

UNITED STATES DEPARTMENT OF COMMERCE NEWS

WASHINGTON, D.C. 20230

BUREAU OF
THE
CENSUS

FOR WIRE TRANSMISSION 10:00 A.M. EST, WEDNESDAY, MARCH 9, 1988
Questions concerning this report may be directed
to: Ms. Shirley Roberts (301) 763-3916 or 763-5806

CB-88-35

MONTHLY WHOLESALE TRADE REPORT: JANUARY 1988

INTENTION TO REVISE MONTHLY WHOLESALE ESTIMATES: The unadjusted and adjusted merchant wholesale sales, inventories, and stock/sales ratio estimates will be revised utilizing the results from the 1986 Annual Trade Survey.

Revised estimates for the period December 1980 through December 1987 along with the previously published estimates for the same period will be provided in the Census Bureau publication *Current Business Reports*, "Revised Monthly Wholesale Trade Sales and Inventories: December 1980-December 1987," scheduled for release the week of April 4. The January Monthly Wholesale Trade Report, scheduled for release the week of March 28, will present revised January 1988 estimates.

(This press release is being 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 \$127.8 billion, up 0.4 percent (+.9 percent) from December, and up 9.2 percent (+2.5 percent) from the January 1987 level. January sales of durable goods were down 0.4 percent (+1.1 percent) from December but were up 7.5 percent (+2.0 percent) from a year ago. January sales of nondurable goods increased 1.1 percent (+1.2 percent) from the previous month and were 10.8 percent (+5.4 percent) above a year ago.

INVENTORIES Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$161.8 billion at the end of January, up 1.6 percent (+.6 percent) from the previous month and up 8.4 percent (+1.8 percent) from January 1987. Durable goods stocks increased 2.1 percent (+.6 percent) from December and were up 7.6 percent (+2.4 percent) from January 1987. Nondurable goods stocks were up 0.6 percent (+.9 percent) from the previous month and were 9.9 percent (+3.6 percent) above the year ago level.

STOCK/SALES RATIO The January stock/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.27, up from the December ratio of 1.25.

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 1988
(Sales and inventories in millions of dollars)

Kind of business	Unadjusted			Adjusted ¹		
	Jan. ² 1988	Dec. 1987	Jan. 1987	Jan. ² 1988	Dec. 1987	Jan. 1987
SALES						
Merchant wholesalers, total.....	117,039	131,381	110,564	127,814	127,314	117,023
Durable goods, total.....	53,391	61,395	51,319	60,489	60,733	56,272
Nondurable goods, total.....	63,648	69,986	59,245	67,325	66,581	60,751
INVENTORIES						
Merchant wholesalers, total.....	162,062	160,269	149,548	161,818	159,324	149,304
Durable goods, total.....	103,151	102,025	95,895	104,680	102,506	97,301
Nondurable goods, total.....	58,911	58,244	53,653	57,138	56,818	52,003
STOCK/SALES RATIOS						
Merchant wholesalers, total.....	1.38	1.22	1.35	1.27	1.25	1.28
Durable goods, total.....	1.93	1.66	1.87	1.73	1.69	1.73
Nondurable goods, total.....	0.93	0.83	0.91	0.85	0.85	0.86

¹ Adjusted for seasonal variations and, in the case of sales, also for trading-day differences.

² Preliminary estimates.

Table 2. Sales, Inventories, Percent Changes, and Stock/Sales Ratios of Merchant Wholesalers, by Kind of Business: January 1988

SIC code	Kind of business	Sales				Inventories (end-of-month)				Stock/sales ratios	
		Dollars (millions)		Percent change		Dollars (millions)		Percent change		Jan. ¹ 1988	Dec. 1987
		Jan. ¹ 1988	Dec. 1987	Jan. 1988 from Dec. 1987	Jan. 1988 from Jan. 1987	Jan. ¹ 1988	Dec. 1987	Jan. 1988 from Dec. 1987	Jan. 1988 from Jan. 1987		
Data are NOT ADJUSTED for seasonal variation or trading-day differences											
	Merchant wholesalers, total.....	117,039	131,381	-10.9	+5.9	162,062	160,269	+1.1	+8.4	1.38	1.22
50	Durable goods, total.....	53,391	61,395	-13.0	+4.0	103,151	102,025	+1.1	+7.6	1.93	1.66
501	Motor vehicles & auto. equip.....	11,002	13,217	-16.8	+1.3	21,407	21,705	-1.4	+14.2	1.95	1.64
502	Furniture & home furnishings.....	2,230	2,395	-6.9	+8.1	4,239	4,062	+4.4	+19.1	1.90	1.70
503	Lumber & other construction mat.....	3,560	4,382	-18.8	-3.4	6,071	5,745	+5.7	+28.7	1.71	1.31
504	Sporting, recreational, photographic & hobby goods, toys & supplies.....	1,232	1,484	-17.0	-11.8	3,354	3,367	-0.4	-0.8	2.72	2.27
505	Metals & minerals, ex. petroleum.....	5,879	5,906	-0.5	+21.9	10,140	9,851	+2.9	+5.9	1.72	1.67
506	Electrical goods.....	6,994	7,975	-12.3	-2.9	13,543	13,576	-0.2	+0.8	1.94	1.70
507	Hardware, plumbing and heating equipment.....	3,904	4,296	-9.1	+14.2	6,699	6,500	+3.1	+4.8	1.72	1.51
508	Machinery, equip. & supplies.....	13,808	15,815	-12.7	+2.8	32,817	32,129	+2.1	+4.2	2.38	2.03
509	Miscellaneous durable goods.....	4,782	5,925	-19.3	+7.6	4,881	5,090	-4.1	+6.3	1.02	0.86
51	Nondurable goods, total.....	63,648	69,986	-9.1	+7.4	58,911	58,244	+1.1	+9.8	0.93	0.83
511	Paper & paper products.....	4,240	4,540	-6.6	+21.5	3,880	3,823	+1.5	+8.6	0.92	0.84
512	Drugs, drug proprietaries and druggists' sundries.....	2,547	2,736	-6.9	+1.2	5,165	5,130	+0.7	+15.1	2.03	1.88
513	Apparel, piece goods & notions.....	3,452	3,103	+11.2	+13.9	7,790	7,700	+1.2	+10.3	2.26	2.48
514	Groceries & related products.....	20,175	22,253	-9.3	+1.0	12,653	13,072	-3.2	+7.0	0.63	0.59
515	Farm-product raw materials.....	8,528	8,138	+4.8	+26.7	7,742	7,547	+2.6	+3.9	0.91	0.93
516	Chemicals & allied products.....	2,291	2,315	-1.0	+12.5	2,484	2,467	+0.7	+18.3	1.08	1.07
517	Petroleum & petroleum products.....	11,176	12,201	-8.4	-1.3	3,505	3,313	+5.8	-3.1	0.31	0.27
518	Beer, wine, & distilled beverages.....	2,723	4,201	-35.2	+0.9	3,743	3,662	+2.2	-1.5	1.37	0.87
519	Misc. nondurable goods.....	8,516	10,499	-18.9	+14.4	11,949	11,530	+3.6	+22.6	1.40	1.10
Data are ADJUSTED for seasonal variation and, in the case of sales, for trading-day differences											
	Merchant wholesalers, total.....	127,814	127,314	+0.4	+9.2	161,818	159,324	+1.6	+8.4	1.27	1.25
50	Durable goods, total.....	60,489	60,733	-0.4	+7.5	104,680	102,506	+2.1	+7.6	1.73	1.69
501	Motor vehicles & auto. equip.....	12,211	12,672	-3.6	+5.9	21,536	21,363	+0.8	+14.2	1.76	1.69
502	Furniture & home furnishings.....	2,569	2,459	+4.5	+10.6	4,152	4,022	+3.2	+18.8	1.62	1.64
503	Lumber & other construction mat.....	4,605	4,957	-7.1	0.0	6,391	5,838	+9.5	+29.0	1.39	1.18
504	Sporting, recreational, photographic & hobby goods, toys & supplies.....	1,438	1,426	+0.8	-9.2	3,426	3,475	-1.4	-0.6	2.38	2.44
505	Metals & minerals, ex. petroleum.....	6,182	6,833	+2.5	+24.9	9,883	9,696	+1.9	+5.5	1.60	1.61
506	Electrical goods.....	7,788	7,566	+2.9	-1.2	13,991	13,769	+1.6	+0.9	1.80	1.82
507	Hardware, plumbing and heating equipment.....	4,416	4,393	+0.5	+18.5	6,864	6,750	+1.7	+4.8	1.55	1.54
508	Machinery, equip. & supplies.....	15,567	15,062	+3.4	+5.5	33,283	32,258	+3.2	+4.3	2.14	2.14
509	Miscellaneous durable goods.....	5,713	6,165	-7.3	+16.1	5,154	5,335	-3.4	+6.3	0.90	0.87
51	Nondurable goods, total.....	67,325	66,581	+1.1	+10.8	57,138	56,818	+0.6	+9.9	0.85	0.85
511	Paper & paper products.....	4,506	4,460	+1.0	+25.8	3,842	3,808	+0.9	+8.3	0.85	0.85
512	Drugs, drug proprietaries and druggists' sundries.....	2,594	2,628	-1.3	+3.7	5,084	5,120	-0.7	+15.4	1.96	1.95
513	Apparel, piece goods & notions.....	4,037	4,067	-0.7	+17.4	7,941	7,841	+1.3	+10.7	1.97	1.93
514	Groceries & related products.....	21,104	21,418	-1.5	+3.6	12,807	12,917	-0.9	+6.8	0.61	0.60
515	Farm-product raw materials.....	8,328	6,902	+20.7	+34.5	6,274	6,358	-1.3	+3.9	0.75	0.92
516	Chemicals & allied products.....	2,381	2,514	-5.3	+15.6	2,522	2,512	+0.4	+18.5	1.06	1.00
517	Petroleum & petroleum products.....	10,425	10,943	-4.7	+0.6	3,155	2,998	+5.2	-3.7	0.30	0.27
518	Beer, wine, & distilled beverages.....	3,640	3,446	+5.6	+4.4	3,957	4,037	-2.0	-1.6	1.09	1.17
519	Misc. nondurable goods.....	10,310	10,203	+1.0	+17.7	11,556	11,227	+2.9	+22.7	1.12	1.10

¹Preliminary estimates.



Monthly Wholesale Trade

Sales and Inventories

U.S. Department of Commerce
BUREAU OF THE CENSUS

January 1988

BW88-01
Issued March 1988

Notice of Revision to Wholesale Estimates: Monthly merchant wholesalers' sales, inventories, and stock/sales ratios by kind of business for the United States have been revised for the period December 1980 through December 1987 utilizing the results from the 1986 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 1987*.

Sales. January 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$129.0 billion, up 0.6 percent (± 0.9 percent) from the revised December level and up 9.3 percent (± 2.5 percent) from a year ago. January sales of durable goods were down 0.5 percent (± 1.0 percent) from December, and were 7.3 percent (± 2.0 percent) above a year ago. January sales of nondurable goods increased 1.5 percent (± 1.2 percent) from December and were 11.1 percent (± 5.4 percent) above January 1987.

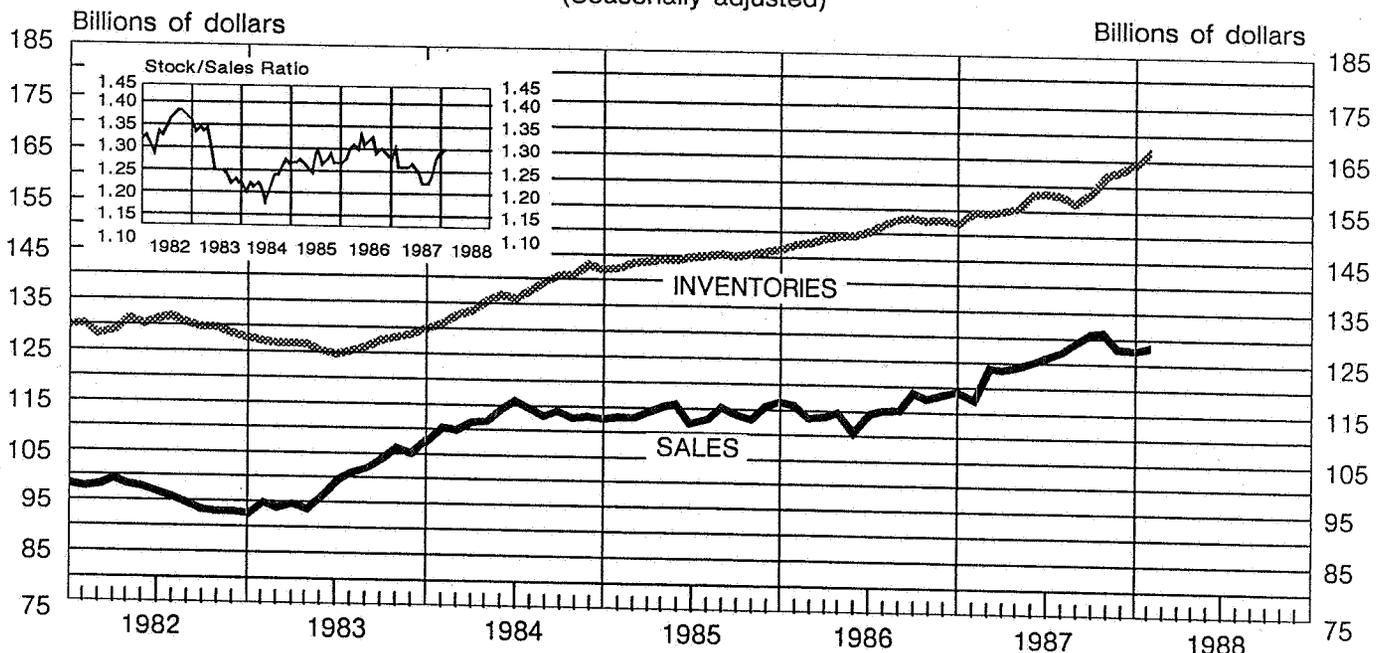
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$167.4 billion at the end of January, up

1.4 percent (± 0.6 percent) from the revised December level and up 8.1 percent (± 1.8 percent) from a year ago. Inventories of durable goods wholesalers increased 1.9 percent (± 0.6 percent) from the December level and were up 7.4 percent (± 2.4 percent) from a year ago. Inventories of nondurable goods wholesalers were up 0.4 percent (± 0.9 percent) from the December level and were 9.3 percent (± 3.6 percent) above January 1987.

Stock/Sales Ratio. The January stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.30.

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: 1982-1988
(Seasonally adjusted)



Monthly Wholesale Trade for February is scheduled to be released April 6, 1988 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988		1987											
		Jan. ^P	Jan. ^r	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
	Sales, Total	129,044	118,114	124,291	124,039	124,550	125,511	126,599	127,705	129,662	131,437	131,743	128,501	128,332	
50	Durable goods	61,698	57,502	60,675	60,632	60,303	60,686	61,830	62,155	62,387	63,584	64,265	62,325	61,983	
501	Motor vehicles & auto. equip.	12,493	11,793	13,127	13,083	12,563	12,660	12,477	12,362	12,928	12,904	13,223	12,982	12,927	
502	Furniture & home furnishings	2,246	2,029	1,994	2,058	1,912	1,922	1,873	2,008	2,067	2,348	2,177	2,140	2,148	
503	Lumber & other construction mat.	4,816	4,816	4,794	5,064	4,960	5,050	5,379	5,489	5,312	5,494	5,396	5,100	5,184	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,658	1,814	1,972	1,751	1,698	1,616	1,706	1,733	1,857	1,706	1,696	1,649	1,638	
505	Metals & minerals, ex. petroleum	5,569	4,458	4,720	4,962	4,709	4,858	4,990	5,056	5,200	5,181	5,280	5,231	5,435	
506	Electrical goods	7,732	7,824	8,219	7,949	8,138	8,154	8,018	8,236	8,262	7,951	7,965	7,865	7,511	
507	Hardware, plumbing & heating equipment	4,170	3,515	3,683	3,991	3,787	3,669	3,991	3,989	4,038	4,267	4,184	4,145	4,143	
508	Machinery, equip. & supplies	16,087	15,265	15,755	15,639	15,859	15,815	16,048	16,451	16,363	16,712	16,676	15,982	15,582	
509	Miscellaneous durable goods	6,927	5,988	6,411	6,135	6,677	6,942	7,348	6,831	6,360	7,021	7,668	7,231	7,415	
51	Nondurable goods	67,346	60,612	63,616	63,407	64,247	64,825	64,769	65,550	67,275	67,853	67,478	66,176	66,349	
511	Paper & paper products	4,237	3,372	3,473	3,442	3,499	3,457	3,619	3,715	3,770	3,954	4,064	4,151	4,194	
512	Drugs, drug proprietaries and druggists' sundries	2,771	2,673	2,780	2,693	2,678	2,792	2,776	2,782	2,748	2,781	2,703	2,741	2,807	
513	Apparel, piece goods & notions	4,068	3,467	3,876	3,938	3,384	3,522	3,687	3,603	3,834	3,975	3,956	4,017	4,102	
514	Groceries & related products	19,897	19,204	19,377	18,952	19,389	19,738	19,479	19,678	19,526	19,307	19,639	20,461	20,194	
515	Farm-product raw materials	10,038	7,462	7,832	7,985	8,372	8,248	8,790	9,197	9,770	9,874	9,817	8,109	8,326	
516	Chemicals & allied products	2,108	1,825	1,763	1,875	1,937	1,901	1,933	1,951	1,944	1,955	2,041	2,045	2,225	
517	Petroleum & petroleum products	11,283	11,217	12,090	12,267	12,370	12,461	12,348	13,107	13,276	13,200	12,708	12,421	11,843	
518	Beer, wine, & distilled beverages	3,687	3,530	3,643	3,579	3,633	3,600	3,475	3,432	3,428	3,498	3,514	3,481	3,498	
519	Misc. nondurable goods	8,257	7,862	8,782	8,676	8,985	9,106	8,662	8,085	8,981	9,209	9,036	8,750	9,160	
	Inventories, Total	167,354	154,863	154,812	155,241	155,767	158,560	158,835	158,611	157,072	159,135	162,517	163,353	165,097	
50	Durable goods	110,033	102,423	101,710	102,803	103,172	105,513	104,746	104,514	103,324	103,933	106,734	106,503	107,996	
501	Motor vehicles & auto. equip.	21,778	19,088	19,390	19,483	19,577	20,910	20,254	20,410	20,510	20,583	20,839	21,441	21,602	
502	Furniture & home furnishings	4,100	3,456	3,531	3,651	3,825	3,978	4,003	4,114	3,978	4,132	4,082	4,076	3,971	
503	Lumber & other construction mat.	6,769	5,252	5,212	5,378	5,543	5,794	5,750	5,954	5,700	5,943	6,007	5,861	6,203	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,039	4,063	4,102	4,129	4,076	4,138	4,156	4,398	4,362	4,348	4,309	4,191	4,092	
505	Metals & minerals, ex. petroleum	7,623	7,226	7,061	7,197	7,244	7,252	7,329	7,030	6,764	6,927	7,295	7,259	7,478	
506	Electrical goods	13,783	13,657	13,839	13,830	13,329	13,633	13,494	13,149	13,178	12,619	13,145	13,277	13,605	
507	Hardware, plumbing & heating equipment	7,067	6,743	6,694	6,702	6,388	6,481	6,637	6,571	6,472	6,812	7,040	6,725	6,949	
508	Machinery, equip. & supplies	37,283	35,793	35,022	35,071	35,419	34,879	34,969	35,031	34,718	35,019	36,342	35,911	36,245	
509	Miscellaneous durable goods	7,591	7,145	6,859	7,362	7,771	8,450	8,154	7,857	7,642	7,550	7,675	7,762	7,851	
51	Nondurable goods	57,321	52,440	53,102	52,438	52,595	53,047	54,089	54,097	53,748	55,202	55,783	56,850	57,101	
511	Paper & paper products	3,864	3,573	3,550	3,574	3,572	3,553	3,554	3,587	3,460	3,638	3,832	3,758	3,831	
512	Drugs, drug proprietaries and druggists' sundries	5,025	4,361	4,330	4,096	4,400	4,337	4,389	4,579	4,568	4,602	4,826	5,022	5,091	
513	Apparel, piece goods & notions	8,206	7,422	7,387	7,560	7,344	7,457	7,781	7,426	7,466	7,729	7,750	8,134	8,127	
514	Groceries & related products	12,917	12,091	11,982	11,773	11,893	12,028	12,141	12,794	12,475	12,861	12,649	12,856	13,029	
515	Farm-product raw materials	6,770	6,518	6,490	6,244	6,673	6,946	7,068	6,795	6,587	6,852	7,126	7,021	6,854	
516	Chemicals & allied products	2,562	2,164	2,288	2,267	2,262	2,399	2,377	2,325	2,444	2,453	2,401	2,452	2,551	
517	Petroleum & petroleum products	3,575	3,714	3,854	3,865	3,628	3,491	3,559	3,900	3,745	3,705	3,695	3,607	3,401	
518	Beer, wine, & distilled beverages	4,196	4,268	4,581	4,472	4,278	4,303	4,247	4,178	4,252	4,347	4,304	4,236	4,282	
519	Misc. nondurable goods	10,206	8,329	8,640	8,587	8,545	8,533	8,973	8,513	8,751	9,015	9,200	9,764	9,935	
	Stock/sales ratios, Total	1.30	1.31	1.25	1.25	1.25	1.26	1.25	1.24	1.21	1.21	1.23	1.27	1.29	
50	Durable goods	1.78	1.78	1.68	1.70	1.71	1.74	1.69	1.68	1.66	1.63	1.66	1.71	1.74	
501	Motor vehicles & auto. equip.	1.74	1.62	1.48	1.49	1.56	1.65	1.62	1.65	1.59	1.60	1.58	1.65	1.67	
502	Furniture & home furnishings	1.83	1.70	1.77	1.77	2.00	2.07	2.14	2.05	1.92	1.76	1.88	1.90	1.85	
503	Lumber & other construction mat.	1.41	1.09	1.09	1.06	1.12	1.15	1.07	1.08	1.07	1.08	1.11	1.15	1.20	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.44	2.24	2.08	2.36	2.40	2.56	2.44	2.54	2.35	2.55	2.54	2.54	2.50	
505	Metals & minerals, ex. petroleum	1.37	1.62	1.50	1.45	1.54	1.49	1.47	1.39	1.30	1.34	1.38	1.39	1.38	
506	Electrical goods	1.78	1.75	1.68	1.74	1.64	1.67	1.68	1.60	1.60	1.59	1.65	1.69	1.81	
507	Hardware, plumbing & heating equipment	1.69	1.92	1.82	1.68	1.69	1.77	1.66	1.65	1.60	1.60	1.68	1.62	1.68	
508	Machinery, equip. & supplies	2.32	2.34	2.22	2.24	2.23	2.21	2.18	2.13	2.12	2.10	2.18	2.25	2.33	
509	Miscellaneous durable goods	1.10	1.19	1.07	1.20	1.16	1.22	1.11	1.15	1.20	1.08	1.00	1.07	1.06	
51	Nondurable goods .....	.85	.87	.83	.83	.82	.82	.84	.83	.80	.81	.83	.86	.86
511	Paper & paper products .....	.91	1.06	1.02	1.04	1.02	1.03	.98	.97	.92	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.63	1.56	1.52	1.64	1.55	1.58	1.65	1.66	1.65	1.79	1.83	1.81	
513	Apparel, piece goods & notions	2.02	2.14	1.91	1.92	2.17	2.12	2.11	2.08	1.95	1.94	1.96	2.02	1.98	
514	Groceries & related products .....	.65	.63	.62	.62	.61	.61	.62	.65	.64	.67	.64	.63	.65
515	Farm-product raw materials .....	.67	.87	.83	.78	.80	.84	.80	.74	.67	.69	.73	.87	.82
516	Chemicals & allied products	1.22	1.19	1.30	1.21	1.17	1.26	1.23	1.19	1.28	1.25	1.18	1.20	1.15	
517	Petroleum & petroleum products .....	.32	.33	.32	.32	.29	.28	.29	.30	.28	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.21	1.26	1.25	1.18	1.20	1.22	1.22	1.24	1.24	1.22	1.22	1.22	
519	Misc. nondurable goods	1.10	1.08	.98	.99	.95	.94	1.04	1.05	.97	.98	1.02	1.12	1.08	

^rRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988												1987	Total 12 mos.
		Jan. ^P	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.			Dec.
	Sales, Total	118,329	111,780	112,842	128,109	127,622	126,672	130,275	127,653	126,500	132,110	137,621	126,896	132,747	1,520,827
50	Durable goods	54,336	52,357	53,927	62,297	62,691	60,643	64,887	62,586	61,837	65,226	69,005	61,096	62,725	739,277
501	Motor vehicles & auto. equip.	11,244	11,097	11,512	13,358	13,040	13,078	13,363	12,683	12,398	12,220	14,294	12,670	13,509	153,222
502	Furniture & home furnishings	1,947	1,800	1,773	2,050	1,935	1,884	1,955	2,038	2,084	2,501	2,469	2,123	2,090	24,702
503	Lumber & other construction mat.	3,723	3,853	3,792	4,826	5,129	5,212	6,057	6,115	5,785	6,021	5,979	4,998	4,583	82,360
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,416	1,605	1,731	1,751	1,701	1,445	1,628	1,712	1,837	1,827	2,011	1,850	1,705	20,803
505	Metals & minerals, ex. petroleum	5,291	4,342	4,475	5,428	4,860	4,756	5,140	4,985	5,169	5,481	5,343	4,786	5,315	60,080
506	Electrical goods	6,943	7,151	7,446	8,100	7,731	7,591	8,130	8,187	8,312	8,524	8,857	8,085	7,917	96,031
507	Hardware, plumbing & heating equipment	3,682	3,223	3,311	3,827	3,908	3,750	4,330	4,141	4,026	4,357	4,514	4,033	4,052	47,472
508	Machinery, equip. & supplies	14,285	13,891	14,290	16,687	16,668	15,957	16,818	16,188	15,888	17,197	17,126	15,103	16,361	192,174
509	Miscellaneous durable goods	5,805	5,395	5,597	6,270	7,719	6,970	7,466	6,537	6,328	7,098	8,412	7,448	7,193	82,433
51	Nondurable goods	63,993	59,423	58,915	65,812	64,931	66,029	65,388	65,067	64,663	66,884	68,616	65,800	70,022	781,550
511	Paper & paper products	3,987	3,281	3,272	3,573	3,548	3,319	3,742	3,696	3,789	3,974	4,255	4,022	4,270	44,741
512	Drugs, drug proprietaries and druggists' sundries	2,721	2,689	2,583	2,747	2,764	2,683	2,749	2,630	2,892	2,806	2,875	2,922	2,922	32,955
513	Apparel, piece goods & notions	3,478	3,054	4,031	4,072	3,266	3,078	3,897	3,992	4,402	4,194	4,411	3,760	3,126	45,283
514	Groceries & related products	19,022	18,939	17,769	18,990	19,583	20,113	19,810	20,426	19,467	19,346	19,718	19,990	20,982	235,033
515	Farm-product raw materials	10,269	8,104	7,581	8,648	8,179	8,479	8,342	8,047	8,324	8,777	10,053	9,009	9,800	103,343
516	Chemicals & allied products	2,028	1,803	1,629	1,935	1,983	1,897	2,072	1,953	1,899	2,027	2,172	1,951	2,049	23,370
517	Petroleum & petroleum products	12,084	12,238	11,703	13,126	12,073	11,938	11,694	12,294	12,015	13,279	12,860	12,570	13,193	148,983
518	Beer, wine, & distilled beverages	2,758	2,732	2,838	3,368	3,589	3,722	3,826	3,768	3,560	3,564	3,630	3,467	4,254	42,318
519	Misc. nondurable goods	7,646	6,683	7,509	9,353	9,946	10,800	9,190	8,142	8,577	8,831	8,711	8,356	9,426	105,524
	Inventories, Total	167,543	154,972	155,493	156,278	156,484	157,255	158,425	157,211	154,651	158,624	163,892	164,406	165,819	(X)
50	Durable goods	108,320	100,789	100,944	102,775	103,587	105,611	105,703	105,052	103,382	104,729	107,150	106,314	107,257	(X)
501	Motor vehicles & auto. equip.	21,647	18,954	19,429	19,580	19,675	20,659	20,396	19,920	19,751	20,995	21,027	21,784	21,948	(X)
502	Furniture & home furnishings	4,186	3,515	3,556	3,629	3,745	3,972	3,975	4,093	4,034	4,165	4,062	4,027	4,011	(X)
503	Lumber & other construction mat.	6,437	5,000	5,123	5,464	5,687	5,864	5,974	6,043	5,740	5,937	5,899	5,779	6,091	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	3,958	3,990	4,057	4,154	4,068	4,080	4,164	4,526	4,436	4,431	4,378	4,132	3,973	(X)
505	Metals & minerals, ex. petroleum	7,806	7,371	7,068	7,168	7,179	7,274	7,461	7,107	6,771	6,858	7,149	7,056	7,583	(X)
506	Electrical goods	13,342	13,234	13,465	13,567	13,276	13,551	13,494	13,451	13,442	13,086	13,408	13,343	13,374	(X)
507	Hardware, plumbing & heating equipment	6,897	6,581	6,694	6,883	6,637	6,649	6,690	6,637	6,491	6,717	6,913	6,597	6,692	(X)
508	Machinery, equip. & supplies	36,836	35,363	34,707	35,211	35,596	35,019	35,354	35,206	34,892	34,809	36,524	35,624	36,064	(X)
509	Miscellaneous durable goods	7,211	6,781	6,845	7,119	7,724	8,543	8,195	8,069	7,825	7,731	7,790	7,972	7,521	(X)
51	Nondurable goods	59,223	54,183	54,549	53,501	52,897	51,644	52,722	52,159	51,269	53,895	56,742	58,092	58,562	(X)
511	Paper & paper products	3,907	3,598	3,585	3,599	3,593	3,553	3,565	3,573	3,495	3,540	3,771	3,750	3,850	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,110	4,439	4,482	4,321	4,492	4,229	4,240	4,419	4,390	4,602	4,947	4,942	5,076	(X)
513	Apparel, piece goods & notions	8,083	7,326	7,306	7,190	7,087	7,576	8,038	7,909	7,892	8,023	7,564	7,662	7,989	(X)
514	Groceries & related products	12,762	11,922	12,126	11,679	11,774	11,956	12,129	12,538	12,038	12,720	13,130	13,409	13,185	(X)
515	Farm-product raw materials	8,347	8,030	7,457	6,743	6,640	5,765	5,803	5,416	5,230	5,982	7,688	8,172	8,136	(X)
516	Chemicals & allied products	2,524	2,134	2,304	2,256	2,343	2,435	2,408	2,353	2,446	2,345	2,389	2,454	2,508	(X)
517	Petroleum & petroleum products	3,968	4,093	3,615	3,656	3,414	3,435	3,534	3,818	3,513	3,746	3,776	3,762	3,751	(X)
518	Beer, wine, & distilled beverages	3,969	4,029	4,421	4,517	4,402	4,333	4,391	4,207	4,188	4,373	4,545	4,431	3,884	(X)
519	Misc. nondurable goods	10,553	8,612	9,253	9,540	9,152	8,362	8,614	7,926	8,077	8,564	8,952	9,510	10,183	(X)
	Stock/sales ratios, Total	1.42	1.39	1.38	1.22	1.23	1.24	1.22	1.23	1.22	1.20	1.19	1.30	1.25	(X)
50	Durable goods	1.99	1.93	1.87	1.65	1.65	1.74	1.63	1.68	1.67	1.61	1.55	1.74	1.71	(X)
501	Motor vehicles & auto. equip.	1.93	1.71	1.69	1.47	1.51	1.58	1.53	1.57	1.59	1.72	1.47	1.72	1.62	(X)
502	Furniture & home furnishings	2.15	1.95	2.01	1.77	1.94	2.11	2.03	2.01	1.94	1.67	1.65	1.90	1.92	(X)
503	Lumber & other construction mat.	1.73	1.30	1.35	1.13	1.11	1.13	.99	.99	.99	.99	.99	1.16	1.33	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.80	2.49	2.34	2.37	2.39	2.82	2.56	2.64	2.41	2.43	2.18	2.23	2.33	(X)
505	Metals & minerals, ex. petroleum	1.48	1.70	1.58	1.32	1.48	1.53	1.45	1.43	1.31	1.25	1.34	1.47	1.43	(X)
506	Electrical goods	1.82	1.85	1.81	1.67	1.72	1.79	1.66	1.64	1.62	1.54	1.51	1.65	1.69	(X)
507	Hardware, plumbing & heating equipment	1.87	2.04	2.02	1.80	1.70	1.77	1.55	1.60	1.61	1.54	1.53	1.64	1.65	(X)
508	Machinery, equip. & supplies	2.58	2.55	2.43	2.11	2.14	2.19	2.10	2.17	2.20	2.02	2.13	2.36	2.20	(X)
509	Miscellaneous durable goods	1.24	1.26	1.22	1.14	1.00	1.23	1.10	1.23	1.24	1.09	.93	1.07	1.05	(X)
51	Nondurable goods .....	.93	.91	.93	.81	.81	.78	.81	.80	.79	.81	.83	.88	.84	(X)
511	Paper & paper products .....	.98	1.10	1.10	1.01	1.01	1.07	.95	.97	.92	.89	.89	.93	.90	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.88	1.65	1.74	1.57	1.63	1.58	1.51	1.61	1.67	1.59	1.76	1.85	1.74	(X)
513	Apparel, piece goods & notions	2.32	2.40	1.81	1.77	2.17	2.46	2.06	1.98	1.79	1.91	1.71	2.04	2.56	(X)
514	Groceries & related products .....	.67	.63	.68	.62	.60	.59	.61	.61	.62	.66	.67	.67	.63	(X)
515	Farm-product raw materials .....	.81	.99	.98	.78	.81	.68	.70	.67	.63	.68	.76	.91	.83	(X)
516	Chemicals & allied products	1.24	1.18	1.41	1.17	1.18	1.28	1.16	1.20	1.29	1.16	1.10	1.26	1.22	(X)
517	Petroleum & petroleum products .....	.33	.33	.31	.28	.28	.29	.30	.31	.29	.28	.29	.30	.28	(X)
518	Beer, wine, & distilled beverages	1.44	1.47	1.56	1.34	1.23	1.16	1.15	1.12	1.18	1.23	1.25	1.28	.91	(X)
519	Misc. nondurable goods	1.38	1.29	1.23	1.02	.92	.77	.94	.97	.94	.97	1.03	1.14	1.08	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

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 ¹			
		Sales		Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Jan. 1988 from Dec. 1987	Jan. 1988 from Jan. 1987	Jan. 1988 from Dec. 1987	Jan. 1988 from Jan. 1987	Jan. 1988 from Dec. 1987	Jan. 1988 from Jan. 1987	Jan. 1988 from Dec. 1987	Jan. 1988 from Jan. 1987
	Total	-10.9	+5.9	+1.0	+8.1	+6	+9.3	+1.4	+8.1
50	Durable goods	-13.4	+3.8	+1.0	+7.5	-5	+7.3	+1.9	+7.4
501	Motor vehicles & auto, equip.	-16.8	+1.3	-1.4	+14.2	-3.4	+5.9	+8	+14.1
502	Furniture & home furnishings	-6.8	+8.2	+4.4	+19.1	+4.6	+10.7	+3.2	+18.6
503	Lumber & other construction mat.	-18.8	-3.4	+5.7	+28.7	-7.1	.0	+9.1	+28.9
504	Sporting, recreational, photographic & hobby goods, toys & supplies	-17.0	-11.8	-4	-8	+1.2	-8.6	-1.3	-6
505	Metals & minerals, ex. petroleum	-5	+21.9	+2.9	+5.9	+2.5	+24.9	+1.9	+5.5
506	Electrical goods	-12.3	-2.9	-2	+8	+2.9	-1.2	+1.3	+9
507	Hardware, plumbing & heating equipment	-9.1	+14.2	+3.1	+4.8	+7	+18.6	+1.7	+4.8
508	Machinery, equip. & supplies	-12.7	+2.8	+2.1	+4.2	+3.2	+5.4	+2.9	+4.2
509	Miscellaneous durable goods	-19.3	+7.6	-4.1	+6.3	-6.6	+15.7	-3.3	+6.2
51	Nondurable goods	-8.6	+7.7	+1.1	+9.3	+1.5	+11.1	+4	+9.3
511	Paper & paper products	-6.6	+21.5	+1.5	+8.6	+1.0	+25.7	+9	+8.1
512	Drugs, drug proprietaries and druggists' sundries	-6.9	+1.2	+7	+15.1	-1.3	+3.7	-1.3	+15.2
513	Apparel, piece goods & notions	+11.3	+13.9	+1.2	+10.3	-8	+17.3	+1.0	+10.6
514	Groceries & related products	-9.3	+1.0	-3.2	+7.0	-1.5	+3.6	-9	+6.8
515	Farm-product raw materials	+4.8	+26.7	+2.6	+3.9	+20.6	+34.5	-1.2	+3.9
516	Chemicals & allied products	-1.0	+12.5	+6	+18.3	-5.3	+15.5	+4	+18.4
517	Petroleum & petroleum products	-8.4	-1.3	+5.8	-3.1	-4.7	+6	+5.1	-3.7
518	Beer, wine, & distilled beverages	-35.2	+1.0	+2.2	-1.5	+5.4	+4.4	-2.0	-1.7
519	Misc. nondurable goods	-18.9	+14.4	+3.6	+22.5	+1.1	+17.7	+2.7	+22.5

¹Adjusted 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*¹ 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

¹Executive 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.2-1.6	1.2	1.0-1.4	1.2	0.4-0.9	0.6	1.4-1.8	1.6	1.0	(Y)	(Y)
50	Durable goods	1.3-1.9	1.6	1.1-1.7	1.4	0.5-0.9	0.7	1.4-2.2	1.9	1.3	(Y)	(Y)
501	Motor vehicles & auto, equip.	3.2-3.7	3.4	3.0-3.7	3.3	0.9-1.9	1.5	2.4-5.3	3.8	3.1	(Y)	(Y)
502	Furniture & home furnishings	5.0-8.7	6.6	4.6-8.1	5.3	1.8-7.1	3.1	6.1-12.0	8.0	5.1	(Y)	(Y)
503	Lumber & other construction mat.	5.3-8.8	6.9	5.0-8.5	6.7	1.6-3.5	2.1	4.6-11.3	9.4	5.3	(Y)	(Y)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.9-9.4	7.1	5.0-8.8	5.9	1.9-5.5	3.3	9.4-20.4	11.6	5.8	(Y)	(Y)
505	Metals & minerals, ex. petroleum	3.5-4.6	4.4	3.5-4.7	4.1	1.2-2.4	1.8	3.9-7.0	4.9	3.3	(Y)	(Y)
506	Electrical goods	2.0-3.2	2.3	1.8-2.8	2.2	1.1-1.7	1.5	2.9-9.0	5.2	2.1	(Y)	(Y)
507	Hardware, plumbing & heating equipment	6.2-8.6	6.9	6.0-8.0	6.5	1.3-3.6	2.0	5.0-10.3	8.1	5.7	(Y)	(Y)
508	Machinery, equip. & supplies	2.3-3.0	2.6	1.6-2.5	2.5	0.8-2.1	1.6	2.2-5.2	4.6	1.7	(Y)	(Y)
509	Miscellaneous durable goods	2.9-4.1	3.4	2.6-4.0	3.0	1.2-2.7	1.8	3.2-5.5	4.9	2.3	(Y)	(Y)
51	Nondurable goods	2.0-3.2	2.2	1.9-2.3	2.1	0.4-1.5	0.8	2.4-3.3	2.8	1.9	(Y)	(Y)
511	Paper & paper products	3.8-5.8	5.3	3.8-5.7	4.8	1.1-2.6	1.9	2.9-6.5	4.9	4.1	(Y)	(Y)
512	Drugs, drug proprietaries and druggists' sundries	5.0-8.3	5.8	5.0-7.9	5.8	0.9-2.0	1.7	3.4-10.1	7.8	5.4	(Y)	(Y)
513	Apparel, piece goods & notions	7.3-9.2	7.5	6.1-8.3	7.5	2.6-5.3	3.1	6.0-10.4	8.4	5.6	(Y)	(Y)
514	Groceries & related products	3.6-6.8	4.2	3.8-4.9	4.2	0.5-4.1	0.8	4.2-7.0	6.6	4.0	(Y)	(Y)
515	Farm-product raw materials	4.8-6.2	5.4	4.4-6.2	5.2	2.0-4.4	2.6	5.9-9.3	6.3	4.3	(Y)	(Y)
516	Chemicals & allied products	5.1-9.9	7.4	4.8-8.5	5.8	1.1-3.9	2.3	6.4-12.4	9.0	5.7	(Y)	(Y)
517	Petroleum & petroleum products	4.0-4.9	4.5	4.0-4.8	4.3	0.8-1.3	1.1	3.0-12.0	7.9	3.8	(Y)	(Y)
518	Beer, wine, & distilled beverages	2.6-3.7	2.9	2.6-3.3	2.8	0.8-1.7	1.4	2.8-9.9	6.8	2.5	(Y)	(Y)
519	Misc. nondurable goods	4.5-5.5	4.9	4.2-5.5	4.6	1.4-2.3	1.7	4.7-8.7	6.5	4.0	(Y)	(Y)
	Inventories, Total	1.1-1.3	1.3	1.2-1.3	1.3	0.2-0.4	0.3	0.8-2.1	1.5	(X)	(X)	(X)
50	Durable goods	1.3-1.6	1.5	1.4-1.6	1.5	0.2-0.5	0.3	1.0-2.4	2.0	(X)	(X)	(X)
501	Motor vehicles & auto, equip.	4.4-6.2	5.2	4.5-5.7	5.1	0.5-1.4	0.9	3.7-6.8	5.9	(X)	(X)	(X)
502	Furniture & home furnishings	7.5-8.9	8.2	7.6-9.4	7.9	0.5-2.3	1.4	5.1-16.8	13.0	(X)	(X)	(X)
503	Lumber & other construction mat.	4.9-6.1	5.5	4.9-5.7	5.4	0.7-2.9	1.0	4.6-12.6	7.4	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	7.5-12.4	10.1	8.7-11.5	10.5	0.8-2.0	1.4	4.4-18.6	13.1	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	4.8-5.9	5.8	4.7-5.9	5.6	0.5-0.9	0.8	4.0-8.3	6.8	(X)	(X)	(X)
506	Electrical goods	1.7-2.4	1.9	1.5-2.6	1.9	0.3-0.7	0.5	2.2-9.1	5.7	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	4.3-5.3	5.0	4.1-5.4	4.7	0.5-2.6	1.2	4.8-8.6	6.4	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.1-3.4	2.9	2.1-3.0	2.8	0.3-0.9	0.6	2.8-6.2	4.4	(X)	(X)	(X)
509	Miscellaneous durable goods	5.2-8.3	6.9	5.4-8.3	6.5	0.5-1.0	0.9	7.7-12.8	10.8	(X)	(X)	(X)
51	Nondurable goods	1.4-2.0	1.9	1.5-1.9	1.7	0.4-0.6	0.5	1.8-2.7	2.0	(X)	(X)	(X)
511	Paper & paper products	5.8-6.8	6.1	5.6-6.6	6.1	0.5-1.1	0.8	3.4-9.7	8.1	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.4-6.3	5.7	5.3-5.9	5.7	0.5-1.2	0.7	4.8-9.1	7.9	(X)	(X)	(X)
513	Apparel, piece goods & notions	4.4-6.0	5.3	4.2-6.0	5.1	0.9-1.7	1.3	6.0-14.5	8.9	(X)	(X)	(X)
514	Groceries & related products	4.7-5.1	4.7	4.7-5.4	4.9	0.6-1.0	0.8	3.6-7.9	5.8	(X)	(X)	(X)
515	Farm-product raw materials	6.5-8.1	7.2	6.3-8.0	7.3	1.2-3.9	2.1	7.3-10.4	9.9	(X)	(X)	(X)
516	Chemicals & allied products	7.0-9.2	7.6	7.2-9.1	7.5	0.8-2.1	1.3	8.4-14.9	10.9	(X)	(X)	(X)
517	Petroleum & petroleum products	2.9-4.4	3.3	3.1-4.0	3.4	0.7-2.0	0.8	3.0-20.7	7.9	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.4-5.8	4.9	4.3-6.2	4.9	0.6-1.2	0.8	2.5-6.7	5.9	(X)	(X)	(X)
519	Misc. nondurable goods	7.2-9.0	8.2	7.6-8.4	8.0	0.9-3.1	1.2	5.5-12.2	11.1	(X)	(X)	(X)

x Cumulative coefficients of variation are not applicable for inventories.

y Previous year cumulative coefficients of variation will appear early in 1988.

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 1987 through November 1987.

