)	Jul. 1997 (r)	Jul./ Jun.	Jun./ May	Jul. 98 Jul. 97	Jul. 1998 (p)	Jun. 1998 (r)	Jul. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	<b>214,537</b>	<b>213,904</b>	<b>208,822</b>	<b>0.3</b>	<b>0.2</b>	<b>2.7</b>	<b>276,898</b>	<b>277,518</b>	<b>263,517</b>	<b>-0.2</b>	<b>-0.1</b>	<b>5.1</b>	<b>1.29</b>	<b>1.30</b>	<b>1.26</b>
<b>50</b>	<b>Durable</b>	<b>114,764</b>	<b>114,394</b>	<b>111,130</b>	<b>0.3</b>	<b>1.1</b>	<b>3.3</b>	<b>181,511</b>	<b>182,313</b>	<b>173,444</b>	<b>-0.4</b>	<b>-0.5</b>	<b>4.7</b>	<b>1.58</b>	<b>1.59</b>	<b>1.56</b>
501	Automotive	18,918	18,701	18,207	1.2	-0.7	3.9	27,151	27,779	28,860	-2.3	-2.5	-5.9	1.44	1.49	1.59
502	Furniture	3,478	3,505	3,329	-0.8	3.7	4.5	5,675	5,597	5,326	1.4	1.2	6.6	1.63	1.60	1.60
503	Lumber	7,827	7,516	7,631	4.1	1.7	2.6	7,884	7,767	8,277	1.5	-0.4	-4.7	1.01	1.03	1.08
504	Prof. equip.	21,527	21,686	19,910	-0.7	3.9	8.1	25,794	26,157	25,103	-1.4	-3.4	2.8	1.20	1.21	1.26
505	Metals	8,907	8,781	9,181	1.4	-0.3	-3.0	14,076	14,149	13,811	-0.5	-0.8	1.9	1.58	1.61	1.50
506	Electrical	17,303	17,346	17,226	-0.2	-0.5	0.4	26,859	26,906	25,592	-0.2	0.1	5.0	1.55	1.55	1.49
507	Hardware	6,728	6,780	6,457	-0.8	0.6	4.2	13,486	13,565	12,221	-0.6	2.1	10.4	2.00	2.00	1.89
508	Machinery	18,768	18,917	17,770	-0.8	0.3	5.6	44,879	44,480	39,302	0.9	1.3	14.2	2.39	2.35	2.21
509	Other Durable	11,308	11,162	11,419	1.3	3.1	-1.0	15,707	15,913	14,952	-1.3	-0.2	5.0	1.39	1.43	1.31
<b>51</b>	<b>Nondurable</b>	<b>99,773</b>	<b>99,510</b>	<b>97,692</b>	<b>0.3</b>	<b>-0.7</b>	<b>2.1</b>	<b>95,387</b>	<b>95,205</b>	<b>90,073</b>	<b>0.2</b>	<b>0.7</b>	<b>5.9</b>	<b>0.96</b>	<b>0.96</b>	<b>0.92</b>
511	Paper	7,540	7,621	6,833	-1.1	0.9	10.3	9,215	9,242	8,501	-0.3	1.4	8.4	1.22	1.21	1.24
512	Drugs	10,873	10,801	9,697	0.7	0.1	12.1	14,863	14,891	12,483	-0.2	-1.5	19.1	1.37	1.38	1.29
513	Apparel	6,768	6,827	6,999	-0.9	-2.7	-3.3	12,055	12,040	11,750	0.1	-0.1	2.6	1.78	1.76	1.68
514	Groceries	28,957	28,630	27,060	1.1	0.5	7.0	16,347	16,403	15,441	-0.3	-0.9	5.9	0.56	0.57	0.57
515	Farm-products	8,718	8,811	9,847	-1.1	-0.1	-11.5	10,516	10,313	11,167	2.0	6.1	-5.8	1.21	1.17	1.13
516	Chemicals	4,559	4,525	4,776	0.8	-0.5	-4.5	5,075	4,865	4,963	4.3	-3.5	2.3	1.11	1.08	1.04
517	Petroleum	12,888	12,675	13,703	1.7	0.8	-5.9	4,588	4,679	4,856	-1.9	0.1	-5.5	0.36	0.37	0.35
518	Alcohol	4,774	4,645	4,571	2.8	-2.8	4.4	5,233	5,387	4,678	-2.9	2.0	11.9	1.10	1.16	1.02
519	Other Nondur.	14,696	14,975	14,206	-1.9	-4.5	3.4	17,495	17,385	16,234	0.6	2.4	7.8	1.19	1.16	1.14
<b>Not Adjusted</b>																
	<b>U.S. Total</b>	<b>216,289</b>	<b>222,518</b>	<b>210,992</b>	<b>-2.8</b>	<b>5.8</b>	<b>2.5</b>	<b>276,110</b>	<b>274,411</b>	<b>262,527</b>	<b>0.6</b>	<b>-0.7</b>	<b>5.2</b>	<b>Sales to date</b>		
														<b>1998</b>	<b>1997</b>	
<b>50</b>	<b>Durable</b>	<b>115,362</b>	<b>120,486</b>	<b>112,141</b>	<b>-4.3</b>	<b>9.4</b>	<b>2.9</b>	<b>183,824</b>	<b>182,653</b>	<b>175,647</b>	<b>0.6</b>	<b>-1.0</b>	<b>4.7</b>	<b>783,515</b>	<b>749,995</b>	
501	Automotive	19,221	19,842	18,717	-3.1	4.7	2.7	27,097	27,501	28,773	-1.5	-4.2	-5.8	131,214	126,923	
502	Furniture	3,412	3,600	3,302	-5.2	10.0	3.3	5,794	5,687	5,433	1.9	2.2	6.6	23,470	23,194	
503	Lumber	8,571	8,358	8,364	2.5	9.6	2.5	7,955	7,969	8,343	-0.2	-0.1	-4.7	52,047	52,494	
504	Prof. equip.	21,505	22,857	19,711	-5.9	17.1	9.1	26,155	25,712	25,480	1.7	-3.9	2.6	145,954	132,812	
505	Metals	8,720	9,202	9,025	-5.2	5.7	-3.4	14,231	14,262	13,977	-0.2	-0.5	1.8	62,435	62,437	
506	Electrical	17,424	17,814	17,433	-2.2	8.1	-0.1	27,584	27,336	26,283	0.9	1.6	4.9	116,950	113,882	
507	Hardware	7,273	7,519	7,032	-3.3	13.7	3.4	13,473	13,660	12,209	-1.4	0.6	10.4	45,997	43,382	
508	Machinery	18,505	20,165	17,663	-8.2	7.2	4.8	45,373	44,613	39,734	1.7	-0.2	14.2	131,148	119,726	
509	Other Durable	10,731	11,129	10,894	-3.6	9.5	-1.5	16,162	15,913	15,415	1.6	-0.4	4.8	74,300	75,145	
<b>51</b>	<b>Nondurable</b>	<b>100,927</b>	<b>102,032</b>	<b>98,851</b>	<b>-1.1</b>	<b>1.8</b>	<b>2.1</b>	<b>92,286</b>	<b>91,758</b>	<b>86,880</b>	<b>0.6</b>	<b>-0.1</b>	<b>6.2</b>	<b>694,644</b>	<b>690,851</b>	
511	Paper	7,548	7,636	6,867	-1.2	7.5	9.9	9,233	9,048	8,527	2.0	0.9	8.3	51,744	47,968	
512	Drugs	10,884	10,812	9,755	0.7	6.4	11.6	14,685	14,355	12,333	2.3	0.1	19.1	74,907	63,694	
513	Apparel	7,337	6,766	7,699	8.4	17.7	-4.7	12,465	12,305	12,149	1.3	4.6	2.6	48,819	47,672	
514	Groceries	29,970	29,403	28,142	1.9	1.8	6.5	16,298	16,223	15,379	0.5	-0.9	6.0	197,408	191,016	
515	Farm-products	8,038	8,309	9,040	-3.3	-1.9	-11.1	8,150	8,281	8,632	-1.6	-0.8	-5.6	62,584	70,954	
516	Chemicals	4,637	4,878	4,881	-4.9	4.0	-5.0	5,039	4,894	4,928	3.0	-4.5	2.3	32,617	32,620	
517	Petroleum	12,656	12,472	13,319	1.5	-0.9	-5.0	4,418	4,436	4,705	-0.4	-5.1	-6.1	85,651	98,381	
518	Alcohol	5,146	5,119	4,928	0.5	4.0	4.4	5,343	5,457	4,772	-2.1	7.3	12.0	31,929	30,366	
519	Other Nondur.	14,711	16,637	14,220	-11.6	-5.8	3.5	16,655	16,759	15,455	-0.6	-2.6	7.8	108,985	108,180	

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			
	<b>U.S. Total</b>	<b>1.0</b>	<b>1.3</b>	<b>1.0</b>	<b>1.4</b>	<b>0.4</b>	<b>0.2</b>	<b>0.7</b>	<b>1.0</b>	<b>0.9</b>	<b>0.7</b>	<b>0.3</b>
<b>50</b>	<b>Durable</b>	<b>2.1</b>	<b>2.2</b>	<b>2.1</b>	<b>2.2</b>	<b>0.6</b>	<b>0.2</b>	<b>1.0</b>	<b>1.1</b>	<b>2.0</b>	<b>2.4</b>	<b>0.8</b>
501	Automotive	4.0	5.3	4.1	5.3	1.2	0.8	2.5	2.3	4.1	4.1	1.5
502	Furniture	6.5	7.7	6.6	7.6	2.1	0.7	4.3	2.4	6.3	5.7	2.6
503	Lumber	4.7	5.8	4.9	5.9	1.2	0.8	2.4	2.6	4.8	5.2	1.6
504	Prof. equip.	5.3	6.3	4.9	6.3	1.3	0.7	3.0	3.3	4.5	5.4	2.7
505	Metals	4.6	9.2	4.5	9.1	1.3	0.6	2.0	3.1	4.4	4.3	1.0
506	Electrical	5.7	5.4	5.6	5.4	1.4	0.5	2.2	1.9	6.0	5.1	1.4
507	Hardware	5.2	4.8	5.1	4.8	1.1	0.5	2.1	2.0	5.5	4.7	1.1
508	Machinery	6.1	5.7	5.9	5.7	1.7	0.5	3.1	2.1	6.3	6.1	2.2
509	Other Durable	5.6	7.7	5.5	7.8	1.7	0.8	2.6	3.3	5.9	4.9	1.9
<b>51</b>	<b>Nondurable</b>	<b>1.9</b>	<b>2.2</b>	<b>1.9</b>	<b>2.2</b>	<b>0.5</b>	<b>0.4</b>	<b>1.2</b>	<b>1.3</b>	<b>1.7</b>	<b>0.8</b>	<b>0.5</b>
511	Paper	4.7	4.5	4.5	4.3	1.1	0.5	4.7	5.0	4.9	0.4	0.3
512	Drugs	5.9	4.9	5.9	4.9	0.8	0.5	2.5	1.5	6.2	5.6	2.1
513	Apparel	5.4	7.7	5.3	7.7	1.9	0.8	2.8	2.8	4.7	4.4	1.9
514	Groceries	3.0	5.5	3.0	5.5	0.8	0.5	1.5	2.0	3.0	3.2	1.0
515	Farm-products	5.4	8.4	5.1	8.3	2.2	1.7	2.8	4.4	4.4	4.6	2.0
516	Chemicals	5.9	5.7	6.0	5.7	1.3	0.6	2.3	2.0	5.7	5.8	1.1
517	Petroleum	5.9	14.7	5.9	14.3	1.0	0.8	1.9	1.7	5.7	5.8	1.2
518	Alcohol	6.3	6.2	6.3	6.3	1.5	1.3	1.9	5.7	6.2	6.8	1.0
519	Other Nondur.	6.2	6.1	6.1	6.1	2.0	1.0	4.2	4.2	5.9	5.3	2.4

