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BUREAU OF  
THE  
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Questions concerning this report may be directed  
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CB-90-41

## MONTHLY WHOLESALE TRADE REPORT: JANUARY 1990

**REVISION OF MONTHLY WHOLESALE ESTIMATES:** The unadjusted and adjusted merchant wholesale sales, inventories, and stock/sales ratio estimates will be revised utilizing the results from the 1987 Census of Wholesale Trade and the 1988 Annual Trade Survey.

Revised estimates for the period January 1983 through December 1989 will be provided in the Census Bureau publication *Current Business Reports*, "Revised Monthly Wholesale Trade Sales and Inventories: December 1980-December 1989," scheduled for release the week of April 2. The January Monthly Wholesale Trade Report, also scheduled for release the week of April 2, will present revised January 1990 estimates.

(This press release is traditionally issued on a one-time basis because of timing considerations during the revision process.)

**SALES** The Bureau of the Census, U.S. Department of Commerce, announced today that January sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$148.4 billion, up 1.4 percent (+1.2 percent) from December, and up 6.1 percent (+1.8 percent) from the January 1989 level. January sales of durable goods increased 3.9 percent (+1.7 percent) from December and were 7.7 percent (+2.1 percent) above a year ago. January sales of nondurable goods decreased 1.0 percent (+1.3 percent) from the previous month but were up 4.5 percent (+2.6 percent) from the January 1989 level.

**INVENTORIES** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$187.2 billion at the end of January, up 0.2 percent (+0.7 percent) from the previous month and up 4.0 percent (+1.5 percent) from January 1989. Durable goods stocks increased 0.6 percent (+0.6 percent) from December and were 5.1 percent (+1.8 percent) above the January 1989 level. Nondurable goods stocks decreased 0.7 percent (+0.6 percent) from the previous month but were up 1.8 percent (+3.0 percent) from a year ago.

**STOCK/SALES RATIO** The January stock/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.26, down from the December ratio of 1.28. The year ago ratio was 1.29.

**NOTE:** For the sampling variability associated with these data and the use of sampling errors in determining reliability of the estimates, please see Explanatory Material in the Monthly Wholesale Trade Report.

**Table 1. Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: January 1990**  
(Sales and inventories in millions of dollars)

Kind of business	Unadjusted			Adjusted <sup>1</sup>		
	Jan. <sup>2</sup> 1990	Dec. 1989	Jan. 1989	Jan. <sup>2</sup> 1990	Dec. 1989	Jan. 1989
<b>SALES</b>						
Merchant wholesalers, total .....	143,134	141,255	131,786	148,420	148,344	139,912
Durable goods, total .....	70,025	68,293	63,265	74,971	72,159	69,833
Nondurable goods, total .....	73,109	72,962	68,521	73,449	74,185	70,279
<b>INVENTORIES</b>						
Merchant wholesalers, total .....	187,849	188,988	181,054	187,218	188,843	180,054
Durable goods, total .....	121,800	120,821	115,885	123,373	122,581	117,380
Nondurable goods, total .....	66,049	68,347	65,169	63,843	64,262	62,694
<b>STOCK/SALES RATIOS</b>						
Merchant wholesalers, total .....	1.31	1.32	1.37	1.26	1.28	1.29
Durable goods, total .....	1.74	1.77	1.83	1.65	1.70	1.69
Nondurable goods, total .....	.90	.91	.95	.87	.87	.89

<sup>1</sup>Data are adjusted for seasonal variation and, in the case of sales, for trading-day differences. <sup>2</sup>Preliminary estimates.

**Table 2. Sales, Inventories, Percent Changes, and Stock/Sales Ratios of Merchant Wholesalers, by Kind of Business: January 1990**

SIC code	Kind of business	Sales				Inventories (end-of-month)				Stock/sales ratios	
		Dollars (millions)		Percent change		Dollars (millions)		Percent change			
		Jan. <sup>1</sup> 1990	Dec. 1989	Jan. 1990 from Dec. 1989	Jan. 1990 from Jan. 1989	Jan. <sup>1</sup> 1990	Dec. 1989	Jan. 1990 from Dec. 1989	Jan. 1990 from Jan. 1989	Jan. <sup>1</sup> 1990	Dec. 1989
	<b>Unadjusted<sup>2</sup></b>										
	<b>Sales, Total</b> .....	143,134	141,255	1.3	8.6	187,849	186,988	.5	3.8	1.31	1.32
50	Durable goods .....	70,025	68,293	2.5	10.7	121,800	120,621	1.0	5.1	1.74	1.77
501	Motor vehicles & auto. equip. ....	13,818	12,778	6.6	4.2	22,840	21,985	3.9	6.8	1.68	1.72
502	Furniture & home furnishings .....	2,286	2,130	7.3	5.3	3,863	4,015	-3.8	-5.1	1.89	1.88
503	Lumber & other construction mat. ....	3,972	3,519	12.9	-3	5,591	5,514	1.4	.9	1.41	1.57
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,848	2,220	-17.1	-10.7	4,883	4,782	-1.7	8.6	2.53	2.14
505	Metals & minerals, ex. petroleum .....	7,995	6,553	22.0	34.6	8,883	9,091	-2.3	-1.3	1.11	1.39
506	Electrical goods .....	9,293	9,471	-1.9	7.8	15,822	15,938	-7	8.1	1.70	1.68
507	Hardware, plumbing & heating equipment .....	3,822	3,642	4.9	1.0	7,236	7,733	1.3	4.3	2.05	2.12
508	Machinery, equip. & supplies .....	19,905	20,304	-2.0	15.6	44,318	43,728	1.3	7.0	2.23	2.15
509	Miscellaneous durable goods .....	7,286	7,666	-5.0	13.8	7,984	7,654	1.4	-5	1.09	1.02
51	Nondurable goods .....	73,109	72,962	.2	6.7	66,049	66,347	-4	1.4	.90	.91
511	Paper & paper products .....	4,993	4,632	7.8	11.9	4,485	4,508	-5	-5.1	.90	.97
512	Drugs, drug proprietaries and druggists' sundries .....	3,946	3,558	10.9	18.9	6,247	6,028	3.6	15.3	1.58	1.69
513	Apparel, piece goods & notions .....	4,780	3,847	24.3	9.9	9,520	9,273	2.7	17.1	1.99	2.41
514	Groceries & related products .....	18,803	19,371	-2.9	-1.0	13,257	14,074	-5.8	2.9	.71	.73
515	Farm-product raw materials .....	12,067	10,101	19.5	1.0	9,285	9,362	-8	-14.8	.77	.93
516	Chemicals & allied products .....	3,038	2,816	7.9	7.2	2,604	2,518	3.4	-6.4	.86	.89
517	Petroleum & petroleum products .....	13,595	14,405	-5.6	23.5	4,381	4,449	-1.5	1.4	.32	.31
518	Beer, wine, & distilled beverages .....	3,089	4,152	-25.6	8.9	4,123	3,937	4.7	6.6	1.33	.85
519	Misc. nondurable goods .....	8,798	10,080	-12.7	3.0	12,147	12,198	-4	.1	1.38	1.21
	<b>Adjusted<sup>3</sup></b>										
	<b>Sales, Total</b> .....	148,420	146,344	1.4	6.1	187,216	186,843	.2	4.0	1.26	1.28
50	Durable goods .....	74,971	72,159	3.9	7.7	123,373	122,581	.6	5.1	1.65	1.70
501	Motor vehicles & auto. equip. ....	14,456	13,065	10.6	.8	23,117	21,724	6.4	7.0	1.60	1.66
502	Furniture & home furnishings .....	2,379	2,313	2.9	.0	3,882	4,105	-5.4	-4.8	1.63	1.77
503	Lumber & other construction mat. ....	4,651	4,155	11.9	-3.4	5,682	5,685	-1	.5	1.22	1.37
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2,015	2,157	-6.6	-13.4	4,863	4,940	-1.6	8.8	2.41	2.29
505	Metals & minerals, ex. petroleum .....	8,003	7,281	9.9	31.5	8,839	9,055	-2.4	-1.1	1.10	1.24
506	Electrical goods .....	9,855	9,754	1.0	5.1	16,244	16,115	.8	8.1	1.65	1.65
507	Hardware, plumbing & heating equipment .....	4,032	4,015	.4	-1.7	7,963	7,997	-4	4.2	1.97	1.99
508	Machinery, equip. & supplies .....	21,403	21,238	.8	13.3	44,496	44,804	-7	6.9	2.08	2.11
509	Miscellaneous durable goods .....	8,177	8,181	.0	11.8	8,287	8,156	1.6	-4	1.01	1.00
51	Nondurable goods .....	73,449	74,185	-1.0	4.5	63,843	64,262	-7	1.8	.87	.87
511	Paper & paper products .....	4,963	4,845	2.4	9.5	4,397	4,522	-2.8	-5.2	.89	.93
512	Drugs, drug proprietaries and druggists' sundries .....	3,765	3,660	2.9	15.6	5,910	5,830	1.4	15.1	1.57	1.59
513	Apparel, piece goods & notions .....	5,058	5,284	-4.3	8.4	9,444	9,348	1.0	16.9	1.87	1.77
514	Groceries & related products .....	18,860	19,217	-1.9	-3.4	13,217	13,864	-3.3	2.9	.70	.71
515	Farm-product raw materials .....	10,920	10,224	6.8	-2.7	7,895	8,043	-1.8	-14.2	.72	.79
516	Chemicals & allied products .....	3,126	3,215	-2.8	4.8	2,586	2,596	-4	-6.7	.83	.81
517	Petroleum & petroleum products .....	13,097	13,824	-5.3	21.4	4,229	4,278	-1.1	2.2	.32	.31
518	Beer, wine, & distilled beverages .....	3,786	3,744	1.1	4.1	4,349	4,275	1.7	6.6	1.15	1.14
519	Misc. nondurable goods .....	9,874	10,172	-2.9	2.2	11,816	11,706	.9	.2	1.20	1.15

<sup>1</sup>Preliminary estimates.

<sup>2</sup>Data are not adjusted for seasonal variation or trading-day differences.

<sup>3</sup>Data are adjusted for seasonal variation and, in the case of sales, for trading-day differences.

# Monthly Wholesale Trade

## Sales and Inventories



U.S. Department of Commerce  
BUREAU OF THE CENSUS

January 1990

BW90-01  
Issued April 1990

**Notice of Revision to Wholesale Estimates:** Monthly merchant wholesalers' sales, inventories, and stock/sales ratio estimates have been revised for the period January 1983 through December 1989 utilizing the results of the 1987 Census of Wholesale Trade and the 1988 Annual Trade Survey. The data shown in this report reflect this revision. Revised estimates are shown in *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989*.

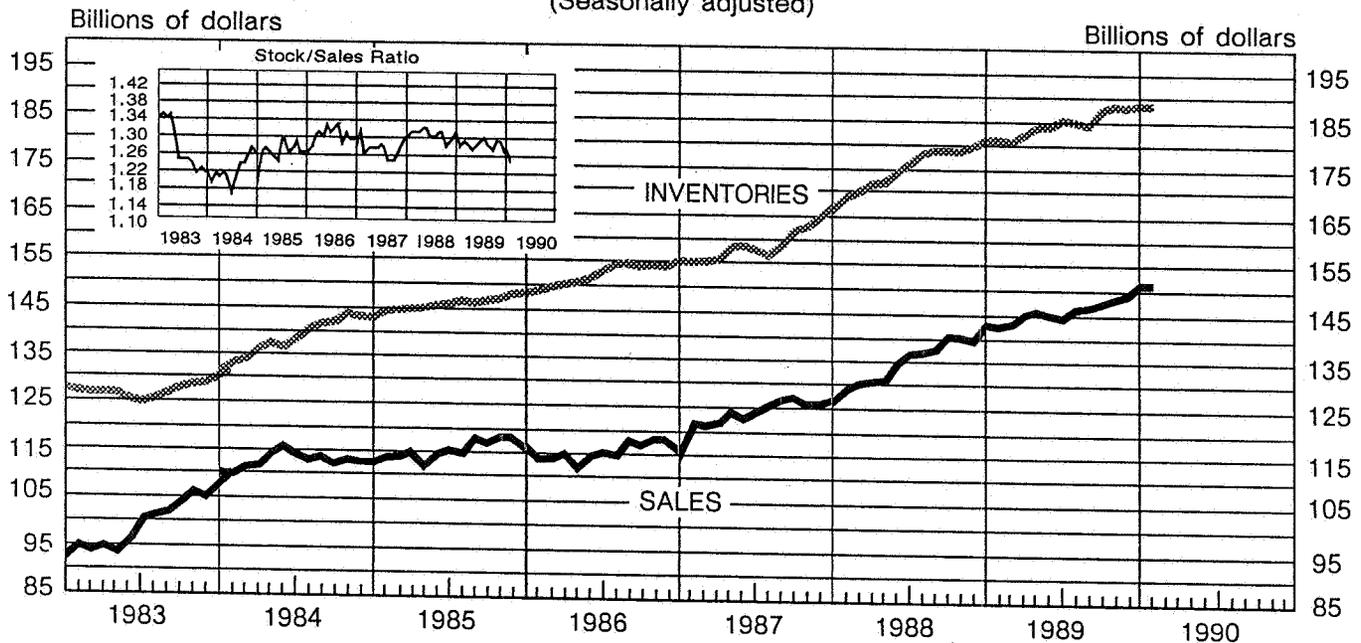
**Sales.** January 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$151.9 billion, up 1.5 percent ( $\pm 1.2$  percent) from the revised December level and were up 5.9 percent ( $\pm 1.8$  percent) from a year ago. January sales of durable goods increased 4.3 percent ( $\pm 1.7$  percent) from the revised December level, and were 7.4 percent ( $\pm 2.1$  percent) above a year ago. Monthly increases in the sales of durable goods were as follows: lumber and other construction materials increased 12.2 percent to \$5.0 billion; motor vehicles and automotive equipment were up 10.9 percent to \$14.5 billion; and metals and minerals, except petroleum were up 7.7 percent to \$7.4 billion. January sales of nondurable goods were down 1.2 percent ( $\pm 1.3$  percent) from December but were up 4.4 percent ( $\pm 2.6$  percent) from January 1989. Sales of petroleum and petroleum products decreased 5.4 percent to \$12.9 billion from the December level. However, sales of farm-product raw materials increased 5.8 percent to \$11.1 billion for the same period.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$189.2 billion at the end of January, up 0.2 percent ( $\pm 0.7$  percent) from the revised December level and were up 4.0 percent ( $\pm 1.5$  percent) from a year ago. Inventories of durable goods wholesalers increased 0.6 percent ( $\pm 0.6$  percent) from the December level and were 5.1 percent ( $\pm 1.8$  percent) above a year ago. Inventories of nondurable goods wholesalers were down 0.6 percent ( $\pm 0.6$  percent) from the December level but were up 2.0 percent ( $\pm 3.0$  percent) from January 1989.

**Stock/Sales Ratio.** The January stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.25.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-1990  
(Seasonally adjusted)



Monthly Wholesale Trade for February is scheduled to be released April 6, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990		1989											
		Jan. <sup>P</sup>	Jan. <sup>T</sup>	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
	<b>Sales, Total</b> .....	151,884	143,378	142,952	143,568	145,515	146,333	145,512	144,856	146,800	146,981	147,921	148,782	149,584	
50	Durable goods .....	76,343	71,058	70,505	70,120	70,686	72,068	70,735	71,545	72,696	72,388	73,048	73,970	73,180	
501	Motor vehicles & auto. equip. ....	14,451	14,351	14,384	14,207	14,094	13,199	13,336	13,347	14,118	13,901	13,892	13,708	13,034	
502	Furniture & home furnishings .....	2,461	2,468	2,439	2,435	2,515	2,453	2,444	2,495	2,575	2,569	2,407	2,488	2,405	
503	Lumber & other construction mat. ....	4,955	5,129	4,981	4,783	4,903	4,958	4,849	4,920	5,016	4,886	4,978	4,866	4,425	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,898	2,191	1,885	2,067	1,962	1,979	2,019	1,939	2,027	2,155	2,076	2,023	2,036	
505	Metals & minerals, ex. petroleum .....	7,353	7,249	6,789	6,827	7,198	7,674	7,239	7,111	7,447	7,447	6,325	7,527	6,827	
506	Electrical goods .....	9,736	9,263	9,011	8,976	9,118	9,715	9,094	9,140	9,365	9,312	9,336	9,495	9,605	
507	Hardware, plumbing & heating equipment ..	3,660	3,724	3,622	3,487	3,725	3,737	3,525	3,599	3,632	3,588	3,624	3,619	3,649	
508	Machinery, equip. & supplies .....	23,176	20,485	21,191	21,008	21,476	21,656	21,825	22,112	22,116	22,628	22,589	22,970	22,974	
509	Miscellaneous durable goods .....	8,643	6,198	6,223	6,330	5,707	6,397	6,404	6,882	6,370	7,024	6,819	7,497	8,225	
51	<b>Nondurable goods</b> .....	75,521	72,320	72,447	73,448	74,829	74,265	74,777	73,311	74,104	74,593	74,773	74,812	76,404	
511	Paper & paper products .....	4,440	4,059	4,054	4,119	4,252	4,217	4,179	4,321	4,262	4,348	4,366	4,320	4,348	
512	Drugs, drug proprietaries and druggists' sundries .....	4,090	3,540	3,450	3,555	3,529	3,576	3,565	3,631	3,651	3,738	3,889	3,958	3,992	
513	Apparel, piece goods & notions .....	5,230	4,803	4,488	4,659	4,785	4,551	4,850	4,919	4,742	4,953	4,816	5,163	5,493	
514	Groceries & related products .....	19,312	19,960	20,128	20,174	20,308	20,613	20,611	20,386	20,232	20,285	20,846	19,999	19,581	
515	Farm-product raw materials .....	11,073	11,410	11,613	11,610	11,748	11,011	10,961	10,370	11,056	10,555	10,759	10,971	10,465	
516	Chemicals & allied products .....	3,205	3,063	3,054	3,083	3,089	3,024	3,083	3,140	3,037	3,083	3,093	3,204	3,304	
517	Petroleum & petroleum products .....	12,942	10,642	11,127	11,555	12,805	12,778	12,828	11,987	12,099	12,274	12,300	11,800	13,674	
518	Beer, wine, & distilled beverages .....	3,849	3,503	3,407	3,498	3,483	3,433	3,554	3,494	3,589	3,569	3,532	3,586	3,604	
519	Misc. nondurable goods .....	11,580	11,340	11,126	11,195	10,830	10,962	11,346	11,063	11,445	11,788	11,542	11,811	11,943	
	<b>Inventories, Total</b> .....	189,157	181,869	181,771	181,449	182,937	184,606	184,737	186,113	185,730	185,098	188,103	189,057	188,819	
50	Durable goods .....	124,676	118,655	119,298	118,614	120,331	121,789	121,874	123,602	122,939	122,148	123,716	124,363	123,954	
501	Motor vehicles & auto. equip. ....	23,817	22,262	22,443	22,637	23,125	23,646	23,588	23,806	23,545	22,770	23,472	23,298	22,381	
502	Furniture & home furnishings .....	4,252	4,465	4,471	4,469	4,383	4,427	4,505	4,537	4,531	4,565	4,570	4,510	4,496	
503	Lumber & other construction mat. ....	5,846	5,815	5,719	5,813	5,820	5,850	5,759	5,806	5,687	5,725	5,805	5,704	5,847	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,513	4,147	4,241	4,234	4,313	4,323	4,504	4,437	4,408	4,460	4,473	4,580	4,589	
505	Metals & minerals, ex. petroleum .....	10,428	10,554	10,590	10,661	10,605	10,388	10,585	11,034	10,691	10,811	10,741	10,879	10,693	
506	Electrical goods .....	15,650	14,496	14,809	14,776	15,048	15,201	15,260	15,592	15,469	15,285	15,455	15,541	15,525	
507	Hardware, plumbing & heating equipment ..	7,379	7,081	6,927	6,883	7,043	7,153	7,153	7,278	7,278	7,352	7,492	7,494	7,410	
508	Machinery, equip. & supplies .....	46,186	43,201	43,402	42,565	43,786	44,490	44,515	45,208	45,084	45,016	45,351	45,777	46,506	
509	Miscellaneous durable goods .....	6,605	6,634	6,696	6,576	6,208	6,311	6,005	5,904	6,246	6,164	6,357	6,580	6,507	
51	<b>Nondurable goods</b> .....	64,481	63,214	62,473	62,835	62,606	62,817	62,863	62,511	62,791	62,950	64,387	64,694	64,865	
511	Paper & paper products .....	4,035	4,258	4,125	4,098	4,142	4,166	4,156	4,234	4,171	4,230	4,249	4,175	4,154	
512	Drugs, drug proprietaries and druggists' sundries .....	6,052	5,264	5,280	5,243	5,309	5,332	5,520	5,558	5,705	5,846	5,829	5,846	5,976	
513	Apparel, piece goods & notions .....	9,908	8,477	8,694	8,662	8,637	8,724	8,839	9,010	9,219	9,244	9,391	9,428	9,807	
514	Groceries & related products .....	13,149	12,781	12,693	12,877	12,812	13,001	12,960	12,585	12,681	12,499	13,335	13,527	13,593	
515	Farm-product raw materials .....	7,687	8,961	8,346	7,991	7,478	7,432	6,886	6,797	6,921	6,778	7,354	7,685	7,831	
516	Chemicals & allied products .....	2,552	2,733	2,582	2,681	2,671	2,599	2,700	2,690	2,600	2,771	2,575	2,523	2,560	
517	Petroleum & petroleum products .....	3,718	3,640	3,732	4,057	4,246	4,158	4,351	4,028	4,066	4,058	4,060	4,038	3,762	
518	Beer, wine, & distilled beverages .....	4,096	3,840	3,800	3,809	3,768	3,832	3,853	3,885	3,848	3,918	3,915	4,025	4,022	
519	Misc. nondurable goods .....	13,284	13,260	13,221	13,417	13,543	13,573	13,594	13,724	13,580	13,606	13,679	13,447	13,160	
	<b>Stock/sales ratios, Total</b> .....	1.25	1.27	1.27	1.26	1.26	1.26	1.27	1.28	1.27	1.26	1.27	1.27	1.26	
50	Durable goods .....	1.63	1.67	1.69	1.69	1.70	1.69	1.72	1.73	1.69	1.69	1.69	1.68	1.69	
501	Motor vehicles & auto. equip. ....	1.65	1.55	1.56	1.59	1.64	1.79	1.77	1.78	1.67	1.64	1.69	1.70	1.72	
502	Furniture & home furnishings .....	1.73	1.81	1.83	1.84	1.74	1.80	1.84	1.82	1.76	1.78	1.90	1.81	1.87	
503	Lumber & other construction mat. ....	1.18	1.13	1.15	1.22	1.19	1.18	1.19	1.18	1.13	1.17	1.17	1.17	1.32	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.38	1.89	2.25	2.05	2.20	2.18	2.23	2.29	2.17	2.07	2.15	2.26	2.25	
505	Metals & minerals, ex. petroleum .....	1.42	1.46	1.56	1.56	1.47	1.30	1.46	1.55	1.44	1.71	1.43	1.43	1.57	
506	Electrical goods .....	1.61	1.56	1.64	1.65	1.65	1.56	1.68	1.71	1.65	1.64	1.66	1.64	1.62	
507	Hardware, plumbing & heating equipment ..	2.02	1.90	1.91	1.97	1.89	1.91	2.03	2.02	2.00	2.05	2.07	2.07	2.03	
508	Machinery, equip. & supplies .....	1.99	2.11	2.05	2.03	2.04	2.05	2.04	2.04	2.04	1.99	2.01	2.02	2.02	
509	Miscellaneous durable goods .....	.76	1.07	1.08	1.04	1.09	.99	.94	.86	.98	.88	.96	.88	.79	
51	<b>Nondurable goods</b> .....	.85	.87	.86	.86	.84	.85	.84	.85	.85	.84	.86	.86	.85	
511	Paper & paper products .....	.91	1.05	1.02	.99	.97	.99	.99	.98	.98	.97	.97	.97	.96	
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.49	1.53	1.47	1.50	1.49	1.55	1.53	1.56	1.56	1.50	1.48	1.50	
513	Apparel, piece goods & notions .....	1.89	1.76	1.94	1.86	1.81	1.92	1.82	1.83	1.94	1.87	1.95	1.83	1.79	
514	Groceries & related products .....	.68	.64	.63	.64	.63	.63	.63	.62	.63	.62	.64	.68	.69	
515	Farm-product raw materials .....	.69	.79	.72	.69	.64	.67	.63	.66	.63	.64	.68	.70	.75	
516	Chemicals & allied products .....	.80	.89	.85	.87	.86	.86	.88	.86	.86	.90	.83	.79	.77	
517	Petroleum & petroleum products .....	.29	.34	.34	.35	.33	.32	.34	.34	.34	.33	.34	.34	.28	
518	Beer, wine, & distilled beverages .....	1.12	1.10	1.12	1.09	1.08	1.12	1.08	1.11	1.07	1.10	1.11	1.12	1.12	
519	Misc. nondurable goods .....	1.15	1.17	1.19	1.20	1.25	1.24	1.20	1.24	1.19	1.15	1.19	1.14	1.10	

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.

<sup>T</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990	1989												Total 12 mos.
		Jan. <sup>P</sup>	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1989
	<b>Sales, Total</b>	146,222	135,038	130,545	152,712	141,130	152,604	150,308	137,524	152,731	145,394	155,847	150,006	144,355	1,748,194
50	Durable goods	71,084	64,512	63,219	74,414	69,440	74,643	74,245	68,081	76,020	73,080	78,451	74,608	69,247	859,960
501	Motor vehicles & auto. equip.	13,598	13,045	12,989	15,045	14,239	14,083	14,043	12,693	14,302	12,858	15,059	13,859	12,760	164,975
502	Furniture & home furnishings	2,365	2,246	2,210	2,511	2,341	2,485	2,400	2,335	2,766	2,767	2,720	2,617	2,203	29,801
503	Lumber & other construction mat.	4,240	4,252	3,860	4,697	4,785	5,295	5,460	5,245	5,708	5,257	5,645	4,671	3,757	58,632
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,739	1,948	1,734	2,166	1,762	1,730	1,958	1,710	2,080	2,340	2,441	2,355	2,099	24,323
505	Metals & minerals, ex. petroleum	7,177	7,039	6,322	7,933	7,052	7,783	7,753	6,443	7,968	6,464	7,655	7,319	6,274	86,005
506	Electrical goods	9,113	8,466	8,173	9,272	8,507	9,540	9,194	8,802	9,987	9,647	10,354	9,998	9,288	111,228
507	Hardware, plumbing & heating equipment	3,470	3,437	3,173	3,484	3,606	3,972	3,835	3,552	3,904	3,541	3,994	3,615	3,306	43,419
508	Machinery, equip. & supplies	21,577	18,662	19,369	22,647	21,390	22,782	22,763	20,763	23,222	23,013	23,560	21,987	22,009	262,167
509	Miscellaneous durable goods	7,805	5,417	5,389	6,659	5,758	6,973	6,839	6,538	6,083	7,193	7,023	8,187	7,551	79,610
51	Nondurable goods	75,138	70,526	67,326	78,298	71,690	77,961	76,063	69,443	76,711	72,314	77,396	75,398	75,108	888,234
511	Paper & paper products	4,476	4,002	3,803	4,399	4,018	4,120	4,304	4,040	4,586	4,300	4,645	4,372	4,152	50,741
512	Drugs, drug proprietaries and druggists' sundries	4,290	3,607	3,229	3,719	3,331	3,673	3,583	3,424	3,786	3,734	4,052	3,962	3,868	43,968
513	Apparel, piece goods & notions	4,942	4,496	4,497	4,883	4,091	4,073	5,020	5,096	5,975	5,107	5,616	5,158	3,977	57,989
514	Groceries & related products	19,235	19,421	18,457	20,497	19,272	21,850	21,023	20,243	20,981	19,534	20,909	20,799	19,816	242,802
515	Farm-product raw materials	12,302	12,425	11,183	12,516	11,172	11,484	10,347	9,136	10,658	9,573	11,889	11,520	10,298	132,201
516	Chemicals & allied products	3,118	2,910	2,782	3,348	3,098	3,272	3,459	2,992	3,116	3,031	3,214	3,034	2,891	37,147
517	Petroleum & petroleum products	13,460	10,897	10,871	12,930	12,062	13,058	12,464	11,064	12,014	12,323	11,741	11,375	14,262	145,061
518	Beer, wine, & distilled beverages	2,974	2,732	2,702	3,557	3,145	3,759	3,984	4,024	3,490	3,490	3,592	3,816	3,997	42,201
519	Misc. nondurable goods	10,341	10,036	9,802	12,449	11,501	12,672	11,879	10,045	11,571	11,222	11,738	11,362	11,847	136,124
	<b>Inventories, Total</b>	189,919	182,962	183,428	183,244	184,390	183,089	184,498	184,895	182,299	183,868	189,404	189,822	189,042	(X)
50	Durable goods	123,213	117,267	118,834	119,232	121,635	122,538	122,613	124,655	122,371	122,335	123,856	123,652	122,053	(X)
501	Motor vehicles & auto. equip.	23,531	22,039	22,712	22,977	23,171	23,693	23,564	23,258	22,603	23,225	23,402	23,624	22,650	(X)
502	Furniture & home furnishings	4,231	4,456	4,431	4,433	4,344	4,480	4,537	4,623	4,613	4,693	4,561	4,357	4,397	(X)
503	Lumber & other construction mat.	5,752	5,699	5,610	5,952	6,082	5,920	5,989	6,067	5,579	5,673	5,718	5,379	5,672	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,346	4,002	4,148	4,213	4,274	4,228	4,545	4,677	4,501	4,629	4,580	4,516	4,419	(X)
505	Metals & minerals, ex. petroleum	10,501	10,638	10,495	10,725	10,817	10,502	11,030	11,255	10,381	10,530	10,569	10,531	10,746	(X)
506	Electrical goods	15,243	14,105	14,631	14,702	14,988	15,277	15,291	15,904	15,686	15,438	15,594	15,510	15,354	(X)
507	Hardware, plumbing & heating equipment	7,261	6,961	6,913	7,014	7,177	7,225	7,146	7,343	7,358	7,337	7,589	7,299	7,165	(X)
508	Machinery, equip. & supplies	46,001	42,985	43,359	42,693	44,487	44,801	44,560	45,524	45,129	44,566	45,442	45,823	45,390	(X)
509	Miscellaneous durable goods	6,347	5,382	6,535	6,523	6,295	6,412	5,951	6,004	6,521	6,244	6,401	6,613	6,260	(X)
51	Nondurable goods	66,706	65,695	64,594	64,012	62,755	60,551	61,885	60,240	59,928	61,533	65,548	66,170	66,989	(X)
511	Paper & paper products	4,116	4,339	4,187	4,188	4,200	4,116	4,131	4,264	4,108	4,099	4,274	4,108	4,137	(X)
512	Drugs, drug proprietaries and druggists' sundries	6,403	5,554	5,475	5,259	5,463	5,140	5,316	5,380	5,517	5,805	5,940	5,671	6,179	(X)
513	Apparel, piece goods & notions	9,987	8,528	8,607	8,298	8,171	8,907	9,396	9,443	9,634	9,475	8,997	8,938	9,729	(X)
514	Groceries & related products	13,188	12,819	12,769	12,619	12,581	12,767	12,740	12,283	12,085	12,499	14,002	14,284	14,001	(X)
515	Farm-product raw materials	9,040	10,610	9,590	8,223	7,336	6,005	5,867	5,703	5,724	6,005	8,310	8,869	9,115	(X)
516	Chemicals & allied products	2,572	2,747	2,628	2,686	2,754	2,682	2,807	2,701	2,629	2,641	2,477	2,447	2,486	(X)
517	Petroleum & petroleum products	3,852	3,800	3,824	4,106	4,068	3,992	4,347	3,992	3,920	4,208	4,113	4,070	3,912	(X)
518	Beer, wine, & distilled beverages	3,879	3,640	3,739	3,874	3,840	3,817	3,918	3,862	3,763	3,557	4,166	4,242	3,704	(X)
519	Misc. nondurable goods	13,669	13,658	13,975	14,759	14,342	13,125	13,363	12,612	12,548	12,844	13,269	13,541	13,726	(X)
	<b>Stock/sales ratios, Total</b>	1.30	1.35	1.41	1.20	1.31	1.20	1.23	1.34	1.19	1.26	1.22	1.27	1.31	(X)
50	Durable goods	1.73	1.82	1.88	1.60	1.75	1.64	1.65	1.83	1.61	1.67	1.58	1.66	1.76	(X)
501	Motor vehicles & auto. equip.	1.73	1.69	1.75	1.53	1.63	1.68	1.68	1.83	1.58	1.81	1.55	1.70	1.78	(X)
502	Furniture & home furnishings	1.79	1.98	2.00	1.77	1.86	1.80	1.89	1.98	1.67	1.70	1.68	1.66	2.00	(X)
503	Lumber & other construction mat.	1.36	1.34	1.45	1.27	1.27	1.12	1.10	1.16	.98	1.08	1.01	1.15	1.51	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.50	2.05	2.39	1.95	2.43	2.44	2.32	2.74	2.16	1.98	1.88	1.92	2.11	(X)
505	Metals & minerals, ex. petroleum	1.46	1.51	1.66	1.35	1.53	1.35	1.42	1.75	1.30	1.63	1.38	1.44	1.71	(X)
506	Electrical goods	1.67	1.67	1.79	1.59	1.76	1.60	1.66	1.81	1.57	1.60	1.51	1.55	1.66	(X)
507	Hardware, plumbing & heating equipment	2.09	2.03	2.18	2.01	1.99	1.82	1.86	2.07	1.88	2.07	1.90	2.02	2.17	(X)
508	Machinery, equip. & supplies	2.13	2.30	2.24	1.89	2.08	1.97	1.96	2.19	1.94	1.94	1.93	2.08	2.06	(X)
509	Miscellaneous durable goods	.81	1.18	1.21	.98	1.09	.92	.87	1.07	.87	.87	.91	.81	.83	(X)
51	Nondurable goods	.89	.93	.96	.82	.88	.78	.81	.87	.78	.85	.85	.88	.89	(X)
511	Paper & paper products	.92	1.08	1.10	.95	1.05	1.00	.96	1.06	.90	.95	.92	.94	1.00	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.49	1.54	1.70	1.41	1.64	1.40	1.48	1.57	1.46	1.55	1.47	1.43	1.60	(X)
513	Apparel, piece goods & notions	2.02	1.90	1.91	1.70	2.00	2.19	1.87	1.85	1.61	1.86	1.60	1.73	2.45	(X)
514	Groceries & related products	.69	.66	.69	.62	.65	.58	.61	.61	.58	.64	.67	.69	.71	(X)
515	Farm-product raw materials	.73	.85	.66	.66	.66	.52	.57	.62	.54	.63	.70	.77	.89	(X)
516	Chemicals & allied products	.92	.94	.94	.80	.89	.82	.81	.90	.84	.87	.77	.81	.86	(X)
517	Petroleum & petroleum products	.29	.35	.33	.32	.34	.31	.35	.36	.33	.34	.35	.36	.27	(X)
518	Beer, wine, & distilled beverages	1.30	1.33	1.38	1.09	1.22	1.02	.98	1.13	.94	1.13	1.16	1.11	.93	(X)
519	Misc. nondurable goods	1.32	1.36	1.43	1.19	1.25	1.04	1.12	1.26	1.08	1.14	1.13	1.19	1.16	(X)

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
 x Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted				Adjusted <sup>1</sup>			
		Sales		Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Jan. 1990 from Dec. 1989	Jan. 1990 from Jan. 1989	Jan. 1990 from Dec. 1989	Jan. 1990 from Jan. 1989	Jan. 1990 from Dec. 1989	Jan. 1990 from Jan. 1989	Jan. 1990 from Dec. 1989	Jan. 1990 from Jan. 1989
	<b>Total</b> .....	+1.3	+8.3	+5	+3.8	+1.5	+5.9	+2	+4.0
50	Durable goods .....	+2.7	+10.2	+1.0	+5.1	+4.3	+7.4	+6	+5.1
501	Motor vehicles & auto. equip. ....	+6.6	+4.2	+3.9	+6.8	+10.9	+7	+6.4	+7.0
502	Furniture & home furnishings .....	+7.4	+5.3	-3.8	-5.0	+2.3	-3	-5.4	-4.8
503	Lumber & other construction mat. ....	+12.9	-3	+1.4	+9	+12.2	-3.2	0.0	+5
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	-17.2	-10.7	-1.7	+8.6	-6.8	-13.4	-1.7	+8.8
505	Metals & minerals, ex. petroleum .....	+14.4	+2.0	-2.3	-1.3	+7.7	+1.4	-2.5	-1.2
506	Electrical goods .....	-1.9	+7.6	-7	+8.1	+1.4	+5.1	+8	+8.0
507	Hardware, plumbing & heating equipment .....	+5.0	+1.0	+1.3	+4.3	+3	-1.7	-4	+4.2
508	Machinery, equip. & supplies .....	-2.0	+15.6	+1.3	+7.0	+9	+13.1	-7	+6.9
509	Miscellaneous durable goods .....	+3.4	+44.1	+1.4	-5	+5.1	+39.4	+1.5	-4
51	Nondurable goods .....	0.0	+6.5	-4	+1.5	-1.2	+4.4	-6	+2.0
511	Paper & paper products .....	+7.8	+11.8	-5	-5.1	+2.1	+9.4	-2.9	-5.2
512	Drugs, drug proprietaries and druggists' sundries .....	+10.9	+18.9	+3.6	+15.3	+2.5	+15.5	+1.3	+15.0
513	Apparel, piece goods & notions .....	+24.3	+9.9	+2.7	+17.1	-4.8	+8.9	+1.0	+16.9
514	Groceries & related products .....	-2.9	-1.0	-5.8	+2.9	-1.4	-3.2	-3.3	+2.9
515	Farm-product raw materials .....	+19.5	-1.0	-8	-14.8	+5.8	-3.0	-1.8	-14.2
516	Chemicals & allied products .....	+7.9	+7.1	+3.5	-6.4	-3.0	+4.6	-3	-6.6
517	Petroleum & petroleum products .....	-5.6	+23.5	-1.5	+1.4	-5.4	+21.6	-1.2	+2.1
518	Beer, wine, & distilled beverages .....	-25.6	+8.9	+4.7	+6.6	+1.2	+4.2	+1.8	+6.7
519	Misc. nondurable goods .....	-12.7	+3.0	-4	+1	-3.0	+2.1	+9	+2

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

## CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### Unpublished Data

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### Definition of Terms

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### Kind-of-Business Classifications

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### Adjustment for Seasonal and Trading-Day Variation

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.6-1.8	1.7	1.5-1.7	1.6	0.4-0.7	0.6	0.7-1.0	0.9	1.8	1.8	
50	Durable goods .....	1.7-2.5	2.2	1.7-2.4	2.0	0.5-1.0	0.8	1.1-1.4	1.2	2.4	2.1	1.0
501	Motor vehicles & auto, equip. ....	3.9-5.5	4.7	3.9-5.0	4.4	1.0-2.2	1.2	1.9-3.6	2.8	5.5	6.9	2.8
502	Furniture & home furnishings .....	6.4-15.6	8.6	6.4-8.7	7.2	1.5-10.5	3.7	5.3-15.9	8.0	15.6	7.9	15.9
503	Lumber & other construction mat. ....	4.4-5.8	4.9	4.2-5.0	4.7	1.1-2.5	1.6	2.3-3.7	3.0	5.8	5.9	3.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	6.6-8.2	7.2	4.6-7.5	6.6	2.6-5.9	4.8	4.2-8.4	7.2	6.6	8.1	7.2
505	Metals & minerals, ex. petroleum .....	5.4-10.5	6.9	5.2-11.9	7.3	0.9-5.0	3.3	2.6-5.4	2.9	5.4	7.0	2.6
506	Electrical goods .....	2.7-5.5	4.5	2.9-4.7	3.7	0.7-2.4	1.6	1.9-3.9	3.2	4.5	2.4	3.9
507	Hardware, plumbing & heating equipment .....	6.8-9.0	8.3	7.1-8.7	8.3	1.3-2.4	1.8	2.6-3.9	3.2	6.8	8.1	3.9
508	Machinery, equip. & supplies .....	3.4-4.4	3.8	3.3-4.2	3.7	1.1-1.7	1.5	2.3-3.6	2.5	4.0	3.2	2.3
509	Miscellaneous durable goods .....	4.5-5.8	5.3	4.2-6.5	4.9	1.2-2.5	2.0	3.5-4.1	3.7	5.7	5.5	4.0
51	<b>Nondurable goods</b> .....	2.6-2.9	2.8	2.4-3.0	2.7	0.7-1.0	0.8	0.9-1.6	1.5	2.8	2.9	1.5
511	Paper & paper products .....	4.7-5.3	5.1	5.0-5.5	5.1	0.9-2.1	1.6	2.7-4.4	3.5	4.7	5.3	3.8
512	Drugs, drug proprietaries and druggists' sundries .....	5.0-6.3	5.6	5.1-6.3	5.5	0.7-1.7	1.2	1.8-3.4	2.9	5.4	4.4	2.9
513	Apparel, piece goods & notions .....	8.6-12.3	9.7	8.1-11.5	9.5	2.1-5.2	4.4	4.6-7.3	5.5	9.2	10.7	6.2
514	Groceries & related products .....	4.3-5.3	4.8	4.1-5.3	4.5	0.7-2.2	1.5	2.0-3.6	2.4	5.0	5.6	2.5
515	Farm-product raw materials .....	5.6-6.7	6.1	3.7-6.2	5.9	2.0-4.8	3.1	3.2-5.7	4.7	6.0	5.6	4.6
516	Chemicals & allied products .....	5.9-8.7	8.1	6.0-8.7	8.1	1.5-2.9	2.0	2.8-6.3	5.5	8.0	5.1	5.9
517	Petroleum & petroleum products .....	5.8-7.7	6.5	5.5-7.1	6.7	0.8-2.4	2.1	1.8-3.5	3.0	7.7	6.1	3.3
518	Beer, wine, & distilled beverages .....	3.1-5.4	4.2	2.8-4.4	3.9	0.6-3.5	1.3	1.5-3.4	2.8	4.0	4.0	1.7
519	Misc. nondurable goods .....	5.3-6.8	6.1	4.8-7.0	5.6	1.3-3.2	2.1	2.5-4.8	3.5	6.0	5.1	2.5
	<b>Inventories, Total</b> .....	1.2-1.5	1.3	1.2-1.4	1.3	0.2-0.4	0.3	0.7-1.1	0.9	(X)	(X)	(X)
50	Durable goods .....	1.5-1.8	1.7	1.5-1.8	1.6	0.2-0.4	0.4	0.8-1.7	1.0	(X)	(X)	(X)
501	Motor vehicles & auto, equip. ....	5.8-6.5	6.0	5.8-6.2	6.1	0.4-1.2	0.7	2.0-3.0	2.5	(X)	(X)	(X)
502	Furniture & home furnishings .....	8.1-9.8	9.1	8.2-9.4	8.8	0.8-2.9	1.1	4.2-8.1	5.4	(X)	(X)	(X)
503	Lumber & other construction mat. ....	5.3-6.4	6.2	5.3-6.5	6.0	0.7-1.3	0.9	2.6-4.0	3.5	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4.6-6.5	5.5	4.7-6.1	5.5	0.7-2.2	1.4	2.8-4.4	3.5	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	4.0-5.2	4.8	3.9-5.2	4.7	0.5-1.0	0.9	2.2-3.0	2.5	(X)	(X)	(X)
506	Electrical goods .....	2.5-3.9	3.1	2.6-3.6	2.9	0.5-0.8	0.5	1.9-2.5	2.2	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment .....	5.0-6.9	6.5	5.3-6.8	6.4	0.6-0.9	0.7	2.1-5.3	3.3	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.0-4.0	3.6	3.0-4.1	3.6	0.4-0.9	0.6	1.9-4.0	2.2	(X)	(X)	(X)
509	Miscellaneous durable goods .....	8.6-9.8	9.1	8.6-9.4	9.1	0.5-1.6	0.9	2.6-3.6	2.9	(X)	(X)	(X)
51	<b>Nondurable goods</b> .....	2.7-3.3	2.9	2.5-3.2	2.9	0.3-0.9	0.6	1.0-2.2	1.5	(X)	(X)	(X)
511	Paper & paper products .....	5.0-6.6	5.9	5.3-6.2	5.9	0.6-1.4	0.9	2.0-3.1	2.8	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6.3-7.1	6.8	5.9-7.4	6.7	0.5-1.7	0.6	2.0-3.3	2.5	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.8-8.1	7.2	6.2-7.9	6.8	1.3-2.0	1.8	3.0-5.4	4.6	(X)	(X)	(X)
514	Groceries & related products .....	4.6-9.3	8.2	4.6-9.4	6.3	0.4-3.8	0.6	1.8-6.1	4.9	(X)	(X)	(X)
515	Farm-product raw materials .....	6.6-8.0	7.5	6.5-7.7	7.1	1.0-1.7	1.5	3.3-4.9	4.0	(X)	(X)	(X)
516	Chemicals & allied products .....	7.5-9.7	8.3	7.1-8.8	7.9	0.6-3.0	1.3	4.5-6.0	5.4	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.3-7.9	7.2	5.9-7.9	7.0	0.7-1.8	1.1	1.8-5.5	4.2	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	5.0-6.3	5.2	4.6-5.2	5.0	0.7-5.6	1.1	2.0-3.8	2.8	(X)	(X)	(X)
519	Misc. nondurable goods .....	8.1-9.1	8.5	8.0-8.9	8.8	1.0-2.3	1.4	3.0-4.5	3.9	(X)	(X)	(X)

\* Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for August 1989 through January 1990.

U.S. Department of Commerce  
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# Monthly Wholesale Trade

## Sales and Inventories

February 1990

U.S. Department of Commerce  
BUREAU OF THE CENSUS

BW90-02  
Issued April 1990

**Sales.** February 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$151.8 billion, down 0.1 percent ( $\pm 0.8$  percent) from the revised January level but were up 6.3 percent ( $\pm 1.6$  percent) from a year ago. The January preliminary estimate was revised upward by \$0.1 billion or about 0.1 percent. February sales of durable goods increased 0.7 percent ( $\pm 1.0$  percent) from the revised January level, and were 9.8 percent ( $\pm 2.5$  percent) above a year ago. Sales of motor vehicles and automotive equipment increased 3.2 percent to \$15.1 billion from the January level. However, sales of miscellaneous durable goods decreased 3.7 percent to \$8.3 billion for the same period. February sales of nondurable goods were down 0.9 percent ( $\pm 1.1$  percent) from January but were up 2.9 percent ( $\pm 2.9$  percent) from February 1989. Monthly decreases in the sales of nondurable goods were as follows: petroleum and petroleum products decreased 7.2 percent to \$11.8 billion and farm-product raw materials were down 5.9 percent to \$10.4 billion.

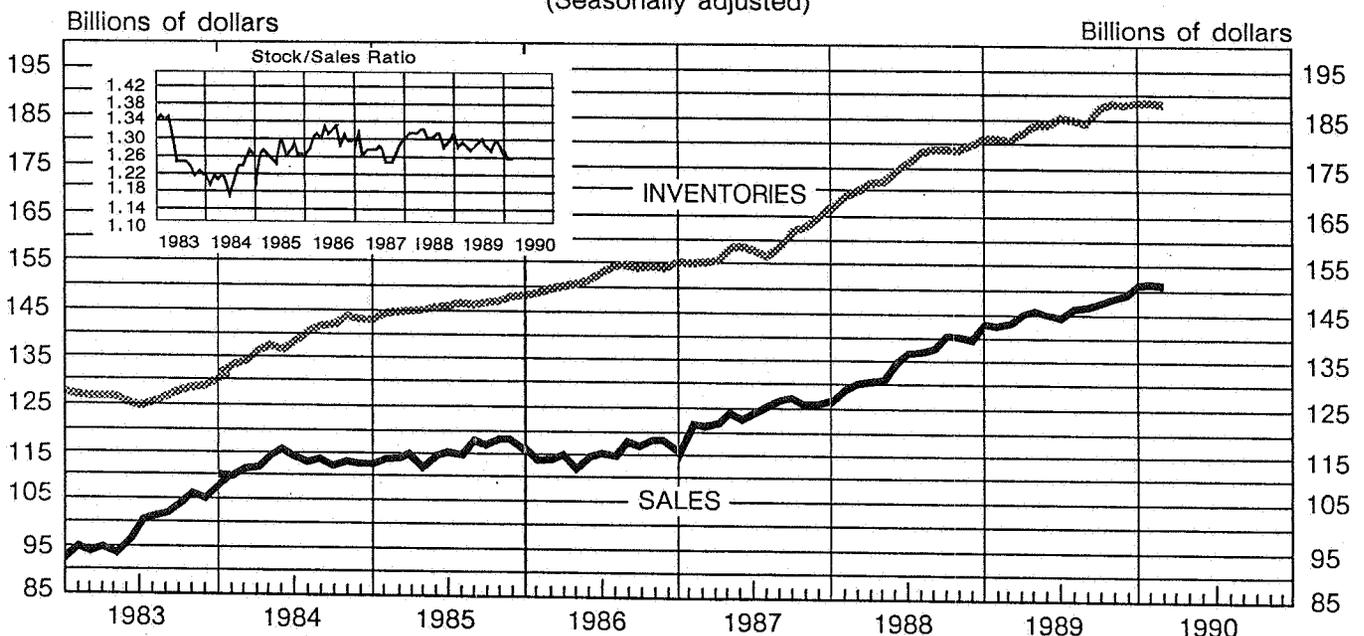
**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$189.0 billion at the end of February,

down 0.2 percent ( $\pm 0.3$  percent) from the revised January level but were up 3.9 percent ( $\pm 1.6$  percent) from a year ago. The January preliminary estimate was revised upward by \$0.2 billion or about 0.1 percent. Inventories of durable goods wholesalers increased 0.5 percent ( $\pm 0.4$  percent) from the January level and were 5.7 percent ( $\pm 1.8$  percent) above a year ago. Inventories of nondurable goods wholesalers were down 1.4 percent ( $\pm 0.6$  percent) from the January level but were up 0.4 percent ( $\pm 2.6$  percent) from February 1989. Monthly decreases in the stocks of nondurable goods were as follows: inventories of groceries and related products decreased 3.3 percent to \$12.7 billion; beer, wine, and distilled beverage stocks were down 2.8 percent to \$3.9 billion; apparel, piece goods and notions decreased 2.7 percent to \$9.4 billion; and inventories of miscellaneous nondurables were down 2.3 percent to \$12.7 billion.

**Stock/Sales Ratio.** The February stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.25.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-1990  
(Seasonally adjusted)



Monthly Wholesale Trade for March is scheduled to be released May 8, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990		1989											
		Jan.	Feb. <sup>P</sup>	Feb. <sup>F</sup>	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
	<b>Sales, Total</b> .....	151,968	151,803	142,799	143,568	145,515	146,333	145,512	144,856	146,800	146,981	147,921	148,782	149,584	
50	Durable goods .....	76,653	77,196	70,316	70,120	70,686	72,068	70,735	71,545	72,696	72,388	73,048	73,970	73,180	
501	Motor vehicles & auto. equip. ....	14,630	15,093	14,198	14,207	14,084	13,199	13,336	13,347	14,118	13,901	13,892	13,708	13,034	
502	Furniture & home furnishings .....	2,282	2,367	2,407	2,435	2,515	2,453	2,444	2,495	2,575	2,569	2,407	2,488	2,405	
503	Lumber & other construction mat. ....	5,112	5,296	4,955	4,783	4,903	4,958	4,849	4,920	5,016	4,886	4,978	4,866	4,425	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,893	1,922	1,875	2,067	1,962	1,979	2,019	1,939	2,027	2,155	2,076	2,023	2,036	
505	Metals & minerals, ex. petroleum .....	7,330	7,485	6,805	6,827	7,196	7,974	7,239	7,111	7,447	6,325	7,527	7,584	6,827	
506	Electrical goods .....	9,818	9,933	9,001	8,976	9,118	9,715	9,094	9,140	9,395	9,312	9,336	9,495	9,605	
507	Hardware, plumbing & heating equipment .....	3,661	3,774	3,610	3,457	3,725	3,737	3,525	3,599	3,632	3,588	3,624	3,619	3,649	
508	Machinery, equip. & supplies .....	23,355	23,070	21,215	21,008	21,476	21,658	21,825	22,112	22,116	22,628	22,589	22,690	22,974	
509	Miscellaneous durable goods .....	8,572	8,256	6,252	6,330	5,707	6,397	6,404	6,882	6,370	7,024	6,619	7,497	8,225	
51	Nondurable goods .....	75,315	74,807	72,483	73,448	74,829	74,265	74,777	73,311	74,104	74,593	74,873	74,812	76,404	
511	Paper & paper products .....	4,370	4,307	4,076	4,119	4,252	4,217	4,179	4,321	4,262	4,348	4,366	4,320	4,348	
512	Drugs, drug proprietaries and druggists' sundries .....	4,065	4,029	3,457	3,555	3,529	3,576	3,565	3,631	3,651	3,738	3,889	3,958	3,992	
513	Apparel, piece goods & notions .....	5,128	5,445	4,484	4,659	4,785	4,551	4,850	4,919	4,742	4,953	4,816	5,163	5,493	
514	Groceries & related products .....	19,432	19,732	20,062	20,174	20,308	20,613	20,611	20,386	20,232	20,285	20,846	19,999	19,581	
515	Farm-product raw materials .....	11,070	10,415	11,698	11,610	11,748	11,011	10,961	10,370	11,056	10,555	10,759	10,971	10,465	
516	Chemicals & allied products .....	3,176	3,307	3,054	3,083	3,089	3,024	3,083	3,140	3,037	3,083	3,024	3,304	3,304	
517	Petroleum & petroleum products .....	12,670	11,762	11,173	11,555	12,805	12,878	12,628	11,987	12,099	12,274	12,030	11,800	13,674	
518	Beer, wine, & distilled beverages .....	3,827	3,596	3,403	3,498	3,483	3,433	3,554	3,494	3,580	3,532	3,586	3,532	3,604	
519	Misc. nondurable goods .....	11,777	12,014	11,076	11,195	10,830	10,962	11,346	11,063	11,445	11,788	11,542	11,811	11,943	
	<b>Inventories, Total</b> .....	189,375	189,025	181,935	181,449	182,937	184,606	184,737	186,113	185,730	185,098	188,103	189,057	188,819	
50	Durable goods .....	125,510	126,082	119,257	118,614	120,331	121,789	121,874	123,602	122,939	122,148	123,716	124,363	123,954	
501	Motor vehicles & auto. equip. ....	23,909	24,017	22,398	22,637	23,125	23,646	23,588	23,806	23,545	22,770	23,472	23,298	22,381	
502	Furniture & home furnishings .....	4,123	4,111	4,521	4,469	4,383	4,427	4,505	4,537	4,531	4,565	4,570	4,510	4,496	
503	Lumber & other construction mat. ....	5,966	6,095	5,707	5,813	5,820	5,850	5,759	5,806	5,887	5,725	5,805	5,704	5,847	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,452	4,358	4,281	4,234	4,313	4,323	4,504	4,437	4,408	4,460	4,473	4,580	4,589	
505	Metals & minerals, ex. petroleum .....	10,548	10,529	10,601	10,661	10,605	10,388	10,585	11,034	10,691	10,811	10,741	10,879	10,693	
506	Electrical goods .....	15,716	15,601	14,794	14,776	15,048	15,201	15,260	15,592	15,469	15,285	15,455	15,541	15,525	
507	Hardware, plumbing & heating equipment .....	7,375	7,365	6,941	6,883	7,043	7,153	7,153	7,278	7,278	7,352	7,492	7,494	7,410	
508	Machinery, equip. & supplies .....	46,811	47,142	43,359	42,565	43,786	44,490	44,515	45,208	45,016	45,016	45,351	45,777	46,506	
509	Miscellaneous durable goods .....	6,610	6,864	6,655	6,576	6,208	6,311	6,005	5,904	6,246	6,164	6,357	6,580	6,507	
51	Nondurable goods .....	63,865	62,943	62,678	62,835	62,606	62,817	62,863	62,511	62,791	62,950	64,387	64,694	64,865	
511	Paper & paper products .....	4,077	4,069	4,129	4,098	4,142	4,166	4,156	4,234	4,171	4,230	4,249	4,175	4,154	
512	Drugs, drug proprietaries and druggists' sundries .....	5,976	6,034	5,290	5,243	5,309	5,332	5,520	5,558	5,705	5,846	5,829	5,846	5,976	
513	Apparel, piece goods & notions .....	9,697	9,438	8,738	8,662	8,637	8,724	8,839	9,010	9,219	9,244	9,391	9,428	9,807	
514	Groceries & related products .....	13,129	12,699	12,718	12,877	12,812	13,001	12,960	12,585	12,681	12,493	13,355	13,527	13,593	
515	Farm-product raw materials .....	7,743	7,747	8,383	7,991	7,478	7,432	6,886	6,797	6,821	6,778	7,354	7,655	7,831	
516	Chemicals & allied products .....	2,581	2,563	2,569	2,681	2,671	2,599	2,704	2,690	2,600	2,771	2,575	2,523	2,560	
517	Petroleum & petroleum products .....	3,666	3,806	3,702	4,057	4,246	4,158	4,351	4,028	4,066	4,058	4,060	4,038	3,762	
518	Beer, wine, & distilled beverages .....	4,009	3,895	3,827	3,809	3,788	3,832	3,853	3,865	3,848	3,918	3,915	4,025	4,022	
519	Misc. nondurable goods .....	12,987	12,692	13,322	13,417	13,543	13,573	13,594	13,724	13,580	13,606	13,679	13,447	13,160	
	<b>Stock/sales ratios, Total</b> .....	1.25	1.25	1.27	1.26	1.26	1.26	1.27	1.28	1.27	1.26	1.27	1.27	1.26	
50	Durable goods .....	1.64	1.63	1.70	1.69	1.70	1.69	1.72	1.73	1.69	1.69	1.69	1.68	1.69	
501	Motor vehicles & auto. equip. ....	1.83	1.59	1.58	1.59	1.64	1.79	1.77	1.78	1.67	1.64	1.69	1.70	1.72	
502	Furniture & home furnishings .....	1.81	1.74	1.88	1.84	1.74	1.80	1.84	1.82	1.76	1.78	1.90	1.81	1.87	
503	Lumber & other construction mat. ....	1.17	1.15	1.15	1.22	1.19	1.18	1.19	1.18	1.13	1.17	1.17	1.17	1.32	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.35	2.27	2.28	2.05	2.20	2.18	2.23	2.29	2.17	2.07	2.15	2.26	2.25	
505	Metals & minerals, ex. petroleum .....	1.44	1.41	1.56	1.56	1.47	1.30	1.46	1.55	1.44	1.71	1.43	1.43	1.57	
506	Electrical goods .....	1.60	1.57	1.64	1.65	1.65	1.56	1.68	1.71	1.65	1.64	1.66	1.64	1.62	
507	Hardware, plumbing & heating equipment .....	2.01	1.95	1.92	1.97	1.89	1.91	2.03	2.02	2.00	2.07	2.07	2.07	2.03	
508	Machinery, equip. & supplies .....	2.00	2.04	2.04	2.03	2.04	2.05	2.04	2.04	2.04	1.99	2.01	2.02	2.02	
509	Miscellaneous durable goods .....	.77	.83	1.06	1.04	1.09	.99	.94	.86	.98	.88	.96	.88	.79	
51	Nondurable goods .....	.85	.84	.86	.86	.84	.85	.84	.85	.85	.84	.86	.86	.85	
511	Paper & paper products .....	.93	.94	1.01	.99	.97	.99	.99	.98	.98	.97	.97	.97	.96	
512	Drugs, drug proprietaries and druggists' sundries .....	1.47	1.50	1.53	1.47	1.50	1.49	1.55	1.53	1.56	1.56	1.50	1.48	1.50	
513	Apparel, piece goods & notions .....	1.89	1.73	1.95	1.86	1.81	1.92	1.82	1.83	1.94	1.87	1.95	1.83	1.79	
514	Groceries & related products .....	.68	.64	.63	.64	.63	.63	.63	.62	.63	.62	.64	.68	.69	
515	Farm-product raw materials .....	.70	.74	.72	.69	.64	.67	.63	.62	.63	.64	.68	.70	.75	
516	Chemicals & allied products .....	.81	.78	.84	.87	.86	.86	.88	.86	.86	.90	.83	.79	.77	
517	Petroleum & petroleum products .....	.29	.32	.33	.35	.33	.32	.34	.34	.33	.33	.34	.34	.28	
518	Beer, wine, & distilled beverages .....	1.11	1.08	1.12	1.09	1.08	1.12	1.08	1.11	1.07	1.10	1.11	1.12	1.12	
519	Misc. nondurable goods .....	1.10	1.06	1.20	1.20	1.25	1.24	1.20	1.24	1.19	1.15	1.19	1.14	1.10	

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.

