



Monthly Wholesale Trade

Sales and Inventories

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

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Sales. September 1997 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$213.1 billion, up 2.3 percent (+/-0.8%) from the revised August level and were 4.7 percent (+/-1.1%) above September 1996. The August preliminary estimate was revised downward by \$0.4 billion or 0.2 percent. September sales of durable goods increased 2.8 percent (+/-1.1%) from August and were 6.1 percent (+/-2.5%) above last September. Compared to last month, sales of furniture and home furnishings increased 6.4 percent, and motor vehicles and automotive equipment grew 5.6 percent. September sales of nondurable goods increased 1.7 percent (+/-0.8%) from last month and were 3.4 percent (+/-2.7%) above September 1996. Compared to last month, sales of farm-product raw materials increased 15.8 percent while paper and paper products rose 4.4 percent.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$268.0 billion at the end of September, up 1.2 percent (+/-0.4%) from the revised August level and were 5.3 percent (+/-2.5%) above September 1996. The August preliminary

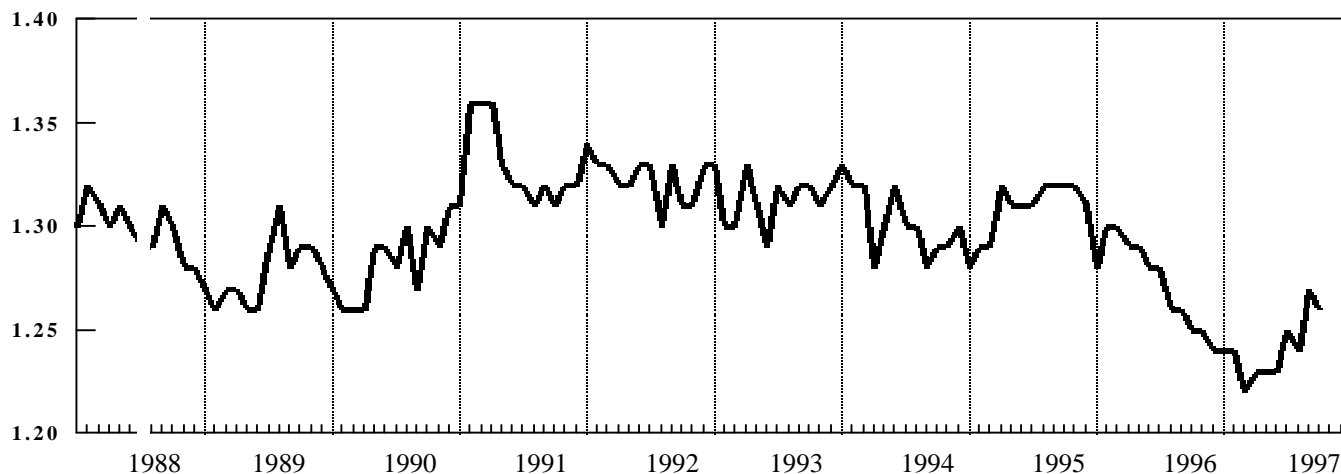
estimate was revised upward by 0.1 billion or 0.03 percent. End-of-month inventories of durable goods wholesalers increased 1.3 percent (+/-0.5%) from last month and were 4.9 percent (+/-3.6%) above September 1996. Compared to last month, inventories of professional and commercial equipment and supplies increased 3.0 percent, and machinery, equipment, and supplies rose 1.8 percent. End-of-month inventories of nondurable goods increased 1.0 percent (+/-0.5%) from August and were 5.9 percent (+/-2.5%) above last September. Compared to last month, inventories of petroleum and petroleum products increased 4.2 percent, while paper and paper products fell 1.2 percent.

Inventories/Sales Ratio. The September inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.26. The September 1996 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/96-RV Current Business Report.