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998					1997	1998					1997
		Aug.	Jul.r	Jun.r	May	Apr.	Jul.r	Aug.	Jul.r	Jun.r	May	Apr.	Jul.r
	<b>U.S. Total<sup>1</sup></b>	<b>1.007</b>	<b>1.008</b>	<b>1.038</b>	<b>0.985</b>	<b>1.009</b>	<b>1.007</b>	<b>0.979</b>	<b>0.995</b>	<b>0.986</b>	<b>0.995</b>	<b>1.007</b>	<b>0.995</b>
<b>50</b>	<b>Durable</b>	<b>1.009</b>	<b>1.010</b>	<b>1.054</b>	<b>0.969</b>	<b>1.001</b>	<b>1.014</b>	<b>1.002</b>	<b>1.013</b>	<b>1.001</b>	<b>1.008</b>	<b>1.008</b>	<b>1.014</b>
501	Automotive	0.971	1.016	1.061	1.006	1.037	1.028	0.973	0.998	0.990	1.008	1.010	0.997
502	Furniture	1.003	0.981	1.027	0.969	1.008	0.992	1.036	1.021	1.016	1.006	0.977	1.020
503	Lumber	1.082	1.095	1.112	1.032	1.014	1.096	0.998	1.009	1.026	1.022	1.026	1.008
504	Prof. equip.	0.989	0.999	1.054	0.935	0.973	0.990	0.999	1.014	0.983	0.988	1.004	1.015
505	Metals	1.004	0.979	1.048	0.988	1.042	0.983	1.000	1.011	1.008	1.005	1.009	1.012
506	Electrical	1.017	1.007	1.027	0.945	0.961	1.012	1.029	1.027	1.016	1.001	0.998	1.027
507	Hardware	1.019	1.081	1.109	0.981	0.975	1.089	1.003	0.999	1.007	1.022	1.017	0.999
508	Machinery	0.992	0.986	1.066	0.997	1.043	0.994	1.002	1.011	1.003	1.018	1.019	1.011
509	Other Durable	1.032	0.949	0.997	0.939	0.949	0.954	1.025	1.029	1.000	1.002	0.989	1.031
<b>51</b>	<b>Nondurable</b>	<b>0.999</b>	<b>1.008</b>	<b>1.023</b>	<b>0.998</b>	<b>1.018</b>	<b>1.010</b>	<b>0.938</b>	<b>0.962</b>	<b>0.959</b>	<b>0.970</b>	<b>1.009</b>	<b>0.962</b>
511	Paper	1.024	1.001	1.002	0.940	0.993	1.005	0.961	1.002	0.979	0.983	1.013	1.003
512	Drugs	0.952	1.001	1.001	0.941	1.002	1.006	0.972	0.988	0.964	0.948	0.998	0.988
513	Apparel	1.080	1.084	0.991	0.819	0.956	1.100	1.019	1.034	1.022	0.976	0.969	1.034
514	Groceries	1.004	1.035	1.027	1.014	0.996	1.040	0.972	0.997	0.989	0.989	0.985	0.996
515	Farm-products	0.947	0.922	0.943	0.961	0.973	0.918	0.699	0.775	0.803	0.859	1.012	0.773
516	Chemicals	1.004	1.017	1.078	1.032	1.039	1.022	1.007	0.993	1.006	1.017	1.007	0.993
517	Petroleum	1.002	0.982	0.984	1.001	1.017	0.972	1.019	0.963	0.948	1.000	0.995	0.969
518	Alcohol	1.028	1.078	1.102	1.030	1.003	1.078	0.999	1.021	1.013	0.963	1.006	1.020
519	Other Nondur.	0.984	1.001	1.111	1.126	1.153	1.001	0.921	0.952	0.964	1.013	1.073	0.952



r Revised

<sup>1</sup> 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.



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

# Monthly Wholesale Trade

Sales and Inventories

August 1998

BW/98-8

Issued October 1998

## 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

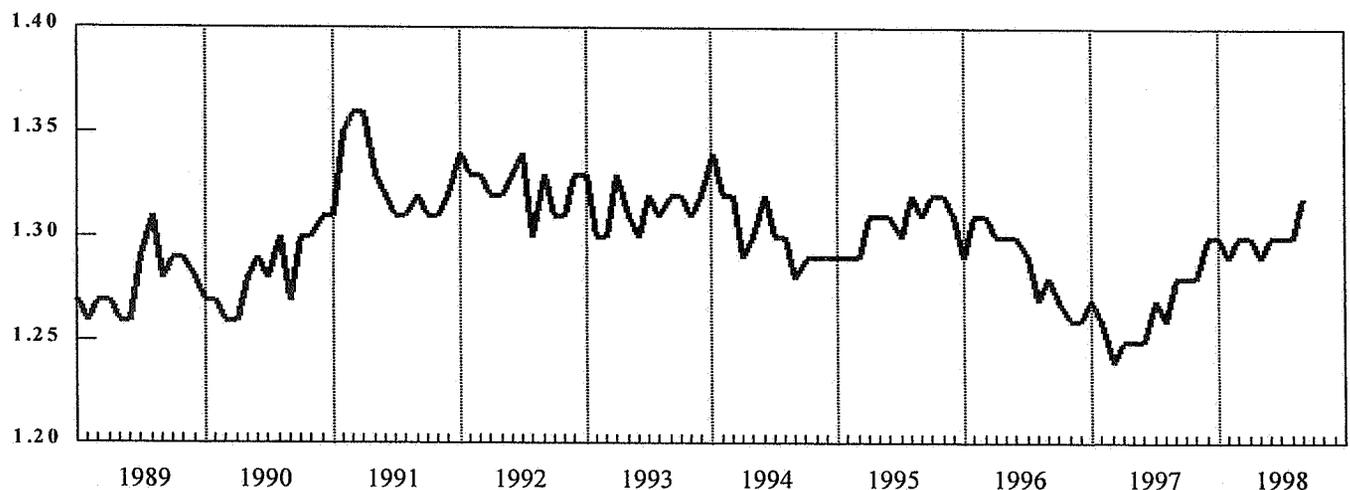
upward \$0.6 billion or 0.2 percent. End-of-month inventories of durable goods increased 0.8 percent (+/-0.8%) from last month and were up 5.8 percent (+/-2.3%) from the previous year. Compared to July, inventories of metals and minerals, except petroleum, grew 2.8 percent and lumber and other construction 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 Inventories/Sales Ratios of Merchant Wholesalers: 1989 to 1998

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



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

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienckyoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> 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)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	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
<b>50</b>	<b>Durable</b>	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
<b>51</b>	<b>Nondurable</b>	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
<b>Not Adjusted</b>																
	<b>U.S. Total</b>	210,425	216,434	205,591	-2.8	-2.7	2.4	275,896	276,448	260,251	-0.2	0.7	6.0	1,688,729	1,646,437	
<b>50</b>	<b>Durable</b>	112,650	115,553	108,565	-2.5	-4.1	3.8	184,508	184,246	174,159	0.1	0.9	5.9	896,356	858,560	
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	
<b>51</b>	<b>Nondurable</b>	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			
	<b>U.S. Total</b>	1.0	1.3	1.0	1.4	0.4	0.2	0.7	1.0	0.9	0.7	0.3
50	<b>Durable</b>	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	<b>Nondurable</b>	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.

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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
	<b>U.S. Total<sup>1</sup></b>	<b>1.022</b>	<b>0.995</b>	<b>1.011</b>	<b>1.038</b>	<b>0.985</b>	<b>0.993</b>	<b>0.978</b>	<b>0.981</b>	<b>0.994</b>	<b>0.986</b>	<b>0.995</b>	<b>0.980</b>
<b>50</b>	<b>Durable</b>	<b>1.048</b>	<b>0.997</b>	<b>1.014</b>	<b>1.054</b>	<b>0.969</b>	<b>0.998</b>	<b>0.994</b>	<b>1.003</b>	<b>1.013</b>	<b>1.001</b>	<b>1.008</b>	<b>1.003</b>
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
<b>51</b>	<b>Nondurable</b>	<b>0.993</b>	<b>0.994</b>	<b>1.011</b>	<b>1.023</b>	<b>0.998</b>	<b>0.987</b>	<b>0.949</b>	<b>0.940</b>	<b>0.961</b>	<b>0.959</b>	<b>0.970</b>	<b>0.940</b>
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.



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

# Monthly Wholesale Trade

## Sales and Inventories

September 1998

BW/98-9

Issued November 1998

### MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES SEPTEMBER 1998

**Sales.** September 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$214.1 billion, up 1.1 percent (+/- 0.7%) from the revised August level and were 1.7 percent (+/-1.0%) above the September 1997 level. The August preliminary estimate was revised upward \$0.1 billion or 0.1 percent. Among durable goods, sales of hardware, plumbing and heating equipment were down 4.9 percent from last month, and furniture and home furnishings fell 3.1 percent. Sales of nondurable goods increased 2.6 percent (+/-0.8%) from August and were up 1.7 percent (+/-1.5%) from last year. Compared to last month, sales of beer, wine, and distilled alcoholic beverages rose 8.8 percent and petroleum and petroleum products increased 7.4 percent, while apparel, piece goods and notions fell 4.0 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$283.9 billion at the end of September, up 1.2 percent (+/-0.4%) from the revised August level and were 5.9 percent (+/-1.7%) above September 1997. The August preliminary estimate was

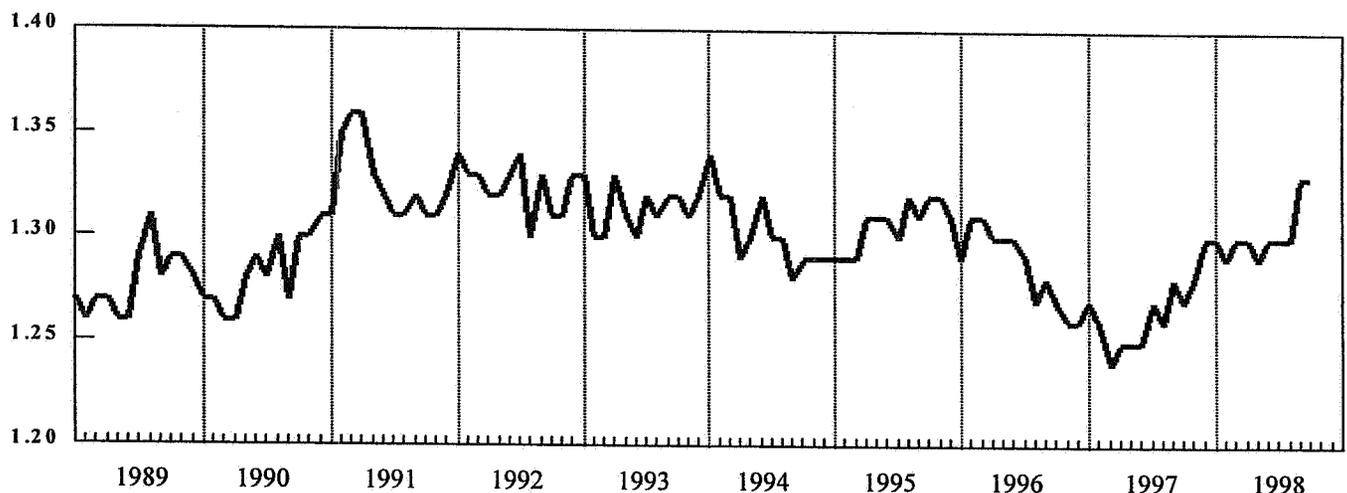
revised upward \$0.6 billion or 0.2 percent. End-of-month inventories of durable goods increased 0.8 percent (+/-0.6%) from last month and were up 5.3 percent (+/-2.2%) from the previous year. Compared to August, inventories of machinery, equipment, and supplies increased 1.8 percent, while lumber and other construction materials decreased 4.6 percent. End-of-month inventories of nondurable goods increased 2.0 percent (+/-0.7%) from last month and were 6.8 percent (+/-2.3%) above September 1997. Compared to last month, inventories of farm-product raw materials increased 15.5 percent, and petroleum and petroleum products increased 6.0 percent.