<sup>F</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990		1989												Total 2 mos.	
		Jan.	Feb. <sup>P</sup>	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1990	1989	
	<b>Sales, Total</b> .....	146,135	138,731	130,545	152,712	141,130	152,604	150,308	137,524	152,731	145,394	155,847	150,006	144,355	284,866	265,583	
50	Durable goods .....	71,238	69,411	63,219	74,414	69,440	74,643	74,245	68,081	76,020	73,080	78,451	74,608	69,247	140,649	127,731	
501	Motor vehicles & auto. equip. ....	13,650	13,886	12,989	15,045	14,239	14,083	14,043	12,693	14,302	12,858	15,059	13,859	12,760	27,536	26,034	
502	Furniture & home furnishings .....	2,131	2,180	2,210	2,511	2,341	2,485	2,400	2,335	2,766	2,767	2,720	2,617	2,203	4,311	4,456	
503	Lumber & other construction mat. . .	4,350	4,115	3,860	4,697	4,785	5,295	5,460	5,245	5,708	5,257	5,645	4,671	3,757	8,465	8,112	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,726	1,782	1,734	2,166	1,762	1,730	1,958	1,710	2,080	2,340	2,441	2,355	2,099	3,508	3,682	
505	Metals & minerals, ex. petroleum ..	7,139	6,916	6,322	7,933	7,052	7,783	7,753	6,443	7,968	6,464	7,855	7,319	6,274	14,055	13,361	
506	Electrical goods .....	9,268	9,019	8,173	9,272	8,507	9,540	9,194	8,802	9,987	9,647	10,354	9,998	9,288	18,287	16,639	
507	Hardware, plumbing & heating equipment .....	3,452	3,310	3,173	3,484	3,606	3,972	3,835	3,552	3,904	3,541	3,994	3,615	3,306	6,762	6,610	
508	Machinery, equip. & supplies .....	21,790	21,086	19,389	22,647	21,390	22,782	22,763	20,763	23,222	23,013	23,560	21,987	22,009	42,876	38,031	
509	Miscellaneous durable goods .....	7,732	7,117	5,389	6,659	5,758	6,973	6,839	6,538	6,083	7,193	7,023	8,187	7,551	14,849	10,806	
51	Nondurable goods .....	74,897	69,320	67,326	78,298	71,690	77,961	76,063	69,443	76,711	72,314	77,396	75,398	75,108	144,217	137,852	
511	Paper & paper products .....	4,392	4,014	3,803	4,399	4,018	4,120	4,304	4,040	4,588	4,300	4,645	4,372	4,152	8,406	7,805	
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,763	3,229	3,719	3,331	3,673	3,583	3,424	3,788	3,734	4,052	3,962	3,868	8,031	6,836	
513	Apparel, piece goods & notions .....	4,743	5,445	4,497	4,883	4,091	4,073	5,020	5,096	5,975	5,107	5,616	5,158	3,977	10,188	8,993	
514	Groceries & related products .....	19,393	18,153	18,457	20,497	19,272	21,850	21,023	20,243	20,981	19,534	20,909	20,799	19,816	37,546	37,878	
515	Farm-product raw materials .....	12,332	9,946	11,183	12,516	11,172	11,484	10,347	9,136	10,658	9,573	11,889	11,520	10,298	22,278	23,608	
516	Chemicals & allied products .....	3,084	3,016	2,782	3,348	3,098	3,272	3,459	2,992	3,116	3,031	3,214	3,034	2,991	6,100	5,692	
517	Petroleum & petroleum products ..	13,228	11,468	10,871	12,930	12,062	13,058	12,464	11,064	12,014	12,323	11,741	11,375	14,262	24,696	21,768	
518	Beer, wine, & distilled beverages ..	2,952	2,859	2,702	3,557	3,145	3,759	3,984	3,403	4,024	3,490	3,592	3,816	3,997	5,811	5,434	
519	Misc. nondurable goods .....	10,505	10,656	9,802	12,449	11,501	12,672	11,879	10,045	11,571	11,222	11,738	11,362	11,847	21,161	19,838	
	<b>Inventories, Total</b> .....	190,390	190,514	183,428	183,244	184,390	183,089	184,498	184,895	182,299	183,868	189,404	189,822	189,042	(X)	(X)	
50	Durable goods .....	124,313	125,788	118,834	119,232	121,635	122,538	122,613	124,655	122,371	122,335	123,856	123,652	122,053	(X)	(X)	
501	Motor vehicles & auto. equip. ....	23,670	24,425	22,712	22,977	23,171	23,693	23,564	23,258	22,603	23,225	23,402	23,624	22,650	(X)	(X)	
502	Furniture & home furnishings .....	4,102	4,025	4,431	4,433	4,344	4,480	4,537	4,623	4,613	4,693	4,561	4,357	4,397	(X)	(X)	
503	Lumber & other construction mat. . .	5,930	5,991	5,610	5,952	6,082	5,920	5,989	6,067	5,579	5,673	5,718	5,379	5,672	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,296	4,214	4,148	4,213	4,274	4,228	4,545	4,677	4,501	4,629	4,580	4,516	4,419	(X)	(X)	
505	Metals & minerals, ex. petroleum ..	10,632	10,424	10,495	10,725	10,817	10,502	11,030	11,255	10,381	10,530	10,569	10,531	10,746	(X)	(X)	
506	Electrical goods .....	15,323	15,445	14,631	14,702	14,988	15,277	15,291	15,904	15,686	15,438	15,594	15,510	15,354	(X)	(X)	
507	Hardware, plumbing & heating equipment .....	7,264	7,328	6,913	7,014	7,177	7,225	7,146	7,343	7,958	7,337	7,589	7,299	7,165	(X)	(X)	
508	Machinery, equip. & supplies .....	46,764	47,189	43,359	42,893	44,487	44,801	44,560	45,524	45,129	44,566	45,442	45,823	45,390	(X)	(X)	
509	Miscellaneous durable goods .....	6,332	6,747	6,535	6,523	6,295	6,412	5,951	6,004	6,521	6,244	6,401	6,613	6,260	(X)	(X)	
51	Nondurable goods .....	66,077	64,726	64,594	64,012	62,755	60,551	61,885	60,240	59,928	61,533	65,548	66,170	66,989	(X)	(X)	
511	Paper & paper products .....	4,171	4,126	4,187	4,188	4,200	4,116	4,131	4,264	4,108	4,099	4,274	4,108	4,137	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,233	5,475	5,259	5,463	5,140	5,318	5,380	5,517	5,805	5,940	5,671	6,179	(X)	(X)	
513	Apparel, piece goods & notions .....	9,765	9,306	8,607	8,298	8,171	8,907	9,396	9,443	9,634	9,475	8,997	8,938	9,729	(X)	(X)	
514	Groceries & related products .....	13,142	12,737	12,769	12,619	12,581	12,767	12,740	12,833	12,085	12,499	14,002	14,284	14,001	(X)	(X)	
515	Farm-product raw materials .....	9,176	8,870	9,590	8,223	7,336	6,005	5,867	5,703	5,724	6,005	8,310	8,889	9,115	(X)	(X)	
516	Chemicals & allied products .....	2,602	2,627	2,628	2,686	2,754	2,682	2,807	2,701	2,629	2,641	2,477	2,447	2,486	(X)	(X)	
517	Petroleum & petroleum products ..	3,783	3,749	3,624	4,106	4,068	3,992	4,347	3,992	3,920	4,208	4,113	4,070	3,912	(X)	(X)	
518	Beer, wine, & distilled beverages ..	3,801	3,802	3,739	3,874	3,840	3,817	3,918	3,862	3,763	3,957	4,166	4,242	3,704	(X)	(X)	
519	Misc. nondurable goods .....	13,338	13,276	13,975	14,759	14,342	13,125	13,363	12,612	12,548	12,844	13,269	13,541	13,726	(X)	(X)	
	<b>Stock/sales ratios, Total</b> .....	1.30	1.37	1.41	1.20	1.31	1.20	1.23	1.34	1.19	1.26	1.22	1.27	1.31	(X)	(X)	
50	Durable goods .....	1.75	1.81	1.88	1.60	1.75	1.64	1.65	1.83	1.61	1.67	1.58	1.66	1.76	(X)	(X)	
501	Motor vehicles & auto. equip. ....	1.73	1.76	1.75	1.53	1.63	1.68	1.68	1.83	1.58	1.81	1.55	1.70	1.78	(X)	(X)	
502	Furniture & home furnishings .....	1.92	1.85	2.00	1.77	1.86	1.80	1.89	1.98	1.67	1.70	1.68	1.66	2.00	(X)	(X)	
503	Lumber & other construction mat. . .	1.36	1.46	1.45	1.27	1.27	1.12	1.10	1.16	.98	1.08	1.01	1.15	1.51	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.49	2.36	2.39	1.95	2.43	2.44	2.32	2.74	2.16	1.98	1.88	1.92	2.11	(X)	(X)	
505	Metals & minerals, ex. petroleum ..	1.49	1.51	1.66	1.35	1.53	1.35	1.42	1.75	1.30	1.63	1.38	1.44	1.71	(X)	(X)	
506	Electrical goods .....	1.65	1.71	1.79	1.59	1.76	1.60	1.66	1.81	1.57	1.60	1.51	1.55	1.65	(X)	(X)	
507	Hardware, plumbing & heating equipment .....	2.10	2.21	2.18	2.01	1.99	1.82	1.86	2.07	1.88	2.07	1.90	2.02	2.17	(X)	(X)	
508	Machinery, equip. & supplies .....	2.15	2.24	2.24	1.89	2.08	1.97	1.96	2.19	1.94	1.94	1.93	2.08	2.06	(X)	(X)	
509	Miscellaneous durable goods .....	.82	.95	1.21	.98	1.09	.92	.87	.92	1.07	.87	.91	.81	.83	(X)	(X)	
51	Nondurable goods .....	.88	.93	.96	.82	.88	.78	.81	.87	.78	.85	.85	.88	.89	(X)	(X)	
511	Paper & paper products .....	.95	1.03	1.10	.95	1.05	1.00	.96	1.06	.90	.95	.92	.94	1.00	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.70	1.41	1.64	1.40	1.48	1.57	1.46	1.55	1.47	1.43	1.60	(X)	(X)	
513	Apparel, piece goods & notions .....	2.06	1.71	1.91	1.70	2.00	2.19	1.87	1.85	1.61	1.86	1.60	1.73	2.45	(X)	(X)	
514	Groceries & related products .....	.68	.70	.69	.62	.65	.58	.61	.61	.58	.64	.67	.69	.71	(X)	(X)	
515	Farm-product raw materials .....	.74	.89	.86	.66	.66	.52	.57	.62	.54	.63	.70	.77	.89	(X)	(X)	
516	Chemicals & allied products .....	.84	.87	.94	.80	.89	.82	.81	.90	.84	.87	.77	.81	.86	(X)	(X)	
517	Petroleum & petroleum products ..	.29	.33	.33	.32	.34	.31	.35	.36	.33	.34	.35	.36	.27	(X)	(X)	
518	Beer, wine, & distilled beverages ..	1.29	1.33	1.38	1.09	1.22	1.02	.98	1.13	.94	1.13	1.16	1.11	.93	(X)	(X)	
519	Misc. nondurable goods .....	1.27	1.25	1.43	1.19	1.25	1.04	1.12	1.26	1.08	1.14	1.13	1.19	1.16	(X)	(X)	

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.

x Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Feb. 1990 from Jan. 1990	Feb. 1990 from Feb. 1989	2 months 1990 from 2 months 1989	Feb. 1990 from Jan. 1990	Feb. 1990 from Feb. 1989	Feb. 1990 from Jan. 1990	Feb. 1990 from Feb. 1989	Feb. 1990 from Jan. 1990	Feb. 1990 from Feb. 1989
	<b>Total</b> .....	-5.1	+6.3	+7.3	+1	+3.9	-.1	+6.3	-.2	+3.9
50	Durable goods .....	-2.6	+9.8	+10.1	+1.2	+5.9	+.7	+9.8	+.5	+5.7
501	Motor vehicles & auto. equip. ....	+1.7	+6.9	+5.8	+3.2	+7.5	+3.2	+6.3	+.5	+7.2
502	Furniture & home furnishings .....	+2.3	-1.4	-3.3	-1.9	-9.2	+3.7	-1.7	-.3	-9.1
503	Lumber & other construction mat. ....	-5.4	+6.6	+4.4	+1.0	+6.8	+3.6	+6.9	+2.2	+6.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	+3.2	+2.8	-4.7	-1.9	+1.6	+1.5	+2.5	-2.1	+1.8
505	Metals & minerals, ex. petroleum .....	-3.1	+9.4	+5.2	-2.0	-.7	+2.1	+10.0	-.2	-.7
506	Electrical goods .....	-2.7	+10.4	+9.9	+.8	+5.6	+1.2	+10.4	-.7	+5.5
507	Hardware, plumbing & heating equipment .....	-4.1	+4.3	+2.3	+.9	+6.0	+3.1	+4.5	-.1	+6.1
508	Machinery, equip. & supplies .....	-3.2	+8.9	+12.7	+.9	+8.8	-1.2	+8.7	+.7	+8.7
509	Miscellaneous durable goods .....	-8.0	+32.1	+37.4	+6.6	+3.2	-3.7	+32.1	+3.8	+3.1
51	Nondurable goods .....	-7.4	+3.0	+4.6	-2.0	+.2	-.9	+2.9	-1.4	+.4
511	Paper & paper products .....	-8.6	+5.5	+7.7	-1.1	-1.5	-1.4	+5.7	-.2	-1.5
512	Drugs, drug proprietaries and druggists' sundries .....	-11.8	+16.5	+17.5	-1.0	+13.8	-.9	+16.5	+1.0	+14.1
513	Apparel, piece goods & notions .....	+14.8	+21.1	+13.3	-4.7	+8.1	+6.2	+21.4	-2.7	+8.0
514	Groceries & related products .....	-6.4	-1.6	-.9	-3.1	-.3	+1.5	-1.6	-3.3	-.1
515	Farm-product raw materials .....	-19.3	-11.1	-5.6	-3.3	-7.5	-5.9	-11.0	+.1	-7.6
516	Chemicals & allied products .....	-2.2	+8.4	+7.2	+1.0	.0	+4.1	+8.3	-.7	-.2
517	Petroleum & petroleum products .....	-13.3	+5.5	+13.5	-.9	+3.4	-7.2	+5.3	+3.8	+2.8
518	Beer, wine, & distilled beverages .....	-3.2	+5.8	+6.9	.0	+1.7	-.9	+5.7	-2.8	+1.8
519	Misc. nondurable goods .....	+1.4	+8.7	+6.7	-.5	-5.0	+2.0	+8.5	-2.3	-4.7

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.7-1.8	1.8	1.5-1.7	1.7	0.4-0.7	0.6	0.7-1.0	0.9	1.8	1.7	0.8
50	Durable goods .....	1.8-2.5	2.4	1.7-2.4	2.2	0.5-1.0	0.8	1.1-1.4	1.2	2.4	2.1	1.1
501	Motor vehicles & auto. equip. ....	3.9-6.4	4.9	4.2-5.5	4.8	1.0-1.5	1.2	1.9-3.6	2.8	5.9	6.3	2.7
502	Furniture & home furnishings .....	6.4-15.6	9.0	6.4-8.7	7.9	2.9-10.5	3.7	7.1-15.9	8.5	8.4	7.1	8.4
503	Lumber & other construction mat. ....	4.4-5.9	5.1	4.2-5.9	4.7	1.1-2.5	1.6	2.3-3.9	3.2	5.9	5.8	3.5
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.1-8.2	7.2	5.3-7.5	6.6	2.5-5.9	4.8	4.2-8.4	7.1	5.1	7.0	5.6
505	Metals & minerals, ex. petroleum .....	5.4-10.5	6.9	5.2-11.9	7.8	0.9-5.0	2.7	2.6-4.7	2.9	8.4	6.9	2.7
506	Electrical goods .....	3.7-5.5	4.5	2.9-4.7	4.1	0.7-2.4	1.6	1.9-3.9	3.2	4.1	2.7	2.8
507	Hardware, plumbing & heating equipment ..	6.8-9.7	8.3	7.1-8.7	8.3	1.3-3.1	1.7	2.6-4.9	3.4	8.4	7.8	4.1
508	Machinery, equip. & supplies .....	3.4-4.4	3.8	3.3-4.2	3.6	1.1-1.7	1.5	2.3-3.6	2.5	3.5	2.8	2.0
509	Miscellaneous durable goods .....	4.7-5.8	5.3	4.1-6.5	4.9	1.2-2.5	2.0	3.1-4.1	3.6	4.3	5.5	2.9
51	Nondurable goods .....	2.6-2.9	2.8	2.6-3.0	2.7	0.7-0.9	0.8	0.9-1.7	1.5	2.8	2.8	1.4
511	Paper & paper products .....	4.3-5.3	5.1	4.2-5.2	5.0	0.8-2.1	1.6	2.7-4.4	3.5	4.3	5.2	3.0
512	Drugs, drug proprietaries and druggists' sundries .....	5.0-6.3	5.7	5.1-6.3	5.5	0.7-2.0	1.4	1.8-4.1	3.1	5.3	4.0	2.9
513	Apparel, piece goods & notions .....	8.6-12.3	9.9	8.1-11.5	9.5	2.1-5.2	4.4	4.2-7.3	5.4	9.3	9.2	4.2
514	Groceries & related products .....	4.3-5.3	5.1	4.1-5.3	4.7	0.9-2.2	1.5	1.7-3.4	2.4	5.0	5.6	1.5
515	Farm-product raw materials .....	5.6-6.7	6.1	5.3-6.2	5.9	2.0-3.9	3.0	3.2-5.7	5.1	5.6	5.5	4.2
516	Chemicals & allied products .....	6.8-10.2	8.1	6.0-8.7	8.2	1.5-3.5	2.0	2.8-7.3	5.5	9.2	5.3	5.9
517	Petroleum & petroleum products .....	5.8-8.2	6.6	5.5-7.3	6.7	1.0-2.4	2.1	2.6-3.5	3.0	7.7	6.5	2.5
518	Beer, wine, & distilled beverages .....	3.1-5.4	4.2	2.8-4.8	3.9	1.0-3.5	1.4	1.5-3.4	2.8	5.0	3.9	2.4
519	Misc. nondurable goods .....	5.3-6.8	6.0	4.8-6.2	5.6	1.3-2.2	1.9	2.5-4.8	3.3	6.0	5.0	2.5
	<b>Inventories, Total</b> .....	1.2-1.5	1.4	1.2-1.4	1.4	0.2-0.4	0.3	0.7-1.1	0.9	(X)	(X)	(X)
50	Durable goods .....	1.6-1.8	1.7	1.5-1.8	1.6	0.2-0.4	0.4	0.8-1.1	1.0	(X)	(X)	(X)
501	Motor vehicles & auto. equip. ....	5.8-6.5	6.0	5.8-6.2	6.1	0.4-1.2	0.7	2.0-2.8	2.4	(X)	(X)	(X)
502	Furniture & home furnishings .....	8.1-9.8	8.8	8.2-9.4	8.6	0.8-2.9	1.0	4.4-8.1	6.0	(X)	(X)	(X)
503	Lumber & other construction mat. ....	5.3-6.4	6.2	5.4-6.5	6.0	0.7-1.0	0.9	2.6-4.0	3.5	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.2-6.5	5.6	4.7-6.1	5.5	0.7-2.2	1.1	2.8-4.4	3.4	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	4.0-5.8	4.8	3.9-5.3	4.7	0.5-1.2	0.9	2.2-3.2	2.7	(X)	(X)	(X)
506	Electrical goods .....	2.9-3.9	3.1	2.7-3.6	3.0	0.4-0.8	0.5	1.7-2.3	2.1	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.0-6.9	6.2	5.3-6.8	6.3	0.5-0.9	0.7	1.9-3.5	2.9	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.0-4.0	3.8	3.0-4.1	3.7	0.4-0.9	0.6	1.9-2.8	2.1	(X)	(X)	(X)
509	Miscellaneous durable goods .....	8.6-9.8	9.1	8.6-9.4	9.1	0.5-1.6	0.8	2.8-3.6	2.9	(X)	(X)	(X)
51	Nondurable goods .....	2.7-3.3	3.0	2.6-3.2	3.0	0.3-0.9	0.5	1.1-2.2	1.7	(X)	(X)	(X)
511	Paper & paper products .....	5.0-6.0	5.6	5.0-6.2	5.7	0.6-1.1	0.8	2.0-3.1	2.7	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6.4-7.1	6.8	5.9-7.4	6.8	0.5-1.7	0.6	2.0-3.3	2.5	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.8-8.1	7.7	6.2-8.1	7.1	1.3-2.0	1.8	3.0-5.4	4.7	(X)	(X)	(X)
514	Groceries & related products .....	4.7-9.3	8.7	4.6-9.4	8.4	0.4-3.8	1.0	1.8-6.1	4.9	(X)	(X)	(X)
515	Farm-product raw materials .....	6.6-8.0	7.4	6.5-7.7	7.1	1.4-1.7	1.6	3.3-4.9	4.2	(X)	(X)	(X)
516	Chemicals & allied products .....	7.5-10.7	8.5	7.1-10.1	8.2	0.6-3.0	1.4	4.5-8.5	5.5	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.3-7.9	7.1	5.2-7.9	6.8	0.7-2.0	1.4	1.8-5.5	4.2	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	5.0-5.5	5.2	4.6-5.2	5.1	0.7-1.2	0.9	2.0-3.8	2.5	(X)	(X)	(X)
519	Misc. nondurable goods .....	8.1-8.9	8.5	8.0-8.9	8.6	0.9-2.3	1.3	3.0-4.5	3.9	(X)	(X)	(X)

× Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for September 1989 through February 1990.

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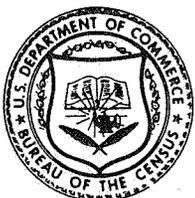
Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989												1990		
		Feb. <sup>r</sup>	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. <sup>r</sup>	Feb. <sup>r</sup>	Mar.	
	<b>Sales,<sup>1</sup> Total</b> .....	.911	1.056	.972	1.046	1.031	.953	1.043	.990	1.057	1.009	.960	.965	.912	1.039	
50	Durable goods .....	.894	1.054	.980	1.045	1.048	.955	1.047	1.009	1.079	1.009	.940	.931	.895	1.035	
501	Motor vehicles & auto. equip. ...	.915	1.059	1.011	1.067	1.053	.951	1.013	.925	1.084	1.011	.979	.933	.920	1.046	
502	Furniture & home furnishings ...	.918	1.031	.931	1.013	.982	.936	1.074	1.077	1.130	1.052	.916	.934	.921	1.009	
503	Lumber & other construction mat. ....	.779	.982	.976	1.068	1.126	1.066	1.138	1.076	1.134	.960	.849	.851	.777	.949	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.925	1.048	.898	.874	.970	.882	1.026	1.086	1.176	1.164	1.031	.912	.927	1.011	
505	Metals & minerals, ex. petroleum	.929	1.162	.980	.976	1.071	.906	1.070	1.022	1.017	.965	.919	.974	.924	1.122	
506	Electrical goods .....	.908	1.033	.933	.982	1.011	.963	1.063	1.036	1.109	1.053	.967	.944	.908	1.016	
507	Hardware, plumbing & heating equipment .....	.879	.999	.968	1.063	1.088	.987	1.075	.987	1.102	.999	.906	.943	.877	.975	
508	Machinery, equip. & supplies	.913	1.078	.996	1.052	1.043	.939	1.050	1.017	1.043	.969	.958	.933	.914	1.057	
509	Miscellaneous durable goods ...	.862	1.052	1.009	1.090	1.068	.950	.955	1.024	1.061	1.092	.918	.902	.862	1.032	
51	<b>Nondurable goods</b> .....	.926	1.064	.960	1.050	1.016	.947	1.034	.974	1.039	1.006	.983	.993	.927	1.041	
511	Paper & paper products .....	.933	1.068	.945	.977	1.030	.935	1.076	.989	1.064	1.012	.955	1.005	.932	1.041	
512	Drugs, drug proprietaries and druggists' sundries .....	.934	1.046	.944	1.027	1.005	.943	1.037	.999	1.042	1.001	.969	1.050	.934	1.016	
513	Apparel, piece goods & notions	1.003	1.048	.855	.895	1.035	1.036	1.260	1.031	1.166	.999	.724	.925	1.000	1.029	
514	Groceries & related products ...	.920	1.016	.949	1.060	1.020	.993	1.037	.963	1.003	1.040	1.012	.998	.920	.991	
515	Farm-product raw materials ...	.956	1.078	.951	1.043	.944	.881	.964	.907	1.105	1.050	.984	1.114	.955	1.082	
516	Chemicals & allied products ...	.911	1.086	1.003	1.082	1.122	.953	1.026	.983	1.039	.947	.875	.971	.912	1.043	
517	Petroleum & petroleum products	.973	1.119	.942	1.014	.987	.923	.993	1.004	.976	.964	1.043	1.044	.975	1.102	
518	Beer, wine, & distilled beverages	.794	1.017	.903	1.095	1.121	.974	1.124	.978	1.017	1.064	1.109	.814	.795	.978	
519	Misc. nondurable goods .....	.885	1.112	1.062	1.156	1.047	.908	1.011	.952	1.017	.962	.992	.892	.887	1.080	
	<b>Inventories,<sup>1</sup> Total</b> .....	1.009	1.008	1.006	.991	.996	.994	.984	.994	1.009	1.004	1.000	1.007	1.009	1.008	
50	Durable goods .....	.997	1.003	1.010	1.006	1.005	1.010	.999	1.001	1.004	.993	.983	.991	.998	1.003	
501	Motor vehicles & auto. equip. ...	1.014	1.015	1.002	1.002	.999	.977	.960	1.020	.997	1.014	1.012	.990	1.017	1.013	
502	Furniture & home furnishings ...	.980	.992	.991	1.012	1.007	1.019	1.018	1.028	.998	.966	.978	.995	.979	.991	
503	Lumber & other construction mat. ....	.983	1.024	1.045	1.012	1.040	1.045	.981	.991	.985	.943	.970	.994	.983	1.025	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.969	.995	.991	.978	1.009	1.054	1.021	1.038	1.024	.986	.963	.965	.967	.995	
505	Metals & minerals, ex. petroleum	.990	1.006	1.020	1.011	1.042	1.020	.971	.974	.984	.968	1.005	1.008	.990	1.006	
506	Electrical goods .....	.989	.995	.996	1.005	1.002	1.020	1.014	1.010	1.009	.998	.989	.975	.990	.995	
507	Hardware, plumbing & heating equipment .....	.996	1.019	1.019	1.010	.999	1.009	1.011	.998	1.013	.974	.967	.985	.995	1.018	
508	Machinery, equip. & supplies	1.000	1.003	1.016	1.007	1.001	1.007	1.001	.990	1.002	1.001	.976	.999	1.001	1.003	
509	Miscellaneous durable goods ...	.982	.992	1.014	1.016	.991	1.017	1.044	1.013	1.007	1.005	.962	.958	.983	.993	
51	<b>Nondurable goods</b> .....	1.027	1.017	.997	.962	.984	.963	.957	.974	1.020	1.028	1.035	1.035	1.027	1.016	
511	Paper & paper products .....	1.014	1.022	1.014	.988	.994	1.007	.985	.969	1.006	.984	.996	1.023	1.014	1.023	
512	Drugs, drug proprietaries and druggists' sundries .....	1.035	1.003	1.029	.964	.963	.968	.967	.993	1.019	.970	1.034	1.054	1.033	1.000	
513	Apparel, piece goods & notions	.985	.958	.946	1.021	1.063	1.048	1.045	1.025	.958	.948	.992	1.007	.986	.959	
514	Groceries & related products ...	1.004	.980	.982	.982	.983	.976	.953	1.000	1.050	1.030	1.001	1.003	.990		
515	Farm-product raw materials ...	1.144	1.029	.981	.808	.852	.839	.827	.886	1.130	1.154	1.164	1.185	1.145	1.025	
516	Chemicals & allied products ...	1.023	1.002	1.031	1.032	1.038	1.004	1.011	.953	.962	.970	.971	1.008	1.025	1.002	
517	Petroleum & petroleum products	.979	1.012	.958	.960	.999	.991	.964	1.037	1.013	1.008	1.040	1.032	.985	1.015	
518	Beer, wine, & distilled beverages	.977	1.017	1.019	.996	1.017	.994	.978	1.010	1.064	1.054	.921	.948	.976	1.019	
519	Misc. nondurable goods .....	1.049	1.100	1.059	.967	.983	.919	.924	.944	.970	1.007	1.043	1.027	1.046	1.099	

<sup>r</sup>Revised

<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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

March 1990

BW90-03  
Issued May 1990

U.S. Department of Commerce  
BUREAU OF THE CENSUS

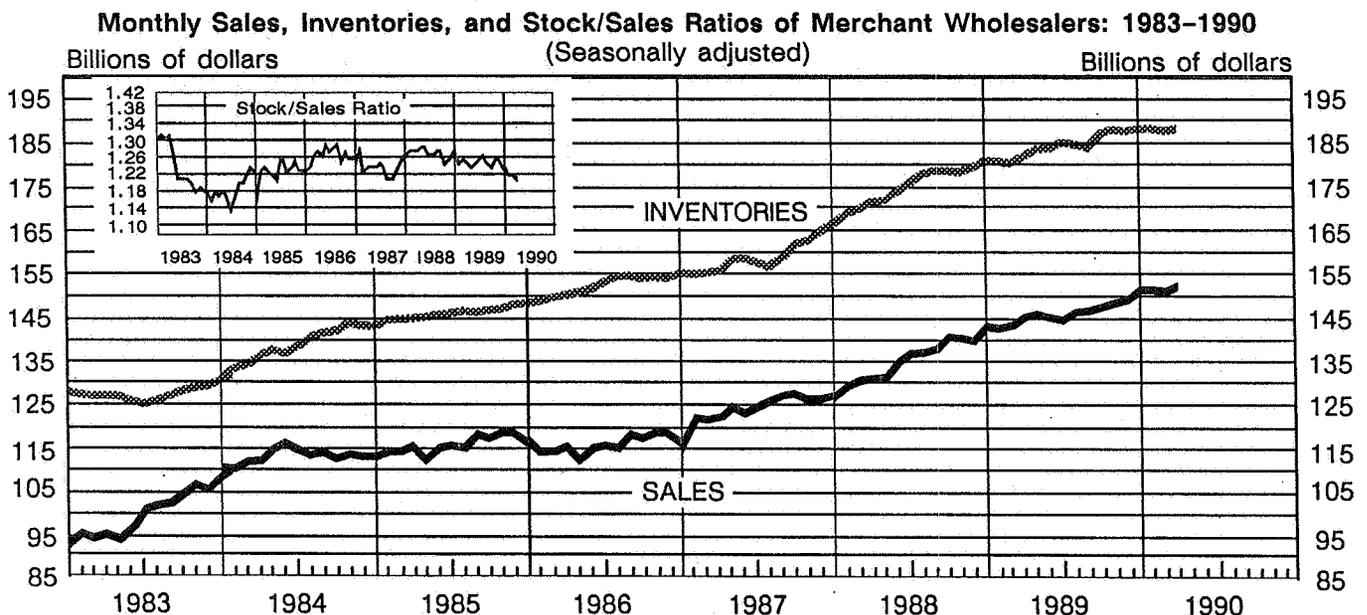
**Sales.** March 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$152.8 billion, up 0.8 percent ( $\pm 0.8$  percent) from the revised February level and were up 6.4 percent ( $\pm 1.9$  percent) from a year ago. The February preliminary estimate was revised downward by \$0.2 billion or about 0.1 percent. March sales of durable goods increased 1.7 percent ( $\pm 1.5$  percent) from the revised February level, and were 11.9 percent ( $\pm 1.7$  percent) above a year ago. Monthly increases in the sales of durable goods were as follows: motor vehicles and automotive equipment increased 4.6 percent to \$15.9 billion and machinery, equipment and supplies were up 3.3 percent to \$23.9 billion. March sales of nondurable goods were down 0.2 percent ( $\pm 1.2$  percent) from February but were up 1.2 percent ( $\pm 3.0$  percent) from March 1989. Sales of petroleum and petroleum products decreased 4.3 percent to \$11.4 billion from the February level. However, sales of groceries and related products increased 3.5 percent to \$20.5 billion for the same period.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$189.3 billion at the end of March, up 0.2 percent ( $\pm 0.3$  percent) from the revised February level

and were up 4.2 percent ( $\pm 1.4$  percent) from a year ago. The February preliminary estimate was revised downward by \$0.2 billion or about 0.1 percent. Inventories of durable goods wholesalers decreased 0.4 percent ( $\pm 0.3$  percent) from the February level but were 5.4 percent ( $\pm 1.4$  percent) above a year ago. Monthly decreases in the inventories of durable goods wholesalers were as follows: lumber and other construction materials decreased 3.5 percent to \$5.6 billion; metals and minerals, except petroleum were down 3.2 percent to \$10.0 billion; and miscellaneous durables decreased 3.0 percent to \$6.7 billion. Inventories of nondurable goods wholesalers were up 1.5 percent ( $\pm 0.8$  percent) from the February level and were up 2.0 percent ( $\pm 2.4$  percent) from March 1989. Monthly increases in the inventories of nondurable goods wholesalers were as follows: groceries and related products were up 6.3 percent to \$13.5 billion and farm-product raw materials increased 5.7 percent to \$8.0 billion.

**Stock/Sales Ratio.** The March stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.24. The year ago ratio was 1.27.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.



Monthly Wholesale Trade for April is scheduled to be released June 7, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990			1989									
		Jan.	Feb.	Mar. <sup>P</sup>	Mar. <sup>F</sup>	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<b>Sales, Total</b> .....	151,968	151,620	152,783	143,548	145,515	146,333	145,512	144,856	146,800	146,981	147,921	148,782	149,584
50	Durable goods .....	76,653	77,018	78,301	69,944	70,686	72,068	70,735	71,545	72,696	72,388	73,048	73,970	73,180
501	Motor vehicles & auto. equip. ....	14,630	15,217	15,923	14,061	14,084	13,199	13,336	13,347	14,118	13,901	13,892	13,708	13,034
502	Furniture & home furnishings .....	2,282	2,316	2,321	2,426	2,515	2,453	2,444	2,495	2,575	2,569	2,407	2,488	2,405
503	Lumber & other construction mat. ....	5,112	5,183	5,051	4,822	4,903	4,958	4,849	4,920	5,016	4,886	4,978	4,866	4,425
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,893	1,985	2,118	2,032	1,982	1,979	2,019	1,939	2,027	2,155	2,076	2,023	2,036
505	Metals & minerals, ex. petroleum .....	7,330	7,277	7,025	6,886	7,196	7,974	7,239	7,111	7,447	6,325	7,527	7,584	6,827
506	Electrical goods .....	9,818	9,782	9,890	8,976	9,118	9,715	9,094	9,140	9,395	9,312	9,336	9,495	9,605
507	Hardware, plumbing & heating equipment .....	3,681	3,760	3,825	3,433	3,725	3,737	3,525	3,599	3,632	3,588	3,624	3,619	3,649
508	Machinery, equip. & supplies .....	23,355	23,181	23,949	20,911	21,476	21,656	21,825	22,112	22,116	22,628	22,589	22,690	22,974
509	Miscellaneous durable goods .....	8,572	8,317	8,199	6,397	5,707	6,397	6,404	6,882	6,370	7,024	6,619	7,497	8,225
51	Nondurable goods .....	75,315	74,602	74,482	73,604	74,829	74,265	74,777	73,311	74,104	74,593	74,873	74,812	76,404
511	Paper & paper products .....	4,370	4,241	4,282	4,115	4,252	4,217	4,179	4,321	4,262	4,348	4,366	4,320	4,348
512	Drugs, drug proprietaries and druggists' sundries .....	4,065	3,990	4,045	3,545	3,529	3,576	3,565	3,631	3,651	3,738	3,889	3,958	3,992
513	Apparel, piece goods & notions .....	5,128	5,308	5,275	4,642	4,785	4,551	4,850	4,919	4,742	4,953	4,816	5,163	5,493
514	Groceries & related products .....	19,432	19,841	20,534	20,174	20,308	20,613	20,611	20,386	20,232	20,285	20,846	19,999	19,581
515	Farm-product raw materials .....	11,070	10,369	10,289	11,632	11,748	11,011	10,961	10,370	11,056	10,555	10,759	10,971	10,465
516	Chemicals & allied products .....	3,176	3,284	3,274	3,066	3,089	3,024	3,083	3,140	3,037	3,093	3,093	3,204	3,304
517	Petroleum & petroleum products .....	12,670	11,956	11,437	11,649	12,805	12,878	12,626	11,987	12,099	12,274	12,030	11,800	13,674
518	Beer, wine, & distilled beverages .....	3,627	3,630	3,516	3,515	3,483	3,493	3,554	3,494	3,580	3,569	3,532	3,566	3,604
519	Misc. nondurable goods .....	11,777	11,983	11,830	11,266	10,830	10,962	11,346	11,063	11,445	11,788	11,542	11,811	11,943
	<b>Inventories, Total</b> .....	189,375	188,847	189,312	181,615	182,937	184,606	184,737	186,113	185,730	185,098	188,103	189,057	188,819
50	Durable goods .....	125,510	125,685	125,185	118,738	120,331	121,789	121,874	123,602	122,939	122,148	123,716	124,363	123,954
501	Motor vehicles & auto. equip. ....	23,909	24,219	24,400	22,637	23,125	23,646	23,588	23,806	23,545	22,770	23,472	23,298	22,381
502	Furniture & home furnishings .....	4,123	4,142	4,243	4,469	4,383	4,427	4,505	4,537	4,531	4,565	4,570	4,510	4,496
503	Lumber & other construction mat. ....	5,966	5,821	5,620	5,835	5,820	5,850	5,759	5,806	5,687	5,725	5,805	5,704	5,847
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,452	4,392	4,262	4,264	4,313	4,323	4,504	4,437	4,408	4,460	4,473	4,580	4,589
505	Metals & minerals, ex. petroleum .....	10,548	10,299	9,974	10,672	10,605	10,388	10,585	11,034	10,691	10,811	10,741	10,879	10,693
506	Electrical goods .....	15,718	15,520	15,255	14,806	15,048	15,201	15,260	15,592	15,469	15,285	15,455	15,541	15,525
507	Hardware, plumbing & heating equipment .....	7,375	7,360	7,359	6,904	7,043	7,153	7,163	7,278	7,278	7,352	7,492	7,494	7,410
508	Machinery, equip. & supplies .....	46,811	46,977	47,323	42,808	43,786	44,490	44,515	45,208	45,084	45,016	45,351	45,777	46,506
509	Miscellaneous durable goods .....	6,610	6,955	6,749	6,543	6,208	6,311	6,005	5,904	6,246	6,164	6,357	6,580	6,507
51	Nondurable goods .....	63,865	63,162	64,127	62,877	62,606	62,817	62,863	62,511	62,791	62,950	64,387	64,694	64,865
511	Paper & paper products .....	4,077	3,998	3,939	4,106	4,142	4,166	4,156	4,234	4,171	4,230	4,249	4,175	4,154
512	Drugs, drug proprietaries and druggists' sundries .....	5,976	5,988	6,156	5,254	5,309	5,332	5,520	5,558	5,705	5,846	5,829	5,846	5,976
513	Apparel, piece goods & notions .....	9,697	9,776	10,108	8,608	8,637	8,724	8,839	9,010	9,219	9,244	9,391	9,428	9,807
514	Groceries & related products .....	13,129	12,674	13,467	12,850	12,812	13,001	12,960	12,585	12,681	12,499	13,335	13,527	13,593
515	Farm-product raw materials .....	7,743	7,559	7,987	7,991	7,478	7,432	6,886	6,797	6,921	6,778	7,354	7,685	7,831
516	Chemicals & allied products .....	2,581	2,544	2,610	2,667	2,671	2,599	2,704	2,690	2,600	2,771	2,575	2,523	2,560
517	Petroleum & petroleum products .....	3,666	3,849	3,732	4,041	4,246	4,158	4,351	4,028	4,066	4,058	4,060	4,038	3,762
518	Beer, wine, & distilled beverages .....	4,009	3,903	3,867	3,832	3,768	3,832	3,853	3,885	3,848	3,918	3,915	4,025	4,022
519	Misc. nondurable goods .....	12,987	12,871	12,263	13,528	13,543	13,573	13,594	13,724	13,580	13,606	13,679	13,447	13,160
	<b>Stock/sales ratios, Total</b> .....	1.25	1.25	1.24	1.27	1.26	1.26	1.27	1.28	1.27	1.26	1.27	1.27	1.26
50	Durable goods .....	1.64	1.63	1.60	1.70	1.70	1.69	1.72	1.73	1.69	1.69	1.69	1.68	1.69
501	Motor vehicles & auto. equip. ....	1.63	1.59	1.53	1.61	1.64	1.79	1.77	1.79	1.67	1.64	1.69	1.70	1.72
502	Furniture & home furnishings .....	1.81	1.79	1.83	1.84	1.74	1.80	1.84	1.82	1.76	1.78	1.80	1.81	1.87
503	Lumber & other construction mat. ....	1.17	1.12	1.11	1.21	1.19	1.18	1.19	1.18	1.13	1.17	1.17	1.17	1.32
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.35	2.21	2.01	2.10	2.20	2.18	2.23	2.29	2.17	2.07	2.15	2.26	2.25
505	Metals & minerals, ex. petroleum .....	1.44	1.42	1.42	1.55	1.47	1.30	1.46	1.55	1.44	1.71	1.43	1.43	1.57
506	Electrical goods .....	1.60	1.59	1.54	1.65	1.65	1.68	1.71	1.65	1.64	1.66	1.64	1.64	1.62
507	Hardware, plumbing & heating equipment .....	2.01	1.96	1.92	2.01	1.89	1.91	2.03	2.02	2.00	2.05	2.07	2.07	2.03
508	Machinery, equip. & supplies .....	2.00	2.03	1.98	2.04	2.04	2.05	2.04	2.04	2.04	1.99	2.01	2.02	2.02
509	Miscellaneous durable goods .....	.77	.84	.82	1.02	1.09	.99	.94	.86	.98	.88	.86	.86	.79
51	Nondurable goods .....	.85	.85	.86	.85	.84	.85	.84	.85	.85	.84	.86	.86	.85
511	Paper & paper products .....	.93	.94	.92	1.00	.97	.99	.99	.98	.98	.97	.97	.97	.96
512	Drugs, drug proprietaries and druggists' sundries .....	1.47	1.50	1.52	1.48	1.50	1.49	1.55	1.53	1.56	1.56	1.50	1.48	1.50
513	Apparel, piece goods & notions .....	1.89	1.84	1.92	1.85	1.81	1.92	1.82	1.83	1.94	1.87	1.95	1.83	1.79
514	Groceries & related products .....	.68	.64	.66	.64	.63	.63	.63	.62	.63	.62	.64	.68	.69
515	Farm-product raw materials .....	.70	.73	.78	.69	.64	.67	.63	.66	.63	.64	.68	.70	.75
516	Chemicals & allied products .....	.81	.77	.80	.87	.86	.86	.88	.86	.86	.90	.83	.79	.77
517	Petroleum & petroleum products .....	.29	.32	.33	.35	.33	.32	.34	.34	.34	.33	.34	.34	.28
518	Beer, wine, & distilled beverages .....	1.11	1.08	1.10	1.09	1.08	1.12	1.08	1.11	1.07	1.10	1.11	1.12	1.12
519	Misc. nondurable goods .....	1.10	1.07	1.04	1.20	1.25	1.24	1.20	1.24	1.19	1.15	1.19	1.14	1.10

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.

<sup>F</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990			1989										Total 3 mos.	
		Jan.	Feb.	Mar. <sup>P</sup>	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1990	1989
	<b>Sales, Total</b> .....	146,135	138,361	158,965	152,712	141,130	152,604	150,308	137,524	152,731	145,394	155,847	150,006	144,355	443,461	418,295
50	Durable goods .....	71,238	69,070	81,640	74,414	69,440	74,643	74,245	68,081	76,020	73,080	78,451	74,608	69,247	221,948	202,145
501	Motor vehicles & auto. equip. ....	13,650	13,908	16,926	15,045	14,239	14,083	14,043	12,693	14,302	12,858	15,059	13,859	12,760	44,484	41,079
502	Furniture & home furnishings .....	2,131	2,112	2,356	2,511	2,341	2,485	2,400	2,335	2,766	2,767	2,720	2,617	2,203	6,599	6,967
503	Lumber & other construction mat. . .	4,350	4,022	4,788	4,697	4,785	5,295	5,460	5,245	5,708	5,257	5,645	4,671	3,757	13,140	12,809
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,726	1,818	2,196	2,168	1,762	1,730	1,958	1,710	2,080	2,340	2,441	2,355	2,099	5,740	5,848
505	Metals & minerals, ex. petroleum .....	7,139	6,724	7,819	7,933	7,052	7,783	7,753	6,443	7,968	6,464	7,655	7,319	6,274	21,682	21,294
506	Electrical goods .....	9,268	8,853	10,078	9,272	8,507	9,540	9,194	8,802	9,987	9,647	10,354	9,998	9,288	26,199	25,911
507	Hardware, plumbing & heating equipment .....	3,452	3,271	3,798	3,484	3,606	3,972	3,835	3,552	3,904	3,541	3,994	3,615	3,306	10,521	10,094
508	Machinery, equip. & supplies .....	21,790	21,118	25,410	22,647	21,390	22,782	20,763	22,763	23,222	23,013	23,560	21,987	22,009	68,318	60,678
509	Miscellaneous durable goods .....	7,732	7,244	8,289	6,659	5,758	6,973	6,839	6,538	6,083	7,193	7,023	6,187	7,551	23,265	17,465
51	Nondurable goods .....	74,897	69,291	77,325	78,298	71,690	77,961	76,063	69,443	76,711	72,314	77,396	75,398	75,108	221,513	216,150
511	Paper & paper products .....	4,392	3,936	4,458	4,399	4,018	4,120	4,304	4,040	4,586	4,300	4,645	4,372	4,152	12,786	12,204
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,723	4,106	3,719	3,331	3,673	3,583	3,424	3,786	3,734	4,052	3,962	3,868	12,097	10,555
513	Apparel, piece goods & notions .....	4,743	5,292	5,354	4,883	4,091	4,073	5,020	5,096	5,975	5,107	5,616	5,158	3,977	15,389	13,876
514	Groceries & related products .....	19,393	18,234	20,390	20,497	19,272	21,850	21,023	20,243	20,981	19,534	20,909	20,799	19,816	58,017	58,375
515	Farm-product raw materials .....	12,332	9,954	11,019	12,516	11,172	11,484	10,347	9,136	10,658	9,573	11,889	11,520	10,298	33,305	36,124
516	Chemicals & allied products .....	3,084	3,002	3,412	3,348	3,098	3,272	3,459	2,992	3,116	3,031	3,214	3,034	2,891	9,498	9,040
517	Petroleum & petroleum products .....	13,228	11,633	12,455	12,930	12,062	13,058	12,464	11,064	12,014	12,323	11,741	11,375	14,262	37,316	34,698
518	Beer, wine, & distilled beverages .....	2,952	2,900	3,414	3,557	3,145	3,759	3,984	3,403	4,024	3,490	3,592	3,816	3,997	9,266	8,991
519	Misc. nondurable goods .....	10,505	10,617	12,717	12,449	11,501	12,672	11,879	10,405	11,571	11,222	11,738	11,362	11,847	33,839	32,287
	<b>Inventories, Total</b> .....	190,390	190,475	190,785	183,244	184,390	183,089	184,498	184,895	182,299	183,868	189,404	189,822	189,042	(X)	(X)
50	Durable goods .....	124,313	125,488	125,760	119,232	121,635	122,538	122,613	124,655	122,371	122,335	123,856	123,652	122,053	(X)	(X)
501	Motor vehicles & auto. equip. ....	23,670	24,631	24,790	22,977	23,171	23,693	23,564	23,258	22,803	23,225	23,402	23,624	22,650	(X)	(X)
502	Furniture & home furnishings .....	4,102	4,051	4,213	4,433	4,344	4,480	4,537	4,623	4,613	4,693	4,561	4,357	4,397	(X)	(X)
503	Lumber & other construction mat. . .	5,930	5,722	5,732	5,952	6,082	5,920	5,989	6,067	5,579	5,673	5,718	5,379	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,298	4,273	4,207	4,213	4,274	4,228	4,545	4,677	4,501	4,629	4,580	4,516	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum .....	10,632	10,196	10,034	10,725	10,817	10,502	11,030	11,255	10,381	10,530	10,569	10,581	10,746	(X)	(X)
506	Electrical goods .....	15,323	15,396	15,148	14,702	14,988	15,277	15,291	15,904	15,886	15,438	15,594	15,510	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment .....	7,264	7,323	7,462	7,014	7,177	7,225	7,146	7,343	7,358	7,337	7,589	7,299	7,165	(X)	(X)
508	Machinery, equip. & supplies .....	46,764	47,024	47,418	42,693	44,487	44,801	44,560	45,524	45,129	44,566	45,442	45,823	45,390	(X)	(X)
509	Miscellaneous durable goods .....	6,332	6,872	6,756	6,523	6,295	6,412	5,951	6,004	6,521	6,244	6,401	6,613	6,260	(X)	(X)
51	Nondurable goods .....	66,077	64,987	65,025	64,012	62,755	60,551	61,885	60,240	59,928	61,533	65,548	66,170	66,989	(X)	(X)
511	Paper & paper products .....	4,171	4,050	4,018	4,188	4,200	4,116	4,131	4,264	4,108	4,099	4,274	4,108	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,162	6,150	5,259	5,463	5,140	5,316	5,380	5,517	5,805	5,940	5,671	6,179	(X)	(X)
513	Apparel, piece goods & notions .....	9,765	9,678	9,752	8,298	8,171	8,907	9,396	9,443	9,634	9,475	8,997	8,938	9,729	(X)	(X)
514	Groceries & related products .....	13,142	12,712	13,211	12,619	12,581	12,767	12,740	12,283	12,498	12,499	14,002	14,284	14,001	(X)	(X)
515	Farm-product raw materials .....	9,176	8,602	8,187	8,223	7,336	6,005	5,867	5,703	5,724	6,005	6,310	8,869	9,115	(X)	(X)
516	Chemicals & allied products .....	2,602	2,567	2,633	2,686	2,754	2,682	2,807	2,701	2,629	2,641	2,477	2,447	2,486	(X)	(X)
517	Petroleum & petroleum products .....	3,783	3,803	3,810	4,106	4,068	3,992	4,347	3,992	3,920	4,208	4,113	4,070	3,912	(X)	(X)
518	Beer, wine, & distilled beverages .....	3,801	3,821	3,910	3,874	3,840	3,817	3,918	3,862	3,763	3,957	4,166	4,242	3,704	(X)	(X)
519	Misc. nondurable goods .....	13,338	13,592	13,354	14,759	14,342	13,125	13,363	12,612	12,548	12,844	13,269	13,541	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> .....	1.30	1.38	1.20	1.20	1.31	1.20	1.23	1.34	1.19	1.26	1.22	1.27	1.31	(X)	(X)
50	Durable goods .....	1.75	1.82	1.54	1.60	1.75	1.64	1.65	1.83	1.61	1.67	1.58	1.66	1.76	(X)	(X)
501	Motor vehicles & auto. equip. ....	1.73	1.77	1.46	1.53	1.63	1.68	1.68	1.83	1.58	1.81	1.55	1.70	1.78	(X)	(X)
502	Furniture & home furnishings .....	1.92	1.92	1.79	1.77	1.88	1.80	1.89	1.98	1.67	1.70	1.68	1.66	2.00	(X)	(X)
503	Lumber & other construction mat. . .	1.36	1.42	1.20	1.27	1.27	1.12	1.10	1.16	.98	1.08	1.01	1.15	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.49	2.35	1.92	1.95	2.43	2.44	2.32	2.74	2.16	1.98	1.88	1.92	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum .....	1.49	1.52	1.28	1.35	1.53	1.35	1.42	1.75	1.30	1.63	1.38	1.44	1.71	(X)	(X)
506	Electrical goods .....	1.65	1.74	1.50	1.59	1.76	1.60	1.66	1.81	1.57	1.60	1.51	1.55	1.65	(X)	(X)
507	Hardware, plumbing & heating equipment .....	2.10	2.24	1.96	2.01	1.99	1.82	1.86	2.07	1.88	2.07	1.90	2.02	2.17	(X)	(X)
508	Machinery, equip. & supplies .....	2.15	2.23	1.87	1.89	2.08	1.97	1.96	2.19	1.94	1.93	2.08	2.08	2.06	(X)	(X)
509	Miscellaneous durable goods .....	.82	.95	.82	.98	1.09	.92	.87	.92	1.07	.87	.91	.81	.83	(X)	(X)
51	Nondurable goods .....	.88	.94	.84	.82	.88	.78	.81	.87	.78	.85	.88	.89	.89	(X)	(X)
511	Paper & paper products .....	.95	1.03	.90	.95	1.05	1.00	.96	1.06	.90	.95	.92	.94	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.50	1.41	1.64	1.40	1.48	1.57	1.46	1.55	1.47	1.43	1.60	(X)	(X)
513	Apparel, piece goods & notions .....	2.06	1.83	1.82	1.70	2.00	2.19	1.87	1.85	1.61	1.86	1.60	1.73	2.45	(X)	(X)
514	Groceries & related products .....	.74	.70	.65	.62	.65	.58	.61	.61	.58	.64	.67	.69	.71	(X)	(X)
515	Farm-product raw materials .....	.84	.86	.74	.66	.66	.52	.57	.62	.54	.63	.70	.77	.89	(X)	(X)
516	Chemicals & allied products .....	.84	.86	.77	.80	.89	.82	.81	.90	.84	.87	.77	.81	.86	(X)	(X)
517	Petroleum & petroleum products .....	.29	.33	.31	.32	.34	.31	.35	.36	.33	.34	.35	.36	.27	(X)	(X)
518	Beer, wine, & distilled beverages .....	1.29	1.32	1.15	1.09	1.22	1.02	.98	1.13	.94	1.13	1.16	1.11	.93	(X)	(X)
519	Misc. nondurable goods .....	1.27	1.28	1.05	1.19	1.25	1.04	1.12	1.26	1.08	1.14	1.13	1.19	1.16	(X)	(X)

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
 x Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>				
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)		
		Mar. 1990 from Feb. 1990	Mar. 1990 from Mar. 1989	3 months 1990 from 3 months 1989	Mar. 1990 from Feb. 1990	Mar. 1990 from Mar. 1989	Mar. 1990 from Feb. 1990	Mar. 1990 from Mar. 1989	Mar. 1990 from Feb. 1990	Mar. 1990 from Mar. 1989	
	<b>Total</b> .....	+14.9	+4.1	+6.0	+2	+4.1	+8	+6.4	+2	+4.2	
50	Durable goods .....	+18.2	+9.7	+9.8	+2	+5.5	+1.7	+11.9	-.4	+5.4	
501	Motor vehicles & auto. equip. ....	+21.7	+12.5	+8.3	+8	+7.9	+4.6	+13.2	+7	+7.8	
502	Furniture & home furnishings .....	+11.6	-6.2	-5.3	+4.0	-5.0	+2	-4.3	+2.4	-5.1	
503	Lumber & other construction mat. ....	+18.5	+1.5	+2.6	+2	-3.7	-2.5	+4.7	-3.5	-3.7	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	+20.8	+1.4	-1.8	-1.5	-.1	+6.7	+4.2	-3.0	.0	
505	Metals & minerals, ex. petroleum .....	+16.3	-1.4	+1.8	-1.6	-6.4	-3.5	+2.0	-3.2	-6.5	
506	Electrical goods .....	+13.8	+8.7	+8.8	-1.6	+3.0	+1.1	+10.2	-1.7	+3.0	
507	Hardware, plumbing & heating equipment .....	+16.1	+9.0	+4.2	+1.9	+6.4	+1.7	+11.4	.0	+6.6	
508	Machinery, equip. & supplies .....	+20.3	+12.2	+12.6	+8	+11.1	+3.3	+14.5	+7	+11.1	
509	Miscellaneous durable goods .....	+14.4	+24.5	+33.2	-1.7	+3.6	-1.4	+28.2	-3.0	+3.1	
51	Nondurable goods .....	+11.6	-1.2	+2.5	+1	+1.6	-2	+1.2	+1.5	+2.0	
511	Paper & paper products .....	+13.3	+1.3	+4.8	-.8	-4.1	+1.0	+4.1	-1.5	-4.1	
512	Drugs, drug proprietaries and druggists' sundries .....	+10.3	+10.4	+14.6	-.2	+16.9	+1.4	+14.1	+2.8	+17.2	
513	Apparel, piece goods & notions .....	+1.2	+9.6	+10.9	+8	+17.5	-.6	+13.6	+3.4	+17.4	
514	Groceries & related products .....	+11.8	-.5	-.6	+3.9	+4.7	+3.5	+1.8	+6.3	+4.8	
515	Farm-product raw materials .....	+10.7	-12.0	-7.8	-4.8	-.4	-.8	-11.5	+5.7	-.1	
516	Chemicals & allied products .....	+13.7	+1.9	+5.1	+2.6	-2.0	-.3	+6.8	+2.6	-2.1	
517	Petroleum & petroleum products .....	+7.1	-3.7	+7.5	+2	-7.2	-4.3	-1.8	-3.0	-7.6	
518	Beer, wine, & distilled beverages .....	+17.7	-4.0	+3.1	+2.3	+9	-3.1	.0	-.9	+9	
519	Misc. nondurable goods .....	+19.8	+2.2	+4.8	-1.8	-9.5	-1.3	+5.0	-4.7	-9.4	

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.7-1.9	1.8	1.5-1.8	1.7	0.4-0.7	0.6	0.7-1.1	1.0	1.7	1.6	0.8
50	Durable goods .....	2.1-2.5	2.4	1.9-2.4	2.2	0.5-1.0	0.8	0.9-1.4	1.2	2.2	2.0	0.6
501	Motor vehicles & auto. equip. ....	4.2-6.4	5.4	4.2-5.9	5.0	1.1-1.5	1.2	1.9-3.4	2.5	5.6	6.2	2.2
502	Furniture & home furnishings .....	6.4-15.6	9.0	6.8-9.7	8.0	2.9-10.5	3.8	7.1-15.9	8.5	7.8	6.3	7.3
503	Lumber & other construction mat. ....	4.4-5.9	5.2	4.2-5.9	4.8	1.1-2.5	1.8	2.3-3.9	3.1	5.4	5.5	2.6
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.1-7.8	6.7	5.1-7.5	6.1	2.5-5.9	3.9	4.2-7.2	6.5	5.4	6.3	5.5
505	Metals & minerals, ex. petroleum .....	5.4-10.5	6.9	5.2-11.9	7.7	0.9-5.0	2.3	2.6-4.7	2.8	7.4	6.1	2.5
506	Electrical goods .....	4.3-5.5	4.5	3.1-4.7	4.3	0.7-2.4	1.6	2.7-3.9	3.2	4.1	2.6	2.6
507	Hardware, plumbing & heating equipment ..	6.8-10.0	8.3	7.1-9.8	8.3	1.3-3.1	1.9	2.6-4.9	3.7	8.9	7.5	4.0
508	Machinery, equip. & supplies .....	3.6-4.6	4.0	3.5-4.2	3.8	1.1-1.8	1.6	2.3-3.6	2.7	3.7	2.9	2.0
509	Miscellaneous durable goods .....	4.5-5.8	5.1	4.1-5.5	4.9	1.2-2.5	1.5	3.1-4.1	3.8	4.3	5.2	3.2
51	Nondurable goods .....	2.6-3.2	2.9	2.6-3.0	2.7	0.7-0.8	0.8	0.9-1.8	1.6	2.9	2.7	1.4
511	Paper & paper products .....	4.3-5.1	5.1	4.2-5.2	5.0	0.8-2.1	1.6	2.7-4.4	3.9	4.5	5.2	3.2
512	Drugs, drug proprietaries and druggists' sundries .....	4.8-6.3	5.7	5.1-6.3	5.5	1.0-2.0	1.4	1.8-4.1	2.9	5.0	4.2	2.2
513	Apparel, piece goods & notions .....	9.2-12.3	10.5	9.1-11.5	9.8	2.3-5.2	4.4	4.2-7.3	5.8	9.8	9.0	4.7
514	Groceries & related products .....	4.7-5.3	5.1	4.1-5.3	5.0	0.9-2.2	1.8	1.4-3.4	2.2	4.8	5.2	1.3
515	Farm-product raw materials .....	5.6-7.0	6.3	5.3-5.9	5.9	2.0-3.9	2.9	3.2-6.3	5.2	5.9	5.5	4.7
516	Chemicals & allied products .....	8.0-10.8	8.5	6.6-10.1	8.6	1.5-3.5	2.4	4.9-7.3	6.1	9.7	6.7	6.4
517	Petroleum & petroleum products .....	5.8-8.2	6.9	5.5-8.3	6.8	1.0-2.4	1.8	2.6-3.6	3.2	7.6	6.4	2.8
518	Beer, wine, & distilled beverages .....	3.1-5.4	4.6	2.8-4.8	4.3	1.0-3.5	1.6	1.5-3.4	2.6	4.4	3.6	1.7
519	Misc. nondurable goods .....	5.3-6.8	5.8	4.8-6.2	5.6	1.3-2.1	1.9	2.5-3.9	3.3	5.5	4.8	2.7
	<b>Inventories, Total</b> .....	1.2-1.5	1.4	1.2-1.4	1.4	0.2-0.4	0.3	0.7-1.1	0.9	(X)	(X)	(X)
50	Durable goods .....	1.6-1.8	1.7	1.5-1.8	1.7	0.2-0.4	0.4	0.8-1.1	1.0	(X)	(X)	(X)
501	Motor vehicles & auto. equip. ....	5.8-6.5	6.0	5.8-6.2	6.0	0.4-1.2	0.8	2.2-2.8	2.4	(X)	(X)	(X)
502	Furniture & home furnishings .....	8.1-9.8	8.5	8.2-9.4	8.4	0.9-2.9	1.1	4.7-8.1	6.0	(X)	(X)	(X)
503	Lumber & other construction mat. ....	5.3-6.6	6.2	5.4-6.6	6.0	0.7-1.0	0.8	2.6-4.0	3.4	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.2-6.7	5.6	4.9-6.1	5.7	0.7-2.2	1.1	2.8-4.4	3.4	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	4.3-5.8	5.0	3.9-5.3	5.0	0.5-1.2	0.9	2.2-3.3	2.7	(X)	(X)	(X)
506	Electrical goods .....	2.9-3.9	3.2	2.7-3.6	3.2	0.4-0.8	0.5	1.5-2.3	2.0	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.0-6.9	6.0	5.3-6.8	6.0	0.5-0.8	0.7	1.9-3.4	2.4	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.2-4.0	3.8	3.1-4.1	3.7	0.4-0.9	0.5	1.7-2.8	2.0	(X)	(X)	(X)
509	Miscellaneous durable goods .....	8.6-9.8	9.1	8.6-9.4	9.0	0.5-1.6	0.9	2.4-3.3	2.9	(X)	(X)	(X)
51	Nondurable goods .....	2.8-3.3	3.0	2.8-3.2	3.0	0.3-0.9	0.5	1.3-2.2	1.7	(X)	(X)	(X)
511	Paper & paper products .....	5.0-6.0	5.3	4.9-6.2	5.4	0.6-1.1	0.8	2.0-3.4	2.7	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	5.9-7.1	6.8	5.7-7.4	6.8	0.5-1.7	0.6	1.9-3.3	2.3	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.1-8.1	7.7	6.6-8.1	7.1	1.3-2.0	1.8	3.0-5.4	4.6	(X)	(X)	(X)
514	Groceries & related products .....	7.6-9.3	8.8	6.9-9.4	8.9	0.4-3.8	1.1	3.9-6.1	4.9	(X)	(X)	(X)
515	Farm-product raw materials .....	6.6-7.8	7.4	6.5-7.5	7.1	1.4-1.7	1.6	2.9-4.9	4.2	(X)	(X)	(X)
516	Chemicals & allied products .....	8.2-10.7	8.8	7.8-10.1	8.5	0.6-3.0	1.7	4.4-6.5	5.5	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.3-7.3	6.7	5.2-7.5	6.2	1.0-2.0	1.5	2.9-5.5	4.2	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	4.6-5.5	5.1	4.6-5.2	5.0	0.7-1.2	0.9	2.0-3.4	2.5	(X)	(X)	(X)
519	Misc. nondurable goods .....	7.8-8.9	8.3	7.9-8.9	8.6	0.9-2.3	1.3	2.7-4.5	3.5	(X)	(X)	(X)

\* Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for October 1989 through March 1990.

Official Business  
Penalty for Private Use, \$300

Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989										1990			
		Mar. <sup>1</sup>	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. <sup>1</sup>	Mar. <sup>1</sup>	Apr.
	<b>Sales,<sup>1</sup> Total</b> .....	1.058	.972	1.046	1.031	.953	1.043	.990	1.057	1.009	.960	.965	.912	1.040	.988
50	Durable goods .....	1.056	.980	1.045	1.048	.955	1.047	1.009	1.079	1.009	.940	.931	.894	1.039	.999
501	Motor vehicles & auto. equip. ...	1.070	1.011	1.067	1.053	.951	1.013	.925	1.084	1.011	.979	.933	.914	1.063	1.016
502	Furniture & home furnishings ...	1.035	.931	1.013	.982	.936	1.074	1.077	1.130	1.052	.916	.934	.912	1.015	.950
503	Lumber & other construction mat. ....	.974	.976	1.068	1.126	1.066	1.138	1.076	1.134	.960	.849	.851	.776	.944	1.009
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.066	.898	.874	.970	.882	1.026	1.086	1.176	1.164	1.031	.912	.916	1.037	.932
505	Metals & minerals, ex. petroleum	1.152	.980	.976	1.071	.906	1.070	1.022	1.017	.965	.919	.974	.924	1.113	1.004
506	Electrical goods .....	1.033	.933	.982	1.011	.963	1.063	1.036	1.109	1.053	.967	.944	.905	1.019	.949
507	Hardware, plumbing & heating equipment .....	1.015	.968	1.063	1.088	.987	1.075	.987	1.102	.999	.906	.943	.870	.993	.998
508	Machinery, equip. & supplies ...	1.083	.996	1.052	1.043	.939	1.050	1.017	1.043	.969	.958	.933	.911	1.061	1.015
509	Miscellaneous durable goods ...	1.041	1.009	1.090	1.068	.950	.955	1.024	1.061	1.092	.918	.902	.871	1.011	1.092
51	<b>Nondurable goods</b> .....	1.063	.960	1.050	1.016	.947	1.034	.974	1.039	1.006	.983	.993	.928	1.039	.984
511	Paper & paper products .....	1.069	.945	.977	1.030	.935	1.076	.989	1.064	1.012	.955	1.005	.928	1.041	.970
512	Drugs, drug proprietaries and druggists' sundries .....	1.049	.944	1.027	1.005	.943	1.037	.999	1.042	1.001	.969	1.050	.933	1.015	.969
513	Apparel, piece goods & notions	1.052	.855	.895	1.035	1.036	1.260	1.031	1.166	.999	.724	.925	.997	1.015	.884
514	Groceries & related products ...	1.016	.949	1.060	1.020	.993	1.037	.963	1.003	1.040	1.012	.998	.919	.993	.959
515	Farm-product raw materials ...	1.076	.951	1.043	.944	.881	.964	.907	1.105	1.050	.984	1.114	.960	1.071	.970
516	Chemicals & allied products ...	1.092	1.003	1.082	1.122	.953	1.026	.983	1.039	.947	.875	.971	.914	1.042	1.050
517	Petroleum & petroleum products	1.110	.942	1.014	.987	.923	.993	1.004	.976	.964	1.043	1.044	.973	1.089	.966
518	Beer, wine, & distilled beverages	1.012	.903	1.095	1.121	.974	1.124	.978	1.017	1.064	1.109	.814	.799	.971	.932
519	Misc. nondurable goods .....	1.105	1.062	1.156	1.047	.908	1.011	.952	1.017	.962	.992	.892	.886	1.075	1.106
	<b>Inventories,<sup>1</sup> Total</b> .....	1.008	1.006	.991	.996	.994	.984	.994	1.009	1.004	1.000	1.007	1.009	1.008	1.006
50	Durable goods .....	1.003	1.010	1.006	1.005	1.010	.999	1.001	1.004	.993	.983	.991	.998	1.003	1.009
501	Motor vehicles & auto. equip. ...	1.015	1.002	1.002	.999	.977	.960	1.020	.997	1.014	1.012	.990	1.017	1.016	1.002
502	Furniture & home furnishings ...	.992	.991	1.012	1.007	1.019	1.018	1.028	.998	.966	.978	.995	.978	.993	.996
503	Lumber & other construction mat. ....	1.020	1.045	1.012	1.040	1.045	.981	.991	.985	.943	.970	.994	.983	1.020	1.047
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.988	.991	.978	1.009	1.054	1.021	1.038	1.024	.986	.963	.965	.973	.987	.990
505	Metals & minerals, ex. petroleum	1.005	1.020	1.011	1.042	1.020	.971	.974	.984	.968	1.005	1.008	.990	1.006	1.020
506	Electrical goods .....	.993	.996	1.005	1.002	1.020	1.014	1.010	1.009	.998	.989	.975	.992	.993	.996
507	Hardware, plumbing & heating equipment .....	1.016	1.019	1.010	.999	1.009	1.011	.998	1.013	.974	.967	.985	.995	1.014	1.018
508	Machinery, equip. & supplies ...	1.002	1.016	1.007	1.001	1.007	1.001	.990	1.002	1.001	.976	.999	1.001	1.002	1.017
509	Miscellaneous durable goods ...	.997	1.014	1.016	.991	1.017	1.044	1.013	1.007	1.005	.962	.958	.988	1.001	1.016
51	<b>Nondurable goods</b> .....	1.017	.997	.962	.984	.963	.957	.974	1.020	1.028	1.035	1.035	1.026	1.016	.997
511	Paper & paper products .....	1.020	1.014	.988	.994	1.007	.985	.969	1.006	.984	.996	1.023	1.013	1.020	1.013
512	Drugs, drug proprietaries and druggists' sundries .....	1.001	1.029	.964	.963	.968	.967	.993	1.019	.970	1.034	1.054	1.029	.999	1.029
513	Apparel, piece goods & notions	.964	.946	1.021	1.063	1.048	1.045	1.025	.958	.948	.992	1.007	.990	.965	.945
514	Groceries & related products ...	.982	.982	.982	.983	.976	.953	1.000	1.050	1.056	1.030	1.001	1.003	.981	.983
515	Farm-product raw materials ...	1.029	.981	.908	.852	.839	.827	.886	1.130	1.154	1.164	1.185	1.138	1.025	.983
516	Chemicals & allied products ...	1.007	1.031	1.032	1.038	1.004	1.011	.953	.962	.970	.971	1.008	1.009	1.009	1.030
517	Petroleum & petroleum products	1.016	.958	.960	.999	.991	.964	1.037	1.013	1.008	1.040	1.032	.988	1.021	.956
518	Beer, wine, & distilled beverages	1.011	1.019	.996	1.017	.994	.978	1.010	1.064	1.054	.921	.948	.979	1.011	1.019
519	Misc. nondurable goods .....	1.091	1.059	.967	.983	.919	.924	.944	.970	1.007	1.043	1.027	1.056	1.089	1.059

<sup>1</sup>Revised

Adjusted sales and inventory data shown in table 1A 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

April 1990

BW90-04  
Issued June 1990

U.S. Department of Commerce  
BUREAU OF THE CENSUS

**Sales.** April 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$150.8 billion, down 1.1 percent ( $\pm 0.9$  percent) from the revised March level but were up 3.5 percent ( $\pm 2.2$  percent) from a year ago. The March preliminary estimate was revised downward by \$0.4 billion or about 0.3 percent. April sales of durable goods decreased 2.2 percent ( $\pm 1.0$  percent) from the revised March level, but were up 7.1 percent ( $\pm 2.6$  percent) from a year ago. Sales of motor vehicles and automotive equipment decreased 12.5 percent to \$13.8 billion from the March level. However, sales of miscellaneous durable goods increased 6.2 percent to \$8.5 billion for the same period. April sales of nondurable goods were up 0.1 percent ( $\pm 1.3$  percent) from March and showed no change from the April 1989 level.