Monthly Inventories/Sales Ratios of Merchant Wholesalers: 1988 to 1997

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



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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: 1997 and 1996

[In millions of dollars]

SIC ¹ code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Sep. 1997 (p)	Aug. 1997 (r)	Sep. 1996 (r)	Sep./ Aug.	Aug./ Jul.	Sep. 97 Sep. 96	Sep. 1997 (p)	Aug. 1997 (r)	Sep. 1996 (r)	Sep./ Aug.	Aug./ Jul.	Sep. 97 Sep. 96	Sep. 1997 (p)	Aug. 1997 (r)	Sep. 1996 (r)
Adjusted²																
	U.S. Total	213,093	208,336	203,437	2.3	-1.3	4.7	268,043	264,899	254,654	1.2	1.0	5.3	1.26	1.27	1.25
50	Durable	110,764	107,759	104,426	2.8	-2.5	6.1	170,123	167,917	162,185	1.3	0.5	4.9	1.54	1.56	1.55
501	Automotive	18,748	17,760	17,545	5.6	-2.8	6.9	28,696	28,294	26,849	1.4	1.6	6.9	1.53	1.59	1.53
502	Furniture	3,599	3,381	3,670	6.4	-1.8	-1.9	5,202	5,184	5,306	0.3	1.6	-2.0	1.45	1.53	1.45
503	Lumber	7,303	7,311	7,433	-0.1	-3.0	-1.7	8,235	8,272	8,117	-0.4	-0.3	1.5	1.13	1.13	1.09
504	Prof. equip.	22,003	21,066	19,686	4.4	-1.4	11.8	23,826	23,138	22,692	3.0	-0.4	5.0	1.08	1.10	1.15
505	Metals	9,027	8,904	7,980	1.4	-0.5	13.1	13,728	13,748	12,267	-0.1	0.1	11.9	1.52	1.54	1.54
506	Electrical	15,223	15,193	14,418	0.2	-1.0	5.6	24,670	24,260	22,822	1.7	0.8	8.1	1.62	1.60	1.58
507	Hardware	6,147	6,248	6,071	-1.6	-2.7	1.3	12,239	12,281	11,656	-0.3	0.2	5.0	1.99	1.97	1.92
508	Machinery	16,239	15,957	15,312	1.8	-3.9	6.1	37,503	36,837	36,479	1.8	-0.8	2.8	2.31	2.31	2.38
509	Other Durable	12,475	11,939	12,311	4.5	-4.9	1.3	16,024	15,903	15,997	0.8	2.6	0.2	2.38	1.33	1.30
51	Nondurable	102,329	100,577	99,011	1.7	0.0	3.4	97,920	96,982	92,469	1.0	1.9	5.9	0.96	0.96	0.93
511	Paper	7,763	7,434	6,945	4.4	5.2	11.8	9,488	9,607	8,592	-1.2	5.2	10.4	1.22	1.29	1.24
512	Drugs	10,267	10,261	8,776	0.1	0.0	17.0	15,439	15,319	12,432	0.8	3.9	24.2	1.50	1.49	1.42
513	Apparel	7,269	7,200	6,617	1.0	-3.1	9.9	12,589	12,622	11,549	-0.3	-0.1	9.0	1.73	1.75	1.75
514	Groceries	27,100	27,424	26,212	-1.2	-0.6	3.4	17,169	17,347	17,969	-1.0	0.3	-4.5	0.63	0.63	0.69
515	Farm-products	10,156	8,772	10,992	15.8	-2.3	-7.6	9,624	9,520	9,612	1.1	-1.8	0.1	0.95	1.09	0.87
516	Chemicals	4,934	4,753	4,471	3.8	-2.6	10.4	4,960	4,907	4,476	1.1	-1.3	10.8	1.01	1.03	1.00
517	Petroleum	15,096	15,497	15,406	-2.6	3.6	-2.0	5,112	4,908	5,080	4.2	-1.4	0.6	0.34	0.32	0.33
518	Alcohol	4,994	4,865	4,621	2.7	0.8	8.1	5,025	4,933	4,961	1.9	1.3	1.3	1.01	1.01	1.07
519	Other Nondur.	14,750	14,371	14,971	2.6	-1.2	-1.5	18,514	17,819	17,798	3.9	5.8	4.0	1.26	1.24	1.19
Not Adjusted																
	U.S. Total	218,624	208,259	202,502	5.0	-2.2	8.0	262,968	260,028	249,879	1.1	-0.8	5.2	1,881,854	1,794,518	
50	Durable	116,580	108,015	106,447	7.9	-2.8	9.5	168,817	168,152	161,013	0.4	-0.8	4.8	970,373	923,878	
501	Automotive	18,261	17,174	16,317	6.3	-9.0	11.9	27,921	27,417	26,151	1.8	-1.5	6.8	163,407	157,270	
502	Furniture	3,869	3,401	3,842	13.8	-0.9	0.7	5,374	5,376	5,470	0.0	3.3	-1.8	31,465	32,103	
503	Lumber	7,829	8,006	7,634	-2.2	-2.1	2.6	8,079	8,189	7,955	-1.3	-0.9	1.6	67,162	64,213	
504	Prof. equip.	23,653	20,876	20,670	13.3	-0.8	14.4	23,492	22,976	22,352	2.2	-3.5	5.1	187,754	170,208	
505	Metals	9,280	8,886	7,924	4.4	0.4	17.1	13,550	13,734	12,120	-1.3	-1.1	11.8	79,520	74,016	
506	Electrical	16,700	15,391	15,442	8.5	-0.2	8.1	24,769	24,866	22,936	-0.4	0.6	8.0	132,998	130,007	
507	Hardware	6,719	6,442	6,393	4.3	-7.6	5.1	12,251	12,330	11,668	-0.6	0.7	5.0	56,258	52,062	
508	Machinery	16,434	15,542	14,868	5.7	-6.1	10.5	36,940	36,948	35,932	0.0	-1.4	2.8	144,160	139,781	
509	Other Durable	13,835	12,297	13,357	12.5	4.1	3.6	16,441	16,316	16,429	0.8	1.4	0.1	107,649	104,218	
51	Nondurable	102,044	100,244	96,055	1.8	-1.5	6.2	94,151	91,876	88,866	2.5	-0.8	5.9	911,481	870,640	
511	Paper	8,004	7,724	6,945	3.6	7.0	15.2	9,232	9,252	8,360	-0.2	0.6	10.4	66,177	61,472	
512	Drugs	10,565	9,717	8,750	8.7	-5.3	20.7	15,207	14,813	12,258	2.7	1.7	24.1	87,310	75,008	
513	Apparel	8,178	7,884	7,266	3.7	-2.8	12.6	12,778	12,925	11,734	-1.1	-1.0	8.9	66,288	56,105	
514	Groceries	26,856	27,342	25,426	-1.8	-2.9	5.6	17,461	16,809	18,257	3.9	-2.5	-4.4	245,265	234,833	
515	Farm-products	9,506	8,211	10,014	15.8	-3.5	-5.1	7,016	6,740	7,007	4.1	-9.7	0.1	84,694	96,216	
516	Chemicals	4,914	4,734	4,350	3.8	-3.6	13.0	4,920	4,932	4,440	-0.2	0.1	10.8	42,456	40,357	
517	Petroleum	14,583	15,729	14,451	-7.3	7.4	0.9	5,255	4,987	5,227	5.4	0.4	0.5	137,484	128,178	
518	Alcohol	4,939	4,992	4,376	-1.1	-3.8	12.9	5,286	4,918	5,209	7.5	-1.3	1.5	41,917	41,406	
519	Other Nondur.	14,499	13,911	14,477	4.2	-6.2	0.2	16,996	16,500	16,374	3.0	1.9	3.8	139,890	137,065	