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	1987												1988	
		Jan. ^r	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. ^r	Jan. ^r	Feb.
	Sales,¹ Total .....	.955	.908	1.037	1.021	.998	1.032	.996	.978	1.011	1.041	.987	1.038	.926	.946
50	Durable goods .....	.915	.891	1.033	1.033	.991	1.055	1.005	.983	1.031	1.073	.980	1.013	.886	.928
501	Motor vehicles & auto. equip. ....	.941	.877	1.021	1.038	1.033	1.071	1.026	.959	.947	1.081	.976	1.045	.900	.909
502	Furniture & home furnishings ....	.887	.889	.996	1.012	.980	1.044	1.015	1.008	1.065	1.134	.992	.973	.867	.925
503	Lumber & other construction mat. ....	.800	.791	.953	1.034	1.032	1.126	1.114	1.091	1.096	1.108	.980	.884	.773	.829
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.885	.878	1.000	1.002	.894	.954	.988	.989	1.071	1.186	1.122	1.041	.854	.922
505	Metals & minerals, ex. petroleum .....	.974	.948	1.094	1.032	.979	1.030	.986	.994	1.058	1.012	.915	.978	.950	.988
506	Electrical goods .....	.914	.906	1.019	.950	.931	1.014	.994	1.006	1.072	1.112	1.028	1.054	.898	.943
507	Hardware, plumbing & heating equipment .....	.917	.899	.959	1.032	1.022	1.085	1.038	.997	1.021	1.079	.973	.978	.883	.943
508	Machinery, equip. & supplies .....	.910	.907	1.067	1.051	1.009	1.048	.984	.971	1.029	1.027	.945	1.050	.888	.939
509	Miscellaneous durable goods .....	.901	.873	1.022	1.156	1.004	1.016	.957	.995	1.011	1.097	1.030	.970	.838	.919
51	Nondurable goods .....	.985	.921	1.043	1.008	1.021	1.013	.987	.965	.992	1.012	.994	1.059	.958	.960
511	Paper & paper products .....	.973	.942	1.038	1.014	.960	1.034	.995	1.005	1.005	1.047	.969	1.018	.941	.976
512	Drugs, drug proprietaries and druggists' sundries	1.006	.929	1.020	1.032	.961	1.014	.988	.957	1.040	1.038	.976	1.041	.982	.961
513	Apparel, piece goods & notions .....	.881	1.040	1.034	.965	.874	1.057	1.108	1.148	1.055	1.115	.936	.762	.855	1.095
514	Groceries & related products .....	.981	.917	1.002	1.010	1.019	1.017	1.038	.997	1.002	1.004	.977	1.039	.956	.951
515	Farm-product raw materials	1.086	.968	1.083	.977	1.028	.949	.875	.852	.880	1.024	1.111	1.177	1.023	1.018
516	Chemicals & allied products .....	.988	.924	1.032	1.024	.998	1.072	1.001	.977	1.037	1.064	.954	.921	.962	.976
517	Petroleum & petroleum products	1.091	.968	1.070	.976	.958	.947	.938	.905	1.006	1.012	1.012	1.114	1.071	1.004
518	Beer, wine, & distilled beverages .....	.774	.779	.941	.988	1.034	1.101	1.098	1.039	1.019	1.033	.996	1.216	.748	.805
519	Misc. nondurable goods .....	.850	.855	1.078	1.107	1.186	1.061	1.007	.955	.959	.964	.955	1.029	.826	.899
	Inventories,¹ Total	1.003	1.005	1.007	1.005	.991	.993	.991	.986	.996	1.010	1.008	1.003	1.003	1.005
50	Durable goods .....	.985	.992	1.000	1.004	1.000	1.007	1.006	1.003	1.011	1.003	.998	.992	.985	.992
501	Motor vehicles & auto. equip. ....	.993	1.002	1.005	1.005	.988	1.007	.976	.963	1.020	1.009	1.016	1.016	.994	1.001
502	Furniture & home furnishings	1.017	1.007	.994	.979	.999	.993	.995	1.014	1.008	.995	.988	1.010	1.021	1.007
503	Lumber & other construction mat. ....	.952	.983	1.016	1.026	1.012	1.039	1.015	1.007	.999	.982	.986	.982	.951	.982
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.982	.989	1.006	.998	.986	1.002	1.029	1.017	1.019	1.016	.986	.971	.980	.989
505	Metals & minerals, ex. petroleum	1.020	1.001	.996	.991	1.003	1.018	1.011	1.001	.990	.980	.972	1.014	1.024	1.001
506	Electrical goods .....	.969	.973	.981	.996	.994	1.000	1.023	1.020	1.037	1.020	1.005	.983	.968	.974
507	Hardware, plumbing & heating equipment .....	.976	1.000	1.027	1.039	1.026	1.008	1.010	1.003	.986	.982	.981	.963	.976	1.000
508	Machinery, equip. & supplies .....	.988	.991	1.004	1.005	1.004	1.011	1.005	1.005	.994	1.005	.992	.995	.988	.991
509	Miscellaneous durable goods .....	.949	.998	.967	.994	1.011	1.005	1.027	1.024	1.024	1.015	1.027	.958	.950	.999
51	Nondurable goods	1.038	1.030	1.020	1.005	.970	.971	.962	.949	.973	1.018	1.031	1.032	1.039	1.030
511	Paper & paper products	1.007	1.010	1.007	1.006	1.000	1.003	.996	1.010	.973	.984	.998	1.005	1.011	1.011
512	Drugs, drug proprietaries and druggists' sundries	1.018	1.035	1.055	1.021	.975	.966	.965	.961	1.000	1.025	.984	.997	1.017	1.035
513	Apparel, piece goods & notions .....	.987	.989	.951	.965	1.016	1.033	1.065	1.057	1.038	.976	.942	.983	.985	.989
514	Groceries & related products .....	.986	1.012	.992	.990	.994	.999	.980	.965	.989	1.038	1.043	1.012	.988	1.012
515	Farm-product raw materials	1.232	1.149	1.080	.995	.830	.821	.797	.794	.873	1.076	1.164	1.187	1.233	1.148
516	Chemicals & allied products .....	.986	1.007	.995	1.036	1.015	1.013	1.012	1.001	.956	.995	1.001	.983	.985	1.009
517	Petroleum & petroleum products	1.102	.938	.946	.941	.984	.993	.979	.938	1.011	1.022	1.043	1.103	1.110	.938
518	Beer, wine, & distilled beverages .....	.944	.965	1.010	1.029	1.007	1.034	1.007	.985	1.006	1.056	1.046	.907	.946	.967
519	Misc. nondurable goods	1.034	1.071	1.111	1.071	.980	.960	.931	.923	.950	.973	.974	1.025	1.034	1.069

^rRevised

¹Adjusted 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

February 1988



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW88-02
Issued April 1988

Sales. February 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$131.3 billion, up 1.2 percent (± 0.7 percent) from the revised January level and up 6.1 percent (± 1.7 percent) from a year ago. The January preliminary estimate was revised upward by \$0.7 billion or about 0.5 percent. February sales of durable goods were up 1.6 percent (± 1.2 percent) from January, and were 5.1 percent (± 2.3 percent) above a year ago. February sales of nondurable goods increased 0.9 percent (± 0.8 percent) from January and were 7.1 percent (± 3.6 percent) above February 1987.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$169.9 billion at the end of February, up 0.9 percent (± 0.5 percent) from the revised January

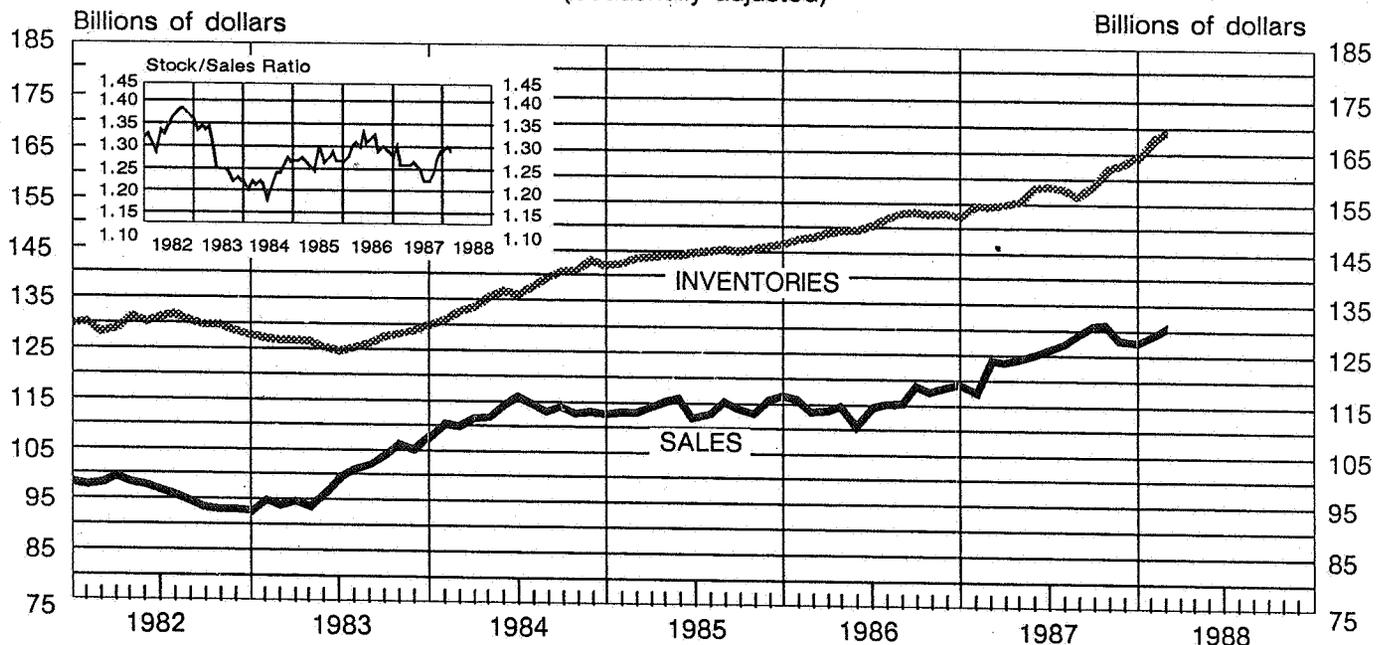
level and up 9.7 percent (± 1.7 percent) from a year ago. The January preliminary estimate was revised upward by \$1.0 billion or about 0.6 percent. Inventories of durable goods wholesalers increased 0.8 percent (± 0.7 percent) from the January level and were up 10.3 percent (± 2.7 percent) from a year ago. Inventories of nondurable goods wholesalers were up 1.0 percent (± 0.9 percent) from the January level and were 8.7 percent (± 3.5 percent) above February 1987.

Stock/Sales Ratio. The February stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.29 down from the January ratio of 1.30, and up from a year ago ratio of 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: 1982-1988

(Seasonally adjusted)



Monthly Wholesale Trade for March is scheduled to be released May 9, 1988 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988		1987											
		Jan.	Feb. ^P	Feb. ^r	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
	Sales, Total	129,720	131,338	123,766	124,039	124,550	125,511	126,599	127,705	129,662	131,437	131,743	128,501	128,332	
50	Durable goods	62,486	63,480	60,379	60,632	60,303	60,686	61,830	62,155	62,387	63,584	64,265	62,325	61,993	
501	Motor vehicles & auto. equip.	12,595	13,178	13,052	13,083	12,563	12,660	12,477	12,362	12,928	12,904	13,223	12,982	12,927	
502	Furniture & home furnishings	2,257	2,375	1,977	2,058	1,912	1,922	1,873	2,008	2,067	2,348	2,177	2,140	2,148	
503	Lumber & other construction mat.	5,098	5,339	4,764	5,064	4,960	5,050	5,379	5,489	5,312	5,494	5,396	5,100	5,184	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,725	1,908	1,751	1,698	1,616	1,706	1,733	1,857	1,706	1,698	1,649	1,638	
505	Metals & minerals, ex. petroleum	5,589	5,573	4,691	4,962	4,709	4,858	4,990	5,056	5,200	5,181	5,280	5,231	5,435	
506	Electrical goods	7,736	7,906	8,111	7,949	8,138	8,154	8,018	8,236	8,262	7,951	7,965	7,865	7,511	
507	Hardware, plumbing & heating equipment	4,125	3,925	3,712	3,991	3,787	3,669	3,991	3,989	4,038	4,267	4,184	4,145	4,143	
508	Machinery, equip. & supplies	16,566	16,549	15,703	15,639	15,859	15,815	16,048	16,451	16,363	16,712	16,676	15,982	15,582	
509	Miscellaneous durable goods	6,780	6,910	6,463	6,135	6,677	6,942	7,348	6,831	6,380	7,021	7,668	7,231	7,415	
51	Nondurable goods	67,234	67,858	63,387	63,407	64,247	64,825	64,769	65,550	67,275	67,853	67,478	66,176	66,349	
511	Paper & paper products	4,207	4,246	3,466	3,442	3,499	3,457	3,619	3,715	3,770	3,954	4,064	4,151	4,194	
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,909	2,754	2,693	2,678	2,792	2,776	2,782	2,748	2,781	2,703	2,741	2,807	
513	Apparel, piece goods & notions	4,005	3,896	3,925	3,938	3,384	3,522	3,687	3,603	3,834	3,975	3,956	4,017	4,102	
514	Groceries & related products	19,839	19,715	19,462	19,952	19,389	19,738	19,479	19,678	19,526	19,307	19,639	20,461	20,194	
515	Farm-product raw materials	9,676	9,314	7,807	7,985	8,372	8,248	8,790	9,197	9,770	9,974	9,817	8,109	8,326	
516	Chemicals & allied products	2,233	2,462	1,739	1,875	1,937	1,901	1,933	1,951	1,944	1,955	2,041	2,045	2,225	
517	Petroleum & petroleum products	11,508	12,226	11,893	12,267	12,370	12,461	12,348	13,107	13,276	13,200	12,708	12,421	11,843	
518	Beer, wine, & distilled beverages	3,588	3,615	3,620	3,579	3,633	3,600	3,475	3,432	3,426	3,498	3,514	3,481	3,498	
519	Misc. nondurable goods	9,381	9,475	8,721	8,676	8,985	9,106	8,662	8,085	8,981	9,209	9,036	8,750	9,160	
	Inventories, Total	168,388	169,890	154,821	155,241	155,767	158,560	158,835	158,611	157,072	159,135	162,517	163,353	165,097	
50	Durable goods	111,259	112,182	101,720	102,803	103,172	105,513	104,746	104,514	103,324	103,933	106,734	106,503	107,996	
501	Motor vehicles & auto. equip.	21,733	21,641	19,468	19,483	19,577	20,910	20,254	20,410	20,510	20,583	20,839	21,441	21,602	
502	Furniture & home furnishings	4,081	4,100	3,531	3,651	3,825	3,976	4,003	4,114	3,978	4,132	4,082	4,076	3,971	
503	Lumber & other construction mat.	7,289	7,198	5,149	5,378	5,543	5,794	5,750	5,954	5,700	5,943	6,007	5,861	6,203	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,159	4,090	4,129	4,076	4,138	4,156	4,398	4,362	4,348	4,309	4,191	4,092	
505	Metals & minerals, ex. petroleum	7,687	8,122	7,005	7,197	7,244	7,252	7,329	7,030	6,764	6,927	7,295	7,259	7,478	
506	Electrical goods	13,606	13,680	13,824	13,830	13,329	13,633	13,494	13,149	13,178	12,619	13,145	13,277	13,605	
507	Hardware, plumbing & heating equipment	7,031	6,987	6,701	6,702	6,388	6,481	6,637	6,571	6,472	6,812	7,040	6,725	6,949	
508	Machinery, equip. & supplies	38,251	39,087	34,881	35,071	35,419	34,879	34,969	35,031	34,718	35,019	36,342	35,911	36,245	
509	Miscellaneous durable goods	7,437	7,208	7,071	7,362	7,771	8,450	8,154	7,857	7,642	7,550	7,675	7,762	7,851	
51	Nondurable goods	57,129	57,708	53,101	52,438	52,595	53,047	54,089	54,097	53,748	55,202	55,783	56,850	57,101	
511	Paper & paper products	3,964	4,020	3,532	3,574	3,572	3,553	3,554	3,587	3,460	3,638	3,832	3,758	3,831	
512	Drugs, drug proprietaries and druggists' sundries	5,052	5,056	4,330	4,096	4,400	4,337	4,389	4,579	4,568	4,602	4,826	5,022	5,091	
513	Apparel, piece goods & notions	8,074	7,777	7,501	7,560	7,344	7,457	7,781	7,426	7,466	7,729	7,750	8,134	8,127	
514	Groceries & related products	12,910	12,741	12,030	11,773	11,893	12,028	12,141	12,794	12,475	12,861	12,649	12,856	13,029	
515	Farm-product raw materials	6,822	7,585	6,412	6,244	6,673	6,946	7,068	6,795	6,587	6,852	7,126	7,021	6,854	
516	Chemicals & allied products	2,714	2,719	2,281	2,267	2,399	2,377	2,325	2,444	2,453	2,401	2,452	2,452	2,551	
517	Petroleum & petroleum products	3,546	3,849	3,758	3,865	3,628	3,491	3,559	3,900	3,745	3,705	3,695	3,607	3,401	
518	Beer, wine, & distilled beverages	4,103	4,145	4,544	4,472	4,278	4,303	4,247	4,178	4,252	4,347	4,304	4,236	4,282	
519	Misc. nondurable goods	9,944	9,706	8,713	8,587	8,545	8,533	8,973	8,513	8,751	9,015	9,200	9,764	9,935	
	Stock/sales ratios, Total	1.30	1.29	1.25	1.25	1.25	1.26	1.25	1.24	1.21	1.21	1.23	1.27	1.29	
50	Durable goods	1.78	1.77	1.68	1.70	1.71	1.74	1.69	1.68	1.66	1.63	1.66	1.71	1.74	
501	Motor vehicles & auto. equip.	1.73	1.64	1.49	1.49	1.56	1.65	1.62	1.65	1.59	1.60	1.58	1.65	1.67	
502	Furniture & home furnishings	1.80	1.73	1.79	1.77	2.00	2.07	2.14	2.05	1.92	1.76	1.88	1.90	1.85	
503	Lumber & other construction mat.	1.43	1.35	1.08	1.06	1.12	1.15	1.07	1.08	1.07	1.08	1.11	1.15	1.20	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.41	2.15	2.36	2.40	2.56	2.44	2.54	2.35	2.55	2.54	2.54	2.50	
505	Metals & minerals, ex. petroleum	1.38	1.46	1.49	1.45	1.54	1.49	1.47	1.39	1.30	1.34	1.38	1.39	1.38	
506	Electrical goods	1.76	1.73	1.70	1.64	1.64	1.67	1.68	1.60	1.60	1.59	1.65	1.69	1.81	
507	Hardware, plumbing & heating equipment	1.70	1.78	1.81	1.68	1.69	1.77	1.66	1.65	1.60	1.60	1.68	1.62	1.68	
508	Machinery, equip. & supplies	2.31	2.36	2.22	2.24	2.23	2.21	2.18	2.13	2.12	2.10	2.18	2.25	2.33	
509	Miscellaneous durable goods	1.10	1.04	1.09	1.20	1.16	1.22	1.11	1.15	1.20	1.08	1.00	1.07	1.06	
51	Nondurable goods . . . . .	.85	.85	.84	.83	.82	.82	.84	.83	.80	.81	.83	.86	.86
511	Paper & paper products . . . . .	.94	.95	1.02	1.04	1.02	1.03	.98	.97	.92	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.74	1.57	1.52	1.64	1.55	1.58	1.65	1.66	1.65	1.79	1.83	1.81	
513	Apparel, piece goods & notions	2.02	2.00	1.91	1.92	2.17	2.12	2.11	2.06	1.95	1.94	1.96	2.02	1.98	
514	Groceries & related products . . . . .	.65	.65	.62	.62	.61	.61	.62	.65	.64	.67	.64	.63	.65
515	Farm-product raw materials . . . . .	.71	.83	.82	.78	.80	.84	.80	.74	.67	.69	.73	.87	.82
516	Chemicals & allied products	1.22	1.10	1.31	1.21	1.17	1.26	1.23	1.19	1.26	1.25	1.18	1.20	1.15	
517	Petroleum & petroleum products . . . . .	.31	.31	.32	.32	.29	.28	.29	.30	.28	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.15	1.26	1.25	1.18	1.20	1.22	1.22	1.24	1.24	1.22	1.22	1.22	
519	Misc. nondurable goods	1.06	1.02	1.00	.99	.95	.94	1.04	1.05	.97	.98	1.02	1.12	1.08	

^rRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988		1987												Total 2 mos.	
		Jan.	Feb. ^P	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1988	1987	
	Sales, Total	118,752	125,066	112,842	128,109	127,622	126,672	130,275	127,653	126,500	132,110	137,621	126,896	132,747	243,818	224,622	
50	Durable goods	54,944	59,114	53,927	62,297	62,691	60,643	64,887	62,586	61,837	65,226	69,005	61,096	62,725	114,058	106,284	
501	Motor vehicles & auto. equip.	11,285	12,097	11,512	13,358	13,040	13,078	13,363	12,883	12,398	12,220	14,294	12,670	13,509	23,382	22,609	
502	Furniture & home furnishings	1,947	2,228	1,773	2,050	1,935	1,884	1,955	2,038	2,084	2,501	2,469	2,123	2,090	4,175	3,573	
503	Lumber & other construction mat. . .	3,971	4,463	3,792	4,826	5,129	5,212	6,057	6,115	5,795	6,021	5,979	4,998	4,583	8,434	7,645	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,479	1,654	1,731	1,751	1,701	1,445	1,628	1,712	1,837	1,827	2,011	1,850	1,705	3,133	3,336	
505	Metals & minerals, ex. petroleum ..	5,304	5,556	4,475	5,428	4,860	4,756	5,140	4,985	5,169	5,481	5,343	4,786	5,315	10,860	8,817	
506	Electrical goods	6,862	7,582	7,446	8,100	7,731	7,591	8,130	8,187	8,312	8,524	8,857	8,085	7,917	14,444	14,597	
507	Hardware, plumbing & heating equipment	3,663	3,654	3,311	3,827	3,908	3,750	4,330	4,141	4,026	4,357	4,514	4,033	4,052	7,317	6,534	
508	Machinery, equip. & supplies	14,711	15,606	14,290	16,687	16,668	15,957	16,818	16,188	15,888	17,197	17,126	15,103	16,361	30,317	28,181	
509	Miscellaneous durable goods	5,722	6,274	5,597	6,270	7,719	6,970	7,466	6,537	6,328	7,098	8,412	7,448	7,193	11,996	10,992	
51	Nondurable goods	63,808	65,952	58,915	65,812	64,931	66,029	65,388	65,067	64,663	66,884	68,618	65,800	70,022	129,760	118,338	
511	Paper & paper products	3,946	4,165	3,272	3,573	3,548	3,319	3,742	3,696	3,789	3,974	4,255	4,022	4,270	8,111	6,553	
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,836	2,593	2,747	2,764	2,683	2,815	2,749	2,630	2,892	2,806	2,675	2,922	5,566	5,272	
513	Apparel, piece goods & notions	3,456	4,177	4,031	4,072	3,266	3,078	3,897	3,992	4,402	4,194	4,411	3,760	3,126	7,633	7,085	
514	Groceries & related products	19,008	18,650	17,763	18,990	19,583	20,113	19,810	20,426	19,467	19,346	19,718	19,990	20,982	37,656	36,608	
515	Farm-product raw materials	10,015	9,519	7,531	8,648	8,179	8,479	8,342	8,047	8,324	8,777	10,053	9,009	9,800	19,534	15,685	
516	Chemicals & allied products	2,135	2,450	1,629	1,935	1,993	1,897	2,072	1,953	1,899	2,027	2,172	1,951	2,049	4,585	3,432	
517	Petroleum & petroleum products ..	12,187	12,617	11,703	13,126	12,073	11,938	11,694	12,294	12,015	13,279	12,860	12,570	13,193	24,804	23,941	
518	Beer, wine, & distilled beverages ..	2,659	2,935	2,838	3,368	3,589	3,722	3,826	3,768	3,560	3,564	3,630	3,467	4,254	5,594	5,570	
519	Misc. nondurable goods	7,674	8,603	7,509	9,353	9,946	10,800	9,190	8,142	8,577	8,831	8,711	8,356	9,426	16,277	14,192	
	Inventories, Total	168,783	170,805	155,493	156,276	156,484	157,255	158,425	157,211	154,651	158,624	163,892	164,406	165,819	(X)	(X)	
50	Durable goods	109,662	111,337	100,944	102,775	103,587	105,611	105,703	105,052	103,382	104,729	107,150	106,314	107,257	(X)	(X)	
501	Motor vehicles & auto. equip.	21,646	21,554	19,429	19,580	19,675	20,659	20,396	19,920	19,751	20,995	21,027	21,784	21,948	(X)	(X)	
502	Furniture & home furnishings	4,154	4,121	3,556	3,629	3,745	3,972	3,975	4,093	4,034	4,165	4,062	4,027	4,011	(X)	(X)	
503	Lumber & other construction mat. . .	6,903	7,169	5,123	5,464	5,687	5,864	5,974	6,043	5,740	5,937	5,899	5,779	6,091	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,069	4,130	4,057	4,154	4,068	4,080	4,164	4,526	4,436	4,431	4,378	4,132	3,973	(X)	(X)	
505	Metals & minerals, ex. petroleum ..	7,848	8,219	7,088	7,168	7,179	7,274	7,461	7,107	6,771	6,858	7,149	7,056	7,583	(X)	(X)	
506	Electrical goods	13,171	13,324	13,465	13,567	13,276	13,551	13,494	13,451	13,442	13,086	13,408	13,343	13,374	(X)	(X)	
507	Hardware, plumbing & heating equipment	6,862	6,987	6,694	6,883	6,637	6,649	6,690	6,637	6,491	6,717	6,913	6,597	6,692	(X)	(X)	
508	Machinery, equip. & supplies	37,907	38,892	34,707	35,211	35,586	35,019	35,354	35,206	34,892	34,809	36,524	35,624	36,064	(X)	(X)	
509	Miscellaneous durable goods	7,102	6,941	6,845	7,119	7,724	8,543	8,195	8,069	7,825	7,731	7,790	7,972	7,521	(X)	(X)	
51	Nondurable goods	59,121	59,468	54,549	53,501	52,897	51,644	52,722	52,159	51,269	53,895	56,742	58,092	58,562	(X)	(X)	
511	Paper & paper products	4,016	4,084	3,585	3,599	3,593	3,553	3,565	3,573	3,495	3,540	3,771	3,750	3,850	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,238	4,482	4,321	4,492	4,229	4,240	4,419	4,390	4,602	4,947	4,942	5,076	(X)	(X)	
513	Apparel, piece goods & notions	8,001	7,551	7,306	7,190	7,087	7,576	8,038	7,909	7,892	8,023	7,564	7,662	7,989	(X)	(X)	
514	Groceries & related products	12,781	12,830	12,126	11,679	11,774	11,956	12,129	12,538	12,038	12,720	13,130	13,409	13,185	(X)	(X)	
515	Farm-product raw materials	8,378	8,965	7,457	6,743	6,640	5,765	5,803	5,416	5,230	5,982	7,668	8,172	8,136	(X)	(X)	
516	Chemicals & allied products	2,711	2,752	2,304	2,256	2,343	2,435	2,408	2,353	2,446	2,345	2,389	2,454	2,508	(X)	(X)	
517	Petroleum & petroleum products ..	3,869	3,714	3,615	3,656	3,414	3,435	3,534	3,818	3,513	3,746	3,776	3,762	3,751	(X)	(X)	
518	Beer, wine, & distilled beverages ..	3,869	4,046	4,421	4,517	4,402	4,333	4,391	4,207	4,188	4,373	4,545	4,431	3,884	(X)	(X)	
519	Misc. nondurable goods	10,282	10,268	9,253	9,540	9,152	8,362	8,614	7,926	8,077	8,564	8,952	9,510	10,183	(X)	(X)	
	Stock/sales ratios, Total	1.42	1.37	1.38	1.22	1.23	1.24	1.22	1.23	1.22	1.20	1.19	1.30	1.25	(X)	(X)	
50	Durable goods	2.00	1.88	1.87	1.65	1.65	1.74	1.63	1.68	1.67	1.61	1.55	1.74	1.71	(X)	(X)	
501	Motor vehicles & auto. equip.	1.92	1.78	1.69	1.47	1.51	1.58	1.53	1.57	1.59	1.72	1.47	1.72	1.62	(X)	(X)	
502	Furniture & home furnishings	2.13	1.85	2.01	1.77	1.94	2.11	2.03	2.01	1.94	1.67	1.65	1.90	1.92	(X)	(X)	
503	Lumber & other construction mat. . .	1.74	1.61	1.35	1.13	1.11	1.13	.99	.99	.99	.99	.99	1.16	1.33	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.75	2.50	2.34	2.37	2.39	2.82	2.56	2.64	2.41	2.43	2.18	2.23	2.33	(X)	(X)	
505	Metals & minerals, ex. petroleum ..	1.48	1.48	1.58	1.32	1.48	1.53	1.45	1.43	1.31	1.25	1.34	1.47	1.43	(X)	(X)	
506	Electrical goods	1.92	1.76	1.81	1.67	1.72	1.79	1.66	1.64	1.62	1.54	1.51	1.65	1.69	(X)	(X)	
507	Hardware, plumbing & heating equipment	1.87	1.91	2.02	1.80	1.70	1.77	1.55	1.60	1.61	1.54	1.53	1.64	1.65	(X)	(X)	
508	Machinery, equip. & supplies	2.58	2.49	2.43	2.11	2.14	2.19	2.10	2.17	2.20	2.02	2.13	2.36	2.20	(X)	(X)	
509	Miscellaneous durable goods	1.24	1.11	1.22	1.14	1.00	1.23	1.10	1.23	1.24	1.09	.93	1.07	1.05	(X)	(X)	
51	Nondurable goods .....	.93	.90	.93	.81	.81	.78	.81	.80	.79	.81	.83	.88	.84	(X)	(X)
511	Paper & paper products	1.02	.98	1.10	1.01	1.01	1.07	.95	.97	.92	.89	.89	.93	.90	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.85	1.74	1.57	1.63	1.58	1.51	1.61	1.67	1.59	1.76	1.85	1.74	(X)	(X)	
513	Apparel, piece goods & notions	2.32	1.81	1.81	1.77	1.77	2.46	2.06	1.98	1.79	1.91	1.71	2.04	2.56	(X)	(X)	
514	Groceries & related products .....	.67	.69	.68	.62	.60	.59	.61	.61	.62	.66	.67	.67	.63	(X)	(X)
515	Farm-product raw materials .....	.84	.94	.98	.78	.81	.68	.70	.67	.63	.68	.76	.91	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.12	1.41	1.17	1.18	1.28	1.16	1.20	1.29	1.16	1.10	1.26	1.22	(X)	(X)	
517	Petroleum & petroleum products ..	.32	.29	.21	.28	.28	.29	.30	.31	.29	.28	.29	.30	.28	(X)	(X)	
518	Beer, wine, & distilled beverages ..	1.46	1.38	1.56	1.34	1.23	1.16	1.15	1.12	1.18	1.23	1.25	1.28	.91	(X)	(X)	
519	Misc. nondurable goods	1.34	1.20	1.23	1.02	.92	.77	.94	.97	.94	.97	1.03	1.14	1.08	(X)	(X)	

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.
 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 ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Feb. 1988 from Jan. 1988	Feb. 1988 from Feb. 1987	2 months 1988 from 2 months 1987	Feb. 1988 from Jan. 1988	Feb. 1988 from Feb. 1987	Feb. 1988 from Jan. 1988	Feb. 1988 from Feb. 1987	Feb. 1988 from Jan. 1988	Feb. 1988 from Feb. 1987
	Total	+5.3	+10.8	+8.5	+1.2	+9.8	+1.2	+6.1	+9.9	+9.7
50	Durable goods	+7.6	+9.6	+7.3	+1.5	+10.3	+1.6	+5.1	+8	+10.3
501	Motor vehicles & auto. equip.	+7.2	+5.1	+3.4	-.4	+10.9	+4.6	+1.0	-.4	+11.2
502	Furniture & home furnishings	+14.4	+25.7	+16.8	-.8	+15.9	+4.8	+20.1	+5	+16.1
503	Lumber & other construction mat.	+12.4	+17.7	+10.3	+3.9	+39.9	+4.7	+12.1	-1.2	+39.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+11.8	-4.4	-6.1	+1.5	+1.8	-.3	-9.5	+4	+1.7
505	Metals & minerals, ex. petroleum	+4.8	+24.2	+23.2	+4.7	+16.3	-.3	+18.8	+5.7	+15.9
506	Electrical goods	+10.5	+1.8	-1.0	+1.2	-1.0	+2.2	-2.5	+5	-1.0
507	Hardware, plumbing & heating equipment	-.2	+10.4	+12.0	+1.8	+4.4	-4.8	+5.7	-.6	+4.3
508	Machinery, equip. & supplies	+6.1	+9.2	+7.6	+2.6	+12.1	-.1	+5.4	+2.2	+12.1
509	Miscellaneous durable goods	+9.6	+12.1	+9.1	-2.3	+1.4	+1.9	+6.9	-3.1	+1.9
51	Nondurable goods	+3.4	+11.9	+9.7	+6	+9.0	+9	+7.1	+1.0	+8.7
511	Paper & paper products	+5.5	+27.3	+23.8	+1.7	+13.9	+9	+22.5	+1.4	+13.8
512	Drugs, drug proprietaries and druggists' sundries	+3.9	+9.8	+5.6	+5	+16.9	+4.0	+5.6	+1	+16.8
513	Apparel, piece goods & notions	+20.9	+3.6	+7.7	-5.6	+3.4	-2.7	-.7	-3.7	+3.7
514	Groceries & related products	-1.9	+5.0	+2.9	+4	+5.8	-.6	+1.3	-1.3	+5.9
515	Farm-product raw materials	-5.0	+25.6	+24.5	+7.0	+20.2	-3.7	+19.3	+12.8	+20.0
516	Chemicals & allied products	+14.8	+50.4	+33.6	+1.5	+19.4	+10.3	+41.6	+2	+19.2
517	Petroleum & petroleum products	+3.5	+7.8	+3.6	-4.0	+2.7	+6.2	+2.8	+8.5	+2.4
518	Beer, wine, & distilled beverages	+10.4	+3.4	+4	+4.6	-8.5	+8	-1	+1.0	-8.8
519	Misc. nondurable goods	+12.1	+14.6	+14.7	+1	+11.2	+1.0	+8.6	-2.4	+11.4

¹Adjusted 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*¹ 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.

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

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 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.2-1.7	1.5	1.2-1.8	1.4	0.3-0.9	0.6	1.0-1.5	1.4	1.6	1.2	1.1
50	Durable goods	1.6-1.9	1.9	1.4-1.8	1.7	0.6-0.9	0.7	1.1-2.1	1.4	1.8	1.4	1.2
501	Motor vehicles & auto. equip.	3.2-6.2	3.6	3.1-5.7	3.4	1.2-3.3	1.6	2.4-4.0	3.3	5.9	3.5	3.8
502	Furniture & home furnishings	6.9-8.7	7.5	5.1-8.1	6.9	2.6-7.1	4.2	5.1-12.0	6.4	7.8	6.0	5.5
503	Lumber & other construction mat.	4.5-8.8	6.2	5.0-8.5	6.5	1.7-3.3	2.0	3.1-8.8	4.4	4.6	4.0	3.0
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-9.4	7.9	5.5-8.8	6.5	2.3-7.2	3.6	5.5-20.4	9.2	6.5	8.5	5.9
505	Metals & minerals, ex. petroleum	4.2-4.8	4.4	4.0-4.7	4.3	1.4-2.1	1.8	3.9-4.4	4.1	4.5	3.0	3.5
506	Electrical goods	2.1-3.4	3.0	1.9-3.0	2.8	0.9-2.2	1.5	2.8-3.7	3.2	2.9	3.4	3.2
507	Hardware, plumbing & heating equipment ..	7.2-8.9	7.8	6.8-8.1	7.8	1.7-3.8	2.9	5.0-7.4	6.0	7.5	4.6	6.0
508	Machinery, equip. & supplies	2.3-3.7	3.0	2.0-3.1	2.5	1.8-2.1	2.0	2.2-4.2	2.9	3.0	1.8	2.5
509	Miscellaneous durable goods	3.2-4.1	3.6	3.1-4.0	3.4	1.9-2.7	2.2	3.2-5.3	4.3	3.4	3.0	4.0
51	Nondurable goods	2.1-3.5	3.2	2.2-3.4	2.8	0.5-1.5	0.8	2.0-3.1	2.6	3.2	1.8	2.3
511	Paper & paper products	4.9-5.8	5.4	5.0-5.9	5.3	1.1-2.1	1.6	3.1-6.5	5.4	4.9	3.2	3.4
512	Drugs, drug proprietaries and druggists' sundries	5.0-5.7	5.3	4.9-6.2	5.1	0.6-2.4	1.8	3.4-7.7	5.2	5.1	5.5	5.2
513	Apparel, piece goods & notions	7.4-10.6	9.1	6.7-10.6	7.9	1.9-6.0	2.7	6.0-10.2	8.0	9.0	4.1	6.9
514	Groceries & related products	4.0-6.8	6.4	4.2-7.0	5.4	0.7-4.1	0.9	3.7-6.9	5.8	6.7	3.5	4.3
515	Farm-product raw materials	5.1-7.1	6.1	5.0-6.3	5.5	1.8-4.4	2.9	5.9-6.9	6.1	6.3	5.3	6.2
516	Chemicals & allied products	6.0-9.9	8.0	6.0-8.5	7.1	1.3-3.9	2.6	4.7-8.2	5.8	6.0	5.2	4.2
517	Petroleum & petroleum products	4.0-4.9	4.7	4.1-5.0	4.7	0.5-1.4	1.1	3.0-5.4	3.1	4.9	3.4	3.0
518	Beer, wine, & distilled beverages	2.8-3.9	3.4	2.6-3.8	3.1	1.4-2.5	1.6	2.4-8.5	3.0	3.8	2.8	3.0
519	Misc. nondurable goods	4.2-5.5	4.7	4.2-5.5	4.6	1.4-2.0	1.7	4.4-8.7	5.3	4.3	4.3	4.8
	Inventories, Total	1.1-1.3	1.2	1.1-1.3	1.2	0.2-0.4	0.3	0.6-2.1	1.0	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.6	1.5-1.7	1.6	0.3-0.5	0.4	1.0-2.4	1.5	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.3-6.2	6.0	5.2-6.2	5.9	0.4-1.4	0.8	2.9-5.8	3.6	(X)	(X)	(X)
502	Furniture & home furnishings	7.8-11.7	8.9	7.6-11.6	9.1	0.8-2.3	1.6	5.1-12.4	7.8	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-6.1	5.5	4.2-5.7	5.2	0.7-2.9	1.4	4.6-12.6	5.8	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	7.1-12.4	7.9	6.9-11.5	8.4	1.1-3.0	1.4	4.4-9.7	5.6	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.6-6.3	5.9	5.5-6.1	5.8	0.5-1.1	0.8	3.5-8.3	4.1	(X)	(X)	(X)
506	Electrical goods	1.9-2.8	2.4	1.9-2.8	2.3	0.4-1.1	0.5	2.2-3.0	2.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	4.1-5.1	4.7	4.1-5.4	4.7	0.7-2.6	1.2	2.6-8.6	3.9	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.2-3.5	3.2	2.4-3.5	2.9	0.6-0.9	0.8	2.8-6.2	3.4	(X)	(X)	(X)
509	Miscellaneous durable goods	7.3-9.0	8.4	7.0-8.8	8.3	0.5-1.3	1.0	6.8-12.8	7.8	(X)	(X)	(X)
51	Nondurable goods	1.4-2.4	1.9	1.5-2.3	1.8	0.5-0.7	0.8	1.6-2.7	1.9	(X)	(X)	(X)
511	Paper & paper products	5.4-6.3	6.1	5.6-6.2	5.9	0.5-1.3	1.0	2.7-6.8	3.0	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.7-7.2	6.2	5.6-6.8	5.8	0.7-1.3	1.2	3.8-7.2	5.1	(X)	(X)	(X)
513	Apparel, piece goods & notions	4.4-6.7	6.0	4.2-6.5	5.9	0.9-1.7	1.0	6.0-14.5	8.7	(X)	(X)	(X)
514	Groceries & related products	4.7-5.4	4.8	4.5-5.4	5.0	0.5-1.2	0.9	2.9-4.8	3.5	(X)	(X)	(X)
515	Farm-product raw materials	6.5-8.1	7.4	6.8-8.0	7.4	0.7-3.9	1.7	6.7-10.3	7.2	(X)	(X)	(X)
516	Chemicals & allied products	7.6-9.2	8.1	7.4-9.1	7.8	1.0-2.1	1.3	5.3-8.6	8.4	(X)	(X)	(X)
517	Petroleum & petroleum products	2.9-4.5	3.6	3.1-4.4	3.6	0.7-1.5	1.1	3.0-5.4	3.3	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.4-5.6	4.9	4.3-5.7	4.7	0.6-1.8	1.0	2.5-9.2	5.1	(X)	(X)	(X)
519	Misc. nondurable goods	6.5-9.0	8.2	7.6-8.4	7.9	0.9-3.1	1.6	4.8-11.0	5.4	(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 September 1987 through February 1988.

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

SIC code	Kind of business	1987											1988		
		Feb. [†]	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. [†]	Feb. [†]	Mar.
	Sales,¹ Total .....	.914	1.037	1.021	.998	1.032	.996	.978	1.011	1.041	.987	1.038	.918	.954	1.067
50	Durable goods .....	.895	1.033	1.033	.991	1.055	1.005	.983	1.031	1.073	.980	1.013	.880	.934	1.064
501	Motor vehicles & auto. equip. ...	.882	1.021	1.038	1.033	1.071	1.026	.959	.947	1.081	.976	1.045	.896	.918	1.065
502	Furniture & home furnishings ...	.897	.996	1.012	.980	1.044	1.015	1.008	1.065	1.134	.992	.973	.859	.938	1.019
503	Lumber & other construction mat. ....	.796	.953	1.034	1.032	1.126	1.114	1.091	1.096	1.108	.980	.884	.779	.836	.982
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.908	1.000	1.002	.894	.954	.988	.989	1.071	1.186	1.122	1.041	.855	.959	1.032
505	Metals & minerals, ex. petroleum	.954	1.094	1.032	.979	1.030	.986	.994	1.058	1.012	.915	.978	.949	.997	1.122
506	Electrical goods .....	.918	1.019	.950	.931	1.014	.994	1.006	1.072	1.112	1.028	1.054	.887	.959	1.037
507	Hardware, plumbing & heating equipment .....	.892	.959	1.032	1.022	1.085	1.038	.997	1.021	1.079	.973	.978	.888	.931	.991
508	Machinery, equip. & supplies ...	.910	1.067	1.051	1.009	1.048	.984	.971	1.029	1.027	.945	1.050	.888	.943	1.100
509	Miscellaneous durable goods ...	.866	1.022	1.156	1.004	1.016	.957	.995	1.011	1.097	1.030	.970	.844	.908	1.079
51	Nondurable goods .....	.930	1.043	1.008	1.021	1.013	.987	.965	.992	1.012	.994	1.059	.952	.973	1.067
511	Paper & paper products .....	.944	1.038	1.014	.960	1.034	.995	1.005	1.005	1.047	.969	1.018	.938	.981	1.078
512	Drugs, drug proprietaries and druggists' sundries .....	.938	1.020	1.032	.961	1.014	.988	.957	1.040	1.038	.976	1.041	.976	.975	1.054
513	Apparel, piece goods & notions	1.027	1.034	.965	.874	1.057	1.108	1.148	1.055	1.115	.936	.762	.863	1.072	1.061
514	Groceries & related products ...	.913	1.002	1.010	1.019	1.017	1.038	.997	1.002	1.004	.977	1.039	.958	.946	1.039
515	Farm-product raw materials	.971	1.083	.977	1.028	.949	.875	.852	.880	1.024	1.111	1.177	1.035	1.022	1.118
516	Chemicals & allied products ...	.937	1.032	1.024	.998	1.072	1.001	.977	1.037	1.064	.954	.921	.956	.995	1.050
517	Petroleum & petroleum products	.984	1.070	.976	.958	.947	.938	.905	1.006	1.012	1.012	1.114	1.059	1.032	1.083
518	Beer, wine, & distilled beverages	.784	.941	.988	1.034	1.101	1.098	1.039	1.019	1.033	.996	1.216	.741	.812	.989
519	Misc. nondurable goods .....	.861	1.078	1.107	1.186	1.061	1.007	.955	.959	.964	.955	1.029	.818	.908	1.093
	Inventories,¹ Total	1.005	1.007	1.005	.991	.993	.991	.986	.996	1.010	1.008	1.003	1.004	1.005	1.007
50	Durable goods .....	.992	1.000	1.004	1.000	1.007	1.006	1.003	1.011	1.003	.998	.992	.986	.991	1.000
501	Motor vehicles & auto. equip. ...	.998	1.005	1.005	.988	1.007	.976	.963	1.020	1.009	1.016	1.016	.996	.996	1.005
502	Furniture & home furnishings ...	1.007	.994	.979	.999	.993	.995	1.014	1.008	.995	.988	1.010	1.018	1.005	.994
503	Lumber & other construction mat. ....	.995	1.016	1.026	1.012	1.039	1.015	1.007	.999	.982	.986	.982	.947	.996	1.015
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.992	1.006	.998	.986	1.002	1.029	1.017	1.019	1.016	.986	.971	.982	.993	1.003
505	Metals & minerals, ex. petroleum	1.009	.996	.991	1.003	1.018	1.011	1.001	.990	.980	.972	1.014	1.021	1.012	.996
506	Electrical goods .....	.974	.981	.996	.994	1.000	1.023	1.020	1.037	1.020	1.005	.983	.968	.974	.982
507	Hardware, plumbing & heating equipment .....	.999	1.027	1.039	1.026	1.008	1.010	1.003	.986	.982	.981	.963	.976	1.000	1.029
508	Machinery, equip. & supplies ...	.995	1.004	1.005	1.004	1.011	1.005	1.005	.994	1.005	.992	.995	.991	.995	1.004
509	Miscellaneous durable goods ...	.968	.967	.994	1.011	1.005	1.027	1.024	1.024	1.015	1.027	.958	.955	.963	.970
51	Nondurable goods	1.032	1.020	1.005	.970	.971	.962	.949	.973	1.018	1.031	1.032	1.038	1.032	1.020
511	Paper & paper products	1.015	1.007	1.006	1.000	1.003	.996	1.010	.973	.984	.998	1.005	1.013	1.016	1.008
512	Drugs, drug proprietaries and druggists' sundries	1.035	1.055	1.021	.975	.966	.965	.961	1.000	1.025	.984	.997	1.032	1.036	1.055
513	Apparel, piece goods & notions	.974	.951	.965	1.016	1.033	1.065	1.057	1.038	.976	.942	.983	.991	.971	.950
514	Groceries & related products ...	1.008	.992	.990	.994	.999	.980	.965	.989	1.038	1.043	1.012	.990	1.007	.992
515	Farm-product raw materials	1.163	1.080	.995	.830	.821	.797	.794	.873	1.076	1.164	1.187	1.228	1.165	1.079
516	Chemicals & allied products ...	1.010	.995	1.036	1.015	1.013	1.012	1.001	.956	.995	1.001	.983	.999	1.012	.995
517	Petroleum & petroleum products	.962	.946	.941	.984	.993	.979	.938	1.011	1.022	1.043	1.103	1.091	.965	.946
518	Beer, wine, & distilled beverages	.973	1.010	1.029	1.007	1.034	1.007	.985	1.006	1.056	1.046	.907	.943	.976	1.011
519	Misc. nondurable goods	1.062	1.111	1.071	.980	.960	.931	.923	.950	.973	.974	1.025	1.034	1.060	1.112