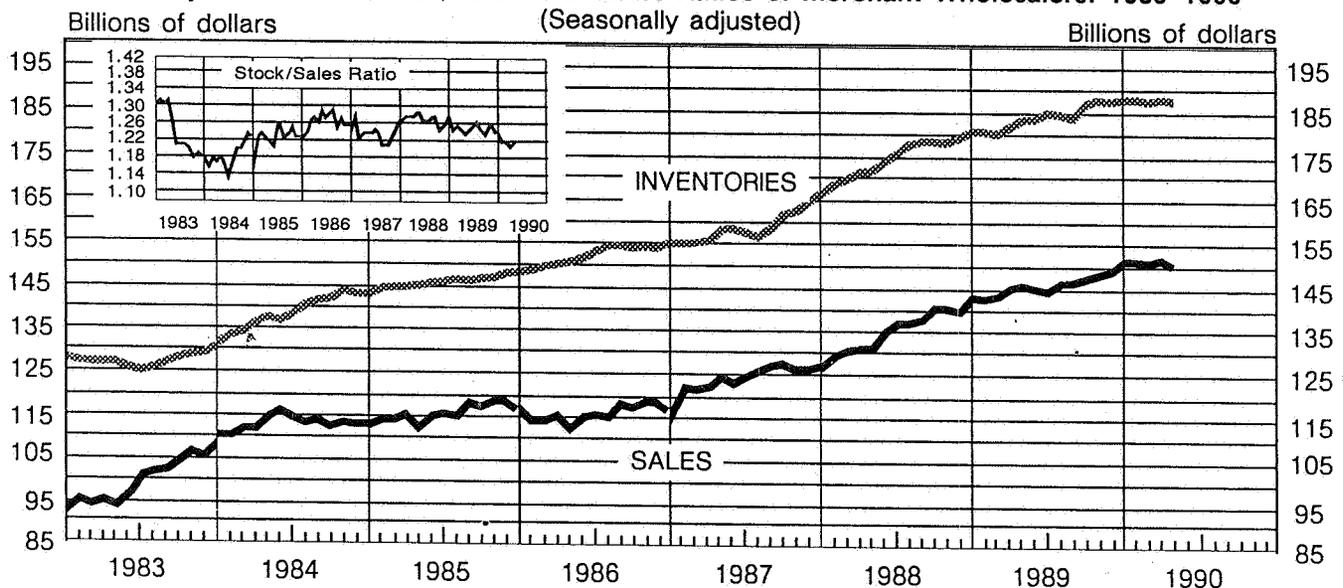
**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$188.9 billion at the end of April, down 0.2 percent ( $\pm 0.4$  percent) from the revised March level but were up 3.3 percent ( $\pm 0.9$  percent) from a year ago. The March preliminary estimate was revised upward by \$0.05

billion or about 0.03 percent. Inventories of durable goods wholesalers decreased 0.9 percent ( $\pm 0.6$  percent) from the March level but were 2.9 percent ( $\pm 1.4$  percent) above a year ago. Monthly decreases in the inventories of durable goods wholesalers were as follows: miscellaneous durable goods decreased 6.7 percent to \$6.1 billion and minerals and metals, except petroleum were down 3.8 percent to \$9.7 billion. Inventories of nondurable goods wholesalers were up 1.0 percent ( $\pm 0.6$  percent) from the March level and were up 4.2 percent ( $\pm 2.0$  percent) from April 1989. Monthly increases in the inventories of nondurable goods wholesalers were as follows: apparel, piece goods and notions were up 3.8 percent to \$10.6 billion and miscellaneous nondurable goods increased 3.3 percent to \$12.9 billion.

**Stock/Sales Ratio.** The April stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.25, up from the March ratio of 1.24. The year ago ratio was 1.25.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-1990



Monthly Wholesale Trade for May is scheduled to be released July 10, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990				1989											
		Jan.	Feb.	Mar.	Apr. <sup>P</sup>	Apr. <sup>T</sup>	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.			
	<b>Sales, Total</b> . . . . .	151,968	151,620	152,383	150,758	145,708	146,333	145,512	144,856	146,800	146,981	147,921	148,782	149,584			
50	Durable goods . . . . .	76,653	77,018	77,612	75,918	70,875	72,068	70,735	71,545	72,696	72,388	73,048	73,970	73,180			
501	Motor vehicles & auto. equip. . . . .	14,630	15,217	15,792	13,824	14,084	13,199	13,336	13,347	14,118	13,901	13,892	13,708	13,034			
502	Furniture & home furnishings . . . . .	2,282	2,316	2,298	2,392	2,488	2,453	2,444	2,495	2,575	2,569	2,407	2,488	2,405			
503	Lumber & other construction mat. . . . .	5,112	5,183	5,081	5,001	4,918	4,958	4,849	4,920	5,016	4,886	4,978	4,866	4,425			
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	1,893	1,985	2,162	2,145	1,969	1,979	2,019	1,939	2,027	2,155	2,076	2,023	2,036			
505	Metals & minerals, ex. petroleum . . . . .	7,330	7,277	7,050	7,288	7,152	7,974	7,239	7,111	7,447	6,325	7,527	7,584	6,827			
506	Electrical goods . . . . .	9,818	9,782	9,732	9,559	9,137	9,715	9,094	9,140	9,395	9,312	9,336	9,495	9,605			
507	Hardware, plumbing & heating equipment . . . . .	3,661	3,760	3,805	3,687	3,748	3,737	3,525	3,599	3,632	3,588	3,624	3,619	3,649			
508	Machinery, equip. & supplies . . . . .	23,355	23,181	23,705	23,556	21,563	21,656	21,825	22,112	22,116	22,628	22,589	22,690	22,974			
509	Miscellaneous durable goods . . . . .	8,572	8,317	7,987	8,486	5,816	6,397	6,404	6,882	6,370	7,024	6,619	7,497	8,225			
51	Nondurable goods . . . . .	75,315	74,602	74,771	74,840	74,833	74,265	74,777	73,311	74,104	74,593	74,873	74,812	76,404			
511	Paper & paper products . . . . .	4,370	4,241	4,349	4,332	4,261	4,217	4,179	4,321	4,262	4,348	4,366	4,320	4,348			
512	Drugs, drug proprietaries and druggists' sundries . . . . .	4,065	3,990	4,014	4,195	3,540	3,576	3,565	3,631	3,651	3,738	3,889	3,958	3,992			
513	Apparel, piece goods & notions . . . . .	5,128	5,308	5,434	5,335	4,819	4,551	4,850	4,919	4,742	4,953	4,816	5,163	5,493			
514	Groceries & related products . . . . .	19,432	19,841	20,231	19,983	20,437	20,613	20,611	20,386	20,232	20,285	20,846	19,999	19,581			
515	Farm-product raw materials . . . . .	11,070	10,369	10,372	10,672	11,613	11,011	10,961	10,370	11,056	10,555	10,759	10,971	10,465			
516	Chemicals & allied products . . . . .	3,176	3,284	3,336	3,214	3,092	3,024	3,083	3,140	3,037	3,083	3,093	3,204	3,304			
517	Petroleum & petroleum products . . . . .	12,670	11,956	11,579	11,976	12,657	12,878	12,628	11,987	12,099	12,274	12,030	11,800	13,674			
518	Beer, wine, & distilled beverages . . . . .	3,627	3,630	3,586	3,715	3,471	3,433	3,554	3,494	3,580	3,569	3,532	3,586	3,604			
519	Misc. nondurable goods . . . . .	11,777	11,983	11,870	11,418	10,943	10,962	11,346	11,063	11,445	11,788	11,542	11,811	11,943			
	<b>Inventories, Total</b> . . . . .	189,375	188,847	189,361	188,928	182,832	184,606	184,737	186,113	185,730	185,098	188,103	189,057	188,819			
50	Durable goods . . . . .	125,510	125,685	124,901	123,797	120,343	121,789	121,874	123,602	122,939	122,148	123,716	124,363	123,954			
501	Motor vehicles & auto. equip. . . . .	23,909	24,219	23,911	23,870	23,148	23,646	23,588	23,806	23,545	22,770	23,472	23,298	22,381			
502	Furniture & home furnishings . . . . .	4,123	4,142	4,429	4,439	4,357	4,427	4,505	4,537	4,531	4,565	4,570	4,510	4,496			
503	Lumber & other construction mat. . . . .	5,986	5,821	5,815	5,783	5,798	5,850	5,759	5,806	5,687	5,725	5,805	5,704	5,847			
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	4,452	4,392	4,387	4,409	4,304	4,323	4,504	4,437	4,408	4,460	4,473	4,580	4,589			
505	Metals & minerals, ex. petroleum . . . . .	10,548	10,299	10,075	9,695	10,638	10,388	10,585	11,034	10,691	10,811	10,741	10,879	10,693			
506	Electrical goods . . . . .	15,716	15,520	15,330	15,327	15,018	15,201	15,260	15,592	15,469	15,285	15,455	15,541	15,525			
507	Hardware, plumbing & heating equipment . . . . .	7,375	7,360	7,349	7,335	7,057	7,153	7,153	7,278	7,278	7,352	7,492	7,494	7,410			
508	Machinery, equip. & supplies . . . . .	46,811	46,977	47,066	46,836	43,786	44,490	44,515	45,208	45,084	45,016	45,351	45,777	46,506			
509	Miscellaneous durable goods . . . . .	6,610	6,955	6,539	6,103	6,239	6,311	6,005	5,904	6,246	6,164	6,357	6,580	6,507			
51	Nondurable goods . . . . .	63,865	63,162	64,460	65,131	62,489	62,817	62,863	62,511	62,791	62,960	64,387	64,694	64,865			
511	Paper & paper products . . . . .	4,077	3,998	4,011	3,973	4,150	4,166	4,156	4,234	4,171	4,230	4,249	4,175	4,154			
512	Drugs, drug proprietaries and druggists' sundries . . . . .	5,976	5,988	6,099	6,055	5,314	5,332	5,520	5,558	5,705	5,846	5,829	5,846	5,976			
513	Apparel, piece goods & notions . . . . .	9,697	9,776	10,184	10,572	8,563	8,724	8,839	9,010	9,219	9,244	9,391	9,428	9,807			
514	Groceries & related products . . . . .	13,129	12,674	13,335	13,201	12,825	13,001	12,960	12,585	12,681	12,499	13,335	13,527	13,593			
515	Farm-product raw materials . . . . .	7,743	7,553	7,830	7,941	7,486	7,432	6,886	6,797	6,921	6,778	7,354	7,685	7,831			
516	Chemicals & allied products . . . . .	2,581	2,544	2,693	2,657	2,669	2,599	2,704	2,690	2,600	2,771	2,575	2,523	2,560			
517	Petroleum & petroleum products . . . . .	3,666	3,849	3,862	3,854	4,202	4,158	4,351	4,028	4,066	4,058	4,060	4,038	3,762			
518	Beer, wine, & distilled beverages . . . . .	4,009	3,903	3,929	3,940	3,768	3,832	3,853	3,865	3,848	3,918	3,915	4,025	4,022			
519	Misc. nondurable goods . . . . .	12,987	12,871	12,521	12,928	13,492	13,573	13,594	13,724	13,580	13,606	13,679	13,447	13,160			
	<b>Stock/sales ratios, Total</b> . . . . .	1.25	1.25	1.24	1.25	1.25	1.26	1.27	1.28	1.27	1.26	1.27	1.27	1.26			
50	Durable goods . . . . .	1.64	1.63	1.61	1.63	1.70	1.69	1.72	1.73	1.69	1.69	1.69	1.68	1.69			
501	Motor vehicles & auto. equip. . . . .	1.63	1.59	1.51	1.73	1.64	1.79	1.77	1.78	1.67	1.64	1.69	1.70	1.72			
502	Furniture & home furnishings . . . . .	1.81	1.79	1.93	1.86	1.75	1.80	1.84	1.82	1.76	1.78	1.90	1.81	1.87			
503	Lumber & other construction mat. . . . .	1.17	1.12	1.14	1.16	1.18	1.18	1.19	1.18	1.13	1.17	1.17	1.17	1.32			
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	2.35	2.21	2.03	2.06	2.19	2.18	2.23	2.29	2.17	2.07	2.15	2.26	2.25			
505	Metals & minerals, ex. petroleum . . . . .	1.44	1.42	1.43	1.33	1.49	1.30	1.46	1.55	1.44	1.71	1.43	1.43	1.57			
506	Electrical goods . . . . .	1.60	1.59	1.58	1.60	1.64	1.56	1.68	1.71	1.65	1.64	1.66	1.64	1.62			
507	Hardware, plumbing & heating equipment . . . . .	2.01	1.96	1.93	1.99	1.88	1.91	2.03	2.02	2.00	2.05	2.07	2.07	2.03			
508	Machinery, equip. & supplies . . . . .	2.00	2.03	1.99	1.99	2.03	2.05	2.04	2.04	2.04	1.99	2.01	2.02	2.02			
509	Miscellaneous durable goods . . . . .	.77	.84	.82	.72	1.07	.99	.94	.86	.98	.88	.96	.88	.79			
51	Nondurable goods . . . . .	.85	.85	.86	.87	.84	.85	.84	.85	.85	.84	.86	.86	.85			
511	Paper & paper products . . . . .	.93	.94	.92	.92	.97	.99	.99	.98	.98	.97	.97	.97	.96			
512	Drugs, drug proprietaries and druggists' sundries . . . . .	1.47	1.50	1.52	1.44	1.50	1.49	1.55	1.53	1.56	1.56	1.50	1.48	1.50			
513	Apparel, piece goods & notions . . . . .	1.89	1.84	1.87	1.98	1.78	1.92	1.82	1.83	1.94	1.87	1.95	1.83	1.79			
514	Groceries & related products . . . . .	.68	.64	.66	.66	.63	.63	.63	.62	.63	.62	.64	.68	.69			
515	Farm-product raw materials . . . . .	.70	.73	.75	.74	.64	.67	.63	.66	.63	.64	.68	.70	.75			
516	Chemicals & allied products . . . . .	.81	.77	.81	.83	.86	.86	.88	.86	.86	.90	.83	.79	.77			
517	Petroleum & petroleum products . . . . .	.29	.32	.33	.32	.33	.32	.34	.34	.34	.33	.34	.34	.28			
518	Beer, wine, & distilled beverages . . . . .	1.11	1.08	1.10	1.06	1.09	1.12	1.08	1.11	1.07	1.10	1.11	1.12	1.12			
519	Misc. nondurable goods . . . . .	1.10	1.07	1.05	1.13	1.23	1.24	1.20	1.24	1.19	1.15	1.19	1.14	1.10			

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.

<sup>T</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990				1989								Total 4 mos.		
		Jan.	Feb.	Mar.	Apr. <sup>P</sup>	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1990	1989
	<b>Sales, Total</b> .....	146,135	138,361	158,734	149,810	141,130	152,604	150,308	137,524	152,731	145,394	155,847	150,006	144,355	592,840	559,425
50	Durable goods .....	71,238	69,070	80,795	76,093	69,440	74,843	74,245	68,081	76,020	73,080	78,451	74,608	69,247	297,196	271,585
501	Motor vehicles & auto. equip. ....	13,650	13,908	16,661	14,045	14,239	14,083	14,043	12,693	14,302	12,858	15,059	13,859	12,760	58,264	55,318
502	Furniture & home furnishings .....	2,131	2,112	2,305	2,308	2,341	2,485	2,400	2,335	2,765	2,767	2,720	2,617	2,203	8,654	9,308
503	Lumber & other construction mat. . .	4,350	4,022	4,822	5,011	4,785	5,295	5,460	5,245	5,708	5,257	5,645	4,671	3,757	18,205	17,594
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,726	1,818	2,233	1,991	1,762	1,730	1,958	1,710	2,080	2,340	2,441	2,355	2,099	7,768	7,610
505	Metals & minerals, ex. petroleum .....	7,139	6,724	7,811	7,384	7,052	7,783	7,753	6,443	7,968	6,464	7,655	7,319	6,274	29,058	28,346
506	Electrical goods .....	9,268	8,853	9,927	9,052	8,507	9,540	9,194	8,802	9,987	9,647	10,354	9,998	9,288	37,100	34,418
507	Hardware, plumbing & heating equipment .....	3,452	3,271	3,809	3,643	3,606	3,972	3,835	3,552	3,904	3,541	3,994	3,615	3,306	14,175	13,700
508	Machinery, equip. & supplies .....	21,790	21,118	25,104	23,886	21,390	22,782	22,763	20,763	23,222	23,013	23,560	21,987	22,009	91,898	82,068
509	Miscellaneous durable goods .....	7,732	7,244	8,123	8,775	6,758	6,973	6,839	6,538	6,083	7,193	7,023	8,187	7,551	31,874	23,223
51	Nondurable goods .....	74,897	69,291	77,939	73,517	71,690	77,961	76,063	69,443	76,711	72,314	77,396	75,398	75,108	295,644	287,840
511	Paper & paper products .....	4,392	3,936	4,536	4,185	4,018	4,120	4,304	4,040	4,586	4,300	4,645	4,372	4,152	17,049	16,222
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,723	4,068	4,052	3,331	3,673	3,583	3,424	3,786	3,734	4,052	3,962	3,868	16,109	13,886
513	Apparel, piece goods & notions .....	4,743	5,292	5,586	4,695	4,091	4,073	5,020	5,096	5,975	5,107	5,616	5,158	3,977	20,316	17,967
514	Groceries & related products .....	19,393	18,234	20,150	19,064	19,272	21,850	21,023	20,243	20,981	19,534	20,909	20,799	19,816	76,841	77,647
515	Farm-product raw materials .....	12,332	9,954	11,088	10,512	11,172	11,484	10,347	9,136	10,658	9,573	11,889	11,520	10,298	43,886	47,296
516	Chemicals & allied products .....	3,084	3,002	3,519	3,355	3,098	3,272	3,459	2,992	3,116	3,031	3,214	3,034	2,891	12,960	12,138
517	Petroleum & petroleum products .....	13,228	11,633	12,633	11,784	12,062	13,058	12,464	11,064	12,014	12,323	11,741	11,375	14,262	49,278	46,760
518	Beer, wine, & distilled beverages .....	2,952	2,900	3,482	3,481	3,145	3,759	3,984	3,403	4,024	3,490	3,592	3,816	3,997	12,815	12,136
519	Misc. nondurable goods .....	10,505	10,617	12,879	12,389	11,501	12,672	11,879	10,045	11,571	11,222	11,738	11,362	11,847	46,390	43,788
	<b>Inventories, Total</b> .....	190,390	190,475	190,909	190,518	184,390	183,089	184,498	184,895	182,299	183,868	189,404	189,822	189,042	(X)	(X)
50	Durable goods .....	124,313	125,488	125,562	125,232	121,635	122,538	122,613	124,655	122,371	122,335	123,856	123,652	122,053	(X)	(X)
501	Motor vehicles & auto. equip. ....	23,670	24,631	24,222	23,894	23,171	23,693	23,564	23,258	22,603	23,225	23,402	23,624	22,650	(X)	(X)
502	Furniture & home furnishings .....	4,102	4,051	4,389	4,435	4,344	4,480	4,537	4,623	4,613	4,693	4,561	4,357	4,397	(X)	(X)
503	Lumber & other construction mat. . .	5,930	5,722	5,960	6,084	6,082	5,920	5,989	6,067	5,579	5,673	5,718	5,379	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,296	4,273	4,352	4,378	4,274	4,228	4,545	4,677	4,501	4,629	4,580	4,516	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum .....	10,632	10,196	10,166	9,879	10,817	10,502	11,030	11,255	10,381	10,530	10,569	10,531	10,746	(X)	(X)
506	Electrical goods .....	15,323	15,396	15,223	15,312	14,988	15,277	15,291	15,904	15,686	15,438	15,594	15,510	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment .....	7,264	7,323	7,445	7,460	7,177	7,225	7,146	7,343	7,358	7,337	7,589	7,299	7,165	(X)	(X)
508	Machinery, equip. & supplies .....	46,764	47,024	47,207	47,632	44,487	44,801	44,560	45,524	45,129	44,566	45,442	45,823	45,390	(X)	(X)
509	Miscellaneous durable goods .....	6,332	6,872	6,598	6,158	6,295	6,412	5,951	6,004	6,521	6,244	6,401	6,613	6,260	(X)	(X)
51	Nondurable goods .....	66,077	64,987	65,347	65,286	62,755	60,551	61,885	60,240	59,928	61,533	65,548	66,170	66,989	(X)	(X)
511	Paper & paper products .....	4,171	4,050	4,103	4,021	4,200	4,116	4,131	4,264	4,108	4,099	4,274	4,108	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,162	6,093	6,237	5,463	5,140	5,316	5,380	5,517	5,805	5,940	5,671	6,179	(X)	(X)
513	Apparel, piece goods & notions .....	9,765	9,678	9,777	10,054	8,171	8,907	9,396	9,443	9,634	9,475	9,997	9,938	9,729	(X)	(X)
514	Groceries & related products .....	13,142	12,712	13,082	12,937	12,581	12,767	12,740	12,283	12,085	12,459	14,002	14,284	14,001	(X)	(X)
515	Farm-product raw materials .....	9,176	8,602	7,987	7,774	7,356	6,005	5,867	5,703	5,724	6,005	6,310	8,869	9,115	(X)	(X)
516	Chemicals & allied products .....	2,602	2,567	2,727	2,752	2,754	2,682	2,807	2,701	2,629	2,641	2,477	2,447	2,486	(X)	(X)
517	Petroleum & petroleum products .....	3,783	3,803	3,955	3,754	4,068	3,992	4,347	3,992	3,920	4,208	4,113	4,070	3,912	(X)	(X)
518	Beer, wine, & distilled beverages .....	3,801	3,821	3,988	4,015	3,840	3,917	3,918	3,862	3,763	3,957	4,166	4,242	3,704	(X)	(X)
519	Misc. nondurable goods .....	13,338	13,592	13,635	13,742	14,342	13,125	13,363	12,612	12,548	12,844	13,269	13,541	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> .....	1.30	1.38	1.20	1.27	1.31	1.20	1.23	1.34	1.19	1.26	1.22	1.27	1.31	(X)	(X)
50	Durable goods .....	1.75	1.82	1.55	1.65	1.75	1.64	1.65	1.83	1.61	1.67	1.58	1.66	1.76	(X)	(X)
501	Motor vehicles & auto. equip. ....	1.73	1.77	1.45	1.70	1.63	1.68	1.68	1.83	1.58	1.81	1.55	1.70	1.78	(X)	(X)
502	Furniture & home furnishings .....	1.92	1.92	1.90	1.92	1.86	1.80	1.89	1.98	1.67	1.70	1.68	1.66	2.00	(X)	(X)
503	Lumber & other construction mat. . .	1.36	1.42	1.24	1.21	1.27	1.12	1.10	1.16	.98	1.08	1.01	1.15	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.49	2.35	1.95	2.20	2.43	2.44	2.32	2.74	2.16	1.98	1.88	1.92	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum .....	1.49	1.52	1.30	1.34	1.53	1.35	1.42	1.75	1.30	1.63	1.38	1.44	1.71	(X)	(X)
506	Electrical goods .....	1.65	1.74	1.53	1.69	1.76	1.60	1.66	1.81	1.57	1.60	1.51	1.55	1.65	(X)	(X)
507	Hardware, plumbing & heating equipment .....	2.10	2.24	1.95	2.05	1.99	1.82	1.86	2.07	1.88	2.07	1.90	2.02	2.17	(X)	(X)
508	Machinery, equip. & supplies .....	2.15	2.23	1.88	1.99	2.08	1.97	1.96	2.19	1.94	1.94	1.93	2.08	2.06	(X)	(X)
509	Miscellaneous durable goods .....	.82	.95	.81	.70	1.09	.92	.87	.92	1.07	.87	.91	.81	.83	(X)	(X)
51	Nondurable goods .....	.88	.94	.84	.89	.88	.78	.81	.87	.85	.85	.85	.88	.89	(X)	(X)
511	Paper & paper products .....	.95	1.03	.90	.96	1.05	1.00	.96	1.06	.90	.95	.92	.94	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.50	1.54	1.64	1.40	1.48	1.57	1.46	1.55	1.47	1.43	1.60	(X)	(X)
513	Apparel, piece goods & notions .....	2.06	1.83	1.75	2.14	2.00	2.19	1.87	1.85	1.61	1.86	1.60	1.73	2.45	(X)	(X)
514	Groceries & related products .....	.68	.70	.65	.68	.65	.58	.61	.61	.58	.64	.67	.69	.71	(X)	(X)
515	Farm-product raw materials .....	.74	.86	.72	.74	.66	.52	.57	.62	.54	.63	.70	.77	.89	(X)	(X)
516	Chemicals & allied products .....	.84	.86	.77	.82	.89	.82	.81	.90	.84	.87	.77	.81	.86	(X)	(X)
517	Petroleum & petroleum products .....	.29	.33	.31	.32	.34	.31	.35	.36	.33	.34	.35	.36	.27	(X)	(X)
518	Beer, wine, & distilled beverages .....	1.29	1.32	1.15	1.15	1.22	1.02	.98	1.13	.94	1.13	1.16	1.11	.93	(X)	(X)
519	Misc. nondurable goods .....	1.27	1.28	1.06	1.11	1.25	1.04	1.12	1.26	1.08	1.14	1.13	1.19	1.16	(X)	(X)

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
 × Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Apr. 1990 from Mar. 1990	Apr. 1990 from Apr. 1989	4 months 1990 from 4 months 1989	Apr. 1990 from Mar. 1990	Apr. 1990 from Apr. 1989	Apr. 1990 from Mar. 1990	Apr. 1990 from Apr. 1989	Apr. 1990 from Mar. 1990	Apr. 1990 from Apr. 1989
	<b>Total</b> .....	-5.7	+6.0	+6.0	-2	+3.3	-1.1	+3.5	-2	+3.3
50	Durable goods .....	-5.8	+9.6	+9.4	-3	+3.0	-2.2	+7.1	-9	+2.9
501	Motor vehicles & auto. equip. ....	-15.7	-1.4	+5.3	-1.4	+3.1	-12.5	-1.8	-2	+3.1
502	Furniture & home furnishings .....	.0	-1.5	-4.9	+1.0	+2.1	+4.1	-3.9	+2	+1.9
503	Lumber & other construction mat. ....	+3.9	+4.7	+3.5	+2.1	.0	-1.6	+1.7	-6	-3
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	-10.8	+13.0	+2.1	+6	+2.4	-.8	+8.9	+5	+2.4
505	Metals & minerals, ex. petroleum .....	-5.5	+4.7	+2.5	-2.8	-8.7	+3.1	+1.6	-3.8	-8.8
506	Electrical goods .....	-8.8	+6.4	+7.8	+6	+2.2	-1.8	+4.6	.0	+2.1
507	Hardware, plumbing & heating equipment .....	-4.4	+1.0	+3.5	+2	+3.9	-3.1	-1.6	-2	+3.9
508	Machinery, equip. & supplies .....	-4.9	+11.7	+12.0	+9	+7.1	-.6	+9.2	-.5	+7.0
509	Miscellaneous durable goods .....	+8.0	+52.4	+37.3	-6.7	-2.2	+6.2	+45.9	-6.7	-2.2
51	Nondurable goods .....	-5.7	+2.5	+2.7	-1	+4.0	+1	.0	+1.0	+4.2
511	Paper & paper products .....	-7.7	+4.2	+5.1	-2.0	-4.3	-.4	+1.7	-.9	-4.3
512	Drugs, drug proprietaries and druggists' sundries .....	-.3	+21.6	+16.0	+2.4	+14.2	+4.5	+18.5	-.7	+13.9
513	Apparel, piece goods & notions .....	-16.0	+14.8	+13.1	+2.8	+23.0	-1.8	+10.7	+3.8	+23.2
514	Groceries & related products .....	-5.4	-1.1	-1.0	-1.1	+2.8	-1.2	-2.2	-1.0	+2.9
515	Farm-product raw materials .....	-5.2	-5.9	-7.2	-2.7	+6.0	+2.9	-8.1	+1.4	+6.1
516	Chemicals & allied products .....	-4.7	+8.3	+6.8	+9	-.1	-3.7	+3.9	-.8	-.1
517	Petroleum & petroleum products .....	-6.7	-2.3	+5.4	-5.1	-7.7	+3.4	-5.4	-2	-8.3
518	Beer, wine, & distilled beverages .....	.0	+10.7	+5.6	+7	+4.6	+3.6	+7.0	+3	+4.6
519	Misc. nondurable goods .....	-3.8	+7.7	+5.9	+8	-4.2	-3.8	+4.3	+3.3	-4.2

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.7-1.9	1.8	1.5-1.8	1.7	0.4-0.7	0.5	0.9-1.3	1.0	1.7	1.5	0.8
50	Durable goods .....	2.2-2.5	2.4	2.2-2.4	2.2	0.5-1.0	0.7	0.9-1.4	1.3	2.2	1.9	0.7
501	Motor vehicles & auto. equip. ....	4.4-6.4	5.5	4.7-6.0	5.3	0.8-1.3	1.2	2.2-3.4	2.8	5.7	5.9	2.0
502	Furniture & home furnishings .....	7.0-15.6	9.0	8.8-8.7	8.0	2.8-10.5	3.4	7.1-15.9	8.1	7.0	6.2	6.3
503	Lumber & other construction mat. ....	4.5-5.9	5.2	4.2-5.9	5.0	1.1-2.5	1.9	2.4-3.9	3.6	5.2	5.2	2.9
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.1-7.6	6.5	5.0-7.5	5.3	2.5-5.9	3.3	4.2-7.2	5.9	5.0	5.8	4.7
505	Metals & minerals, ex. petroleum .....	5.4-10.5	7.0	5.7-11.9	7.7	0.9-5.0	2.2	2.6-4.7	3.2	7.0	6.5	2.0
506	Electrical goods .....	3.8-5.5	4.5	3.8-4.7	4.3	0.7-2.0	1.3	2.7-3.9	2.9	3.8	2.5	2.4
507	Hardware, plumbing & heating equipment ..	6.8-10.0	8.3	7.1-9.8	8.3	1.3-3.1	2.2	3.3-4.9	3.8	8.6	7.3	3.6
508	Machinery, equip. & supplies .....	3.6-4.6	4.2	3.5-4.4	3.8	1.1-1.8	1.6	2.3-3.6	2.9	3.8	3.0	2.0
509	Miscellaneous durable goods .....	4.3-5.8	4.8	4.1-6.5	4.5	1.2-2.5	1.8	3.1-4.1	3.8	4.2	5.0	2.9
51	Nondurable goods .....	2.7-3.2	2.9	2.6-3.1	2.8	0.7-0.8	0.7	1.4-1.8	1.6	2.9	2.6	1.4
511	Paper & paper products .....	4.1-5.1	4.9	4.2-5.1	4.8	0.8-2.1	1.8	2.7-4.4	3.9	4.2	5.1	2.7
512	Drugs, drug proprietaries and druggists' sundries .....	4.8-5.9	5.6	5.1-6.3	5.4	1.0-2.0	1.4	1.8-4.1	2.6	5.1	4.3	2.0
513	Apparel, piece goods & notions .....	9.2-12.3	10.8	9.2-11.5	10.2	2.3-4.6	4.2	4.2-7.3	6.2	9.8	9.2	4.3
514	Groceries & related products .....	4.1-5.3	4.9	4.4-5.3	5.0	0.9-1.9	1.5	1.4-3.4	2.1	4.6	5.0	1.4
515	Farm-product raw materials .....	5.6-7.0	6.4	5.5-6.5	5.9	2.0-3.1	2.6	3.2-6.3	5.6	5.9	5.4	4.5
516	Chemicals & allied products .....	8.0-10.8	9.1	8.1-10.1	8.7	1.5-3.5	2.4	4.6-7.3	6.1	9.4	5.9	5.3
517	Petroleum & petroleum products .....	5.9-8.3	7.6	5.5-8.3	6.9	1.0-2.4	1.5	2.6-4.8	3.4	7.8	6.5	3.2
518	Beer, wine, & distilled beverages .....	4.0-5.4	4.8	3.6-4.8	4.3	0.8-3.5	1.6	1.7-3.4	2.6	4.2	3.5	1.4
519	Misc. nondurable goods .....	5.3-7.7	6.0	4.8-6.2	5.6	1.3-4.0	2.0	2.5-3.9	3.2	5.8	5.2	2.3
	<b>Inventories, Total</b> .....	1.2-1.5	1.3	1.2-1.4	1.3	0.2-0.4	0.3	0.6-1.1	0.9	(X)	(X)	(X)
50	Durable goods .....	1.6-1.8	1.7	1.6-1.8	1.7	0.2-0.4	0.4	0.8-1.1	1.0	(X)	(X)	(X)
501	Motor vehicles & auto. equip. ....	5.8-6.5	6.1	5.8-6.2	6.0	0.4-1.2	0.7	2.1-2.8	2.4	(X)	(X)	(X)
502	Furniture & home furnishings .....	8.1-9.5	8.5	8.2-8.6	8.4	0.9-2.9	1.1	4.7-8.1	5.9	(X)	(X)	(X)
503	Lumber & other construction mat. ....	5.3-6.9	6.2	5.4-6.8	6.0	0.7-1.0	0.9	2.6-4.1	3.4	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.2-6.9	5.6	4.9-6.7	5.7	0.7-2.2	1.2	3.0-4.4	3.6	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	3.7-5.8	5.0	4.6-5.3	5.0	0.5-1.2	1.0	2.2-3.3	2.6	(X)	(X)	(X)
506	Electrical goods .....	2.9-3.9	3.2	2.7-3.6	3.2	0.4-0.8	0.5	1.5-2.3	1.8	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.0-6.9	5.8	5.3-6.8	5.7	0.5-0.8	0.7	1.9-3.4	2.2	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.2-4.3	3.8	3.1-4.2	3.7	0.4-0.9	0.6	1.7-2.8	2.0	(X)	(X)	(X)
509	Miscellaneous durable goods .....	8.6-9.8	9.2	8.6-9.4	9.0	0.5-1.6	0.8	2.4-3.3	2.8	(X)	(X)	(X)
51	Nondurable goods .....	2.8-3.3	3.2	2.8-3.2	3.0	0.3-0.7	0.5	1.1-2.2	1.7	(X)	(X)	(X)
511	Paper & paper products .....	5.0-6.0	5.2	4.9-6.2	5.2	0.6-1.1	0.8	2.0-3.4	2.5	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	5.9-7.1	6.6	5.7-7.4	6.6	0.5-1.7	0.6	1.9-3.3	2.5	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.1-8.1	7.4	6.6-8.1	6.9	1.3-2.2	1.8	4.5-5.4	4.8	(X)	(X)	(X)
514	Groceries & related products .....	8.6-9.3	8.8	7.8-9.4	9.0	0.4-1.4	1.0	3.7-6.1	4.9	(X)	(X)	(X)
515	Farm-product raw materials .....	6.8-8.0	7.5	6.5-7.9	7.1	0.8-1.7	1.6	2.7-4.9	4.2	(X)	(X)	(X)
516	Chemicals & allied products .....	8.2-10.7	9.4	7.8-10.1	8.7	0.6-3.0	1.7	4.4-6.5	5.3	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.3-7.1	6.1	5.2-7.2	6.0	1.0-2.0	1.7	2.9-5.5	3.6	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	4.6-5.5	5.1	4.6-5.2	4.9	0.7-1.2	0.8	2.0-3.4	2.3	(X)	(X)	(X)
519	Misc. nondurable goods .....	7.8-8.9	8.4	7.9-8.8	8.4	0.9-2.3	1.3	2.7-4.5	3.6	(X)	(X)	(X)

\* Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for November 1989 through April 1990.

FIRST-CLASS MAIL  
POSTAGE & FEES PAID  
CENSUS  
PERMIT No. G-58

Official Business  
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Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989									1990				
		Apr. <sup>1</sup>	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. <sup>1</sup>	Apr. <sup>1</sup>	May
	<b>Sales,<sup>1</sup> Total</b> .....	.971	1.046	1.031	.953	1.043	.990	1.057	1.009	.960	.965	.912	1.042	.988	1.055
50	Durable goods .....	.979	1.045	1.048	.955	1.047	1.009	1.079	1.009	.940	.931	.894	1.041	.995	1.051
501	Motor vehicles & auto. equip. ...	1.011	1.067	1.053	.951	1.013	.925	1.084	1.011	.979	.933	.914	1.055	1.016	1.075
502	Furniture & home furnishings ...	.941	1.013	.982	.936	1.074	1.077	1.130	1.052	.916	.934	.912	1.003	.964	.994
503	Lumber & other construction mat. ....	.973	1.068	1.126	1.066	1.138	1.076	1.134	.960	.849	.851	.776	.949	1.002	1.062
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.895	.874	.970	.882	1.026	1.086	1.176	1.164	1.031	.912	.916	1.033	.928	.866
505	Metals & minerals, ex. petroleum	.986	.976	1.071	.906	1.070	1.022	1.017	.965	.919	.974	.924	1.108	1.016	1.004
506	Electrical goods .....	.931	.982	1.011	.963	1.063	1.036	1.109	1.053	.967	.944	.905	1.020	.947	.984
507	Hardware, plumbing & heating equipment .....	.962	1.063	1.088	.987	1.075	.987	1.102	.999	.906	.943	.870	1.001	.988	1.069
508	Machinery, equip. & supplies .....	.992	1.052	1.043	.939	1.050	1.017	1.043	.969	.958	.933	.911	1.059	1.014	1.061
509	Miscellaneous durable goods ...	.990	1.090	1.068	.950	.955	1.024	1.061	1.092	.918	.902	.871	1.017	1.034	1.103
51	<b>Nondurable goods</b> .....	.959	1.050	1.016	.947	1.034	.974	1.039	1.006	.983	.993	.928	1.041	.984	1.051
511	Paper & paper products .....	.943	.977	1.030	.935	1.076	.989	1.064	1.012	.955	1.005	.928	1.043	.966	.989
512	Drugs, drug proprietaries and druggists' sundries .....	.941	1.027	1.005	.943	1.037	.999	1.042	1.001	.969	1.050	.933	1.013	.966	1.033
513	Apparel, piece goods & notions .....	.849	.895	1.035	1.036	1.260	1.031	1.166	.999	.724	.925	.997	1.028	.880	.900
514	Groceries & related products ...	.943	1.060	1.020	.993	1.037	.963	1.003	1.040	1.012	.998	.919	.996	.954	1.069
515	Farm-product raw materials .....	.962	1.043	.944	.881	.964	.907	1.105	1.050	.984	1.114	.960	1.069	.985	1.065
516	Chemicals & allied products .....	1.002	1.082	1.122	.953	1.026	.983	1.039	.947	.875	.971	.914	1.055	1.044	1.082
517	Petroleum & petroleum products .....	.953	1.014	.987	.923	.993	1.004	.976	.964	1.043	1.044	.973	1.091	.984	1.008
518	Beer, wine, & distilled beverages .....	.906	1.095	1.121	.974	1.124	.978	1.017	1.064	1.109	.814	.799	.971	.937	1.110
519	Misc. nondurable goods .....	1.051	1.156	1.047	.908	1.011	.952	1.017	.962	.992	.892	.886	1.085	1.085	1.160
	<b>Inventories,<sup>1</sup> Total</b> .....	1.007	.991	.996	.994	.984	.994	1.009	1.004	1.000	1.007	1.009	1.008	1.007	.991
50	Durable goods .....	1.007	1.006	1.005	1.010	.999	1.001	1.004	.993	.983	.991	.998	1.004	1.007	1.006
501	Motor vehicles & auto. equip. ...	1.001	1.002	.999	.977	.960	1.020	.997	1.014	1.012	.990	1.017	1.013	1.001	1.002
502	Furniture & home furnishings ...	.997	1.012	1.007	1.019	1.018	1.028	.998	.966	.978	.995	.978	.991	.999	1.011
503	Lumber & other construction mat. ....	1.049	1.012	1.040	1.045	.981	.991	.985	.943	.970	.994	.983	1.025	1.052	1.012
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.993	.978	1.009	1.054	1.021	1.038	1.024	.986	.963	.965	.973	.992	.993	.977
505	Metals & minerals, ex. petroleum	1.017	1.011	1.042	1.020	.971	.974	.984	.968	1.005	1.008	.990	1.009	1.019	1.009
506	Electrical goods .....	.998	1.005	1.002	1.020	1.014	1.010	1.009	.998	.989	.975	.992	.993	.999	1.006
507	Hardware, plumbing & heating equipment .....	1.017	1.010	.999	1.009	1.011	.998	1.013	.974	.967	.985	.995	1.013	1.017	1.009
508	Machinery, equip. & supplies .....	1.016	1.007	1.001	1.007	1.001	.990	1.002	1.001	.976	.999	1.001	1.003	1.017	1.007
509	Miscellaneous durable goods ...	1.009	1.016	.991	1.017	1.044	1.013	1.007	1.005	.962	.958	.988	1.009	1.009	1.016
51	<b>Nondurable goods</b> .....	.996	.962	.984	.963	.957	.974	1.020	1.028	1.035	1.035	1.026	1.015	.995	.962
511	Paper & paper products .....	1.012	.988	.994	1.007	.985	.969	1.006	.984	.996	1.023	1.013	1.023	1.012	.986
512	Drugs, drug proprietaries and druggists' sundries .....	1.028	.964	.963	.968	.967	.993	1.019	.970	1.034	1.054	1.029	.999	1.030	.962
513	Apparel, piece goods & notions .....	.952	1.021	1.063	1.048	1.045	1.025	.958	.948	.992	1.007	.990	.960	.951	1.021
514	Groceries & related products ...	.981	.982	.983	.976	.953	1.000	1.050	1.030	1.001	1.003	.981	.980	.981	.981
515	Farm-product raw materials .....	.980	.808	.852	.839	.827	.886	1.130	1.154	1.164	1.185	1.138	1.020	.979	.811
516	Chemicals & allied products .....	1.032	1.032	1.038	1.004	1.011	.953	.962	.970	.971	1.008	1.009	1.014	1.032	1.034
517	Petroleum & petroleum products .....	.968	.960	.999	.991	.964	1.037	1.013	1.008	1.040	1.032	.988	1.024	.974	.955
518	Beer, wine, & distilled beverages .....	1.019	.996	1.017	.994	.978	1.010	1.064	1.054	.921	.948	.979	1.015	1.019	.995
519	Misc. nondurable goods .....	1.063	.967	.983	.919	.924	.944	.970	1.007	1.043	1.027	1.056	1.089	1.063	.965

<sup>1</sup>Revised

<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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

May 1990

BW90-05  
Issued July 1990

U.S. Department of Commerce  
BUREAU OF THE CENSUS

**Sales.** May 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$152.4 billion, up 0.6 percent ( $\pm 0.9$  percent) from the revised April level and were up 4.5 percent ( $\pm 1.8$  percent) from a year ago. The April preliminary estimate was revised upward by \$0.7 billion or about 0.5 percent. May sales of durable goods increased 1.4 percent ( $\pm 1.1$  percent) from the revised April level, and were 8.4 percent ( $\pm 2.0$  percent) above a year ago. Monthly increases in the sales of durable goods were as follows: motor vehicles and automotive equipment increased 6.3 percent to \$14.8 billion and metals and minerals, except petroleum were up 5.3 percent to \$7.9 billion. May sales of nondurable goods were down 0.2 percent ( $\pm 0.8$  percent) from April but were up 0.8 percent ( $\pm 2.8$  percent) from the May 1989 level. Monthly sales of beer, wine, and distilled beverages decreased 4.7 percent to \$3.5 billion. However, sales of chemicals and allied products increased 5.7 percent to \$3.4 billion for the same period.

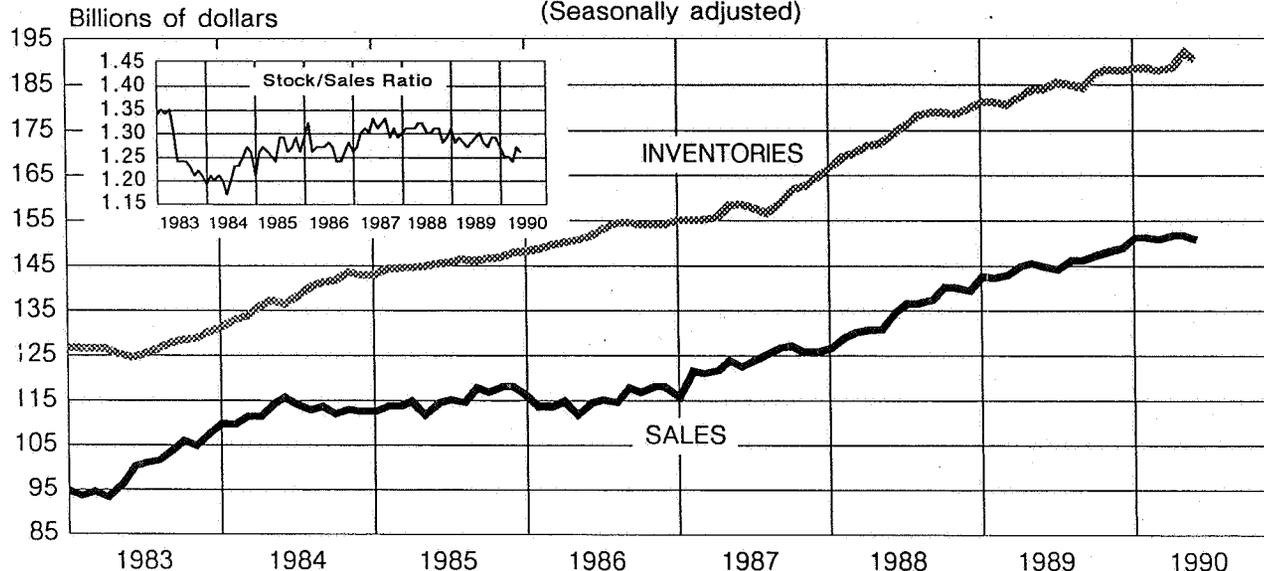
**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$193.3 billion at the end of May, up 1.2 percent ( $\pm 0.4$  percent) from the revised April level and were up 4.9 percent ( $\pm 1.5$  percent) from a year ago. The

April preliminary estimate was revised upward by \$2.0 billion or about 1.0 percent. Inventories of durable goods wholesalers increased 0.8 percent ( $\pm 0.6$  percent) from the April level and were 4.3 percent ( $\pm 1.6$  percent) above a year ago. Monthly increases in the inventories of durable goods wholesalers were as follows: machinery, equipment and supplies increased 1.9 percent to \$48.7 billion and metals and minerals, except petroleum were up 1.5 percent to \$10.1 billion. Inventories of nondurable goods wholesalers were up 2.1 percent ( $\pm 0.6$  percent) from the April level and were 6.1 percent ( $\pm 2.2$  percent) above May 1989. Monthly increases in the inventories of nondurable goods wholesalers were as follows: miscellaneous nondurable goods increased 7.1 percent to \$13.8 billion; farm-product raw materials were up 3.9 percent to \$8.4 billion; and drugs, drug proprietaries and druggists' sundries increased 1.8 percent to \$6.1 billion.

**Stock/Sales Ratio.** The May stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.27, up from the April ratio of 1.26. The year ago ratio was 1.26.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-1990  
(Seasonally adjusted)



Monthly Wholesale Trade for June is scheduled to be released August 8, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990					1989									
		Jan.	Feb.	Mar.	Apr.	May <sup>a</sup>	May <sup>f</sup>	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
	<b>Sales, Total</b> . . . . .	151,968	151,620	152,383	151,458	152,390	145,823	145,512	144,856	146,800	146,981	147,921	148,782	149,584		
50	Durable goods . . . . .	76,653	77,018	77,812	76,522	77,628	71,630	70,735	71,545	72,696	72,388	73,048	73,970	73,180		
501	Motor vehicles & auto. equip. . . . .	14,630	15,217	15,792	13,928	14,799	13,349	13,336	13,347	14,118	13,901	13,892	13,708	13,034		
502	Furniture & home furnishings . . . . .	2,282	2,316	2,298	2,428	2,546	2,456	2,444	2,495	2,575	2,569	2,407	2,488	2,405		
503	Lumber & other construction mat. . . . .	5,112	5,183	5,081	4,968	5,112	4,921	4,849	4,920	5,016	4,886	4,978	4,866	4,425		
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	1,893	1,985	2,162	2,069	2,144	1,991	2,019	1,939	2,027	2,155	2,076	2,023	2,036		
505	Metals & minerals, ex. petroleum . . . . .	7,330	7,277	7,050	7,520	7,917	7,448	7,239	7,111	7,447	6,325	7,527	7,584	6,827		
506	Electrical goods . . . . .	9,818	9,782	9,732	9,740	9,779	9,656	9,094	9,140	9,395	9,312	9,336	9,495	9,605		
507	Hardware, plumbing & heating equipment . . . . .	3,661	3,760	3,805	3,670	3,728	3,744	3,525	3,599	3,632	3,588	3,624	3,619	3,649		
508	Machinery, equip. & supplies . . . . .	23,355	23,181	23,705	23,810	23,606	21,697	21,825	22,112	22,116	22,628	22,589	22,974	22,974		
509	Miscellaneous durable goods . . . . .	8,572	8,317	7,987	8,391	7,997	6,368	6,404	6,882	6,370	7,024	6,619	7,497	8,225		
51	Nondurable goods . . . . .	75,315	74,602	74,771	74,936	74,762	74,193	74,777	73,311	74,104	74,593	74,873	74,812	76,404		
511	Paper & paper products . . . . .	4,370	4,241	4,349	4,357	4,458	4,213	4,179	4,321	4,262	4,348	4,366	4,320	4,348		
512	Drugs, drug proprietaries and druggists' sundries . . . . .	4,065	3,990	4,014	4,106	3,983	3,601	3,565	3,631	3,651	3,738	3,889	3,958	3,992		
513	Apparel, piece goods & notions . . . . .	5,128	5,308	5,434	5,283	5,234	4,592	4,850	4,919	4,742	4,953	4,816	5,163	5,493		
514	Groceries & related products . . . . .	19,432	19,841	20,231	20,125	19,983	20,652	20,611	20,386	20,232	20,285	20,846	19,999	19,581		
515	Farm-product raw materials . . . . .	11,070	10,369	10,372	10,768	10,486	11,074	10,961	10,370	11,056	10,555	10,759	10,971	10,465		
516	Chemicals & allied products . . . . .	3,176	3,284	3,336	3,175	3,356	2,999	3,083	3,140	3,037	3,083	3,093	3,204	3,304		
517	Petroleum & petroleum products . . . . .	12,670	11,956	11,579	12,029	12,047	12,616	12,628	11,987	12,099	12,274	12,030	11,800	13,674		
518	Beer, wine, & distilled beverages . . . . .	3,627	3,630	3,586	3,678	3,506	3,465	3,554	3,494	3,580	3,529	3,579	3,566	3,604		
519	Misc. nondurable goods . . . . .	11,777	11,983	11,870	11,415	11,709	10,981	11,346	11,063	11,445	11,788	11,542	11,811	11,943		
	<b>Inventories, Total</b> . . . . .	189,375	188,847	189,361	190,903	193,279	184,224	184,737	186,113	185,730	185,098	188,103	189,057	188,819		
50	Durable goods . . . . .	125,510	125,685	124,901	125,781	126,782	121,548	121,874	123,602	122,939	122,148	123,716	124,363	123,954		
501	Motor vehicles & auto. equip. . . . .	23,909	24,219	23,911	24,399	24,154	23,622	23,588	23,806	23,545	22,770	23,472	23,298	22,381		
502	Furniture & home furnishings . . . . .	4,123	4,142	4,429	4,364	4,386	4,436	4,505	4,537	4,531	4,565	4,570	4,510	4,496		
503	Lumber & other construction mat. . . . .	5,966	5,821	5,815	5,896	5,961	5,821	5,759	5,806	5,687	5,725	5,805	5,704	5,847		
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	4,452	4,392	4,387	4,353	4,360	4,310	4,504	4,437	4,408	4,460	4,473	4,580	4,589		
505	Metals & minerals, ex. petroleum . . . . .	10,548	10,299	10,075	9,956	10,110	10,306	10,585	11,034	10,691	10,811	10,741	10,879	10,693		
506	Electrical goods . . . . .	15,716	15,520	15,330	15,587	15,535	15,188	15,260	15,592	15,469	15,285	15,455	15,541	15,525		
507	Hardware, plumbing & heating equipment . . . . .	7,375	7,360	7,349	7,319	7,393	7,161	7,153	7,278	7,278	7,352	7,492	7,494	7,410		
508	Machinery, equip. & supplies . . . . .	46,811	46,977	47,066	47,775	48,691	44,357	44,515	45,208	45,084	45,016	45,351	45,777	46,506		
509	Miscellaneous durable goods . . . . .	6,610	6,955	6,539	6,132	6,192	6,349	6,005	5,904	6,246	6,164	6,357	6,580	6,507		
51	Nondurable goods . . . . .	63,865	63,162	64,460	65,122	66,497	62,676	62,863	62,511	62,791	62,950	64,387	64,694	64,775		
511	Paper & paper products . . . . .	4,077	3,998	4,011	4,039	4,096	4,149	4,156	4,234	4,171	4,230	4,249	4,175	4,175		
512	Drugs, drug proprietaries and druggists' sundries . . . . .	5,976	5,988	6,099	6,034	6,144	5,354	5,520	5,558	5,705	5,846	5,829	5,846	5,976		
513	Apparel, piece goods & notions . . . . .	9,697	9,776	10,184	10,414	10,324	8,715	8,839	9,010	9,219	9,244	9,391	9,428	9,807		
514	Groceries & related products . . . . .	13,129	12,674	13,335	13,362	13,391	13,001	12,960	12,585	12,681	12,499	13,335	13,527	13,593		
515	Farm-product raw materials . . . . .	7,743	7,559	7,830	8,102	8,420	7,270	6,886	6,797	6,921	6,778	7,354	7,685	7,831		
516	Chemicals & allied products . . . . .	2,581	2,544	2,689	2,626	2,639	2,601	2,704	2,690	2,600	2,771	2,575	2,523	2,560		
517	Petroleum & petroleum products . . . . .	3,666	3,849	3,862	3,827	3,820	4,145	4,351	4,028	4,066	4,058	4,060	4,038	3,762		
518	Beer, wine, & distilled beverages . . . . .	4,009	3,903	3,929	3,868	3,895	3,840	3,853	3,885	3,848	3,918	3,915	4,025	4,022		
519	Misc. nondurable goods . . . . .	12,987	12,871	12,521	12,850	13,768	13,601	13,594	13,724	13,580	13,606	13,679	13,447	13,160		
	<b>Stock/sales ratios, Total</b> . . . . .	1.25	1.25	1.24	1.26	1.27	1.26	1.27	1.28	1.27	1.26	1.27	1.27	1.26		
50	Durable goods . . . . .	1.64	1.63	1.61	1.64	1.63	1.70	1.72	1.73	1.69	1.69	1.69	1.68	1.69		
501	Motor vehicles & auto. equip. . . . .	1.63	1.59	1.51	1.75	1.63	1.77	1.77	1.78	1.67	1.64	1.69	1.70	1.72		
502	Furniture & home furnishings . . . . .	1.81	1.79	1.93	1.80	1.72	1.81	1.84	1.82	1.76	1.78	1.90	1.81	1.87		
503	Lumber & other construction mat. . . . .	1.17	1.12	1.14	1.19	1.17	1.18	1.19	1.18	1.13	1.17	1.17	1.17	1.32		
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	2.35	2.21	2.03	2.10	2.03	2.16	2.23	2.29	2.17	2.07	2.15	2.26	2.25		
505	Metals & minerals, ex. petroleum . . . . .	1.44	1.42	1.43	1.32	1.28	1.38	1.46	1.55	1.44	1.71	1.43	1.43	1.57		
506	Electrical goods . . . . .	1.60	1.59	1.58	1.60	1.59	1.57	1.68	1.71	1.65	1.64	1.66	1.64	1.62		
507	Hardware, plumbing & heating equipment . . . . .	2.01	1.96	1.93	1.99	1.98	1.91	2.03	2.02	2.00	2.05	2.07	2.07	2.03		
508	Machinery, equip. & supplies . . . . .	2.00	2.03	1.99	2.01	2.06	2.04	2.04	2.04	2.04	1.99	2.01	2.02	2.02		
509	Miscellaneous durable goods . . . . .	.77	.84	.82	.73	.77	1.00	.94	.86	.98	.88	.96	.88	.79		
51	Nondurable goods . . . . .	.85	.85	.86	.87	.89	.84	.84	.85	.85	.84	.86	.86	.85		
511	Paper & paper products . . . . .	.93	.94	.92	.93	.92	.98	.99	.98	.98	.97	.97	.97	.96		
512	Drugs, drug proprietaries and druggists' sundries . . . . .	1.47	1.50	1.52	1.47	1.54	1.49	1.55	1.53	1.56	1.56	1.50	1.48	1.50		
513	Apparel, piece goods & notions . . . . .	1.89	1.84	1.87	1.97	1.97	1.90	1.82	1.83	1.94	1.87	1.95	1.83	1.79		
514	Groceries & related products . . . . .	.68	.64	.66	.66	.67	.63	.63	.62	.63	.62	.64	.68	.69		
515	Farm-product raw materials . . . . .	.70	.73	.75	.75	.80	.66	.63	.66	.63	.64	.68	.70	.75		
516	Chemicals & allied products . . . . .	.81	.77	.81	.83	.79	.87	.88	.86	.86	.90	.83	.79	.77		
517	Petroleum & petroleum products . . . . .	.29	.32	.33	.32	.32	.33	.34	.34	.34	.33	.34	.34	.28		
518	Beer, wine, & distilled beverages . . . . .	1.11	1.08	1.10	1.05	1.11	1.11	1.08	1.11	1.07	1.10	1.11	1.12	1.12		
519	Misc. nondurable goods . . . . .	1.10	1.07	1.05	1.13	1.18	1.24	1.20	1.24	1.19	1.15	1.19	1.14	1.10		

<sup>a</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.