**Inventories/Sales Ratio.** The September inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.33. The September 1997 ratio was 1.27.

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

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



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

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Piencykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Sep. 1998 (p)	Aug. 1998 (r)	Sep. 1997 (r)	Sep./ Aug.	Aug./ Jul.	Sep. 98 Sep. 97	Sep. 1998 (p)	Aug. 1998 (r)	Sep. 1997 (r)	Sep./ Aug.	Aug./ Jul.	Sep. 98 Sep. 97	Sep. 1998 (p)	Aug. 1998 (r)	Sep. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	214,055	211,713	210,396	1.1	-1.2	1.7	283,914	280,591	268,196	1.2	1.1	5.9	1.33	1.33	1.27
50	<b>Durable</b>	113,180	113,403	111,206	-0.2	-1.0	1.8	185,129	183,747	175,733	0.8	1.0	5.3	1.64	1.62	1.58
501	Automotive	19,628	19,476	18,455	0.8	2.1	6.4	28,169	27,925	29,296	0.9	2.2	-3.8	1.44	1.43	1.59
502	Furniture	3,396	3,506	3,540	-3.1	1.1	-4.1	5,658	5,650	5,457	0.1	-0.5	3.7	1.67	1.61	1.54
503	Lumber	7,637	7,671	7,502	-0.4	-1.8	1.8	7,616	7,980	8,161	-4.6	1.3	-6.7	1.00	1.04	1.09
504	Prof. equip.	21,691	21,705	20,314	-0.1	0.8	6.8	25,431	25,580	25,600	-0.6	-0.8	-0.7	1.17	1.18	1.26
505	Metals	8,677	8,615	9,239	0.7	-3.1	-6.1	14,736	14,561	13,895	1.2	2.8	6.1	1.70	1.69	1.50
506	Electrical	16,909	16,969	16,936	-0.4	-1.4	-0.2	27,369	26,969	25,800	1.5	0.4	6.1	1.62	1.59	1.52
507	Hardware	6,311	6,633	6,290	-4.9	-1.2	0.3	13,457	13,559	12,413	-0.8	0.5	8.4	2.13	2.04	1.97
508	Machinery	18,811	18,410	17,431	2.2	-1.2	7.9	46,089	45,284	39,878	1.8	0.6	15.6	2.45	2.46	2.29
509	Other Durable	10,120	10,418	11,499	-2.9	-7.2	-12.0	16,604	16,239	15,233	2.2	3.0	9.0	1.64	1.56	1.32
51	<b>Nondurable</b>	100,875	98,310	99,190	2.6	-1.4	1.7	98,785	96,844	92,463	2.0	1.4	6.8	0.98	0.99	0.93
511	Paper	7,836	7,639	7,225	2.6	1.5	8.5	9,301	9,363	8,734	-0.7	1.4	6.5	1.19	1.23	1.21
512	Drugs	11,253	11,045	9,714	1.9	0.0	15.8	14,844	14,846	12,968	0.0	0.0	14.5	1.32	1.34	1.33
513	Apparel	6,540	6,814	6,962	-4.0	1.0	-6.1	12,154	12,275	11,782	-1.0	1.8	3.2	1.86	1.80	1.69
514	Groceries	28,849	28,860	27,131	0.0	-0.4	6.3	16,249	16,439	15,277	-1.2	0.5	6.4	0.56	0.57	0.56
515	Farm-products	8,826	8,334	10,594	5.9	-2.8	-16.7	13,013	11,268	11,786	15.5	7.2	10.4	1.47	1.35	1.11
516	Chemicals	4,523	4,541	4,771	-0.4	-0.6	-5.2	5,104	4,988	4,921	2.3	-1.9	3.7	1.13	1.10	1.03
517	Petroleum	12,471	11,609	13,646	7.4	-9.2	-8.6	4,629	4,365	4,833	6.0	-4.4	-4.2	0.37	0.38	0.35
518	Alcohol	5,103	4,692	4,682	8.8	-0.9	9.0	5,461	5,472	4,800	-0.2	3.1	13.8	1.07	1.17	1.03
519	Other Nondur.	15,474	14,776	14,465	4.7	0.5	7.0	18,030	17,828	17,362	1.1	1.8	3.8	1.17	1.21	1.20
<b>Not Adjusted</b>																
	<b>U.S. Total</b>	219,420	210,174	216,362	4.4	-2.9	1.4	278,068	276,083	262,776	0.7	-0.1	5.8	1,907,898	1,862,799	
50	<b>Durable</b>	118,259	112,672	116,937	5.0	-2.5	1.1	184,193	184,633	174,815	-0.2	0.2	5.4	1,014,637	975,497	
501	Automotive	19,196	18,580	18,086	3.3	-4.2	6.1	27,803	27,311	28,886	1.8	0.3	-3.7	169,165	162,043	
502	Furniture	3,566	3,492	3,784	2.1	2.7	-5.8	5,856	5,859	5,643	-0.1	1.0	3.8	30,517	30,235	
503	Lumber	8,210	8,354	7,990	-1.7	-2.6	2.8	7,586	8,012	8,120	-5.3	1.0	-6.6	68,619	68,676	
504	Prof. equip.	23,296	21,336	21,878	9.2	-0.8	6.5	25,050	25,631	25,190	-2.3	-2.0	-0.6	190,582	173,937	
505	Metals	8,868	8,589	9,433	3.2	-1.6	-6.0	14,515	14,576	13,700	-0.4	1.8	5.9	79,903	80,929	
506	Electrical	18,566	17,241	18,579	7.7	-1.4	-0.1	27,506	27,697	25,955	-0.7	0.4	6.0	152,824	149,858	
507	Hardware	6,841	6,693	6,818	2.2	-8.1	0.3	13,390	13,586	12,376	-1.4	0.8	8.2	59,538	56,656	
508	Machinery	18,604	17,802	17,640	4.5	-3.5	5.5	45,352	45,284	39,240	0.2	-0.6	15.6	167,492	153,953	
509	Other Durable	11,112	10,585	12,729	5.0	-1.4	-12.7	17,135	16,677	15,705	2.7	3.1	9.1	95,997	99,210	
51	<b>Nondurable</b>	101,161	97,502	99,425	3.8	-3.3	1.7	93,875	91,450	87,961	2.7	-0.8	6.7	893,261	887,302	
511	Paper	8,291	7,799	7,572	6.3	3.5	9.5	9,106	9,091	8,551	0.2	-1.6	6.5	67,818	62,884	
512	Drugs	11,579	10,471	10,044	10.6	-5.4	15.3	14,785	14,445	12,903	2.4	-1.6	14.6	97,138	82,971	
513	Apparel	7,364	7,345	7,776	0.3	1.1	-5.3	12,239	12,521	11,888	-2.3	0.6	3.0	63,458	62,931	
514	Groceries	28,532	29,033	26,805	-1.7	-3.1	6.4	16,330	16,110	15,369	1.4	-1.0	6.3	254,969	244,900	
515	Farm-products	8,667	7,684	10,329	12.8	-2.5	-16.1	9,330	7,989	8,462	16.8	-0.8	10.3	78,779	90,123	
516	Chemicals	4,505	4,568	4,738	-1.4	-1.6	-4.9	4,992	5,003	4,818	-0.2	-1.5	3.6	41,696	42,065	
517	Petroleum	12,059	11,563	13,250	4.3	-8.4	-9.0	4,634	4,382	4,848	5.8	-0.7	-4.4	109,241	125,893	
518	Alcohol	5,154	4,795	4,677	7.5	-6.1	10.2	5,745	5,472	5,045	5.0	1.1	13.9	41,838	39,782	
519	Other Nondur.	15,010	14,244	14,234	5.4	-3.7	5.5	16,714	16,437	16,077	1.7	-1.0	4.0	138,324	135,753	

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			
	<b>U.S. Total</b>	<b>1.0</b>	<b>1.3</b>	<b>1.0</b>	<b>1.3</b>	<b>0.4</b>	<b>0.2</b>	<b>0.7</b>	<b>1.0</b>	<b>0.9</b>	<b>0.7</b>	<b>0.3</b>
<b>50</b>	<b>Durable</b>	<b>2.1</b>	<b>2.2</b>	<b>2.1</b>	<b>2.2</b>	<b>0.6</b>	<b>0.3</b>	<b>1.0</b>	<b>1.1</b>	<b>2.0</b>	<b>2.4</b>	<b>0.8</b>
501	Automotive	4.1	5.4	4.1	5.3	1.2	0.8	2.2	2.0	4.1	4.1	1.5
502	Furniture	6.6	7.7	6.6	7.6	1.9	0.7	3.8	2.3	6.4	5.8	2.4
503	Lumber	4.7	5.8	4.9	5.9	1.1	0.8	2.3	2.4	4.9	5.3	1.6
504	Prof. equip.	5.0	6.3	4.9	6.1	1.3	0.7	3.0	3.1	4.5	5.3	2.6
505	Metals	4.6	9.2	4.6	9.2	1.3	0.7	1.7	3.0	4.4	4.4	1.0
506	Electrical	5.9	5.6	5.8	5.5	1.3	0.5	2.2	1.9	6.0	5.2	1.4
507	Hardware	5.3	5.2	5.2	5.0	1.1	0.5	1.7	1.8	5.3	4.7	1.0
508	Machinery	6.3	5.9	6.2	5.9	1.7	0.6	3.1	2.1	6.2	5.9	2.0
509	Other Durable	5.7	7.8	5.8	7.8	1.5	0.9	2.6	2.9	5.8	4.9	1.5
<b>51</b>	<b>Nondurable</b>	<b>1.9</b>	<b>2.2</b>	<b>1.9</b>	<b>2.2</b>	<b>0.5</b>	<b>0.4</b>	<b>1.0</b>	<b>1.2</b>	<b>1.7</b>	<b>0.9</b>	<b>0.5</b>
511	Paper	5.0	5.0	4.8	4.9	1.1	0.6	4.5	4.8	4.9	0.5	0.4
512	Drugs	6.0	4.9	6.0	4.9	0.7	0.5	2.3	1.4	6.2	5.6	2.1
513	Apparel	5.3	7.7	5.3	7.6	2.0	0.9	2.8	2.7	4.6	4.6	2.1
514	Groceries	3.0	5.4	3.0	5.5	0.8	0.6	1.5	1.4	3.0	3.1	1.1
515	Farm-products	5.8	8.4	5.8	8.4	2.1	1.9	3.0	4.0	4.7	4.9	2.1
516	Chemicals	5.9	5.8	6.0	5.7	1.3	0.6	2.2	2.0	5.7	5.8	1.1
517	Petroleum	6.0	15.5	5.8	15.4	0.9	0.8	1.8	1.6	5.7	5.7	1.2
518	Alcohol	6.3	8.5	6.3	8.5	1.5	1.3	1.8	11.1	6.3	6.7	0.9
519	Other Nondur.	6.3	6.2	6.3	6.2	2.0	1.0	3.9	4.0	5.8	5.2	2.6