[†]Revised

¹Adjusted 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 1988



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW88-03
Issued May 1988

Sales. March 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$132.7 billion, up 0.8 percent (± 1.0 percent) from the revised February level and up 7.3 percent (± 1.7 percent) from a year ago. The February preliminary estimate was revised upward by \$0.3 billion or about 0.2 percent. March sales of durable goods increased 1.2 percent (± 1.3 percent) from February, and were 6.8 percent (± 0.2 percent) above a year ago. Monthly gains in the durable goods group were as follows: sales of hardware, plumbing, and heating equipment were up 8.2 percent, electrical goods increased 6.5 percent, and sales of metals and minerals, except petroleum increased 6.3 percent to \$5,821 million. March sales of nondurable goods were up 0.5 percent (± 1.8 percent) from February and were up 7.8 percent (± 3.4 percent) above March 1987.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price

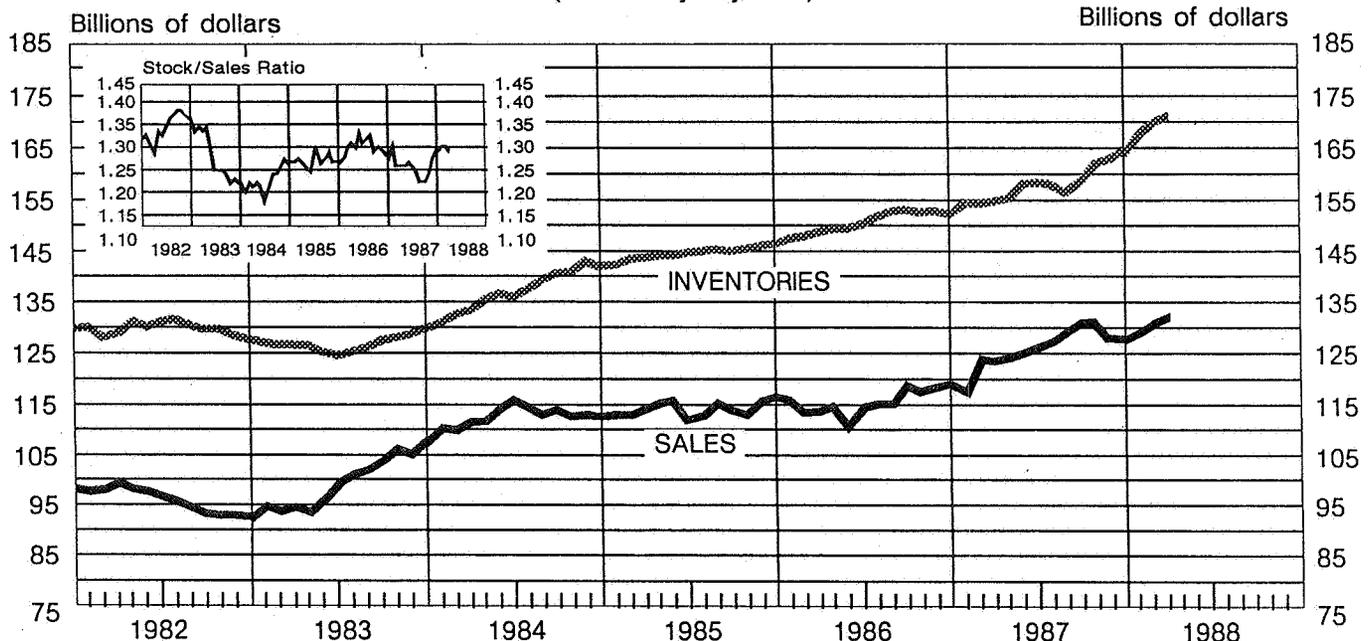
changes, were \$171.7 billion at the end of March, up 0.6 percent (± 0.4 percent) from the revised February level and up 10.6 percent (± 1.8 percent) from a year ago. The February preliminary estimate was revised upward by \$0.7 billion or about 0.4 percent. Inventories of durable goods wholesalers increased 0.7 percent (± 0.6 percent) from the February level and were up 10.4 percent (± 0.3 percent) from a year ago. Inventories of nondurable goods wholesalers were up 0.4 percent (± 0.9 percent) from the February level and were 11.1 percent (± 3.9 percent) above March 1987.

Stock/Sales Ratio. The March stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.29, but up from the year ago ratio of 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: 1982-1988

(Seasonally adjusted)



Monthly Wholesale Trade for April is scheduled to be released June 8, 1988 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988			1987									
		Jan.	Feb.	Mar. ^P	Mar. ^F	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	129,720	131,622	132,707	123,702	124,550	125,511	126,599	127,705	129,662	131,437	131,743	128,501	128,332
50	Durable goods	62,486	63,795	64,534	60,436	60,303	60,686	61,830	62,155	62,387	63,584	64,265	62,325	61,983
501	Motor vehicles & auto. equip.	12,595	13,550	13,230	13,122	12,583	12,660	12,477	12,362	12,928	12,904	13,223	12,982	12,927
502	Furniture & home furnishings	2,267	2,319	2,247	2,081	1,912	1,922	1,873	2,008	2,067	2,348	2,177	2,140	2,148
503	Lumber & other construction mat.	5,098	5,366	5,492	5,027	4,960	5,050	5,379	5,489	5,312	5,494	5,396	5,100	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,689	1,767	1,698	1,618	1,706	1,733	1,857	1,708	1,696	1,649	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,821	4,886	4,709	4,858	4,990	5,056	5,200	5,181	5,280	5,231	5,435
506	Electrical goods	7,736	7,897	8,410	7,941	8,138	8,154	8,018	8,236	8,262	7,951	7,965	7,865	7,511
507	Hardware, plumbing & heating equipment	4,125	3,803	4,115	3,873	3,787	3,689	3,991	3,989	4,038	4,267	4,184	4,145	4,143
508	Machinery, equip. & supplies	16,566	16,701	16,758	15,610	15,859	15,815	16,048	16,451	16,363	16,712	16,676	15,982	15,582
509	Miscellaneous durable goods	6,780	6,967	6,772	6,129	6,677	6,942	7,348	6,831	6,360	7,021	7,668	7,231	7,415
51	Nondurable goods	67,234	67,827	68,173	63,266	64,247	64,825	64,769	65,550	67,275	67,853	67,478	66,176	66,349
511	Paper & paper products	4,207	4,159	4,211	3,436	3,499	3,457	3,619	3,715	3,770	3,954	4,064	4,151	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,882	2,688	2,678	2,792	2,776	2,782	2,748	2,781	2,703	2,741	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,912	3,831	3,384	3,522	3,687	3,603	3,834	3,975	3,956	4,017	4,102
514	Groceries & related products	19,839	19,710	19,617	19,047	19,389	19,758	19,479	19,678	19,526	19,307	19,639	20,461	20,194
515	Farm-product raw materials	9,676	9,553	9,690	8,000	8,372	8,248	8,790	9,197	9,770	9,974	9,817	8,109	8,326
516	Chemicals & allied products	2,233	2,361	2,460	1,862	1,937	1,901	1,933	1,951	1,944	1,955	2,041	2,045	2,225
517	Petroleum & petroleum products	11,508	12,225	12,535	12,176	12,370	12,461	12,348	13,107	13,276	13,200	12,708	12,421	11,843
518	Beer, wine, & distilled beverages	3,588	3,643	3,608	3,542	3,633	3,600	3,475	3,432	3,426	3,498	3,514	3,481	3,498
519	Misc. nondurable goods	9,381	9,402	9,258	8,684	8,985	9,106	8,662	8,085	8,981	9,209	9,036	8,750	9,160
	Inventories, Total	168,388	170,632	171,656	155,164	155,767	158,560	158,835	158,611	157,072	159,135	162,517	163,353	165,097
50	Durable goods	111,259	112,661	113,436	102,775	103,172	105,513	104,746	104,514	103,324	103,933	106,734	106,503	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,461	19,521	19,577	20,910	20,254	20,410	20,510	20,583	20,839	21,441	21,602
502	Furniture & home furnishings	4,081	4,128	4,174	3,640	3,825	3,976	4,003	4,114	3,978	4,132	4,082	4,076	3,971
503	Lumber & other construction mat.	7,289	7,003	7,045	5,399	5,543	5,794	5,750	5,954	5,700	5,943	6,007	5,861	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,117	4,142	4,076	4,138	4,156	4,398	4,362	4,348	4,309	4,191	4,092
505	Metals & minerals, ex. petroleum	7,687	7,822	7,915	7,175	7,244	7,252	7,329	7,030	6,764	6,927	7,295	7,259	7,478
506	Electrical goods	13,606	13,709	13,765	13,788	13,329	13,633	13,494	13,149	13,178	12,619	13,145	13,277	13,605
507	Hardware, plumbing & heating equipment	7,031	6,854	6,791	6,722	6,388	6,481	6,637	6,571	6,472	6,812	7,040	6,725	6,949
508	Machinery, equip. & supplies	38,251	39,040	39,399	35,071	35,419	34,879	34,969	35,031	34,718	35,019	36,342	35,911	36,245
509	Miscellaneous durable goods	7,437	7,430	7,769	7,317	7,771	8,450	8,154	7,857	7,642	7,550	7,675	7,762	7,851
51	Nondurable goods	57,129	57,971	58,220	52,389	52,595	53,047	54,089	54,097	53,748	55,202	55,783	56,850	57,101
511	Paper & paper products	3,964	3,916	4,022	3,549	3,572	3,553	3,554	3,587	3,460	3,638	3,832	3,758	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,853	4,143	4,400	4,337	4,389	4,579	4,568	4,602	4,826	5,022	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,154	7,545	7,344	7,457	7,781	7,426	7,466	7,729	7,750	8,134	8,127
514	Groceries & related products	12,910	12,605	12,620	11,809	11,893	12,028	12,141	12,794	12,475	12,861	12,649	12,856	13,029
515	Farm-product raw materials	6,822	7,717	7,674	6,226	6,673	6,946	7,068	6,795	6,587	6,852	7,126	7,021	6,854
516	Chemicals & allied products	2,714	2,780	2,884	2,261	2,262	2,399	2,377	2,325	2,444	2,453	2,401	2,452	2,551
517	Petroleum & petroleum products	3,546	3,984	3,848	3,800	3,628	3,491	3,559	3,900	3,745	3,705	3,695	3,607	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,037	4,477	4,278	4,303	4,247	4,178	4,252	4,347	4,304	4,236	4,282
519	Misc. nondurable goods	9,944	9,862	10,148	8,579	8,545	8,533	8,973	8,513	8,751	9,015	9,200	9,764	9,935
	Stock/sales ratios, Total	1.30	1.30	1.29	1.25	1.25	1.26	1.25	1.24	1.21	1.21	1.23	1.27	1.29
50	Durable goods	1.78	1.77	1.76	1.70	1.71	1.74	1.69	1.68	1.66	1.63	1.66	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.67	1.70	1.49	1.56	1.65	1.62	1.65	1.59	1.60	1.58	1.65	1.67
502	Furniture & home furnishings	1.80	1.78	1.86	1.75	2.00	2.07	2.14	2.05	1.92	1.78	1.88	1.90	1.85
503	Lumber & other construction mat.	1.43	1.31	1.28	1.07	1.12	1.15	1.07	1.08	1.07	1.08	1.11	1.15	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.44	2.34	2.40	2.56	2.44	2.54	2.35	2.55	2.54	2.54	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.36	1.47	1.54	1.49	1.47	1.39	1.30	1.34	1.38	1.39	1.38
506	Electrical goods	1.76	1.74	1.64	1.74	1.64	1.67	1.68	1.60	1.60	1.59	1.65	1.69	1.81
507	Hardware, plumbing & heating equipment	1.70	1.80	1.65	1.74	1.69	1.77	1.66	1.65	1.60	1.60	1.68	1.62	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.35	2.25	2.23	2.21	2.18	2.13	2.12	2.10	2.18	2.25	2.33
509	Miscellaneous durable goods	1.10	1.07	1.15	1.19	1.16	1.22	1.11	1.15	1.20	1.08	1.00	1.07	1.06
51	Nondurable goods .....	.85	.85	.85	.83	.82	.82	.84	.83	.80	.81	.83	.86	.86
511	Paper & paper products .....	.94	.94	.96	1.03	1.02	1.03	.98	.97	.92	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.68	1.54	1.64	1.55	1.58	1.65	1.66	1.65	1.79	1.83	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.08	1.97	2.17	2.12	2.11	2.06	1.95	1.94	1.96	2.02	1.98
514	Groceries & related products .....	.65	.64	.64	.62	.61	.61	.62	.65	.64	.67	.64	.63	.65
515	Farm-product raw materials .....	.71	.81	.79	.78	.80	.84	.80	.74	.67	.69	.73	.87	.82
516	Chemicals & allied products	1.22	1.18	1.16	1.21	1.17	1.25	1.23	1.19	1.26	1.25	1.18	1.20	1.15
517	Petroleum & petroleum products .....	.31	.32	.31	.31	.29	.28	.29	.30	.28	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.12	1.26	1.18	1.20	1.22	1.22	1.24	1.24	1.22	1.22	1.22
519	Misc. nondurable goods	1.06	1.05	1.10	.99	.95	.94	1.04	1.05	.97	.98	1.02	1.12	1.08

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988				1987										Total 3 mos.	
		Jan.	Feb.	Mar. ^P	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1988	1987	
	Sales, Total	118,752	124,987	141,951	128,109	127,822	126,672	130,275	127,653	126,500	132,110	137,621	126,896	132,747	385,690	352,731	
50	Durable goods	54,944	59,327	68,838	62,297	62,691	60,643	64,887	62,586	61,837	65,226	69,005	61,096	62,725	183,109	168,581	
501	Motor vehicles & auto. equip.	11,285	12,493	14,090	13,358	13,040	13,078	13,363	12,683	12,398	12,220	14,294	12,670	13,509	37,868	35,967	
502	Furniture & home furnishings	1,947	2,178	2,258	2,050	1,935	1,884	1,955	2,038	2,084	2,469	2,469	2,123	2,090	6,383	5,623	
503	Lumber & other construction mat. . .	3,971	4,448	5,459	4,826	5,129	5,212	6,057	6,115	5,796	6,021	5,979	4,998	4,583	13,878	12,471	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,479	1,643	1,719	1,751	1,701	1,445	1,628	1,712	1,837	1,827	2,011	1,850	1,705	4,841	5,087	
505	Metals & minerals, ex. petroleum ..	5,304	5,384	6,677	5,428	4,880	4,756	5,140	4,985	5,481	5,343	4,786	5,315	5,315	17,365	14,245	
506	Electrical goods	6,862	7,542	8,755	8,100	7,731	7,591	8,130	8,187	8,312	8,524	8,857	8,065	7,917	23,159	22,697	
507	Hardware, plumbing & heating equipment	3,663	3,548	4,201	3,827	3,908	3,750	4,330	4,141	4,026	4,357	4,514	4,033	4,052	11,412	10,361	
508	Machinery, equip. & supplies	14,711	15,716	18,467	16,687	16,668	15,957	16,818	16,188	15,888	17,197	17,126	15,103	16,361	48,894	44,868	
509	Miscellaneous durable goods	5,722	6,375	7,212	6,270	7,719	6,970	7,466	6,537	6,328	7,098	8,412	7,448	7,193	19,309	17,262	
51	Nondurable goods	63,808	65,660	73,113	65,812	64,931	66,029	65,388	65,067	64,663	66,884	68,616	65,800	70,022	202,581	184,150	
511	Paper & paper products	3,946	4,047	4,548	3,573	3,548	3,319	3,742	3,696	3,789	3,974	4,255	4,022	4,270	12,541	10,128	
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,046	2,747	2,764	2,693	2,815	2,749	2,630	2,892	2,806	2,675	2,922	8,593	8,019	
513	Apparel, piece goods & notions	3,456	4,174	4,248	4,072	3,268	3,078	3,897	3,992	4,402	4,184	4,411	3,760	3,126	11,878	11,157	
514	Groceries & related products	19,008	18,705	20,205	18,990	19,583	20,113	19,810	20,426	19,467	19,346	19,718	19,990	20,982	57,916	55,598	
515	Farm-product raw materials	10,015	9,696	10,901	8,648	8,179	8,479	8,342	8,047	8,324	8,777	10,053	9,009	9,800	30,612	24,333	
516	Chemicals & allied products	2,135	2,333	2,620	1,935	1,983	1,897	2,072	1,953	1,869	2,027	2,172	1,951	2,049	7,088	5,367	
517	Petroleum & petroleum products ..	12,187	12,408	13,826	13,126	12,073	11,938	11,694	12,294	12,015	13,279	12,860	12,570	13,193	38,421	37,067	
518	Beer, wine, & distilled beverages ..	2,659	2,962	3,619	3,368	3,589	3,722	3,826	3,768	3,560	3,564	3,630	3,467	4,254	9,240	8,938	
519	Misc. nondurable goods	7,674	8,518	10,100	9,353	9,946	10,800	9,190	8,142	8,577	8,831	8,711	8,356	9,426	26,292	23,545	
	Inventories, Total	168,783	171,742	173,103	156,276	156,484	157,255	158,425	157,211	154,651	158,624	163,892	164,406	165,819	(X)	(X)	
50	Durable goods	109,662	111,920	113,469	102,775	103,587	105,611	105,703	105,052	103,382	104,729	107,150	106,314	107,257	(X)	(X)	
501	Motor vehicles & auto. equip.	21,646	22,681	22,528	19,580	19,675	20,659	20,396	19,920	19,751	20,995	21,027	21,784	21,948	(X)	(X)	
502	Furniture & home furnishings	4,154	4,140	4,157	3,629	3,745	3,972	3,975	4,093	4,034	4,165	4,062	4,027	4,011	(X)	(X)	
503	Lumber & other construction mat. . .	6,903	6,891	7,122	5,464	5,687	5,864	5,974	6,043	5,740	5,937	5,899	5,779	6,091	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,069	4,027	4,121	4,154	4,068	4,080	4,164	4,526	4,436	4,431	4,378	4,132	3,973	(X)	(X)	
505	Metals & minerals, ex. petroleum ..	7,848	7,892	7,907	7,168	7,179	7,274	7,461	7,107	6,771	6,858	7,149	7,056	7,583	(X)	(X)	
506	Electrical goods	13,171	13,380	13,572	13,567	13,276	13,551	13,494	13,451	13,442	13,086	13,408	13,343	13,374	(X)	(X)	
507	Hardware, plumbing & heating equipment	6,862	6,840	6,961	6,883	6,637	6,649	6,690	6,637	6,711	6,913	6,597	6,692	6,692	(X)	(X)	
508	Machinery, equip. & supplies	37,907	38,884	39,557	35,211	35,596	35,019	35,354	35,206	34,892	34,809	36,524	35,624	36,064	(X)	(X)	
509	Miscellaneous durable goods	7,102	7,185	7,544	7,119	7,724	8,543	8,195	8,069	7,825	7,731	7,790	7,972	7,521	(X)	(X)	
51	Nondurable goods	59,121	59,822	59,634	53,501	52,897	51,644	52,722	52,159	51,269	53,895	56,742	58,092	58,562	(X)	(X)	
511	Paper & paper products	4,016	3,955	4,086	3,599	3,593	3,553	3,566	3,573	3,495	3,540	3,771	3,750	3,850	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,057	4,321	4,492	4,229	4,240	4,419	4,390	4,602	4,947	4,942	5,076	(X)	(X)	
513	Apparel, piece goods & notions	8,001	7,870	7,787	7,190	7,087	7,576	8,038	7,909	7,892	8,023	7,564	7,662	7,989	(X)	(X)	
514	Groceries & related products	12,781	12,681	12,469	11,679	11,774	11,956	12,129	12,538	12,038	12,720	13,130	13,409	13,185	(X)	(X)	
515	Farm-product raw materials	8,378	8,013	8,303	6,743	6,640	5,765	5,803	5,416	5,230	5,982	7,668	8,172	8,136	(X)	(X)	
516	Chemicals & allied products	2,711	2,813	2,858	2,256	2,343	2,435	2,408	2,353	2,446	2,345	2,389	2,454	2,508	(X)	(X)	
517	Petroleum & petroleum products ..	3,869	3,813	3,733	3,656	3,414	3,435	3,534	3,818	3,513	3,746	3,776	3,762	3,751	(X)	(X)	
518	Beer, wine, & distilled beverages ..	3,869	4,070	4,077	4,517	4,402	4,333	4,391	4,207	4,188	4,373	4,545	4,431	3,884	(X)	(X)	
519	Misc. nondurable goods	10,282	10,493	11,264	9,540	9,152	8,362	8,614	7,926	8,077	8,564	8,952	9,510	10,183	(X)	(X)	
	Stock/sales ratios, Total	1.42	1.37	1.22	1.22	1.23	1.24	1.22	1.23	1.22	1.20	1.19	1.30	1.25	(X)	(X)	
50	Durable goods	2.00	1.89	1.65	1.65	1.65	1.74	1.63	1.68	1.67	1.61	1.55	1.74	1.71	(X)	(X)	
501	Motor vehicles & auto. equip.	1.92	1.82	1.60	1.47	1.51	1.58	1.53	1.57	1.59	1.72	1.47	1.72	1.62	(X)	(X)	
502	Furniture & home furnishings	2.13	1.90	1.84	1.77	1.94	2.11	2.03	2.01	1.94	1.67	1.65	1.90	1.92	(X)	(X)	
503	Lumber & other construction mat. . .	1.74	1.55	1.30	1.13	1.11	1.13	.99	.99	.99	.99	.99	1.16	1.33	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.75	2.45	2.40	2.37	2.39	2.82	2.56	2.64	2.41	2.43	2.18	2.23	2.33	(X)	(X)	
505	Metals & minerals, ex. petroleum ..	1.48	1.47	1.18	1.32	1.48	1.53	1.45	1.43	1.31	1.25	1.34	1.47	1.43	(X)	(X)	
506	Electrical goods	1.92	1.77	1.55	1.67	1.72	1.79	1.66	1.64	1.62	1.54	1.51	1.65	1.69	(X)	(X)	
507	Hardware, plumbing & heating equipment	1.87	1.93	1.66	1.80	1.70	1.77	1.55	1.60	1.61	1.54	1.53	1.64	1.65	(X)	(X)	
508	Machinery, equip. & supplies	2.58	2.47	2.14	2.11	2.14	2.19	2.10	2.17	2.20	2.02	2.13	2.36	2.20	(X)	(X)	
509	Miscellaneous durable goods	1.24	1.13	1.05	1.14	1.00	1.23	1.10	1.23	1.24	1.09	.93	1.07	1.05	(X)	(X)	
51	Nondurable goods .....	.93	.91	.82	.81	.81	.78	.81	.80	.79	.81	.83	.88	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.01	1.01	1.07	.95	.97	.92	.89	.89	.93	.90	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.66	1.57	1.63	1.58	1.51	1.61	1.67	1.59	1.76	1.85	1.74	(X)	(X)	
513	Apparel, piece goods & notions	2.32	1.89	1.83	1.77	2.17	2.46	2.06	1.98	1.79	1.91	1.71	2.04	2.56	(X)	(X)	
514	Groceries & related products .....	.67	.68	.62	.62	.60	.59	.61	.61	.62	.66	.67	.67	.63	(X)	(X)
515	Farm-product raw materials .....	.84	.93	.76	.81	.81	.68	.70	.67	.63	.68	.76	.91	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.09	1.17	1.18	1.28	1.16	1.20	1.29	1.16	1.10	1.26	1.22	(X)	(X)	
517	Petroleum & petroleum products ..	.32	.31	.27	.28	.28	.29	.30	.31	.29	.28	.29	.30	.28	(X)	(X)	
518	Beer, wine, & distilled beverages ..	1.46	1.37	1.13	1.34	1.23	1.16	1.15	1.12	1.18	1.23	1.25	1.28	.91	(X)	(X)	
519	Misc. nondurable goods	1.34	1.23	1.12	1.02	.92	.77	.94	.97	.94	.97	1.03	1.14	1.08	(X)	(X)	