<sup>f</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990					1989					Total 5 mos.				
		Jan.	Feb.	Mar.	Apr.	May <sup>P</sup>	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1990	1989
	<b>Sales, Total</b> . . . . .	146,135	138,361	158,734	150,395	160,727	152,604	150,308	137,524	152,731	145,394	155,847	150,006	144,355	754,352	712,029
50	Durable goods . . . . .	71,238	69,070	80,795	76,808	81,607	74,643	74,245	68,081	76,020	73,080	78,451	74,608	69,247	379,518	346,228
501	Motor vehicles & auto. equip. . . . .	13,650	13,908	16,661	14,191	15,776	14,083	14,043	12,693	14,302	12,858	15,059	13,859	12,760	74,186	69,401
502	Furniture & home furnishings . . . . .	2,131	2,112	2,305	2,314	2,556	2,485	2,400	2,335	2,766	2,767	2,720	2,617	2,203	11,418	11,793
503	Lumber & other construction mat. . . . .	4,350	4,022	4,822	4,963	5,439	5,295	5,460	5,245	5,708	5,257	5,645	4,671	3,757	23,596	22,889
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	1,726	1,818	2,233	1,895	1,852	1,730	1,958	1,710	2,080	2,340	2,441	2,355	2,099	9,524	9,340
505	Metals & minerals, ex. petroleum . . . . .	7,139	6,724	7,811	7,550	8,558	7,783	7,753	6,443	7,988	6,464	7,655	7,319	6,274	37,782	36,129
506	Electrical goods . . . . .	9,268	8,853	9,927	9,253	9,671	9,540	9,194	8,802	9,987	9,647	10,354	9,998	9,288	46,972	43,958
507	Hardware, plumbing & heating equipment . . . . .	3,452	3,271	3,809	3,626	3,967	3,972	3,835	3,552	3,904	3,541	3,994	3,615	3,306	18,125	17,672
508	Machinery, equip. & supplies . . . . .	21,790	21,118	25,104	24,239	24,999	22,782	22,763	20,783	23,222	23,013	23,560	21,987	22,009	117,250	104,850
509	Miscellaneous durable goods . . . . .	7,732	7,244	8,123	8,777	8,789	6,973	6,839	6,083	7,193	7,023	8,187	7,551	7,551	40,665	30,196
51	Nondurable goods . . . . .	74,897	69,291	77,939	73,587	79,120	77,961	76,063	69,443	76,711	72,314	77,396	75,398	75,108	374,834	365,801
511	Paper & paper products . . . . .	4,392	3,936	4,536	4,161	4,431	4,120	4,304	4,040	4,586	4,300	4,645	4,372	4,152	21,456	20,342
512	Drugs, drug proprietaries and druggists' sundries . . . . .	4,268	3,723	4,066	4,003	4,075	3,673	3,583	3,424	3,786	3,734	4,052	3,962	3,868	20,135	17,559
513	Apparel, piece goods & notions . . . . .	4,743	5,292	5,586	4,670	4,653	4,073	5,020	5,096	5,975	5,107	5,616	5,158	3,977	24,944	22,040
514	Groceries & related products . . . . .	19,393	18,234	20,150	19,260	21,302	21,850	21,023	20,243	20,981	19,534	20,909	19,816	19,916	98,339	99,497
515	Farm-product raw materials . . . . .	12,332	9,954	11,088	10,639	11,126	11,484	10,347	9,136	10,658	9,573	11,889	11,520	10,298	55,139	58,780
516	Chemicals & allied products . . . . .	3,084	3,002	3,519	3,283	3,682	3,272	3,459	2,992	3,116	3,031	3,214	3,034	2,891	16,570	15,410
517	Petroleum & petroleum products . . . . .	13,228	11,633	12,633	11,740	12,420	13,058	12,464	11,064	12,014	12,323	11,741	11,375	14,262	61,654	59,818
518	Beer, wine, & distilled beverages . . . . .	2,952	2,900	3,482	3,457	3,825	3,759	3,984	3,403	4,024	3,490	3,592	3,816	3,997	16,616	15,895
519	Misc. nondurable goods . . . . .	10,505	10,617	12,879	12,374	13,606	12,672	11,879	10,045	11,571	11,222	11,738	11,362	11,847	59,981	56,460
	<b>Inventories, Total</b> . . . . .	190,390	190,475	190,909	192,411	191,994	183,089	184,498	184,895	182,299	183,868	189,404	189,822	189,042	(X)	(X)
50	Durable goods . . . . .	124,313	125,488	125,562	127,344	127,842	122,538	122,613	124,655	122,371	122,335	123,856	123,652	122,053	(X)	(X)
501	Motor vehicles & auto. equip. . . . .	23,670	24,631	24,222	24,545	24,251	23,693	23,564	23,258	22,603	23,225	23,402	23,624	22,650	(X)	(X)
502	Furniture & home furnishings . . . . .	4,102	4,051	4,389	4,342	4,430	4,480	4,537	4,623	4,613	4,693	4,561	4,357	4,397	(X)	(X)
503	Lumber & other construction mat. . . . .	5,930	5,722	5,960	6,203	6,068	5,920	5,989	6,067	5,579	5,673	5,718	5,379	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	4,296	4,273	4,352	4,305	4,282	4,228	4,545	4,677	4,501	4,629	4,580	4,516	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum . . . . .	10,832	10,198	10,166	10,115	10,302	10,502	11,300	11,256	10,381	10,530	10,569	10,531	10,746	(X)	(X)
506	Electrical goods . . . . .	15,323	15,396	15,223	15,603	15,644	15,277	15,291	15,904	15,686	15,438	15,594	15,510	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment . . . . .	7,264	7,323	7,445	7,421	7,452	7,225	7,146	7,343	7,358	7,337	7,589	7,299	7,165	(X)	(X)
508	Machinery, equip. & supplies . . . . .	46,764	47,024	47,207	48,635	49,178	44,801	44,560	45,524	45,129	44,566	45,442	45,823	45,390	(X)	(X)
509	Miscellaneous durable goods . . . . .	6,332	6,872	6,598	6,175	6,235	6,412	5,951	6,004	6,244	6,244	6,401	6,613	6,260	(X)	(X)
	Nondurable goods . . . . .	66,077	64,987	65,347	65,067	64,152	60,551	61,885	60,240	59,928	61,533	65,548	66,170	66,989	(X)	(X)
511	Paper & paper products . . . . .	4,171	4,050	4,103	4,087	4,063	4,116	4,131	4,264	4,108	4,099	4,274	4,108	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries . . . . .	6,299	6,162	6,093	6,209	5,880	5,140	5,316	5,380	5,517	5,805	5,940	5,671	6,179	(X)	(X)
513	Apparel, piece goods & notions . . . . .	9,765	9,678	9,777	9,883	10,561	8,907	9,396	9,443	9,634	9,475	8,997	8,938	9,729	(X)	(X)
514	Groceries & related products . . . . .	13,142	12,712	13,082	13,121	13,150	12,767	12,740	12,283	12,085	12,499	14,002	14,284	14,001	(X)	(X)
515	Farm-product raw materials . . . . .	9,176	8,602	7,987	7,867	6,963	6,005	5,867	5,703	5,724	6,095	8,310	8,869	9,115	(X)	(X)
516	Chemicals & allied products . . . . .	2,602	2,567	2,727	2,705	2,718	2,682	2,807	2,701	2,629	2,641	2,477	2,447	2,486	(X)	(X)
517	Petroleum & petroleum products . . . . .	3,783	3,803	3,955	3,716	3,694	3,992	4,347	3,992	3,920	4,208	4,113	4,070	3,912	(X)	(X)
518	Beer, wine, & distilled beverages . . . . .	3,801	3,821	3,988	3,922	3,864	3,817	3,918	3,862	3,763	3,957	4,166	4,242	3,704	(X)	(X)
519	Misc. nondurable goods . . . . .	13,338	13,592	13,635	13,557	13,259	13,125	13,363	12,612	12,548	12,844	13,269	13,541	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> . . . . .	1.30	1.38	1.20	1.28	1.19	1.20	1.23	1.34	1.19	1.26	1.22	1.27	1.31	(X)	(X)
50	Durable goods . . . . .	1.75	1.82	1.55	1.66	1.57	1.64	1.65	1.83	1.61	1.67	1.58	1.66	1.76	(X)	(X)
501	Motor vehicles & auto. equip. . . . .	1.73	1.77	1.45	1.73	1.54	1.68	1.68	1.83	1.58	1.81	1.55	1.70	1.78	(X)	(X)
502	Furniture & home furnishings . . . . .	1.92	1.92	1.90	1.88	1.73	1.80	1.89	1.98	1.67	1.70	1.68	1.66	2.00	(X)	(X)
503	Lumber & other construction mat. . . . .	1.36	1.42	1.24	1.25	1.12	1.12	1.10	1.16	.98	1.08	1.01	1.15	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	2.49	2.35	1.95	2.27	2.31	2.44	2.32	2.74	2.16	1.98	1.88	1.92	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum . . . . .	1.49	1.52	1.30	1.34	1.20	1.35	1.42	1.75	1.30	1.63	1.38	1.44	1.71	(X)	(X)
506	Electrical goods . . . . .	1.65	1.74	1.53	1.69	1.62	1.60	1.66	1.81	1.57	1.60	1.51	1.55	1.65	(X)	(X)
507	Hardware, plumbing & heating equipment . . . . .	2.10	2.24	1.95	2.05	1.88	1.82	1.86	2.07	1.88	2.07	1.90	2.02	2.17	(X)	(X)
508	Machinery, equip. & supplies . . . . .	2.15	2.23	1.88	2.01	1.97	1.97	1.96	2.19	1.94	1.94	1.93	2.08	2.06	(X)	(X)
509	Miscellaneous durable goods . . . . .	.82	.95	.81	.70	.71	.92	.87	.92	1.07	.87	.91	.81	.83	(X)	(X)
51	Nondurable goods . . . . .	.88	.94	.84	.88	.81	.78	.81	.87	.78	.85	.85	.88	.89	(X)	(X)
511	Paper & paper products . . . . .	.95	1.03	.90	.98	.92	1.00	.96	1.06	.90	.95	.92	.94	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries . . . . .	1.48	1.66	1.50	1.55	1.44	1.40	1.48	1.57	1.46	1.55	1.47	1.43	1.60	(X)	(X)
513	Apparel, piece goods & notions . . . . .	2.06	1.83	1.75	2.12	2.27	2.19	1.87	1.85	1.61	1.86	1.60	1.73	2.45	(X)	(X)
514	Groceries & related products . . . . .	.68	.70	.65	.68	.62	.58	.61	.61	.58	.64	.67	.69	.71	(X)	(X)
515	Farm-product raw materials . . . . .	.74	.86	.72	.74	.63	.52	.57	.62	.54	.63	.70	.77	.89	(X)	(X)
516	Chemicals & allied products . . . . .	.84	.86	.77	.82	.74	.82	.81	.90	.84	.87	.77	.81	.86	(X)	(X)
517	Petroleum & petroleum products . . . . .	.29	.33	.31	.32	.30	.31	.35	.36	.33	.34	.35	.36	.27	(X)	(X)
518	Beer, wine, & distilled beverages . . . . .	1.29	1.32	1.15	1.13	1.01	1.02	.98	1.13	.94	1.13	1.16	1.11	.93	(X)	(X)
519	Misc. nondurable goods . . . . .	1.27	1.28	1.06	1.10	.97	1.04	1.12								

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		May 1990 from Apr. 1990	May 1990 from May 1989	5 months 1990 from 5 months 1989	May 1990 from Apr. 1990	May 1990 from May 1989	May 1990 from Apr. 1990	May 1990 from May 1989	May 1990 from Apr. 1990	May 1990 from May 1989
	<b>Total</b> .....	+6.9	+5.3	+5.9	-.2	+4.9	+6	+4.5	+1.2	+4.9
50	Durable goods .....	+6.2	+9.3	+9.6	+4	+4.3	+1.4	+8.4	+8	+4.3
501	Motor vehicles & auto. equip. ....	+11.2	+12.0	+6.9	-1.2	+2.4	+6.3	+10.9	-1.0	+2.3
502	Furniture & home furnishings .....	+10.5	+2.9	-3.2	+2.0	-1.1	+4.9	+3.7	+5	-1.1
503	Lumber & other construction mat. ....	+9.6	+2.7	+3.1	-2.2	+2.5	+2.9	+3.9	+1.1	+2.4
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	-2.3	+7.1	+2.0	-.5	+1.3	+3.6	+7.7	+2	+1.2
505	Metals & minerals, ex. petroleum .....	+13.4	+10.0	+4.6	+1.8	-1.9	+5.3	+6.3	+1.5	-1.9
506	Electrical goods .....	+4.5	+1.4	+6.9	+3	+2.4	+4	+1.3	-.3	+2.3
507	Hardware, plumbing & heating equipment .....	+9.4	-.1	+2.6	+4	+3.1	+1.6	-.4	+1.0	+3.2
508	Machinery, equip. & supplies .....	+3.1	+9.7	+11.8	+1.1	+9.8	-.9	+8.8	+1.9	+9.8
509	Miscellaneous durable goods .....	+1	+26.0	+34.7	+1.0	-2.8	-4.7	+25.6	+1.0	-2.5
51	Nondurable goods .....	+7.5	+1.5	+2.5	-1.4	+5.9	-.2	+8	+2.1	+6.1
511	Paper & paper products .....	+6.5	+7.5	+5.5	-.6	-1.3	+2.3	+5.8	+1.4	-1.3
512	Drugs, drug proprietaries and druggists' sundries .....	+1.8	+10.9	+14.7	-5.3	+14.4	-3.0	+10.6	+1.8	+14.8
513	Apparel, piece goods & notions .....	-.4	+14.2	+13.2	+6.9	+18.6	-.9	+14.0	-.9	+18.5
514	Groceries & related products .....	+10.6	-2.5	-1.2	+2	+3.0	-.7	-3.2	+2	+3.0
515	Farm-product raw materials .....	+4.6	-3.1	-6.2	-11.5	+16.0	-2.6	-5.3	+3.9	+15.8
516	Chemicals & allied products .....	+12.2	+12.5	+7.5	+5	+1.3	+5.7	+11.9	+5	+1.5
517	Petroleum & petroleum products .....	+5.8	-4.9	+3.1	-.6	-7.5	+1	-4.5	-.2	-7.8
518	Beer, wine, & distilled beverages .....	+10.6	+1.8	+4.5	+1.2	+1.2	-4.7	+1.2	+7	+1.4
519	Misc. nondurable goods .....	+10.0	+7.4	+6.2	-2.2	+1.0	+2.6	+6.6	+7.1	+1.2

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+ 0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> . . . . .	1.4-1.9	1.8	1.5-1.8	1.7	0.5-0.7	0.5	0.9-1.3	1.1	1.6	1.5	0.8
50	Durable goods . . . . .	1.9-2.5	2.3	2.1-2.4	2.2	0.6-1.0	0.8	0.9-1.4	1.3	2.1	1.9	0.7
501	Motor vehicles & auto. equip. . . . .	4.4-6.4	5.5	5.0-6.0	5.4	0.8-1.3	1.2	2.2-3.9	2.8	5.5	5.2	2.3
502	Furniture & home furnishings . . . . .	7.0-15.6	9.0	6.8-8.7	8.0	2.8-10.5	3.4	7.1-15.9	8.1	7.5	6.3	5.8
503	Lumber & other construction mat. . . . .	5.2-5.9	5.2	4.8-5.9	5.2	1.1-2.5	2.1	2.6-4.1	3.7	5.0	5.1	2.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	5.1-7.6	6.4	5.0-7.5	5.3	1.9-5.9	2.8	3.5-7.2	5.9	4.9	5.4	4.1
505	Metals & minerals, ex. petroleum . . . . .	5.4-8.5	7.0	5.7-11.9	7.9	0.9-5.0	1.5	1.8-3.5	2.8	7.5	6.8	1.9
506	Electrical goods . . . . .	3.1-5.5	4.4	3.3-4.7	4.1	1.0-2.0	1.3	2.7-3.9	3.0	3.5	2.8	1.9
507	Hardware, plumbing & heating equipment . . . . .	6.8-10.0	9.0	7.1-9.8	8.4	1.3-3.1	2.2	3.3-4.9	4.0	8.9	7.4	3.3
508	Machinery, equip. & supplies . . . . .	3.5-4.6	4.2	3.5-4.4	3.8	1.4-1.8	1.7	2.3-3.6	3.0	3.5	3.1	2.0
509	Miscellaneous durable goods . . . . .	3.9-5.8	4.6	4.0-6.5	4.3	1.1-2.5	1.8	2.8-4.1	3.8	4.1	5.0	2.8
51	<b>Nondurable goods</b> . . . . .	2.8-3.2	2.9	2.7-3.1	2.8	0.5-0.8	0.7	1.5-1.8	1.7	2.8	2.5	1.3
511	Paper & paper products . . . . .	4.1-5.1	4.5	3.9-5.1	4.6	0.8-2.1	1.4	2.7-4.4	3.6	4.2	5.1	2.7
512	Drugs, drug proprietaries and druggists' sundries . . . . .	4.8-5.7	5.6	5.1-6.3	5.4	1.1-2.0	1.4	1.8-4.1	2.6	5.2	4.4	2.0
513	Apparel, piece goods & notions . . . . .	9.2-12.3	10.5	9.2-11.5	10.3	2.3-4.5	4.1	4.2-7.3	6.2	9.7	9.2	4.0
514	Groceries & related products . . . . .	4.1-5.2	4.7	3.9-5.3	4.7	0.9-1.9	1.4	1.4-3.4	1.8	4.4	5.0	1.3
515	Farm-product raw materials . . . . .	6.0-7.0	6.8	5.5-6.5	5.9	1.2-3.1	2.6	3.9-6.3	5.6	6.1	5.1	4.2
516	Chemicals & allied products . . . . .	8.0-10.8	10.2	8.1-10.1	9.1	1.3-3.5	2.4	4.6-7.3	6.1	9.5	5.8	5.1
517	Petroleum & petroleum products . . . . .	5.9-8.2	7.6	6.3-8.3	7.3	1.0-2.4	1.4	2.7-4.8	3.5	7.5	6.7	3.2
518	Beer, wine, & distilled beverages . . . . .	4.0-5.7	4.6	3.6-4.9	4.3	0.8-2.0	1.3	1.7-3.4	2.6	4.6	3.4	1.8
519	Misc. nondurable goods . . . . .	5.3-8.4	6.0	4.8-7.8	5.6	1.5-4.0	2.0	2.5-3.8	3.2	6.4	5.3	2.3
	<b>Inventories, Total</b> . . . . .	1.2-1.4	1.3	1.2-1.4	1.3	0.2-0.4	0.3	0.6-0.9	0.9	(X)	(X)	(X)
50	Durable goods . . . . .	1.6-1.8	1.7	1.6-1.8	1.7	0.2-0.4	0.3	0.8-1.0	0.9	(X)	(X)	(X)
501	Motor vehicles & auto. equip. . . . .	5.8-6.2	6.1	5.8-6.2	6.0	0.4-1.2	0.8	2.1-2.5	2.3	(X)	(X)	(X)
502	Furniture & home furnishings . . . . .	8.1-9.5	8.6	8.2-8.5	8.3	0.9-2.9	1.0	4.6-8.1	5.9	(X)	(X)	(X)
503	Lumber & other construction mat. . . . .	5.9-6.9	6.5	5.6-6.8	6.3	0.7-1.3	0.9	3.3-4.2	3.7	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	5.2-6.9	5.6	4.9-6.7	5.8	0.7-2.2	1.2	3.0-4.4	3.8	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum . . . . .	3.7-5.8	5.1	4.6-5.3	4.8	0.5-1.2	0.9	2.2-3.3	2.9	(X)	(X)	(X)
506	Electrical goods . . . . .	2.2-3.9	3.2	2.5-3.6	3.2	0.4-0.8	0.6	1.1-2.3	1.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment . . . . .	5.0-6.4	5.8	5.3-6.5	5.7	0.5-0.8	0.7	1.6-3.4	2.1	(X)	(X)	(X)
508	Machinery, equip. & supplies . . . . .	3.2-4.3	3.8	3.1-4.2	3.8	0.4-0.9	0.5	1.7-2.3	2.0	(X)	(X)	(X)
509	Miscellaneous durable goods . . . . .	9.0-9.8	9.3	8.9-9.4	9.1	0.6-1.6	0.9	2.0-3.3	2.7	(X)	(X)	(X)
51	<b>Nondurable goods</b> . . . . .	2.8-3.3	3.2	2.9-3.2	3.1	0.3-0.7	0.4	1.1-2.2	1.5	(X)	(X)	(X)
511	Paper & paper products . . . . .	5.0-5.4	5.2	4.9-5.5	5.2	0.6-1.2	0.9	2.0-3.4	2.4	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries . . . . .	5.9-7.1	6.6	5.7-7.4	6.5	0.5-1.7	0.7	1.9-3.3	2.4	(X)	(X)	(X)
513	Apparel, piece goods & notions . . . . .	6.1-8.1	6.9	6.6-8.1	6.9	1.3-2.2	1.8	4.5-5.4	4.9	(X)	(X)	(X)
514	Groceries & related products . . . . .	8.3-9.3	8.7	8.6-9.4	9.0	0.4-1.1	0.8	3.7-6.1	3.9	(X)	(X)	(X)
515	Farm-product raw materials . . . . .	7.1-8.4	7.7	6.5-8.0	7.2	0.8-1.7	1.6	2.7-4.9	3.5	(X)	(X)	(X)
516	Chemicals & allied products . . . . .	8.2-10.7	9.9	7.8-10.1	9.3	1.2-3.0	2.0	4.4-6.5	5.0	(X)	(X)	(X)
517	Petroleum & petroleum products . . . . .	5.3-7.1	6.0	5.2-6.5	5.9	1.2-2.0	1.7	2.9-4.8	3.6	(X)	(X)	(X)
518	Beer, wine, & distilled beverages . . . . .	4.6-5.5	4.9	4.6-5.2	4.8	0.7-1.2	0.8	2.0-3.4	2.6	(X)	(X)	(X)
519	Misc. nondurable goods . . . . .	7.8-9.3	8.4	7.9-8.8	8.4	0.9-2.3	1.3	2.7-4.5	3.6	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for December 1989 through May 1990.

FIRST-CLASS MAIL  
POSTAGE & FEES PAID  
CENSUS  
PERMIT No. G-58

Official Business  
Penalty for Private Use, \$300

Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989								1990					
		May <sup>r</sup>	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. <sup>r</sup>	May <sup>r</sup>	June
	<b>Sales,<sup>1</sup> Total</b> .....	1.045	1.031	.953	1.043	.990	1.057	1.009	.960	.965	.912	1.042	.988	1.054	1.004
50	Durable goods .....	1.045	1.048	.955	1.047	1.009	1.079	1.009	.940	.931	.894	1.041	.996	1.053	1.023
501	Motor vehicles & auto. equip. ...	1.055	1.053	.951	1.013	.925	1.084	1.011	.979	.933	.914	1.055	1.019	1.066	1.038
502	Furniture & home furnishings ...	1.012	.982	.936	1.074	1.077	1.130	1.052	.916	.934	.912	1.003	.953	1.004	.969
503	Lumber & other construction mat. ....	1.076	1.126	1.066	1.138	1.076	1.134	.960	.849	.851	.776	.949	.999	1.064	1.108
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.869	.970	.882	1.026	1.086	1.176	1.164	1.031	.912	.916	1.033	.916	.864	.936
505	Metals & minerals, ex. petroleum	1.045	1.071	.906	1.070	1.022	1.017	.965	.919	.974	.924	1.108	1.004	1.081	1.002
506	Electrical goods .....	.988	1.011	.963	1.063	1.036	1.109	1.053	.967	.944	.905	1.020	.950	.989	.995
507	Hardware, plumbing & heating equipment .....	1.061	1.088	.987	1.075	.987	1.102	.999	.906	.943	.870	1.001	.988	1.064	1.057
508	Machinery, equip. & supplies ...	1.050	1.043	.939	1.050	1.017	1.043	.969	.958	.933	.911	1.059	1.018	1.059	1.013
509	Miscellaneous durable goods ...	1.095	1.068	.950	.955	1.024	1.061	1.092	.918	.902	.871	1.017	1.046	1.099	1.013
51	<b>Nondurable goods</b> .....	1.054	1.016	.947	1.034	.974	1.039	1.006	.983	.993	.928	1.041	.984	1.057	.989
511	Paper & paper products .....	.978	1.030	.935	1.076	.989	1.064	1.012	.955	1.005	.928	1.043	.955	.994	.988
512	Drugs, drug proprietaries and druggists' sundries .....	1.020	1.005	.943	1.037	.999	1.042	1.001	.969	1.050	.933	1.013	.975	1.023	.970
513	Apparel, piece goods & notions	.887	1.035	1.036	1.260	1.031	1.166	.999	.724	.925	.997	1.028	.884	.889	.997
514	Groceries & related products ...	1.058	1.020	.993	1.037	.963	1.003	1.040	1.012	.998	.919	.996	.957	1.066	1.001
515	Farm-product raw materials ...	1.037	.944	.881	.964	.907	1.105	1.050	.984	1.114	.960	1.069	.988	1.061	.909
516	Chemicals & allied products ...	1.091	1.122	.953	1.026	.983	1.039	.947	.875	.971	.914	1.055	1.034	1.097	1.087
517	Petroleum & petroleum products	1.035	.987	.923	.993	1.004	.976	.964	1.043	1.044	.973	1.091	.976	1.031	.972
518	Beer, wine, & distilled beverages	1.085	1.121	.974	1.124	.978	1.017	1.064	1.109	.814	.799	.971	.940	1.091	1.072
519	Misc. nondurable goods .....	1.154	1.047	.908	1.011	.952	1.017	.962	.992	.892	.886	1.085	1.084	1.162	1.002
	<b>Inventories,<sup>1</sup> Total</b> .....	.993	.996	.994	.984	.994	1.009	1.004	1.000	1.007	1.009	1.008	1.007	.993	.996
50	Durable goods .....	1.007	1.005	1.010	.999	1.001	1.004	.993	.983	.991	.998	1.004	1.011	1.007	1.004
501	Motor vehicles & auto. equip. ...	1.003	.999	.977	.960	1.020	.997	1.014	1.012	.990	1.017	1.013	1.006	1.004	1.002
502	Furniture & home furnishings ...	1.010	1.007	1.019	1.018	1.028	.998	.966	.978	.995	.978	.991	.995	1.010	1.007
503	Lumber & other construction mat. ....	1.017	1.040	1.045	.981	.991	.985	.943	.970	.994	.983	1.025	1.052	1.018	1.039
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.981	1.009	1.054	1.021	1.038	1.024	.986	.963	.965	.973	.992	.989	.982	1.015
505	Metals & minerals, ex. petroleum	1.019	1.042	1.020	.971	.974	.984	.968	1.005	1.008	.990	1.009	1.016	1.019	1.038
506	Electrical goods .....	1.006	1.002	1.020	1.014	1.010	1.009	.998	.989	.975	.992	.993	1.001	1.007	1.001
507	Hardware, plumbing & heating equipment .....	1.009	.999	1.009	1.011	.998	1.013	.974	.967	.985	.995	1.013	1.014	1.008	.999
508	Machinery, equip. & supplies ...	1.010	1.001	1.007	1.001	.990	1.002	1.001	.976	.999	1.001	1.003	1.018	1.010	1.001
509	Miscellaneous durable goods ...	1.010	.991	1.017	1.044	1.013	1.007	1.005	.962	.958	.988	1.009	1.007	1.007	.990
51	<b>Nondurable goods</b> .....	.962	.984	.963	.957	.974	1.020	1.028	1.035	1.035	1.026	1.015	.997	.962	.984
511	Paper & paper products .....	.992	.994	1.007	.985	.969	1.006	.984	.996	1.023	1.013	1.023	1.012	.992	.992
512	Drugs, drug proprietaries and druggists' sundries .....	.960	.963	.968	.967	.993	1.019	.970	1.034	1.054	1.029	.999	1.029	.957	.963
513	Apparel, piece goods & notions	1.022	1.063	1.048	1.045	1.025	.958	.948	.992	1.007	.990	.960	.949	1.023	1.065
514	Groceries & related products ...	.982	.983	.976	.953	1.000	1.050	1.056	1.030	1.001	1.003	.981	.982	.982	.981
515	Farm-product raw materials ...	.826	.852	.839	.827	.886	1.130	1.154	1.164	1.185	1.138	1.020	.971	.827	.853
516	Chemicals & allied products ...	1.031	1.038	1.004	1.011	.953	.962	.970	.971	1.008	1.009	1.014	1.030	1.030	1.041
517	Petroleum & petroleum products	.963	.999	.991	.964	1.037	1.013	1.008	1.040	1.032	.988	1.024	.971	.967	.996
518	Beer, wine, & distilled beverages	.994	1.017	.994	.978	1.010	1.064	1.054	.921	.948	.979	1.015	1.014	.992	1.015
519	Misc. nondurable goods .....	.965	.983	.919	.924	.944	.970	1.007	1.043	1.027	1.056	1.089	1.055	.963	.984

<sup>r</sup>Revised

<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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

U.S. Department of Commerce  
BUREAU OF THE CENSUS

June 1990

BW90-06  
Issued August 1990

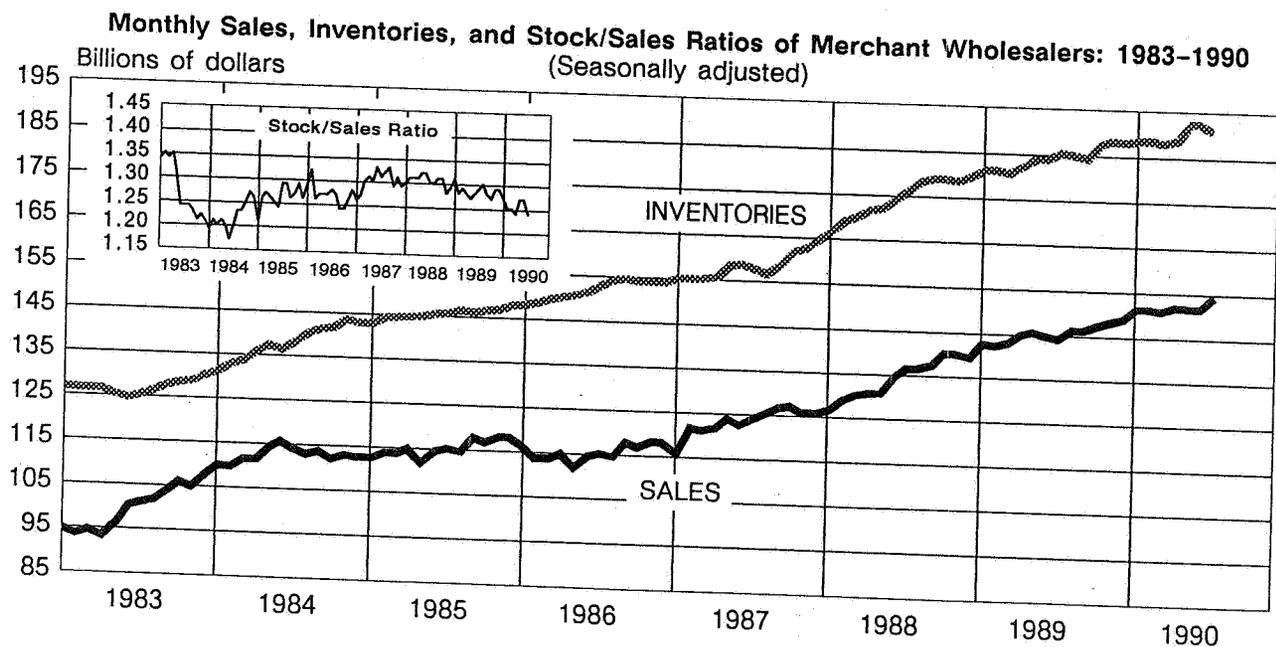
**Sales.** June 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$154.9 billion, up 1.7 percent ( $\pm 0.8$  percent) from the revised May level and were up 6.8 percent ( $\pm 1.6$  percent) from a year ago. The May preliminary estimate was revised downward by \$0.09 billion or about 0.06 percent. June sales of durable goods increased 1.8 percent ( $\pm 1.4$  percent) from the revised May level, and were 12.0 percent ( $\pm 2.2$  percent) above a year ago. June sales of nondurable goods were up 1.7 percent ( $\pm 1.0$  percent) from May and were up 1.9 percent ( $\pm 1.8$  percent) from the June 1989 level. Monthly increases in the sales of nondurable goods were as follows: farm-product raw materials increased 5.0 percent to \$11.1 billion and miscellaneous nondurable goods were up 4.3 percent to \$12.2 billion.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$191.6 billion at the end of June, down 0.8 percent ( $\pm 0.5$  percent) from the revised May level but were up 3.5 percent ( $\pm 1.2$  percent) from a year ago. The May preliminary estimate was revised downward by

\$0.08 billion or about 0.04 percent. Inventories of durable goods wholesalers decreased 0.4 percent ( $\pm 0.6$  percent) from the May level but were 3.5 percent ( $\pm 1.6$  percent) above a year ago. Monthly decreases in the inventories of durable goods wholesalers were as follows: lumber and other construction materials decreased 2.9 percent to \$5.6 billion and motor vehicles and automotive equipment were down 2.2 percent to \$23.5 billion. However, inventories of electrical goods increased 1.9 percent to \$15.9 billion for the same period. Inventories of nondurable goods wholesalers were down 1.6 percent ( $\pm 0.6$  percent) from the May level but were 3.5 percent ( $\pm 2.0$  percent) above June 1989. Monthly decreases in the inventories of nondurable goods wholesalers were as follows: farm-product raw materials were down 5.6 percent to \$7.8 billion and petroleum and petroleum products decreased 3.3 percent to \$3.7 billion.

**Stock/Sales Ratio.** The June stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.24, down from the May ratio of 1.27. The year ago ratio was 1.28.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.



Monthly Wholesale Trade for July is scheduled to be released September 7, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

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**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990						1989						
		Jan.	Feb.	Mar.	Apr.	May	June <sup>P</sup>	June <sup>r</sup>	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<b>Sales, Total</b> .....	151,968	151,620	152,383	151,458	152,302	154,939	145,064	144,856	146,800	146,981	147,921	148,782	149,584
50	Durable goods .....	76,653	77,018	77,612	76,522	77,768	79,149	70,698	71,545	72,696	72,388	73,048	73,970	73,180
501	Motor vehicles & auto. equip. ....	14,630	15,217	15,792	13,926	14,676	14,901	13,362	13,347	14,118	13,901	13,892	13,708	13,034
502	Furniture & home furnishings .....	2,282	2,316	2,298	2,428	2,553	2,644	2,429	2,495	2,575	2,569	2,407	2,488	2,405
503	Lumber & other construction mat. ....	5,112	5,183	5,081	4,968	5,014	4,947	4,862	4,920	5,016	4,886	4,978	4,866	4,425
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,893	1,985	2,162	2,069	2,189	2,151	2,031	1,939	2,027	2,155	2,076	2,023	2,036
505	Metals & minerals, ex. petroleum .....	7,330	7,277	7,050	7,520	8,233	8,810	7,185	7,111	7,447	6,325	7,527	7,584	6,827
506	Electrical goods .....	9,818	9,782	9,732	9,740	9,746	9,628	9,130	9,140	9,395	9,312	9,336	9,495	9,605
507	Hardware, plumbing & heating equipment .....	3,681	3,760	3,805	3,670	3,716	3,797	3,509	3,599	3,632	3,588	3,624	3,619	3,649
508	Machinery, equip. & supplies .....	23,355	23,181	23,705	23,810	23,510	24,265	21,762	22,112	22,116	22,628	22,589	22,690	22,974
509	Miscellaneous durable goods .....	8,572	8,317	7,987	8,391	8,129	8,006	6,428	6,882	6,370	7,024	6,619	7,497	8,225
51	Nondurable goods .....	75,315	74,602	74,771	74,936	74,536	75,790	74,366	73,311	74,104	74,593	74,873	74,812	76,404
511	Paper & paper products .....	4,370	4,241	4,349	4,357	4,366	4,296	4,199	4,321	4,262	4,348	4,366	4,320	4,348
512	Drugs, drug proprietaries and druggists' sundries .....	4,065	3,990	4,014	4,106	3,932	3,976	3,565	3,631	3,651	3,738	3,889	3,958	3,992
513	Apparel, piece goods & notions .....	5,128	5,308	5,434	5,283	5,146	5,395	4,778	4,919	4,742	4,953	4,816	5,163	5,493
514	Groceries & related products .....	19,432	19,841	20,231	20,125	19,916	20,182	20,591	20,386	20,232	20,285	20,846	19,999	19,581
515	Farm-product raw materials .....	11,070	10,369	10,372	10,768	10,580	11,107	10,787	10,370	11,056	10,555	10,759	10,971	10,465
516	Chemicals & allied products .....	3,176	3,284	3,336	3,175	3,253	3,105	3,083	3,140	3,037	3,083	3,093	3,204	3,304
517	Petroleum & petroleum products .....	12,670	11,956	11,579	12,029	12,145	12,001	12,539	11,987	12,099	12,274	12,030	11,800	13,674
518	Beer, wine, & distilled beverages .....	3,627	3,630	3,586	3,678	3,537	3,563	3,554	3,494	3,580	3,569	3,532	3,586	3,604
519	Misc. nondurable goods .....	11,777	11,983	11,870	11,415	11,681	12,165	11,292	11,063	11,445	11,788	11,542	11,811	11,943
	<b>Inventories, Total</b> .....	189,375	188,847	189,361	190,903	193,201	191,643	185,146	186,113	185,730	185,098	188,103	189,057	188,819
50	Durable goods .....	125,510	125,685	124,901	125,781	126,998	126,478	122,187	123,602	122,939	122,148	123,716	124,363	123,954
501	Motor vehicles & auto. equip. ....	23,909	24,219	23,911	24,399	24,018	23,490	23,754	23,806	23,545	22,770	23,472	23,298	22,381
502	Furniture & home furnishings .....	4,123	4,142	4,429	4,364	4,338	4,294	4,505	4,537	4,531	4,585	4,570	4,510	4,496
503	Lumber & other construction mat. ....	5,966	5,821	5,815	5,896	5,750	5,683	5,803	5,806	5,687	5,725	5,805	5,704	5,847
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,452	4,392	4,387	4,353	4,407	4,309	4,482	4,437	4,408	4,460	4,473	4,580	4,589
505	Metals & minerals, ex. petroleum .....	10,548	10,299	10,075	9,966	10,064	9,820	10,657	11,034	10,691	10,811	10,741	10,879	10,693
506	Electrical goods .....	15,716	15,520	15,330	15,587	15,598	15,888	15,230	15,592	15,469	15,285	15,455	15,541	15,525
507	Hardware, plumbing & heating equipment .....	7,375	7,380	7,349	7,319	7,377	7,486	7,146	7,278	7,278	7,352	7,492	7,494	7,410
508	Machinery, equip. & supplies .....	46,811	46,977	47,068	47,775	49,165	49,258	44,605	45,208	45,084	45,016	45,351	45,777	46,506
509	Miscellaneous durable goods .....	6,610	6,955	6,539	6,132	6,281	6,350	6,005	5,904	6,246	6,164	6,357	6,580	6,507
51	Nondurable goods .....	63,865	63,162	64,460	65,122	66,203	65,165	62,959	62,511	62,791	62,950	64,387	64,694	64,865
511	Paper & paper products .....	4,077	3,998	4,011	4,039	4,049	4,053	4,164	4,234	4,171	4,230	4,249	4,175	4,154
512	Drugs, drug proprietaries and druggists' sundries .....	5,976	5,988	6,039	6,034	6,088	6,124	5,520	5,558	5,705	5,846	5,829	5,846	5,976
513	Apparel, piece goods & notions .....	9,697	9,776	10,184	10,414	10,365	10,329	8,814	9,010	9,219	9,244	9,391	9,428	9,807
514	Groceries & related products .....	13,129	12,674	13,335	13,362	13,418	13,286	13,027	12,585	12,681	12,499	13,335	13,527	13,593
515	Farm-product raw materials .....	7,743	7,559	7,830	8,102	8,229	7,770	7,026	6,797	6,921	6,778	7,354	7,685	7,831
516	Chemicals & allied products .....	2,581	2,544	2,689	2,626	2,598	2,582	2,696	2,690	2,771	2,600	2,575	2,523	2,560
517	Petroleum & petroleum products .....	3,666	3,849	3,862	3,827	3,814	3,689	4,356	4,028	4,066	4,058	4,060	4,038	3,762
518	Beer, wine, & distilled beverages .....	4,009	3,903	3,929	3,868	3,882	3,863	3,872	3,885	3,848	3,918	3,915	4,025	4,022
519	Misc. nondurable goods .....	12,987	12,871	12,521	12,850	13,762	13,469	13,484	13,724	13,580	13,506	13,679	13,447	13,160
	<b>Stock/sales ratios, Total</b> .....	1.25	1.25	1.24	1.26	1.27	1.24	1.28	1.28	1.27	1.26	1.27	1.27	1.26
50	Durable goods .....	1.64	1.63	1.61	1.64	1.63	1.60	1.73	1.73	1.69	1.69	1.69	1.68	1.69
501	Motor vehicles & auto. equip. ....	1.63	1.59	1.51	1.75	1.64	1.58	1.78	1.78	1.67	1.64	1.69	1.70	1.72
502	Furniture & home furnishings .....	1.81	1.79	1.93	1.80	1.70	1.62	1.85	1.82	1.76	1.78	1.90	1.81	1.87
503	Lumber & other construction mat. ....	1.17	1.12	1.14	1.19	1.15	1.13	1.19	1.18	1.13	1.17	1.17	1.17	1.32
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.35	2.21	2.03	2.10	2.01	2.00	2.21	2.29	2.17	2.07	2.15	2.26	2.25
505	Metals & minerals, ex. petroleum .....	1.44	1.42	1.43	1.32	1.22	1.11	1.48	1.55	1.44	1.71	1.43	1.43	1.57
506	Electrical goods .....	1.60	1.59	1.58	1.60	1.60	1.65	1.67	1.71	1.65	1.64	1.66	1.64	1.62
507	Hardware, plumbing & heating equipment .....	2.01	1.96	1.93	1.99	1.99	1.97	2.04	2.02	2.00	2.05	2.07	2.07	2.03
508	Machinery, equip. & supplies .....	2.00	2.03	1.99	2.01	2.09	2.03	2.05	2.04	1.99	1.99	2.01	2.02	2.02
509	Miscellaneous durable goods .....	.77	.84	.82	.73	.77	.79	.93	.86	.98	.88	.96	.88	.79
51	Nondurable goods .....	.85	.85	.86	.87	.89	.86	.85	.85	.85	.84	.86	.86	.85
511	Paper & paper products .....	.93	.94	.92	.93	.93	.94	.99	.98	.98	.97	.97	.97	.96
512	Drugs, drug proprietaries and druggists' sundries .....	1.47	1.50	1.52	1.47	1.55	1.54	1.55	1.53	1.56	1.56	1.50	1.48	1.50
513	Apparel, piece goods & notions .....	1.89	1.84	1.87	1.97	2.01	1.91	1.85	1.83	1.94	1.87	1.95	1.83	1.79
514	Groceries & related products .....	.68	.64	.66	.66	.67	.66	.63	.62	.63	.62	.64	.68	.69
515	Farm-product raw materials .....	.70	.73	.75	.75	.78	.70	.95	.66	.63	.64	.68	.70	.75
516	Chemicals & allied products .....	.81	.77	.81	.83	.80	.83	.87	.86	.86	.90	.83	.79	.77
517	Petroleum & petroleum products .....	.29	.32	.33	.32	.31	.31	.35	.34	.34	.33	.34	.34	.28
518	Beer, wine, & distilled beverages .....	1.11	1.08	1.10	1.05	1.10	1.08	1.09	1.11	1.07	1.10	1.11	1.12	1.12
519	Misc. nondurable goods .....	1.10	1.07	1.05	1.13	1.18	1.11	1.19	1.24	1.19	1.15	1.19	1.14	1.10

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
<sup>r</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990						1989						Total 6 mos.		
		Jan.	Feb.	Mar.	Apr.	May	June <sup>P</sup>	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1990	1989
	<b>Sales, Total</b> .....	146,135	138,361	158,734	150,395	160,026	156,099	150,308	137,524	152,731	145,394	155,847	150,006	144,355	909,750	862,337
50	Durable goods .....	71,238	69,070	80,795	76,808	81,467	80,758	74,245	68,081	76,020	73,080	78,451	74,608	69,247	460,136	420,473
501	Motor vehicles & auto, equip. ....	13,650	13,908	16,661	14,191	15,689	15,378	14,043	12,693	14,302	12,858	15,059	13,859	12,760	89,477	83,444
502	Furniture & home furnishings .....	2,131	2,112	2,305	2,314	2,540	2,575	2,400	2,335	2,766	2,767	2,720	2,617	2,203	13,977	14,193
503	Lumber & other construction mat. ....	4,350	4,022	4,822	4,963	5,325	5,461	5,460	5,245	5,708	5,257	5,645	4,671	3,757	28,943	28,349
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,726	1,818	2,233	1,895	1,902	1,996	1,958	1,710	2,080	2,340	2,441	2,355	2,099	11,570	11,298
505	Metals & minerals, ex. petroleum .....	7,139	6,724	7,811	7,550	8,628	9,101	7,753	6,443	7,968	6,464	7,655	7,319	6,274	46,953	43,882
506	Electrical goods .....	9,268	8,853	9,927	9,253	9,658	9,551	9,194	8,802	9,987	9,647	10,354	9,998	9,288	56,510	53,152
507	Hardware, plumbing & heating equipment .....	3,452	3,271	3,809	3,626	3,946	4,021	3,835	3,552	3,904	3,541	3,994	3,615	3,306	22,125	21,507
508	Machinery, equip. & supplies .....	21,790	21,118	25,104	24,239	24,780	24,677	22,763	20,763	23,222	23,013	23,560	21,987	22,009	141,708	127,613
509	Miscellaneous durable goods .....	7,732	7,244	8,123	8,777	8,999	7,998	6,839	6,538	6,083	7,193	7,023	8,187	7,551	48,873	37,035
51	Nondurable goods .....	74,897	69,291	77,939	73,587	78,559	75,341	76,063	69,443	76,711	72,314	77,396	75,398	75,108	449,614	441,864
511	Paper & paper products .....	4,392	3,936	4,536	4,161	4,331	4,214	4,304	4,040	4,586	4,300	4,645	4,372	4,152	25,570	24,646
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,723	4,066	4,003	4,030	3,869	3,583	3,424	3,786	3,734	4,052	3,962	3,868	23,959	21,142
513	Apparel, piece goods & notions .....	4,743	5,292	5,586	4,670	4,513	5,449	5,020	5,096	5,975	5,107	5,616	5,158	3,977	30,253	27,060
514	Groceries & related products .....	19,393	18,234	20,150	19,260	21,230	20,202	21,023	20,243	20,981	19,534	20,909	20,799	19,816	118,469	120,520
515	Farm-product raw materials .....	12,332	9,954	11,088	10,639	11,151	10,274	10,347	9,136	10,658	9,573	11,889	11,520	10,298	65,438	69,127
516	Chemicals & allied products .....	3,084	3,002	3,519	3,283	3,559	3,357	3,459	2,992	3,116	3,031	3,214	3,034	2,891	19,804	18,869
517	Petroleum & petroleum products .....	13,228	11,633	12,633	11,740	12,485	11,857	12,464	11,064	12,014	12,323	11,741	11,375	14,262	73,576	72,282
518	Beer, wine, & distilled beverages .....	2,952	2,900	3,482	3,457	3,873	3,820	3,984	3,403	4,024	3,490	3,592	3,816	3,997	20,484	19,679
519	Misc. nondurable goods .....	10,505	10,617	12,879	12,374	13,387	12,299	11,879	10,045	11,571	11,222	11,738	11,362	11,847	72,061	68,339
	<b>Inventories, Total</b> .....	190,390	190,475	190,909	192,411	192,015	190,815	184,498	184,895	182,299	183,868	189,404	189,822	189,042	(X)	(X)
50	Durable goods .....	124,313	125,488	125,562	127,344	128,124	126,762	122,613	124,655	122,371	122,335	123,856	123,652	122,053	(X)	(X)
501	Motor vehicles & auto, equip. ....	23,670	24,631	24,222	24,545	24,210	23,255	23,564	23,258	22,603	23,225	23,402	23,624	22,650	(X)	(X)
502	Furniture & home furnishings .....	4,102	4,051	4,369	4,342	4,373	4,337	4,537	4,623	4,613	4,693	4,561	4,367	4,397	(X)	(X)
503	Lumber & other construction mat. ....	5,930	5,722	5,960	6,203	5,842	5,745	5,989	6,067	5,579	5,673	5,718	5,379	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,296	4,273	4,352	4,305	4,332	4,378	4,545	4,677	4,501	4,629	4,580	4,516	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum .....	10,632	10,196	10,166	10,115	10,255	10,164	11,030	11,255	10,381	10,530	10,569	10,631	10,746	(X)	(X)
506	Electrical goods .....	15,323	15,396	15,223	15,603	15,660	15,952	15,291	15,904	15,686	15,438	15,594	15,510	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment .....	7,264	7,323	7,445	7,421	7,421	7,479	7,146	7,343	7,358	7,337	7,589	7,299	7,165	(X)	(X)
508	Machinery, equip. & supplies .....	46,764	47,024	47,207	49,635	49,706	49,159	44,560	45,524	45,129	44,566	45,442	45,823	45,390	(X)	(X)
509	Miscellaneous durable goods .....	6,332	6,872	6,598	6,175	6,325	6,293	5,951	6,004	6,521	6,244	6,401	6,613	6,260	(X)	(X)
51	Nondurable goods .....	66,077	64,987	65,347	65,067	63,891	64,053	61,885	60,240	59,928	61,533	65,548	66,170	66,989	(X)	(X)
511	Paper & paper products .....	4,171	4,050	4,103	4,087	3,992	4,017	4,131	4,264	4,108	4,099	4,274	4,108	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,162	6,093	6,209	5,818	5,891	5,316	5,380	5,517	5,805	5,940	5,671	6,179	(X)	(X)
513	Apparel, piece goods & notions .....	9,765	9,678	9,777	9,883	10,614	11,031	9,396	9,443	9,634	9,475	8,997	8,938	9,729	(X)	(X)
514	Groceries & related products .....	13,142	12,712	13,082	13,121	13,190	12,967	12,740	12,283	12,085	12,499	14,002	14,284	14,001	(X)	(X)
515	Farm-product raw materials .....	9,176	8,602	7,987	7,867	6,797	6,472	5,867	5,703	5,724	6,005	8,310	8,869	9,115	(X)	(X)
516	Chemicals & allied products .....	2,602	2,567	2,727	2,705	2,673	2,696	2,807	2,701	2,629	2,641	2,477	2,447	2,486	(X)	(X)
517	Petroleum & petroleum products .....	3,783	3,803	3,955	3,716	3,707	3,689	4,347	3,992	3,920	4,208	4,113	4,070	3,912	(X)	(X)
518	Beer, wine, & distilled beverages .....	3,801	3,821	3,988	3,922	3,847	3,902	3,918	3,862	3,763	3,957	4,166	4,242	3,704	(X)	(X)
519	Misc. nondurable goods .....	13,338	13,592	13,635	13,557	13,253	13,388	13,363	12,612	12,548	12,844	13,269	13,541	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> .....	1.30	1.38	1.20	1.28	1.20	1.22	1.23	1.34	1.19	1.26	1.22	1.27	1.31	(X)	(X)
50	Durable goods .....	1.75	1.82	1.55	1.66	1.57	1.57	1.65	1.83	1.61	1.67	1.58	1.66	1.76	(X)	(X)
501	Motor vehicles & auto, equip. ....	1.73	1.77	1.45	1.73	1.54	1.51	1.68	1.83	1.58	1.81	1.55	1.70	1.78	(X)	(X)
502	Furniture & home furnishings .....	1.92	1.92	1.90	1.88	1.72	1.88	1.89	1.98	1.67	1.70	1.68	1.66	2.00	(X)	(X)
503	Lumber & other construction mat. ....	1.36	1.42	1.24	1.25	1.10	1.05	1.10	1.16	.98	1.08	1.01	1.15	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.49	2.35	1.95	2.27	2.28	2.19	2.32	2.74	2.16	1.98	1.88	1.92	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum .....	1.49	1.52	1.30	1.34	1.19	1.12	1.42	1.75	1.30	1.63	1.28	1.44	1.71	(X)	(X)
506	Electrical goods .....	1.65	1.74	1.53	1.69	1.62	1.67	1.66	1.81	1.57	1.60	1.51	1.55	1.65	(X)	(X)
507	Hardware, plumbing & heating equipment .....	2.10	2.24	1.95	2.05	1.88	1.86	1.86	2.07	1.88	2.07	1.90	2.02	2.17	(X)	(X)
508	Machinery, equip. & supplies .....	2.15	2.23	1.88	2.01	2.01	1.99	1.96	2.19	1.94	1.94	1.93	2.08	2.06	(X)	(X)
509	Miscellaneous durable goods .....	.82	.95	.81	.70	.70	.79	.87	.92	1.07	.87	.91	.81	.83	(X)	(X)
51	Nondurable goods .....	.88	.94	.84	.88	.81	.85	.81	.87	.78	.85	.85	.88	.89	(X)	(X)
511	Paper & paper products .....	.95	1.03	.90	.98	.92	.95	.96	1.06	.90	.95	.92	.94	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.50	1.55	1.44	1.52	1.48	1.57	1.46	1.55	1.47	1.43	1.60	(X)	(X)
513	Apparel, piece goods & notions .....	2.06	1.83	1.75	2.12	2.35	2.02	1.87	1.85	1.61	1.86	1.60	1.73	1.60	(X)	(X)
514	Groceries & related products .....	.68	.70	.65	.68	.62	.64	.61	.61	.58	.64	.67	.69	.71	(X)	(X)
515	Farm-product raw materials .....	.74	.86	.72	.74	.61	.63	.57	.62	.54	.63	.70	.77	.89	(X)	(X)
516	Chemicals & allied products .....	.84	.86	.77	.82	.75	.80	.81	.90	.84	.87	.77	.81	.86	(X)	(X)
517	Petroleum & petroleum products .....	.29	.33	.31	.32	.30	.31	.35	.36	.33	.34	.35	.36	.27	(X)	(X)
518	Beer, wine, & distilled beverages .....	1.29	1.32	1.15	1.13	.99	1.02	.98	1.13	.94	1.13	1.16	1.11	.93	(X)	(X)
519	Misc. nondurable goods .....	1.27	1.28	1.06	1.10	.99	1.09	1.12	1.26	1.08	1.14	1.13	1.19	1.16	(X)	(X)

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1990 through December 1989.  
 X Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		June 1990 from May 1990	June 1990 from June 1989	6 months 1990 from 6 months 1989	June 1990 from May 1990	June 1990 from June 1989	June 1990 from May 1990	June 1990 from June 1989	June 1990 from May 1990	June 1990 from June 1989
	<b>Total</b> .....	-2.5	+3.9	+5.5	-.6	+3.4	+1.7	+6.8	-.8	+3.5
50	Durable goods .....	-.9	+8.8	+9.4	-1.1	+3.4	+1.8	+12.0	-.4	+3.5
501	Motor vehicles & auto. equip. ....	-2.0	+9.5	+7.2	-3.9	-1.3	+1.5	+11.5	-2.2	-1.1
502	Furniture & home furnishings .....	+1.4	+7.3	-1.5	-.8	-4.4	+3.6	+8.9	-1.0	-4.7
503	Lumber & other construction mat. ....	+2.6	.0	+2.1	-1.7	-4.1	-1.3	+1.7	-2.9	-3.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	+4.9	+1.9	+2.4	+1.1	-3.7	-1.7	+5.9	-2.2	-3.9
505	Metals & minerals, ex. petroleum .....	+5.5	+17.4	+7.0	-.9	-7.9	+7.0	+22.6	-2.4	-7.9
506	Electrical goods .....	-1.1	+3.9	+6.3	+1.9	+4.3	-1.2	+5.5	+1.9	+4.3
507	Hardware, plumbing & heating equipment .....	+1.9	+4.9	+2.9	+.8	+4.7	+2.2	+8.2	+1.5	+4.8
508	Machinery, equip. & supplies .....	-.4	+8.4	+11.0	-1.1	+10.3	+3.2	+11.5	+.2	+10.4
509	Miscellaneous durable goods .....	-11.1	+16.9	+32.0	-.5	+5.7	-1.5	+24.5	+1.1	+5.7
51	Nondurable goods .....	-4.1	-.9	+1.8	+.3	+3.5	+1.7	+1.9	-1.6	+3.5
511	Paper & paper products .....	-2.7	-2.1	+3.7	+.6	-2.8	-1.6	+2.3	+.1	-2.7
512	Drugs, drug proprietaries and druggists' sundries .....	-4.0	+8.0	+13.3	+1.3	+10.8	+1.1	+11.5	+.6	+10.9
513	Apparel, piece goods & notions .....	+20.7	+8.5	+11.8	+3.9	+17.4	+4.8	+13.0	-.3	+17.2
514	Groceries & related products .....	-4.8	-3.9	-1.7	-1.7	+1.8	+1.3	-2.0	-1.0	+2.0
515	Farm-product raw materials .....	-7.9	-.7	-5.3	-4.8	+10.3	+5.0	+3.2	-5.6	+10.6
516	Chemicals & allied products .....	-5.7	-2.9	+5.0	+.9	-4.0	-4.5	+.7	-.6	-4.2
517	Petroleum & petroleum products .....	-5.0	-4.9	+1.8	-.5	-15.1	-1.2	-4.3	-3.3	-15.3
518	Beer, wine, & distilled beverages .....	-1.4	-4.1	+3.0	+1.4	-.4	+.7	+.3	-.5	-.2
519	Misc. nondurable goods .....	-8.1	+3.5	+5.4	+1.0	+.2	+4.3	+7.7	-2.1	-.1

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

## **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

**Concurrent Seasonal Adjustment**

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.4-1.9	1.8	1.4-1.8	1.7	0.5-0.7	0.5	0.9-1.3	1.1			
50	Durable goods .....	1.9-2.5	2.2	1.8-2.4	2.2	0.6-1.0	0.7	0.9-1.4	1.2	1.6	1.5	0.8
501	Motor vehicles & auto. equip. ....	4.9-6.4	5.5	4.4-6.0	5.4	0.8-1.7	1.2	2.2-3.9	3.0	2.0	1.9	0.7
502	Furniture & home furnishings .....	7.0-15.6	9.0	6.8-9.1	8.2	2.8-10.5	3.6	6.6-15.9	7.3	5.2	5.0	2.1
503	Lumber & other construction mat. ....	5.0-5.9	5.2	4.7-5.9	5.2	1.1-2.4	2.1	2.6-4.8	3.9	8.1	6.0	5.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.1-6.9	6.4	5.0-6.9	5.3	1.6-5.9	2.8	3.5-7.2	5.8	4.8	5.0	2.7
505	Metals & minerals, ex. petroleum .....	5.4-8.5	7.1	5.7-8.3	7.5	0.9-2.8	1.2	1.9-5.3	2.8	5.3	5.1	4.1
506	Electrical goods .....	3.1-4.5	4.1	3.2-4.7	3.9	1.0-2.0	1.3	2.7-3.9	2.9	7.3	6.6	1.7
507	Hardware, plumbing & heating equipment .....	6.8-10.2	9.8	7.1-9.8	9.0	1.7-3.1	2.2	3.8-4.9	4.0	9.1	7.4	1.8
508	Machinery, equip. & supplies .....	3.5-4.6	4.1	3.3-4.4	3.8	1.5-1.9	1.7	2.3-3.5	2.8	3.5	3.2	3.2
509	Miscellaneous durable goods .....	3.9-5.7	4.4	4.0-6.5	4.3	1.1-2.4	1.5	2.6-4.1	3.3	4.1	4.9	1.9
51	Nondurable goods .....	2.7-3.2	2.9	2.7-3.1	2.8	0.5-0.8	0.7	1.1-1.8	1.7	2.8	2.5	2.6
511	Paper & paper products .....	4.1-5.1	4.5	3.9-5.1	4.6	0.8-2.0	1.1	2.7-4.1	3.6	4.3	5.1	2.8
512	Drugs, drug proprietaries and druggists' sundries .....	4.8-5.7	5.4	5.1-6.3	5.2	0.9-2.0	1.4	2.1-4.1	2.9	5.0	4.6	1.8
513	Apparel, piece goods & notions .....	8.1-10.8	10.0	9.2-11.4	10.2	2.3-4.3	3.9	4.2-6.7	6.2	9.2	9.3	4.3
514	Groceries & related products .....	4.1-5.2	4.6	3.9-5.2	4.5	0.7-1.9	1.0	1.4-2.5	1.8	4.5	4.8	4.1
515	Farm-product raw materials .....	6.0-7.0	6.5	5.5-7.1	6.2	1.2-3.0	2.5	3.8-6.3	5.0	6.0	4.9	4.1
516	Chemicals & allied products .....	8.0-10.8	10.2	8.1-10.2	9.6	1.3-3.5	2.7	4.6-7.3	5.9	9.4	6.0	4.9
517	Petroleum & petroleum products .....	7.1-8.2	7.7	6.3-8.3	7.3	1.0-2.4	1.4	2.7-4.8	3.4	7.5	6.7	3.0
518	Beer, wine, & distilled beverages .....	4.0-5.7	4.5	3.6-4.9	4.2	0.8-2.0	1.5	1.7-3.3	2.0	4.2	3.3	1.3
519	Misc. nondurable goods .....	5.4-8.4	6.2	4.8-7.8	5.8	1.0-4.0	1.8	2.5-3.8	3.2	6.1	5.4	2.1
	<b>Inventories, Total</b> .....	1.2-1.4	1.3	1.2-1.4	1.2	0.2-0.4	0.3	0.6-0.9	0.8	(X)	(X)	(X)
50	Durable goods .....	1.6-1.8	1.7	1.6-1.7	1.7	0.2-0.4	0.3	0.8-1.0	0.9	(X)	(X)	(X)
501	Motor vehicles & auto. equip. ....	5.8-6.4	6.1	5.8-6.1	6.0	0.7-1.2	0.8	2.1-2.9	2.3	(X)	(X)	(X)
502	Furniture & home furnishings .....	8.2-9.5	8.7	8.2-9.0	8.4	0.9-2.9	1.1	4.6-8.1	5.9	(X)	(X)	(X)
503	Lumber & other construction mat. ....	5.9-7.8	6.8	5.6-7.2	6.4	0.7-1.3	0.9	3.3-4.4	4.0	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.5-7.2	6.2	4.9-6.7	5.9	0.7-3.1	1.2	3.0-5.0	3.8	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	3.7-5.8	4.8	4.8-5.3	4.8	0.5-1.2	0.8	2.2-3.3	2.9	(X)	(X)	(X)
506	Electrical goods .....	2.2-3.6	3.0	2.5-3.6	3.0	0.4-0.6	0.5	1.1-2.3	1.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment .....	5.0-6.4	5.8	5.3-6.3	5.7	0.5-1.2	0.7	1.6-2.2	2.0	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.3-4.3	3.8	3.3-4.2	3.8	0.4-0.8	0.5	1.7-2.3	2.0	(X)	(X)	(X)
509	Miscellaneous durable goods .....	9.0-9.7	9.3	9.0-9.9	9.3	0.6-0.9	0.8	2.0-3.3	2.7	(X)	(X)	(X)
51	Nondurable goods .....	2.8-3.3	3.2	2.9-3.2	3.1	0.3-0.7	0.4	1.1-1.8	1.3	(X)	(X)	(X)
511	Paper & paper products .....	4.8-5.4	5.0	4.8-5.3	5.0	0.6-1.2	0.9	2.0-3.4	2.4	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	5.9-7.1	6.5	5.7-7.4	6.5	0.4-1.7	0.6	1.9-3.3	2.7	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.1-8.1	6.9	6.1-8.1	6.9	1.0-2.2	1.6	4.5-5.0	4.9	(X)	(X)	(X)
514	Groceries & related products .....	7.1-9.1	8.6	8.3-9.4	8.8	0.7-1.6	1.0	2.4-5.7	3.9	(X)	(X)	(X)
515	Farm-product raw materials .....	7.4-8.8	7.9	7.0-8.5	7.6	0.8-1.7	1.5	2.7-4.7	3.2	(X)	(X)	(X)
516	Chemicals & allied products .....	8.9-10.7	9.9	8.6-10.1	9.3	1.2-3.2	2.2	4.4-6.5	4.8	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.3-6.4	6.0	5.2-6.3	5.9	1.0-2.0	1.5	2.9-4.9	3.6	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	3.7-5.5	4.7	3.6-5.2	4.8	0.7-0.9	0.8	2.0-3.6	2.6	(X)	(X)	(X)
519	Misc. nondurable goods .....	7.8-9.3	8.6	7.9-8.8	8.5	0.9-2.3	1.2	2.7-3.8	3.3	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for January 1990 through June 1990.

FIRST-CLASS MAIL  
POSTAGE & FEES PAID  
CENSUS  
PERMIT No. G-58

Official Business  
Penalty for Private Use, \$300

Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989							1990						
		June <sup>f</sup>	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May <sup>f</sup>	June <sup>f</sup>	July
	<b>Sales,<sup>1</sup> Total</b> .....	1.033	.953	1.043	.990	1.057	1.009	.960	.965	.912	1.042	.988	1.052	1.008	.974
50	Durable goods .....	1.049	.955	1.047	1.009	1.079	1.009	.940	.931	.894	1.041	.996	1.050	1.025	.980
501	Motor vehicles & auto. equip. ...	1.051	.951	1.013	.925	1.084	1.011	.979	.933	.914	1.055	1.019	1.069	1.032	.968
502	Furniture & home furnishings ...	.988	.936	1.074	1.077	1.130	1.052	.916	.934	.912	1.003	.953	.995	.974	.952
503	Lumber & other construction mat. ....	1.123	1.066	1.138	1.076	1.134	.960	.849	.851	.776	.949	.999	1.062	1.104	1.104
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.964	.882	1.026	1.086	1.176	1.164	1.031	.912	.916	1.033	.916	.869	.928	.900
505	Metals & minerals, ex. petroleum	1.079	.906	1.070	1.022	1.017	.965	.919	.974	.924	1.108	1.004	1.048	1.033	.945
506	Electrical goods .....	1.007	.963	1.063	1.036	1.109	1.053	.967	.944	.905	1.020	.950	.991	.992	.980
507	Hardware, plumbing & heating equipment .....	1.093	.987	1.075	.987	1.102	.999	.906	.943	.870	1.001	.988	1.062	1.059	1.019
508	Machinery, equip. & supplies	1.046	.939	1.050	1.017	1.043	.969	.958	.933	.911	1.059	1.018	1.054	1.017	.974
509	Miscellaneous durable goods ...	1.064	.950	.955	1.024	1.061	1.092	.918	.902	.871	1.017	1.046	1.107	.999	.937
51	Nondurable goods .....	1.021	.947	1.034	.974	1.039	1.006	.983	.993	.928	1.041	.984	1.052	.996	.970
511	Paper & paper products .....	1.025	.935	1.076	.989	1.064	1.012	.955	1.005	.928	1.043	.955	.992	.981	.972
512	Drugs, drug proprietaries and druggists' sundries .....	1.005	.943	1.037	.999	1.042	1.001	.969	1.050	.933	1.013	.975	1.025	.973	.972
513	Apparel, piece goods & notions	1.051	1.036	1.260	1.031	1.166	.999	.724	.925	.997	1.028	.884	.877	1.010	1.099
514	Groceries & related products ...	1.021	.993	1.037	.963	1.003	1.040	1.012	.998	.919	.996	.957	1.066	1.001	1.004
515	Farm-product raw materials ...	.961	.881	.964	.907	1.105	1.050	.984	1.114	.960	1.069	.988	1.054	.925	.896
516	Chemicals & allied products ...	1.122	.953	1.026	.983	1.039	.947	.875	.971	.914	1.055	1.034	1.094	1.081	.984
517	Petroleum & petroleum products	.994	.923	.993	1.004	.976	.964	1.043	1.044	.973	1.091	.976	1.028	.988	.945
518	Beer, wine, & distilled beverages	1.121	.974	1.124	.978	1.017	1.064	1.109	.814	.799	.971	.940	1.095	1.072	1.008
519	Misc. nondurable goods .....	1.052	.908	1.011	.952	1.017	.962	.992	.892	.886	1.085	1.084	1.148	1.011	.938
	<b>Inventories,<sup>1</sup> Total</b> .....	.995	.994	.984	.994	1.009	1.004	1.000	1.007	1.009	1.008	1.007	.992	.995	.993
50	Durable goods .....	1.002	1.010	.999	1.001	1.004	.993	.983	.991	.998	1.004	1.011	1.008	1.002	1.010
501	Motor vehicles & auto. equip. ...	.992	.977	.960	1.020	.997	1.014	1.012	.990	1.017	1.013	1.006	1.008	.990	.978
502	Furniture & home furnishings ...	1.007	1.019	1.018	1.028	.998	.966	.978	.995	.978	.991	.995	1.008	1.010	1.020
503	Lumber & other construction mat. ....	1.032	1.045	.981	.991	.985	.943	.970	.994	.983	1.025	1.052	1.016	1.029	1.043
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.014	1.054	1.021	1.038	1.024	.986	.963	.965	.973	.992	.989	.983	1.016	1.052
505	Metals & minerals, ex. petroleum	1.035	1.020	.971	.974	.984	.968	1.005	1.008	.990	1.009	1.016	1.019	1.035	1.019
506	Electrical goods .....	1.004	1.020	1.014	1.010	1.009	.998	.989	.975	.992	.993	1.001	1.004	1.004	1.019
507	Hardware, plumbing & heating equipment .....	1.000	1.009	1.011	.998	1.013	.974	.967	.985	.995	1.013	1.014	1.006	.999	1.009
508	Machinery, equip. & supplies	.999	1.007	1.001	.990	1.002	1.001	.976	.999	1.001	1.003	1.018	1.011	.998	1.007
509	Miscellaneous durable goods ...	.991	1.017	1.044	1.013	1.007	1.005	.962	.958	.988	1.009	1.007	1.007	.991	1.013
51	Nondurable goods .....	.984	.963	.957	.974	1.020	1.028	1.035	1.035	1.026	1.015	.997	.961	.985	.962
511	Paper & paper products .....	.992	1.007	.985	.969	1.006	.984	.996	1.023	1.013	1.023	1.012	.986	.991	1.007
512	Drugs, drug proprietaries and druggists' sundries .....	.963	.968	.967	.993	1.019	.970	1.034	1.054	1.029	.999	1.029	.956	.962	.971
513	Apparel, piece goods & notions	1.066	1.048	1.045	1.025	.958	.948	.992	1.007	.990	.960	.949	1.024	1.068	1.046
514	Groceries & related products ...	.978	.976	.953	1.000	1.050	1.056	1.030	1.001	1.003	.981	.982	.983	.976	.981
515	Farm-product raw materials ...	.835	.839	.827	.886	1.130	1.154	1.164	1.185	1.138	1.020	.971	.826	.833	.837
516	Chemicals & allied products ...	1.041	1.004	1.011	.953	.962	.970	.971	1.008	1.009	1.014	1.030	1.029	1.044	1.005
517	Petroleum & petroleum products	.998	.991	.964	1.037	1.013	1.008	1.040	1.032	.988	1.024	.971	.972	1.000	.990
518	Beer, wine, & distilled beverages	1.012	.994	.978	1.010	1.064	1.054	.921	.948	.979	1.015	1.014	.991	1.010	.992
519	Misc. nondurable goods .....	.991	.919	.924	.944	.970	1.007	1.043	1.027	1.056	1.089	1.055	.963	.994	.919

<sup>f</sup>Revised  
<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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 1990

U.S. Department of Commerce  
BUREAU OF THE CENSUS

BW90-07  
Issued September 1990

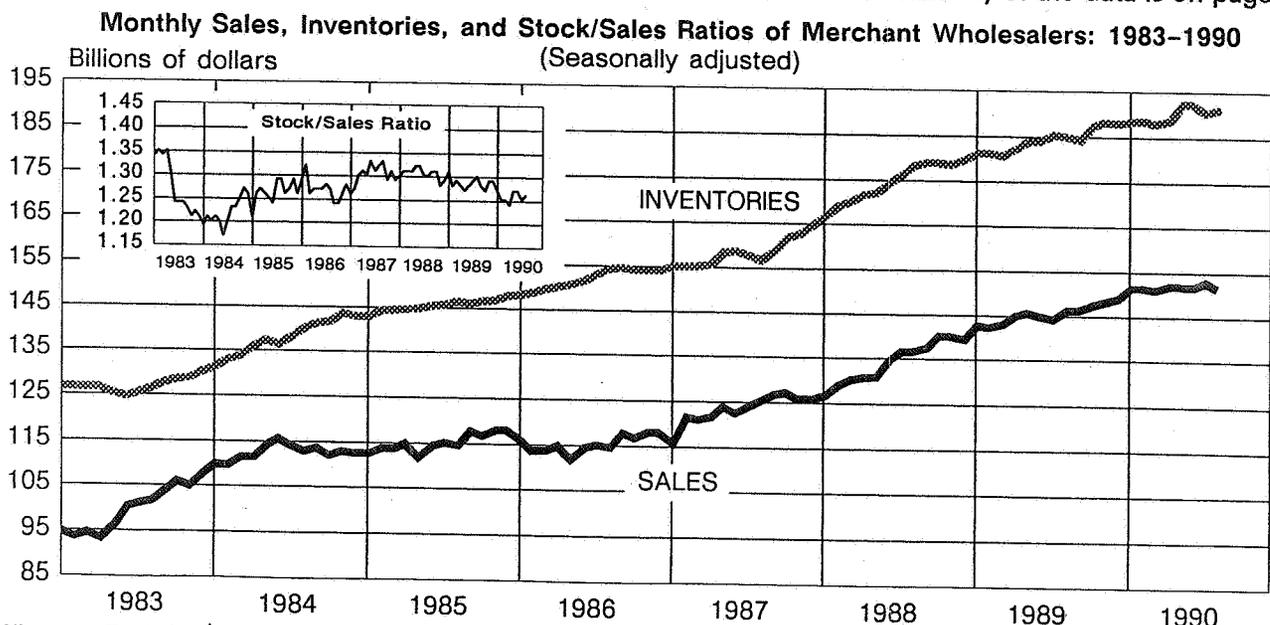
**Sales.** July 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$152.0 billion, down 1.0 percent ( $\pm 0.9$  percent) from the revised June level but were up 4.8 percent ( $\pm 1.9$  percent) from a year ago. The June preliminary estimate was revised downward by \$1.4 billion or about 0.9 percent. July sales of durable goods decreased 1.5 percent ( $\pm 0.7$  percent) from the revised June level, but were 7.1 percent ( $\pm 2.4$  percent) above a year ago. Sales of metals and minerals, except petroleum decreased 6.4 percent to \$ 7.6 billion from the June level which was almost half of the dollar volume decrease in durable goods sales. July sales of nondurable goods were down 0.5 percent ( $\pm 1.5$  percent) from June but were up 2.5 percent ( $\pm 2.5$  percent) from the July 1989 level. Sales of miscellaneous nondurable goods decreased 4.1 percent to \$11.8 billion from the June level. However, sales of paper and paper products increased 5.4 percent to \$4.6 billion; beer, wine and distilled beverage sales were up 2.9 percent to \$3.7 billion; and drugs, drug proprietaries and druggists' sundries increased 2.6 percent to \$4.1 billion for the same period.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$192.2 billion at the end of July, up 0.5 percent ( $\pm 0.6$  percent) from the revised June level and

were up 3.3 percent ( $\pm 1.3$  percent) from a year ago. The June preliminary estimate was revised downward by \$ 0.4 billion or about 0.2 percent. Inventories of durable goods wholesalers were down 0.2 percent ( $\pm 0.4$  percent) from the June level but were 1.8 percent ( $\pm 1.5$  percent) above a year ago. Monthly decreases in the inventories of durable goods wholesalers were as follows: miscellaneous durable goods decreased 3.2 percent to \$6.0 billion; hardware, plumbing and heating inventories were down 2.8 percent to \$7.3 billion, and lumber and other construction materials decreased 2.1 percent to \$5.6 billion. Inventories of nondurable goods wholesalers were up 1.7 percent ( $\pm 0.6$  percent) from the June level and were 6.2 percent ( $\pm 3.0$  percent) above July 1989. Monthly increases in the inventories of nondurable goods wholesalers were as follows: chemicals and allied products were up 4.9 percent to \$2.8 billion and miscellaneous nondurable goods increased 4.7 percent to \$14.3 billion.

**Stock/Sales Ratio.** The July stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.26, up from the June ratio of 1.25. The year ago ratio was 1.28.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.