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998					1997	1998					1997
		Oct.	Sep.r	Aug.r	Jul.	Jun.	Sep.r	Oct.	Sep.r	Aug.r	Jul.	Jun.	Sep.r
	<b>U.S. Total<sup>1</sup></b>	<b>1.061</b>	<b>1.025</b>	<b>0.994</b>	<b>1.011</b>	<b>1.038</b>	<b>1.029</b>	<b>1.007</b>	<b>0.979</b>	<b>0.980</b>	<b>0.994</b>	<b>0.986</b>	<b>0.979</b>
<b>50</b>	<b>Durable</b>	<b>1.071</b>	<b>1.049</b>	<b>0.998</b>	<b>1.014</b>	<b>1.054</b>	<b>1.052</b>	<b>0.996</b>	<b>0.997</b>	<b>1.003</b>	<b>1.013</b>	<b>1.001</b>	<b>0.996</b>
501	Automotive	1.043	0.978	0.954	1.017	1.061	0.980	0.997	0.987	0.978	0.997	0.990	0.986
502	Furniture	1.102	1.050	0.996	0.981	1.027	1.069	0.999	1.035	1.037	1.021	1.016	1.034
503	Lumber	1.089	1.075	1.089	1.098	1.112	1.065	0.958	0.996	1.004	1.007	1.026	0.995
504	Prof. equip.	1.048	1.074	0.983	0.999	1.054	1.077	1.011	0.985	1.002	1.014	0.983	0.984
505	Metals	1.041	1.022	0.997	0.982	1.048	1.021	0.980	0.985	1.001	1.011	1.008	0.986
506	Electrical	1.088	1.098	1.016	1.016	1.027	1.097	0.983	1.005	1.027	1.027	1.016	1.006
507	Hardware	1.107	1.084	1.009	1.084	1.109	1.084	0.993	0.995	1.002	0.999	1.007	0.997
508	Machinery	1.043	0.989	0.967	0.990	1.066	1.012	1.000	0.984	1.000	1.012	1.003	0.984
509	Other Durable	1.155	1.098	1.016	0.956	0.997	1.107	1.030	1.032	1.027	1.026	1.000	1.031
<b>51</b>	<b>Nondurable</b>	<b>1.044</b>	<b>1.000</b>	<b>0.990</b>	<b>1.011</b>	<b>1.023</b>	<b>1.002</b>	<b>1.025</b>	<b>0.953</b>	<b>0.939</b>	<b>0.961</b>	<b>0.959</b>	<b>0.953</b>
511	Paper	1.037	1.058	1.021	1.001	1.002	1.048	1.010	0.979	0.971	1.000	0.979	0.979
512	Drugs	1.047	1.029	0.948	1.002	1.001	1.034	1.014	0.996	0.973	0.989	0.964	0.995
513	Apparel	1.137	1.126	1.078	1.077	0.991	1.117	0.983	1.007	1.020	1.032	1.022	1.009
514	Groceries	1.034	0.989	1.006	1.034	1.027	0.988	1.059	1.005	0.980	0.995	0.989	1.006
515	Farm-products	1.049	0.982	0.922	0.919	0.943	0.975	1.097	0.717	0.709	0.766	0.803	0.718
516	Chemicals	1.011	0.996	1.006	1.016	1.078	0.993	0.977	0.978	1.003	0.998	1.006	0.979
517	Petroleum	1.022	0.967	0.996	0.987	0.984	0.971	1.034	1.001	1.004	0.966	0.948	1.003
518	Alcohol	1.040	1.010	1.022	1.078	1.102	0.999	1.094	1.052	1.000	1.020	1.013	1.051
519	Other Nondur.	0.998	0.970	0.964	1.006	1.111	0.984	0.980	0.927	0.922	0.948	0.964	0.926



r Revised

<sup>1</sup> 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.

For Wire Transmission 10:00 a.m. E.T. December 10, 1998

BW/98-10

**MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES  
OCTOBER 1998**

**Sales.** October 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$213.0 billion, down 0.4 percent (+/-0.9%) from the revised September level but were 1.4 percent (+/-1.5%) above the October 1997 level. The September preliminary estimate was revised downward \$0.2 billion or 0.1 percent. October sales of durable goods decreased 0.9 percent (+/-0.9%) from September but were 0.7 percent (+/-2.3%) above last October. Compared to last month, sales of machinery, equipment and supplies were down 4.9 percent, while electrical goods increased 2.8 percent. Among nondurable goods, sales of apparel, piece goods, and notions increased 4.4 percent from last month, while sales of beer, wine, and distilled alcoholic beverages fell 4.3 percent.

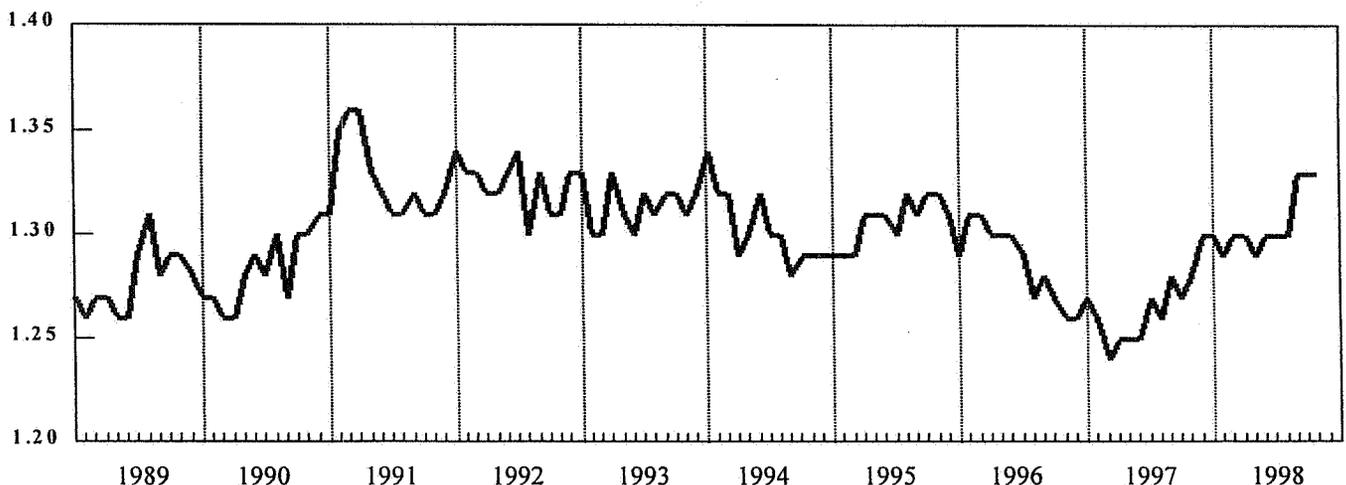
(+/-1.9%) above October 1997. The September preliminary estimate was revised upward \$0.2 billion or 0.1 percent. Among durable goods, inventories of furniture and home furnishings increased 2.7 percent from last month. End-of-month inventories of nondurable goods decreased 1.1 percent (+/-0.9%) from last month but were 4.4 percent (+/-2.6%) above October 1997. Compared to last month, inventories of petroleum and petroleum products decreased 4.1 percent and paper and paper products declined 2.3 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$283.4 billion at the end of October, down 0.2 percent (+/-0.4%) from the revised September level but were 5.5 percent

**Inventories/Sales Ratio.** The October inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.33. The October 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 Inventories/Sales Ratios of Merchant Wholesalers: 1989 to 1998**  
(Data adjusted for seasonal and trading-day differences, but not for price changes)



Monthly Wholesale Trade for November is scheduled to be released January 8, 1999 at 10:00 a.m.

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienycoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales ratios		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Oct. 1998 (p)	Sep. 1998 (r)	Oct. 1997 (r)	Oct./ Sep.	Sep./ Aug.	Oct. 98 Oct. 97	Oct. 1998 (p)	Sep. 1998 (r)	Oct. 1997 (r)	Oct./ Sep.	Sep./ Aug.	Oct. 98 Oct. 97	Oct. 1998 (p)	Sep. 1998 (r)	Oct. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	213,014	213,856	210,137	-0.4	1.0	1.4	283,432	284,128	268,745	-0.2	1.3	5.5	1.33	1.33	1.28
50	<b>Durable</b>	111,784	112,821	110,955	-0.9	-0.5	0.7	185,698	185,305	175,121	0.2	0.8	6.0	1.66	1.64	1.58
501	Automotive	19,017	19,548	18,739	-2.7	0.4	1.5	28,405	28,253	29,036	0.5	1.2	-2.2	1.49	1.45	1.55
502	Furniture	3,335	3,368	3,477	-1.0	-3.9	-4.1	5,819	5,667	5,439	2.7	0.3	7.0	1.74	1.68	1.56
503	Lumber	7,762	7,646	7,384	1.5	-0.3	5.1	7,696	7,633	7,972	0.8	-4.3	-3.5	0.99	1.00	1.08
504	Prof. equip.	21,257	21,507	20,292	-1.2	-0.9	4.8	25,106	25,470	25,859	-1.4	-0.4	-2.9	1.18	1.18	1.27
505	Metals	8,449	8,631	9,262	-2.1	0.2	-8.8	14,735	14,707	13,811	0.2	1.0	6.7	1.74	1.70	1.49
506	Electrical	17,445	16,963	16,560	2.8	0.0	5.3	27,415	27,375	25,732	0.1	1.5	6.5	1.57	1.61	1.55
507	Hardware	6,399	6,346	6,415	0.8	-4.3	-0.2	13,475	13,448	12,330	0.2	-0.8	9.3	2.11	2.12	1.92
508	Machinery	17,739	18,647	17,802	-4.9	1.3	-0.4	46,360	46,125	40,175	0.5	1.9	15.4	2.61	2.47	2.26
509	Other Durable	10,381	10,165	11,024	2.1	-2.4	-5.8	16,687	16,627	14,768	0.4	2.4	13.0	1.61	1.64	1.34
51	<b>Nondurable</b>	101,230	101,035	99,182	0.2	2.8	2.1	97,734	98,823	93,624	-1.1	2.0	4.4	0.97	0.98	0.94
511	Paper	7,881	7,849	7,305	0.4	2.7	7.9	9,066	9,277	8,879	-2.3	-0.9	2.1	1.15	1.18	1.22
512	Drugs	11,366	11,229	9,717	1.2	1.7	17.0	15,175	14,846	12,862	2.2	0.0	18.0	1.34	1.32	1.32
513	Apparel	6,889	6,599	6,789	4.4	-3.2	1.5	12,301	12,193	12,296	0.9	-0.7	0.0	1.79	1.85	1.81
514	Groceries	29,088	28,949	26,797	0.5	0.3	8.5	16,031	16,215	15,669	-1.1	-1.4	2.3	0.55	0.56	0.58
515	Farm-products	9,012	8,841	11,728	1.9	6.1	-23.2	12,666	13,153	12,565	-3.7	16.7	0.8	1.41	1.49	1.07
516	Chemicals	4,653	4,553	4,727	2.2	0.3	-1.6	5,068	5,113	4,934	-0.9	2.5	2.7	1.09	1.12	1.04
517	Petroleum	12,349	12,348	13,160	0.0	6.4	-6.2	4,412	4,599	4,848	-4.1	5.4	-9.0	0.36	0.37	0.37
518	Alcohol	4,954	5,175	4,627	-4.3	10.3	7.1	5,497	5,465	4,699	0.6	-0.1	17.0	1.11	1.06	1.02
519	Other Nondur.	15,038	15,492	14,332	-2.9	4.8	4.9	17,518	17,962	16,872	-2.5	0.8	3.8	1.16	1.16	1.18
<b>Not Adjusted</b>																
<b>Sales to date</b>																
1998      1997																
	<b>U.S. Total</b>	224,403	219,074	226,108	2.4	4.2	-0.8	285,756	278,248	270,890	2.7	0.8	5.5	2,131,955	2,088,907	
50	<b>Durable</b>	119,200	117,912	120,562	1.1	4.7	-1.1	185,370	184,243	174,786	0.6	-0.2	6.1	1,133,490	1,096,059	
501	Automotive	19,702	19,177	19,601	2.7	3.2	0.5	28,405	27,857	29,035	2.0	2.0	-2.2	188,848	181,644	
502	Furniture	3,632	3,577	3,880	1.5	2.4	-6.4	5,842	5,854	5,455	-0.2	-0.1	7.1	34,160	34,115	
503	Lumber	8,445	8,212	8,277	2.8	-1.7	2.0	7,396	7,587	7,661	-2.5	-5.3	-3.5	77,066	76,953	
504	Prof. equip.	22,129	23,077	21,611	-4.1	8.2	2.4	25,307	25,088	26,092	0.9	-2.1	-3.0	212,492	195,548	
505	Metals	8,745	8,873	9,827	-1.4	3.3	-11.0	14,396	14,501	13,507	-0.7	-0.5	6.6	88,653	90,756	
506	Electrical	19,085	18,557	18,547	2.8	7.6	2.9	26,949	27,512	25,295	-2.0	-0.7	6.5	171,900	168,405	
507	Hardware	7,077	6,841	7,211	3.4	2.2	-1.9	13,327	13,394	12,207	-0.5	-1.4	9.2	66,615	63,867	
508	Machinery	18,395	18,498	18,710	-0.6	3.9	-1.7	46,360	45,341	40,175	2.2	0.1	15.4	185,781	172,663	
509	Other Durable	11,990	11,100	12,898	8.0	4.9	-7.0	17,388	17,109	15,359	1.6	2.6	13.2	107,975	112,108	
51	<b>Nondurable</b>	105,203	101,162	105,546	4.0	3.8	-0.3	100,386	94,005	96,104	6.8	2.8	4.5	998,465	992,848	
511	Paper	8,204	8,289	7,831	-1.0	6.3	4.8	9,129	9,110	8,932	0.2	0.2	2.2	76,020	70,715	
512	Drugs	11,877	11,543	10,553	2.9	10.2	12.5	15,403	14,712	13,068	4.7	1.8	17.9	108,979	93,524	
513	Apparel	7,840	7,391	7,896	6.1	0.6	-0.7	12,104	12,291	12,099	-1.5	-1.8	0.0	71,325	70,827	
514	Groceries	30,048	28,602	28,056	5.1	-1.5	7.1	16,913	16,329	16,546	3.6	1.4	2.2	285,087	272,956	
515	Farm-products	9,697	8,602	12,983	12.7	11.9	-25.3	14,414	9,444	14,173	52.6	18.2	1.7	88,411	103,106	
516	Chemicals	4,760	4,521	4,944	5.3	-1.0	-3.7	4,962	5,011	4,825	-1.0	0.2	2.8	46,472	47,009	
517	Petroleum	12,682	12,027	13,897	5.4	4.0	-8.7	4,553	4,636	4,993	-1.8	5.8	-8.8	121,891	139,790	
518	Alcohol	5,207	5,175	5,025	0.6	7.9	3.6	6,003	5,749	5,136	4.4	5.1	16.9	47,066	44,807	
519	Other Nondur.	14,888	15,012	14,361	-0.8	5.4	3.7	16,905	16,723	16,332	1.1	1.7	3.5	153,214	150,114	