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
		Sales	Inv	Sales	Inv	Sales	Inv	Sales	Inv	CY	PY	year cumulative
		Median	Median	Median	Median	Median	Median	Median	Median			
	U.S. Total	1.1	1.3	1.0	1.4	0.4	0.2	0.8	1.5	1.0	0.8	0.6
50	Durable	2.1	2.2	2.1	2.2	0.7	0.3	1.6	2.3	2.0	1.2	1.4
501	Automotive	4.1	4.7	4.1	4.0	1.2	1.0	3.6	4.2	3.6	2.8	2.8
502	Furniture	5.7	7.2	5.5	7.1	2.5	1.0	4.5	10.7	5.2	3.9	3.8
503	Lumber	5.0	5.3	5.1	5.2	1.5	0.9	5.3	5.5	5.0	2.2	5.0
504	Prof. equip.	5.6	6.7	5.7	6.9	1.4	0.8	4.7	5.0	5.5	3.3	4.3
505	Metals	4.6	9.1	4.5	9.1	1.2	0.7	2.9	10.2	4.6	3.6	2.4
506	Electrical	4.8	4.2	4.8	4.2	1.2	0.5	3.4	2.9	4.6	2.8	3.2
507	Hardware	4.8	4.7	4.9	4.5	1.5	0.5	6.4	5.0	4.5	2.5	5.8
508	Machinery	5.5	4.5	5.6	4.6	1.7	0.5	4.9	5.3	5.5	2.1	5.0
509	Other Durable	4.5	6.6	4.4	6.4	1.6	0.8	2.9	6.0	4.2	3.3	2.0
51	Nondurable	1.9	2.0	1.8	2.0	0.6	0.3	1.3	1.4	1.7	1.2	1.2
511	Paper	3.4	3.7	3.4	3.8	1.0	0.4	2.9	4.0	3.2	4.6	3.3
512	Drugs	5.6	5.2	5.5	5.2	0.5	0.4	3.3	2.2	5.6	4.9	3.4
513	Apparel	4.7	7.7	4.7	7.8	2.4	0.8	4.8	5.6	4.5	3.0	3.3
514	Groceries	3.2	4.7	3.2	4.8	0.8	0.6	2.0	5.0	3.0	2.7	1.8
515	Farm-products	5.1	6.7	5.1	6.7	2.3	1.5	3.1	3.8	4.3	3.6	2.1
516	Chemicals	5.5	5.4	5.6	5.4	1.3	0.6	4.6	4.0	5.5	2.8	4.0
517	Petroleum	5.4	13.9	5.3	13.9	1.0	1.0	3.7	12.7	5.5	4.3	3.5
518	Alcohol	6.5	6.0	6.4	6.1	1.6	1.2	8.3	5.9	6.4	5.0	8.2
519	Other Nondur.	5.9	5.5	5.9	5.5	1.7	1.1	6.3	5.4	5.4	1.8	5.8