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.
 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 ¹				
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)		
		Mar. 1988 from Feb. 1988	Mar. 1988 from Mar. 1987	3 months 1988 from 3 months 1987	Mar. 1988 from Feb. 1988	Mar. 1988 from Mar. 1987	Mar. 1988 from Feb. 1988	Mar. 1988 from Mar. 1987	Mar. 1988 from Feb. 1988	Mar. 1988 from Mar. 1987	
	Total	+13.6	+10.8	+9.3	+8	+10.8	+8	+7.3	+6	+10.6	
50	Durable goods	+16.0	+10.5	+8.6	+1.4	+10.4	+1.2	+6.8	+7	+10.4	
501	Motor vehicles & auto. equip.	+12.8	+5.5	+5.3	-7	+15.1	-2.4	+8	-6	+15.1	
502	Furniture & home furnishings	+3.7	+10.1	+13.5	+4	+14.5	-3.1	+8.0	+1.1	+14.7	
503	Lumber & other construction mat.	+22.7	+13.1	+11.3	+3.4	+30.3	+2.3	+9.3	+6	+30.5	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+4.6	-1.8	-4.8	+2.3	-8	-1.5	-4.4	+8	-6	
505	Metals & minerals, ex. petroleum	+24.0	+23.0	+21.9	+2	+10.3	+6.3	+19.1	+1.2	+10.3	
506	Electrical goods	+16.1	+8.1	+2.0	+1.4	.0	+6.5	+5.9	+4	-2	
507	Hardware, plumbing & heating equipment	+18.4	+9.8	+10.1	+1.8	+1.1	+8.2	+6.2	-9	+1.0	
508	Machinery, equip. & supplies	+17.5	+10.7	+9.0	+1.7	+12.3	+3	+7.4	+9	+12.3	
509	Miscellaneous durable goods	+13.1	+15.0	+11.9	+5.0	+6.0	-2.8	+10.5	+4.6	+6.2	
51	Nondurable goods	+11.4	+11.1	+10.0	-3	+11.5	+5	+7.8	+4	+11.1	
511	Paper & paper products	+12.4	+27.3	+23.8	+3.3	+13.5	+1.3	+22.6	+2.7	+13.3	
512	Drugs, drug proprietaries and druggists' sundries	+8.1	+10.9	+7.2	-1.1	+17.0	-4	+7.2	-1.5	+17.1	
513	Apparel, piece goods & notions	+1.8	+4.3	+6.5	-1.1	+8.3	+9	+2.1	+1.3	+8.1	
514	Groceries & related products	+8.0	+6.4	+4.2	-1.7	+6.8	-5	+3.0	+1	+6.9	
515	Farm-product raw materials	+12.4	+26.1	+25.8	-7.9	+23.1	+1.4	+21.1	-6	+23.3	
516	Chemicals & allied products	+12.3	+35.4	+32.1	+1.6	+26.7	+4.2	+32.1	+3.0	+26.7	
517	Petroleum & petroleum products	+11.4	+5.3	+3.7	-2.1	+2.1	+2.5	+2.9	-2.9	+1.3	
518	Beer, wine, & distilled beverages	+22.2	+7.5	+3.4	+2	-9.7	-1.0	+1.9	-2.8	-9.8	
519	Misc. nondurable goods	+18.6	+8.0	+11.7	+7.3	+18.1	-1.5	+6.6	+2.9	+18.3	

¹Adjusted 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*¹ 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.

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

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 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.2-1.7	1.5	1.2-1.8	1.4	0.3-0.9	0.6	1.0-1.5	1.4	1.6	1.2	1.1
50	Durable goods	1.6-1.9	1.9	1.4-1.8	1.7	0.6-0.9	0.7	1.1-2.1	1.4	1.8	1.4	1.2
501	Motor vehicles & auto. equip.	3.2-6.2	3.6	3.1-5.7	3.4	1.2-3.3	1.6	2.4-4.0	3.3	5.9	3.5	3.8
502	Furniture & home furnishings	6.9-8.7	7.5	5.1-8.1	6.9	2.6-7.1	4.2	5.1-12.0	6.4	7.8	6.0	5.5
503	Lumber & other construction mat.	4.5-8.8	6.2	5.0-8.5	6.5	1.7-3.3	2.0	3.1-8.8	4.4	4.6	4.0	3.0
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-9.4	7.9	5.5-8.8	6.5	2.3-7.2	3.6	5.5-20.4	9.2	6.5	8.5	5.9
505	Metals & minerals, ex. petroleum	4.2-4.8	4.4	4.0-4.7	4.3	1.4-2.1	1.6	3.9-4.4	4.1	4.5	3.0	3.5
506	Electrical goods	2.1-3.4	3.0	1.9-3.0	2.8	0.9-2.2	1.5	2.8-3.7	3.2	2.9	3.4	3.2
507	Hardware, plumbing & heating equipment	7.2-8.9	7.8	6.8-8.1	7.8	1.7-3.8	2.9	5.0-7.4	6.0	7.5	4.6	6.0
508	Machinery, equip. & supplies	2.3-3.7	3.0	2.0-3.1	2.5	1.8-2.1	2.0	2.2-4.2	2.9	3.0	1.8	2.5
509	Miscellaneous durable goods	3.2-4.1	3.6	3.1-4.0	3.4	1.9-2.7	2.2	3.2-5.3	4.3	3.4	3.0	4.0
51	Nondurable goods	2.1-3.5	3.2	2.2-3.4	2.8	0.5-1.5	0.8	2.0-3.1	2.6	3.2	1.9	2.3
511	Paper & paper products	4.9-5.8	5.4	5.0-5.9	5.3	1.1-2.1	1.6	3.1-6.5	5.4	4.9	3.2	3.4
512	Drugs, drug proprietaries and druggists' sundries	5.0-5.7	5.3	4.9-6.2	5.1	0.6-2.4	1.8	3.4-7.7	5.2	5.1	5.5	5.2
513	Apparel, piece goods & notions	7.4-10.6	9.1	6.7-10.6	7.9	1.9-6.0	2.7	6.0-10.2	8.0	9.0	4.1	6.9
514	Groceries & related products	4.0-6.8	6.4	4.2-7.0	5.4	0.7-4.1	0.9	3.7-6.9	5.8	6.7	3.5	4.3
515	Farm-product raw materials	5.1-7.1	6.1	5.0-6.3	5.5	1.8-4.4	2.9	5.9-6.9	6.1	6.3	5.3	6.2
516	Chemicals & allied products	6.0-9.9	8.0	6.0-8.5	7.1	1.3-3.9	2.6	4.7-8.2	5.8	6.0	5.2	4.2
517	Petroleum & petroleum products	4.0-4.9	4.7	4.1-5.0	4.7	0.5-1.4	1.1	3.0-5.4	3.1	4.9	3.4	3.0
518	Beer, wine, & distilled beverages	2.8-3.9	3.4	2.6-3.8	3.1	1.4-2.5	1.6	2.4-6.5	3.0	3.8	2.8	3.0
519	Misc. nondurable goods	4.2-5.5	4.7	4.2-5.5	4.6	1.4-2.0	1.7	4.4-8.7	5.3	4.3	4.3	4.8
	Inventories, Total	1.1-1.3	1.2	1.1-1.3	1.2	0.2-0.4	0.3	0.6-2.1	1.0	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.6	1.5-1.7	1.6	0.3-0.5	0.4	1.0-2.4	1.5	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.3-6.2	6.0	5.2-6.2	5.9	0.4-1.4	0.8	2.9-5.8	3.6	(X)	(X)	(X)
502	Furniture & home furnishings	7.8-11.7	8.9	7.6-11.6	9.1	0.8-2.3	1.6	5.1-12.4	7.8	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-6.1	5.5	4.2-5.7	5.2	0.7-2.9	1.4	4.6-12.6	5.8	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	7.1-12.4	7.9	6.9-11.5	8.4	1.1-3.0	1.4	4.4-9.7	5.6	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.8-6.3	5.9	5.5-6.1	5.8	0.5-1.1	0.8	3.5-8.3	4.1	(X)	(X)	(X)
506	Electrical goods	1.9-2.8	2.4	1.9-2.8	2.3	0.4-1.1	0.5	2.2-3.0	2.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	4.1-5.1	4.7	4.1-5.4	4.7	0.7-2.6	1.2	2.6-8.6	3.9	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.2-3.5	3.2	2.4-3.5	2.9	0.6-0.9	0.8	2.8-6.2	3.4	(X)	(X)	(X)
509	Miscellaneous durable goods	7.3-9.0	8.4	7.0-8.8	8.3	0.5-1.3	1.0	6.8-12.8	7.8	(X)	(X)	(X)
51	Nondurable goods	1.4-2.4	1.9	1.5-2.3	1.8	0.5-0.7	0.6	1.6-2.7	1.9	(X)	(X)	(X)
511	Paper & paper products	5.4-6.3	6.1	5.6-6.2	5.9	0.5-1.3	1.0	2.7-6.8	3.0	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.7-7.2	6.2	5.6-6.8	5.8	0.7-1.3	1.2	3.8-7.2	5.1	(X)	(X)	(X)
513	Apparel, piece goods & notions	4.4-6.7	6.0	4.2-6.5	5.9	0.9-1.7	1.0	6.0-14.5	8.7	(X)	(X)	(X)
514	Groceries & related products	4.7-5.4	4.8	4.5-5.4	5.0	0.5-1.2	0.9	2.9-4.8	3.5	(X)	(X)	(X)
515	Farm-product raw materials	6.5-8.1	7.4	6.8-8.0	7.4	0.7-3.9	1.7	6.7-10.3	7.2	(X)	(X)	(X)
516	Chemicals & allied products	7.6-9.2	8.1	7.4-9.1	7.8	1.0-2.1	1.3	5.3-8.6	8.4	(X)	(X)	(X)
517	Petroleum & petroleum products	2.9-4.5	3.6	3.1-4.4	3.6	0.7-1.5	1.1	3.0-5.4	3.3	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.4-5.6	4.9	4.3-5.7	4.7	0.6-1.8	1.0	2.5-9.2	5.1	(X)	(X)	(X)
519	Misc. nondurable goods	6.5-9.0	8.2	7.6-8.4	7.9	0.9-3.1	1.6	4.8-11.0	5.4	(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 September 1987 through February 1988.

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	1987										1988			
		Mar. ^r	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. ^r	Mar. ^r	Apr.
	Sales,¹ Total	1.036	1.021	.998	1.032	.996	.978	1.011	1.041	.987	1.038	.918	.952	1.067	.991
50	Durable goods	1.032	1.033	.991	1.055	1.005	.983	1.031	1.073	.980	1.013	.880	.931	1.063	1.003
501	Motor vehicles & auto. equip. ...	1.018	1.038	1.033	1.071	1.026	.959	.947	1.081	.976	1.045	.896	.922	1.065	.999
502	Furniture & home furnishings ...	.985	1.012	.980	1.044	1.015	1.008	1.065	1.134	.992	.973	.859	.939	1.005	.986
503	Lumber & other construction mat. ....	.960	1.034	1.032	1.126	1.114	1.091	1.096	1.108	.980	.884	.779	.829	.994	.986
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.991	1.002	.894	.954	.988	.989	1.071	1.186	1.122	1.041	.855	.958	1.018	.959
505	Metals & minerals, ex. petroleum	1.111	1.032	.979	1.030	.986	.994	1.058	1.012	.915	.978	.949	.983	1.147	.981
506	Electrical goods	1.020	.950	.931	1.014	.994	1.006	1.072	1.112	1.028	1.054	.887	.955	1.041	.928
507	Hardware, plumbing & heating equipment .....	.988	1.032	1.022	1.085	1.038	.997	1.021	1.079	.973	.978	.888	.933	1.021	.993
508	Machinery, equip. & supplies ...	1.069	1.051	1.009	1.048	.984	.971	1.029	1.027	.945	1.050	.888	.941	1.102	1.025
509	Miscellaneous durable goods ...	1.023	1.156	1.004	1.016	.957	.995	1.011	1.097	1.030	.970	.844	.915	1.065	1.078
51	Nondurable goods	1.041	1.008	1.021	1.013	.987	.965	.992	1.012	.994	1.059	.952	.969	1.067	.979
511	Paper & paper products	1.040	1.014	.960	1.034	.995	1.005	1.005	1.047	.969	1.018	.938	.973	1.080	.984
512	Drugs, drug proprietaries and druggists' sundries	1.022	1.032	.961	1.014	.988	.957	1.040	1.038	.976	1.041	.976	.973	1.057	.989
513	Apparel, piece goods & notions	1.063	.965	.874	1.057	1.108	1.148	1.055	1.115	.936	.762	.863	1.076	1.086	.915
514	Groceries & related products ...	.997	1.010	1.019	1.017	1.038	.997	1.002	1.004	.977	1.039	.958	.949	1.030	.978
515	Farm-product raw materials	1.081	.977	1.028	.949	.875	.852	.880	1.024	1.111	1.177	1.035	1.015	1.125	.943
516	Chemicals & allied products ...	1.039	1.024	.998	1.072	1.001	.977	1.037	1.064	.954	.921	.956	.988	1.065	.994
517	Petroleum & petroleum products	1.078	.976	.958	.947	.938	.905	1.006	1.012	1.012	1.114	1.059	1.015	1.103	.962
518	Beer, wine, & distilled beverages	.951	.988	1.034	1.101	1.098	1.039	1.019	1.033	.996	1.216	.741	.813	1.003	.945
519	Misc. nondurable goods	1.077	1.107	1.186	1.061	1.007	.955	.959	.964	.955	1.029	.818	.906	1.091	1.074
	Inventories,¹ Total	1.007	1.005	.991	.993	.991	.986	.996	1.010	1.008	1.003	1.004	1.006	1.007	1.005
50	Durable goods .....	.999	1.004	1.000	1.007	1.006	1.003	1.011	1.003	.998	.992	.986	.994	.998	1.005
501	Motor vehicles & auto. equip. ...	1.003	1.005	.988	1.007	.976	.963	1.020	1.009	1.016	1.016	.996	1.004	1.003	1.005
502	Furniture & home furnishings ...	.997	.979	.999	.993	.995	1.014	1.008	.995	.988	1.010	1.018	1.003	.996	.978
503	Lumber & other construction mat.	1.012	1.026	1.012	1.039	1.015	1.007	.999	.982	.986	.982	.947	.984	1.011	1.028
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.003	.998	.986	1.002	1.029	1.017	1.019	1.016	.986	.971	.982	.986	1.001	.996
505	Metals & minerals, ex. petroleum	.999	.991	1.003	1.018	1.011	1.001	.990	.980	.972	1.014	1.021	1.009	.999	.994
506	Electrical goods .....	.984	.996	.994	1.000	1.023	1.020	1.037	1.020	1.005	.983	.968	.976	.986	.996
507	Hardware, plumbing & heating equipment	1.024	1.039	1.026	1.008	1.010	1.003	.986	.982	.981	.963	.976	.998	1.025	1.039
508	Machinery, equip. & supplies ...	1.004	1.005	1.004	1.011	1.005	.994	1.005	.992	.995	.991	.996	.996	1.004	1.006
509	Miscellaneous durable goods ...	.973	.994	1.011	1.005	1.027	1.024	1.024	1.015	1.027	.958	.955	.967	.971	.996
51	Nondurable goods	1.022	1.005	.970	.971	.962	.949	.973	1.018	1.031	1.032	1.038	1.032	1.023	1.004
511	Paper & paper products	1.014	1.006	1.000	1.003	.996	1.010	.973	.984	.998	1.005	1.013	1.010	1.016	1.008
512	Drugs, drug proprietaries and druggists' sundries	1.043	1.021	.975	.966	.965	.961	1.000	1.025	.984	.997	1.032	1.038	1.042	1.022
513	Apparel, piece goods & notions	.953	.965	1.016	1.033	1.065	1.057	1.038	.976	.942	.983	.991	.978	.955	.964
514	Groceries & related products ...	.989	.990	.994	.999	.980	.965	.989	1.038	1.043	1.012	.990	1.006	.988	.990
515	Farm-product raw materials	1.083	.995	.830	.821	.797	.794	.873	1.076	1.164	1.187	1.228	1.168	1.082	.996
516	Chemicals & allied products ...	.998	1.036	1.015	1.013	1.012	1.001	.956	.995	1.001	.983	.999	1.012	.998	1.035
517	Petroleum & petroleum products	.962	.941	.984	.993	.979	.938	1.011	1.022	1.043	1.103	1.091	.962	.970	.937
518	Beer, wine, & distilled beverages	1.009	1.029	1.007	1.034	1.007	.985	1.006	1.056	1.046	.907	.943	.980	1.010	1.029
519	Misc. nondurable goods	1.112	1.071	.980	.960	.931	.923	.950	.973	.974	1.025	1.034	1.064	1.110	1.070

^rRevised

¹Adjusted 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 1988

U.S. Department of Commerce
BUREAU OF THE CENSUS

BW88-04
Issued June 1988

Sales. April 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$132.4 billion, down 0.4 percent (± 0.9 percent) from the revised March level but up 6.3 percent (± 1.9 percent) from a year ago. The March preliminary estimate was revised upward by \$0.2 billion or about 0.1 percent. April sales of durable goods increased 0.8 percent (± 0.9 percent) from March, and were 8.7 percent (± 2.9 percent) above a year ago. April sales of nondurable goods were down 1.5 percent (± 1.4 percent) from March but were up 4.0 percent (± 3.4 percent) from April 1987. Monthly decreases in the nondurable goods group were as follows: sales of groceries and related products were down 3.3 percent, to \$18,553 million and petroleum and petroleum products decreased 3.3 percent to \$12,159 million.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$173.3 billion at the end of April, up 0.9

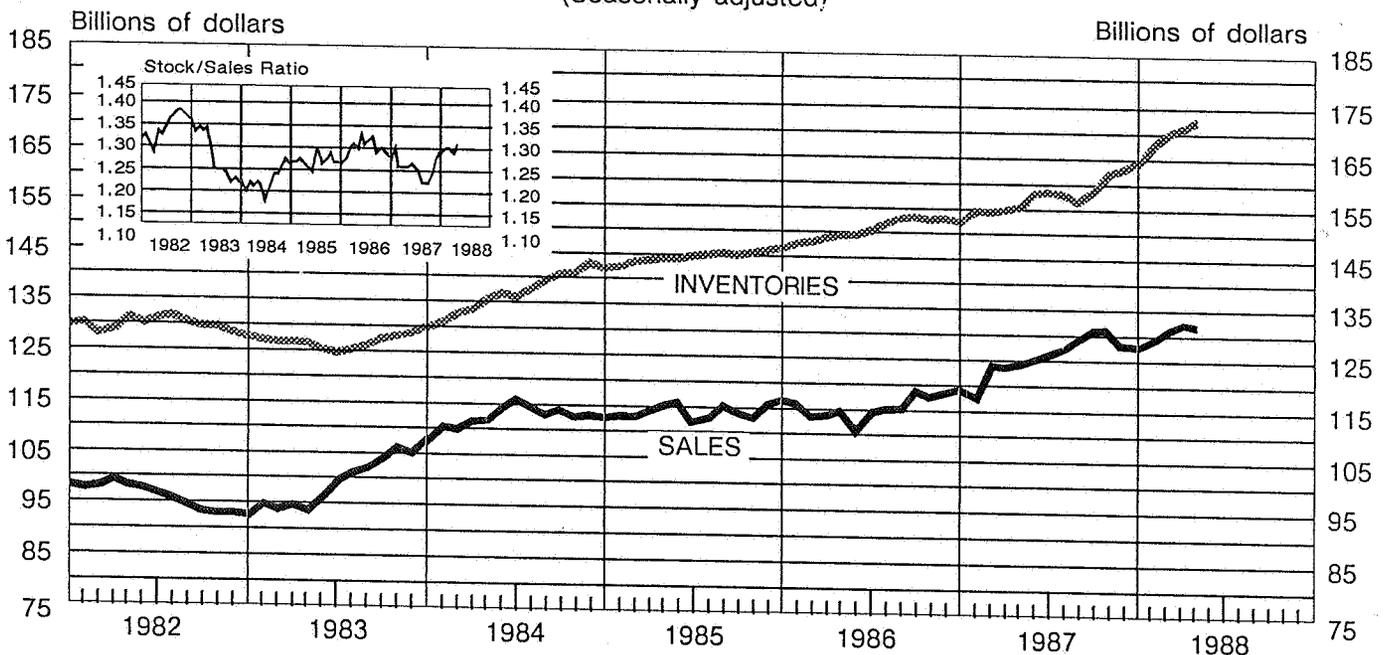
percent (± 0.4 percent) from the revised March level and up 11.3 percent (± 1.8 percent) from a year ago. The March preliminary estimate was revised upward by \$0.08 billion or about 0.04 percent. Inventories of durable goods wholesalers increased 0.6 percent (± 0.4 percent) from the March level and were 10.9 percent (± 2.3 percent) above a year ago. Inventories of nondurable goods wholesalers were up 1.6 percent (± 0.8 percent) from the March level and increased 12.1 percent (± 4.8 percent) from April 1987.