Monthly Wholesale Trade for August is scheduled to be released October 12, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990							1989					
		Jan.	Feb.	Mar.	Apr.	May	June	July <sup>P</sup>	Jul. <sup>F</sup>	Aug.	Sept.	Oct.	Nov.	Dec.
	<b>Sales, Total</b> . . . . .	151,968	151,620	152,383	151,458	152,302	153,549	151,990	145,062	146,800	146,981	147,921	148,782	149,584
50	Durable goods . . . . .	76,653	77,018	77,812	78,522	77,766	78,002	76,848	71,747	72,696	72,388	73,048	73,970	73,180
501	Motor vehicles & auto. equip. . . . .	14,630	15,217	15,792	13,926	14,676	14,824	14,967	13,305	14,118	13,901	13,892	13,708	13,034
502	Furniture & home furnishings . . . . .	2,282	2,316	2,298	2,428	2,553	2,777	2,820	2,479	2,575	2,569	2,407	2,488	2,405
503	Lumber & other construction mat. . . . .	5,112	5,183	5,081	4,968	5,014	4,990	4,893	4,920	5,016	4,886	4,978	4,866	4,425
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	1,893	1,985	2,162	2,069	2,189	2,162	2,085	1,961	2,027	2,155	2,076	2,023	2,036
505	Metals & minerals, ex. petroleum . . . . .	7,330	7,277	7,050	7,520	8,233	8,104	7,588	7,215	7,447	6,325	7,527	7,584	6,827
506	Electrical goods . . . . .	9,818	9,782	9,732	9,740	9,746	9,516	9,441	9,207	9,395	9,312	9,336	9,495	9,605
507	Hardware, plumbing & heating equipment . . . . .	3,661	3,760	3,805	3,670	3,716	3,802	3,865	3,570	3,632	3,580	3,624	3,602	3,649
508	Machinery, equip. & supplies . . . . .	23,355	23,181	23,705	23,810	23,510	23,910	23,489	22,112	22,116	22,628	22,589	22,690	22,974
509	Miscellaneous durable goods . . . . .	8,572	8,317	7,987	8,391	8,129	7,917	7,700	6,978	6,370	7,024	6,619	7,497	8,225
51	Nondurable goods . . . . .	75,315	74,602	74,771	74,936	74,536	75,547	75,142	73,315	74,104	74,593	74,873	74,812	76,404
511	Paper & paper products . . . . .	4,370	4,241	4,349	4,357	4,366	4,341	4,577	4,298	4,262	4,348	4,366	4,320	4,348
512	Drugs, drug proprietaries and druggists' sundries . . . . .	4,065	3,990	4,014	4,106	3,932	3,989	4,093	3,627	3,651	3,738	3,889	3,958	3,992
513	Apparel, piece goods & notions . . . . .	5,128	5,308	5,434	5,283	5,146	5,421	5,395	4,886	4,742	4,953	4,816	5,163	5,493
514	Groceries & related products . . . . .	19,432	19,841	20,231	20,125	19,916	19,848	19,799	20,365	20,232	20,285	20,846	19,999	19,581
515	Farm-product raw materials . . . . .	11,070	10,369	10,372	10,768	10,580	11,210	10,829	10,465	11,056	10,555	10,759	10,971	10,465
516	Chemicals & allied products . . . . .	3,176	3,284	3,336	3,175	3,253	3,161	3,214	3,123	3,037	3,083	3,093	3,204	3,304
517	Petroleum & petroleum products . . . . .	12,670	11,956	11,579	12,029	12,145	11,672	11,733	11,922	12,099	12,274	12,030	11,800	13,674
518	Beer, wine, & distilled beverages . . . . .	3,627	3,630	3,586	3,678	3,537	3,597	3,701	3,480	3,580	3,569	3,532	3,586	3,604
519	Misc. nondurable goods . . . . .	11,777	11,983	11,870	11,415	11,661	12,308	11,801	11,149	11,445	11,788	11,542	11,811	11,943
	<b>Inventories, Total</b> . . . . .	189,375	188,847	189,361	190,903	193,201	191,259	192,171	186,024	185,730	185,098	188,103	189,057	188,819
50	Durable goods . . . . .	125,510	125,685	124,901	125,781	126,998	126,061	125,870	123,594	122,939	122,148	123,716	124,363	123,954
501	Motor vehicles & auto. equip. . . . .	23,909	24,219	23,911	24,399	24,018	23,116	23,176	23,733	23,545	22,770	23,472	23,298	22,381
502	Furniture & home furnishings . . . . .	4,123	4,142	4,429	4,364	4,338	4,544	4,572	4,506	4,531	4,565	4,570	4,510	4,496
503	Lumber & other construction mat. . . . .	5,966	5,821	5,815	5,896	5,750	5,773	5,649	5,834	5,687	5,725	5,805	5,704	5,847
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	4,452	4,392	4,387	4,353	4,407	4,396	4,426	4,442	4,408	4,460	4,473	4,580	4,589
505	Metals & minerals, ex. petroleum . . . . .	10,548	10,299	10,075	9,956	10,064	9,824	9,888	10,948	10,691	10,811	10,741	10,879	10,892
506	Electrical goods . . . . .	15,718	15,520	15,330	15,587	15,598	15,685	15,724	15,607	15,469	15,285	15,455	15,541	15,525
507	Hardware, plumbing & heating equipment . . . . .	7,375	7,380	7,349	7,319	7,377	7,475	7,287	7,292	7,278	7,252	7,492	7,494	7,410
508	Machinery, equip. & supplies . . . . .	46,811	46,977	47,066	47,775	49,165	49,031	49,153	45,252	45,084	45,016	45,351	45,777	46,506
509	Miscellaneous durable goods . . . . .	6,610	6,955	6,539	6,132	6,281	6,217	6,015	5,980	6,246	6,164	6,357	6,580	6,507
51	Nondurable goods . . . . .	63,865	63,162	64,460	65,122	66,203	65,198	66,301	62,430	62,791	62,950	64,387	64,694	64,865
511	Paper & paper products . . . . .	4,077	3,998	4,011	4,039	4,049	4,081	4,050	4,230	4,171	4,230	4,249	4,175	4,154
512	Drugs, drug proprietaries and druggists' sundries . . . . .	5,976	5,988	6,099	6,034	6,086	6,107	6,036	5,541	5,705	5,846	5,829	5,846	5,976
513	Apparel, piece goods & notions . . . . .	9,697	9,776	10,184	10,414	10,365	10,351	10,913	9,968	9,219	9,244	9,391	9,428	9,807
514	Groceries & related products . . . . .	13,129	12,674	13,335	13,362	13,418	13,167	13,068	12,676	12,681	12,499	13,335	13,527	13,593
515	Farm-product raw materials . . . . .	7,743	7,559	7,830	8,102	8,229	7,581	7,406	6,913	6,921	6,778	7,685	7,831	7,831
516	Chemicals & allied products . . . . .	2,581	2,544	2,689	2,626	2,598	2,623	2,752	2,664	2,600	2,771	2,575	2,523	2,560
517	Petroleum & petroleum products . . . . .	3,666	3,849	3,862	3,827	3,814	3,779	3,878	3,992	4,066	4,058	4,060	4,038	3,762
518	Beer, wine, & distilled beverages . . . . .	4,009	3,903	3,929	3,868	3,882	3,898	3,945	3,885	3,848	3,918	3,915	4,025	4,022
519	Misc. nondurable goods . . . . .	12,987	12,871	12,521	12,850	13,762	13,611	14,253	13,561	13,580	13,606	13,679	13,447	13,160
	<b>Stock/sales ratios, Total</b> . . . . .	1.25	1.25	1.24	1.26	1.27	1.25	1.26	1.28	1.27	1.26	1.27	1.27	1.26
50	Durable goods . . . . .	1.64	1.63	1.61	1.64	1.63	1.62	1.64	1.72	1.69	1.69	1.69	1.68	1.69
501	Motor vehicles & auto. equip. . . . .	1.63	1.59	1.51	1.75	1.64	1.56	1.55	1.78	1.67	1.64	1.69	1.70	1.72
502	Furniture & home furnishings . . . . .	1.81	1.79	1.93	1.80	1.70	1.64	1.62	1.82	1.76	1.78	1.90	1.81	1.87
503	Lumber & other construction mat. . . . .	1.17	1.12	1.14	1.19	1.15	1.16	1.15	1.19	1.13	1.17	1.17	1.17	1.32
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	2.35	2.21	2.03	2.10	2.01	2.03	2.12	2.27	2.17	2.07	2.15	2.26	2.25
505	Metals & minerals, ex. petroleum . . . . .	1.44	1.42	1.43	1.32	1.22	1.21	1.30	1.52	1.44	1.71	1.43	1.43	1.57
506	Electrical goods . . . . .	1.60	1.59	1.58	1.60	1.60	1.65	1.67	1.70	1.65	1.64	1.66	1.64	1.62
507	Hardware, plumbing & heating equipment . . . . .	2.01	1.96	1.93	1.99	1.99	1.97	1.88	2.04	2.00	2.05	2.07	2.07	2.03
508	Machinery, equip. & supplies . . . . .	2.00	2.03	1.99	2.01	2.09	2.05	2.09	2.05	2.04	1.99	2.01	2.02	2.02
509	Miscellaneous durable goods . . . . .	.77	.84	.82	.73	.77	.79	.78	.86	.98	.88	.96	.88	.79
51	Nondurable goods . . . . .	.85	.85	.86	.87	.89	.86	.88	.85	.85	.84	.86	.86	.85
511	Paper & paper products . . . . .	.93	.94	.92	.93	.93	.94	.88	.98	.98	.97	.97	.97	.96
512	Drugs, drug proprietaries and druggists' sundries . . . . .	1.47	1.50	1.52	1.47	1.55	1.53	1.47	1.53	1.56	1.56	1.50	1.48	1.50
513	Apparel, piece goods & notions . . . . .	1.89	1.84	1.87	1.97	2.01	1.91	2.02	1.84	1.94	1.87	1.95	1.83	1.79
514	Groceries & related products . . . . .	.68	.64	.66	.66	.67	.66	.66	.62	.63	.62	.64	.68	.69
515	Farm-product raw materials . . . . .	.70	.73	.75	.75	.78	.68	.68	.66	.63	.64	.68	.70	.75
516	Chemicals & allied products . . . . .	.81	.77	.81	.83	.80	.83	.86	.85	.86	.90	.83	.79	.77
517	Petroleum & petroleum products . . . . .	.29	.32	.33	.32	.31	.32	.33	.33	.34	.33	.34	.34	.28
518	Beer, wine, & distilled beverages . . . . .	1.11	1.08	1.10	1.05	1.10	1.08	1.07	1.12	1.07	1.10	1.11	1.12	1.12
519	Misc. nondurable goods . . . . .	1.10	1.07	1.05	1.13	1.18	1.11	1.21	1.22	1.19	1.15	1.19	1.14	1.10

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.

<sup>F</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990							1989							Total 7 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July <sup>P</sup>	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	1990	1989	
	<b>Sales, Total</b> .....	146,135	138,361	158,734	150,395	160,026	154,461	147,538	137,524	152,731	145,394	155,847	150,006	144,355	1,055,650	999,861	
50	Durable goods .....	71,238	69,070	80,795	76,808	81,467	79,475	74,534	68,081	76,020	73,080	78,451	74,608	69,247	533,387	488,554	
501	Motor vehicles & auto. equip. ....	13,650	13,908	16,661	14,191	15,689	15,239	14,473	12,693	14,302	12,858	15,059	13,859	12,760	103,811	96,137	
502	Furniture & home furnishings .....	2,131	2,112	2,305	2,314	2,540	2,735	2,693	2,335	2,766	2,767	2,720	2,617	2,203	16,630	16,528	
503	Lumber & other construction mat. ....	4,350	4,022	4,822	4,963	5,325	5,539	5,373	5,245	5,708	5,257	5,645	4,671	3,757	34,394	33,594	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,726	1,818	2,233	1,895	1,902	2,037	1,839	1,710	2,080	2,340	2,441	2,355	2,099	13,450	13,008	
505	Metals & minerals, ex. petroleum ..	7,139	6,724	7,811	7,550	8,628	8,299	7,011	6,443	7,988	6,464	7,655	7,319	6,274	53,162	50,325	
506	Electrical goods .....	9,268	8,853	9,927	9,253	9,658	9,421	9,177	8,802	9,987	9,647	10,354	9,998	9,288	65,557	61,954	
507	Hardware, plumbing & heating equipment .....	3,452	3,271	3,809	3,626	3,946	4,004	3,977	3,552	3,904	3,541	3,994	3,615	3,306	26,085	25,059	
508	Machinery, equip. & supplies .....	21,790	21,118	25,104	24,239	24,780	24,316	22,761	20,763	23,222	23,013	23,560	21,987	22,009	164,108	148,376	
509	Miscellaneous durable goods .....	7,732	7,244	8,123	8,777	8,999	7,885	7,230	6,538	6,083	7,193	7,023	8,187	7,551	43,573	43,573	
51	Nondurable goods .....	74,897	69,291	77,939	73,587	78,559	74,986	73,004	69,443	76,711	72,314	77,396	75,398	75,108	522,263	511,307	
511	Paper & paper products .....	4,392	3,936	4,536	4,161	4,331	4,259	4,476	4,040	4,586	4,300	4,645	4,372	4,152	30,091	28,686	
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,723	4,066	4,003	4,030	3,853	4,007	3,424	3,786	3,734	4,052	3,962	3,868	27,950	24,566	
513	Apparel, piece goods & notions .....	4,743	5,262	5,586	4,670	4,513	5,470	5,967	5,096	5,975	5,107	5,616	5,158	3,977	36,241	32,156	
514	Groceries & related products .....	19,393	18,234	20,150	19,260	21,230	19,828	19,878	20,243	20,981	19,534	20,909	20,799	19,816	137,973	140,763	
515	Farm-product raw materials .....	12,332	9,954	11,088	10,639	11,151	10,392	9,605	9,136	10,658	9,573	11,889	11,520	10,298	75,161	78,263	
516	Chemicals & allied products .....	3,084	3,002	3,519	3,283	3,559	3,420	3,208	2,992	3,116	3,031	3,214	3,034	2,891	23,075	21,861	
517	Petroleum & petroleum products .....	13,228	11,633	12,633	11,740	12,485	11,392	11,182	11,064	12,014	12,323	11,741	11,375	14,262	84,293	83,346	
518	Beer, wine, & distilled beverages ..	2,952	2,900	3,462	3,467	3,873	3,842	3,753	3,403	4,024	3,490	3,592	3,816	3,997	24,259	23,282	
519	Misc. nondurable goods .....	10,505	10,617	12,879	12,374	13,387	12,530	10,928	10,045	11,571	11,222	11,738	11,362	11,847	83,220	78,384	
	<b>Inventories, Total</b> .....	190,390	190,475	190,909	192,411	192,015	190,333	191,029	184,895	182,299	183,868	189,404	189,822	189,042	(X)	(X)	
50	Durable goods .....	124,313	125,488	125,562	127,344	128,124	126,390	126,943	124,655	122,371	122,335	123,856	123,652	122,053	(X)	(X)	
501	Motor vehicles & auto. equip. ....	23,670	24,631	24,222	24,545	24,210	22,839	22,712	23,258	22,603	23,225	23,402	23,624	22,650	(X)	(X)	
502	Furniture & home furnishings .....	4,102	4,051	4,389	4,342	4,373	4,626	4,700	4,623	4,613	4,693	4,561	4,357	4,397	(X)	(X)	
503	Lumber & other construction mat. ....	5,930	5,722	5,960	6,203	5,842	5,981	5,881	6,067	5,579	5,673	5,718	5,379	5,672	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,296	4,273	4,352	4,305	4,332	4,480	4,665	4,677	4,501	4,629	4,580	4,516	4,419	(X)	(X)	
505	Metals & minerals, ex. petroleum ..	10,632	10,196	10,166	10,115	10,255	10,119	10,185	11,255	10,381	10,530	10,569	10,531	10,746	(X)	(X)	
506	Electrical goods .....	15,323	15,398	15,223	15,603	15,660	15,732	16,007	15,904	15,686	15,438	15,594	15,510	15,354	(X)	(X)	
507	Hardware, plumbing & heating equipment .....	7,264	7,323	7,445	7,421	7,421	7,482	7,318	7,343	7,358	7,337	7,589	7,299	7,165	(X)	(X)	
508	Machinery, equip. & supplies .....	46,764	47,024	47,207	48,635	49,706	48,982	49,448	45,524	45,129	44,566	45,442	45,823	45,390	(X)	(X)	
509	Miscellaneous durable goods .....	6,332	6,872	6,598	6,175	6,325	6,149	6,027	6,004	6,521	6,244	6,401	6,613	6,260	(X)	(X)	
51	Nondurable goods .....	66,077	64,987	65,347	65,067	63,891	63,943	64,086	60,240	59,928	61,533	65,548	66,170	66,989	(X)	(X)	
511	Paper & paper products .....	4,171	4,050	4,103	4,087	3,992	4,052	4,091	4,264	4,108	4,099	4,274	4,108	4,137	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,162	6,093	6,209	5,818	5,887	5,867	5,380	5,517	5,805	5,940	5,671	6,179	(X)	(X)	
513	Apparel, piece goods & notions .....	9,765	9,678	9,777	9,883	10,614	10,910	11,481	9,443	9,634	9,475	9,997	8,938	9,729	(X)	(X)	
514	Groceries & related products .....	13,142	12,712	13,082	13,121	13,190	12,864	12,650	12,283	12,085	12,489	14,002	14,284	14,001	(X)	(X)	
515	Farm-product raw materials .....	9,176	8,602	7,987	7,867	6,797	6,338	6,117	5,703	6,724	6,005	6,310	6,869	9,115	(X)	(X)	
516	Chemicals & allied products .....	2,602	2,567	2,727	2,705	2,673	2,731	2,793	2,701	2,629	2,641	2,477	2,447	2,486	(X)	(X)	
517	Petroleum & petroleum products .....	3,783	3,803	3,955	3,716	3,707	3,794	3,882	3,992	3,920	4,208	4,113	4,070	3,912	(X)	(X)	
518	Beer, wine, & distilled beverages ..	3,801	3,821	3,988	3,922	3,847	3,933	3,921	3,862	3,763	3,957	4,166	4,242	3,704	(X)	(X)	
519	Misc. nondurable goods .....	13,338	13,592	13,635	13,557	13,253	13,434	13,284	12,612	12,548	12,844	13,269	13,541	13,726	(X)	(X)	
	<b>Stock/sales ratios, Total</b> .....	1.30	1.38	1.20	1.28	1.20	1.23	1.29	1.34	1.19	1.26	1.22	1.27	1.31	(X)	(X)	
50	Durable goods .....	1.75	1.82	1.55	1.66	1.57	1.59	1.70	1.83	1.61	1.67	1.58	1.66	1.76	(X)	(X)	
501	Motor vehicles & auto. equip. ....	1.73	1.77	1.45	1.73	1.54	1.50	1.57	1.83	1.58	1.81	1.55	1.70	1.78	(X)	(X)	
502	Furniture & home furnishings .....	1.92	1.92	1.90	1.88	1.72	1.69	1.75	1.98	1.67	1.70	1.68	1.66	2.00	(X)	(X)	
503	Lumber & other construction mat. ....	1.36	1.42	1.24	1.25	1.10	1.08	1.09	1.16	.98	1.08	1.01	1.15	1.51	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.49	2.35	1.95	2.27	2.28	2.20	2.54	2.74	2.16	1.98	1.88	1.92	2.11	(X)	(X)	
505	Metals & minerals, ex. petroleum ..	1.49	1.52	1.30	1.34	1.19	1.22	1.45	1.75	1.30	1.63	1.38	1.44	1.71	(X)	(X)	
506	Electrical goods .....	1.65	1.74	1.53	1.69	1.62	1.67	1.74	1.81	1.57	1.60	1.51	1.55	1.65	(X)	(X)	
507	Hardware, plumbing & heating equipment .....	2.10	2.24	1.95	2.05	1.88	1.87	1.84	2.07	1.88	2.07	1.90	2.02	2.17	(X)	(X)	
508	Machinery, equip. & supplies .....	2.15	2.23	1.88	2.01	2.01	2.01	2.17	2.19	1.94	1.94	1.93	2.08	2.06	(X)	(X)	
509	Miscellaneous durable goods .....	.82	.95	.81	.70	.70	.78	.83	.92	1.07	.87	.91	.81	.83	(X)	(X)	
51	Nondurable goods .....	.88	.94	.84	.88	.81	.85	.88	.87	.78	.85	.85	.88	.89	(X)	(X)	
511	Paper & paper products .....	.95	1.03	.90	.98	.92	.95	.91	1.06	.90	.95	.92	.94	1.00	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.50	1.55	1.44	1.53	1.46	1.57	1.46	1.55	1.47	1.43	1.60	(X)	(X)	
513	Apparel, piece goods & notions .....	2.06	1.83	1.75	2.12	2.35	1.99	1.92	1.85	1.61	1.86	1.60	1.73	2.45	(X)	(X)	
514	Groceries & related products .....	.68	.70	.65	.68	.62	.65	.64	.61	.58	.64	.67	.69	.71	(X)	(X)	
515	Farm-product raw materials .....	.74	.86	.72	.74	.61	.61	.64	.62	.54	.63	.70	.77	.89	(X)	(X)	
516	Chemicals & allied products .....	.84	.86	.77	.82	.75	.80	.87	.90	.84	.87	.77	.81	.86	(X)	(X)	
517	Petroleum & petroleum products .....	.29	.33	.31	.32	.30	.33	.35	.36	.33	.34	.35	.36	.27	(X)	(X)	
518	Beer, wine, & distilled beverages ..	1.29	1.32	1.15	1.13	.99	1.02	1.04	1.13	.94	1.13	1.16	1.11	.93	(X)	(X)	
519	Misc. nondurable goods .....	1.27	1.28	1.06	1.10	.99	1.07	1.22	1.26	1.08	1.14	1.13	1.19	1.16	(X)	(X)	

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
 X Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		July 1990 from June 1990	July 1990 from July 1989	7 months 1990 from 7 months 1989	July 1990 from June 1990	July 1990 from July 1989	July 1990 from June 1990	July 1990 from July 1989	July 1990 from June 1990	July 1990 from July 1989
	<b>Total</b> .....	-4.5	+7.3	+5.6	+4	+3.3	-1.0	+4.8	+5	+3.3
50	Durable goods .....	-6.2	+9.5	+9.2	+4	+1.8	-1.5	+7.1	-2	+1.8
501	Motor vehicles & auto. equip. ....	-5.0	+14.0	+8.0	-.6	-2.3	+1.0	+12.5	+3	-2.3
502	Furniture & home furnishings .....	-1.5	+15.3	+1.8	+1.6	+1.7	+1.5	+13.8	+6	+1.5
503	Lumber & other construction mat. ....	-3.0	+2.4	+2.4	-1.7	-3.1	-1.9	-.5	-2.1	-3.2
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	-9.7	+7.5	+3.4	+4.1	-.3	-3.6	+6.3	+7	-.4
505	Metals & minerals, ex. petroleum .....	-15.5	+8.8	+5.6	+7	-9.5	-6.4	+5.2	+7	-9.7
506	Electrical goods .....	-2.6	+4.3	+5.8	+1.7	+6	-.8	+2.5	+2	+7
507	Hardware, plumbing & heating equipment .....	-.7	+12.0	+4.1	-2.2	-.3	+1.7	+8.3	-2.8	-.3
508	Machinery, equip. & supplies .....	-6.4	+9.6	+10.6	+1.0	+8.6	-1.8	+6.2	+2	+8.6
509	Miscellaneous durable goods .....	-8.3	+10.6	+28.5	-2.0	+4	-2.7	+10.3	-3.2	+6
51	Nondurable goods .....	-2.6	+5.1	+2.1	+2	+6.4	-.5	+2.5	+1.7	+6.2
511	Paper & paper products .....	+5.1	+10.8	+4.9	+1.0	-4.1	+5.4	+6.5	-.8	-4.3
512	Drugs, drug proprietaries and druggists' sundries .....	+4.0	+17.0	+13.8	-.3	+9.1	+2.6	+12.8	-1.2	+8.9
513	Apparel, piece goods & notions .....	+9.1	+17.1	+12.7	+5.2	+21.6	-.5	+10.4	+5.4	+21.7
514	Groceries & related products .....	+3	-1.8	-2.0	-1.7	+3.0	-.2	-2.8	-.8	+3.1
515	Farm-product raw materials .....	-7.6	+5.1	-4.0	-3.5	+7.3	-3.4	+3.5	-2.3	+7.1
516	Chemicals & allied products .....	-6.2	+7.2	+5.6	+2.3	+3.4	+1.7	+2.9	+4.9	+3.3
517	Petroleum & petroleum products .....	-1.8	+1.1	+1.1	+2.3	-2.8	+5	-1.6	+2.6	-2.9
518	Beer, wine, & distilled beverages .....	-2.3	+10.3	+4.2	-.3	+1.5	+2.9	+6.4	+1.2	+1.5
519	Misc. nondurable goods .....	-12.8	+8.8	+6.2	-1.1	+5.3	-4.1	+5.8	+4.7	+5.1

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm 1.3$ )" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

#### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

#### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

#### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

#### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> . . . . .	1.4-1.9	1.8	1.4-1.8	1.7	0.5-0.6	0.5	0.9-1.3	1.1	1.6	1.5	0.7
50	Durable goods . . . . .	1.9-2.5	2.2	1.8-2.3	2.2	0.4-0.9	0.6	0.9-1.4	1.3	2.0	1.8	0.7
501	Motor vehicles & auto. equip. . . . .	4.7-6.4	5.3	4.4-6.0	5.4	0.8-1.7	1.3	2.2-3.9	3.3	5.2	4.8	2.1
502	Furniture & home furnishings . . . . .	7.0-12.6	9.0	6.8-10.2	8.2	2.8-6.4	3.6	6.6-10.0	7.3	8.2	6.0	6.0
503	Lumber & other construction mat. . . . .	5.0-5.9	5.2	4.4-5.9	5.2	1.1-2.2	2.1	2.6-4.8	3.9	4.8	5.0	2.6
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	5.1-7.4	6.4	5.0-6.9	5.5	1.6-3.5	2.8	3.5-7.6	5.8	5.2	4.8	4.1
505	Metals & minerals, ex. petroleum . . . . .	6.1-8.5	7.8	5.7-8.3	7.8	1.0-2.8	1.4	1.8-3.5	2.9	7.5	6.7	1.6
506	Electrical goods . . . . .	3.0-4.4	3.5	3.1-4.3	3.6	1.0-1.9	1.3	2.7-3.2	2.8	3.3	2.8	1.7
507	Hardware, plumbing & heating equipment . . . . .	8.4-10.2	9.8	7.3-9.8	9.5	1.7-3.1	1.9	2.8-4.9	4.0	9.0	7.5	2.9
508	Machinery, equip. & supplies . . . . .	3.5-4.6	3.9	3.3-4.4	3.8	1.2-1.9	1.7	1.4-3.5	2.8	3.4	3.2	1.6
509	Miscellaneous durable goods . . . . .	3.9-4.7	4.3	4.0-4.7	4.2	1.1-1.9	1.5	2.8-4.1	3.1	4.1	4.8	2.5
51	Nondurable goods . . . . .	2.7-3.2	2.9	2.6-3.1	2.8	0.5-0.9	0.7	1.1-1.8	1.7	2.8	2.4	1.2
511	Paper & paper products . . . . .	4.1-5.1	4.4	3.9-4.7	4.5	0.8-1.7	1.1	2.7-4.1	3.6	4.2	5.1	2.7
512	Drugs, drug proprietaries and druggists' sundries . . . . .	4.8-6.2	5.6	5.1-5.7	5.2	0.9-2.0	1.4	2.1-4.1	3.0	5.2	4.7	1.8
513	Apparel, piece goods & notions . . . . .	8.1-10.8	10.3	7.9-10.5	9.9	2.3-5.5	3.9	4.2-6.7	6.0	9.2	9.1	3.8
514	Groceries & related products . . . . .	4.1-5.2	4.5	3.9-5.2	4.6	0.4-1.7	0.9	1.4-1.9	1.8	4.4	4.7	1.1
515	Farm-product raw materials . . . . .	6.2-7.0	6.8	5.5-7.1	6.2	1.2-3.6	2.5	3.8-6.3	5.2	6.0	4.7	3.8
516	Chemicals & allied products . . . . .	9.6-10.8	10.2	8.4-10.2	9.6	1.3-3.5	2.7	4.6-7.3	5.3	9.3	6.2	4.5
517	Petroleum & petroleum products . . . . .	7.1-8.3	7.8	6.9-8.3	7.5	1.0-1.9	1.4	2.7-4.8	3.6	7.6	6.7	3.0
518	Beer, wine, & distilled beverages . . . . .	3.8-5.7	4.5	3.6-4.9	4.2	0.8-2.0	1.3	1.9-3.3	2.4	4.0	3.4	1.1
519	Misc. nondurable goods . . . . .	5.4-8.4	6.6	5.3-7.8	6.2	1.0-4.0	1.8	2.0-3.8	3.2	6.1	5.6	1.8
	<b>Inventories, Total</b> . . . . .	1.2-1.4	1.3	1.2-1.4	1.2	0.2-0.4	0.3	0.6-0.9	0.8	(X)	(X)	(X)
50	Durable goods . . . . .	1.6-1.8	1.7	1.6-1.7	1.7	0.2-0.4	0.3	0.8-1.0	0.9	(X)	(X)	(X)
501	Motor vehicles & auto. equip. . . . .	6.0-6.4	6.1	5.8-6.3	6.0	0.7-1.0	0.8	2.1-2.9	2.3	(X)	(X)	(X)
502	Furniture & home furnishings . . . . .	8.2-9.2	8.7	8.2-9.0	8.4	0.9-1.7	1.1	4.6-6.0	5.5	(X)	(X)	(X)
503	Lumber & other construction mat. . . . .	5.9-7.8	6.9	5.6-7.5	6.7	0.7-1.3	0.9	3.3-4.4	4.1	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	5.5-7.2	6.7	4.9-6.7	5.9	0.7-3.1	1.3	3.6-5.0	4.0	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum . . . . .	3.7-5.8	4.7	4.2-5.3	4.8	0.7-1.2	0.8	2.3-3.3	2.9	(X)	(X)	(X)
506	Electrical goods . . . . .	2.2-3.3	2.9	2.5-3.4	2.8	0.4-0.6	0.5	1.1-1.7	1.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment . . . . .	5.6-6.4	5.9	5.4-6.3	5.8	0.5-1.2	0.7	1.6-2.2	2.0	(X)	(X)	(X)
508	Machinery, equip. & supplies . . . . .	3.3-4.3	3.8	3.3-4.2	3.8	0.4-0.8	0.5	1.7-2.3	2.0	(X)	(X)	(X)
509	Miscellaneous durable goods . . . . .	9.0-9.7	9.3	9.0-9.9	9.3	0.6-0.9	0.8	2.0-3.1	2.7	(X)	(X)	(X)
51	Nondurable goods . . . . .	2.8-3.3	3.2	2.9-3.2	3.1	0.3-0.9	0.4	1.1-1.7	1.3	(X)	(X)	(X)
511	Paper & paper products . . . . .	4.7-5.4	5.0	4.8-5.3	5.0	0.6-1.2	0.9	2.2-3.4	2.4	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries . . . . .	5.9-6.9	6.5	5.7-6.6	6.5	0.4-0.9	0.6	1.9-3.0	2.6	(X)	(X)	(X)
513	Apparel, piece goods & notions . . . . .	6.1-7.6	6.9	6.1-8.1	6.9	1.0-4.2	1.6	4.5-6.5	5.0	(X)	(X)	(X)
514	Groceries & related products . . . . .	7.1-8.7	8.4	7.3-9.3	8.6	0.6-1.6	0.9	2.4-4.0	3.8	(X)	(X)	(X)
515	Farm-product raw materials . . . . .	7.4-9.7	8.2	7.1-9.2	7.9	0.8-1.7	1.4	2.7-4.1	3.2	(X)	(X)	(X)
516	Chemicals & allied products . . . . .	8.9-10.7	9.8	8.6-10.1	9.7	1.0-3.2	1.7	4.3-6.5	4.7	(X)	(X)	(X)
517	Petroleum & petroleum products . . . . .	5.7-6.4	6.1	5.2-6.3	5.8	1.0-2.0	1.5	2.9-5.1	4.1	(X)	(X)	(X)
518	Beer, wine, & distilled beverages . . . . .	3.7-5.5	4.6	3.6-5.2	4.7	0.7-1.1	0.8	2.2-3.6	3.1	(X)	(X)	(X)
519	Misc. nondurable goods . . . . .	7.8-9.3	8.7	7.9-8.9	8.5	0.9-2.2	1.2	2.6-3.8	3.1	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for February 1990 through July 1990.

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Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989						1990							
		July <sup>r</sup>	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June <sup>r</sup>	July <sup>r</sup>	Aug.
	Sales, <sup>1</sup> Total .....	.951	1.043	.990	1.057	1.009	.960	.965	.912	1.042	.988	1.052	1.008	.971	1.029
50	Durable goods .....	.954	1.047	1.009	1.079	1.009	.940	.931	.894	1.041	.996	1.050	1.022	.976	1.034
501	Motor vehicles & auto. equip. ...	.954	1.013	.925	1.084	1.011	.979	.933	.914	1.055	1.019	1.069	1.028	.967	1.002
502	Furniture & home furnishings ...	.942	1.074	1.077	1.130	1.052	.916	.934	.912	1.003	.953	.995	.985	.955	1.070
503	Lumber & other construction mat. ....	1.066	1.138	1.076	1.134	.960	.849	.851	.776	.949	.999	1.062	1.110	1.098	1.148
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.872	1.026	1.086	1.176	1.164	1.031	.912	.916	1.033	.916	.869	.942	.882	1.066
505	Metals & minerals, ex. petroleum	.893	1.070	1.022	1.017	.965	.919	.974	.924	1.108	1.004	1.048	1.024	.924	1.071
506	Electrical goods .....	.956	1.063	1.036	1.109	1.053	.967	.944	.905	1.020	.950	.991	.990	.972	1.049
507	Hardware, plumbing & heating equipment .....	.995	1.075	.987	1.102	.999	.906	.943	.870	1.001	.988	1.062	1.053	1.029	1.058
508	Machinery, equip. & supplies ...	.939	1.050	1.017	1.043	.969	.958	.933	.911	1.059	1.018	1.054	1.017	.969	1.035
509	Miscellaneous durable goods ...	.937	.955	1.024	1.061	1.092	.918	.902	.871	1.017	1.046	1.107	.996	.939	.963
51	Nondurable goods .....	.946	1.034	.974	1.039	1.006	.983	.993	.928	1.041	.984	1.052	.994	.970	1.025
511	Paper & paper products .....	.940	1.076	.989	1.064	1.012	.955	1.005	.928	1.043	.955	.992	.981	.978	1.068
512	Drugs, drug proprietaries and druggists' sundries .....	.944	1.037	.999	1.042	1.001	.969	1.050	.933	1.013	.975	1.025	.966	.979	1.024
513	Apparel, piece goods & notions	1.043	1.260	1.031	1.166	.999	.724	.925	.997	1.028	.884	.877	1.009	1.106	1.214
514	Groceries & related products ...	.994	1.037	.963	1.003	1.040	1.012	.998	.919	.996	.957	1.066	.999	1.004	1.039
515	Farm-product raw materials ...	.873	.964	.907	1.105	1.050	.984	1.114	.960	1.069	.988	1.054	.927	.887	.937
516	Chemicals & allied products ...	.958	1.026	.983	1.039	.947	.875	.971	.914	1.055	1.034	1.094	1.082	.998	1.039
517	Petroleum & petroleum products	.928	.993	1.004	.976	.964	1.043	1.044	.973	1.091	.976	1.028	.976	.953	.999
518	Beer, wine, & distilled beverages	.978	1.124	.978	1.017	1.064	1.109	.814	.799	.971	.940	1.095	1.068	1.014	1.121
519	Misc. nondurable goods .....	.901	1.011	.952	1.017	.962	.992	.892	.886	1.085	1.084	1.148	1.018	.926	1.002
	Inventories, <sup>1</sup> Total .....	.993	.984	.994	1.009	1.004	1.000	1.007	1.009	1.008	1.007	.992	.995	.994	.983
50	Durable goods .....	1.009	.999	1.001	1.004	.993	.983	.991	.998	1.004	1.011	1.008	1.002	1.009	.996
501	Motor vehicles & auto. equip. ...	.980	.960	1.020	.997	1.014	1.012	.990	1.017	1.013	1.006	1.008	.988	.980	.960
502	Furniture & home furnishings ...	1.026	1.018	1.028	.998	.966	.978	.995	.978	.991	.995	1.008	1.018	1.028	1.018
503	Lumber & other construction mat. ....	1.040	.981	.991	.985	.943	.970	.994	.983	1.025	1.052	1.016	1.036	1.041	.975
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.053	1.021	1.038	1.024	.986	.963	.965	.973	.992	.989	.983	1.019	1.054	1.017
505	Metals & minerals, ex. petroleum	1.028	.971	.974	.984	.968	1.005	1.008	.990	1.009	1.016	1.019	1.030	1.030	.968
506	Electrical goods .....	1.019	1.014	1.010	1.009	.998	.989	.975	.992	.993	1.001	1.004	1.003	1.018	1.013
507	Hardware, plumbing & heating equipment .....	1.007	1.011	.998	1.013	.974	.967	.985	.995	1.013	1.014	1.006	1.001	1.007	1.013
508	Machinery, equip. & supplies ...	1.006	1.001	.990	1.002	1.001	.976	.999	.999	1.003	1.018	1.011	.999	1.006	1.000
509	Miscellaneous durable goods ...	1.004	1.044	1.013	1.007	1.005	.962	.958	.988	1.009	1.007	1.007	.989	1.002	1.041
51	Nondurable goods .....	.963	.957	.974	1.020	1.028	1.035	1.035	1.026	1.015	.997	.961	.985	.963	.956
511	Paper & paper products .....	1.008	.985	.969	1.006	.984	.996	1.023	1.013	1.023	1.012	.986	.993	1.010	.985
512	Drugs, drug proprietaries and druggists' sundries .....	.971	.967	.993	1.019	.970	1.034	1.054	1.029	.999	1.029	.956	.964	.972	.970
513	Apparel, piece goods & notions	1.053	1.045	1.025	.958	.948	.992	1.007	.990	.960	.949	1.024	1.054	1.052	1.043
514	Groceries & related products ...	.969	.953	1.000	1.050	1.056	1.030	1.001	1.003	.981	.982	.983	.977	.968	.951
515	Farm-product raw materials ...	.825	.827	.886	1.130	1.154	1.164	1.185	1.138	1.020	.971	.826	.836	.826	.823
516	Chemicals & allied products ...	1.014	1.011	.953	.962	.970	.971	1.008	1.009	1.014	1.030	1.029	1.041	1.015	1.013
517	Petroleum & petroleum products	1.000	.964	1.037	1.013	1.008	1.040	1.032	.988	1.024	.971	.972	1.004	1.001	.966
518	Beer, wine, & distilled beverages	.994	.978	1.010	1.064	1.054	.921	.948	.979	1.015	1.014	.991	1.009	.994	.976
519	Misc. nondurable goods .....	.930	.924	.944	.970	1.007	1.043	1.027	1.056	1.089	1.055	.963	.987	.932	.926

<sup>r</sup>Revised

<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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



U.S. Department of Commerce  
BUREAU OF THE CENSUS

August 1990

BW90-08  
Issued October 1990

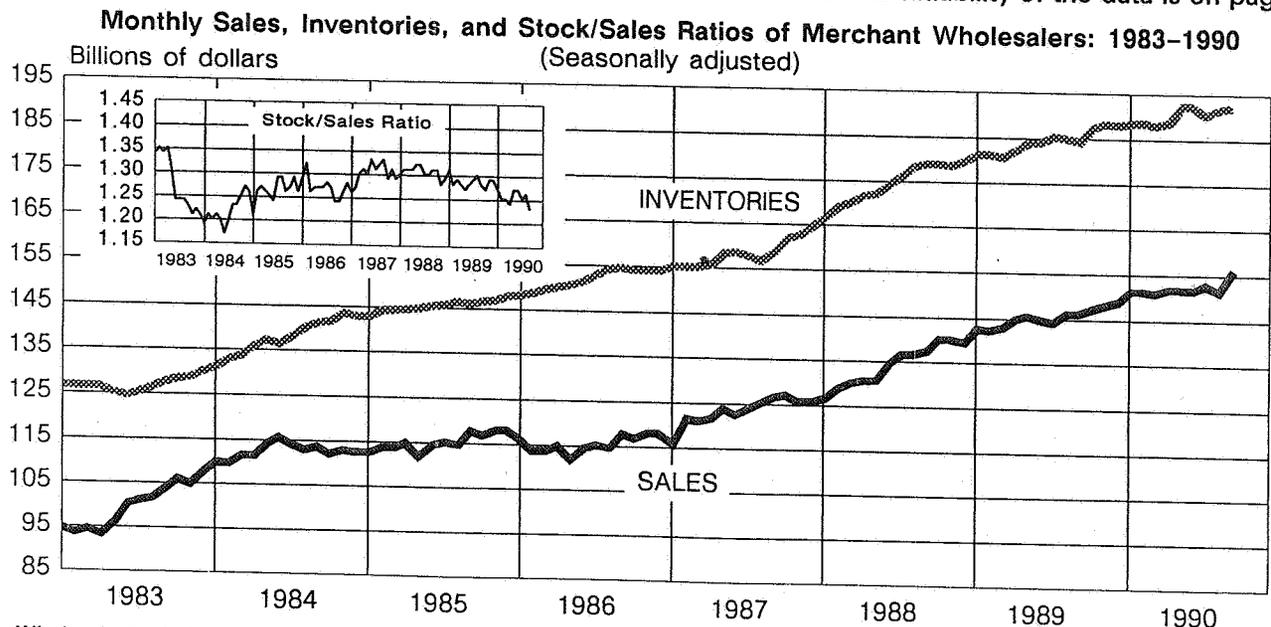
**Sales.** August 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$156.4 billion, up 2.6 percent ( $\pm 0.8$  percent) from the revised July level and were up 6.6 percent ( $\pm 1.8$  percent) from a year ago. Excluding the petroleum and petroleum products group, the percent change from the July 1990 sales level showed an increase of 0.8 percent ( $\pm 0.8$  percent) while the change from August 1989 was up 5.2 percent ( $\pm 1.8$  percent). The July preliminary estimate was revised upward by \$0.3 billion or about 0.2 percent. August sales of durable goods increased 0.7 percent ( $\pm 1.7$  percent) from the revised July level, and were 6.0 percent ( $\pm 2.9$  percent) above a year ago. August sales of nondurable goods were up 4.6 percent ( $\pm 1.0$  percent) from July and were up 7.2 percent ( $\pm 2.8$  percent) from the August 1989 level. Monthly increases in the sales of nondurable goods were as follows: petroleum and petroleum products increased 24.2 percent to \$14.6 billion and chemicals and allied products were up 12.7 percent to \$3.7 billion.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$193.0 billion at the end of August, up 0.3 percent ( $\pm 0.3$  percent) from the revised July level and were up 3.8 percent ( $\pm 2.1$  percent) from a year ago. The July preliminary estimate was revised upward by \$0.3

billion or about 0.2 percent. Inventories of durable goods wholesalers increased 1.2 percent ( $\pm 0.6$  percent) from the July level and were 4.2 percent ( $\pm 2.0$  percent) above a year ago. Monthly increases in the inventories of durable goods wholesalers were as follows: lumber and other construction materials increased 5.8 percent to \$6.1 billion; metals and minerals, except petroleum were up 4.1 percent to \$10.5 billion; and machinery, equipment and supplies increased 1.6 percent to \$50.4 billion. Inventories of nondurable goods wholesalers were down 1.4 percent ( $\pm 0.6$  percent) from the July level but were 3.0 percent ( $\pm 3.2$  percent) above August 1989. Monthly decreases in the inventories of nondurable goods wholesalers were as follows: miscellaneous nondurable goods decreased 6.5 percent to \$13.1 billion and farm-product raw materials were down 5.4 percent to \$7.2 billion. However, inventories of petroleum and petroleum products increased 16.4 percent to \$4.5 billion and paper and paper products were up 3.6 percent to \$4.3 billion for the same period.

**Stock/Sales Ratio.** The August stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.23, down from the July ratio of 1.26. The year ago ratio was 1.27.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.



Monthly Wholesale Trade for September is scheduled to be released November 7, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990								1989				
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>P</sup>	Aug. <sup>r</sup>	Sept.	Oct.	Nov.	Dec.
	<b>Sales, Total</b> .....	151,968	151,620	152,383	151,458	152,302	153,549	152,333	156,356	146,698	146,981	147,921	148,782	149,584
50	Durable goods .....	76,653	77,018	77,612	76,522	77,766	78,002	76,687	77,193	72,836	72,388	73,048	73,970	73,180
501	Motor vehicles & auto. equip. ....	14,630	15,217	15,792	13,926	14,676	14,824	14,953	15,300	14,049	13,901	13,892	13,708	13,034
502	Furniture & home furnishings .....	2,282	2,316	2,298	2,428	2,553	2,777	2,842	2,872	2,575	2,569	2,407	2,488	2,405
503	Lumber & other construction mat. ....	5,112	5,183	5,081	4,968	5,014	4,990	4,891	4,876	5,007	4,886	4,978	4,866	4,425
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,893	1,985	2,182	2,069	2,199	2,162	2,064	2,146	1,999	2,155	2,076	2,023	2,036
505	Metals & minerals, ex. petroleum .....	7,330	7,277	7,050	7,520	8,233	8,104	7,600	7,644	7,461	6,325	7,527	7,594	6,827
506	Electrical goods .....	9,818	9,782	9,732	9,740	9,746	9,516	9,587	9,539	9,413	9,312	9,336	9,495	9,605
507	Hardware, plumbing & heating equipment .....	3,651	3,760	3,805	3,670	3,716	3,802	3,822	3,711	3,649	3,588	3,624	3,619	3,649
508	Machinery, equip. & supplies .....	23,355	23,181	23,705	23,810	23,510	23,910	23,234	23,045	22,201	22,628	22,589	22,690	22,974
509	Miscellaneous durable goods .....	8,572	8,317	7,987	8,391	8,129	7,917	7,724	8,060	6,492	7,024	6,619	7,497	8,225
51	Nondurable goods .....	75,315	74,602	74,771	74,936	74,536	75,547	75,646	79,163	73,862	74,593	74,873	74,812	76,404
511	Paper & paper products .....	4,370	4,241	4,349	4,357	4,366	4,341	4,575	4,604	4,258	4,348	4,366	4,320	4,348
512	Drugs, drug proprietaries and druggists' sundries .....	4,065	3,990	4,014	4,106	3,932	3,989	4,098	4,128	3,651	3,738	3,889	3,958	3,992
513	Apparel, piece goods & notions .....	5,128	5,308	5,434	5,283	5,146	5,421	5,214	5,388	4,819	4,953	4,816	5,163	5,493
514	Groceries & related products .....	19,432	19,841	20,231	20,125	19,916	19,848	20,011	20,116	20,285	20,846	19,999	19,581	19,581
515	Farm-product raw materials .....	11,070	10,369	10,372	10,768	10,580	11,210	10,914	10,544	11,045	10,555	10,759	10,971	10,465
516	Chemicals & allied products .....	3,176	3,284	3,336	3,175	3,253	3,161	3,248	3,661	3,028	3,083	3,093	3,204	3,304
517	Petroleum & petroleum products .....	12,670	11,956	11,579	12,029	12,145	11,672	11,772	14,822	11,954	12,274	12,030	11,800	13,674
518	Beer, wine, & distilled beverages .....	3,627	3,630	3,586	3,678	3,537	3,597	3,630	3,623	3,580	3,569	3,532	3,586	3,604
519	Misc. nondurable goods .....	11,777	11,983	11,870	11,415	11,661	12,308	12,184	12,400	11,411	11,788	11,542	11,811	11,943
	<b>Inventories, Total</b> .....	189,375	188,847	189,361	190,903	193,201	191,259	192,466	193,005	185,944	185,098	188,103	189,057	188,819
50	Durable goods .....	125,510	125,685	124,901	125,781	126,998	126,061	126,786	128,252	123,053	122,148	123,716	124,363	123,954
501	Motor vehicles & auto. equip. ....	23,909	24,219	23,911	24,399	24,018	23,116	23,531	23,787	23,496	22,770	23,472	23,298	22,381
502	Furniture & home furnishings .....	4,123	4,142	4,429	4,364	4,338	4,544	4,483	4,404	4,540	4,565	4,570	4,510	4,496
503	Lumber & other construction mat. ....	5,966	5,821	5,815	5,896	5,750	5,773	5,736	6,070	5,704	5,725	5,805	5,704	5,847
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,452	4,392	4,387	4,353	4,407	4,396	4,333	4,427	4,421	4,460	4,473	4,580	4,589
505	Metals & minerals, ex. petroleum .....	10,548	10,299	10,075	9,956	10,064	9,824	10,100	10,519	10,680	10,811	10,741	10,879	10,693
506	Electrical goods .....	15,716	15,520	15,330	15,587	15,598	15,685	15,749	15,698	15,485	15,285	15,455	15,541	15,525
507	Hardware, plumbing & heating equipment .....	7,375	7,360	7,349	7,319	7,377	7,475	7,268	7,117	7,336	7,352	7,492	7,494	7,410
508	Machinery, equip. & supplies .....	46,811	46,977	47,066	47,775	49,165	49,031	49,617	50,430	45,084	45,016	45,351	45,777	46,506
509	Miscellaneous durable goods .....	6,610	6,955	6,539	6,132	6,281	6,217	5,969	5,800	6,307	6,164	6,357	6,580	6,507
51	Nondurable goods .....	63,865	63,162	64,460	65,122	66,203	65,198	65,680	64,753	62,891	62,950	64,387	64,694	64,865
511	Paper & paper products .....	4,077	3,998	4,011	4,039	4,049	4,081	4,117	4,267	4,158	4,230	4,249	4,175	4,154
512	Drugs, drug proprietaries and druggists' sundries .....	5,976	5,988	6,099	6,034	6,086	6,107	6,034	5,931	5,688	5,846	5,829	5,846	5,976
513	Apparel, piece goods & notions .....	9,697	9,776	10,184	10,414	10,365	10,351	10,194	9,904	9,317	9,244	9,391	9,428	9,807
514	Groceries & related products .....	13,129	12,674	13,335	13,362	13,418	13,167	13,182	13,372	12,694	12,499	13,335	13,527	13,593
515	Farm-product raw materials .....	7,743	7,559	7,830	8,102	8,229	7,581	7,633	7,221	7,006	6,778	7,354	7,685	7,831
516	Chemicals & allied products .....	2,581	2,544	2,689	2,626	2,598	2,623	2,770	2,635	2,588	2,771	2,575	2,523	2,560
517	Petroleum & petroleum products .....	3,666	3,849	3,862	3,827	3,814	3,779	3,857	4,490	4,016	4,058	4,060	4,038	3,762
518	Beer, wine, & distilled beverages .....	4,009	3,903	3,929	3,868	3,882	3,898	3,831	3,786	3,859	3,918	3,915	4,025	4,022
519	Misc. nondurable goods .....	12,987	12,871	12,521	12,850	13,762	13,611	14,062	13,147	13,565	13,606	13,679	13,447	13,160
	<b>Stock/sales ratios, Total</b> .....	1.25	1.25	1.24	1.26	1.27	1.25	1.26	1.23	1.27	1.26	1.27	1.27	1.26
50	Durable goods .....	1.64	1.63	1.61	1.64	1.63	1.62	1.65	1.66	1.69	1.69	1.69	1.68	1.69
501	Motor vehicles & auto. equip. ....	1.63	1.59	1.51	1.75	1.64	1.56	1.57	1.55	1.67	1.64	1.69	1.70	1.72
502	Furniture & home furnishings .....	1.81	1.79	1.93	1.80	1.70	1.64	1.58	1.53	1.76	1.78	1.90	1.81	1.87
503	Lumber & other construction mat. ....	1.17	1.12	1.14	1.19	1.15	1.16	1.18	1.24	1.14	1.17	1.17	1.17	1.32
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.35	2.21	2.03	2.10	2.01	2.03	2.10	2.06	2.22	2.07	2.15	2.26	2.25
505	Metals & minerals, ex. petroleum .....	1.44	1.42	1.43	1.32	1.22	1.21	1.33	1.38	1.43	1.71	1.43	1.43	1.57
506	Electrical goods .....	1.60	1.59	1.58	1.60	1.60	1.65	1.64	1.65	1.65	1.64	1.66	1.64	1.62
507	Hardware, plumbing & heating equipment .....	2.01	1.96	1.93	1.99	1.99	1.97	1.90	1.92	2.01	2.05	2.07	2.07	2.03
508	Machinery, equip. & supplies .....	2.00	2.03	1.99	2.01	2.09	2.05	2.14	2.19	2.03	1.99	2.01	2.02	2.02
509	Miscellaneous durable goods .....	.77	.84	.82	.73	.77	.79	.77	.72	.97	.88	.96	.88	.79
51	Nondurable goods .....	.85	.85	.86	.87	.89	.86	.87	.82	.85	.84	.86	.86	.85
511	Paper & paper products .....	.93	.94	.92	.93	.93	.94	.90	.93	.98	.97	.97	.97	.96
512	Drugs, drug proprietaries and druggists' sundries .....	1.47	1.50	1.52	1.47	1.55	1.53	1.47	1.44	1.56	1.56	1.50	1.48	1.50
513	Apparel, piece goods & notions .....	1.89	1.84	1.87	1.97	2.01	1.91	1.96	1.84	1.93	1.87	1.95	1.83	1.79
514	Groceries & related products .....	.68	.64	.66	.66	.67	.66	.66	.66	.63	.62	.64	.68	.69
515	Farm-product raw materials .....	.70	.73	.75	.75	.78	.68	.70	.68	.63	.64	.68	.70	.75
516	Chemicals & allied products .....	.81	.77	.81	.83	.80	.83	.85	.72	.85	.90	.83	.79	.77
517	Petroleum & petroleum products .....	.29	.32	.33	.32	.31	.32	.33	.31	.34	.33	.34	.34	.28
518	Beer, wine, & distilled beverages .....	1.11	1.08	1.10	1.05	1.10	1.08	1.06	1.04	1.08	1.10	1.11	1.12	1.12
519	Misc. nondurable goods .....	1.10	1.07	1.05	1.13	1.18	1.11	1.15	1.06	1.19	1.15	1.19	1.14	1.10

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.

<sup>r</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990								1989					Total 8 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>P</sup>	Aug.	Sept.	Oct.	Nov.	Dec.	1990	1989
	<b>Sales, Total</b> .....	146,135	138,361	158,734	150,395	160,028	154,461	147,580	162,054	152,731	145,394	155,847	150,006	144,355	1,217,746	1,152,592
50	Durable goods .....	71,238	69,070	80,795	76,808	81,467	79,475	74,234	80,120	76,020	73,080	78,451	74,608	69,247	613,207	564,574
501	Motor vehicles & auto. equip. ....	13,650	13,908	16,661	14,191	15,689	15,239	14,355	15,422	14,302	12,858	15,059	13,859	12,760	119,115	110,439
502	Furniture & home furnishings .....	2,131	2,112	2,305	2,314	2,540	2,735	2,728	3,082	2,766	2,767	2,720	2,617	2,203	19,947	19,294
503	Lumber & other construction mat. ...	4,350	4,022	4,822	4,963	5,325	5,539	5,323	5,607	5,708	5,257	5,645	4,671	3,757	39,951	39,302
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,726	1,818	2,233	1,895	1,902	2,037	1,818	2,316	2,080	2,340	2,441	2,355	2,099	15,745	15,088
505	Metals & minerals, ex. petroleum ..	7,139	6,724	7,811	7,550	8,628	8,299	7,068	8,149	7,968	6,464	7,655	7,319	6,274	61,368	58,293
506	Electrical goods .....	9,268	8,853	9,927	9,253	9,658	9,421	9,347	10,016	9,987	9,647	10,354	9,998	9,288	75,743	71,941
507	Hardware, plumbing & heating equipment .....	3,452	3,271	3,809	3,626	3,946	4,004	3,929	3,922	3,904	3,541	3,994	3,615	3,306	29,959	28,963
508	Machinery, equip. & supplies .....	21,790	21,118	25,104	24,239	24,780	24,316	22,514	23,852	23,222	23,013	23,560	21,987	22,009	187,713	171,598
509	Miscellaneous durable goods .....	7,732	7,244	8,123	8,777	8,999	7,885	7,152	7,754	6,083	7,193	7,023	6,187	7,551	63,666	49,656
51	<b>Nondurable goods</b> .....	74,897	69,291	77,939	73,587	78,559	74,986	73,346	81,934	76,711	72,314	77,396	75,398	75,108	604,539	588,018
511	Paper & paper products .....	4,392	3,936	4,536	4,161	4,331	4,259	4,493	4,917	4,586	4,300	4,645	4,372	4,152	35,025	33,272
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,723	4,066	4,003	4,030	3,853	4,000	4,248	3,786	3,734	4,052	3,962	3,868	32,191	28,352
513	Apparel, piece goods & notions .....	4,743	5,292	5,586	4,670	4,513	5,470	5,678	6,546	5,975	5,107	5,616	5,158	3,977	42,498	38,131
514	Groceries & related products .....	19,333	18,234	20,150	19,260	21,230	19,828	20,131	21,061	20,981	19,534	20,909	20,739	19,816	159,287	161,744
515	Farm-product raw materials .....	12,332	9,954	11,088	10,639	11,151	10,392	9,757	9,869	10,658	9,573	11,889	11,520	10,298	85,182	88,921
516	Chemicals & allied products .....	3,084	3,002	3,519	3,283	3,559	3,420	3,180	3,829	3,116	3,031	3,214	3,034	2,891	26,876	24,977
517	Petroleum & petroleum products .....	13,228	11,633	12,633	11,740	12,485	11,392	11,101	14,871	12,014	12,323	11,741	11,375	14,262	99,083	95,360
518	Beer, wine, & distilled beverages ..	2,952	2,900	3,482	3,457	3,873	3,842	3,663	4,069	4,024	3,490	3,592	3,816	3,997	28,238	27,306
519	Misc. nondurable goods .....	10,505	10,617	12,879	12,374	13,387	12,530	11,343	12,524	11,571	11,222	11,738	11,362	11,847	96,159	89,955
	<b>Inventories, Total</b> .....	190,390	190,475	190,909	192,411	192,015	190,333	191,188	189,296	182,299	183,868	189,404	189,822	189,042	(X)	(X)
50	Durable goods .....	124,313	125,488	125,562	127,344	128,124	126,390	127,824	127,526	122,371	122,335	123,856	123,652	122,053	(X)	(X)
501	Motor vehicles & auto. equip. ....	23,670	24,631	24,222	24,545	24,210	22,839	22,990	22,883	22,603	23,225	23,402	23,624	22,650	(X)	(X)
502	Furniture & home furnishings .....	4,102	4,051	4,389	4,342	4,373	4,626	4,609	4,474	4,613	4,693	4,561	4,357	4,397	(X)	(X)
503	Lumber & other construction mat. ...	5,930	5,722	5,960	6,203	5,842	5,981	5,960	5,924	5,579	5,673	5,718	5,379	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,296	4,273	4,352	4,305	4,332	4,480	4,541	4,498	4,501	4,629	4,580	4,516	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum ..	10,632	10,196	10,166	10,115	10,255	10,119	10,403	10,224	10,381	10,530	10,569	10,531	10,746	(X)	(X)
506	Electrical goods .....	15,323	15,396	15,223	15,603	15,660	15,732	16,042	15,802	15,686	15,438	15,594	15,510	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment .....	7,264	7,323	7,445	7,421	7,421	7,482	7,355	7,138	7,358	7,337	7,589	7,299	7,165	(X)	(X)
508	Machinery, equip. & supplies .....	46,764	47,024	47,207	48,635	49,706	48,982	49,915	50,480	45,129	44,566	45,442	45,823	45,390	(X)	(X)
509	Miscellaneous durable goods .....	6,332	6,872	6,598	6,175	6,325	6,149	5,987	6,003	6,521	6,244	6,401	6,613	6,260	(X)	(X)
51	<b>Nondurable goods</b> .....	66,077	64,987	65,347	65,067	63,891	63,943	63,364	61,770	59,928	61,533	65,548	66,170	66,989	(X)	(X)
511	Paper & paper products .....	4,171	4,050	4,103	4,087	3,992	4,052	4,166	4,207	4,108	4,099	4,274	4,108	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,162	6,093	6,209	5,818	5,887	5,877	5,765	5,517	5,805	5,940	5,671	6,179	(X)	(X)
513	Apparel, piece goods & notions .....	9,765	9,678	9,777	9,883	10,614	10,910	10,632	10,231	9,634	9,475	8,997	8,938	9,729	(X)	(X)
514	Groceries & related products .....	13,142	12,712	13,082	13,121	13,190	12,864	12,787	12,717	12,085	12,489	14,002	14,284	14,001	(X)	(X)
515	Farm-product raw materials .....	9,176	8,602	7,987	7,867	6,797	6,338	6,404	5,914	5,724	6,005	8,310	8,869	9,115	(X)	(X)
516	Chemicals & allied products .....	2,602	2,567	2,727	2,705	2,673	2,731	2,792	2,680	2,629	2,541	2,477	2,447	2,486	(X)	(X)
517	Petroleum & petroleum products .....	3,783	3,803	3,955	3,716	3,707	3,794	3,845	4,391	3,920	4,208	4,113	4,070	3,912	(X)	(X)
518	Beer, wine, & distilled beverages ..	3,801	3,821	3,988	3,922	3,847	3,933	3,797	3,691	3,763	3,957	4,166	4,242	3,704	(X)	(X)
519	Misc. nondurable goods .....	13,338	13,592	13,635	13,557	13,253	13,434	13,064	12,174	12,548	12,844	13,269	13,541	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> .....	1.30	1.38	1.20	1.28	1.20	1.23	1.30	1.17	1.19	1.26	1.22	1.27	1.31	(X)	(X)
50	Durable goods .....	1.75	1.82	1.55	1.66	1.57	1.59	1.72	1.59	1.61	1.67	1.58	1.66	1.76	(X)	(X)
501	Motor vehicles & auto. equip. ....	1.73	1.77	1.45	1.73	1.54	1.50	1.60	1.48	1.58	1.81	1.55	1.70	1.78	(X)	(X)
502	Furniture & home furnishings .....	1.92	1.92	1.90	1.88	1.72	1.69	1.69	1.45	1.67	1.70	1.68	1.68	2.00	(X)	(X)
503	Lumber & other construction mat. ...	1.36	1.42	1.24	1.25	1.10	1.08	1.12	1.06	.98	1.08	1.01	1.15	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.49	2.35	1.95	2.27	2.28	2.20	2.50	1.94	2.16	1.98	1.88	1.92	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum ..	1.49	1.52	1.30	1.34	1.19	1.22	1.47	1.25	1.30	1.63	1.38	1.44	1.71	(X)	(X)
506	Electrical goods .....	1.65	1.74	1.53	1.69	1.62	1.67	1.72	1.59	1.57	1.60	1.51	1.55	1.85	(X)	(X)
507	Hardware, plumbing & heating equipment .....	2.10	2.24	1.95	2.05	1.88	1.87	1.87	1.82	1.88	2.07	1.90	2.02	2.17	(X)	(X)
508	Machinery, equip. & supplies .....	2.15	2.23	1.88	2.01	2.01	2.01	2.22	2.12	1.94	1.94	1.93	2.08	2.06	(X)	(X)
509	Miscellaneous durable goods .....	.82	.95	.81	.70	.70	.78	.84	.77	1.07	.87	.91	.81	.83	(X)	(X)
51	<b>Nondurable goods</b> .....	.88	.94	.84	.88	.81	.85	.86	.75	.78	.85	.88	.89	.89	(X)	(X)
511	Paper & paper products .....	.95	1.03	.90	.98	.92	.95	.93	.86	.90	.95	.92	.94	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.50	1.55	1.44	1.53	1.47	1.36	1.46	1.55	1.47	1.43	1.60	(X)	(X)
513	Apparel, piece goods & notions .....	2.08	1.83	1.75	2.12	2.35	1.99	1.87	1.56	1.61	1.88	1.60	1.73	2.45	(X)	(X)
514	Groceries & related products .....	.68	.70	.65	.68	.62	.65	.64	.60	.58	.64	.67	.69	.71	(X)	(X)
515	Farm-product raw materials .....	.74	.86	.72	.74	.61	.61	.66	.60	.54	.63	.70	.77	.89	(X)	(X)
516	Chemicals & allied products .....	.84	.86	.77	.82	.75	.80	.88	.70	.84	.87	.77	.81	.86	(X)	(X)
517	Petroleum & petroleum products .....	.29	.32	.31	.32	.30	.33	.35	.30	.33	.34	.35	.36	.27	(X)	(X)
518	Beer, wine, & distilled beverages ..	1.29	1.32	1.15	1.13	.99	1.02	1.04	.91	.94	1.13	1.16	1.11	.93	(X)	(X)
519	Misc. nondurable goods .....	1.27	1.28	1.06	1.10	.99	1.07	1.15	.97	1.08	1.14	1.13	1.19	1.16	(X)	(X)

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
X Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Aug. 1990 from July 1990	Aug. 1990 from Aug. 1989	8 months 1990 from 8 months 1989	Aug. 1990 from July 1990	Aug. 1990 from Aug. 1989	Aug. 1990 from July 1990	Aug. 1990 from Aug. 1989	Aug. 1990 from July 1990	Aug. 1990 from Aug. 1989
	<b>Total</b> .....	+9.8	+6.1	+5.7	-1.0	+3.8	+2.6	+6.6	+3.3	+3.8
50	Durable goods .....	+7.9	+5.4	+8.6	-2	+4.2	+7	+6.0	+1.2	+4.2
501	Motor vehicles & auto. equip. ....	+7.4	+7.8	+7.9	-.5	+1.2	+2.3	+8.9	+1.1	+1.2
502	Furniture & home furnishings .....	+13.0	+11.4	+3.4	-2.9	-3.0	+1.1	+11.5	-1.8	-3.0
503	Lumber & other construction mat. ....	+5.3	-1.8	+1.7	-.6	+6.2	+3	-2.6	+5.8	+6.4
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	+27.4	+11.3	+4.4	-.9	-.1	+4.0	+7.9	+2.2	+1
505	Metals & minerals, ex. petroleum .....	+15.3	+2.3	+5.3	-1.7	-1.5	+6	+2.5	+4.1	-1.5
506	Electrical goods .....	+7.2	+3	+5.3	-1.0	+1.4	-5	+1.3	-.3	+1.4
507	Hardware, plumbing & heating equipment .....	-.2	+5	+3.4	-3.0	-3.0	-2.9	+1.7	-2.1	-3.0
508	Machinery, equip. & supplies .....	+5.9	+2.7	+9.4	+1.1	+11.9	-.8	+3.8	+1.6	+11.9
509	Miscellaneous durable goods .....	+8.4	+27.5	+28.2	+3	-7.9	+4.4	+24.2	-2.8	-8.0
51	Nondurable goods .....	+11.7	+6.8	+2.8	-2.5	+3.1	+4.6	+7.2	-1.4	+3.0
511	Paper & paper products .....	+9.4	+7.2	+5.3	+1.0	+2.4	+6	+8.1	+3.6	+2.6
512	Drugs, drug proprietaries and druggists' sundries .....	+6.2	+12.2	+13.5	-1.9	+4.5	+7	+13.1	-1.7	+4.3
513	Apparel, piece goods & notions .....	+15.3	+9.6	+11.5	-3.8	+6.2	+3.3	+11.8	-2.8	+6.3
514	Groceries & related products .....	+4.6	+4	-1.5	-.5	+5.2	+9	+4	+1.4	+5.3
515	Farm-product raw materials .....	+1.1	-7.4	-4.2	-7.7	+3.3	-3.4	-4.5	-5.4	+3.1
516	Chemicals & allied products .....	+20.4	+22.9	+7.6	-4.0	+1.9	+12.7	+20.9	-4.9	+1.8
517	Petroleum & petroleum products .....	+34.0	+23.8	+3.9	+14.2	+12.0	+24.2	+22.3	+16.4	+11.8
518	Beer, wine, & distilled beverages .....	+11.1	+1.1	+3.4	-2.8	-1.9	-.2	+1.2	-1.2	-1.9
519	Misc. nondurable goods .....	+10.4	+8.2	+6.9	-6.8	-3.0	+1.8	+8.7	-6.5	-3.1

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

## CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### Unpublished Data

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### Definition of Terms

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### Kind-of-Business Classifications

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### Adjustment for Seasonal and Trading-Day Variation

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.4-1.9	1.6	1.4-1.8	1.5	0.5-0.6	0.5	0.9-1.3	1.1	1.5	1.5	
50	Durable goods .....	1.9-2.5	2.2	1.8-2.3	2.1	0.4-1.0	0.7	0.9-1.7	1.3	2.1	1.8	0.7
501	Motor vehicles & auto. equip. ....	4.7-7.2	5.3	4.4-6.0	5.3	0.8-3.4	1.3	2.2-4.7	3.3	5.4	4.7	2.2
502	Furniture & home furnishings .....	7.0-12.6	9.8	6.8-10.7	8.5	2.8-6.4	3.7	6.6-10.0	7.3	8.1	5.9	5.7
503	Lumber & other construction mat. ....	5.0-5.3	5.2	4.4-5.4	5.1	1.6-2.2	2.1	2.6-4.8	3.8	4.8	4.9	2.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	6.0-7.4	6.6	5.0-6.9	5.9	1.6-3.9	3.1	3.5-7.6	5.8	5.2	4.6	3.7
505	Metals & minerals, ex. petroleum .....	6.1-10.2	7.8	5.7-9.3	7.8	1.0-2.8	1.5	1.8-3.5	2.6	7.9	7.0	1.6
506	Electrical goods .....	2.7-4.3	3.2	2.6-4.3	3.2	1.0-1.9	1.3	2.3-3.2	2.8	3.1	2.8	1.5
507	Hardware, plumbing & heating equipment ..	8.4-10.2	9.6	8.6-9.8	9.7	1.7-3.0	1.9	2.8-4.9	3.8	9.0	7.6	2.6
508	Machinery, equip. & supplies .....	3.5-4.6	4.0	3.2-4.4	3.8	1.2-1.9	1.7	1.4-3.5	2.8	3.4	3.2	1.5
509	Miscellaneous durable goods .....	3.9-4.6	4.3	3.8-4.7	4.2	1.1-1.9	1.3	2.8-4.1	3.0	4.1	4.7	2.3
51	Nondurable goods .....	2.7-3.2	3.0	2.6-3.1	2.8	0.5-0.9	0.7	1.1-1.8	1.6	2.8	2.5	1.1
511	Paper & paper products .....	4.1-5.1	4.5	3.9-4.7	4.5	0.9-1.7	1.2	3.3-4.1	3.8	4.2	5.1	2.7
512	Drugs, drug proprietaries and druggists' sundries .....	4.8-7.7	5.6	5.1-6.5	5.4	0.9-1.7	1.4	2.1-4.9	3.0	5.5	4.7	2.2
513	Apparel, piece goods & notions .....	8.1-10.8	10.3	7.9-10.5	9.9	2.3-5.5	3.9	5.6-6.7	6.0	8.9	8.9	3.8
514	Groceries & related products .....	4.1-4.7	4.5	3.9-5.2	4.5	0.4-1.7	0.8	1.4-2.2	1.8	4.4	4.7	1.1
515	Farm-product raw materials .....	6.2-7.0	6.8	5.7-7.1	6.3	1.2-3.6	2.3	3.8-6.3	5.3	5.9	4.5	3.5
516	Chemicals & allied products .....	9.6-11.3	10.3	8.7-10.2	9.6	1.3-3.4	2.7	4.6-6.9	5.3	9.5	6.2	4.5
517	Petroleum & petroleum products .....	7.1-8.8	7.8	6.9-8.3	7.7	1.2-2.0	1.6	2.9-4.8	3.8	7.7	6.7	2.9
518	Beer, wine, & distilled beverages .....	3.8-5.7	4.5	3.6-4.9	4.2	0.8-2.0	1.3	1.9-3.3	2.4	4.1	3.4	1.4
519	Misc. nondurable goods .....	5.4-8.4	6.8	5.3-7.8	6.6	1.0-4.0	2.1	2.0-3.8	3.3	6.2	5.5	1.8
	<b>Inventories, Total</b> .....	1.2-1.4	1.3	1.2-1.4	1.2	0.2-0.4	0.3	0.6-1.2	0.8	(X)	(X)	(X)
50	Durable goods .....	1.6-1.8	1.7	1.6-1.7	1.7	0.2-0.4	0.3	0.8-1.2	0.9	(X)	(X)	(X)
501	Motor vehicles & auto. equip. ....	5.9-6.4	6.1	5.8-6.3	6.0	0.7-1.3	0.8	2.1-3.4	2.3	(X)	(X)	(X)
502	Furniture & home furnishings .....	8.4-9.2	8.7	8.2-9.0	8.4	1.0-1.7	1.2	4.6-6.0	5.1	(X)	(X)	(X)
503	Lumber & other construction mat. ....	6.6-7.8	6.9	6.3-7.5	6.7	0.7-1.3	1.0	3.5-4.6	4.2	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.5-7.2	6.7	5.8-6.7	6.0	0.7-3.1	1.7	3.7-5.0	4.0	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	3.7-5.2	4.7	4.2-5.2	4.8	0.7-1.2	0.8	2.0-3.3	2.6	(X)	(X)	(X)
506	Electrical goods .....	2.2-3.3	2.8	2.2-3.4	2.7	0.3-0.6	0.5	1.1-1.6	1.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.6-6.6	6.1	5.4-6.7	6.0	0.7-1.2	0.7	1.6-2.2	2.0	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.3-4.3	4.0	3.3-4.2	3.9	0.5-0.8	0.5	1.7-2.2	2.0	(X)	(X)	(X)
509	Miscellaneous durable goods .....	9.1-9.7	9.3	9.0-9.9	9.2	0.6-1.3	0.8	2.0-3.1	2.7	(X)	(X)	(X)
51	Nondurable goods .....	2.8-3.3	3.2	2.9-3.4	3.1	0.3-0.9	0.5	1.1-1.9	1.3	(X)	(X)	(X)
511	Paper & paper products .....	4.7-5.4	5.1	4.8-5.3	5.0	0.7-1.2	0.9	2.4-3.4	2.5	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	5.9-7.1	6.7	5.7-7.1	6.5	0.4-0.9	0.6	1.9-2.8	2.6	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.1-7.3	6.9	6.1-7.4	6.9	1.0-4.2	1.6	4.5-6.5	5.0	(X)	(X)	(X)
514	Groceries & related products .....	7.1-8.7	8.2	7.3-9.0	8.5	0.6-1.6	0.9	2.4-4.5	3.8	(X)	(X)	(X)
515	Farm-product raw materials .....	7.8-10.0	8.6	7.3-9.5	8.2	0.8-1.7	1.5	2.7-4.0	3.2	(X)	(X)	(X)
516	Chemicals & allied products .....	8.9-10.3	9.4	8.6-10.0	9.6	1.0-3.2	1.7	4.3-4.8	4.5	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.8-6.5	6.3	5.5-6.6	6.0	1.0-1.7	1.3	3.3-6.5	4.8	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	3.7-4.8	4.4	3.6-4.8	4.5	0.5-1.1	0.8	2.2-4.4	3.4	(X)	(X)	(X)
519	Misc. nondurable goods .....	7.8-10.0	8.7	7.9-9.3	8.7	1.1-2.2	1.5	2.6-3.8	3.1	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for March 1990 through August 1990.