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			
	<b>U.S. Total</b>	1.0	1.3	1.0	1.3	0.4	0.2	0.7	1.0	0.9	0.7	0.3
50	<b>Durable</b>	2.1	2.2	2.0	2.2	0.6	0.3	1.0	1.1	1.9	2.3	0.8
501	Automotive	4.2	5.3	4.1	5.3	1.1	0.8	2.0	2.0	4.1	4.0	1.4
502	Furniture	6.5	7.7	6.6	7.6	1.9	0.8	3.6	2.3	6.3	5.9	2.3
503	Lumber	4.8	5.8	4.9	5.8	1.2	0.8	2.3	2.4	4.9	5.2	1.7
504	Prof. equip.	5.2	6.3	4.9	6.1	1.3	0.7	3.0	3.1	4.5	5.2	2.7
505	Metals	4.6	9.2	4.6	9.2	1.2	0.7	1.6	3.0	4.5	4.4	1.0
506	Electrical	5.9	5.9	5.9	5.6	1.4	0.5	2.2	1.9	5.9	5.3	1.3
507	Hardware	5.2	5.7	5.3	5.4	1.1	0.5	1.6	1.8	5.3	4.8	0.9
508	Machinery	6.3	5.9	6.2	5.9	1.7	0.6	3.0	2.1	6.2	5.9	1.9
509	Other Durable	5.7	7.8	5.8	7.8	1.7	0.9	2.5	2.8	5.8	4.9	1.4
51	<b>Nondurable</b>	1.9	2.2	1.9	2.2	0.5	0.4	1.0	1.2	1.7	1.0	0.5
511	Paper	5.0	5.0	5.0	4.9	1.1	0.6	4.2	4.8	4.8	0.5	0.4
512	Drugs	6.	4.9	6.1	4.9	0.8	0.4	2.2	1.4	6.2	5.7	2.0
513	Apparel	5.3	7.7	5.1	7.6	2.0	0.9	2.8	2.7	4.7	4.7	2.2
514	Groceries	3.0	5.4	3.0	5.5	0.8	0.6	1.3	1.4	3.0	3.0	1.0
515	Farm-products	5.8	8.4	5.8	8.4	2.1	1.9	2.9	4.0	4.9	5.1	2.1
516	Chemicals	5.9	5.8	5.9	5.8	1.4	0.6	2.0	2.0	5.7	5.8	1.2
517	Petroleum	6.0	16.0	5.9	15.6	0.9	0.9	1.8	1.6	5.7	5.8	1.3
518	Alcohol	6.4	8.5	6.3	8.6	1.5	1.3	1.7	16.4	6.4	6.6	0.7
519	Other Nondur.	6.2	6.3	6.3	6.3	2.0	1.0	3.9	4.0	5.7	5.2	2.7

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

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

SIC code	Kind of business	Sales						Inventories					
		1998					1997	1998					1997
		Nov.	Oct.r	Sep.r	Aug.	Jul.	Oct.r	Nov.	Oct.r	Sep.r	Aug.	Jul.	Oct.r
	<b>U.S. Total<sup>1</sup></b>	<b>0.970</b>	<b>1.060</b>	<b>1.026</b>	<b>0.994</b>	<b>1.011</b>	<b>1.081</b>	<b>1.009</b>	<b>1.005</b>	<b>0.979</b>	<b>0.980</b>	<b>0.994</b>	<b>1.006</b>
<b>50</b>	<b>Durable</b>	<b>0.969</b>	<b>1.071</b>	<b>1.050</b>	<b>0.998</b>	<b>1.014</b>	<b>1.092</b>	<b>0.992</b>	<b>0.995</b>	<b>0.996</b>	<b>1.003</b>	<b>1.013</b>	<b>0.996</b>
501	Automotive	0.960	1.036	0.981	0.954	1.017	1.046	1.011	1.000	0.986	0.978	0.997	1.000
502	Furniture	1.035	1.089	1.062	0.996	0.981	1.116	0.992	1.004	1.033	1.037	1.021	1.003
503	Lumber	0.940	1.088	1.074	1.089	1.098	1.121	0.969	0.961	0.994	1.004	1.007	0.961
504	Prof. equip.	0.948	1.041	1.073	0.983	0.999	1.065	1.007	1.008	0.985	1.002	1.014	1.009
505	Metals	0.936	1.035	1.028	0.997	0.982	1.061	0.969	0.977	0.986	1.001	1.011	0.978
506	Electrical	0.990	1.094	1.094	1.016	1.016	1.120	0.986	0.983	1.005	1.027	1.027	0.983
507	Hardware	0.976	1.106	1.078	1.009	1.084	1.124	0.983	0.989	0.996	1.002	0.999	0.990
508	Machinery	0.939	1.037	0.992	0.967	0.990	1.051	0.989	1.000	0.983	1.000	1.012	1.000
509	Other Durable	1.076	1.155	1.092	1.016	0.956	1.170	0.990	1.042	1.029	1.027	1.026	1.040
<b>51</b>	<b>Nondurable</b>	<b>0.969</b>	<b>1.045</b>	<b>0.999</b>	<b>0.990</b>	<b>1.011</b>	<b>1.066</b>	<b>1.037</b>	<b>1.025</b>	<b>0.954</b>	<b>0.939</b>	<b>0.961</b>	<b>1.025</b>
511	Paper	0.951	1.041	1.056	1.021	1.001	1.072	1.022	1.007	0.982	0.971	1.000	1.006
512	Drugs	0.989	1.045	1.028	0.948	1.002	1.086	1.005	1.015	0.991	0.973	0.989	1.016
513	Apparel	0.936	1.138	1.120	1.078	1.077	1.163	0.967	0.984	1.008	1.020	1.032	0.984
514	Groceries	0.981	1.033	0.988	1.006	1.034	1.047	1.033	1.055	1.007	0.980	0.995	1.056
515	Farm-products	1.035	1.076	0.973	0.922	0.919	1.107	1.230	1.138	0.718	0.709	0.766	1.128
516	Chemicals	0.950	1.023	0.993	1.006	1.016	1.046	0.989	0.979	0.980	1.003	0.998	0.978
517	Petroleum	0.988	1.027	0.974	0.996	0.987	1.056	1.029	1.032	1.008	1.004	0.966	1.030
518	Alcohol	1.022	1.051	1.000	1.022	1.078	1.086	1.069	1.092	1.052	1.000	1.020	1.093
519	Other Nondur.	0.896	0.990	0.969	0.964	1.006	1.002	0.995	0.965	0.931	0.922	0.948	0.968



r Revised

<sup>1</sup> 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.



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

# Monthly Wholesale Trade

## Sales and Inventories

November 1998

BW/98-11

Issued January 1999

### MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES NOVEMBER 1998

**Sales.** November 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$214.1 billion, up 0.3 percent (+/- 0.5%) from the revised October level and were 2.5 percent (+/-1.7%) above the November 1997 level. The October preliminary estimate was revised upward \$0.4 billion or 0.2 percent. Among durable goods, sales of professional and commercial equipment and supplies decreased 3.6 percent from last month, while hardware, plumbing and heating equipment increased 3.2 percent. Among nondurable goods, sales of petroleum and petroleum products declined 3.3 percent from October, while paper and paper products and groceries and related products both rose 1.3 percent.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$285.4 billion at the end of November, up 0.6 percent (+/-0.2%) from the revised October level and were 5.2 percent (+/-1.7%) above November 1997. The October preliminary estimate was revised upward \$0.3 billion or 0.1 percent. Among durable goods, inventories of furniture and home furnishings decreased 3.8

percent from last month. End-of-month inventories of nondurable goods increased 1.3 percent (+/-0.5%) from last month and were 4.3 percent (+/-2.3%) above November 1997. Compared to last month, inventories of petroleum and petroleum products decreased 3.2 percent, while beer, wine, and distilled alcoholic beverages and groceries and related products both increased 2.1 percent.