Stock/Sales Ratio. The April stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.31, up from the March ratio of 1.29, and up from the year ago ratio of 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: 1982-1988

(Seasonally adjusted)



Monthly Wholesale Trade for May is scheduled to be released July 8, 1988 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988				1987								
		Jan.	Feb.	Mar.	Apr. ^P	Apr. ^r	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	129,720	131,622	132,885	132,405	124,607	125,511	126,599	127,705	129,662	131,437	131,743	128,501	128,332
50	Durable goods	62,486	63,795	64,881	65,397	60,183	60,686	61,830	62,155	62,387	63,584	64,265	62,325	61,983
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,417	12,478	12,660	12,477	12,362	12,928	12,904	13,223	12,982	12,927
502	Furniture & home furnishings	2,267	2,319	2,264	2,126	1,922	1,922	1,873	2,008	2,067	2,348	2,177	2,140	2,148
503	Lumber & other construction mat.	5,098	5,366	5,594	5,716	4,936	5,050	5,379	5,489	5,312	5,494	5,396	5,100	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,728	1,698	1,616	1,706	1,733	1,857	1,706	1,696	1,649	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	5,988	4,714	4,858	4,990	5,056	5,200	5,181	5,280	5,231	5,435
506	Electrical goods	7,736	7,897	8,263	8,396	8,078	8,154	8,018	8,236	8,262	7,951	7,965	7,865	7,511
507	Hardware, plumbing & heating equipment ..	4,125	3,803	4,183	4,173	3,794	3,669	3,991	4,038	4,267	4,184	4,184	4,145	4,143
508	Machinery, equip. & supplies	16,566	16,701	16,818	16,520	15,920	15,815	16,048	16,451	16,363	16,712	16,676	15,982	15,582
509	Miscellaneous durable goods	6,780	6,967	6,733	6,333	6,643	6,942	7,348	6,831	6,360	7,021	7,668	7,231	7,415
51	Nondurable goods	67,234	67,827	68,004	67,008	64,424	64,825	64,769	65,550	67,275	67,853	67,478	66,176	66,349
511	Paper & paper products	4,207	4,159	4,228	4,183	3,496	3,457	3,619	3,715	3,770	3,954	4,064	4,151	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,887	2,877	2,699	2,792	2,776	2,782	2,748	2,781	2,703	2,741	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,860	3,471	3,522	3,667	3,603	3,834	3,975	3,956	4,017	4,102
514	Groceries & related products	19,839	19,710	19,180	18,553	19,428	19,738	19,479	19,678	19,526	19,307	19,639	20,461	20,194
515	Farm-product raw materials	9,676	9,553	9,800	9,958	8,389	8,248	8,790	9,197	9,770	9,974	9,817	8,109	8,326
516	Chemicals & allied products	2,233	2,261	2,548	2,679	1,901	1,901	1,933	1,951	1,944	1,955	2,041	2,045	2,225
517	Petroleum & petroleum products	11,508	12,225	12,569	12,159	12,434	12,461	12,348	13,107	13,276	13,200	12,708	12,421	11,843
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,527	3,629	3,600	3,475	3,432	3,426	3,498	3,514	3,481	3,498
519	Misc. nondurable goods	9,381	9,402	9,312	9,212	8,977	9,106	8,662	8,085	8,981	9,209	9,036	8,850	9,160
	Inventories, Total	168,388	170,632	171,732	173,331	155,756	158,560	158,835	158,611	157,072	159,135	162,517	163,353	165,097
50	Durable goods	111,259	112,661	113,694	114,378	103,171	105,513	104,746	104,514	103,324	103,933	106,734	106,503	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,566	22,213	19,675	20,910	20,254	20,410	20,510	20,583	20,839	21,441	21,602
502	Furniture & home furnishings	4,081	4,128	4,224	4,360	3,794	3,976	4,003	4,114	3,978	4,132	4,082	4,076	3,971
503	Lumber & other construction mat.	7,289	7,003	7,018	7,060	5,548	5,794	5,750	5,954	5,700	5,943	6,007	5,861	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,253	4,080	4,138	4,156	4,398	4,362	4,348	4,309	4,191	4,092
505	Metals & minerals, ex. petroleum	7,687	7,822	8,204	8,559	7,186	7,252	7,329	7,030	6,784	6,927	7,296	7,259	7,475
506	Electrical goods	13,606	13,709	13,716	13,647	13,424	13,633	13,494	13,149	13,178	12,619	13,145	13,277	13,605
507	Hardware, plumbing & heating equipment ..	7,031	6,854	6,840	6,850	6,406	6,481	6,637	6,571	6,472	6,812	7,040	6,725	6,949
508	Machinery, equip. & supplies	38,251	39,040	39,118	39,607	35,349	34,879	34,989	35,031	34,718	35,019	36,342	35,911	36,245
509	Miscellaneous durable goods	7,437	7,430	7,819	7,829	7,709	8,450	8,154	7,857	7,642	7,550	7,675	7,762	7,851
51	Nondurable goods	57,129	57,971	58,038	58,953	52,585	53,047	54,089	54,097	53,748	55,202	55,783	56,850	57,101
511	Paper & paper products	3,964	3,916	4,055	4,103	3,550	3,553	3,554	3,587	3,460	3,638	3,832	3,758	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,916	5,243	4,374	4,337	4,389	4,579	4,568	4,602	4,826	5,022	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,023	8,087	7,359	7,457	7,781	7,426	7,466	7,729	7,750	8,134	8,127
514	Groceries & related products	12,910	12,605	12,491	12,476	11,917	12,028	12,141	12,794	12,475	12,861	12,649	12,856	13,029
515	Farm-product raw materials	6,822	7,717	7,532	7,545	6,687	6,946	7,068	6,795	6,587	6,852	7,126	7,021	6,854
516	Chemicals & allied products	2,714	2,780	2,836	2,872	2,264	2,399	2,377	2,325	2,444	2,453	2,401	2,452	2,551
517	Petroleum & petroleum products	3,546	3,964	3,974	4,030	3,655	3,491	3,559	3,900	3,745	3,705	3,695	3,607	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,145	4,266	4,303	4,247	4,178	4,252	4,347	4,304	4,236	4,282
519	Misc. nondurable goods	9,944	9,862	10,114	10,452	8,513	8,533	8,973	8,513	8,751	9,015	9,200	9,764	9,935
	Stock/sales ratios, Total	1.30	1.30	1.29	1.31	1.25	1.26	1.25	1.24	1.21	1.21	1.23	1.27	1.29
50	Durable goods	1.78	1.77	1.75	1.75	1.71	1.74	1.69	1.68	1.66	1.63	1.66	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.67	1.69	1.54	1.58	1.65	1.62	1.65	1.59	1.60	1.58	1.65	1.67
502	Furniture & home furnishings	1.80	1.78	1.87	2.05	1.97	2.07	2.14	2.05	1.92	1.76	1.88	1.90	1.85
503	Lumber & other construction mat.	1.43	1.31	1.25	1.24	1.12	1.15	1.07	1.08	1.07	1.08	1.11	1.15	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.46	2.40	2.56	2.44	2.54	2.35	2.55	2.54	2.54	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.52	1.49	1.47	1.39	1.30	1.34	1.38	1.39	1.38
506	Electrical goods	1.76	1.74	1.66	1.63	1.66	1.67	1.68	1.60	1.60	1.59	1.65	1.69	1.81
507	Hardware, plumbing & heating equipment ..	1.70	1.80	1.64	1.64	1.69	1.77	1.66	1.65	1.60	1.60	1.68	1.62	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.40	2.22	2.21	2.18	2.13	2.12	2.10	2.18	2.25	2.33
509	Miscellaneous durable goods	1.10	1.07	1.16	1.24	1.16	1.22	1.11	1.15	1.20	1.08	1.00	1.07	1.06
51	Nondurable goods .....	.85	.85	.85	.88	.82	.82	.84	.83	.80	.81	.83	.86	.86
511	Paper & paper products .....	.94	.94	.96	.98	1.02	1.03	.98	.97	.92	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.82	1.62	1.55	1.58	1.65	1.66	1.65	1.79	1.83	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.06	2.10	2.12	2.12	2.11	2.06	1.95	1.94	1.96	2.02	1.98
514	Groceries & related products .....	.65	.64	.65	.67	.61	.61	.62	.65	.64	.67	.64	.63	.65
515	Farm-product raw materials .....	.71	.81	.77	.76	.80	.84	.80	.74	.67	.69	.73	.87	.82
516	Chemicals & allied products	1.22	1.18	1.11	1.07	1.19	1.26	1.23	1.19	1.26	1.25	1.18	1.20	1.15
517	Petroleum & petroleum products .....	.31	.32	.32	.33	.29	.28	.29	.30	.28	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.18	1.18	1.20	1.22	1.22	1.24	1.24	1.22	1.22	1.22
519	Misc. nondurable goods	1.06	1.05	1.09	1.13	.95	.94	1.04	1.05	.97	.98	1.02	1.12	1.08

^rRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988					1987								Total 4 mos.	
		Jan.	Feb.	Mar.	Apr. ^P	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	130,996	127,622	126,672	130,275	127,653	126,500	132,110	137,821	126,896	132,747	516,883	480,353
50	Durable goods	54,944	59,327	69,184	65,569	62,691	60,643	64,887	62,586	61,837	65,226	69,005	61,096	62,725	249,024	231,272
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,705	13,040	13,078	13,363	12,883	12,398	12,220	14,294	12,670	13,509	52,485	49,007
502	Furniture & home furnishings	1,947	2,178	2,298	2,071	1,935	1,884	1,955	2,038	2,084	2,501	2,469	2,123	2,090	8,494	7,558
503	Lumber & other construction mat.	3,971	4,448	5,527	5,693	5,129	5,212	6,057	6,115	5,795	6,021	5,979	4,998	4,583	19,639	17,600
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,479	1,643	1,767	1,662	1,701	1,445	1,628	1,712	1,837	1,827	2,011	1,850	1,705	6,551	6,788
505	Metals & minerals, ex. petroleum ..	5,304	5,384	6,855	5,856	4,860	4,756	5,140	4,985	5,169	5,481	5,343	4,788	5,315	23,399	19,105
506	Electrical goods	6,862	7,542	8,651	7,842	7,731	7,591	8,130	8,187	8,312	8,524	8,857	8,085	7,917	30,897	30,428
507	Hardware, plumbing & heating equipment	3,663	3,548	4,258	4,148	3,908	3,750	4,330	4,141	4,026	4,357	4,514	4,033	4,052	15,617	14,269
508	Machinery, equip. & supplies	14,711	15,716	18,601	16,784	16,668	15,957	16,818	16,188	15,888	17,197	17,126	15,103	16,361	65,812	61,536
509	Miscellaneous durable goods	5,722	6,375	7,225	6,808	7,719	6,970	7,466	6,537	6,328	7,098	8,412	7,448	7,193	26,130	24,981
51	Nondurable goods	63,808	65,660	72,964	65,427	64,931	66,029	65,388	65,067	64,663	66,884	68,616	65,800	70,022	267,859	249,081
511	Paper & paper products	3,946	4,047	4,600	4,083	3,548	3,319	3,742	3,696	3,789	3,974	4,255	4,022	4,270	16,676	13,674
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,066	2,808	2,764	2,683	2,815	2,749	2,630	2,892	2,806	2,675	2,922	11,421	10,783
513	Apparel, piece goods & notions	3,456	4,174	4,244	3,462	3,266	3,078	3,897	3,992	4,402	4,194	4,411	3,760	3,126	15,356	14,423
514	Groceries & related products	19,006	18,705	19,698	18,145	19,583	20,113	19,810	20,426	19,467	19,346	19,718	19,990	20,982	75,554	75,181
515	Farm-product raw materials	10,015	9,686	10,956	9,440	8,179	8,479	8,342	8,047	8,324	8,777	10,053	9,009	9,800	40,107	32,512
516	Chemicals & allied products	2,135	2,333	2,708	2,725	1,983	1,897	2,072	1,953	1,899	2,027	2,172	1,951	2,049	9,901	7,350
517	Petroleum & petroleum products	12,187	12,408	13,876	11,575	12,073	11,938	11,694	12,294	12,015	13,279	12,860	12,570	13,193	50,046	49,140
518	Beer, wine, & distilled beverages ..	2,659	2,962	3,619	3,294	3,589	3,722	3,826	3,768	3,560	3,564	3,630	3,467	4,254	12,534	12,527
519	Misc. nondurable goods	7,674	8,518	10,197	9,875	9,946	10,800	9,190	8,142	8,577	8,831	8,711	8,356	9,426	36,264	33,491
	Inventories, Total	168,783	171,742	173,184	174,212	156,484	157,255	158,425	157,211	154,651	158,624	163,892	164,406	165,819	(X)	(X)
50	Durable goods	109,662	111,920	113,888	114,878	103,587	105,611	105,703	105,052	103,382	104,729	107,150	106,314	107,257	(X)	(X)
501	Motor vehicles & auto. equip.	21,646	22,681	22,747	22,169	19,675	20,659	20,396	19,920	19,751	20,995	21,027	21,784	21,948	(X)	(X)
502	Furniture & home furnishings	4,154	4,140	4,194	4,308	3,745	3,972	3,975	4,093	4,034	4,165	4,062	4,027	4,011	(X)	(X)
503	Lumber & other construction mat.	6,903	6,891	7,123	7,244	5,687	5,864	5,974	6,043	5,740	5,937	5,899	5,779	6,091	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,069	4,027	4,185	4,232	4,068	4,080	4,164	4,526	4,436	4,431	4,378	4,132	3,973	(X)	(X)
505	Metals & minerals, ex. petroleum ..	7,848	7,892	8,237	8,568	7,179	7,274	7,461	7,107	6,771	6,858	7,149	7,056	7,583	(X)	(X)
506	Electrical goods	13,171	13,380	13,565	13,483	13,276	13,551	13,494	13,451	13,442	13,086	13,408	13,343	13,374	(X)	(X)
507	Hardware, plumbing & heating equipment	6,862	6,840	7,018	7,090	6,637	6,649	6,690	6,637	6,491	6,717	6,913	6,597	6,692	(X)	(X)
508	Machinery, equip. & supplies	37,907	38,884	39,235	39,924	35,596	35,019	35,354	35,206	34,892	34,809	36,524	35,624	36,064	(X)	(X)
509	Miscellaneous durable goods	7,102	7,185	7,584	7,860	7,724	8,543	8,195	8,069	7,825	7,731	7,790	7,972	7,621	(X)	(X)
51	Nondurable goods	59,121	59,822	59,296	59,334	52,897	51,644	52,722	52,159	51,269	53,895	56,742	58,092	58,562	(X)	(X)
511	Paper & paper products	4,016	3,955	4,120	4,166	3,593	3,563	3,565	3,573	3,495	3,540	3,771	3,750	3,850	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,088	5,390	4,492	4,229	4,240	4,419	4,390	4,602	4,947	4,942	5,076	(X)	(X)
513	Apparel, piece goods & notions	8,001	7,870	7,646	7,772	7,087	7,576	8,038	7,909	7,892	8,023	7,564	7,662	7,989	(X)	(X)
514	Groceries & related products	12,781	12,681	12,329	12,326	11,774	11,956	12,129	12,538	12,038	12,720	13,130	13,409	13,185	(X)	(X)
515	Farm-product raw materials	8,378	9,013	8,120	7,485	6,640	5,765	5,803	5,416	5,230	5,982	7,668	8,172	8,136	(X)	(X)
516	Chemicals & allied products	2,711	2,813	2,830	2,973	2,343	2,435	2,408	2,353	2,446	2,345	2,389	2,454	2,508	(X)	(X)
517	Petroleum & petroleum products	3,869	3,813	3,855	3,744	3,414	3,435	3,534	3,818	3,513	3,746	3,776	3,762	3,751	(X)	(X)
518	Beer, wine, & distilled beverages ..	3,869	4,070	4,142	4,273	4,402	4,333	4,391	4,207	4,188	4,373	4,545	4,431	3,884	(X)	(X)
519	Misc. nondurable goods	10,282	10,493	11,186	11,215	9,152	8,362	8,614	7,926	8,077	8,564	8,952	9,510	10,183	(X)	(X)
	Stock/sales ratios, Total	1.42	1.37	1.22	1.33	1.23	1.24	1.22	1.23	1.22	1.20	1.19	1.30	1.25	(X)	(X)
50	Durable goods	2.00	1.89	1.65	1.75	1.65	1.74	1.63	1.68	1.67	1.61	1.55	1.74	1.71	(X)	(X)
501	Motor vehicles & auto. equip.	1.92	1.82	1.62	1.51	1.51	1.58	1.53	1.57	1.59	1.72	1.47	1.72	1.62	(X)	(X)
502	Furniture & home furnishings	2.13	1.90	1.83	2.08	1.94	2.11	2.03	2.01	1.94	1.67	1.85	1.90	1.92	(X)	(X)
503	Lumber & other construction mat.	1.74	1.55	1.29	1.11	1.13	.99	.99	.99	.99	.99	.99	1.16	1.33	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.75	2.45	2.37	2.55	2.39	2.82	2.56	2.64	2.41	2.43	2.18	2.23	2.33	(X)	(X)
505	Metals & minerals, ex. petroleum ..	1.48	1.47	1.20	1.46	1.48	1.53	1.45	1.43	1.31	1.25	1.34	1.47	1.43	(X)	(X)
506	Electrical goods	1.92	1.77	1.57	1.72	1.72	1.79	1.66	1.64	1.62	1.54	1.51	1.65	1.69	(X)	(X)
507	Hardware, plumbing & heating equipment	1.87	1.93	1.65	1.71	1.70	1.77	1.55	1.60	1.61	1.54	1.53	1.64	1.65	(X)	(X)
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.38	2.14	2.19	2.10	2.17	2.20	2.02	2.13	2.36	2.20	(X)	(X)
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	1.00	1.23	1.10	1.23	1.24	1.09	.93	1.07	1.05	(X)	(X)
51	Nondurable goods .....	.93	.91	.81	.91	.81	.78	.81	.80	.79	.81	.83	.88	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.02	1.01	1.07	.95	.97	.92	.89	.89	.93	.90	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.92	1.63	1.58	1.51	1.61	1.67	1.59	1.76	1.85	1.74	(X)	(X)
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.23	2.17	2.46	2.06	1.98	1.79	1.91	1.71	2.04	2.56	(X)	(X)
514	Groceries & related products .....	.67	.68	.63	.68	.60	.59	.61	.61	.62	.66	.67	.67	.63	(X)	(X)
515	Farm-product raw materials .....	.84	.93	.74	.79	.81	.88	.70	.67	.63	.68	.76	.91	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.05	1.09	1.18	1.28	1.16	1.20	1.29	1.16	1.10	1.26	1.22	(X)	(X)
517	Petroleum & petroleum products .....	.32	.31	.28	.32	.28	.29	.30	.31	.29	.28	.29	.30	.28	(X)	(X)
518	Beer, wine, & distilled beverages ..	1.46	1.37	1.14	1.30	1.23	1.16	1.15	1.12	1.18	1.23	1.25	1.28	.91	(X)	(X)
519	Misc. nondurable goods	1.34	1.23	1.10	1.14	.92	.77	.94	.97	.94	.97	1.03	1.14	1.08	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.
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 ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Apr. 1988 from Mar. 1988	Apr. 1988 from Apr. 1987	4 months 1988 from 4 months 1987	Apr. 1988 from Mar. 1988	Apr. 1988 from Apr. 1987	Apr. 1988 from Mar. 1988	Apr. 1988 from Apr. 1987	Apr. 1988 from Mar. 1988	Apr. 1988 from Apr. 1987
	Total	-7.8	+2.6	+7.6	+6	+11.3	-.4	+6.3	+9	+11.3
50	Durable goods	-5.2	+4.6	+7.7	+9	+10.9	+.8	+8.7	+6	+10.9
501	Motor vehicles & auto. equip.	+5.0	+12.8	+7.1	-2.5	+12.7	+8.0	+15.5	-1.6	+12.9
502	Furniture & home furnishings	-9.9	+7.0	+12.4	+2.7	+15.0	-6.1	+10.6	+3.2	+14.9
503	Lumber & other construction mat.	+3.0	+11.0	+11.6	+1.7	+27.4	+2.2	+15.8	+6	+27.3
504	Sporting, recreational, photographic & hobby goods, toys & supplies	-5.9	-2.3	-3.5	+1.1	+4.0	+1	+1.8	+1.5	+4.2
505	Metals & minerals, ex. petroleum	-14.6	+20.5	+22.5	+4.0	+19.3	+6	+27.0	+4.3	+19.1
506	Electrical goods	-9.4	+1.4	+1.5	-6	+1.6	+1.6	+3.9	-5	+1.7
507	Hardware, plumbing & heating equipment	-2.6	+6.1	+9.4	+1.0	+6.8	-.2	+10.0	+1	+6.9
508	Machinery, equip. & supplies	-9.8	+7	+6.9	+1.8	+12.2	-1.8	+3.8	+1.3	+12.0
509	Miscellaneous durable goods	-5.8	-11.8	+4.6	+3.6	+1.8	-5.9	-4.7	+1	+1.6
51	Nondurable goods	-10.3	+8	+7.5	+1	+12.2	-1.5	+4.0	+1.6	+12.1
511	Paper & paper products	-11.2	+15.1	+22.0	+9	+15.7	-1.1	+19.7	+1.2	+15.6
512	Drugs, drug proprietaries and druggists' sundries	-8.4	+1.6	+5.9	+6.4	+20.0	-.3	+6.6	+6.7	+19.9
513	Apparel, piece goods & notions	-18.0	+6.6	+6.5	+1.6	+9.7	-.8	+11.2	+8	+9.9
514	Groceries & related products	-7.9	-7.3	+5	0	+4.7	-3.3	-4.5	-1	+4.7
515	Farm-product raw materials	-13.8	+15.4	+23.4	-7.8	+12.7	+1.6	+18.7	+2	+12.8
516	Chemicals & allied products	+6	+37.4	+34.7	+5.1	+26.9	+5.1	+40.9	+1.3	+26.9
517	Petroleum & petroleum products	-16.6	-4.1	+1.8	-2.9	+9.7	-3.3	-2.2	+1.4	+10.3
518	Beer, wine, & distilled beverages	-9.0	-8.2	+1	+3.2	-2.9	-1.8	-2.8	+1.2	-2.8
519	Misc. nondurable goods	-3.2	-7	+8.3	+3	+22.5	-1.1	+2.6	+3.3	+22.8