Official Business  
Penalty for Private Use, \$300

Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989					1990								
		Aug. <sup>r</sup>	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July <sup>r</sup>	Aug. <sup>r</sup>	Sept.
	<b>Sales,<sup>1</sup> Total</b> .....	1.043	.990	1.057	1.009	.960	.965	.912	1.042	.988	1.052	1.008	.968	1.035	.973
50	Durable goods .....	1.046	1.009	1.079	1.009	.940	.931	.894	1.041	.996	1.050	1.022	.974	1.037	.981
501	Motor vehicles & auto. equip. ...	1.018	.925	1.084	1.011	.979	.933	.914	1.055	1.019	1.069	1.028	.960	1.008	.896
502	Furniture & home furnishings ...	1.074	1.077	1.130	1.052	.916	.934	.912	1.003	.953	.995	.985	.960	1.073	1.046
503	Lumber & other construction mat. ....	1.140	1.076	1.134	.960	.849	.851	.776	.949	.999	1.062	1.110	1.095	1.150	1.031
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.046	1.086	1.176	1.164	1.031	.912	.916	1.033	.916	.869	.942	.881	1.079	1.047
505	Metals & minerals, ex. petroleum	1.068	1.022	1.017	.965	.919	.974	.924	1.108	1.004	1.048	1.024	.930	1.066	1.014
506	Electrical goods .....	1.061	1.036	1.109	1.053	.967	.944	.905	1.020	.950	.991	.990	.975	1.050	1.015
507	Hardware, plumbing & heating equipment .....	1.070	.987	1.102	.999	.906	.943	.870	1.001	.988	1.062	1.053	1.028	1.057	.964
508	Machinery, equip. & supplies ...	1.046	1.017	1.043	.969	.958	.933	.911	1.059	1.018	1.054	1.017	.969	1.035	.998
509	Miscellaneous durable goods ...	.937	1.024	1.061	1.092	.918	.902	.871	1.017	1.046	1.107	.996	.926	.962	.985
51	<b>Nondurable goods</b> .....	1.040	.974	1.039	1.006	.983	.993	.928	1.041	.984	1.052	.994	.966	1.040	.954
511	Paper & paper products .....	1.077	.989	1.064	1.012	.955	1.005	.928	1.043	.955	.992	.981	.982	1.068	.971
512	Drugs, drug proprietaries and druggists' sundries .....	1.037	.999	1.042	1.001	.969	1.050	.933	1.013	.975	1.025	.966	.976	1.029	.978
513	Apparel, piece goods & notions	1.240	1.031	1.166	.999	.724	.925	.997	1.028	.884	.877	1.009	1.089	1.215	1.025
514	Groceries & related products ...	1.043	.963	1.003	1.040	1.012	.998	.919	.996	.957	1.066	.999	1.006	1.043	.950
515	Farm-product raw materials ....	.965	.907	1.105	1.050	.984	1.114	.960	1.069	.988	1.054	.927	.894	.936	.916
516	Chemicals & allied products ....	1.029	.983	1.039	.947	.875	.971	.914	1.055	1.034	1.094	1.082	.979	1.046	.943
517	Petroleum & petroleum products	1.005	1.004	.976	.964	1.043	1.044	.973	1.091	.976	1.028	.976	.943	1.017	.961
518	Beer, wine, & distilled beverages	1.124	.978	1.017	1.064	1.109	.814	.799	.971	.940	1.095	1.068	1.009	1.123	.945
519	Misc. nondurable goods .....	1.014	.952	1.017	.962	.992	.892	.886	1.085	1.084	1.148	1.018	.931	1.010	.949
	<b>Inventories,<sup>1</sup> Total</b> .....	.983	.994	1.009	1.004	1.000	1.007	1.009	1.008	1.007	.992	.995	.994	.982	.993
50	Durable goods .....	.998	1.001	1.004	.993	.983	.991	.998	1.004	1.011	1.008	1.002	1.009	.997	1.004
501	Motor vehicles & auto. equip. ...	.962	1.020	.997	1.014	1.012	.990	1.017	1.013	1.006	1.008	.988	.977	.962	1.018
502	Furniture & home furnishings ...	1.016	1.028	.998	.966	.978	.995	.978	.991	.995	1.008	1.018	1.028	1.016	1.033
503	Lumber & other construction mat. ....	.978	.991	.985	.943	.970	.994	.983	1.025	1.052	1.016	1.036	1.039	.976	.986
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.018	1.038	1.024	.986	.963	.965	.973	.992	.989	.983	1.019	1.048	1.016	1.036
505	Metals & minerals, ex. petroleum	.972	.974	.984	.968	1.005	1.008	.990	1.009	1.016	1.019	1.030	1.030	.972	.975
506	Electrical goods .....	1.013	1.010	1.009	.998	.989	.975	.992	.993	1.001	1.004	1.003	1.020	1.013	1.007
507	Hardware, plumbing & heating equipment .....	1.003	.998	1.013	.974	.967	.985	.995	1.013	1.014	1.006	1.001	1.012	1.003	1.002
508	Machinery, equip. & supplies ...	1.001	.990	1.002	1.001	.976	.999	1.001	1.003	1.018	1.011	.999	1.006	1.001	.990
509	Miscellaneous durable goods ...	1.034	1.013	1.007	1.005	.962	.958	.988	1.009	1.007	1.007	.989	1.003	1.035	1.006
51	<b>Nondurable goods</b> .....	.952	.974	1.020	1.028	1.035	1.035	1.026	1.015	.997	.961	.985	.965	.952	.974
511	Paper & paper products .....	.988	.969	1.006	.984	.996	1.023	1.013	1.023	1.012	.986	.993	1.012	.986	.971
512	Drugs, drug proprietaries and druggists' sundries .....	.970	.993	1.019	.970	1.034	1.054	1.029	.999	1.029	.956	.964	.974	.972	.995
513	Apparel, piece goods & notions	1.034	1.025	.958	.948	.992	1.007	.990	.960	.949	1.024	1.054	1.043	1.033	1.023
514	Groceries & related products ...	.952	1.000	1.050	1.056	1.030	1.001	1.003	.981	.982	.983	.977	.970	.951	1.003
515	Farm-product raw materials ....	.817	.886	1.130	1.154	1.164	1.185	1.138	1.020	.971	.826	.836	.839	.819	.883
516	Chemicals & allied products ....	1.016	.953	.962	.970	.971	1.008	1.009	1.014	1.030	1.029	1.041	1.008	1.017	.955
517	Petroleum & petroleum products	.976	1.037	1.013	1.008	1.040	1.032	.988	1.024	.971	.972	1.004	.997	.978	1.040
518	Beer, wine, & distilled beverages	.975	1.010	1.064	1.054	.921	.948	.979	1.015	1.014	.991	1.009	.991	.975	1.012
519	Misc. nondurable goods .....	.925	.944	.970	1.007	1.043	1.027	1.056	1.089	1.055	.963	.987	.929	.926	.946

<sup>r</sup>Revised

<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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

September 1990

U.S. Department of Commerce  
BUREAU OF THE CENSUS

BW90-09  
Issued November 1990

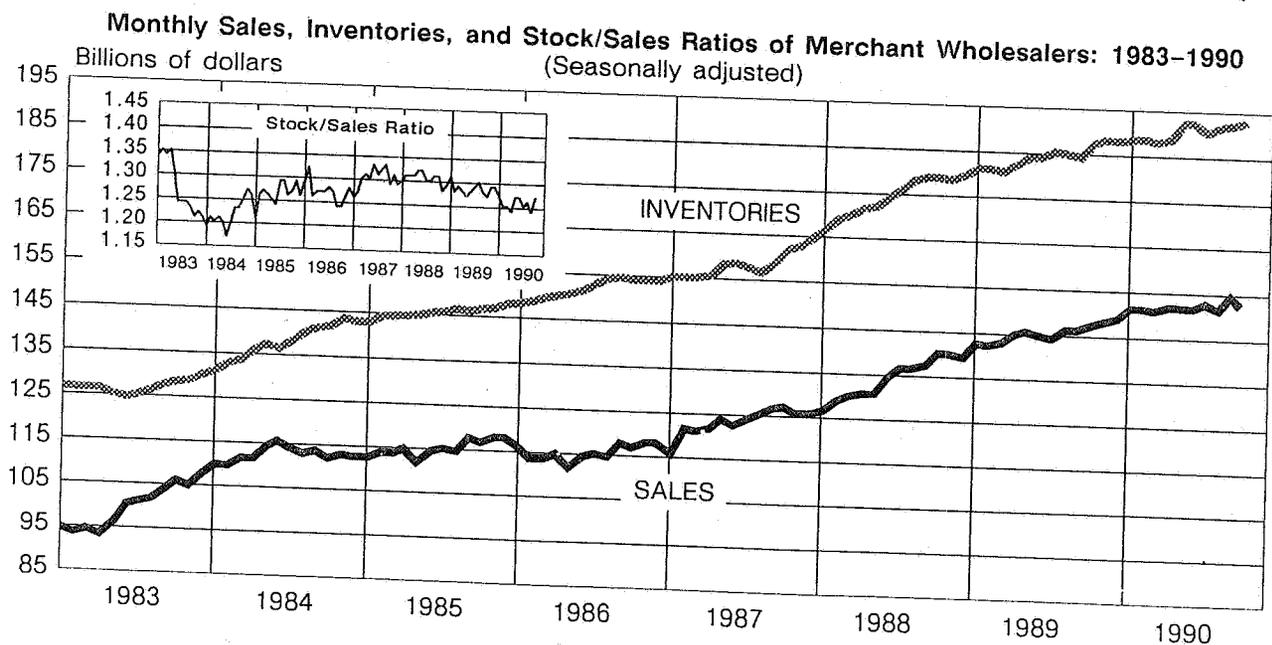
**Sales.** September 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$152.8 billion, down 1.8 percent ( $\pm 0.9$  percent) from the revised August level but were up 3.9 percent ( $\pm 1.8$  percent) from a year ago. The August preliminary estimate was revised downward by \$0.8 billion or about 0.5 percent. September sales of durable goods decreased 2.2 percent ( $\pm 1.2$  percent) from the revised August level, but were 3.3 percent ( $\pm 2.4$  percent) above a year ago. Monthly decreases in the sales of durable goods were as follows: miscellaneous durable goods decreased 15.2 percent to \$6.8 billion and lumber and other construction materials were down 6.2 percent to \$4.5 billion. September sales of nondurable goods were down 1.5 percent ( $\pm 1.7$  percent) from August but were up 4.5 percent ( $\pm 3.0$  percent) from September 1989. Monthly decreases in the sales of nondurable goods were as follows: farm-product raw materials decreased 7.2 percent to \$9.9 billion and apparel, piece goods and notions were down 4.1 percent to \$5.1 billion.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$193.8 billion at the end of September, up

0.4 percent ( $\pm 0.4$  percent) from the revised August level and were up 4.7 percent ( $\pm 1.4$  percent) from a year ago. The August preliminary estimate was revised downward by \$0.01 billion or about 0.01 percent. Inventories of durable goods wholesalers increased 0.6 percent ( $\pm 0.5$  percent) from the August level and were 5.4 percent ( $\pm 1.6$  percent) above a year ago. Inventories of miscellaneous durable goods increased 9.8 percent to \$6.6 billion from the August level. However, inventories of lumber and other construction materials decreased 5.3 percent to \$5.4 billion for the same period. Inventories of nondurable goods wholesalers increased 0.1 percent ( $\pm 0.6$  percent) from the August level and were up 3.5 percent ( $\pm 1.1$  percent) from September 1989. Inventories of miscellaneous nondurable goods increased 1.9 percent to \$13.7 billion from the August level. However, inventories of groceries and related products decreased 2.2 percent to \$13.0 billion for the same period.

**Stock/Sales Ratio.** The September stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.27, up from the August ratio of 1.24.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.



Monthly Wholesale Trade for October is scheduled to be released December 11, 1990 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990									1989			
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. <sup>P</sup>	Sept. <sup>r</sup>	Oct.	Nov.	Dec.
	<b>Sales, Total</b> .....	151,968	151,620	152,383	151,458	152,302	153,549	152,333	155,586	152,787	147,066	147,921	148,782	149,584
50	Durable goods .....	76,653	77,018	77,812	76,522	77,766	78,002	76,687	76,863	75,191	72,808	73,048	73,970	73,180
501	Motor vehicles & auto. equip. ....	14,630	15,217	15,792	13,926	14,678	14,824	14,953	15,455	15,570	13,976	13,892	13,708	13,034
502	Furniture & home furnishings .....	2,282	2,316	2,298	2,428	2,553	2,777	2,842	2,635	2,614	2,593	2,407	2,488	2,405
503	Lumber & other construction mat. ....	5,112	5,183	5,081	4,968	5,014	4,990	4,861	4,804	4,506	4,927	4,978	4,866	4,425
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,893	1,985	2,162	2,069	2,189	2,162	2,084	2,177	2,124	2,141	2,076	2,023	2,036
505	Metals & minerals, ex. petroleum .....	7,330	7,277	7,050	7,520	8,233	8,104	7,800	7,436	7,294	6,331	7,527	7,584	6,827
506	Electrical goods .....	9,818	9,782	9,732	9,740	9,746	9,516	9,587	9,537	9,657	9,357	9,338	9,495	9,605
507	Hardware, plumbing & heating equipment .....	3,661	3,760	3,805	3,670	3,716	3,802	3,822	3,665	3,609	3,610	3,624	3,619	3,649
508	Machinery, equip. & supplies .....	23,355	23,181	23,705	23,810	23,510	23,910	23,234	23,094	22,984	22,498	22,589	22,690	22,974
509	Miscellaneous durable goods .....	8,572	8,317	7,987	8,391	8,129	7,917	7,724	8,060	8,833	7,377	6,619	7,497	8,225
51	Nondurable goods .....	75,315	74,602	74,771	74,936	74,536	75,547	75,646	78,723	77,576	74,258	74,873	74,812	76,404
511	Paper & paper products .....	4,370	4,241	4,349	4,357	4,366	4,341	4,575	4,432	4,394	4,317	4,366	4,320	4,348
512	Drugs, drug proprietaries and druggists' sundries .....	4,085	3,990	4,014	4,106	3,932	3,989	4,098	4,108	4,036	3,753	3,889	3,958	3,992
513	Apparel, piece goods & notions .....	5,128	5,308	5,434	5,283	5,146	5,421	5,214	5,364	5,143	4,930	4,816	5,163	5,493
514	Groceries & related products .....	19,432	19,841	20,231	20,125	19,916	19,848	20,011	20,138	20,363	20,222	20,846	19,999	19,581
515	Farm-product raw materials .....	11,070	10,369	10,372	10,768	10,580	11,210	10,914	10,693	9,925	10,648	10,759	10,971	10,465
516	Chemicals & allied products .....	3,176	3,284	3,336	3,175	3,253	3,161	3,248	3,872	3,745	3,077	3,093	3,204	3,304
517	Petroleum & petroleum products .....	12,670	11,956	11,579	12,029	12,145	11,672	11,772	14,378	14,341	12,058	12,030	11,800	13,674
518	Beer, wine, & distilled beverages .....	3,627	3,630	3,586	3,678	3,537	3,597	3,630	3,620	3,575	3,576	3,532	3,586	3,604
519	Misc. nondurable goods .....	11,777	11,983	11,870	11,415	11,661	12,308	12,184	12,118	12,054	11,677	11,542	11,811	11,943
	<b>Inventories, Total</b> .....	189,375	188,847	189,361	190,903	193,201	191,259	192,466	193,002	193,781	186,003	188,103	189,057	188,819
50	Durable goods .....	125,510	125,685	124,901	125,781	126,998	126,061	126,786	127,985	128,713	122,113	123,716	124,363	123,954
501	Motor vehicles & auto. equip. ....	23,909	24,219	23,911	24,399	24,018	23,116	23,531	24,219	24,198	22,725	23,472	23,298	22,381
502	Furniture & home furnishings .....	4,123	4,142	4,429	4,364	4,338	4,544	4,483	4,249	4,208	4,570	4,510	4,496	4,496
503	Lumber & other construction mat. ....	5,966	5,821	5,815	5,896	5,750	5,773	5,736	5,734	5,430	5,771	5,805	5,704	5,847
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,452	4,392	4,387	4,353	4,407	4,396	4,433	4,443	4,300	4,477	4,473	4,580	4,589
505	Metals & minerals, ex. petroleum .....	10,548	10,299	10,075	9,956	10,064	9,824	10,100	10,251	10,800	10,741	10,879	10,693	10,693
506	Electrical goods .....	15,716	15,520	15,330	15,587	15,598	15,685	15,749	15,748	15,819	15,361	15,455	15,541	15,525
507	Hardware, plumbing & heating equipment .....	7,375	7,360	7,349	7,319	7,377	7,268	7,017	7,475	7,344	7,492	7,494	7,410	7,410
508	Machinery, equip. & supplies .....	46,811	46,977	47,066	47,775	49,165	49,031	49,617	50,267	50,963	44,925	45,351	45,777	46,506
509	Miscellaneous durable goods .....	6,610	6,955	6,539	6,132	6,281	6,217	5,969	6,008	6,594	6,140	6,357	6,580	6,507
51	Nondurable goods .....	63,865	63,162	64,460	65,122	66,203	65,198	65,680	65,017	65,068	62,890	64,387	64,694	64,865
511	Paper & paper products .....	4,077	3,998	4,011	4,039	4,049	4,081	4,117	4,143	4,235	4,195	4,249	4,175	4,154
512	Drugs, drug proprietaries and druggists' sundries .....	5,976	5,988	6,099	6,034	6,086	6,107	6,034	5,944	6,014	5,811	5,829	5,846	5,976
513	Apparel, piece goods & notions .....	9,697	9,776	10,184	10,414	10,365	10,351	10,194	10,228	10,305	9,289	9,391	9,428	9,807
514	Groceries & related products .....	13,129	12,874	13,395	13,362	13,418	13,167	13,182	13,304	13,017	12,512	13,335	13,527	13,593
515	Farm-product raw materials .....	7,743	7,559	7,830	8,102	8,229	7,581	7,633	7,119	6,986	6,847	7,354	7,685	7,831
516	Chemicals & allied products .....	2,581	2,544	2,689	2,626	2,598	2,623	2,770	2,642	2,714	2,723	2,575	2,523	2,560
517	Petroleum & petroleum products .....	3,666	3,849	3,882	3,827	3,814	3,779	3,857	4,389	4,283	4,011	4,060	4,038	3,762
518	Beer, wine, & distilled beverages .....	4,009	3,903	3,929	3,868	3,882	3,898	3,831	3,787	3,821	3,910	3,915	4,025	4,022
519	Misc. nondurable goods .....	12,987	12,871	12,521	12,850	13,762	13,611	14,062	13,461	13,713	13,592	13,679	13,447	13,160
	<b>Stock/sales ratios, Total</b> .....	1.25	1.25	1.24	1.26	1.27	1.25	1.26	1.24	1.27	1.26	1.27	1.27	1.26
50	Durable goods .....	1.64	1.63	1.61	1.64	1.63	1.62	1.65	1.67	1.71	1.68	1.69	1.68	1.69
501	Motor vehicles & auto. equip. ....	1.63	1.59	1.51	1.75	1.64	1.56	1.57	1.57	1.55	1.63	1.69	1.70	1.72
502	Furniture & home furnishings .....	1.81	1.79	1.93	1.80	1.70	1.64	1.58	1.61	1.61	1.76	1.80	1.81	1.87
503	Lumber & other construction mat. ....	1.17	1.12	1.14	1.19	1.15	1.16	1.18	1.19	1.21	1.17	1.17	1.17	1.32
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.35	2.21	2.03	2.10	2.01	2.03	2.10	2.04	2.02	2.09	2.15	2.26	2.25
505	Metals & minerals, ex. petroleum .....	1.44	1.42	1.43	1.32	1.22	1.21	1.33	1.39	1.41	1.71	1.43	1.43	1.57
506	Electrical goods .....	1.60	1.59	1.58	1.60	1.60	1.65	1.64	1.65	1.64	1.64	1.66	1.64	1.62
507	Hardware, plumbing & heating equipment .....	2.01	1.96	1.93	1.99	1.99	1.97	1.90	1.91	1.93	2.03	2.07	2.07	2.03
508	Machinery, equip. & supplies .....	2.00	2.03	1.99	2.01	2.09	2.05	2.14	2.18	2.22	2.00	2.01	2.02	2.02
509	Miscellaneous durable goods .....	.77	.84	.82	.73	.77	.79	.77	.75	.97	.83	.96	.88	.79
51	Nondurable goods .....	.85	.85	.86	.87	.89	.88	.87	.83	.84	.85	.86	.86	.85
511	Paper & paper products .....	.93	.94	.92	.93	.93	.94	.90	.93	.96	.97	.97	.97	.96
512	Drugs, drug proprietaries and druggists' sundries .....	1.47	1.50	1.52	1.47	1.55	1.53	1.47	1.45	1.49	1.55	1.50	1.48	1.50
513	Apparel, piece goods & notions .....	1.89	1.84	1.87	1.97	2.01	1.91	1.96	1.91	2.00	1.88	1.95	1.83	1.79
514	Groceries & related products .....	.68	.64	.66	.66	.67	.66	.66	.66	.64	.62	.64	.68	.69
515	Farm-product raw materials .....	.70	.73	.75	.75	.78	.68	.70	.67	.70	.64	.68	.70	.75
516	Chemicals & allied products .....	.81	.77	.81	.83	.80	.83	.85	.68	.72	.88	.83	.79	.77
517	Petroleum & petroleum products .....	.29	.32	.33	.32	.31	.32	.33	.31	.30	.33	.34	.34	.28
518	Beer, wine, & distilled beverages .....	1.11	1.08	1.10	1.05	1.10	1.08	1.06	1.05	1.07	1.09	1.11	1.12	1.12
519	Misc. nondurable goods .....	1.10	1.07	1.05	1.13	1.18	1.11	1.15	1.11	1.14	1.16	1.19	1.14	1.16

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
<sup>r</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990									1989				Total 9 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. <sup>P</sup>	Sept.	Oct.	Nov.	Dec.	1990	1989
	<b>Sales, Total</b> .....	146,135	138,361	158,734	150,395	160,026	154,461	147,580	161,355	147,619	145,394	155,847	150,006	144,355	1,364,666	1,297,986
50	Durable goods .....	71,238	69,070	80,795	76,808	81,467	79,475	74,234	79,904	73,342	73,080	78,451	74,608	69,247	686,333	637,654
501	Motor vehicles & auto. equip. ....	13,650	13,908	16,661	14,191	15,689	15,239	14,355	15,548	13,873	12,858	15,059	13,859	12,760	133,114	123,297
502	Furniture & home furnishings .....	2,131	2,112	2,305	2,314	2,540	2,735	2,728	2,812	2,679	2,767	2,720	2,617	2,203	22,356	22,061
503	Lumber & other construction mat. ....	4,350	4,022	4,822	4,963	5,325	5,539	5,323	5,544	4,578	5,257	5,645	4,671	3,757	44,466	44,559
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,726	1,818	2,233	1,895	1,902	2,037	1,818	2,364	2,217	2,340	2,441	2,355	2,099	18,010	17,428
505	Metals & minerals, ex. petroleum .....	7,139	6,724	7,811	7,550	8,628	8,299	7,068	7,934	7,309	6,464	7,655	7,319	6,274	68,462	64,757
506	Electrical goods .....	9,268	8,853	9,927	9,253	9,658	9,421	9,347	9,995	9,783	9,647	10,354	9,998	9,288	85,505	81,588
507	Hardware, plumbing & heating equipment .....	3,452	3,271	3,809	3,626	3,946	4,004	3,929	3,881	3,425	3,541	3,994	3,615	3,306	33,343	32,504
508	Machinery, equip. & supplies .....	21,790	21,118	25,104	24,239	24,780	24,316	22,514	23,879	23,007	23,013	23,560	21,987	22,009	210,747	194,611
509	Miscellaneous durable goods .....	7,732	7,244	8,123	8,777	8,989	7,885	7,152	7,947	6,471	7,193	7,023	8,187	7,551	70,330	56,849
51	Nondurable goods .....	74,897	69,291	77,939	73,587	78,559	74,986	73,346	81,451	74,277	72,314	77,396	75,398	75,108	678,333	660,332
511	Paper & paper products .....	4,392	3,936	4,536	4,161	4,331	4,259	4,493	4,738	4,289	4,300	4,645	4,372	4,152	39,135	37,572
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,723	4,068	4,003	4,030	3,853	4,000	4,235	3,931	3,734	4,052	3,962	3,868	36,109	32,086
513	Apparel, piece goods & notions .....	4,743	5,292	5,586	4,670	4,513	5,470	5,678	6,533	5,220	5,107	5,616	5,158	3,977	47,705	43,238
514	Groceries & related products .....	19,393	18,234	20,150	19,260	21,230	19,828	20,131	20,923	19,365	19,534	20,909	20,759	19,816	178,514	181,278
515	Farm-product raw materials .....	12,332	9,954	11,088	10,639	11,151	10,392	9,757	10,212	8,873	9,573	11,889	11,520	10,298	94,398	98,494
516	Chemicals & allied products .....	3,084	3,002	3,519	3,283	3,559	3,420	3,180	4,027	3,573	3,031	3,214	3,034	3,052	30,647	28,008
517	Petroleum & petroleum products .....	13,228	11,633	12,633	11,740	12,485	11,392	11,101	14,507	14,212	12,323	11,741	11,375	14,262	112,931	107,683
518	Beer, wine, & distilled beverages .....	2,952	2,900	3,482	3,457	3,873	3,842	3,663	4,073	3,375	3,490	3,592	3,818	3,997	31,617	30,796
519	Misc. nondurable goods .....	10,505	10,617	12,879	12,374	13,387	12,530	11,343	12,203	11,439	11,222	11,738	11,362	11,847	107,277	101,177
	<b>Inventories, Total</b> .....	190,390	190,475	190,909	192,411	192,015	190,333	191,188	189,337	192,572	183,868	189,404	189,822	189,042	(X)	(X)
50	Durable goods .....	124,313	125,488	125,562	127,344	128,124	126,390	127,824	127,248	128,868	122,335	123,856	123,652	122,053	(X)	(X)
501	Motor vehicles & auto. equip. ....	23,670	24,631	24,222	24,545	24,210	22,839	22,990	23,299	24,730	23,225	23,402	23,624	22,650	(X)	(X)
502	Furniture & home furnishings .....	4,102	4,051	4,389	4,342	4,373	4,626	4,609	4,304	4,317	4,693	4,561	4,367	4,397	(X)	(X)
503	Lumber & other construction mat. ....	5,930	5,722	5,960	6,203	5,842	5,981	5,960	5,579	5,332	5,673	5,718	5,379	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,296	4,273	4,352	4,305	4,332	4,480	4,541	4,532	4,450	4,629	4,580	4,516	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum .....	10,632	10,196	10,166	10,115	10,255	10,119	10,403	10,022	9,984	10,530	10,569	10,531	10,746	(X)	(X)
506	Electrical goods .....	15,323	15,396	15,223	15,603	15,660	15,732	16,064	15,984	15,851	15,438	15,594	15,510	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment .....	7,264	7,323	7,445	7,421	7,421	7,482	7,355	7,073	6,950	7,337	7,589	7,299	7,165	(X)	(X)
508	Machinery, equip. & supplies .....	46,764	47,024	47,207	48,635	49,706	48,982	49,915	50,267	50,555	44,566	45,442	45,823	45,390	(X)	(X)
509	Miscellaneous durable goods .....	6,332	6,872	6,598	6,175	6,325	6,149	5,987	6,188	6,699	6,244	6,401	6,613	6,260	(X)	(X)
51	Nondurable goods .....	66,077	64,987	65,347	65,067	63,891	63,943	63,364	62,089	63,704	61,533	65,548	66,170	66,899	(X)	(X)
511	Paper & paper products .....	4,171	4,050	4,103	4,087	3,992	4,052	4,166	4,068	4,146	4,099	4,274	4,108	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,162	6,093	6,209	6,818	5,887	5,877	5,766	6,014	5,805	5,940	5,671	6,179	(X)	(X)
513	Apparel, piece goods & notions .....	9,765	9,678	9,777	9,883	10,614	10,910	10,632	10,617	10,480	9,476	8,997	8,938	9,729	(X)	(X)
514	Groceries & related products .....	13,142	12,712	13,082	13,121	13,190	12,864	12,787	12,665	13,017	12,499	14,002	14,284	14,001	(X)	(X)
515	Farm-product raw materials .....	9,176	8,602	7,987	7,867	6,797	6,338	6,404	5,852	6,095	6,005	8,310	8,869	9,115	(X)	(X)
516	Chemicals & allied products .....	2,602	2,567	2,727	2,705	2,673	2,731	2,792	2,668	2,643	2,641	2,477	2,447	2,466	(X)	(X)
517	Petroleum & petroleum products .....	3,783	3,803	3,955	3,716	3,707	3,794	3,845	4,310	4,493	4,208	4,113	4,070	3,912	(X)	(X)
518	Beer, wine, & distilled beverages .....	3,801	3,821	3,988	3,922	3,847	3,933	3,797	3,692	3,871	3,957	4,166	4,242	3,704	(X)	(X)
519	Misc. nondurable goods .....	13,338	13,592	13,635	13,557	13,253	13,434	13,064	12,451	12,945	12,844	13,269	13,541	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> .....	1.30	1.38	1.20	1.28	1.20	1.23	1.30	1.17	1.30	1.26	1.22	1.27	1.31	(X)	(X)
50	Durable goods .....	1.75	1.82	1.55	1.66	1.57	1.59	1.72	1.59	1.76	1.67	1.58	1.66	1.76	(X)	(X)
501	Motor vehicles & auto. equip. ....	1.73	1.77	1.45	1.73	1.54	1.50	1.60	1.50	1.78	1.81	1.55	1.70	1.78	(X)	(X)
502	Furniture & home furnishings .....	1.92	1.92	1.90	1.88	1.72	1.69	1.69	1.53	1.61	1.70	1.68	1.66	2.00	(X)	(X)
503	Lumber & other construction mat. ....	1.36	1.42	1.24	1.25	1.10	1.08	1.12	1.01	1.16	1.08	1.01	1.15	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.49	2.35	1.95	2.27	2.28	2.20	2.50	1.92	2.01	1.98	1.88	1.92	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum .....	1.49	1.52	1.30	1.34	1.19	1.22	1.47	1.26	1.37	1.63	1.38	1.44	1.71	(X)	(X)
506	Electrical goods .....	1.65	1.74	1.53	1.69	1.62	1.67	1.72	1.60	1.62	1.60	1.51	1.55	1.65	(X)	(X)
507	Hardware, plumbing & heating equipment .....	2.10	2.24	1.95	2.05	1.88	1.87	1.87	1.82	2.03	2.07	1.90	2.02	2.17	(X)	(X)
508	Machinery, equip. & supplies .....	2.15	2.23	1.88	2.01	2.01	2.01	2.22	2.11	2.20	1.94	1.93	2.08	2.06	(X)	(X)
509	Miscellaneous durable goods .....	.82	.95	.81	.70	.78	.84	.78	.84	1.04	.87	.91	.81	.89	(X)	(X)
51	Nondurable goods .....	.88	.94	.84	.88	.81	.85	.86	.76	.86	.85	.85	.88	.83	(X)	(X)
511	Paper & paper products .....	.95	1.03	.90	.98	.92	.95	.93	.86	.97	.95	.92	.94	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.50	1.55	1.44	1.53	1.47	1.36	1.53	1.55	1.47	1.43	1.60	(X)	(X)
513	Apparel, piece goods & notions .....	2.06	1.83	1.76	2.12	2.35	1.99	1.87	1.63	2.01	1.86	1.60	1.73	2.45	(X)	(X)
514	Groceries & related products .....	.68	.70	.65	.68	.62	.65	.64	.61	.67	.64	.67	.69	.71	(X)	(X)
515	Farm-product raw materials .....	.74	.86	.72	.74	.61	.61	.66	.57	.69	.63	.70	.77	.89	(X)	(X)
516	Chemicals & allied products .....	.84	.86	.77	.82	.75	.80	.88	.66	.74	.87	.77	.81	.86	(X)	(X)
517	Petroleum & petroleum products .....	.29	.33	.31	.32	.30	.33	.35	.30	.32	.34	.34	.36	.27	(X)	(X)
518	Beer, wine, & distilled beverages .....	1.29	1.32	1.15	1.13	.99	1.02	1.04	.91	1.15	1.13	1.16	1.11	.93	(X)	(X)
519	Misc. nondurable goods .....	1.27	1.28	1.08	1.10	.99	1.07	1.15	1.02	1.13	1.14	1.13	1.19	1.16	(X)	(X)

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
<sup>1</sup>Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Sept. 1990 from Aug. 1990	Sept. 1990 from Sept. 1989	9 months 1990 from 9 months 1989	Sept. 1990 from Aug. 1990	Sept. 1990 from Sept. 1989	Sept. 1990 from Aug. 1990	Sept. 1990 from Sept. 1989	Sept. 1990 from Aug. 1990	Sept. 1990 from Sept. 1989
	<b>Total</b> .....	-8.5	+1.5	+5.1	+1.7	+4.7	-1.8	+3.9	+4	+4.7
50	Durable goods .....	-8.2	+4	+7.6	+1.3	+5.3	-2.2	+3.3	+6	+5.4
501	Motor vehicles & auto. equip. ....	-10.8	+7.9	+8.0	+6.1	+6.5	+7	+11.4	-.1	+6.5
502	Furniture & home furnishings .....	-4.7	-3.2	+1.3	+3	-8.0	-.8	+8	-1.0	-7.9
503	Lumber & other construction mat. ....	-17.4	-12.9	-.2	-4.4	-6.0	-6.2	-8.5	-5.3	-5.9
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	-6.2	-5.3	+3.3	-1.8	-3.9	-2.4	-.8	-3.2	-4.0
505	Metals & minerals, ex. petroleum .....	-7.9	+13.1	+5.7	-.4	-5.2	-1.9	+15.2	-.5	-5.1
506	Electrical goods .....	-2.1	+1.4	+4.8	-.8	+2.7	+1.3	+3.2	+5	+3.0
507	Hardware, plumbing & heating equipment .....	-11.7	-3.3	+2.6	-1.7	-5.3	-1.5	.0	-1.0	-5.4
508	Machinery, equip. & supplies .....	-3.7	.0	+8.3	+6	+13.4	-.5	+2.2	+1.4	+13.4
509	Miscellaneous durable goods .....	-18.6	-10.0	+23.7	+8.3	+7.3	-15.2	-7.4	+9.8	+7.4
51	Nondurable goods .....	-8.8	+2.7	+2.7	+2.6	+3.5	-1.5	+4.5	+1	+3.5
511	Paper & paper products .....	-9.5	-.3	+4.2	+1.9	+1.1	-.9	+1.8	+2.2	+1.0
512	Drugs, drug proprietaries and druggists' sundries .....	-7.2	+5.3	+12.5	+4.3	+3.6	-1.8	+7.5	+1.2	+3.5
513	Apparel, piece goods & notions .....	-20.1	+2.2	+10.3	-1.3	+10.8	-4.1	+4.3	+8	+10.9
514	Groceries & related products .....	-7.4	-.9	-1.5	+2.8	+4.1	+1.1	+7	-2.2	+4.0
515	Farm-product raw materials .....	-13.1	-7.3	-4.2	+4.2	+1.5	-7.2	-6.8	-2.1	+1.7
516	Chemicals & allied products .....	-11.3	+17.9	+9.4	-.9	+1	-3.3	+21.7	+2.7	-.3
517	Petroleum & petroleum products .....	-2.0	+15.3	+4.9	+4.2	+6.8	-.3	+18.9	-2.4	+6.8
518	Beer, wine, & distilled beverages .....	-17.1	-3.3	+2.7	+4.8	-2.2	-1.2	.0	+9	-2.3
519	Misc. nondurable goods .....	-6.3	+1.9	+6.0	+4.0	+8	-.5	+3.2	+1.9	+9

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the 1972 *Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.4-1.8	1.6	1.4-1.8	1.5	0.5-0.6	0.5	0.9-1.3	1.1			
50	Durable goods .....	1.9-2.5	2.2	1.8-2.4	2.1	0.4-1.0	0.7	1.1-1.7	1.4	1.6	1.5	0.7
501	Motor vehicles & auto. equip. ....	4.7-7.2	5.4	4.4-6.9	5.3	0.8-3.4	1.4	2.9-4.7	3.5	2.1	1.8	0.7
502	Furniture & home furnishings .....	7.0-12.6	10.0	6.8-10.7	9.4	2.4-6.4	3.7	6.6-10.0	8.0	5.5	4.6	2.2
503	Lumber & other construction mat. ....	5.0-5.2	5.1	4.4-5.4	4.9	1.6-2.2	2.1	2.5-4.8	3.8	8.1	5.9	5.5
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	6.0-7.5	7.1	5.0-8.2	6.1	1.6-3.9	3.3	3.5-7.6	5.4	4.7	4.8	2.5
505	Metals & minerals, ex. petroleum .....	6.5-10.2	8.1	5.7-9.3	7.8	1.0-1.7	1.3	1.8-4.3	2.6	5.5	4.7	3.9
506	Electrical goods .....	2.7-3.8	3.1	2.6-3.8	3.1	1.0-1.9	1.4	2.3-3.2	2.7	7.9	6.8	1.6
507	Hardware, plumbing & heating equipment .....	8.2-10.2	9.0	8.6-9.7	9.5	1.1-3.0	1.8	2.8-4.0	3.1	3.1	2.8	1.4
508	Machinery, equip. & supplies .....	3.5-4.4	3.7	3.2-4.4	3.8	1.2-1.9	1.7	1.4-3.5	3.5	8.9	7.6	2.2
509	Miscellaneous durable goods .....	3.9-5.6	4.3	3.8-4.6	4.2	1.1-1.9	1.5	2.8-3.7	3.0	3.3	3.2	1.5
51	Nondurable goods .....	2.7-3.6	3.0	2.6-3.1	2.8	0.5-1.1	0.7	1.1-1.7	1.6	4.2	4.7	2.2
511	Paper & paper products .....	4.1-4.7	4.4	3.9-4.7	4.5	0.9-1.7	1.1	2.9-4.0	3.5	2.9	2.5	1.1
512	Drugs, drug proprietaries and druggists' sundries .....	5.2-7.7	6.0	5.1-7.1	5.7	0.9-1.7	1.4	0.9-1.7	1.4	4.2	5.1	2.6
513	Apparel, piece goods & notions .....	8.1-10.8	9.9	7.9-10.5	9.6	2.6-5.5	3.9	2.1-4.9	3.1	5.6	4.8	2.2
514	Groceries & related products .....	4.1-4.8	4.5	3.9-4.7	4.5	0.4-1.0	0.8	5.6-6.7	6.1	9.0	8.9	4.1
515	Farm-product raw materials .....	6.2-6.9	6.7	5.7-7.1	6.4	1.2-3.6	2.4	1.8-2.5	1.9	4.5	4.6	1.2
516	Chemicals & allied products .....	7.2-11.3	9.9	8.7-17.0	9.6	1.3-19.5	2.8	3.8-6.1	4.6	6.0	4.4	3.4
517	Petroleum & petroleum products .....	7.1-8.9	8.1	6.9-9.1	7.7	1.2-2.0	1.7	4.6-10.3	5.3	9.3	6.2	4.4
518	Beer, wine, & distilled beverages .....	3.6-5.7	4.2	3.6-4.9	4.2	0.8-1.8	1.3	2.9-5.0	4.3	7.8	6.7	3.1
519	Misc. nondurable goods .....	6.4-8.4	6.8	5.3-7.8	6.6	1.0-4.0	2.4	1.9-3.3	2.4	3.9	3.3	1.2
	<b>Inventories, Total</b> .....	1.2-1.4	1.3	1.2-1.4	1.2	0.2-0.4	0.3	2.0-3.8	3.3	6.0	5.3	1.6
50	Durable goods .....	1.6-1.8	1.8	1.6-1.8	1.7	0.3-0.4	0.3	0.6-1.2	0.8	(X)	(X)	(X)
501	Motor vehicles & auto. equip. ....	5.9-6.4	6.1	5.8-6.3	6.0	0.7-1.3	0.8	0.8-1.2	0.9	(X)	(X)	(X)
502	Furniture & home furnishings .....	8.4-9.2	8.7	8.2-9.0	8.4	0.9-1.7	1.1	2.1-3.4	2.6	(X)	(X)	(X)
503	Lumber & other construction mat. ....	6.6-7.8	6.9	6.3-7.5	6.8	0.7-1.4	1.1	4.2-6.0	5.0	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.5-7.2	6.7	5.8-6.7	6.2	0.7-3.1	1.3	3.3-4.6	4.2	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	3.7-5.2	4.8	4.2-4.9	4.8	0.5-1.2	0.8	3.7-5.0	4.0	(X)	(X)	(X)
506	Electrical goods .....	2.2-3.4	2.8	2.2-3.2	2.7	0.3-0.6	0.5	2.0-2.9	2.4	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment .....	5.6-6.6	6.3	5.4-6.7	6.2	0.6-1.2	0.7	1.1-2.0	1.6	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.5-4.3	4.0	3.4-4.2	3.9	0.5-0.8	0.6	1.6-2.0	2.0	(X)	(X)	(X)
509	Miscellaneous durable goods .....	9.1-10.0	9.4	9.0-9.9	9.4	0.6-1.3	0.8	1.9-2.2	2.1	(X)	(X)	(X)
51	Nondurable goods .....	2.8-3.3	3.2	3.0-3.4	3.1	0.3-0.9	0.4	2.0-3.6	2.7	(X)	(X)	(X)
511	Paper & paper products .....	4.7-5.4	5.1	4.8-5.3	5.1	0.7-1.2	0.9	1.1-1.9	1.2	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6.3-7.1	6.7	6.3-7.1	6.6	0.4-0.9	0.6	2.4-3.4	2.5	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.4-7.3	6.9	6.1-7.4	6.9	1.0-4.2	1.2	2.1-3.5	2.7	(X)	(X)	(X)
514	Groceries & related products .....	7.1-8.6	7.8	7.3-9.0	8.2	0.6-1.6	0.9	4.4-6.5	5.0	(X)	(X)	(X)
515	Farm-product raw materials .....	8.0-10.4	9.2	7.9-9.6	8.9	0.8-1.9	1.5	2.4-4.5	3.7	(X)	(X)	(X)
516	Chemicals & allied products .....	8.2-10.3	9.4	7.9-9.6	8.9	0.8-1.9	1.5	2.7-4.2	3.7	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.8-6.5	6.1	5.4-10.0	9.6	1.0-3.2	1.6	4.4-6.5	4.4	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	3.1-4.8	4.0	3.4-4.8	4.0	1.0-1.7	1.2	4.0-4.8	4.4	(X)	(X)	(X)
519	Misc. nondurable goods .....	8.5-10.0	8.9	8.2-9.3	8.9	0.5-1.1	0.8	3.3-6.5	5.0	(X)	(X)	(X)
						1.1-2.2	1.2	2.2-4.4	3.5	(X)	(X)	(X)
								2.6-3.8	3.2	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for April 1990 through September 1990.

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Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989				1990									
		Sept. <sup>1</sup>	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. <sup>1</sup>	Sept. <sup>1</sup>	Oct.
	<b>Sales,<sup>1</sup> Total</b> .....	.987	1.057	1.009	.960	.965	.912	1.042	.988	1.052	1.008	.968	1.037	.967	1.080
50	Durable goods .....	1.004	1.079	1.009	.940	.931	.894	1.041	.996	1.050	1.022	.974	1.039	.975	1.107
501	Motor vehicles & auto. equip. ....	.920	1.084	1.011	.979	.933	.914	1.055	1.019	1.069	1.028	.960	1.006	.891	1.117
502	Furniture & home furnishings ....	1.067	1.130	1.052	.916	.934	.912	1.003	.953	.995	.985	.960	1.067	1.025	1.198
503	Lumber & other construction mat. ....	1.067	1.134	.960	.849	.851	.776	.949	.999	1.062	1.110	1.095	1.154	1.016	1.172
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.093	1.176	1.164	1.031	.912	.916	1.033	.916	.869	.942	.881	1.086	1.044	1.214
505	Metals & minerals, ex. petroleum .....	1.021	1.017	.965	.919	.974	.924	1.108	1.004	1.048	1.024	.930	1.067	1.002	1.036
506	Electrical goods .....	1.031	1.109	1.053	.967	.944	.905	1.020	.950	.991	.990	.975	1.048	1.013	1.135
507	Hardware, plumbing & heating equipment .....	.981	1.102	.999	.906	.943	.870	1.001	.988	1.062	1.053	1.028	1.059	.949	1.129
508	Machinery, equip. & supplies ....	1.023	1.043	.969	.958	.933	.911	1.059	1.018	1.054	1.017	.969	1.034	1.001	1.067
509	Miscellaneous durable goods ....	.975	1.061	1.092	.918	.902	.871	1.017	1.046	1.107	.996	.926	.986	.947	1.102
51	Nondurable goods .....	.973	1.039	1.006	.983	.993	.928	1.041	.984	1.052	.994	.966	1.038	.953	1.062
511	Paper & paper products .....	.996	1.064	1.012	.955	1.005	.928	1.043	.955	.992	.981	.982	1.069	.976	1.089
512	Drugs, drug proprietaries and druggists' sundries .....	.995	1.042	1.001	.969	1.050	.933	1.013	.975	1.025	.966	.976	1.031	.974	1.073
513	Apparel, piece goods & notions .....	1.036	1.166	.999	.724	.925	.997	1.028	.884	.877	1.009	1.089	1.218	1.015	1.181
514	Groceries & related products ....	.966	1.003	1.040	1.012	.998	.919	.996	.957	1.066	.999	1.006	1.039	.951	1.028
515	Farm-product raw materials .....	.899	1.105	1.050	.984	1.114	.960	1.069	.988	1.054	.927	.894	.955	.894	1.122
516	Chemicals & allied products ....	.985	1.039	.947	.875	.971	.914	1.055	1.034	1.094	1.082	.979	1.040	.954	1.050
517	Petroleum & petroleum products .....	1.022	.976	.964	1.043	1.044	.973	1.091	.976	1.028	.976	.943	1.009	.991	.996
518	Beer, wine, & distilled beverages .....	.976	1.017	1.064	1.109	.814	.799	.971	.940	1.095	1.068	1.009	1.125	.944	1.061
519	Misc. nondurable goods .....	.961	1.017	.962	.992	.892	.886	1.085	1.084	1.148	1.018	.931	1.007	.949	1.024
	<b>Inventories,<sup>1</sup> Total</b> .....	.994	1.009	1.004	1.000	1.007	1.009	1.008	1.007	.992	.995	.994	.982	.994	1.010
50	Durable goods .....	1.006	1.004	.993	.983	.991	.998	1.004	1.011	1.008	1.002	1.009	.996	1.006	1.003
501	Motor vehicles & auto. equip. ....	1.022	.997	1.014	1.012	.990	1.017	1.013	1.006	1.008	.988	.977	.962	1.022	.994
502	Furniture & home furnishings ....	1.027	.998	.966	.978	.995	.978	.991	.995	1.008	1.018	1.028	1.013	1.026	1.000
503	Lumber & other construction mat. ....	.983	.985	.943	.970	.994	.983	1.025	1.052	1.016	1.036	1.039	.973	.982	.982
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.034	1.024	.986	.963	.965	.973	.992	.989	.983	1.019	1.048	1.020	1.035	1.025
505	Metals & minerals, ex. petroleum .....	.975	.984	.968	1.005	1.008	.990	1.009	1.016	1.019	1.030	1.030	.973	.974	.989
506	Electrical goods .....	1.005	1.009	.998	.989	.975	.992	.993	1.001	1.004	1.003	1.020	1.015	1.002	1.008
507	Hardware, plumbing & heating equipment .....	.999	1.013	.974	.967	.985	.995	1.013	1.014	1.006	1.001	1.012	1.008	1.000	1.018
508	Machinery, equip. & supplies ....	.992	1.002	1.001	.976	.999	1.001	1.003	1.018	1.011	.999	1.006	1.000	.992	1.003
509	Miscellaneous durable goods ....	1.017	1.007	1.005	.962	.958	.988	1.009	1.007	1.007	.989	1.003	1.030	1.016	1.003
51	Nondurable goods .....	.974	1.020	1.028	1.035	1.035	1.026	1.015	.997	.961	.985	.965	.954	.974	1.021
511	Paper & paper products .....	.977	1.006	.984	.996	1.023	1.013	1.023	1.012	.986	.993	1.012	.982	.979	1.009
512	Drugs, drug proprietaries and druggists' sundries .....	.999	1.019	.970	1.034	1.054	1.029	.999	1.029	.956	.964	.974	.970	1.000	1.019
513	Apparel, piece goods & notions .....	1.020	.958	.948	.992	1.007	.990	.960	.949	1.024	1.054	1.043	1.038	1.017	.957
514	Groceries & related products ....	.999	1.050	1.056	1.030	1.001	1.003	.981	.982	.983	.977	.970	.952	1.000	1.055
515	Farm-product raw materials .....	.877	1.130	1.154	1.164	1.185	1.138	1.020	.971	.826	.836	.839	.822	.875	1.134
516	Chemicals & allied products ....	.970	.962	.970	.971	1.008	1.009	1.014	1.030	1.029	1.041	1.008	1.010	.974	.959
517	Petroleum & petroleum products .....	1.049	1.013	1.008	1.040	1.032	.988	1.024	.971	.972	1.004	.997	.982	1.049	1.011
518	Beer, wine, & distilled beverages .....	1.012	1.064	1.054	.921	.948	.979	1.015	1.014	.991	1.009	.991	.975	1.013	1.068
519	Misc. nondurable goods .....	.945	.970	1.007	1.043	1.027	1.056	1.089	1.055	.963	.987	.929	.925	.944	.972

<sup>1</sup>Revised  
<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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

October 1990

BW90-10

Issued December 1990



U.S. Department of Commerce  
BUREAU OF THE CENSUS

**Sales.** October 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$152.5 billion, up 0.1 percent ( $\pm 2.5$  percent) from the revised September level and were up 2.5 percent ( $\pm 1.4$  percent) from a year ago. The September preliminary estimate was revised downward by \$0.4 billion or about 0.3 percent. October sales of durable goods decreased 2.6 percent ( $\pm 0.9$  percent) from the revised September level, and were 1.1 percent ( $\pm 2.0$  percent) below a year ago. Monthly decreases in the sales of durable goods were as follows: motor vehicles and automotive equipment decreased 5.2 percent to \$14.3 billion and lumber and other construction materials were down 4.4 percent to \$4.4 billion. October sales of nondurable goods were up 2.7 percent ( $\pm 1.0$  percent) from September and were up 6.1 percent ( $\pm 2.1$  percent) from October 1989. Monthly increases in the sales of nondurable goods were as follows: petroleum and petroleum products increased 14.1 percent to \$16.8 billion and drugs, drug proprietaries and druggists' sundries were up 2.5 percent to \$4.1 billion.

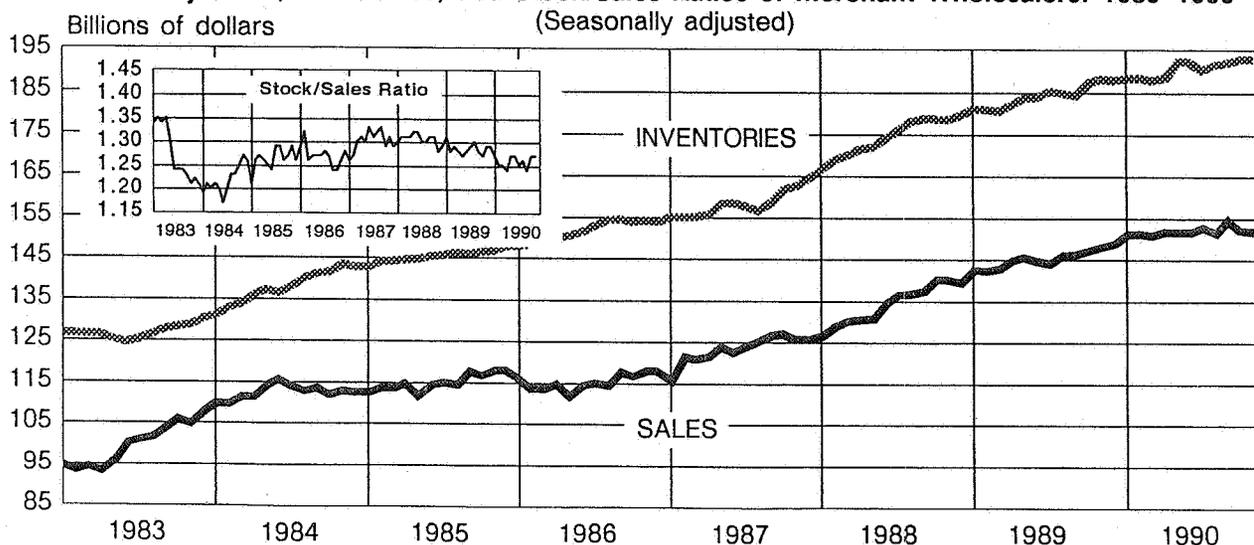
**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$193.8 billion at the end of October, up 0.2 percent ( $\pm 0.5$  percent) from the revised September level and were up 3.1 percent ( $\pm 1.1$  percent) from a year

ago. The September preliminary estimate was revised downward by \$0.5 billion or about 0.2 percent. Inventories of durable goods wholesalers decreased 0.9 percent ( $\pm 0.4$  percent) from the September level but were 2.4 percent ( $\pm 1.7$  percent) above a year ago. Monthly decreases in the inventories of durable goods wholesalers were as follows: miscellaneous durable goods decreased 2.2 percent to \$6.3 billion; electrical goods were down 1.9 percent to \$15.3 billion; and hardware, plumbing and heating equipment decreased 1.8 percent to \$6.9 billion. Inventories of nondurable goods wholesalers increased 2.4 percent ( $\pm 0.6$  percent) from the September level and were up 4.3 percent ( $\pm 1.1$  percent) from October 1989. Monthly increases in the inventories of nondurable goods were as follows: farm-product raw materials increased 9.5 percent to \$7.3 billion; petroleum and petroleum products were up 5.8 percent to \$4.7 billion; and chemicals and allied products increased 4.0 percent to \$2.9 billion.