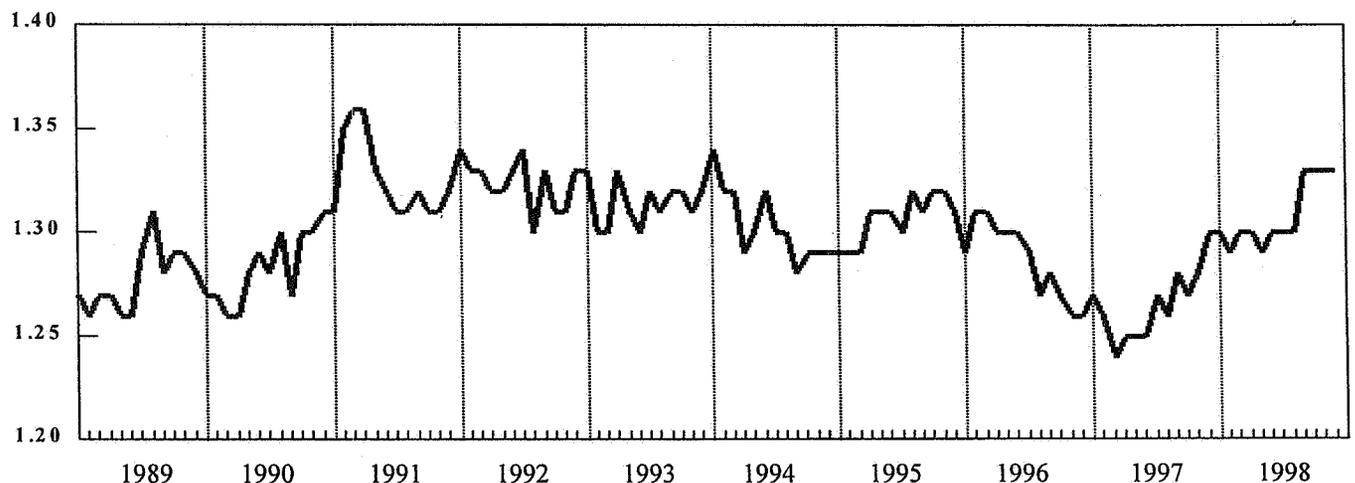
**Inventories/Sales Ratio.** The November inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.33. The November 1997 ratio was 1.30.

The scheduled released dates for 1999 are as follows: January 8, February 10, March 9, April 6, May 7, June 8, July 8, August 9, September 8, October 8, November 9, and December 9.

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

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



Monthly Wholesale Trade for December is scheduled to be released February 10, 1999 at 10:00 a.m.

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Piencykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales ratios		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Nov. 1998 (p)	Oct. 1998 (r)	Nov. 1997 (r)	Nov./ Oct.	Oct./ Sep.	Nov. 98 Nov. 97	Nov. 1998 (p)	Oct. 1998 (r)	Nov. 1997 (r)	Nov./ Oct.	Oct./ Sep.	Nov. 98 Nov. 97	Nov. 1998 (p)	Oct. 1998 (r)	Nov. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	214,145	213,429	208,934	0.3	-0.2	2.5	285,365	283,776	271,168	0.6	-0.1	5.2	1.33	1.33	1.30
50	<b>Durable</b>	111,782	111,943	109,862	-0.1	-0.8	1.7	186,172	185,868	176,101	0.2	0.3	5.7	1.67	1.66	1.60
501	Automotive	19,402	19,058	18,300	1.8	-2.5	6.0	28,313	28,666	28,732	-1.2	1.5	-1.5	1.46	1.50	1.57
502	Furniture	3,413	3,336	3,339	2.3	-1.0	2.2	5,620	5,840	5,464	-3.8	3.1	2.9	1.65	1.75	1.64
503	Lumber	7,857	7,758	7,182	1.3	1.5	9.4	7,596	7,659	7,958	-0.8	0.3	-4.5	0.97	0.99	1.11
504	Prof. equip.	20,420	21,185	20,478	-3.6	-1.5	-0.3	25,205	25,140	25,879	0.3	-1.3	-2.6	1.23	1.19	1.26
505	Metals	8,356	8,434	9,153	-0.9	-2.3	-8.7	14,934	14,745	13,886	1.3	0.3	7.5	1.79	1.75	1.52
506	Electrical	17,153	17,433	16,583	-1.6	2.8	3.4	27,458	27,411	25,518	0.2	0.1	7.6	1.60	1.57	1.54
507	Hardware	6,609	6,403	6,336	3.2	0.9	4.3	13,525	13,445	12,442	0.6	0.0	8.7	2.05	2.10	1.96
508	Machinery	18,210	17,924	17,307	1.6	-3.9	5.2	46,655	46,326	40,918	0.7	0.4	14.0	2.56	2.58	2.36
509	Other Durable	10,362	10,412	11,184	-0.5	2.4	-7.3	16,866	16,636	15,304	1.4	0.1	10.2	1.63	1.60	1.37
51	<b>Nondurable</b>	102,363	101,486	99,072	0.9	0.4	3.3	99,193	97,908	95,067	1.3	-0.9	4.3	0.97	0.96	0.96
511	Paper	8,001	7,898	7,294	1.3	0.6	9.7	9,184	9,068	8,992	1.3	-2.3	2.1	1.15	1.15	1.23
512	Drugs	11,431	11,394	9,935	0.3	1.5	15.1	15,456	15,245	13,285	1.4	2.7	16.3	1.35	1.34	1.34
513	Apparel	6,942	6,972	6,908	-0.4	5.7	0.5	12,205	12,270	12,275	-0.5	0.6	-0.6	1.76	1.76	1.78
514	Groceries	29,460	29,094	27,197	1.3	0.5	8.3	16,364	16,030	15,818	2.1	-1.1	3.5	0.56	0.55	0.58
515	Farm-products	8,761	8,990	10,455	-2.5	1.7	-16.2	12,615	12,652	13,270	-0.3	-3.8	-4.9	1.44	1.41	1.27
516	Chemicals	4,588	4,643	4,638	-1.2	2.0	-1.1	5,154	5,079	4,981	1.5	-0.7	3.5	1.12	1.09	1.07
517	Petroleum	11,785	12,182	13,483	-3.3	-1.3	-12.6	4,207	4,346	4,796	-3.2	-5.5	-12.3	0.36	0.36	0.36
518	Alcohol	4,936	4,996	4,616	-1.2	-3.5	6.9	5,618	5,501	4,743	2.1	0.7	18.4	1.14	1.10	1.03
519	Other Nondur.	16,459	15,317	14,546	7.5	-1.1	13.2	18,390	17,717	16,907	3.8	-1.4	8.8	1.12	1.16	1.16
<b>Not Adjusted</b>																
	<b>U.S. Total</b>	207,389	224,689	197,527	-7.7	2.6	5.0	287,475	285,883	273,585	0.6	2.7	5.1	<b>Sales to date</b>		
													1998	1997		
50	<b>Durable</b>	108,101	119,477	103,783	-9.5	1.3	4.2	184,405	185,367	174,619	-0.5	0.6	5.6	2,339,630	2,286,434	
501	Automotive	18,548	19,744	17,312	-6.1	3.0	7.1	28,540	28,723	29,019	-0.6	3.1	-1.7	207,438	198,956	
502	Furniture	3,563	3,633	3,349	-1.9	1.6	6.4	5,575	5,840	5,415	-4.5	-0.2	3.0	37,724	37,464	
503	Lumber	7,354	8,441	6,557	-12.9	2.8	12.2	7,353	7,353	7,711	0.0	-3.1	-4.6	84,416	83,510	
504	Prof. equip.	19,134	22,202	18,758	-13.8	-3.8	2.0	25,407	25,266	26,060	0.6	0.7	-2.5	231,699	214,306	
505	Metals	7,838	8,738	8,384	-10.3	-1.5	-6.5	14,471	14,391	13,456	0.6	-0.8	7.5	96,484	99,140	
506	Electrical	16,896	19,089	15,969	-11.5	2.9	5.8	27,019	26,945	25,135	0.3	-2.1	7.5	188,800	184,374	
507	Hardware	6,483	7,063	6,070	-8.2	3.2	6.8	13,295	13,284	12,230	0.1	-0.8	8.7	73,084	69,937	
508	Machinery	17,136	18,551	15,663	-7.6	0.3	9.4	46,048	46,280	40,427	-0.5	2.1	13.9	203,073	188,326	
509	Other Durable	11,149	12,016	11,721	-7.2	8.3	-4.9	16,697	17,285	15,166	-3.4	1.0	10.1	119,150	123,829	
51	<b>Nondurable</b>	99,288	105,212	93,744	-5.6	4.0	5.9	103,070	100,516	98,966	2.5	6.9	4.1	1,097,762	1,086,592	
511	Paper	7,641	8,206	6,783	-6.9	-1.0	12.6	9,386	9,131	9,190	2.8	0.2	2.1	83,663	77,498	
512	Drugs	11,271	11,884	9,359	-5.2	3.0	20.4	15,518	15,397	13,351	0.8	4.7	16.2	120,257	102,883	
513	Apparel	6,345	7,934	6,266	-20.0	7.3	1.3	11,778	12,086	11,845	-2.5	-1.7	-0.6	77,764	77,093	
514	Groceries	28,900	29,996	26,381	-3.7	4.9	9.5	16,969	16,880	16,387	0.5	3.4	3.6	313,935	299,337	
515	Farm-products	9,173	9,655	10,445	-5.0	12.2	-12.2	15,516	14,436	16,322	7.5	52.9	-4.9	97,542	113,551	
516	Chemicals	4,304	4,759	4,248	-9.6	5.3	1.3	5,144	4,962	4,956	3.7	-1.0	3.8	50,775	51,257	
517	Petroleum	11,655	12,547	12,890	-7.1	4.3	-9.6	4,304	4,507	4,902	-4.5	-2.8	-12.2	133,411	152,680	
518	Alcohol	5,005	5,236	4,542	-4.4	1.2	10.2	6,028	6,002	5,089	0.4	4.4	18.5	52,100	49,349	
519	Other Nondur.	14,994	14,995	12,830	0.0	-0.1	16.9	18,427	17,115	16,924	7.7	2.3	8.9	168,315	162,944	

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			
	<b>U.S. Total</b>	1.0	1.3	1.0	1.3	0.4	0.2	0.7	1.0	0.9	0.7	0.4
<b>50</b>	<b>Durable</b>	2.0	2.2	2.0	2.2	0.6	0.3	0.7	1.0	0.9	0.7	0.4
501	Automotive	4.2	5.2	4.1	5.3	1.0	0.8	2.0	2.0	4.1	4.2	1.5
502	Furniture	6.5	7.7	6.6	7.6	2.0	0.8	3.6	2.3	6.3	5.9	2.3
503	Lumber	4.9	5.7	5.0	5.8	1.2	0.8	2.3	2.3	4.9	5.1	1.6
504	Prof. equip.	5.2	6.3	4.9	6.1	1.3	0.7	3.1	3.0	4.6	5.1	2.6
505	Metals	4.6	9.2	4.6	9.2	1.2	0.7	1.6	3.0	4.5	4.4	1.1
506	Electrical	5.9	6.2	5.9	6.0	1.5	0.5	2.1	2.2	5.9	5.3	1.2
507	Hardware	5.5	5.8	5.2	5.6	1.2	0.5	1.6	1.7	5.3	4.8	0.8
508	Machinery	6.3	5.9	6.2	5.9	1.7	0.6	2.9	2.1	6.1	5.8	1.9
509	Other Durable	5.7	7.8	5.8	7.8	1.7	0.9	2.5	2.4	5.7	4.9	1.3
<b>51</b>	<b>Nondurable</b>	1.9	2.2	1.9	2.2	0.5	0.4	1.0	1.2	1.7	1.0	0.6
511	Paper	5.0	5.0	5.0	4.9	1.1	0.5	3.5	4.7	4.7	0.5	0.4
512	Drugs	6.2	4.8	6.3	4.9	0.8	0.5	2.2	1.4	6.1	5.6	2.0
513	Apparel	5.3	7.7	5.1	7.6	2.0	1.0	2.8	2.7	4.7	4.6	2.2
514	Groceries	3.0	5.4	3.0	5.5	0.8	0.6	1.2	1.3	2.9	3.0	1.0
515	Farm-products	5.8	8.3	5.8	8.3	2.1	1.7	2.7	4.0	5.0	5.1	2.0
516	Chemicals	5.9	5.9	5.8	5.8	1.4	0.6	2.0	1.9	5.7	5.9	1.2
517	Petroleum	6.0	16.0	5.9	15.6	0.9	0.9	1.9	1.7	5.7	5.8	0.9
518	Alcohol	6.4	8.5	6.4	8.6	1.5	1.3	1.6	16.8	6.3	6.5	0.6
519	Other Nondur.	6.2	6.4	6.3	6.4	1.8	1.1	3.9	4.0	5.7	5.2	2.7

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.