Note: The median measures of variability are based on the most recent 10 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						
		1997					1996		1997				1996
		Oct.	Sep.r	Aug.r	Jul.	Jun.	Sep.r	Oct.	Sep.r	Aug.r	Jul.	Jun.	Sep.r
	U.S. Total¹	1.080	1.022	1.005	1.009	1.007	0.993	1.007	0.979	0.980	0.997	0.985	0.979
50	Durable	1.093	1.051	1.002	1.012	1.016	1.018	0.999	0.994	1.000	1.013	0.998	0.994
501	Automotive	1.046	0.974	0.967	1.033	1.016	0.930	0.998	0.973	0.969	1.000	0.986	0.974
502	Furniture	1.123	1.075	1.006	0.997	0.987	1.047	0.998	1.033	1.037	1.020	1.016	1.031
503	Lumber	1.114	1.072	1.095	1.085	1.063	1.027	0.960	0.981	0.990	0.996	1.022	0.980
504	Prof. equip.	1.073	1.075	0.991	0.985	1.016	1.050	1.004	0.986	0.993	1.025	0.989	0.985
505	Metals	1.059	1.028	0.998	0.989	1.022	0.993	0.986	0.987	0.999	1.011	1.007	0.988
506	Electrical	1.124	1.097	1.013	1.005	0.997	1.071	0.987	1.004	1.025	1.027	1.013	1.005
507	Hardware	1.122	1.093	1.031	1.086	1.061	1.053	0.999	1.001	1.004	0.999	0.999	1.001
508	Machinery	1.052	1.012	0.974	0.997	1.022	0.971	1.001	0.985	1.003	1.009	0.999	0.985
509	Other Durable	1.179	1.109	1.030	0.941	0.988	1.085	1.032	1.026	1.026	1.038	1.002	1.027
51	Nondurable	1.065	0.998	0.993	1.015	0.998	0.971	1.021	0.958	0.944	0.969	0.964	0.958
511	Paper	1.068	1.031	1.039	1.022	0.982	1.000	1.004	0.973	0.963	1.008	0.982	0.973
512	Drugs	1.107	1.029	0.947	1.000	0.964	0.997	1.019	0.985	0.967	0.988	0.967	0.986
513	Apparel	1.183	1.125	1.095	1.092	0.969	1.098	0.982	1.015	1.024	1.034	1.018	1.016
514	Groceries	1.055	0.991	0.997	1.020	0.991	0.970	1.056	1.017	0.969	0.996	0.990	1.016
515	Farm-products	1.076	0.936	0.936	0.947	0.928	0.911	1.061	0.729	0.708	0.770	0.782	0.729
516	Chemicals	1.021	0.996	0.996	1.006	1.044	0.973	0.976	0.992	1.005	0.991	1.010	0.992
517	Petroleum	1.057	0.966	1.015	0.979	0.967	0.938	1.028	1.028	1.016	0.998	0.965	1.029
518	Alcohol	1.076	0.989	1.026	1.076	1.069	0.947	1.103	1.052	0.997	1.023	0.990	1.050
519	Other Nondur.	1.023	0.983	0.968	1.019	1.088	0.967	0.982	0.918	0.926	0.961	0.973	0.920



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.