**Stock/Sales Ratio.** The October stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.27, the same as the September ratio. The year ago ratio was 1.26.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-1990



Monthly Wholesale Trade for November is scheduled to be released January 10, 1991 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

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**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990										1989			
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. <sup>P</sup>	Oct. <sup>F</sup>	Nov.	Dec.	
	<b>Sales, Total</b> .....	151,968	151,620	152,383	151,458	152,302	153,549	152,333	155,586	152,365	152,539	148,784	148,782	149,584	
50	Durable goods .....	76,653	77,018	77,612	76,522	77,766	78,002	76,687	76,863	74,735	72,778	73,590	73,970	73,180	
501	Motor vehicles & auto. equip. ....	14,630	15,217	15,792	13,926	14,676	14,824	14,953	15,455	15,136	14,346	14,153	13,708	13,034	
502	Furniture & home furnishings .....	2,282	2,316	2,298	2,428	2,553	2,777	2,842	2,635	2,614	2,478	2,403	2,488	2,405	
503	Lumber & other construction mat. ....	5,112	5,183	5,081	4,968	5,014	4,990	4,861	4,804	4,618	4,413	5,022	4,866	4,425	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,893	1,985	2,162	2,069	2,189	2,162	2,064	2,177	2,109	2,070	2,077	2,023	2,036	
505	Metals & minerals, ex. petroleum .....	7,330	7,277	7,050	7,520	8,233	8,104	7,600	7,436	7,335	7,402	7,418	7,584	6,827	
506	Electrical goods .....	9,818	9,782	9,732	9,740	9,746	9,516	9,587	9,537	9,536	9,313	9,379	9,495	9,605	
507	Hardware, plumbing & heating equipment .....	3,661	3,760	3,805	3,670	3,716	3,802	3,822	3,665	3,668	3,569	3,661	3,619	3,649	
508	Machinery, equip. & supplies .....	23,355	23,181	23,705	23,810	23,510	23,910	23,234	23,094	23,107	22,700	22,632	22,690	22,974	
509	Miscellaneous durable goods .....	8,572	8,317	7,987	8,391	8,129	7,917	7,724	8,060	6,612	6,487	6,845	7,497	8,225	
51	Nondurable goods .....	75,315	74,802	74,771	74,936	74,538	75,547	75,646	78,723	77,630	79,761	75,194	74,812	76,404	
511	Paper & paper products .....	4,370	4,241	4,349	4,357	4,366	4,341	4,575	4,432	4,413	4,445	4,341	4,320	4,348	
512	Drugs, drug proprietaries and druggists' sundries .....	4,065	3,990	4,014	4,106	3,932	3,989	4,098	4,108	4,010	4,109	3,870	3,958	3,992	
513	Apparel, piece goods & notions .....	5,128	5,308	5,434	5,283	5,146	5,421	5,214	5,364	5,024	4,998	4,918	5,163	4,998	
514	Groceries & related products .....	19,432	19,841	20,231	20,125	19,916	19,848	20,011	20,138	20,123	20,257	20,784	19,999	19,581	
515	Farm-product raw materials .....	11,070	10,369	10,372	10,768	10,580	11,210	10,914	10,693	9,937	9,637	10,948	10,971	10,465	
516	Chemicals & allied products .....	3,176	3,284	3,336	3,175	3,253	3,161	3,248	3,872	3,792	3,819	3,145	3,204	3,304	
517	Petroleum & petroleum products .....	12,670	11,956	11,579	12,029	12,145	11,672	11,772	14,378	14,747	16,831	12,067	11,800	13,674	
518	Beer, wine, & distilled beverages .....	3,627	3,630	3,586	3,678	3,537	3,597	3,630	3,620	3,622	3,659	3,522	3,586	3,604	
519	Misc. nondurable goods .....	11,777	11,983	11,870	11,415	11,661	12,308	12,184	12,118	11,962	12,008	11,599	11,811	11,943	
	<b>Inventories, Total</b> .....	189,375	188,847	189,361	190,903	193,201	191,259	192,466	193,002	193,314	193,760	187,945	189,057	188,819	
50	Durable goods .....	125,510	125,685	124,901	125,781	126,998	126,061	126,786	127,985	128,075	126,977	123,945	124,363	123,954	
501	Motor vehicles & auto. equip. ....	23,909	24,219	23,911	24,399	24,018	23,116	23,531	24,219	23,829	23,842	23,543	23,298	22,381	
502	Furniture & home furnishings .....	4,123	4,142	4,429	4,364	4,338	4,544	4,483	4,249	4,361	4,312	4,543	4,510	4,496	
503	Lumber & other construction mat. ....	5,966	5,821	5,815	5,896	5,750	5,773	5,736	5,734	5,325	5,612	5,829	5,704	5,847	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,452	4,392	4,387	4,353	4,407	4,396	4,433	4,443	4,382	4,475	4,460	4,580	4,589	
505	Metals & minerals, ex. petroleum .....	10,548	10,299	10,075	9,956	10,064	9,824	10,100	10,300	10,293	10,165	10,719	10,879	10,693	
506	Electrical goods .....	15,716	15,520	15,330	15,587	15,598	15,685	15,749	15,748	15,579	15,283	15,501	15,541	15,525	
507	Hardware, plumbing & heating equipment .....	7,375	7,360	7,349	7,319	7,377	7,475	7,268	7,017	7,018	6,894	7,462	7,494	7,410	
508	Machinery, equip. & supplies .....	46,811	46,977	47,066	47,775	49,165	49,031	49,617	50,267	50,589	50,133	45,487	45,777	46,506	
509	Miscellaneous durable goods .....	6,610	6,955	6,539	6,132	6,281	6,217	5,969	6,008	6,399	6,261	6,401	6,580	6,507	
51	Nondurable goods .....	63,865	63,162	64,460	65,122	66,203	65,198	65,680	65,017	65,239	66,783	64,000	64,694	64,865	
511	Paper & paper products .....	4,077	3,998	4,011	4,039	4,049	4,081	4,117	4,143	4,250	4,245	4,223	4,175	4,154	
512	Drugs, drug proprietaries and druggists' sundries .....	5,976	5,988	6,099	6,034	6,086	6,107	6,034	5,944	6,030	6,163	5,801	5,846	5,976	
513	Apparel, piece goods & notions .....	9,697	9,776	10,184	10,414	10,365	10,351	10,194	10,228	10,354	10,730	9,343	9,428	9,807	
514	Groceries & related products .....	13,129	12,674	13,335	13,362	13,418	13,167	13,182	13,304	13,003	12,766	13,310	13,527	13,593	
515	Farm-product raw materials .....	7,743	7,559	7,830	8,102	8,229	7,581	7,633	7,119	6,644	7,275	7,258	7,685	7,831	
516	Chemicals & allied products .....	2,581	2,544	2,689	2,626	2,598	2,623	2,770	2,642	2,809	2,921	2,559	2,523	2,560	
517	Petroleum & petroleum products .....	3,666	3,849	3,862	3,827	3,814	3,779	3,857	4,389	4,438	4,694	4,036	4,038	3,762	
518	Beer, wine, & distilled beverages .....	4,009	3,903	3,929	3,868	3,882	3,898	3,831	3,787	3,905	3,989	3,875	4,025	4,022	
519	Misc. nondurable goods .....	12,987	12,871	12,521	12,850	13,762	13,611	14,062	13,461	13,806	14,000	13,595	13,447	13,160	
	<b>Stock/sales ratios, Total</b> .....	1.25	1.25	1.24	1.26	1.27	1.25	1.26	1.24	1.27	1.27	1.26	1.27	1.26	
50	Durable goods .....	1.64	1.63	1.61	1.64	1.63	1.62	1.65	1.67	1.71	1.74	1.68	1.68	1.69	
501	Motor vehicles & auto. equip. ....	1.63	1.59	1.51	1.75	1.64	1.56	1.57	1.57	1.57	1.66	1.66	1.70	1.72	
502	Furniture & home furnishings .....	1.81	1.79	1.93	1.80	1.70	1.84	1.58	1.61	1.67	1.74	1.89	1.81	1.87	
503	Lumber & other construction mat. ....	1.17	1.12	1.14	1.19	1.15	1.16	1.18	1.19	1.22	1.27	1.16	1.17	1.32	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.35	2.21	2.03	2.10	2.01	2.03	2.10	2.04	2.08	2.16	2.15	2.26	2.25	
505	Metals & minerals, ex. petroleum .....	1.44	1.42	1.43	1.32	1.22	1.21	1.33	1.39	1.40	1.37	1.44	1.43	1.57	
506	Electrical goods .....	1.60	1.59	1.58	1.60	1.60	1.65	1.64	1.65	1.63	1.64	1.65	1.64	1.62	
507	Hardware, plumbing & heating equipment .....	2.01	1.96	1.93	1.99	1.99	1.97	1.90	1.91	1.91	1.93	2.04	2.07	2.03	
508	Machinery, equip. & supplies .....	2.00	2.03	1.99	2.01	2.09	2.05	2.14	2.18	2.19	2.21	2.01	2.02	2.02	
509	Miscellaneous durable goods .....	.77	.84	.82	.73	.77	.79	.77	.75	.97	.97	.94	.88	.79	
51	Nondurable goods .....	.85	.85	.86	.87	.89	.86	.87	.83	.84	.84	.85	.86	.85	
511	Paper & paper products .....	.93	.94	.92	.93	.93	.94	.90	.93	.96	.96	.97	.97	.96	
512	Drugs, drug proprietaries and druggists' sundries .....	1.47	1.50	1.52	1.47	1.55	1.53	1.47	1.45	1.50	1.50	1.50	1.48	1.50	
513	Apparel, piece goods & notions .....	1.89	1.84	1.87	1.97	2.01	1.91	1.96	1.91	2.06	2.15	1.90	1.83	1.79	
514	Groceries & related products .....	.68	.64	.66	.66	.67	.66	.66	.66	.65	.63	.64	.68	.69	
515	Farm-product raw materials .....	.70	.73	.75	.75	.78	.68	.70	.67	.67	.75	.66	.70	.75	
516	Chemicals & allied products .....	.81	.77	.81	.83	.80	.83	.85	.68	.74	.76	.81	.79	.77	
517	Petroleum & petroleum products .....	.29	.32	.33	.32	.31	.32	.33	.31	.30	.28	.33	.34	.28	
518	Beer, wine, & distilled beverages .....	1.11	1.08	1.10	1.05	1.10	1.08	1.06	1.05	1.08	1.08	1.10	1.12	1.12	
519	Misc. nondurable goods .....	1.10	1.07	1.05	1.13	1.18	1.11	1.15	1.11	1.15	1.17	1.17	1.14	1.10	

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
<sup>F</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990										1989			Total 10 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. <sup>P</sup>	Oct.	Nov.	Dec.	1990	1989
	<b>Sales, Total</b> . . . . .	146,135	138,361	158,734	150,395	160,026	154,461	147,580	161,355	147,366	163,085	155,847	150,006	144,355	1,527,498	1,453,833
50	Durable goods . . . . .	71,238	69,070	80,795	76,808	81,467	79,475	74,234	79,904	73,250	79,438	78,451	74,608	69,247	765,679	716,105
501	Motor vehicles & auto. equip. . . . .	13,650	13,908	16,661	14,191	15,689	15,239	14,355	15,548	13,562	15,695	15,059	13,859	12,760	148,498	138,356
502	Furniture & home furnishings . . . . .	2,131	2,112	2,305	2,314	2,540	2,735	2,728	2,812	2,726	2,907	2,720	2,617	2,203	25,310	24,781
503	Lumber & other construction mat. . . . .	4,350	4,022	4,822	4,963	5,325	5,539	5,323	5,544	4,747	5,101	5,645	4,671	3,757	49,736	50,204
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	1,726	1,818	2,233	1,895	1,902	2,037	1,818	2,364	2,206	2,505	2,441	2,355	2,099	20,504	19,869
505	Metals & minerals, ex. petroleum . . . . .	7,139	6,724	7,811	7,550	8,628	8,299	7,068	7,934	7,335	7,720	7,855	7,319	6,274	76,208	72,412
506	Electrical goods . . . . .	9,268	8,853	9,927	9,253	9,658	9,421	9,347	9,995	9,670	10,486	10,354	9,998	9,288	95,878	91,942
507	Hardware, plumbing & heating equipment . . . . .	3,452	3,271	3,809	3,626	3,946	4,004	3,929	3,881	3,514	4,001	3,994	3,615	3,306	37,433	36,498
508	Machinery, equip. & supplies . . . . .	21,790	21,118	25,104	24,239	24,780	24,316	22,514	23,879	23,176	24,153	23,560	21,987	22,009	235,069	218,171
509	Miscellaneous durable goods . . . . .	7,732	7,244	8,123	8,777	8,999	7,885	7,152	7,947	6,314	6,870	7,023	8,187	7,551	77,043	63,872
51	Nondurable goods . . . . .	74,897	69,291	77,939	73,587	78,559	74,986	73,346	81,451	74,116	83,647	77,396	75,398	75,108	761,819	737,728
511	Paper & paper products . . . . .	4,392	3,936	4,536	4,161	4,331	4,259	4,493	4,738	4,307	4,872	4,645	4,372	4,152	44,025	42,217
512	Drugs, drug proprietaries and druggists' sundries . . . . .	4,268	3,723	4,066	4,003	4,030	3,853	4,000	4,235	3,862	4,446	4,052	3,962	3,868	40,486	36,138
513	Apparel, piece goods & notions . . . . .	4,743	5,292	5,586	4,670	4,513	5,470	5,678	6,533	5,089	5,748	5,616	5,158	3,977	63,322	48,854
514	Groceries & related products . . . . .	19,393	18,234	20,150	19,280	21,230	19,828	20,131	20,923	19,077	20,905	20,909	20,799	19,816	199,131	202,187
515	Farm-product raw materials . . . . .	12,332	9,954	11,088	10,639	11,151	10,392	9,757	10,212	8,983	10,639	11,889	11,520	10,298	105,147	110,383
516	Chemicals & allied products . . . . .	3,084	3,002	3,519	3,283	3,559	3,420	3,180	4,027	3,633	4,006	3,214	3,034	2,891	34,713	31,222
517	Petroleum & petroleum products . . . . .	13,228	11,633	12,633	11,740	12,485	11,392	11,101	14,507	14,378	16,848	11,741	11,375	14,262	129,945	119,424
518	Beer, wine, & distilled beverages . . . . .	2,952	2,900	3,482	3,457	3,873	3,842	3,663	4,073	3,423	3,889	3,592	3,816	3,997	35,554	34,388
519	Misc. nondurable goods . . . . .	10,505	10,617	12,879	12,374	13,387	12,530	11,343	12,203	11,364	12,294	11,738	11,362	11,847	119,496	112,915
	<b>Inventories, Total</b> . . . . .	190,390	190,475	190,909	192,411	192,015	190,333	191,188	189,337	191,990	195,207	189,404	189,822	189,042	(X)	(X)
50	Durable goods . . . . .	124,313	125,488	125,562	127,344	128,124	126,390	127,824	127,248	128,154	126,886	123,856	123,652	122,053	(X)	(X)
501	Motor vehicles & auto. equip. . . . .	23,670	24,631	24,222	24,545	24,210	22,839	22,990	23,299	24,115	23,699	23,402	23,624	22,650	(X)	(X)
502	Furniture & home furnishings . . . . .	4,102	4,051	4,389	4,342	4,373	4,826	4,609	4,304	4,509	4,342	4,561	4,357	4,397	(X)	(X)
503	Lumber & other construction mat. . . . .	5,930	5,722	5,960	6,203	5,842	5,981	5,960	5,579	5,518	5,511	5,718	5,379	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	4,296	4,273	4,352	4,305	4,332	4,480	4,541	4,532	4,544	4,596	4,580	4,516	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum . . . . .	10,632	10,198	10,166	10,115	10,255	10,119	10,403	10,022	10,077	10,023	10,569	10,531	10,746	(X)	(X)
506	Electrical goods . . . . .	15,323	15,396	15,223	15,603	15,660	15,732	16,064	15,984	15,641	15,359	15,594	15,510	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment . . . . .	7,264	7,323	7,445	7,421	7,421	7,482	7,355	7,073	7,039	7,025	7,589	7,299	7,165	(X)	(X)
508	Machinery, equip. & supplies . . . . .	46,764	47,024	47,207	48,635	49,706	48,982	49,915	50,267	50,235	50,083	45,442	45,823	45,390	(X)	(X)
509	Miscellaneous durable goods . . . . .	6,332	6,872	6,598	6,175	6,325	6,149	5,987	6,188	6,476	6,248	6,401	6,613	6,260	(X)	(X)
51	Nondurable goods . . . . .	66,077	64,987	65,347	65,067	63,891	63,943	63,364	62,089	63,836	68,321	65,548	66,170	66,989	(X)	(X)
511	Paper & paper products . . . . .	4,171	4,050	4,103	4,087	3,992	4,052	4,186	4,068	4,161	4,304	4,274	4,108	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries . . . . .	6,299	6,162	6,093	6,209	5,818	5,887	5,877	5,766	6,000	6,305	5,940	5,671	6,179	(X)	(X)
513	Apparel, piece goods & notions . . . . .	9,765	9,678	9,777	9,583	10,614	10,910	10,632	10,617	10,478	10,344	8,997	8,938	9,729	(X)	(X)
514	Groceries & related products . . . . .	13,142	12,712	13,082	13,121	13,190	12,864	12,787	12,665	13,042	13,455	14,002	14,284	14,001	(X)	(X)
515	Farm-product raw materials . . . . .	9,176	8,602	7,987	7,867	6,797	6,338	6,404	5,852	5,827	8,366	8,310	8,869	9,115	(X)	(X)
516	Chemicals & allied products . . . . .	2,602	2,567	2,727	2,705	2,673	2,731	2,792	2,668	2,705	2,822	2,477	2,486	2,486	(X)	(X)
517	Petroleum & petroleum products . . . . .	3,783	3,803	3,955	3,716	3,707	3,794	3,845	4,310	4,620	4,779	4,113	4,070	3,912	(X)	(X)
518	Beer, wine, & distilled beverages . . . . .	3,801	3,821	3,988	3,922	3,847	3,933	3,797	3,892	3,956	4,296	4,166	4,242	3,704	(X)	(X)
519	Misc. nondurable goods . . . . .	13,338	13,592	13,635	13,557	13,253	13,434	13,064	12,451	13,047	13,650	13,269	13,541	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> . . . . .	1.30	1.38	1.20	1.28	1.20	1.23	1.30	1.17	1.30	1.20	1.22	1.27	1.31	(X)	(X)
50	Durable goods . . . . .	1.75	1.82	1.55	1.66	1.57	1.59	1.72	1.59	1.75	1.60	1.58	1.66	1.76	(X)	(X)
501	Motor vehicles & auto. equip. . . . .	1.73	1.77	1.45	1.73	1.54	1.50	1.60	1.50	1.78	1.51	1.55	1.70	1.78	(X)	(X)
502	Furniture & home furnishings . . . . .	1.92	1.92	1.90	1.88	1.72	1.69	1.69	1.53	1.65	1.49	1.68	1.66	2.00	(X)	(X)
503	Lumber & other construction mat. . . . .	1.36	1.42	1.24	1.25	1.10	1.08	1.12	1.01	1.16	1.08	1.01	1.15	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	2.49	2.35	1.95	2.27	2.28	2.20	2.50	1.92	2.06	1.83	1.88	1.92	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum . . . . .	1.49	1.52	1.30	1.34	1.19	1.22	1.47	1.26	1.37	1.30	1.38	1.44	1.71	(X)	(X)
506	Electrical goods . . . . .	1.65	1.74	1.53	1.69	1.62	1.67	1.72	1.60	1.62	1.46	1.51	1.55	1.65	(X)	(X)
507	Hardware, plumbing & heating equipment . . . . .	2.10	2.24	1.95	2.05	1.88	1.87	1.87	1.82	2.00	1.76	1.90	2.02	2.17	(X)	(X)
508	Machinery, equip. & supplies . . . . .	2.15	2.23	1.88	2.01	2.01	2.01	2.22	2.11	2.17	2.07	1.93	2.08	2.06	(X)	(X)
509	Miscellaneous durable goods . . . . .	.82	.95	.81	.70	.70	.78	.84	.78	1.03	.91	.91	.81	.83	(X)	(X)
51	Nondurable goods . . . . .	.88	.94	.84	.88	.81	.85	.86	.76	.86	.82	.85	.88	.89	(X)	(X)
511	Paper & paper products . . . . .	.95	1.03	.90	.98	.92	.95	.93	.86	.97	.88	.92	.94	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries . . . . .	1.48	1.66	1.50	1.55	1.44	1.53	1.47	1.36	1.55	1.42	1.47	1.43	1.60	(X)	(X)
513	Apparel, piece goods & notions . . . . .	2.06	1.83	1.75	2.12	2.35	1.99	1.87	1.63	2.06	1.80	1.60	1.73	2.45	(X)	(X)
514	Groceries & related products . . . . .	.68	.70	.65	.68	.62	.65	.64	.61	.68	.64	.67	.69	.71	(X)	(X)
515	Farm-product raw materials . . . . .	.74	.86	.72	.74	.61	.61	.66	.57	.65	.79	.70	.77	.89	(X)	(X)
516	Chemicals & allied products . . . . .	.84	.86	.77	.82	.75	.80	.88	.66	.74	.70	.77	.81	.86	(X)	(X)
517	Petroleum & petroleum products . . . . .	.29	.33	.31	.32	.30	.33	.35	.30	.32	.28	.35	.36	.27	(X)	(X)
518	Beer, wine, & distilled beverages . . . . .	1.29	1.32	1.15	1.13	.99	1.02	1.04	.91	1.16	1.10	1.11	1.11	.93	(X)	(X)
519	Misc. nondurable goods . . . . .	1.27	1.28	1.06	1.10	.9										

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Oct. 1990 from Sept. 1990	Oct. 1990 from Oct. 1989	10 months 1990 from 10 months 1989	Oct. 1990 from Sept. 1990	Oct. 1990 from Oct. 1989	Oct. 1990 from Sept. 1990	Oct. 1990 from Oct. 1989	Oct. 1990 from Sept. 1990	Oct. 1990 from Oct. 1989
	<b>Total</b> .....	+10.7	+4.6	+5.1	+1.7	+3.1	+1	+2.5	+2	+3.1
50	Durable goods .....	+8.4	+1.3	+6.9	-1.0	+2.4	-2.6	-1.1	-0.9	+2.4
501	Motor vehicles & auto. equip. ....	+15.7	+4.2	+7.3	-1.7	+1.3	-5.2	+1.4	+1	+1.3
502	Furniture & home furnishings .....	+6.8	+6.9	+2.1	-3.7	-4.8	-5.2	+3.1	-1.1	-5.1
503	Lumber & other construction mat. ....	+7.5	-9.6	-0.9	-1	-3.6	-4.4	-12.1	-2	-3.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	+13.6	+2.6	+3.2	+1.1	+3	-1.8	-3	+2.1	+3
505	Metals & minerals, ex. petroleum .....	+5.2	+8	+5.2	-5	-5.2	+9	-2	-1.2	-5.2
506	Electrical goods .....	+8.4	+1.3	+4.3	-1.8	-1.5	-2.3	-7	-1.9	-1.4
507	Hardware, plumbing & heating equipment .....	+13.9	+2	+2.6	-2	-7.4	-2.7	-2.5	-1.8	-7.6
508	Machinery, equip. & supplies .....	+4.2	+2.5	+7.7	-3	+10.2	-1.8	+3	-0.9	+10.2
509	Miscellaneous durable goods .....	+8.8	-2.2	+20.6	-3.5	-2.4	-1.9	-5.2	-2.2	-2.2
51	Nondurable goods .....	+12.9	+8.1	+3.3	+7.0	+4.2	+2.7	+6.1	+2.4	+4.3
511	Paper & paper products .....	+13.1	+4.9	+4.3	+3.4	+7	+7	+2.4	-1	+5
512	Drugs, drug proprietaries and druggists' sundries .....	+15.1	+9.7	+12.0	+5.1	+6.1	+2.5	+6.2	+2.2	+6.2
513	Apparel, piece goods & notions .....	+12.9	+2.4	+9.1	-1.3	+15.0	-5	+1.6	+3.6	+14.8
514	Groceries & related products .....	+9.6	0	-1.5	+3.2	-3.9	+7	-2.5	-1.8	-4.1
515	Farm-product raw materials .....	+18.4	-10.5	-4.7	+43.6	+7	-3.0	-12.0	+9.5	+2
516	Chemicals & allied products .....	+10.3	+24.6	+11.2	+4.3	+13.9	+7	+21.4	+4.0	+14.1
517	Petroleum & petroleum products .....	+17.2	+43.5	+8.8	+3.4	+16.2	+14.1	+39.5	+5.8	+16.3
518	Beer, wine, & distilled beverages .....	+13.8	+8.3	+3.4	+8.6	+3.1	+1.0	+3.9	+2.2	+2.9
519	Misc. nondurable goods .....	+8.2	+4.7	+5.8	+4.6	+2.9	+4	+3.5	+1.4	+3.0

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

#### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

#### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

#### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

#### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.4-2.0	1.6	1.4-1.8	1.5	0.5-0.5	0.5	0.8-1.1	1.0	1.6	1.5	0.7
50	Durable goods .....	1.9-2.5	2.2	1.8-2.4	2.1	0.4-1.0	0.7	1.1-1.7	1.3	2.1	1.8	0.7
501	Motor vehicles & auto. equip. ....	4.7-7.2	6.0	4.4-7.9	5.3	1.2-3.4	1.6	3.1-4.7	3.6	5.7	4.6	2.3
502	Furniture & home furnishings .....	9.2-12.6	10.1	7.3-10.7	9.9	2.4-6.4	3.7	6.6-10.0	9.0	8.0	5.9	5.9
503	Lumber & other construction mat. ....	5.0-5.4	5.1	4.4-5.4	4.9	1.6-2.2	2.2	2.5-4.8	3.9	4.7	4.7	2.5
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	6.0-7.5	7.1	5.7-8.2	6.1	1.6-3.9	2.8	3.5-7.6	5.4	5.3	4.7	4.0
505	Metals & minerals, ex. petroleum .....	7.6-10.2	8.4	7.2-9.3	8.1	1.0-1.7	1.1	1.8-4.3	2.6	7.9	6.8	1.5
506	Electrical goods .....	2.7-3.4	3.1	2.6-3.3	3.1	1.0-1.9	1.5	2.3-3.2	2.9	3.1	2.9	1.3
507	Hardware, plumbing & heating equipment .....	8.2-10.2	9.4	8.0-9.7	9.2	1.1-3.0	1.8	2.5-4.0	3.0	8.9	7.7	2.0
508	Machinery, equip. & supplies .....	3.5-4.2	3.6	3.2-3.9	3.6	1.2-1.9	1.7	1.4-3.1	2.8	3.3	3.2	1.2
509	Miscellaneous durable goods .....	3.9-5.6	4.4	3.8-5.4	4.2	1.1-1.8	1.5	2.7-3.7	2.8	4.2	4.7	2.0
51	<b>Nondurable goods</b> .....	2.7-3.8	3.1	2.6-3.5	2.8	0.5-1.1	0.7	1.1-1.7	1.5	3.0	2.5	1.1
511	Paper & paper products .....	4.3-4.7	4.5	3.9-4.7	4.4	0.9-1.7	1.1	2.6-4.0	3.5	4.2	5.0	2.3
512	Drugs, drug proprietaries and druggists' sundries .....	5.2-7.7	6.4	5.1-7.1	6.1	0.9-1.7	1.2	2.9-4.9	3.1	5.7	4.9	2.2
513	Apparel, piece goods & notions .....	8.1-11.3	9.9	7.9-10.6	9.6	2.2-5.5	3.2	4.9-6.7	5.9	9.3	8.9	3.8
514	Groceries & related products .....	4.2-4.8	4.5	3.9-4.7	4.5	0.4-1.0	0.7	1.8-2.5	2.1	4.5	4.6	1.2
515	Farm-product raw materials .....	6.2-7.3	6.7	5.7-7.1	6.2	1.2-3.7	2.4	3.1-5.1	4.0	6.0	4.4	3.1
516	Chemicals & allied products .....	7.2-11.3	9.6	8.7-17.0	9.6	1.3-19.5	2.7	4.6-10.3	5.3	9.9	6.4	4.7
517	Petroleum & petroleum products .....	7.1-9.7	8.5	8.9-9.1	7.9	1.2-2.4	1.9	2.9-5.2	4.3	8.1	6.6	3.0
518	Beer, wine, & distilled beverages .....	3.6-5.7	4.0	3.6-4.9	4.1	1.1-2.0	1.4	2.0-3.3	2.5	3.9	3.3	1.2
519	Misc. nondurable goods .....	5.8-8.4	6.7	5.8-7.8	6.6	1.0-2.9	2.0	2.0-3.8	3.1	6.0	5.4	1.5
	<b>Inventories, Total</b> .....	1.2-1.4	1.3	1.2-1.4	1.2	0.2-0.4	0.3	0.5-1.2	0.8	(X)	(X)	(X)
50	Durable goods .....	1.6-1.8	1.8	1.6-1.8	1.7	0.2-0.4	0.3	0.9-1.2	0.9	(X)	(X)	(X)
501	Motor vehicles & auto. equip. ....	5.9-6.4	6.0	5.8-6.3	6.0	0.6-1.3	0.8	2.2-3.4	2.7	(X)	(X)	(X)
502	Furniture & home furnishings .....	8.4-9.2	8.6	8.2-9.0	8.3	0.9-1.7	1.1	4.2-5.4	5.0	(X)	(X)	(X)
503	Lumber & other construction mat. ....	6.6-7.8	7.1	6.3-7.5	7.0	0.7-1.4	1.1	3.3-4.6	4.3	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	5.5-7.2	6.7	5.8-6.5	6.2	0.7-3.1	1.3	3.6-5.0	4.0	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	4.3-5.2	4.9	4.2-4.9	4.8	0.5-0.8	0.8	2.0-3.0	2.6	(X)	(X)	(X)
506	Electrical goods .....	2.2-3.4	2.8	2.2-3.2	2.7	0.3-0.6	0.5	1.1-2.0	1.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment .....	5.8-6.6	6.3	5.9-6.7	6.2	0.6-1.2	0.8	1.6-2.7	2.0	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.5-4.4	4.0	3.4-4.4	3.9	0.5-0.8	0.6	2.0-2.2	2.1	(X)	(X)	(X)
509	Miscellaneous durable goods .....	9.1-10.5	9.6	9.2-9.9	9.7	0.7-1.3	0.8	2.0-4.0	3.0	(X)	(X)	(X)
51	<b>Nondurable goods</b> .....	2.8-3.3	3.2	3.0-3.4	3.1	0.3-0.9	0.5	1.1-1.9	1.2	(X)	(X)	(X)
511	Paper & paper products .....	4.7-5.4	5.1	4.8-5.3	5.0	0.6-1.2	0.8	2.2-3.4	2.5	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6.3-7.1	6.9	6.4-7.1	6.6	0.4-0.9	0.7	2.1-3.5	2.7	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.4-8.6	7.1	6.1-8.5	7.1	1.0-4.2	1.2	3.4-6.5	5.0	(X)	(X)	(X)
514	Groceries & related products .....	6.2-8.3	7.3	7.3-8.6	7.9	0.6-1.6	1.0	2.4-4.5	3.5	(X)	(X)	(X)
515	Farm-product raw materials .....	8.4-10.4	9.7	8.0-10.6	9.4	1.2-2.5	1.6	2.8-4.2	3.7	(X)	(X)	(X)
516	Chemicals & allied products .....	8.2-10.3	9.1	8.4-9.8	9.1	1.0-3.2	1.9	4.0-4.8	4.3	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.9-6.5	6.1	5.6-6.7	5.9	1.0-1.6	1.2	4.8-6.5	5.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	3.1-4.8	3.7	3.2-4.8	3.6	0.5-1.1	0.9	2.7-4.4	3.6	(X)	(X)	(X)
519	Misc. nondurable goods .....	8.7-10.0	8.9	8.5-9.3	9.0	1.0-2.2	1.2	2.2-3.8	2.9	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for May 1990 through October 1990.

FIRST-CLASS MAIL  
POSTAGE & FEES PAID  
CENSUS  
PERMIT No. G-58

Official Business  
Penalty for Private Use, \$300

Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989			1990										
		Oct. <sup>r</sup>	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. <sup>r</sup>	Oct. <sup>r</sup>	Nov.
	<b>Sales,<sup>1</sup> Total</b> .....	1.053	1.009	.960	.965	.912	1.042	.988	1.052	1.008	.968	1.037	.968	1.079	1.002
50	Durable goods .....	1.070	1.009	.940	.931	.894	1.041	.996	1.050	1.022	.974	1.039	.980	1.098	1.004
501	Motor vehicles & auto. equip. ...	1.064	1.011	.979	.933	.914	1.055	1.019	1.069	1.028	.960	1.006	.896	1.094	1.003
502	Furniture & home furnishings ...	1.132	1.052	.916	.934	.912	1.003	.953	.995	.985	.960	1.067	1.043	1.173	1.050
503	Lumber & other construction mat. ....	1.124	.960	.849	.851	.776	.949	.999	1.062	1.110	1.095	1.154	1.028	1.156	.966
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.175	1.164	1.031	.912	.916	1.033	.916	.869	.942	.881	1.086	1.046	1.210	1.188
505	Metals & minerals, ex. petroleum	1.032	.965	.919	.974	.924	1.108	1.004	1.048	1.024	.930	1.067	1.000	1.043	.952
506	Electrical goods .....	1.104	1.053	.967	.944	.905	1.020	.950	.991	.990	.975	1.048	1.014	1.126	1.044
507	Hardware, plumbing & heating equipment .....	1.091	.999	.906	.943	.870	1.001	.988	1.062	1.053	1.028	1.059	.958	1.121	.990
508	Machinery, equip. & supplies ...	1.041	.969	.958	.933	.911	1.059	1.018	1.054	1.017	.969	1.034	1.003	1.064	.968
509	Miscellaneous durable goods ...	1.026	1.092	.918	.902	.871	1.017	1.046	1.107	.996	.926	.986	.955	1.059	1.084
51	<b>Nondurable goods</b> .....	1.039	1.006	.983	.993	.928	1.041	.984	1.052	.994	.966	1.038	.952	1.065	1.003
511	Paper & paper products .....	1.070	1.012	.955	1.005	.928	1.043	.955	.992	.981	.982	1.069	.976	1.096	1.016
512	Drugs, drug proprietaries and druggists' sundries .....	1.047	1.001	.969	1.050	.933	1.013	.975	1.025	.966	.976	1.031	.963	1.082	.996
513	Apparel, piece goods & notions	1.142	.999	.724	.925	.997	1.028	.884	.877	1.009	1.089	1.218	1.013	1.150	1.014
514	Groceries & related products ...	1.006	1.040	1.012	.998	.919	.996	.957	1.066	.999	1.006	1.039	.948	1.032	1.029
515	Farm-product raw materials ...	1.086	1.050	.984	1.114	.960	1.069	.988	1.054	.927	.894	.955	.904	1.104	1.031
516	Chemicals & allied products ...	1.022	.947	.875	.971	.914	1.055	1.034	1.094	1.082	.979	1.040	.958	1.049	.954
517	Petroleum & petroleum products	.973	.964	1.043	1.044	.973	1.091	.976	1.028	.976	.943	1.009	.975	1.001	.972
518	Beer, wine, & distilled beverages	1.020	1.064	1.109	.814	.799	.971	.940	1.095	1.068	1.009	1.125	.945	1.063	1.058
519	Misc. nondurable goods .....	1.012	.962	.992	.892	.886	1.085	1.084	1.148	1.018	.931	1.007	.950	1.024	.974
	<b>Inventories,<sup>1</sup> Total</b> .....	1.009	1.004	1.000	1.007	1.009	1.008	1.007	.992	.995	.994	.982	.994	1.009	1.004
50	Durable goods .....	1.002	.993	.983	.991	.998	1.004	1.011	1.008	1.002	1.009	.996	1.006	1.001	.992
501	Motor vehicles & auto. equip. ...	.994	1.014	1.012	.990	1.017	1.013	1.006	1.008	.988	.977	.962	1.012	.994	1.010
502	Furniture & home furnishings ...	1.004	.966	.978	.995	.978	.991	.995	1.008	1.018	1.028	1.013	1.034	1.007	.969
503	Lumber & other construction mat. ....	.981	.943	.970	.994	.983	1.025	1.052	1.016	1.036	1.039	.973	.981	.982	.937
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.027	.986	.963	.965	.973	.992	.989	.983	1.019	1.048	1.020	1.037	1.027	.990
505	Metals & minerals, ex. petroleum	.986	.968	1.005	1.008	.990	1.009	1.016	1.019	1.030	1.030	.973	.979	.986	.973
506	Electrical goods .....	1.006	.998	.989	.975	.992	.993	1.001	1.004	1.003	1.020	1.015	1.004	1.005	.997
507	Hardware, plumbing & heating equipment .....	1.017	.974	.967	.985	.995	1.013	1.014	1.006	1.001	1.012	1.008	1.003	1.019	.975
508	Machinery, equip. & supplies ...	.999	1.001	.976	.999	1.001	1.003	1.018	1.011	.999	1.006	1.000	.993	.999	1.001
509	Miscellaneous durable goods ...	1.000	1.005	.962	.958	.988	1.009	1.007	1.007	.989	1.003	1.030	1.012	.998	1.007
51	<b>Nondurable goods</b> .....	1.025	1.028	1.035	1.035	1.026	1.015	.997	.961	.985	.965	.954	.972	1.026	1.030
511	Paper & paper products .....	1.012	.984	.996	1.023	1.013	1.023	1.012	.986	.993	1.012	.982	.979	1.014	.985
512	Drugs, drug proprietaries and druggists' sundries .....	1.024	.970	1.034	1.054	1.029	.999	1.029	.956	.964	.974	.970	.995	1.023	.969
513	Apparel, piece goods & notions	.963	.948	.992	1.007	.990	.960	.949	1.024	1.054	1.043	1.038	1.012	.964	.949
514	Groceries & related products ...	1.052	1.056	1.030	1.001	1.003	.981	.982	.983	.977	.970	.952	1.003	1.054	1.053
515	Farm-product raw materials ...	1.145	1.154	1.164	1.185	1.138	1.020	.971	.826	.836	.839	.822	.877	1.150	1.158
516	Chemicals & allied products ...	.968	.970	.971	1.008	1.009	1.014	1.030	1.029	1.041	1.008	1.010	.963	.966	.966
517	Petroleum & petroleum products	1.019	1.008	1.040	1.032	.988	1.024	.971	.972	1.004	.997	.982	1.041	1.018	1.001
518	Beer, wine, & distilled beverages	1.075	1.054	.921	.948	.979	1.015	1.014	.991	1.009	.991	.975	1.013	1.077	1.060
519	Misc. nondurable goods .....	.976	1.007	1.043	1.027	1.056	1.089	1.055	.963	.987	.929	.925	.945	.975	1.015

<sup>r</sup>Revised

<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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

November 1990

 BW90-11  
 Issued January 1991

 U.S. Department of Commerce  
 BUREAU OF THE CENSUS

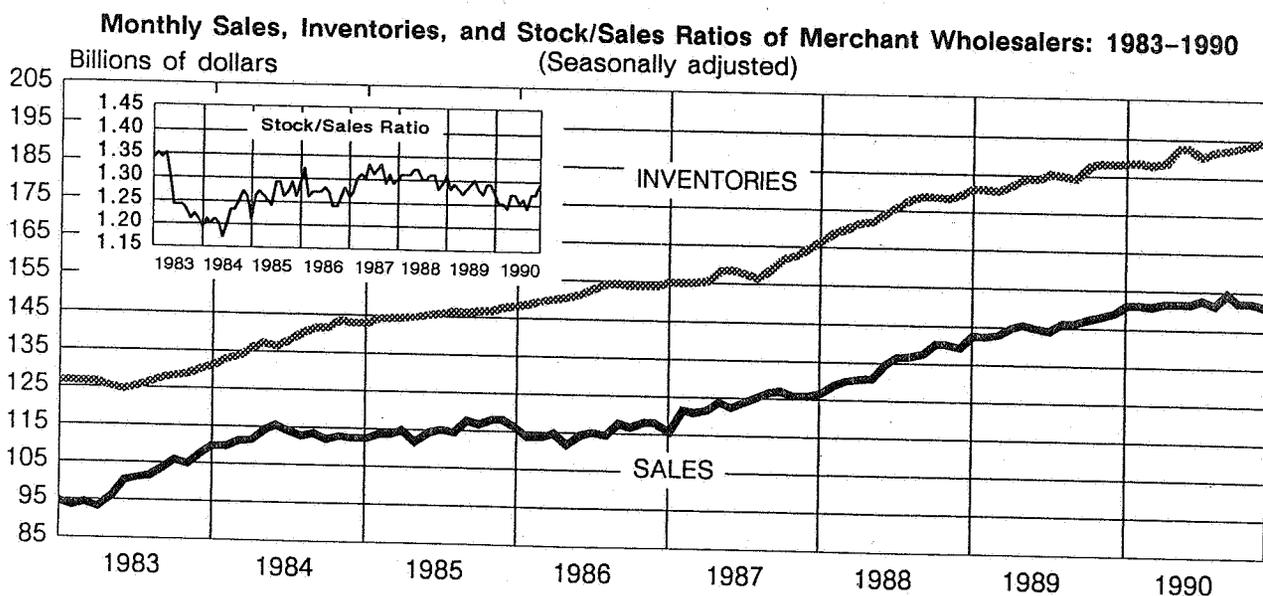
**Sales.** November 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$152.0 billion, down 0.6 percent ( $\pm 0.8$  percent) from the revised October level but were up 2.1 percent ( $\pm 1.8$  percent) from a year ago. The October preliminary estimate was revised upward by \$0.3 billion or about 0.2 percent. November sales of durable goods decreased 1.2 percent ( $\pm 1.2$  percent) from the revised October level, and were 2.9 percent ( $\pm 2.0$  percent) below a year ago. Decreases were reported in the following durable goods categories: miscellaneous durable goods were down 7.8 percent to \$5.8 billion; metals and minerals, except petroleum decreased 4.7 percent to \$7.1 billion; and machinery, equipment, and supplies were down 3.6 percent to \$22.2 billion. Decreases in these categories were partially offset by the increase in motor vehicles and automotive equipment of 5.5 percent to \$15.2 billion. November sales of nondurable goods showed no change from October and were 7.1 percent ( $\pm 2.5$  percent) above the November 1989 level.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$196.1 billion at the end of November, up 0.8 percent ( $\pm 0.5$  percent) from the revised October

level and were up 3.8 percent ( $\pm 1.2$  percent) from a year ago. The October preliminary estimate was revised upward by \$0.7 billion or about 0.4 percent. Inventories of durable goods wholesalers increased 0.7 percent ( $\pm 0.7$  percent) from the October level and were 3.5 percent ( $\pm 2.5$  percent) above a year ago. Inventories of hardware, plumbing, and heating equipment increased 3.8 percent to \$7.2 billion and lumber and other construction materials were up 2.5 percent to \$5.9 billion. However, inventories of miscellaneous durable goods decreased 6.3 percent to \$5.7 billion. Inventories of nondurable goods wholesalers increased 1.0 percent ( $\pm 0.6$  percent) from the October level and were 4.5 percent ( $\pm 1.1$  percent) above the November 1989 level. Monthly increases in the inventories of nondurable goods were as follows: farm-product raw materials increased 10.3 percent to \$8.2 billion; drugs, drug proprietaries and druggists' sundries were up 2.8 percent to \$6.4 billion; and paper and paper products increased 2.2 percent to \$4.4 billion.

**Stock/Sales Ratio.** The November stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.29, up from the October ratio of 1.27.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.



Monthly Wholesale Trade for December is scheduled to be released February 7, 1991 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990											1989	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. <sup>P</sup>	Nov. <sup>T</sup>	Dec.
	<b>Sales, Total</b> .....	151,968	151,620	152,383	151,458	152,302	153,549	152,333	155,586	152,365	152,824	151,972	148,893	149,584
50	Durable goods .....	76,653	77,018	77,612	76,522	77,768	78,002	76,687	76,863	74,735	73,138	72,252	74,434	73,180
501	Motor vehicles & auto. equip. ....	14,630	15,217	15,792	13,926	14,676	14,824	14,953	15,455	15,136	14,396	15,187	13,695	13,034
502	Furniture & home furnishings .....	2,282	2,316	2,298	2,428	2,553	2,777	2,842	2,635	2,614	2,501	2,569	2,448	2,405
503	Lumber & other construction mat. ....	5,112	5,183	5,081	4,968	5,014	4,990	4,861	4,804	4,618	4,444	4,498	4,901	4,425
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,893	1,985	2,162	2,069	2,189	2,162	2,064	2,177	2,109	2,028	1,988	2,027	2,036
505	Metals & minerals, ex. petroleum .....	7,330	7,277	7,050	7,520	8,233	8,104	7,600	7,436	7,335	7,489	7,139	7,745	6,827
506	Electrical goods .....	9,818	9,782	9,732	9,740	9,746	9,516	9,587	9,537	9,536	9,479	9,383	9,513	9,605
507	Hardware, plumbing & heating equipment ..	3,661	3,760	3,805	3,670	3,716	3,802	3,822	3,665	3,668	3,529	3,535	3,652	3,649
508	Machinery, equip. & supplies .....	23,355	23,181	23,705	23,810	23,510	23,910	23,234	23,094	23,107	23,022	22,192	22,879	22,974
509	Miscellaneous durable goods .....	8,572	8,317	7,987	8,391	8,129	7,917	7,724	8,060	6,612	6,250	5,761	5,754	8,225
51	Nondurable goods .....	75,315	74,602	74,771	74,936	74,536	75,547	75,646	78,723	77,630	79,686	79,720	74,459	76,404
511	Paper & paper products .....	4,370	4,241	4,349	4,357	4,366	4,341	4,575	4,432	4,413	4,453	4,435	4,307	4,348
512	Drugs, drug proprietaries and druggists' sundries .....	4,065	3,990	4,014	4,106	3,932	3,989	4,098	4,108	4,010	4,102	4,054	3,966	3,992
513	Apparel, piece goods & notions .....	5,128	5,308	5,434	5,283	5,146	5,421	5,214	5,364	5,024	5,010	5,148	5,067	5,493
514	Groceries & related products .....	19,432	19,841	20,231	20,125	19,916	19,848	20,011	20,138	20,123	20,212	19,649	20,076	19,581
515	Farm-product raw materials .....	11,070	10,369	10,372	10,768	10,580	11,210	10,914	10,693	9,937	9,769	10,091	10,847	10,465
516	Chemicals & allied products .....	3,176	3,284	3,336	3,175	3,253	3,161	3,248	3,872	3,792	3,751	3,541	3,177	3,304
517	Petroleum & petroleum products .....	12,670	11,956	11,579	12,029	12,145	11,672	11,772	14,378	14,747	16,581	16,778	11,788	13,674
518	Beer, wine, & distilled beverages .....	3,627	3,630	3,586	3,678	3,537	3,597	3,620	3,620	3,575	3,609	3,576	3,609	3,604
519	Misc. nondurable goods .....	11,777	11,983	11,870	11,415	11,661	12,308	12,184	12,118	11,962	12,233	12,415	11,665	11,943
	<b>Inventories, Total</b> .....	189,375	188,847	189,361	190,903	193,201	191,259	192,466	193,002	193,314	194,505	196,091	188,904	188,819
50	Durable goods .....	125,510	125,685	124,901	125,781	126,998	126,061	126,786	127,985	128,075	127,841	128,730	124,429	123,954
501	Motor vehicles & auto. equip. ....	23,909	24,219	23,911	24,399	24,018	23,116	23,531	24,219	23,829	23,869	23,940	23,437	22,381
502	Furniture & home furnishings .....	4,123	4,142	4,429	4,384	4,338	4,544	4,483	4,249	4,361	4,336	4,373	4,473	4,496
503	Lumber & other construction mat. ....	5,966	5,821	5,815	5,896	5,750	5,773	5,736	5,734	5,625	5,729	5,872	5,722	5,847
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,452	4,392	4,387	4,353	4,407	4,396	4,333	4,443	4,382	4,365	4,370	4,571	4,589
505	Metals & minerals, ex. petroleum .....	10,548	10,299	10,075	9,956	10,064	9,824	10,100	10,300	10,293	10,259	10,417	10,768	10,693
506	Electrical goods .....	15,716	15,520	15,330	15,587	15,598	15,685	15,749	15,748	15,579	15,550	15,681	15,557	15,525
507	Hardware, plumbing & heating equipment ..	7,375	7,360	7,349	7,319	7,377	7,475	7,268	7,017	7,018	6,917	7,178	7,471	7,410
508	Machinery, equip. & supplies .....	46,811	46,977	47,068	47,775	49,165	49,031	49,617	50,267	50,589	50,698	51,169	45,777	46,506
509	Miscellaneous durable goods .....	6,610	6,955	6,539	6,132	6,281	6,217	5,969	6,008	6,399	6,118	5,730	6,653	6,507
51	Nondurable goods .....	63,865	63,162	64,460	65,122	66,203	65,198	65,680	65,017	65,239	66,664	67,361	64,475	64,865
511	Paper & paper products .....	4,077	3,998	4,011	4,039	4,049	4,081	4,117	4,143	4,250	4,334	4,429	4,129	4,154
512	Drugs, drug proprietaries and druggists' sundries .....	5,976	5,988	6,099	6,034	6,086	6,107	6,034	5,944	6,030	6,187	6,362	5,822	5,976
513	Apparel, piece goods & notions .....	9,697	9,776	10,184	10,414	10,365	10,351	10,184	10,228	10,354	10,449	10,259	9,458	9,807
514	Groceries & related products .....	13,129	12,674	13,335	13,362	13,418	13,167	13,182	13,304	13,003	12,911	12,936	13,598	13,593
515	Farm-product raw materials .....	7,743	7,559	7,830	8,102	8,229	7,581	7,633	7,119	6,844	7,438	8,201	7,613	7,831
516	Chemicals & allied products .....	2,581	2,544	2,689	2,626	2,598	2,623	2,770	2,642	2,809	2,877	2,942	2,523	2,560
517	Petroleum & petroleum products .....	3,666	3,849	3,862	3,827	3,814	3,779	3,857	4,389	4,438	4,704	4,660	4,082	3,762
518	Beer, wine, & distilled beverages .....	4,009	3,903	3,929	3,668	3,682	3,898	3,831	3,787	3,905	3,902	3,874	3,994	4,022
519	Misc. nondurable goods .....	12,987	12,871	12,521	12,850	13,762	13,611	14,062	13,461	13,806	13,862	13,698	13,315	13,160
	<b>Stock/sales ratios, Total</b> .....	1.25	1.25	1.24	1.26	1.27	1.25	1.26	1.24	1.27	1.27	1.29	1.27	1.26
50	Durable goods .....	1.64	1.63	1.61	1.64	1.63	1.62	1.65	1.67	1.71	1.75	1.78	1.67	1.69
501	Motor vehicles & auto. equip. ....	1.63	1.59	1.51	1.75	1.64	1.56	1.57	1.57	1.57	1.66	1.58	1.71	1.72
502	Furniture & home furnishings .....	1.81	1.79	1.93	1.80	1.70	1.64	1.58	1.61	1.67	1.73	1.70	1.83	1.87
503	Lumber & other construction mat. ....	1.17	1.12	1.14	1.19	1.15	1.16	1.18	1.19	1.22	1.29	1.31	1.17	1.32
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.35	2.21	2.03	2.10	2.01	2.03	2.10	2.04	2.08	2.15	2.20	2.26	2.25
505	Metals & minerals, ex. petroleum .....	1.44	1.42	1.43	1.32	1.22	1.21	1.33	1.39	1.40	1.37	1.46	1.39	1.57
506	Electrical goods .....	1.60	1.59	1.58	1.60	1.60	1.65	1.64	1.65	1.63	1.64	1.67	1.64	1.62
507	Hardware, plumbing & heating equipment ..	2.01	1.96	1.93	1.99	1.99	1.97	1.90	1.91	1.91	1.96	2.03	2.05	2.03
508	Machinery, equip. & supplies .....	2.00	2.03	1.99	2.01	2.09	2.05	2.14	2.18	2.19	2.20	2.31	2.00	2.02
509	Miscellaneous durable goods .....	.77	.84	.82	.73	.77	.79	.77	.75	.97	.98	.88	.88	.79
51	Nondurable goods .....	.85	.85	.86	.87	.89	.86	.87	.83	.84	.84	.84	.87	.85
511	Paper & paper products .....	.93	.94	.92	.93	.93	.94	.90	.93	.96	.97	1.00	.96	.96
512	Drugs, drug proprietaries and druggists' sundries .....	1.47	1.50	1.52	1.47	1.55	1.53	1.47	1.45	1.50	1.51	1.57	1.47	1.50
513	Apparel, piece goods & notions .....	1.89	1.84	1.87	1.97	2.01	1.91	1.96	1.91	2.06	2.09	1.99	1.87	1.79
514	Groceries & related products .....	.68	.64	.66	.66	.67	.66	.66	.66	.65	.64	.66	.67	.69
515	Farm-product raw materials .....	.70	.73	.75	.75	.78	.68	.70	.67	.67	.76	.81	.70	.75
516	Chemicals & allied products .....	.81	.77	.81	.83	.80	.83	.85	.68	.74	.77	.83	.79	.77
517	Petroleum & petroleum products .....	.29	.32	.33	.32	.31	.32	.33	.31	.30	.28	.28	.35	.28
518	Beer, wine, & distilled beverages .....	1.11	1.08	1.10	1.05	1.10	1.08	1.06	1.05	1.08	1.09	1.07	1.12	1.12
519	Misc. nondurable goods .....	1.10	1.07	1.05	1.13	1.18	1.11	1.15	1.11	1.15	1.13	1.10	1.14	1.10

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
<sup>T</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990											1989		Total 11 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. <sup>P</sup>	Nov.	Dec.	1990	1989
	<b>Sales, Total</b> .....	146,135	138,361	158,734	150,395	160,026	154,461	147,580	161,355	147,366	164,376	152,137	150,006	144,355	1,680,926	1,603,839
50	Durable goods .....	71,238	69,070	80,795	76,808	81,467	79,475	74,234	79,904	73,250	80,274	72,120	74,608	69,247	838,635	790,713
501	Motor vehicles & auto. equip. ....	13,650	13,908	16,661	14,191	15,689	15,239	14,355	15,548	13,562	15,749	15,369	13,859	12,760	163,921	152,215
502	Furniture & home furnishings .....	2,131	2,112	2,305	2,314	2,540	2,735	2,728	2,812	2,934	2,751	2,617	2,203	2,203	28,088	27,398
503	Lumber & other construction mat. ....	4,350	4,022	4,822	4,963	5,325	5,539	5,323	5,544	4,747	5,142	4,323	4,671	3,757	54,100	54,875
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,726	1,818	2,233	1,895	1,902	2,037	1,818	2,364	2,206	2,450	2,340	2,355	2,099	22,789	22,224
505	Metals & minerals, ex. petroleum .....	7,139	6,724	7,811	7,550	8,628	8,299	7,068	7,934	7,335	7,923	6,768	7,319	6,274	83,179	79,731
506	Electrical goods .....	9,268	8,853	9,927	9,253	9,858	9,421	9,347	9,995	9,670	10,730	9,805	9,998	9,288	105,927	101,940
507	Hardware, plumbing & heating equipment .....	3,452	3,271	3,809	3,626	3,946	4,004	3,929	3,881	3,514	3,956	3,482	3,615	3,306	40,870	40,113
508	Machinery, equip. & supplies .....	21,790	21,118	25,104	24,239	24,780	24,316	22,514	23,879	23,176	24,703	21,216	21,987	22,009	256,835	240,158
509	Miscellaneous durable goods .....	7,732	7,244	8,123	8,777	8,999	7,885	7,152	7,947	6,314	6,687	6,066	8,187	7,551	82,926	72,059
51	Nondurable goods .....	74,897	69,291	77,939	73,587	78,559	74,986	73,346	81,451	74,116	84,102	80,017	75,398	75,108	842,291	813,126
511	Paper & paper products .....	4,392	3,936	4,536	4,161	4,331	4,259	4,493	4,738	4,307	4,880	4,502	4,372	4,152	48,535	46,589
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,723	4,066	4,003	4,030	3,853	4,000	4,235	3,862	4,451	4,026	3,962	3,868	44,517	40,100
513	Apparel, piece goods & notions .....	4,743	5,292	5,586	4,670	4,513	5,470	5,678	6,533	5,089	5,787	5,297	5,158	3,977	58,658	54,012
514	Groceries & related products .....	19,393	18,234	20,150	19,260	21,230	19,828	20,131	20,923	19,077	21,081	20,140	20,799	19,816	219,447	222,986
515	Farm-product raw materials .....	12,332	9,954	11,088	10,639	11,151	10,392	9,757	10,212	8,983	10,765	10,555	11,520	10,298	115,828	121,903
516	Chemicals & allied products .....	3,084	3,002	3,519	3,283	3,559	3,420	3,180	4,027	3,633	3,909	3,382	3,034	2,891	37,998	34,256
517	Petroleum & petroleum products .....	13,228	11,633	12,633	11,740	12,485	11,392	11,101	14,507	14,378	16,896	16,140	11,375	14,262	146,133	130,799
518	Beer, wine, & distilled beverages .....	2,952	2,900	3,482	3,457	3,873	3,842	3,863	4,073	3,423	3,782	3,833	3,816	3,997	39,280	38,204
519	Misc. nondurable goods .....	10,505	10,617	12,879	12,374	13,387	12,530	11,343	12,203	11,364	12,551	12,142	11,362	11,847	131,895	124,277
	<b>Inventories, Total</b> .....	190,390	190,475	190,909	192,411	192,015	190,333	191,188	189,337	191,990	195,916	196,996	189,822	189,042	(X)	(X)
50	Durable goods .....	124,313	125,488	125,562	127,344	128,124	126,390	127,824	127,248	128,154	127,834	127,921	123,652	122,053	(X)	(X)
501	Motor vehicles & auto. equip. ....	23,670	24,831	24,222	24,545	24,210	22,839	22,990	23,299	24,115	23,726	24,084	23,624	22,650	(X)	(X)
502	Furniture & home furnishings .....	4,102	4,051	4,389	4,342	4,373	4,626	4,609	4,304	4,509	4,366	4,259	4,357	4,397	(X)	(X)
503	Lumber & other construction mat. ....	5,930	5,722	5,960	6,203	5,842	5,981	5,960	5,579	5,518	5,626	5,508	5,379	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,296	4,273	4,445	4,305	4,332	4,480	4,541	4,532	4,544	4,461	4,309	4,516	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum .....	10,632	10,186	10,166	10,115	10,255	10,119	10,403	10,022	10,077	10,126	10,209	10,531	10,746	(X)	(X)
506	Electrical goods .....	15,323	15,396	15,223	15,603	15,660	15,732	16,064	15,984	15,641	15,659	15,618	15,510	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment .....	7,264	7,323	7,445	7,421	7,421	7,482	7,355	7,073	7,039	7,042	7,013	7,299	7,165	(X)	(X)
508	Machinery, equip. & supplies .....	46,764	47,024	47,207	46,635	49,706	48,982	49,151	50,267	50,235	50,698	51,220	45,823	45,390	(X)	(X)
509	Miscellaneous durable goods .....	6,332	6,872	6,598	6,176	6,325	6,149	5,987	6,188	6,476	6,130	5,701	6,613	6,260	(X)	(X)
51	Nondurable goods .....	66,077	64,987	65,347	65,067	63,891	63,943	63,364	62,089	63,836	68,082	69,075	66,170	66,989	(X)	(X)
511	Paper & paper products .....	4,171	4,050	4,103	4,087	3,992	4,052	4,166	4,068	4,161	4,395	4,407	4,108	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,162	6,093	6,209	5,818	5,887	5,877	5,766	6,000	6,286	6,190	5,671	6,179	(X)	(X)
513	Apparel, piece goods & notions .....	9,765	9,678	9,777	9,893	10,614	10,910	10,832	10,617	10,478	10,031	9,695	9,938	9,729	(X)	(X)
514	Groceries & related products .....	13,142	12,712	13,082	13,121	13,190	12,864	12,872	12,665	13,042	13,621	13,648	14,284	14,001	(X)	(X)
515	Farm-product raw materials .....	9,176	8,602	7,987	7,867	6,797	6,338	6,404	5,852	5,827	5,516	9,570	8,869	9,115	(X)	(X)
516	Chemicals & allied products .....	2,602	2,567	2,727	2,705	2,673	2,731	2,792	2,668	2,705	2,765	2,848	2,447	2,486	(X)	(X)
517	Petroleum & petroleum products .....	3,783	3,803	3,955	3,716	3,707	3,794	3,845	4,310	4,620	4,793	4,637	4,070	3,912	(X)	(X)
518	Beer, wine, & distilled beverages .....	3,801	3,821	3,988	3,922	3,847	3,933	3,797	3,692	3,856	4,187	4,242	4,242	3,704	(X)	(X)
519	Misc. nondurable goods .....	13,338	13,592	13,635	13,557	13,253	13,434	13,064	12,451	13,047	13,488	13,958	13,541	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> .....	1.30	1.38	1.20	1.28	1.20	1.23	1.30	1.17	1.30	1.19	1.29	1.27	1.31	(X)	(X)
50	Durable goods .....	1.75	1.82	1.55	1.66	1.57	1.59	1.72	1.59	1.75	1.59	1.77	1.66	1.76	(X)	(X)
501	Motor vehicles & auto. equip. ....	1.73	1.77	1.45	1.73	1.54	1.50	1.60	1.50	1.78	1.51	1.57	1.70	1.78	(X)	(X)
502	Furniture & home furnishings .....	1.92	1.92	1.90	1.88	1.72	1.69	1.69	1.53	1.65	1.49	1.55	1.66	2.00	(X)	(X)
503	Lumber & other construction mat. ....	1.36	1.42	1.24	1.25	1.10	1.08	1.12	1.01	1.16	1.09	1.27	1.15	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.49	2.35	1.95	2.27	2.28	2.20	2.50	1.92	2.06	1.82	1.84	1.92	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum .....	1.49	1.52	1.30	1.34	1.19	1.22	1.47	1.26	1.37	1.28	1.51	1.44	1.71	(X)	(X)
506	Electrical goods .....	1.65	1.74	1.53	1.69	1.62	1.67	1.72	1.60	1.62	1.46	1.59	1.55	1.65	(X)	(X)
507	Hardware, plumbing & heating equipment .....	2.10	2.24	1.95	2.05	1.88	1.87	1.87	1.82	2.00	1.78	2.01	2.02	2.17	(X)	(X)
508	Machinery, equip. & supplies .....	2.15	2.23	1.88	2.01	2.01	2.01	2.22	2.11	2.17	2.05	2.41	2.08	2.06	(X)	(X)
509	Miscellaneous durable goods .....	.82	.95	.81	.70	.70	.78	.84	.78	1.03	.92	.94	.81	.83	(X)	(X)
51	Nondurable goods .....	.88	.94	.84	.88	.81	.85	.86	.76	.86	.81	.86	.88	.89	(X)	(X)
511	Paper & paper products .....	.95	1.03	.90	.98	.92	.95	.93	.86	.97	.90	.98	.94	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.50	1.55	1.44	1.53	1.47	1.36	1.55	1.41	1.54	1.43	1.60	(X)	(X)
513	Apparel, piece goods & notions .....	2.06	1.83	1.75	2.12	2.35	1.99	1.87	1.63	2.06	1.73	1.83	1.73	2.45	(X)	(X)
514	Groceries & related products .....	.68	.70	.65	.68	.62	.65	.64	.61	.68	.65	.68	.69	.71	(X)	(X)
515	Farm-product raw materials .....	.74	.86	.72	.74	.61	.61	.66	.57	.65	.79	.91	.77	.89	(X)	(X)
516	Chemicals & allied products .....	.84	.86	.77	.82	.75	.68	.66	.74	.71	.84	.81	.86	.86	(X)	(X)
517	Petroleum & petroleum products .....	.29	.33	.31	.32	.30	.33	.35	.30	.32	.28	.29	.36	.27	(X)	(X)
518	Beer, wine, & distilled beverages .....	1.29	1.32	1.15	1.13	.99	1.02	1.04	.91	1.16	1.11	1.08	1.11	.93	(X)	(X)
519	Misc. nondurable goods .....	1.27	1.28	1.06	1.10	.99	1.07	1.15	1.02	1.15	1.07	1.15	1.19	1.16	(X)	(X)

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
 X Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Nov. 1990 from Oct. 1990	Nov. 1990 from Nov. 1989	11 months 1990 from 11 months 1989	Nov. 1990 from Oct. 1990	Nov. 1990 from Nov. 1989	Nov. 1990 from Oct. 1990	Nov. 1990 from Nov. 1989	Nov. 1990 from Oct. 1990	Nov. 1990 from Nov. 1989
	<b>Total</b> .....	-7.4	+1.4	+4.8	+6	+3.8	-.6	+2.1	+8	+3.8
50	Durable goods .....	-10.2	-3.3	+6.1	+1	+3.5	-1.2	-2.9	+7	+3.5
501	Motor vehicles & auto. equip. ....	-2.4	+10.9	+7.7	+1.5	+1.9	+5.5	+10.9	+3	+2.1
502	Furniture & home furnishings .....	-6.2	+5.1	+2.5	-2.5	-2.2	+2.7	+4.9	+9	-2.2
503	Lumber & other construction mat. ....	-15.9	-7.5	-1.4	-2.1	+2.4	+1.2	-8.2	+2.5	+2.6
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	-4.5	-.6	+2.5	-3.4	-4.6	-2.0	-1.9	+1	-4.4
505	Metals & minerals, ex. petroleum .....	-14.6	-7.5	+4.3	+8	-3.1	-4.7	-7.8	+1.5	-3.3
506	Electrical goods .....	-8.6	-1.9	+3.9	-.3	+7	-1.0	-1.4	+8	+8
507	Hardware, plumbing & heating equipment .....	-12.0	-3.7	+1.9	-.4	-3.9	+2	-3.2	+3.8	-3.9
508	Machinery, equip. & supplies .....	-14.1	-3.5	+6.9	+1.0	+11.8	-3.6	-3.0	+9	+11.8
509	Miscellaneous durable goods .....	-9.3	-25.9	+15.1	-7.0	-13.8	-7.8	-23.9	-6.3	-13.9
51	Nondurable goods .....	-4.9	+6.1	+3.6	+1.5	+4.4	.0	+7.1	+1.0	+4.5
511	Paper & paper products .....	-7.7	+3.0	+4.2	+3	+7.3	-.4	+3.0	+2.2	+7.3
512	Drugs, drug proprietaries and druggists' sundries .....	-9.5	+1.6	+11.0	-1.5	+9.2	-1.2	+2.2	+2.8	+9.3
513	Apparel, piece goods & notions .....	-8.5	+2.7	+8.6	-3.3	+8.5	+2.8	+1.6	-1.8	+8.5
514	Groceries & related products .....	-4.5	-3.2	-1.6	+2	-4.5	-2.8	-2.1	+2	-4.5
515	Farm-product raw materials .....	-2.0	-8.4	-5.0	+12.4	+7.9	+3.3	-7.0	+10.3	+7.7
516	Chemicals & allied products .....	-13.5	+11.5	+10.9	+3.0	+16.4	-5.6	+11.5	+2.3	+16.6
517	Petroleum & petroleum products .....	-4.5	+41.9	+11.7	-3.3	+13.9	+1.2	+42.3	-.9	+14.2
518	Beer, wine, & distilled beverages .....	+1.3	+4	+2.8	-1.6	-2.8	+1.0	+1.2	-.7	-3.0
519	Misc. nondurable goods .....	-3.3	+6.9	+6.1	+3.5	+3.1	+1.5	+6.4	-1.2	+2.9

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major

portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm$  1.3)" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual (SIC)*. The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the *1977 Supplement*.

### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When unadjusted preliminary and final estimates become available,

all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> .....	1.5-2.0	1.7	1.4-1.9	1.5	0.5-0.5	0.5	0.8-1.1	1.0	1.6	1.5	0.6
j0	Durable goods .....	2.1-2.5	2.2	1.8-2.4	2.1	0.4-1.0	0.8	1.2-1.7	1.3	2.1	1.9	0.7
501	Motor vehicles & auto. equip. ....	4.7-7.2	6.5	4.4-7.9	6.1	1.2-3.4	1.6	2.2-4.7	3.5	5.8	4.6	2.2
502	Furniture & home furnishings .....	8.4-12.6	10.1	7.8-10.7	9.9	2.1-6.4	3.4	6.1-10.0	9.0	7.9	6.0	5.4
503	Lumber & other construction mat. ....	5.0-5.4	5.1	4.4-5.5	4.9	1.4-2.2	1.9	2.5-4.8	3.9	4.7	4.7	2.4
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	6.6-7.5	7.2	5.8-8.2	6.1	1.6-3.9	3.2	4.7-7.6	5.6	5.3	4.7	3.5
505	Metals & minerals, ex. petroleum .....	7.6-10.2	8.4	7.2-9.5	8.7	1.0-2.5	1.3	2.4-5.2	2.8	8.0	7.2	1.4
506	Electrical goods .....	2.7-3.7	3.2	2.8-3.2	3.1	1.2-1.9	1.5	2.0-3.0	2.7	3.1	3.0	1.3
507	Hardware, plumbing & heating equipment ..	8.2-10.2	9.4	8.0-9.7	9.4	1.1-3.0	2.0	2.5-3.9	3.0	9.0	7.7	2.0
508	Machinery, equip. & supplies .....	3.5-4.2	3.6	3.2-3.9	3.3	1.2-1.9	1.6	1.4-3.1	2.7	3.3	3.2	1.2
509	Miscellaneous durable goods .....	4.3-5.6	4.8	3.8-5.4	4.4	1.2-2.3	1.6	2.6-3.7	2.8	4.2	4.6	1.8
51	Nondurable goods .....	2.7-3.8	3.3	2.6-3.7	2.9	0.6-1.1	0.7	1.1-1.7	1.5	3.0	2.5	1.1
511	Paper & paper products .....	4.4-4.7	4.5	4.2-4.7	4.4	0.9-1.7	1.2	2.6-4.0	3.3	4.2	4.9	2.2
512	Drugs, drug proprietaries and druggists' sundries .....	5.2-7.7	6.6	5.1-7.1	6.7	0.9-1.7	1.2	2.9-4.9	3.3	5.8	4.9	2.3
513	Apparel, piece goods & notions .....	8.1-11.3	9.8	7.9-10.6	9.3	2.2-5.5	3.2	4.9-6.7	6.1	9.2	8.9	3.5
514	Groceries & related products .....	4.4-4.8	4.6	4.4-4.7	4.6	0.4-1.0	0.7	1.8-2.5	2.1	4.5	4.7	2.8
515	Farm-product raw materials .....	6.1-7.3	6.5	5.7-7.2	6.2	2.1-3.7	2.4	2.4-6.1	4.0	5.9	4.5	2.8
516	Chemicals & allied products .....	7.2-11.3	9.1	8.3-17.0	9.5	2.0-19.5	2.7	4.6-10.3	4.7	9.7	6.6	4.3
517	Petroleum & petroleum products .....	7.6-9.7	8.9	6.9-9.4	8.4	1.5-2.4	1.9	2.9-5.2	3.8	8.2	6.6	3.0
518	Beer, wine, & distilled beverages .....	3.6-4.8	4.0	3.6-5.1	4.1	1.1-2.0	1.4	2.0-4.2	2.5	4.0	3.3	1.4
519	Misc. nondurable goods .....	5.8-7.1	6.7	5.8-7.5	6.3	1.0-2.9	2.2	2.0-3.7	3.1	6.1	5.4	1.4
	<b>Inventories, Total</b> .....	1.2-1.5	1.4	1.2-1.4	1.3	0.2-0.4	0.3	0.6-1.2	0.7	(X)	(X)	(X)
50	Durable goods .....	1.8-1.9	1.8	1.7-1.8	1.7	0.2-0.4	0.3	0.9-1.5	1.0	(X)	(X)	(X)
501	Motor vehicles & auto. equip. ....	5.6-6.4	5.9	5.6-6.3	6.0	0.6-1.3	0.7	2.4-3.4	2.7	(X)	(X)	(X)
502	Furniture & home furnishings .....	7.8-9.2	8.4	7.4-9.0	8.3	0.9-1.7	1.1	4.2-5.4	5.0	(X)	(X)	(X)
503	Lumber & other construction mat. ....	6.6-7.8	7.1	6.5-7.5	7.2	0.7-1.4	1.1	3.3-4.6	4.4	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	6.5-7.2	6.7	5.7-6.5	6.2	1.0-3.1	1.3	3.6-5.0	4.0	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum .....	4.3-5.5	4.9	4.2-5.0	4.8	0.5-1.2	0.8	2.0-3.0	2.3	(X)	(X)	(X)
506	Electrical goods .....	2.2-3.4	3.0	2.2-3.2	2.9	0.3-0.6	0.5	1.3-2.0	1.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.8-6.6	6.4	5.9-6.7	6.3	0.8-1.3	0.9	1.9-2.7	2.0	(X)	(X)	(X)
508	Machinery, equip. & supplies .....	3.5-4.8	4.2	3.4-4.4	4.1	0.5-0.8	0.8	2.0-2.9	2.2	(X)	(X)	(X)
509	Miscellaneous durable goods .....	9.1-10.5	9.8	9.3-9.9	9.8	0.6-1.3	0.8	2.6-4.3	3.4	(X)	(X)	(X)
51	Nondurable goods .....	2.8-3.3	3.1	3.0-3.4	3.1	0.4-0.9	0.5	1.1-2.1	1.5	(X)	(X)	(X)
511	Paper & paper products .....	4.7-5.5	5.1	4.8-5.3	5.0	0.6-1.1	0.8	1.9-3.4	2.5	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6.3-7.1	6.8	6.4-7.3	6.7	0.4-1.0	0.7	2.5-3.5	2.8	(X)	(X)	(X)
513	Apparel, piece goods & notions .....	6.4-8.6	7.2	6.1-8.5	7.3	1.0-4.2	1.2	3.4-6.5	4.7	(X)	(X)	(X)
514	Groceries & related products .....	5.1-8.2	7.1	6.1-8.3	7.5	0.6-1.6	1.2	2.4-4.5	3.5	(X)	(X)	(X)
515	Farm-product raw materials .....	8.8-10.4	9.7	8.5-10.6	9.4	1.2-2.5	1.6	3.5-4.2	4.0	(X)	(X)	(X)
516	Chemicals & allied products .....	8.2-9.8	9.1	8.4-9.6	9.0	1.0-3.2	1.6	4.0-4.8	4.3	(X)	(X)	(X)
517	Petroleum & petroleum products .....	5.3-6.5	6.1	5.5-6.7	6.0	1.0-1.6	1.2	4.9-6.5	5.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages .....	3.1-4.4	3.7	3.2-4.2	3.6	0.5-1.1	1.0	3.5-4.5	3.7	(X)	(X)	(X)
519	Misc. nondurable goods .....	8.7-10.0	8.9	8.5-9.3	9.1	1.0-2.2	1.6	2.2-3.7	2.9	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for June 1990 through November 1990.

FIRST-CLASS MAIL  
 POSTAGE & FEES PAID  
 CENSUS  
 PERMIT No. G-58

Official Business  
 Penalty for Private Use, \$300

Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989		1990											
		Nov. <sup>f</sup>	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. <sup>f</sup>	Nov. <sup>f</sup>	Dec.
	<b>Sales,<sup>1</sup> Total</b> .....	1.008	.960	.965	.912	1.042	.988	1.052	1.008	.968	1.037	.968	1.080	1.002	.966
50	Durable goods .....	1.006	.940	.931	.894	1.041	.996	1.050	1.022	.974	1.039	.980	1.101	1.003	.947
501	Motor vehicles & auto. equip. ...	1.012	.979	.933	.914	1.055	1.019	1.069	1.028	.960	1.006	.896	1.094	1.012	.978
502	Furniture & home furnishings ...	1.069	.916	.934	.912	1.003	.953	.995	.985	.960	1.067	1.043	1.173	1.071	.935
503	Lumber & other construction mat. ....	.953	.849	.851	.776	.949	.999	1.062	1.110	1.095	1.154	1.028	1.157	.961	.839
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.162	1.031	.912	.916	1.033	.916	.869	.942	.881	1.086	1.046	1.208	1.177	1.022
505	Metals & minerals, ex. petroleum	.945	.919	.974	.924	1.108	1.004	1.048	1.024	.930	1.067	1.000	1.058	.948	.885
506	Electrical goods .....	1.051	.967	.944	.905	1.020	.950	.991	.990	.975	1.048	1.014	1.132	1.045	.974
507	Hardware, plumbing & heating equipment .....	.990	.906	.943	.870	1.001	.988	1.062	1.053	1.028	1.059	.958	1.121	.985	.914
508	Machinery, equip. & supplies ...	.961	.958	.933	.911	1.059	1.018	1.054	1.017	.969	1.034	1.003	1.073	.956	.95
509	Miscellaneous durable goods ...	1.081	.918	.902	.871	1.017	1.046	1.107	.996	.926	.986	.955	1.070	1.053	.91
51	<b>Nondurable goods</b> .....	1.008	.983	.993	.928	1.041	.984	1.052	.994	.966	1.038	.952	1.066	1.003	.988
511	Paper & paper products .....	1.015	.955	1.005	.928	1.043	.955	.992	.981	.982	1.069	.976	1.096	1.015	.955
512	Drugs, drug proprietaries and druggists' sundries .....	.999	.969	1.050	.933	1.013	.975	1.025	.966	.976	1.031	.963	1.085	.993	.982
513	Apparel, piece goods & notions	1.018	.724	.925	.997	1.028	.884	.877	1.009	1.089	1.218	1.013	1.155	1.029	.746
514	Groceries & related products	1.036	1.012	.998	.919	.996	.957	1.066	.999	1.006	1.039	.948	1.043	1.025	1.010
515	Farm-product raw materials ...	1.062	.984	1.114	.960	1.069	.988	1.054	.927	.894	.955	.904	1.102	1.046	.999
516	Chemicals & allied products	.955	.875	.971	.914	1.055	1.034	1.094	1.082	.979	1.040	.958	1.042	.955	.869
517	Petroleum & petroleum products	.965	1.043	1.044	.973	1.091	.976	1.028	.976	.943	1.009	.975	1.019	.962	1.014
518	Beer, wine, & distilled beverages	1.070	1.109	.814	.799	.971	.940	1.095	1.068	1.009	1.125	.945	1.058	1.062	1.109
519	Misc. nondurable goods .....	.974	.992	.892	.866	1.085	1.084	1.148	1.018	.931	1.007	.950	1.026	.978	1.002
	<b>Inventories,<sup>1</sup> Total</b> .....	1.005	1.000	1.007	1.009	1.008	1.007	.992	.995	.994	.982	.994	1.009	1.005	1.001
50	Durable goods .....	.993	.983	.991	.998	1.004	1.011	1.008	1.002	1.009	.996	1.006	1.002	.993	.981
501	Motor vehicles & auto. equip. ...	1.008	1.012	.990	1.017	1.013	1.006	1.008	.988	.977	.962	1.012	.994	1.006	1.010
502	Furniture & home furnishings ...	.974	.978	.995	.978	.991	.995	1.008	1.018	1.028	1.013	1.034	1.007	.974	.977
503	Lumber & other construction mat. ....	.940	.970	.994	.983	1.025	1.052	1.016	1.036	1.039	.973	.981	.982	.938	.968
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.988	.963	.965	.973	.992	.989	.983	1.019	1.048	1.020	1.037	1.022	.986	.968
505	Metals & minerals, ex. petroleum	.978	1.005	1.008	.990	1.009	1.016	1.019	1.030	1.030	.973	.979	.987	.980	1.008
506	Electrical goods .....	.997	.989	.975	.992	.993	1.001	1.004	1.003	1.020	1.015	1.004	1.007	.996	.990
507	Hardware, plumbing & heating equipment .....	.977	.967	.985	.995	1.013	1.014	1.006	1.001	1.012	1.008	1.003	1.018	.977	.968
508	Machinery, equip. & supplies ...	1.001	.976	.999	1.001	1.003	1.018	1.011	.999	1.006	1.000	.993	1.000	1.001	.974
509	Miscellaneous durable goods ...	.994	.962	.958	.988	1.009	1.007	1.007	.989	1.003	1.030	1.012	1.002	.995	.970
51	<b>Nondurable goods</b> .....	1.031	1.035	1.035	1.026	1.015	.997	.961	.985	.965	.954	.972	1.024	1.031	1.037
511	Paper & paper products .....	.995	.996	1.023	1.013	1.023	1.012	.986	.993	1.012	.982	.979	1.014	.995	.997
512	Drugs, drug proprietaries and druggists' sundries .....	.974	1.034	1.054	1.029	.999	1.029	.956	.964	.974	.970	.995	1.016	.973	1.038
513	Apparel, piece goods & notions	.945	.992	1.007	.990	.960	.949	1.024	1.054	1.043	1.038	1.012	.960	.945	.992
514	Groceries & related products	1.055	1.030	1.001	1.003	.981	.982	.983	.977	.970	.952	1.003	1.055	1.055	1.036
515	Farm-product raw materials ...	1.165	1.164	1.185	1.138	1.020	.971	.826	.836	.839	.822	.877	1.145	1.167	1.168
516	Chemicals & allied products	.970	.971	1.008	1.009	1.014	1.030	1.029	1.041	1.008	1.010	.963	.961	.968	.968
517	Petroleum & petroleum products	.997	1.040	1.032	.988	1.024	.971	.972	1.004	.997	.982	1.041	1.019	.995	1.025
518	Beer, wine, & distilled beverages	1.062	.921	.948	.979	1.015	1.014	.991	1.009	.991	.975	1.013	1.073	1.064	.930
519	Misc. nondurable goods .....	1.017	1.043	1.027	1.056	1.089	1.055	.963	.987	.929	.925	.945	.973	1.019	1.047

<sup>f</sup>Revised

<sup>1</sup>Adjusted sales and inventory data shown in table 1A are obtained by dividing the unadjusted data by the adjustment factors shown above for the corresponding gross. 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

U.S. Department of Commerce  
BUREAU OF THE CENSUS

December 1990

BW90-12  
Issued February 1991

**Intention to Revise Wholesale Estimates.** The unadjusted and adjusted merchant wholesale sales, inventory, and stock/sales ratio estimates will be revised utilizing the results of the 1987 Census of Wholesale Trade and the 1989 Annual Trade Survey. Revised sales, inventory, and stock/sales ratio estimates for January 1988 through December 1990 are scheduled for release during the week of April 1. Estimates shown in this report do not reflect this revision.

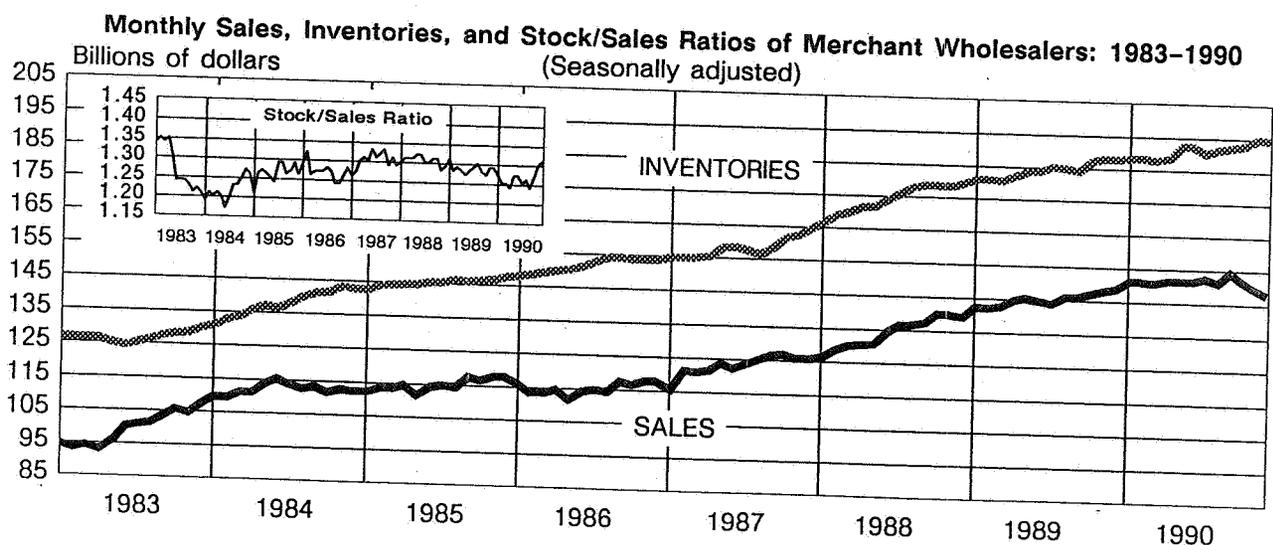
**Sales.** December 1990 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$148.7 billion, down 1.2 percent ( $\pm 0.9$  percent) from the revised November level and were down 1.0 percent ( $\pm 1.2$  percent) from a year ago. Excluding the petroleum and petroleum products group, the percent change from the November 1990 sales level showed an increase of 0.3 percent ( $\pm 1.1$  percent) while the change from December 1989 was down 1.1 percent ( $\pm 1.2$  percent). The November preliminary estimate was revised downward by \$1.5 billion or about 1.0 percent ( $\pm 1.9$  percent) from the revised November level, but were 1.4 percent ( $\pm 2.1$  percent) below a year ago. Increases were reported in the following durable categories: machinery, equipment and supplies were up 6.1 percent to \$23.3 billion; miscellaneous durable goods increased 4.8 percent to \$6.3 billion; and metals and minerals, except petroleum were up 4.0 percent to \$7.4 billion. Increases in these categories were partially offset by the decreases in lumber and other construction materials of 9.5 percent to \$4.0 billion and in motor vehicles and automotive equipment of 2.6 percent to \$14.2 billion. December sales of nondurable goods were down 3.3 percent ( $\pm 0.9$  percent) from November and were down 0.6 percent ( $\pm 1.9$  percent) from December 1989. Sales of petroleum and petroleum products decreased 13.7 percent to \$14.1 billion from the November level. However, sales of beer, wine,

and distilled beverages increased 7.9 percent to \$3.9 billion for the same period.

**Inventories.** Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$195.4 billion at the end of December, down 0.3 percent ( $\pm 0.3$  percent) from the revised November level but were up 3.7 percent ( $\pm 1.3$  percent) from a year ago. The November preliminary estimate was revised downward by \$0.2 billion or about 0.1 percent. Inventories of durable goods wholesalers increased 0.3 percent ( $\pm 0.5$  percent) from the November level and were 4.1 percent ( $\pm 1.9$  percent) above a year ago. Inventories of nondurable goods wholesalers were down 1.4 percent ( $\pm 0.7$  percent) from the November level but were up 2.9 percent ( $\pm 2.7$  percent) from the December 1989 level. Monthly decreases in the inventories of nondurable goods wholesalers were as follows: petroleum and petroleum products were down 9.8 percent to \$4.2 billion and drugs, drug proprietaries and druggists' sundries decreased 2.4 percent to \$6.2 billion.

**Stock/Sales Ratio.** The December stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.31. The year ago ratio was 1.26.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling errors. A discussion of the reliability of the data is on page 4.



Monthly Wholesale Trade for January is scheduled to be released March 12, 1991 at 10:00.

Address inquiries concerning this report to Business Division, Bureau of the Census, Washington, D.C. 20233, or call Dale Gordon or Michael Brown, Telephone (301) 763-3916 or 763-5806.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

**Table 1A. Adjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data adjusted for seasonal variation and, in the case of sales, also for trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990												1989	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. <sup>P</sup>	Dec. <sup>F</sup>	
	<b>Sales, Total</b> .....	151,968	151,620	152,383	151,458	152,302	153,549	152,333	155,586	152,365	152,824	150,519	148,716	150,205	
50	Durable goods .....	76,653	77,018	77,612	76,522	77,766	78,002	76,687	76,863	74,735	73,138	71,364	72,202	73,224	
501	Motor vehicles & auto. equip. ....	14,630	15,217	15,792	13,926	14,676	14,824	14,953	15,455	15,136	14,396	14,592	14,209	13,182	
502	Furniture & home furnishings .....	2,282	2,316	2,298	2,428	2,553	2,777	2,842	2,635	2,614	2,501	2,449	2,308	2,379	
503	Lumber & other construction mat. ....	5,112	5,183	5,081	4,988	5,014	4,990	4,861	4,804	4,618	4,444	4,414	3,996	4,505	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,893	1,985	2,162	2,069	2,189	2,162	2,064	2,177	2,109	2,028	2,011	2,027	2,024	
505	Metals & minerals, ex. petroleum .....	7,330	7,277	7,050	7,520	8,233	8,104	7,600	7,436	7,335	7,489	7,072	7,352	6,963	
506	Electrical goods .....	9,818	9,782	9,732	9,740	9,746	9,516	9,587	9,537	9,536	9,479	9,282	9,139	9,635	
507	Hardware, plumbing & heating equipment .....	3,661	3,760	3,805	3,670	3,716	3,802	3,822	3,665	3,668	3,529	3,494	3,501	3,649	
508	Machinery, equip. & supplies .....	23,355	23,181	23,705	23,810	23,510	23,910	23,234	23,094	23,107	23,022	21,990	23,331	23,070	
509	Miscellaneous durable goods .....	8,572	8,317	7,987	8,391	8,129	7,917	7,724	8,060	6,612	6,250	6,050	6,339	7,817	
51	Nondurable goods .....	75,315	74,602	74,771	74,936	74,536	75,547	75,646	78,723	77,630	79,686	79,155	76,514	76,981	
511	Paper & paper products .....	4,370	4,241	4,349	4,357	4,368	4,341	4,575	4,432	4,413	4,453	4,301	4,197	4,361	
512	Drugs, drug proprietaries and druggists' sundries .....	4,065	3,990	4,014	4,106	3,932	3,989	4,098	4,108	4,010	4,102	4,080	4,058	3,951	
513	Apparel, piece goods & notions .....	5,128	5,308	5,434	5,283	5,146	5,421	5,214	5,364	5,024	5,010	5,165	5,533	5,310	
514	Groceries & related products .....	19,432	19,841	20,231	20,125	19,916	19,848	20,011	20,138	20,123	20,212	19,583	19,403	19,757	
515	Farm-product raw materials .....	11,070	10,369	10,372	10,768	10,580	11,210	10,914	10,693	9,937	9,769	10,121	9,839	10,638	
516	Chemicals & allied products .....	3,176	3,284	3,336	3,175	3,253	3,161	3,248	3,872	3,792	3,751	3,609	3,612	3,319	
517	Petroleum & petroleum products .....	12,670	11,956	11,579	12,029	12,145	11,672	11,772	14,378	14,747	16,581	16,391	14,149	14,093	
518	Beer, wine, & distilled beverages .....	3,627	3,630	3,586	3,678	3,537	3,597	3,630	3,622	3,622	3,575	3,632	3,918	3,585	
519	Misc. nondurable goods .....	11,777	11,983	11,870	11,415	11,661	12,308	12,184	12,118	11,962	12,233	12,273	11,805	11,967	
	<b>Inventories, Total</b> .....	189,375	188,847	189,361	190,903	193,201	191,259	192,466	193,002	193,314	194,505	195,940	195,437	188,528	
50	Durable goods .....	125,510	125,685	124,901	125,781	126,998	126,061	126,786	127,985	128,075	127,841	128,487	128,926	123,893	
501	Motor vehicles & auto. equip. ....	23,909	24,219	23,911	24,399	24,018	23,116	23,531	24,219	23,829	23,869	24,331	24,380	22,426	
502	Furniture & home furnishings .....	4,123	4,142	4,429	4,364	4,338	4,544	4,483	4,249	4,361	4,336	4,321	4,285	4,505	
503	Lumber & other construction mat. ....	5,966	5,821	5,815	5,896	5,750	5,773	5,736	5,734	5,625	5,729	5,568	5,493	5,884	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,452	4,392	4,387	4,353	4,407	4,396	4,333	4,443	4,382	4,365	4,397	4,489	4,532	
505	Metals & minerals, ex. petroleum .....	10,548	10,299	10,075	9,956	10,064	9,824	10,100	10,300	10,293	10,259	10,244	10,227	10,650	
506	Electrical goods .....	15,716	15,520	15,330	15,587	15,598	15,685	15,749	15,748	15,579	15,550	15,851	15,856	15,509	
507	Hardware, plumbing & heating equipment .....	7,375	7,360	7,349	7,319	7,377	7,475	7,268	7,017	7,018	6,917	7,102	7,146	7,387	
508	Machinery, equip. & supplies .....	46,811	46,977	47,066	47,775	49,165	49,031	49,617	50,267	50,589	50,698	50,746	51,178	46,506	
509	Miscellaneous durable goods .....	6,610	6,955	6,539	6,132	6,281	6,217	5,969	6,008	6,399	6,118	5,927	5,872	6,494	
51	Nondurable goods .....	63,865	63,162	64,460	65,122	66,203	65,198	65,680	65,017	65,239	66,664	67,453	66,511	64,635	
511	Paper & paper products .....	4,077	3,998	4,011	4,039	4,049	4,081	4,117	4,143	4,250	4,334	4,319	4,295	4,158	
512	Drugs, drug proprietaries and druggists' sundries .....	5,976	5,988	6,099	6,034	6,086	6,107	6,034	5,944	6,030	6,187	6,343	6,189	5,982	
513	Apparel, piece goods & notions .....	9,697	9,776	10,184	10,414	10,365	10,351	10,194	10,228	10,354	10,449	10,466	10,317	9,827	
514	Groceries & related products .....	13,129	12,674	13,335	13,362	13,418	13,167	13,182	13,304	13,003	12,911	12,893	12,836	13,514	
515	Farm-product raw materials .....	7,743	7,559	7,830	8,102	8,229	7,581	7,635	7,119	6,644	7,438	8,226	8,151	7,634	
516	Chemicals & allied products .....	2,581	2,544	2,689	2,626	2,598	2,623	2,770	2,642	2,809	2,877	2,845	2,911	2,563	
517	Petroleum & petroleum products .....	3,666	3,849	3,862	3,827	3,814	3,773	3,857	4,389	4,438	4,704	4,614	4,162	3,839	
518	Beer, wine, & distilled beverages .....	4,009	3,903	3,929	3,868	3,862	3,898	3,831	3,787	3,905	3,902	3,903	3,851	3,983	
519	Misc. nondurable goods .....	12,987	12,871	12,521	12,850	13,762	13,611	14,062	13,461	13,806	13,862	13,844	13,799	13,135	
	<b>Stock/sales ratios, Total</b> .....	1.25	1.25	1.24	1.26	1.27	1.25	1.26	1.24	1.27	1.27	1.30	1.31	1.26	
50	Durable goods .....	1.64	1.63	1.61	1.64	1.63	1.62	1.65	1.67	1.71	1.75	1.80	1.79	1.69	
501	Motor vehicles & auto. equip. ....	1.63	1.59	1.51	1.75	1.64	1.56	1.57	1.57	1.57	1.66	1.67	1.72	1.70	
502	Furniture & home furnishings .....	1.81	1.79	1.93	1.80	1.70	1.64	1.58	1.61	1.67	1.73	1.76	1.86	1.89	
503	Lumber & other construction mat. ....	1.17	1.12	1.14	1.19	1.15	1.16	1.18	1.19	1.22	1.29	1.26	1.37	1.31	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.35	2.21	2.03	2.10	2.01	2.03	2.10	2.04	2.08	2.15	2.19	2.21	2.24	
505	Metals & minerals, ex. petroleum .....	1.44	1.42	1.43	1.32	1.22	1.21	1.33	1.39	1.40	1.37	1.45	1.39	1.53	
506	Electrical goods .....	1.60	1.59	1.58	1.60	1.60	1.65	1.64	1.65	1.63	1.64	1.71	1.73	1.61	
507	Hardware, plumbing & heating equipment .....	2.01	1.96	1.93	1.99	1.99	1.97	1.90	1.91	1.91	1.96	2.03	2.04	2.02	
508	Machinery, equip. & supplies .....	2.00	2.03	1.99	2.01	2.09	2.05	2.14	2.18	2.19	2.20	2.31	2.19	2.02	
509	Miscellaneous durable goods .....	.77	.84	.82	.73	.77	.79	.77	.75	.97	.98	.98	.93	.83	
51	Nondurable goods .....	.85	.85	.86	.87	.89	.86	.87	.83	.84	.84	.85	.87	.84	
511	Paper & paper products .....	.93	.94	.92	.93	.93	.94	.90	.93	.96	.97	1.00	1.02	.95	
512	Drugs, drug proprietaries and druggists' sundries .....	1.47	1.50	1.52	1.47	1.55	1.53	1.47	1.45	1.50	1.51	1.55	1.53	1.51	
513	Apparel, piece goods & notions .....	1.89	1.84	1.87	1.97	2.01	1.91	1.96	1.91	2.06	2.09	2.03	1.86	1.85	
514	Groceries & related products .....	.68	.64	.66	.66	.67	.66	.66	.66	.65	.64	.66	.66	.68	
515	Farm-product raw materials .....	.70	.73	.75	.75	.78	.68	.70	.67	.67	.76	.81	.83	.72	
516	Chemicals & allied products .....	.81	.77	.81	.83	.80	.83	.85	.68	.74	.77	.79	.81	.77	
517	Petroleum & petroleum products .....	.29	.32	.33	.32	.31	.32	.33	.31	.30	.28	.28	.29	.27	
518	Beer, wine, & distilled beverages .....	1.11	1.08	1.10	1.05	1.10	1.08	1.06	1.05	1.08	1.09	1.07	.98	1.11	
519	Misc. nondurable goods .....	1.10	1.07	1.05	1.13	1.18	1.11	1.15	1.11	1.15	1.13	1.13	1.17	1.10	

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1989.  
<sup>F</sup>Revised.

**Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1990 and 1989**

(Data not adjusted for seasonal variation or trading-day differences. Sales and Inventories in millions of dollars)

SIC code	Kind of business	1990												1989	Total 12 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. <sup>P</sup>	Dec.	1990	1989
	<b>Sales, Total</b> .....	146,135	138,361	158,734	150,395	160,026	154,461	147,580	161,355	147,366	164,376	150,912	143,132	144,355	1,822,833	1,748,194
50	Durable goods .....	71,238	69,070	80,795	76,808	81,467	79,475	74,234	79,904	73,250	80,274	71,232	68,322	69,247	906,069	859,960
501	Motor vehicles & auto. equip. ....	13,650	13,908	16,661	14,191	15,689	15,239	14,355	15,548	13,562	15,749	14,709	13,683	12,760	176,944	164,975
502	Furniture & home furnishings .....	2,131	2,112	2,305	2,314	2,540	2,735	2,728	2,812	2,726	2,934	2,601	2,151	2,203	30,089	29,601
503	Lumber & other construction mat. ...	4,350	4,022	4,822	4,963	5,325	5,539	5,323	5,544	4,747	5,142	4,273	3,257	3,757	57,307	58,632
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1,726	1,818	2,233	1,895	1,902	2,037	1,818	2,364	2,206	2,450	2,363	2,088	2,099	24,900	24,323
505	Metals & minerals, ex. petroleum ..	7,139	6,724	7,811	7,550	8,628	8,299	7,068	7,934	7,335	7,923	6,676	6,514	6,274	89,601	86,005
506	Electrical goods .....	9,268	8,853	9,927	9,253	9,658	9,421	9,347	9,995	9,670	10,730	9,729	8,837	9,288	114,688	111,228
507	Hardware, plumbing & heating equipment .....	3,452	3,271	3,809	3,626	3,946	4,004	3,929	3,881	3,514	3,956	3,428	3,200	3,306	44,016	43,419
508	Machinery, equip. & supplies .....	21,790	21,118	25,104	24,239	24,780	24,316	22,514	23,879	23,176	24,703	21,088	22,164	22,009	278,871	262,167
509	Miscellaneous durable goods .....	7,732	7,244	8,123	8,777	8,999	7,885	7,152	7,947	6,314	6,687	6,385	6,428	7,551	89,653	79,610
51	Nondurable goods .....	74,897	69,291	77,939	73,587	78,559	74,986	73,346	81,451	74,116	84,102	79,680	74,810	75,108	916,764	888,234
511	Paper & paper products .....	4,392	3,936	4,536	4,161	4,331	4,259	4,493	4,738	4,307	4,890	4,357	3,962	4,152	52,352	50,741
512	Drugs, drug proprietaries and druggists' sundries .....	4,268	3,723	4,066	4,003	4,030	3,853	4,000	4,235	3,862	4,451	4,068	3,997	3,868	48,556	43,968
513	Apparel, piece goods & notions .....	4,743	5,292	5,586	4,670	4,513	5,470	5,678	6,533	5,089	5,787	5,232	4,238	3,977	62,831	57,989
514	Groceries & related products .....	19,393	18,234	20,150	19,260	21,230	19,828	20,131	20,923	19,077	21,081	20,073	19,500	19,816	238,880	242,802
515	Farm-product raw materials .....	12,332	9,954	11,088	10,639	11,151	10,392	9,757	10,212	8,983	10,765	10,698	9,691	10,298	125,662	132,201
516	Chemicals & allied products .....	3,084	3,002	3,519	3,283	3,559	3,420	3,180	4,027	3,633	3,809	3,418	3,103	2,891	41,137	37,147
517	Petroleum & petroleum products .....	13,228	11,633	12,633	11,740	12,485	11,392	11,101	14,507	14,378	18,896	15,965	14,177	14,262	160,135	145,061
518	Beer, wine, & distilled beverages ..	2,952	2,900	3,482	3,457	3,873	3,842	3,663	4,073	3,423	3,782	3,854	4,361	3,997	43,662	42,201
519	Misc. nondurable goods .....	10,505	10,617	12,879	12,374	13,387	12,530	11,343	12,203	11,364	12,551	12,015	11,781	11,847	143,549	136,124
	<b>Inventories, Total</b> .....	190,390	190,475	190,909	192,411	192,015	190,333	191,188	189,337	191,990	195,916	196,861	196,043	189,042	(X)	(X)
50	Durable goods .....	124,313	125,488	125,562	127,344	128,124	126,390	127,824	127,248	128,154	127,834	127,663	127,033	122,053	(X)	(X)
501	Motor vehicles & auto. equip. ....	23,670	24,631	24,222	24,545	24,210	22,839	22,990	23,299	24,115	23,726	24,526	24,624	22,650	(X)	(X)
502	Furniture & home furnishings .....	4,102	4,051	4,389	4,342	4,373	4,626	4,609	4,304	4,509	4,366	4,196	4,169	4,397	(X)	(X)
503	Lumber & other construction mat. ...	5,930	5,722	5,960	6,203	5,842	5,981	5,960	5,579	5,518	5,626	5,184	5,295	5,672	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	4,296	4,273	4,352	4,305	4,332	4,480	4,541	4,532	4,544	4,461	4,327	4,390	4,419	(X)	(X)
505	Metals & minerals, ex. petroleum ..	10,632	10,196	10,166	10,115	10,255	10,119	10,403	10,022	10,077	10,126	10,029	10,319	10,746	(X)	(X)
506	Electrical goods .....	15,323	15,396	15,223	15,603	15,680	15,732	16,064	15,984	15,641	15,659	15,803	15,713	15,354	(X)	(X)
507	Hardware, plumbing & heating equipment .....	7,264	7,323	7,445	7,421	7,421	7,482	7,355	7,073	7,039	7,042	6,946	6,924	7,165	(X)	(X)
508	Machinery, equip. & supplies .....	46,764	47,024	47,207	48,635	49,706	48,982	49,915	50,267	50,235	50,698	50,695	49,950	45,390	(X)	(X)
509	Miscellaneous durable goods .....	6,332	6,872	6,598	6,175	6,325	6,149	5,987	6,188	6,476	6,130	5,957	5,655	6,260	(X)	(X)
51	Nondurable goods .....	66,077	64,987	65,347	65,067	63,891	63,943	63,364	62,089	63,836	68,082	69,198	69,004	66,989	(X)	(X)
511	Paper & paper products .....	4,171	4,050	4,103	4,087	3,992	4,052	4,166	4,068	4,161	4,395	4,276	4,269	4,137	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	6,299	6,162	6,093	6,209	5,818	5,887	5,877	5,766	6,000	6,286	6,191	6,399	6,179	(X)	(X)
513	Apparel, piece goods & notions .....	9,765	9,678	9,777	9,883	10,614	10,910	10,632	10,617	10,478	10,031	9,953	10,214	9,729	(X)	(X)
514	Groceries & related products .....	13,142	12,712	13,082	13,121	13,190	12,864	12,787	12,665	13,042	13,621	13,576	13,298	14,001	(X)	(X)
515	Farm-product raw materials .....	9,176	8,602	7,987	7,867	7,797	6,338	6,404	5,852	5,827	5,516	5,583	9,773	9,115	(X)	(X)
516	Chemicals & allied products .....	2,602	2,567	2,727	2,705	2,673	2,731	2,792	2,668	2,705	2,765	2,734	2,824	2,486	(X)	(X)
517	Petroleum & petroleum products .....	3,783	3,803	3,955	3,716	3,707	3,794	3,845	4,310	4,620	4,793	4,600	4,204	3,912	(X)	(X)
518	Beer, wine, & distilled beverages ..	3,801	3,821	3,988	3,922	3,847	3,933	3,797	3,692	3,956	4,187	4,164	3,589	3,704	(X)	(X)
519	Misc. nondurable goods .....	13,338	13,592	13,635	13,557	13,253	13,434	13,064	12,451	13,047	13,488	14,121	14,434	13,726	(X)	(X)
	<b>Stock/sales ratios, Total</b> .....	1.30	1.38	1.20	1.28	1.20	1.23	1.30	1.17	1.30	1.19	1.30	1.37	1.31	(X)	(X)
50	Durable goods .....	1.75	1.82	1.55	1.66	1.57	1.59	1.72	1.59	1.75	1.59	1.79	1.86	1.76	(X)	(X)
501	Motor vehicles & auto. equip. ....	1.73	1.77	1.45	1.73	1.54	1.50	1.60	1.50	1.78	1.51	1.67	1.80	1.78	(X)	(X)
502	Furniture & home furnishings .....	1.92	1.92	1.90	1.88	1.72	1.69	1.69	1.53	1.65	1.49	1.61	1.84	2.00	(X)	(X)
503	Lumber & other construction mat. ...	1.36	1.42	1.24	1.25	1.10	1.08	1.12	1.01	1.16	1.09	1.21	1.63	1.51	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	2.49	2.35	1.95	2.27	2.28	2.20	2.50	1.92	2.06	1.82	1.83	2.10	2.11	(X)	(X)
505	Metals & minerals, ex. petroleum ..	1.49	1.52	1.30	1.34	1.19	1.22	1.47	1.26	1.37	1.28	1.50	1.58	1.71	(X)	(X)
506	Electrical goods .....	1.65	1.74	1.53	1.69	1.62	1.67	1.72	1.60	1.62	1.46	1.62	1.78	1.65	(X)	(X)
507	Hardware, plumbing & heating equipment .....	2.10	2.24	1.95	2.05	1.88	1.87	1.87	1.82	2.00	1.78	2.03	2.16	2.17	(X)	(X)
508	Machinery, equip. & supplies .....	2.15	2.23	1.88	2.01	2.01	2.01	2.22	2.11	2.17	2.05	2.40	2.25	2.06	(X)	(X)
509	Miscellaneous durable goods .....	.82	.95	.81	.70	.70	.78	.84	.78	1.03	.92	.88	.83	.83	(X)	(X)
51	Nondurable goods .....	.88	.94	.84	.88	.85	.86	.86	.76	.86	.81	.87	.92	.89	(X)	(X)
511	Paper & paper products .....	.95	1.03	.90	.98	.92	.95	.93	.86	.97	.90	.98	1.08	1.00	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries .....	1.48	1.66	1.50	1.55	1.44	1.53	1.47	1.36	1.55	1.41	1.52	1.60	1.60	(X)	(X)
513	Apparel, piece goods & notions .....	2.06	1.83	1.75	2.12	2.35	1.99	1.87	1.63	2.06	1.73	1.90	2.41	2.45	(X)	(X)
514	Groceries & related products .....	.68	.70	.65	.68	.62	.65	.64	.61	.68	.65	.68	.68	.71	(X)	(X)
515	Farm-product raw materials .....	.74	.86	.72	.74	.61	.61	.66	.57	.65	.79	.90	1.01	.89	(X)	(X)
516	Chemicals & allied products .....	.84	.86	.77	.82	.75	.80	.88	.66	.74	.71	.80	.91	.86	(X)	(X)
517	Petroleum & petroleum products .....	.29	.33	.31	.32	.30	.33	.35	.30	.32	.28	.29	.30	.27	(X)	(X)
518	Beer, wine, & distilled beverages ..	1.29	1.32	1.15	1.13	.99	1.02	1.04	.91	1.16	1.11	1.08	.82	.93	(X)	(X)
519	Misc. nondurable goods .....	1.27	1.28	1.06	1.10	.99	1.07	1.15	1.02	1.15	1.07	1.18	1.23	1.16	(X)	(X)

<sup>P</sup>Preliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1990 through December 1989.  
 X Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

Table 2. Percent Change in Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Unadjusted					Adjusted <sup>1</sup>			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Dec. 1990 from Nov. 1990	Dec. 1990 from Dec. 1989	12 months 1990 from 12 months 1989	Dec. 1990 from Nov. 1990	Dec. 1990 from Dec. 1989	Dec. 1990 from Nov. 1990	Dec. 1990 from Dec. 1989	Dec. 1990 from Nov. 1990	Dec. 1990 from Dec. 1989
	<b>Total</b> .....	-5.2	-.8	+4.3	-.4	+3.7	-1.2	-1.0	-.3	+3.7
50	Durable goods .....	-4.1	-1.3	+5.4	-.5	+4.1	+1.2	-1.4	+3	+4.1
501	Motor vehicles & auto. equip. ....	-7.0	+7.2	+7.3	+4	+8.7	-2.6	+7.8	+2	+8.7
502	Furniture & home furnishings .....	-17.3	-2.4	+1.6	-.6	-5.2	-5.8	-3.0	-.8	-4.9
503	Lumber & other construction mat. ....	-23.8	-13.3	-2.3	+2.1	-6.6	-9.5	-11.3	-1.3	-6.6
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	-11.6	-.5	+2.4	+1.5	-.7	+8	+1	+2.1	-.9
505	Metals & minerals, ex. petroleum .....	-2.4	+3.8	+4.2	+2.9	-4.0	+4.0	+5.6	-.2	-4.0
506	Electrical goods .....	-9.2	-4.9	+3.1	-.6	+2.3	-1.6	-5.1	.0	+2.2
507	Hardware, plumbing & heating equipment .....	-6.7	-3.2	+1.4	-.3	-3.4	+2	-4.1	+6	-3.3
508	Machinery, equip. & supplies .....	+5.1	+7	+6.4	-1.5	+10.0	+6.1	+1.1	+9	+10.0
509	Miscellaneous durable goods .....	+1.0	-14.9	+12.6	-5.1	-9.7	+4.8	-18.9	-.9	-9.6
51	Nondurable goods .....	-6.1	-.4	+3.2	-.3	+3.0	-3.3	-.6	-1.4	+2.9
511	Paper & paper products .....	-9.1	-4.6	+3.2	-.2	+3.2	-2.4	-3.8	-.6	+3.3
512	Drugs, drug proprietaries and druggists' sundries .....	-1.7	+3.3	+10.4	+3.4	+3.6	-.5	+2.7	-2.4	+3.5
513	Apparel, piece goods & notions .....	-19.0	+6.6	+8.3	+2.6	+5.0	+7.1	+4.2	-1.4	+5.0
514	Groceries & related products .....	-2.9	-1.6	-1.6	-2.0	-5.0	-.9	-1.8	-.4	-5.0
515	Farm-product raw materials .....	-9.4	-5.9	-4.9	+2.0	+7.2	-2.8	-7.5	-.9	+6.8
516	Chemicals & allied products .....	-9.2	+7.3	+10.7	+3.3	+13.6	+1	+8.8	+2.3	+13.6
517	Petroleum & petroleum products .....	-11.2	-.6	+10.4	-8.6	+7.5	-13.7	+4	-9.8	+8.4
518	Beer, wine, & distilled beverages .....	+13.2	+9.1	+3.5	-13.8	-3.1	+7.9	+9.3	-1.3	-3.3
519	Misc. nondurable goods .....	-1.9	-.6	+5.5	+2.2	+5.2	-3.8	-1.4	-.3	+5.1

<sup>1</sup>Adjusted for seasonal variation and, in the case of sales, also for trading-day differences.

## EXPLANATORY MATERIAL

### Scope of Survey

Wholesale trade, as defined in Major Groups 50 and 51 of the 1972 edition of the *Standard Industrial Classification Manual*<sup>1</sup> and the 1977 Supplement and as covered in the 1982 Economic Censuses, includes establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, farm, or professional business users; to other wholesalers; or acting as agents or brokers in buying merchandise for or selling merchandise to such persons or companies.

The principal types of establishments included are: (1) merchant wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, voluntary group wholesalers, exporters, importers, cash-and-carry wholesalers, drop shippers, major distributors, retailer cooperative warehouses, terminal elevators, and cooperative buying associations; (2) sales branches and sales offices (but not retail stores) maintained by domestic manufacturing or mining enterprises apart from their plants or mines for the purpose of marketing their products; and (3) agents, merchandise or commodity brokers, and commission merchants.

This survey is limited to merchant wholesalers (described under category 1 above), who constitute the major portion of the broad field of wholesale trade, and excludes the other types of wholesale trade. All kinds of business in which merchant wholesalers operate are represented in this survey.

Also included in this survey are the sales and inventories of central administrative offices and auxiliaries of merchant wholesale establishments and manufacturers' sales branches of ferrous metal service centers SIC (505).

### Reliability of Data

Estimates based on a sample survey will differ from the value derived from the population because of sampling variability and nonsampling error. Sampling variability occurs because observations are made only on a sample, not on the entire population. Nonsampling errors can be attributed to many sources in the collection and processing of data. The accuracy of a survey result is determined by the joint effects of sampling variability and nonsampling errors.

The estimates of the coefficients of variation in percent for sales and inventories at the level of detail provided in this publication are shown in table 3. Note that the particular sample used in this survey is one of a large number of all possible samples of the same size that could have been selected using the same design. In about 2 out of 3 (67 percent) of these samples, the

<sup>1</sup>Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual*, 1972 and 1977 Supplement.

estimate would differ from a complete enumeration by less than the corresponding percent for that estimate shown in the sampling variability table. In about 9 out of 10 (90 percent) of these samples, the estimates would differ from the results of a complete enumeration by less than 1.65 times the percentages shown. In about 19 out of 20 (95 percent) of these samples, the estimate would differ from the results of a complete enumeration by less than twice the percentages shown.

To illustrate the computations involved in the above confidence statements, as related to dollar volume sales estimates, assume that an estimate of sales published in table 1B is \$10,750 million for a particular month and that the median coefficient of variation for this estimate as given in table 3, is 1.8 percent, or 0.018. Multiplying \$10,750 million by 0.018 yields \$194 million. Therefore, a 67-percent confidence interval is \$10,556 million to \$10,944 million (\$10,750 million plus or minus \$194 million). If corresponding confidence intervals were constructed for all possible samples of the same size and design, approximately 2 out of 3 (67 percent) of these intervals would contain the figure obtained from a complete enumeration. Typical practice is to construct 90 or 95-percent confidence intervals. Continuing with the illustration, a 90-percent confidence interval is \$10,430 million to \$11,070 million (\$10,750 million plus or minus \$320 million). A 95-percent confidence interval is \$10,362 million to \$11,138 million (\$10,750 million plus or minus \$388 million).

All comparisons appearing on the front page of this publication and for which measures of sampling variability are available are accompanied by an indication of the 90-percent confidence interval. Thus a statement such as "+0.8 ( $\pm 1.3$ )" indicates a 90-percent confidence interval from -0.5 to +2.1. If the confidence interval contains zero, it is uncertain whether there is an increase or decrease.

### Nonsampling Errors

The coefficient of variation also measures certain nonsampling errors but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail edit. For all kinds of business combined, imputed data amount to about 22 percent of the sales estimates and 26 percent for inventories.

### Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1989* for a full description of the sample design and estimation procedures.

### Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking<sup>2</sup> operation which made use of the results<sup>3</sup> tabulated in the 1982 and 1987 Censuses of Wholesale Trade based on the *1972 Standard Industrial Classification Manual* (SIC). The revised annual sales estimates and end-of-year inventory estimates were made comparable to the results tabulated in the 1982 and 1987 Censuses of Wholesale Trade and maintained as best as possible the year-to-year trends of the previously published estimates derived from the Annual Trade Surveys. For sales, the benchmarking process equated each of the 12-month sums of the estimates for the years 1983 through 1986 and 1988 to the revised annual sales estimates and for 1987 the annual sum was set equal to the results tabulated in the 1987 Census of Wholesale Trade. The revision process also minimized differences between the month-to-month trends of the original and revised estimates. The sales estimates of the original series were derived by using the composite estimation procedures.

Monthly inventory estimates were revised for the period January 1983 through December 1989. The benchmarking process equated each of the December estimates for the years 1983 through 1988 to the revised end-of-year inventory estimates. The revision also minimized differences between the month-to-month trends of the original and revised estimates. Estimates of the original series were also derived by using composite estimation procedures.

For SIC 515, sales estimates were revised for the period January 1987 through December 1989, and inventory estimates were revised for the period January 1988 through December 1989. Estimates for this SIC were benchmarked to the results derived from the Annual Trade Surveys, instead of the results from the Censuses of Wholesale Trade. Establishments for this SIC in the census include intercompany transfers as part of sales while in the monthly survey, intercompany transfers are not included in sales.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1988 estimates by the composite estimates for December 1988. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1988. These factors were derived at various kind-of-business levels and will be held constant until the next

<sup>2</sup>For a more detailed description, see the section dealing with revisions to published data in the Current Business Report *Revised Monthly Wholesale Trade: December 1980 Through December 1989*.

<sup>3</sup>Inventory estimates for the census years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years. This methodology was implemented because census estimates do not include inventories of auxiliary and central administrative offices of merchant wholesalers.

benchmarking operation. Aggregate level estimates were derived by summing appropriate three-digit kind-of-business estimates, thereby assuring additivity.

### **CLASSIFICATION DIFFERENCES BETWEEN MONTHLY SURVEY AND 1982 AND 1987 CENSUSES OF WHOLESALE TRADE**

For SIC 505, the monthly survey included merchant wholesalers as well as sales branches of ferrous metals service centers with inventories. Therefore, the 1982 and 1987 census sales included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments in the census classified in the Farm-Product Raw Materials group (SIC 515) include in their sales products purchased and transferred to other company establishments. In the monthly survey, intercompany transfers are not included in sales. Because of the differences, the 1982 and 1987 sales for the SIC were obtained from the 1982 and 1987 Annual Trade Surveys instead of from the 1982 and 1987 Censuses of Wholesale Trade.

Inventories were not benchmarked to the census levels since the census of wholesale trade does not include inventories of auxiliary and central administrative offices of merchant wholesale establishments which are included in the monthly survey. The end-of-year inventory estimates for the years 1982 and 1987 were computed by multiplying the stock/sales ratios obtained from the annual surveys by the census sales for these years.

### **Unpublished Data**

Sales and inventory estimates for unpublished four-digit wholesale trade categories are not included in this publication because their sampling variability is so high, relative to the changes from month-to-month or between other periods, as to make them potentially misleading. The Census Bureau for a nominal fee on written request will release these data for individual use, though not for publication.

### **Definition of Terms**

**Sales.** Sales include merchandise sold for cash or credit at wholesale and retail by establishments primarily engaged in merchant wholesale trade; receipts from customers for rental or leasing of equipment, instruments, tools, etc.; receipts for delivery, installation, alteration, maintenance, repair, storage, and other services; and gasoline, liquor, tobacco, and other excise taxes which are paid by the manufacturer and passed along to the wholesaler. Sales are net after deductions for refunds and allowances for merchandise returned by customers. Sales which are made on an agency basis for others are included as gross sales. Direct shipments on orders from

wholesalers are also included in sales. Total sales do not include nonoperating income from sources such as investments, rental or sale of real estate, etc.

Sales exclude sales and excise taxes collected directly from customers and paid directly to a local, State, or Federal tax agency. Also excluded are receipts from customers for carrying or other credit charges.

**Inventories.** Inventories represent stocks on a non-LIFO basis of merchandise owned by merchant wholesalers at the end of the month regardless of location except for goods held outside the United States. Goods held on consignment and items not held for sale such as fixtures, equipment, and supplies are not included. Goods held in foreign trade zones in the United States are also included. Methods of valuation may vary according to the accounting practices of the firm.

**Stock/Sales Ratios.** The stock/sales ratios are derived by dividing the dollar value of inventories by the dollar value of sales. No adjustment is made in these ratios for the markup in sales which may vary from trade to trade.

### **Kind-of-Business Classifications**

The durable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 50. This group includes establishments classified in SIC groups 501 through 509.

The nondurable goods group includes establishments primarily engaged in the distribution of goods classified in SIC major group 51. This group includes establishments classified in SIC groups 511 through 519.

For a further description of the kinds of business included in the major groups see the *1972 Standard Industrial Classification Manual* and the 1977 Supplement.

### **Adjustment for Seasonal and Trading-Day Variation**

We now use the X-11 ARIMA seasonal adjustment program developed by Statistics Canada to derive seasonal factors for adjusting data. The program derives seasonal factors by using the method described in the *X-11 Variant of the Census Method II Seasonal Adjustment Program*, U.S. Bureau of the Census Technical Paper No. 15, Revised 1967. We do not use any forecasting options as input to the X-11 ARIMA program. This program has more accurate computations and diagnostics than the previously used program. Trading-day factors for adjusting sales estimates were also derived from the X-11 program. Seasonal adjustment of estimates is an approximation based on current and past experiences.

Therefore, the adjustments could become less precise if current competitive pressures, changes in economic conditions, and other elements introduce significant changes

in seasonal and trading-day patterns. A description of the trading-day adjustment procedure may be found in *Estimating Trading-Day Variation in Monthly Economic Time Series*, Bureau of the Census Technical Paper No. 12, 1965. Additional details concerning the seasonal adjustment procedure may be obtained from the Chief, Business Division, Bureau of the Census, Washington, D.C. 20233.

### Concurrent Seasonal Adjustment

Concurrent seasonal adjustment uses all available unadjusted estimates (including the latest preliminary estimates) as input to the X-11 program. When

unadjusted preliminary and final estimates become available, all estimates will be used as input to the X-11 program and new factors will be applied to the preliminary and final (one month before the preliminary) estimates and to the previous year estimates that correspond to the preliminary month.

Table 4 presents, by kind of business, the combined seasonal and trading-day factors that are used to adjust inventory and sales estimates. For all kind of business, one month of projected factors are shown. These projected factors are estimates of the factors that will be used to derive adjusted estimates.

An electronic version of portions of this report is available through a commercial vendor as part of CENDATA, the Census Bureau's on-line information utility. For further information, contact Customer Services, DUSD, Bureau of the Census, Washington, DC 20233 or call (301) 763-4100.

**Table 3. Coefficients of Variation of Sales and Inventories**  
(in percent)

SIC code	Kind of business	Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative Sales estimates		Current year cumulative to previous year cumulative
		Range	Median	Range	Median	Range	Median	Range	Median	CY	PY	
	<b>Sales, Total</b> . . . . .	1.6-2.0	1.8	1.4-1.9	1.7	0.5-0.8	0.5	0.7-1.1	1.0	1.6	1.8	
50	Durable goods . . . . .	2.0-2.5	2.2	2.0-2.4	2.2	0.4-1.2	0.8	1.2-1.7	1.3	2.0	2.4	0.7
501	Motor vehicles & auto. equip. . . . .	4.7-7.2	6.5	4.7-7.9	6.6	0.9-3.4	1.5	1.8-4.7	3.5	5.8	5.5	1.3
502	Furniture & home furnishings . . . . .	8.4-12.6	9.7	7.5-10.7	9.9	2.1-3.8	3.4	6.1-10.0	9.0	7.9	15.6	12.9
503	Lumber & other construction mat. . . . .	5.0-5.4	5.1	4.4-5.5	4.9	1.4-2.5	1.9	2.5-4.1	3.7	4.7	5.8	2.6
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	6.6-9.6	7.4	5.8-8.2	6.1	2.4-4.4	3.5	4.7-7.6	5.7	5.6	6.6	4.7
505	Metals & minerals, ex. petroleum . . . . .	7.7-10.2	8.4	7.8-9.5	8.7	1.0-2.5	1.5	2.5-5.2	2.8	7.9	5.4	3.0
506	Electrical goods . . . . .	2.7-4.3	3.3	2.6-4.0	3.1	1.2-1.9	1.6	2.0-3.0	2.7	3.2	4.5	1.9
507	Hardware, plumbing & heating equipment . . . . .	8.2-10.7	9.4	8.0-9.9	9.4	1.1-3.0	2.2	2.5-4.4	3.0	9.0	6.8	3.4
508	Machinery, equip. & supplies . . . . .	3.5-5.3	3.6	3.2-3.9	3.4	1.2-2.7	1.6	1.4-3.1	2.7	3.4	4.0	2.2
509	Miscellaneous durable goods . . . . .	4.3-5.6	5.0	3.8-5.4	4.9	1.2-2.3	1.6	2.6-3.7	2.9	4.3	5.7	2.5
51	Nondurable goods . . . . .	3.1-3.8	3.5	2.6-3.7	3.3	0.6-1.1	0.7	1.2-1.7	1.5	3.0	2.8	0.9
511	Paper & paper products . . . . .	4.4-4.8	4.5	4.2-4.7	4.4	0.9-1.7	1.3	1.9-3.9	3.0	4.2	4.7	2.1
512	Drugs, drug proprietaries and druggists' sundries . . . . .	6.2-7.7	6.6	5.7-7.1	6.7	1.0-1.7	1.3	2.9-4.9	3.7	5.8	5.4	3.7
513	Apparel, piece goods & notions . . . . .	8.8-11.6	10.1	7.9-10.6	9.3	2.2-5.5	3.3	4.9-6.3	6.0	9.3	9.2	4.1
514	Groceries & related products . . . . .	4.4-4.8	4.7	4.4-4.8	4.7	0.4-1.0	0.8	1.8-2.5	2.1	4.5	5.0	1.9
515	Farm-product raw materials . . . . .	6.1-7.7	6.7	5.7-7.2	6.1	2.1-3.7	2.4	2.4-6.1	3.7	6.1	6.0	2.9
516	Chemicals & allied products . . . . .	7.2-11.3	8.9	8.3-17.0	9.4	1.9-19.5	2.4	4.6-10.3	5.2	9.7	8.0	3.4
517	Petroleum & petroleum products . . . . .	7.9-9.7	8.9	7.7-9.4	8.9	1.5-2.5	2.0	3.1-5.2	3.8	8.1	7.7	1.5
518	Beer, wine, & distilled beverages . . . . .	3.0-4.8	4.0	3.3-5.1	3.8	1.1-2.0	1.3	2.1-4.2	2.5	3.7	4.0	1.8
519	Misc. nondurable goods . . . . .	5.6-7.1	6.7	5.8-7.5	6.1	1.6-2.9	2.2	2.0-3.7	3.1	5.9	6.0	2.7
	<b>Inventories, Total</b> . . . . .	1.2-1.5	1.4	1.2-1.4	1.3	0.2-0.4	0.3	0.6-1.2	0.8	(X)	(X)	(X)
50	Durable goods . . . . .	1.8-1.9	1.8	1.7-1.8	1.8	0.2-0.4	0.3	0.9-1.5	1.0	(X)	(X)	(X)
501	Motor vehicles & auto. equip. . . . .	5.6-6.2	5.9	5.5-6.3	6.0	0.5-1.3	0.6	2.1-3.4	2.5	(X)	(X)	(X)
502	Furniture & home furnishings . . . . .	7.8-8.9	8.4	7.4-8.8	8.2	0.9-1.7	1.0	4.2-5.4	4.9	(X)	(X)	(X)
503	Lumber & other construction mat. . . . .	6.6-7.5	7.1	6.5-7.5	7.0	0.7-1.6	1.1	3.3-4.6	4.3	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . . . .	5.5-6.8	6.2	5.7-6.5	6.3	1.0-2.0	1.3	3.6-4.6	4.0	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum . . . . .	4.3-5.5	5.0	4.2-5.0	4.9	0.5-1.2	0.8	1.6-3.0	2.3	(X)	(X)	(X)
506	Electrical goods . . . . .	2.2-3.5	3.1	2.2-3.5	3.2	0.3-0.6	0.6	1.3-2.3	1.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment . . . . .	5.8-6.6	6.5	5.9-6.7	6.4	0.6-1.3	0.8	1.9-3.2	2.3	(X)	(X)	(X)
508	Machinery, equip. & supplies . . . . .	3.8-4.8	4.3	3.8-4.4	4.2	0.5-0.8	0.7	2.0-2.9	2.2	(X)	(X)	(X)
509	Miscellaneous durable goods . . . . .	9.1-10.5	9.9	9.3-10.2	9.8	0.6-1.3	1.0	2.8-5.1	3.8	(X)	(X)	(X)
51	Nondurable goods . . . . .	2.8-3.3	3.1	2.8-3.4	3.1	0.4-0.9	0.5	1.1-2.1	1.6	(X)	(X)	(X)
511	Paper & paper products . . . . .	4.7-5.5	5.3	4.8-5.3	5.1	0.6-1.2	0.8	1.9-3.0	2.5	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries . . . . .	6.3-7.1	6.8	6.3-7.3	6.7	0.5-1.0	0.7	2.5-4.3	3.0	(X)	(X)	(X)
513	Apparel, piece goods & notions . . . . .	6.6-8.6	7.4	6.4-8.5	7.5	1.0-4.2	1.2	3.4-6.5	4.0	(X)	(X)	(X)
514	Groceries & related products . . . . .	5.1-8.2	6.7	5.0-8.1	7.3	0.6-1.2	1.0	2.7-4.7	4.1	(X)	(X)	(X)
515	Farm-product raw materials . . . . .	8.6-10.4	9.7	8.8-10.6	9.4	0.9-2.5	1.6	3.0-4.2	4.0	(X)	(X)	(X)
516	Chemicals & allied products . . . . .	8.2-9.8	9.2	8.4-9.6	9.2	1.0-2.4	1.6	4.0-4.7	4.3	(X)	(X)	(X)
517	Petroleum & petroleum products . . . . .	5.2-6.5	6.0	5.5-6.7	5.7	1.0-1.6	1.4	3.7-6.5	5.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages . . . . .	3.1-4.4	3.6	3.0-4.2	3.5	0.5-1.5	1.1	3.5-4.5	4.0	(X)	(X)	(X)
519	Misc. nondurable goods . . . . .	8.8-10.0	8.9	8.5-9.3	9.1	1.0-2.2	1.7	2.2-3.8	3.1	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for July 1990 through December 1990.

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Table 4. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	1989		1990												1991
		Dec. <sup>r</sup>	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. <sup>r</sup>	Dec. <sup>r</sup>	Jan.	
	<b>Sales,<sup>1</sup> Total</b> .....	.962	.965	.912	1.042	.988	1.052	1.008	.968	1.037	.968	1.080	1.002	.964	.977	
50	Durable goods .....	.940	.931	.894	1.041	.996	1.050	1.022	.974	1.039	.980	1.101	1.001	.943	.942	
501	Motor vehicles & auto. equip. ...	.968	.933	.914	1.055	1.019	1.069	1.028	.960	1.006	.896	1.094	1.008	.963	.945	
502	Furniture & home furnishings ...	.926	.934	.912	1.003	.953	.995	.985	.960	1.067	1.043	1.173	1.062	.932	.920	
503	Lumber & other construction mat. ....	.834	.851	.776	.949	.999	1.062	1.110	1.095	1.154	1.028	1.157	.968	.815	.849	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	1.037	.912	.916	1.033	.916	.869	.942	.881	1.086	1.046	1.208	1.175	1.030	.898	
505	Metals & minerals, ex. petroleum	.901	.974	.924	1.108	1.004	1.048	1.024	.930	1.067	1.000	1.058	.944	.886	1.002	
506	Electrical goods .....	.964	.944	.905	1.020	.950	.991	.990	.975	1.048	1.014	1.132	1.047	.967	.946	
507	Hardware, plumbing & heating equipment .....	.906	.943	.870	1.001	.988	1.062	1.053	1.028	1.059	.958	1.121	.981	.914	.947	
508	Machinery, equip. & supplies ...	.954	.933	.911	1.059	1.018	1.054	1.017	.969	1.034	1.003	1.073	.959	.950	.938	
509	Miscellaneous durable goods ...	.966	.902	.871	1.017	1.046	1.107	.996	.926	.986	.955	1.070	1.052	1.014	.921	
51	Nondurable goods .....	.980	.993	.928	1.041	.984	1.052	.994	.966	1.038	.952	1.066	1.005	.981	.996	
511	Paper & paper products .....	.952	1.005	.928	1.043	.955	.992	.981	.982	1.069	.976	1.096	1.013	.944	1.023	
512	Drugs, drug proprietaries and druggists' sundries .....	.979	1.050	.933	1.013	.975	1.025	.966	.976	1.031	.963	1.085	.997	.985	1.059	
513	Apparel, piece goods & notions	.749	.925	.997	1.028	.884	.877	1.009	1.089	1.218	1.013	1.155	1.013	.766	.915	
514	Groceries & related products ...	1.003	.998	.919	.996	.957	1.066	.999	1.006	1.039	.948	1.043	1.025	1.005	.997	
515	Farm-product raw materials ...	.968	1.114	.960	1.069	.988	1.054	.927	.894	.955	.904	1.102	1.057	.985	1.139	
516	Chemicals & allied products ...	.871	.971	.914	1.055	1.034	1.094	1.082	.979	1.040	.958	1.042	.947	.859	.970	
517	Petroleum & petroleum products	1.012	1.044	.973	1.091	.976	1.028	.976	.943	1.009	.975	1.019	.974	1.002	1.047	
518	Beer, wine, & distilled beverages	1.115	.814	.799	.971	.940	1.095	1.068	1.009	1.125	.945	1.058	1.061	1.113	.826	
519	Misc. nondurable goods .....	.990	.892	.886	1.085	1.084	1.148	1.018	.931	1.007	.950	1.026	.979	.998	.902	
	<b>Inventories,<sup>1</sup> Total</b> .....	1.001	1.007	1.009	1.008	1.007	.992	.995	.994	.982	.994	1.009	1.006	1.001	1.007	
50	Durable goods .....	.982	.991	.998	1.004	1.011	1.008	1.002	1.009	.996	1.006	1.002	.992	.982	.992	
501	Motor vehicles & auto. equip. ...	1.010	.990	1.017	1.013	1.006	1.008	.988	.977	.962	1.012	.994	1.008	1.010	.989	
502	Furniture & home furnishings ...	.976	.995	.978	.991	.995	1.008	1.018	1.028	1.013	1.034	1.007	.971	.973	.993	
503	Lumber & other construction mat. ....	.964	.994	.983	1.025	1.052	1.016	1.036	1.039	.973	.981	.982	.931	.964	1.004	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.975	.965	.973	.992	.989	.983	1.019	1.048	1.020	1.037	1.022	.984	.978	.964	
505	Metals & minerals, ex. petroleum	1.009	1.008	.990	1.009	1.016	1.019	1.030	1.030	.973	.979	.987	.979	1.009	1.011	
506	Electrical goods .....	.990	.975	.992	.993	1.001	1.004	1.003	1.020	1.015	1.004	1.007	.997	.991	.977	
507	Hardware, plumbing & heating equipment .....	.970	.985	.995	1.013	1.014	1.006	1.001	1.012	1.008	1.003	1.018	.978	.969	.988	
508	Machinery, equip. & supplies ...	.976	.999	1.001	1.003	1.018	1.011	.999	1.006	1.000	.993	1.000	.999	.976	1.000	
509	Miscellaneous durable goods ...	.964	.958	.988	1.009	1.007	1.007	.989	1.003	1.030	1.012	1.002	1.005	.963	.973	
51	Nondurable goods .....	1.037	1.035	1.026	1.015	.997	.961	.985	.965	.954	.972	1.024	1.032	1.038	1.034	
511	Paper & paper products .....	.995	1.023	1.013	1.023	1.012	.986	.993	1.012	.982	.979	1.014	.990	.994	1.026	
512	Drugs, drug proprietaries and druggists' sundries .....	1.033	1.054	1.029	.999	1.029	.956	.964	.974	.970	.995	1.016	.976	1.034	1.056	
513	Apparel, piece goods & notions	.990	1.007	.990	.960	.949	1.024	1.054	1.043	1.038	1.012	.960	.951	.990	1.003	
514	Groceries & related products ...	1.036	1.001	1.003	.981	.982	.983	.977	.970	.952	1.003	1.055	1.053	1.036	1.002	
515	Farm-product raw materials ...	1.194	1.185	1.138	1.020	.971	.826	.836	.839	.822	.877	1.145	1.165	1.199	1.187	
516	Chemicals & allied products ...	.970	1.008	1.009	1.014	1.030	1.029	1.041	1.008	1.010	.963	.961	.961	.970	1.009	
517	Petroleum & petroleum products	1.019	1.032	.988	1.024	.971	.972	1.004	.997	.982	1.041	1.019	.997	1.010	1.020	
518	Beer, wine, & distilled beverages	.930	.948	.979	1.015	1.014	.991	1.009	.991	.975	1.013	1.073	1.067	.932	.950	
519	Misc. nondurable goods .....	1.045	1.027	1.056	1.089	1.055	.963	.987	.929	.925	.945	.973	1.020	1.046	1.021	

<sup>r</sup>Revised

<sup>1</sup>Adjusted sales and inventory data shown in table 1A 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.