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

SIC code	Kind of business	Sales						Inventories					
		1998					1997	1998					1997
		Dec.	Nov.r	Oct.r	Sep.	Aug.	Nov.r	Dec.	Nov.r	Oct.r	Sep.	Aug.	Nov.r
	<b>U.S. Total<sup>1</sup></b>	<b>1.013</b>	<b>0.967</b>	<b>1.061</b>	<b>1.026</b>	<b>0.994</b>	<b>0.944</b>	<b>1.002</b>	<b>1.008</b>	<b>1.006</b>	<b>0.979</b>	<b>0.980</b>	<b>1.008</b>
50	<b>Durable</b>	<b>1.004</b>	<b>0.969</b>	<b>1.069</b>	<b>1.050</b>	<b>0.998</b>	<b>0.945</b>	<b>0.984</b>	<b>0.990</b>	<b>0.996</b>	<b>0.996</b>	<b>1.003</b>	<b>0.991</b>
501	Automotive	1.030	0.956	1.036	0.981	0.954	0.946	0.960	1.008	1.002	0.986	0.978	1.010
502	Furniture	1.024	1.044	1.089	1.062	0.996	1.003	0.975	0.992	1.000	1.033	1.037	0.991
503	Lumber	0.880	0.936	1.088	1.074	1.089	0.913	0.980	0.968	0.960	0.994	1.004	0.969
504	Prof. equip.	1.078	0.937	1.048	1.073	0.983	0.916	1.004	1.008	1.005	0.985	1.002	1.007
505	Metals	0.949	0.938	1.036	1.028	0.997	0.916	1.010	0.969	0.976	0.986	1.001	0.969
506	Electrical	0.987	0.985	1.095	1.094	1.016	0.963	0.978	0.984	0.983	1.005	1.027	0.985
507	Hardware	0.946	0.981	1.103	1.078	1.009	0.958	0.986	0.983	0.988	0.996	1.002	0.983
508	Machinery	1.018	0.941	1.035	0.992	0.967	0.905	0.985	0.987	0.999	0.983	1.000	0.988
509	Other Durable	1.030	1.076	1.154	1.092	1.016	1.048	0.977	0.990	1.039	1.029	1.027	0.991
51	<b>Nondurable</b>	<b>1.023</b>	<b>0.967</b>	<b>1.046</b>	<b>0.999</b>	<b>0.990</b>	<b>0.945</b>	<b>1.037</b>	<b>1.041</b>	<b>1.025</b>	<b>0.954</b>	<b>0.939</b>	<b>1.040</b>
511	Paper	1.014	0.955	1.039	1.056	1.021	0.930	1.021	1.022	1.007	0.982	0.971	1.022
512	Drugs	1.055	0.986	1.043	1.028	0.948	0.942	1.020	1.004	1.010	0.991	0.973	1.005
513	Apparel	0.830	0.914	1.138	1.120	1.078	0.907	1.005	0.965	0.985	1.008	1.020	0.965
514	Groceries	1.033	0.981	1.031	0.988	1.006	0.970	1.009	1.037	1.053	1.007	0.980	1.036
515	Farm-products	1.124	1.047	1.074	0.973	0.922	0.999	1.234	1.230	1.141	0.718	0.709	1.230
516	Chemicals	0.942	0.938	1.025	0.993	1.006	0.916	0.999	0.998	0.977	0.980	1.003	0.995
517	Petroleum	1.062	0.989	1.030	0.974	0.996	0.956	1.056	1.023	1.037	1.008	1.004	1.022
518	Alcohol	1.174	1.014	1.048	1.000	1.022	0.984	0.928	1.073	1.091	1.052	1.000	1.073
519	Other Nondur.	0.974	0.911	0.979	0.969	0.964	0.882	0.989	1.002	0.966	0.931	0.922	1.001



r Revised

<sup>1</sup> 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.



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

# Monthly Wholesale Trade

Sales and Inventories

December 1998

BW/98-12

Issued February 1999

## MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES DECEMBER 1998

**Intention to Revise Wholesale Estimates:** Monthly wholesale data will be revised based on the results of the 1997 Annual Trade Survey. Unadjusted sales, inventories, and inventories/sales ratios will be revised for January 1993 through February 1999, while corresponding adjusted data will be revised for January 1990 through February 1999. Revised data are scheduled for release the week of May 2.

**Sales.** December 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$217.4 billion, up 1.2 percent (+/- 0.8%) from the revised November level and were 3.7 percent (+/- 1.7%) above December 1997. The November preliminary estimate was revised upward \$0.7 billion or 0.3 percent. December sales of durable goods increased 1.4 percent (+/- 1.2%) from November and were 3.4 percent (+/- 2.2%) above last December. Compared to last month, sales of professional and commercial equipment and supplies increased 5.2 percent. Among nondurable goods, sales of drugs, drug proprietaries and druggists' sundries increased 5.6 percent from last month, while petroleum and petroleum products fell 5.4 percent.

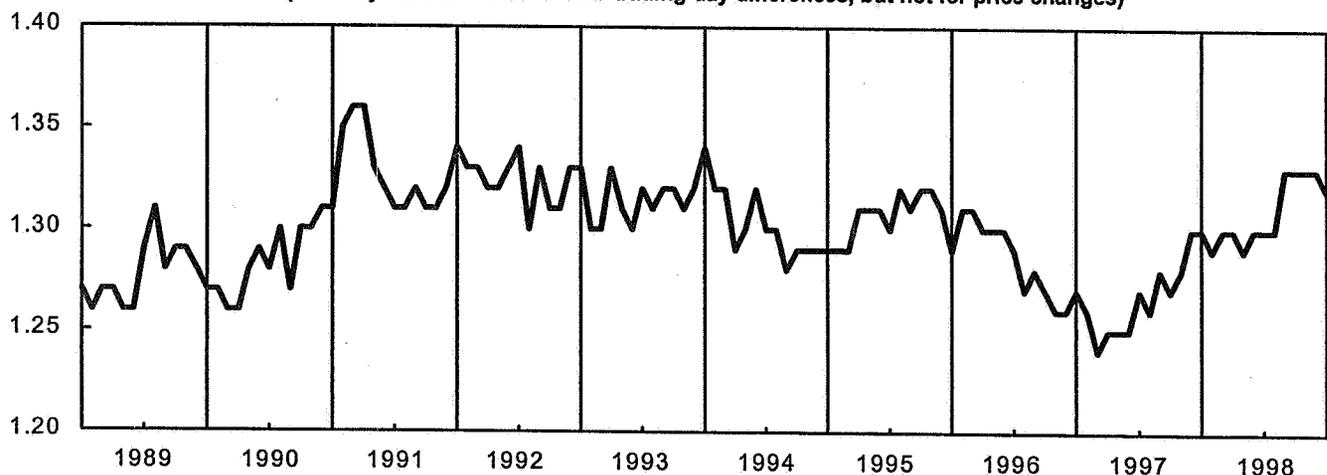
**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$287.2 billion at the end of December, up 0.5 percent (+/- 0.4%) from the revised November level and were 5.2 percent (+/- 1.5%) above December 1997. The November

preliminary estimate was revised upward \$0.4 billion or 0.1 percent. End-of-month inventories of durable goods increased 0.7 percent (+/- 0.4%) from last month and were 5.5 percent (+/- 1.8%) above December 1997. Compared to last month, inventories of motor vehicles and automotive equipment increased 4.1 percent, while professional and commercial equipment and supplies decreased 2.8 percent. Among nondurable goods, inventories of chemicals and allied products rose 1.0 percent from last month, while petroleum and petroleum products declined 5.7 percent.

**Inventories/Sales Ratio.** The December inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.32. The December 1997 ratio was 1.30.

*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 Inventories/Sales Ratios of Merchant Wholesalers: 1989 to 1998**  
(Data adjusted for seasonal and trading-day differences, but not for price changes)



Monthly Wholesale Trade for January is scheduled to be released March 9, 1999 at 10:00 a.m.

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienycoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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 <sup>1</sup> code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Dec. 1998 (p)	Nov. 1998 (r)	Dec. 1997 (r)	Dec./ Nov.	Nov./ Oct.	Dec. 98 Dec. 97	Dec. 1998 (p)	Nov. 1998 (r)	Dec. 1997 (r)	Dec./ Nov.	Nov./ Oct.	Dec. 98 Dec. 97	Dec. 1998 (p)	Nov. 1998 (r)	Dec. 1997 (r)
<b>Adjusted<sup>2</sup></b>																
	<b>U.S. Total</b>	217,391	214,891	209,721	1.2	0.7	3.7	287,249	285,716	273,003	0.5	0.7	5.2	1.32	1.33	1.30
<b>50</b>	<b>Durable</b>	113,928	112,360	110,226	1.4	0.4	3.4	187,672	186,449	177,840	0.7	0.3	5.5	1.65	1.66	1.61
501	Automotive	19,854	19,676	17,125	0.9	3.2	15.9	29,628	28,466	29,044	4.1	-0.7	2.0	1.49	1.45	1.70
502	Furniture	3,296	3,405	3,441	-3.2	2.1	-4.2	5,622	5,623	5,472	0.0	-3.7	2.7	1.71	1.65	1.59
503	Lumber	8,028	7,885	7,423	1.8	1.6	8.2	7,476	7,582	7,774	-1.4	-1.0	-3.8	0.93	0.96	1.05
504	Prof. equip.	21,588	20,517	20,969	5.2	-3.2	3.0	24,435	25,133	25,859	-2.8	0.0	-5.5	1.13	1.22	1.23
505	Metals	8,289	8,346	9,207	-0.7	-1.0	-10.0	14,718	14,930	13,936	-1.4	1.3	5.6	1.78	1.79	1.51
506	Electrical	17,228	17,197	17,003	0.2	-1.4	1.3	27,891	27,563	25,781	1.2	0.6	8.2	1.62	1.60	1.52
507	Hardware	6,680	6,660	6,391	0.3	4.0	4.5	13,622	13,525	12,449	0.7	0.6	9.4	2.04	2.03	1.95
508	Machinery	18,475	18,368	17,622	0.6	2.5	4.8	47,625	46,799	41,758	1.8	1.0	14.1	2.58	2.55	2.37
509	Other Durable	10,490	10,306	11,045	1.8	-1.0	-5.0	16,655	16,828	15,767	-1.0	1.2	5.6	1.59	1.63	1.43
<b>51</b>	<b>Nondurable</b>	103,463	102,531	99,495	0.9	1.0	4.0	99,577	99,267	95,163	0.3	1.4	4.6	0.96	0.97	0.96
511	Paper	8,002	7,909	7,235	1.2	0.1	10.6	9,335	9,245	8,950	1.0	2.0	4.3	1.17	1.17	1.24
512	Drugs	12,195	11,543	10,120	5.6	1.3	20.5	15,718	15,461	13,458	1.7	1.4	16.8	1.29	1.34	1.33
513	Apparel	6,824	6,841	7,078	-0.2	-1.9	-3.6	12,152	12,239	12,201	-0.7	-0.3	-0.4	1.78	1.79	1.72
514	Groceries	29,067	29,198	27,460	-0.4	0.4	5.9	16,150	16,277	15,784	-0.8	1.5	2.3	0.56	0.56	0.57
515	Farm-products	9,153	8,889	10,192	3.0	-1.1	-10.2	12,504	12,663	12,060	-1.3	0.1	3.7	1.37	1.42	1.18
516	Chemicals	4,534	4,558	4,698	-0.5	-1.8	-3.5	5,187	5,138	4,918	1.0	1.2	5.5	1.14	1.13	1.05
517	Petroleum	11,301	11,951	12,929	-5.4	-1.9	-12.6	3,950	4,189	4,782	-5.7	-3.6	-17.4	0.35	0.35	0.37
518	Alcohol	5,003	4,941	4,849	1.3	-1.1	3.2	5,479	5,596	5,066	-2.1	1.7	8.2	1.10	1.13	1.04
519	Other Nondur.	17,384	16,701	14,934	4.1	9.0	16.4	19,102	18,459	17,944	3.5	4.2	6.5	1.10	1.11	1.20
<b>Not Adjusted</b>																
	<b>U.S. Total</b>	221,513	207,832	213,675	6.6	-7.5	3.7	287,806	287,887	273,656	0.0	0.7	5.2	<b>Sales to date</b>		
														<b>1998</b>	<b>1997</b>	
<b>50</b>	<b>Durable</b>	115,395	108,427	111,471	6.4	-9.2	3.5	184,674	184,636	175,033	0.0	-0.4	5.5	1,357,589	1,311,313	
501	Automotive	20,569	18,830	17,605	9.2	-4.6	16.8	28,621	28,608	28,086	0.0	-0.4	1.9	228,289	216,561	
502	Furniture	3,352	3,562	3,465	-5.9	-2.0	-3.3	5,487	5,584	5,341	-1.7	-4.4	2.7	41,075	40,929	
503	Lumber	7,169	7,341	6,651	-2.3	-13.0	7.8	7,222	7,347	7,533	-1.7	-0.1	-4.1	91,572	90,161	
504	Prof. equip.	23,337	19,183	22,730	21.7	-13.6	2.7	24,386	25,359	25,833	-3.8	0.4	-5.6	255,085	237,036	
505	Metals	7,875	7,829	8,747	0.6	-10.4	-10.0	14,850	14,497	14,061	2.4	0.7	5.6	104,350	107,887	
506	Electrical	17,038	16,939	16,782	0.6	-11.3	1.5	27,222	27,122	25,188	0.4	0.7	8.1	205,881	201,156	
507	Hardware	6,319	6,507	6,033	-2.9	-7.9	4.7	13,418	13,282	12,262	1.0	0.0	9.4	79,427	75,970	
508	Machinery	18,826	17,229	18,115	9.3	-7.1	3.9	47,196	46,144	41,340	2.3	-0.3	14.2	221,992	206,441	
509	Other Durable	10,910	11,007	11,343	-0.9	-8.4	-3.8	16,272	16,693	15,389	-2.5	-3.4	5.7	129,918	135,172	
<b>51</b>	<b>Nondurable</b>	106,118	99,405	102,204	6.8	-5.5	3.8	103,132	103,251	98,623	-0.1	2.7	4.6	1,203,997	1,188,796	
511	Paper	8,098	7,521	7,315	7.7	-8.3	10.7	9,578	9,439	9,174	1.5	3.4	4.4	91,641	84,813	
512	Drugs	12,975	11,312	10,758	14.7	-4.8	20.6	16,017	15,507	13,727	3.3	0.7	16.7	133,273	113,641	
513	Apparel	5,637	6,301	5,712	-10.5	-20.6	-1.3	12,201	11,847	12,250	3.0	-2.0	-0.4	83,357	82,805	
514	Groceries	29,823	28,643	28,201	4.1	-4.5	5.8	16,247	16,863	15,910	-3.7	-0.1	2.1	343,501	327,538	
515	Farm-products	10,499	9,280	11,751	13.1	-3.9	-10.7	15,343	15,740	14,822	-2.5	9.0	3.5	108,148	125,302	
516	Chemicals	4,248	4,275	4,416	-0.6	-10.2	-3.8	5,203	5,112	4,928	1.8	3.0	5.6	54,994	55,673	
517	Petroleum	11,889	11,999	13,795	-0.9	-4.4	-13.8	4,163	4,306	5,021	-3.3	-4.5	-17.1	145,644	166,475	
518	Alcohol	5,878	5,010	5,606	17.3	-4.3	4.9	5,068	6,033	4,686	-16.0	0.5	8.2	57,983	54,955	
519	Other Nondur.	17,071	15,064	14,650	13.3	0.5	16.5	19,312	18,404	18,105	4.9	7.5	6.7	185,456	177,594	

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	Current year	Previous year	to
		Median	Median	Median	Median	Median	Median	Median	Median	year	year	previous year cumulative
	<b>U.S. Total</b>	1.0	1.3	1.0	1.3	0.4	0.2	0.7	1.0	0.9	0.7	0.4
<b>50</b>	<b>Durable</b>	2.0	2.2	1.9	2.2	0.6	0.3	1.0	1.2	1.9	2.3	0.9
501	Automotive	4.2	5.2	4.2	5.3	1.0	0.9	2.0	2.0	4.1	4.3	1.6
502	Furniture	6.5	7.7	6.6	7.7	2.0	0.8	3.6	2.3	6.3	5.9	2.3
503	Lumber	5.0	5.7	5.1	5.8	1.2	0.7	2.1	2.3	4.9	5.2	1.5
504	Prof. equip.	5.2	6.3	4.9	6.1	1.3	0.6	3.1	2.8	4.6	5.1	2.5
505	Metals	4.6	9.2	4.6	9.2	1.2	0.7	1.6	3.1	4.4	4.3	1.0
506	Electrical	5.9	6.3	5.9	6.2	1.5	0.5	2.0	2.4	5.9	5.3	1.2
507	Hardware	5.3	5.8	5.5	5.7	1.1	0.6	1.5	1.8	5.3	4.8	0.8
508	Machinery	6.5	6.0	6.2	6.0	1.7	0.6	2.9	2.1	6.1	5.7	1.8
509	Other Durable	5.7	7.9	5.8	7.9	1.7	0.9	2.7	2.2	5.7	5.0	1.4
<b>51</b>	<b>Nondurable</b>	1.9	2.2	1.9	2.2	0.6	0.4	1.0	1.2	1.7	1.0	0.6
511	Paper	4.9	5.1	4.8	4.9	1.1	0.6	2.5	3.6	4.7	0.5	0.5
512	Drugs	6.3	4.8	6.3	4.8	0.9	0.5	2.3	1.5	6.2	5.6	2.1
513	Apparel	5.3	7.7	5.1	7.6	2.0	1.0	2.9	2.6	4.7	4.6	2.1
514	Groceries	3.0	5.4	3.0	5.5	0.8	0.6	1.1	1.2	2.9	2.9	0.9
515	Farm-products	6.1	8.1	5.8	8.2	2.2	1.7	2.7	4.0	5.1	5.2	1.9
516	Chemicals	5.8	6.0	5.8	5.9	1.4	0.6	2.1	1.9	5.7	5.9	1.1
517	Petroleum	6.0	16.0	5.9	15.6	0.9	0.9	1.9	1.7	5.8	5.9	0.9
518	Alcohol	6.4	8.6	6.4	8.6	1.5	1.3	1.4	16.9	6.2	6.4	0.5
519	Other Nondur.	6.2	6.5	6.3	6.6	1.8	1.2	3.9	4.0	5.7	5.3	2.7

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.

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

SIC code	Kind of Business	Sales						Inventories					
		1999	1998				1997	1999	1998				1997
		Jan.	Dec.r	Nov.r	Oct.	Sep.	Dec.r	Jan.	Dec.r	Nov.r	Oct.	Sep.	Dec.r
	<b>U.S. Total<sup>1</sup></b>	0.911	1.014	0.968	1.061	1.026	1.017	1.022	1.003	1.008	1.006	0.979	1.003
<b>50</b>	<b>Durable</b>	0.886	1.006	0.967	1.069	1.050	1.008	0.998	0.984	0.990	0.996	0.996	0.984
501	Automotive	0.873	1.036	0.957	1.036	0.981	1.028	1.015	0.966	1.005	1.002	0.986	0.967
502	Furniture	0.861	1.017	1.046	1.089	1.062	1.007	0.978	0.976	0.993	1.000	1.033	0.976
503	Lumber	0.827	0.893	0.931	1.088	1.074	0.896	0.978	0.966	0.969	0.960	0.994	0.969
504	Prof. equip.	0.920	1.081	0.935	1.048	1.073	1.084	1.010	0.998	1.009	1.005	0.985	0.999
505	Metals	0.946	0.950	0.938	1.036	1.028	0.950	1.012	1.009	0.971	0.976	0.986	1.009
506	Electrical	0.895	0.989	0.985	1.095	1.094	0.987	0.998	0.976	0.984	0.983	1.005	0.977
507	Hardware	0.875	0.946	0.977	1.103	1.078	0.944	0.982	0.985	0.982	0.988	0.996	0.985
508	Machinery	0.893	1.019	0.938	1.035	0.992	1.028	0.988	0.991	0.986	0.999	0.983	0.990
509	Other Durable	0.846	1.040	1.068	1.154	1.092	1.027	0.991	0.977	0.992	1.039	1.029	0.976
<b>51</b>	<b>Nondurable</b>	0.939	1.024	0.970	1.046	0.999	1.028	1.060	1.038	1.040	1.025	0.954	1.038
511	Paper	0.976	1.012	0.951	1.039	1.056	1.011	1.022	1.026	1.021	1.007	0.982	1.025
512	Drugs	0.997	1.064	0.980	1.043	1.028	1.063	1.073	1.019	1.003	1.010	0.991	1.020
513	Apparel	0.895	0.826	0.921	1.138	1.120	0.807	1.044	1.004	0.968	0.985	1.008	1.004
514	Groceries	0.942	1.026	0.981	1.031	0.988	1.027	1.002	1.006	1.036	1.053	1.007	1.008
515	Farm-products	1.055	1.147	1.044	1.074	0.973	1.153	1.288	1.227	1.243	1.141	0.718	1.229
516	Chemicals	0.935	0.937	0.938	1.025	0.993	0.940	0.995	1.003	0.995	0.977	0.980	1.002
517	Petroleum	0.992	1.052	1.004	1.030	0.974	1.067	1.008	1.054	1.028	1.037	1.008	1.050
518	Alcohol	0.738	1.175	1.014	1.048	1.000	1.156	0.932	0.925	1.078	1.091	1.052	0.925
519	Other Nondur.	0.831	0.982	0.902	0.979	0.969	0.981	1.056	1.011	0.997	0.966	0.931	1.009

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<sup>1</sup> 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.