¹Adjusted 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*¹ 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

¹Executive 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 (± 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.2-1.7	1.5	1.2-1.8	1.4	0.3-0.9	0.6	1.0-1.5	1.4	1.6	1.2	1.1
50	Durable goods	1.6-1.9	1.9	1.4-1.8	1.7	0.6-0.9	0.7	1.1-2.1	1.4	1.8	1.4	1.2
501	Motor vehicles & auto. equip.	3.2-6.2	3.6	3.1-5.7	3.4	1.2-3.3	1.6	2.4-4.0	3.3	5.9	3.5	3.8
502	Furniture & home furnishings	6.9-9.7	7.5	5.1-8.1	6.9	2.6-7.1	4.2	5.1-12.0	6.4	7.8	6.0	5.5
503	Lumber & other construction mat.	4.5-8.8	6.2	5.0-8.5	6.5	1.7-3.3	2.0	3.1-8.8	4.4	4.6	4.0	3.0
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-9.4	7.9	5.5-8.8	6.5	2.3-7.2	3.6	5.5-20.4	9.2	6.5	8.5	5.9
505	Metals & minerals, ex. petroleum	4.2-4.8	4.4	4.0-4.7	4.3	1.4-2.1	1.6	3.9-4.4	4.1	4.5	3.0	3.5
506	Electrical goods	2.1-3.4	3.0	1.9-3.0	2.8	0.9-2.2	1.5	2.8-3.7	3.2	2.9	3.4	3.2
507	Hardware, plumbing & heating equipment ..	7.2-8.9	7.8	6.8-8.1	7.8	1.7-3.8	2.9	5.0-7.4	6.0	7.5	4.6	6.0
508	Machinery, equip. & supplies	2.3-3.7	3.0	2.0-3.1	2.5	1.8-2.1	2.0	2.2-4.2	2.9	3.0	1.8	2.5
509	Miscellaneous durable goods	3.2-4.1	3.6	3.1-4.0	3.4	1.9-2.7	2.2	3.2-5.3	4.3	3.4	3.0	4.0
51	Nondurable goods	2.1-3.5	3.2	2.2-3.4	2.8	0.5-1.5	0.8	2.0-3.1	2.6	3.2	1.8	2.3
511	Paper & paper products	4.9-5.8	5.4	5.0-5.9	5.3	1.1-2.1	1.6	3.1-6.5	5.4	4.9	3.2	3.4
512	Drugs, drug proprietaries and druggists' sundries	5.0-5.7	5.3	4.9-6.2	5.1	0.6-2.4	1.8	3.4-7.7	5.2	5.1	5.5	5.2
513	Apparel, piece goods & notions	7.4-10.6	9.1	6.7-10.6	7.9	1.9-6.0	2.7	6.0-10.2	8.0	9.0	4.1	6.9
514	Groceries & related products	4.0-6.8	6.4	4.2-7.0	5.4	0.7-4.1	0.9	3.7-6.9	5.8	6.7	3.5	4.3
515	Farm-product raw materials	5.1-7.1	6.1	5.0-6.3	5.5	1.8-4.4	2.9	5.9-6.9	6.1	6.3	5.3	6.2
516	Chemicals & allied products	6.0-9.9	8.0	6.0-8.5	7.1	1.3-3.9	2.6	4.7-8.2	5.8	6.0	5.2	4.2
517	Petroleum & petroleum products	4.0-4.9	4.7	4.1-5.0	4.7	0.5-1.4	1.1	3.0-5.4	3.1	4.9	3.4	3.0
518	Beer, wine, & distilled beverages	2.8-3.9	3.4	2.6-3.8	3.1	1.4-2.5	1.6	2.4-6.5	3.0	3.8	2.8	3.0
519	Misc. nondurable goods	4.2-5.5	4.7	4.2-5.5	4.6	1.4-2.0	1.7	4.4-8.7	5.3	4.3	4.3	4.8
	Inventories, Total	1.1-1.3	1.2	1.1-1.3	1.2	0.2-0.4	0.3	0.6-2.1	1.0	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.6	1.5-1.7	1.6	0.3-0.5	0.4	1.0-2.4	1.5	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.3-6.2	6.0	5.2-6.2	5.9	0.4-1.4	0.8	2.9-5.8	3.6	(X)	(X)	(X)
502	Furniture & home furnishings	7.8-11.7	8.9	7.6-11.6	9.1	0.8-2.3	1.6	5.1-12.4	7.8	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-6.1	5.5	4.2-5.7	5.2	0.7-2.9	1.4	4.6-12.6	5.8	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	7.1-12.4	7.9	6.9-11.5	8.4	1.1-3.0	1.4	4.4-9.7	5.6	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.6-6.3	5.9	5.5-6.1	5.8	0.5-1.1	0.8	3.5-8.3	4.1	(X)	(X)	(X)
506	Electrical goods	1.9-2.8	2.4	1.9-2.8	2.3	0.4-1.1	0.5	2.2-3.0	2.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	4.1-5.1	4.7	4.1-5.4	4.7	0.7-2.6	1.2	2.6-8.6	3.9	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.2-3.5	3.2	2.4-3.5	2.9	0.6-0.9	0.8	2.8-6.2	3.4	(X)	(X)	(X)
509	Miscellaneous durable goods	7.3-9.0	8.4	7.0-8.8	8.3	0.5-1.3	1.0	6.8-12.8	7.8	(X)	(X)	(X)
51	Nondurable goods	1.4-2.4	1.9	1.5-2.3	1.8	0.5-0.7	0.6	1.6-2.7	1.9	(X)	(X)	(X)
511	Paper & paper products	5.4-6.3	6.1	5.6-6.2	5.9	0.5-1.3	1.0	2.7-6.8	3.0	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.7-7.2	6.2	5.6-6.8	5.8	0.7-1.3	1.2	3.8-7.2	5.1	(X)	(X)	(X)
513	Apparel, piece goods & notions	4.4-6.7	6.0	4.2-6.5	5.9	0.9-1.7	1.0	6.0-14.5	8.7	(X)	(X)	(X)
514	Groceries & related products	4.7-5.4	4.8	4.5-5.4	5.0	0.5-1.2	0.9	2.9-4.8	3.5	(X)	(X)	(X)
515	Farm-product raw materials	6.5-8.1	7.4	6.8-8.0	7.4	0.7-3.9	1.7	6.7-10.3	7.2	(X)	(X)	(X)
516	Chemicals & allied products	7.6-9.2	8.1	7.4-9.1	7.8	1.0-2.1	1.3	5.3-8.6	8.4	(X)	(X)	(X)
517	Petroleum & petroleum products	2.9-4.5	3.6	3.1-4.4	3.6	0.7-1.5	1.1	3.0-5.4	3.3	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.4-5.6	4.9	4.3-5.7	4.7	0.6-1.8	1.0	2.5-9.2	5.1	(X)	(X)	(X)
519	Misc. nondurable goods	6.5-9.0	8.2	7.6-8.4	7.9	0.9-3.1	1.6	4.8-11.0	5.4	(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 1987 through February 1988.

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

SIC code	Kind of business	1987										1988				
		Apr. ¹	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. ¹	Apr. ¹	May	
	Sales, ¹ Total	1.019	.998	1.032	.996	.978	1.011	1.041	.987	1.038	.918	.952	1.068	.987	1.026	
50	Durable goods	1.033	.991	1.055	1.005	.983	1.031	1.073	.980	1.013	.880	.931	1.064	1.002	1.019	
501	Motor vehicles & auto. equip.	1.045	1.033	1.071	1.026	.959	.947	1.081	.976	1.045	.896	.922	1.049	1.020	1.050	
502	Furniture & home furnishings	1.007	.980	1.044	1.015	1.008	1.065	1.134	.992	.973	.859	.939	1.015	.974	1.003	
503	Lumber & other construction mat.	1.039	1.032	1.126	1.114	1.091	1.096	1.108	.980	.884	.779	.829	.988	.996	1.065	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.002	.894	.954	.988	.989	1.071	1.186	1.122	1.041	.855	.958	1.023	.962	.896	
505	Metals & minerals, ex. petroleum	1.031	.979	1.030	.886	.994	1.058	1.012	.915	.978	.949	.983	1.152	.978	1.001	
506	Electrical goods .....	.957	.931	1.014	.994	1.006	1.072	1.112	1.028	1.054	.887	.955	1.047	.934	.949
507	Hardware, plumbing & heating equipment	1.030	1.022	1.085	1.038	.997	1.021	1.079	.973	.978	.888	.933	1.018	.994	1.054	
508	Machinery, equip. & supplies	1.047	1.009	1.048	.984	.971	1.029	1.027	.945	1.050	.888	.941	1.106	1.016	1.039	
509	Miscellaneous durable goods	1.162	1.004	1.016	.957	.995	1.011	1.097	1.030	.970	.844	.915	1.073	1.075	1.049	
51	Nondurable goods	1.007	1.021	1.013	.987	.965	.992	1.012	.994	1.059	.952	.969	1.066	.978	1.049	
511	Paper & paper products	1.015	.960	1.034	.995	1.005	1.005	1.047	.969	1.018	.938	.973	1.088	.976	.984	
512	Drugs, drug proprietaries and druggists' sundries	1.024	.961	1.014	.988	.957	1.040	1.038	.976	1.041	.976	.973	1.062	.976	.995	
513	Apparel, piece goods & notions ..	.941	.874	1.057	1.108	1.148	1.055	1.115	.936	.762	.863	1.076	1.091	.902	.929	
514	Groceries & related products	1.008	1.019	1.017	1.038	.997	1.002	1.004	.977	1.039	.958	.949	1.027	.978	1.035	
515	Farm-product raw materials ....	.975	1.028	.949	.875	.852	.880	1.024	1.111	1.177	1.035	1.015	1.118	.948	1.066
516	Chemicals & allied products	1.043	.998	1.072	1.001	.977	1.037	1.064	.954	.921	.956	.998	1.063	1.017	1.028	
517	Petroleum & petroleum products ..	.971	.958	.947	.938	.905	1.006	1.012	1.012	1.114	1.059	1.015	1.104	.952	.965	
518	Beer, wine, & distilled beverages ..	.989	1.034	1.101	1.098	1.039	1.019	1.033	.995	1.216	.741	.813	1.008	.934	1.063	
519	Misc. nondurable goods	1.108	1.186	1.061	1.007	.955	.959	.964	.955	1.029	.818	.906	1.095	1.072	1.231	
	Inventories, ¹ Total	1.005	.991	.993	.991	.986	.996	1.010	1.008	1.003	1.004	1.006	1.008	1.004	.992	
50	Durable goods	1.004	1.000	1.007	1.006	1.003	1.011	1.003	.998	.992	.986	.994	1.000	1.004	1.001	
501	Motor vehicles & auto. equip.	1.000	.988	1.007	.976	.963	1.020	1.009	1.016	1.016	.996	1.004	1.008	.998	.989	
502	Furniture & home furnishings ....	.987	.999	.993	.995	1.014	1.008	.995	.988	1.010	1.018	1.003	.993	.988	1.000
503	Lumber & other construction mat.	1.025	1.012	1.039	1.015	1.007	.999	.982	.986	.982	.947	.984	1.015	1.026	1.016	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.997	.986	1.002	1.029	1.017	1.019	1.016	.986	.971	.992	.986	.999	.995	.984
505	Metals & minerals, ex. petroleum .....	.999	1.003	1.018	1.011	1.001	.990	.980	.972	1.014	1.021	1.009	1.004	1.001	1.004
506	Electrical goods .....	.989	.994	1.000	1.023	1.020	1.037	1.020	1.005	.983	.968	.976	.989	.988	.992
507	Hardware, plumbing & heating equipment	1.036	1.026	1.008	1.010	1.003	.986	.982	.981	.963	.976	.998	1.026	1.035	1.025	
508	Machinery, equip. & supplies	1.007	1.004	1.011	1.005	1.005	.994	1.005	.992	.995	.991	.996	1.003	1.008	1.005	
509	Miscellaneous durable goods	1.002	1.011	1.005	1.027	1.024	1.024	1.015	1.027	.958	.955	.967	.970	1.004	1.014	
51	Nondurable goods	1.006	.970	.971	.962	.949	.973	1.018	1.031	1.032	1.038	1.032	1.021	1.004	.969	
511	Paper & paper products	1.012	1.000	1.003	.996	1.010	.973	.984	.998	1.005	1.013	1.010	1.016	1.013	1.000	
512	Drugs, drug proprietaries and druggists' sundries	1.027	.975	.966	.965	.961	1.000	1.025	.984	.997	1.032	1.038	1.031	1.028	.973	
513	Apparel, piece goods & notions ..	.963	1.016	1.033	1.065	1.057	1.038	.976	.942	.983	.991	.978	.953	.961	1.017	
514	Groceries & related products ....	.988	.994	.999	.980	.965	.989	1.038	1.043	1.012	.990	1.006	.987	.988	.993
515	Farm-product raw materials ....	.993	.830	.821	.797	.794	.873	1.076	1.164	1.187	1.228	1.168	1.078	.992	.831
516	Chemicals & allied products	1.035	1.015	1.013	1.012	1.001	.956	.995	1.001	.983	.999	1.012	.998	1.035	1.019	
517	Petroleum & petroleum products ..	.934	.984	.993	.979	.938	1.011	1.022	1.043	1.103	1.091	.962	.970	.929	.977	
518	Beer, wine, & distilled beverages ..	1.032	1.007	1.034	1.007	.985	1.006	1.056	1.046	.907	.943	.980	1.011	1.031	1.006	
519	Misc. nondurable goods	1.075	.980	.960	.931	.923	.950	.973	.974	1.025	1.034	1.064	1.106	1.073	.980	

¹Revised

¹Adjusted 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 1988

BW88-05
Issued July 1988U.S. Department of Commerce
BUREAU OF THE CENSUS

Sales. May 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$133.8 billion, up 0.6 percent (± 1.0 percent) from the revised April level and up 5.9 percent (± 1.5 percent) from a year ago. The April preliminary estimate was revised upward by \$0.6 billion or about 0.5 percent. May sales of durable goods increased 0.7 percent (± 1.4 percent) from April, and were 9.3 percent (± 2.4 percent) above a year ago. Monthly gains in the durable goods group are as follows: sales of miscellaneous durable goods were up 8.0 percent to \$6,911 million and sales of machinery, equipment and supplies increased 2.6 percent to \$17,371 million. May sales of nondurable goods were up 0.6 percent (± 1.4 percent) from April and were up 2.8 percent (± 2.7 percent) from May 1987.

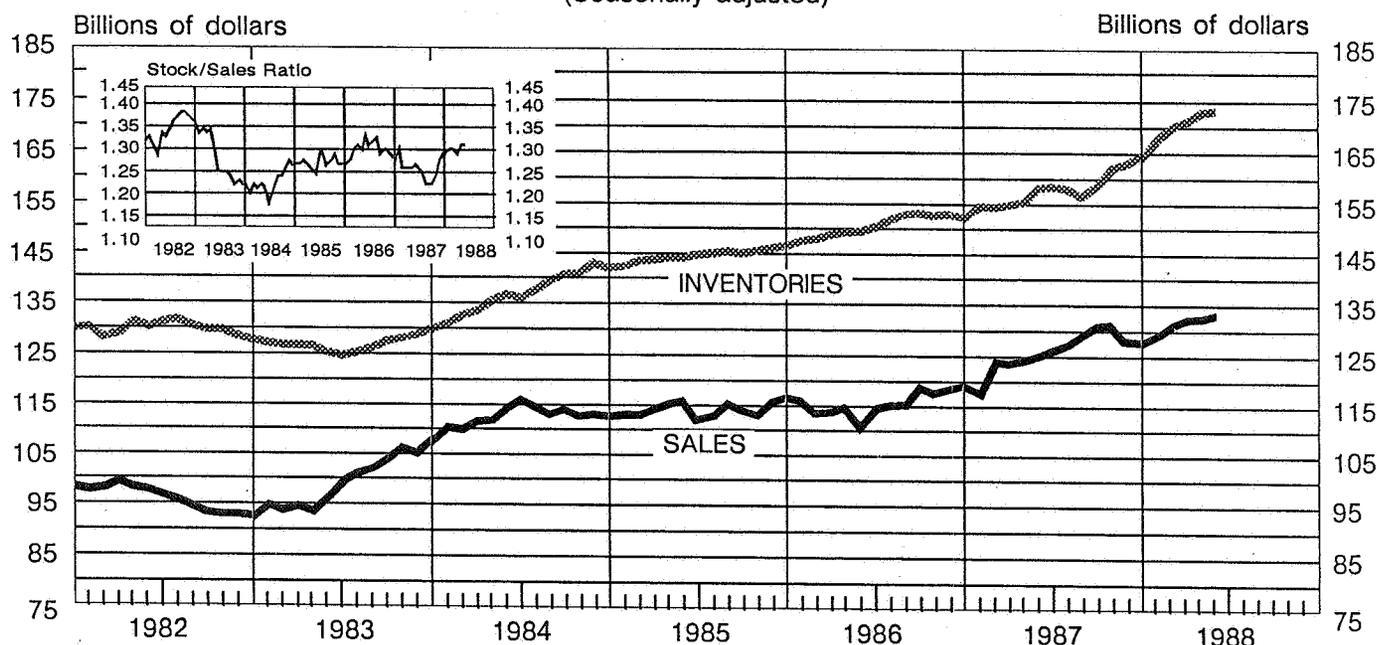
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$174.0 billion at the end of May, up 0.3

percent (± 0.5 percent) from the revised April level and up 9.7 percent (± 1.8 percent) from a year ago. The April preliminary estimate was revised upward by \$0.2 billion or about 0.1 percent. Inventories of durable goods wholesalers decreased 0.3 percent (± 0.5 percent) from the April level but were 8.5 percent (± 1.9 percent) above a year ago. Inventories in the miscellaneous durable goods category were down 7.0 percent to \$7,172 million. Inventories of nondurable goods wholesalers were up 1.4 percent (± 1.3 percent) from the April level and were up 12.2 percent (± 4.1 percent) from May 1987.

Stock/Sales Ratio. The May stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.30, the same as the April ratio.

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: 1982-1988
(Seasonally adjusted)



Monthly Wholesale Trade for June is scheduled to be released August 9, 1988 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988					1987							
		Jan.	Feb.	Mar.	Apr.	May ^a	May ^r	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	129,720	131,622	132,885	133,015	133,823	126,321	126,599	127,705	129,662	131,437	131,743	128,501	128,332
50	Durable goods	62,486	63,795	64,881	66,081	66,512	60,853	61,830	62,155	62,387	63,584	64,265	62,325	61,983
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,333	14,067	12,709	12,477	12,362	12,928	12,904	13,223	12,982	12,927
502	Furniture & home furnishings	2,267	2,319	2,264	2,206	2,207	1,936	1,873	2,008	2,067	2,348	2,177	2,140	2,148
503	Lumber & other construction mat.	5,098	5,266	5,594	5,744	5,503	5,095	5,379	5,489	5,312	5,494	5,396	5,100	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,731	1,784	1,850	1,706	1,733	1,857	1,706	1,696	1,649	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	6,048	5,883	4,913	4,990	5,056	5,200	5,181	5,280	5,231	5,435
506	Electrical goods	7,736	7,897	8,283	8,517	8,635	8,162	8,018	8,236	8,262	7,951	7,965	7,865	7,511
507	Hardware, plumbing & heating equipment	4,125	3,803	4,283	4,165	4,151	3,666	3,991	3,989	4,038	4,267	4,184	4,145	4,143
508	Machinery, equip. & supplies	16,566	16,701	16,818	16,937	17,371	15,862	16,048	16,451	16,363	16,712	16,676	15,982	15,582
509	Miscellaneous durable goods	6,780	6,967	6,733	6,400	6,911	6,860	7,348	6,831	6,360	7,021	7,668	7,231	7,415
51	Nondurable goods	67,234	67,827	68,004	66,934	67,311	65,468	64,769	65,550	67,275	67,853	67,478	66,176	66,349
511	Paper & paper products	4,207	4,159	4,228	4,137	4,211	3,505	3,619	3,715	3,770	3,954	4,064	4,151	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,887	2,875	2,885	2,795	2,776	2,782	2,748	2,781	2,703	2,741	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,866	4,014	3,558	3,687	3,603	3,834	3,975	3,956	4,017	4,102
514	Groceries & related products	19,839	19,710	19,180	18,777	19,351	19,680	19,479	19,678	19,526	19,307	19,639	20,461	20,194
515	Farm-product raw materials	9,676	9,553	9,800	10,056	9,971	8,395	8,790	9,197	9,770	9,974	9,817	8,109	8,326
516	Chemicals & allied products	2,233	2,261	2,548	2,684	2,729	1,893	1,933	1,951	1,944	1,955	2,041	2,045	2,225
517	Petroleum & petroleum products	11,508	12,225	12,569	11,995	12,168	12,593	12,348	13,107	13,276	13,200	12,708	12,421	11,843
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,447	3,431	3,617	3,475	3,432	3,426	3,498	3,514	3,481	3,498
519	Misc. nondurable goods	9,381	9,402	9,312	9,097	8,551	9,432	8,662	8,085	8,981	9,209	9,036	8,750	9,160
	Inventories, Total	168,388	170,632	171,732	173,530	173,994	158,540	158,835	158,611	157,072	159,135	162,517	163,353	165,097
50	Durable goods	111,259	112,661	113,694	114,812	114,460	105,500	104,746	104,514	103,324	103,933	106,734	106,503	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,566	22,056	21,788	20,931	20,254	20,410	20,510	20,583	20,839	21,441	21,602
502	Furniture & home furnishings	4,081	4,128	4,224	4,423	4,349	3,968	4,003	4,114	3,978	4,132	4,082	4,076	3,971
503	Lumber & other construction mat.	7,269	7,003	7,018	7,075	7,112	5,817	5,750	5,954	5,700	5,943	6,007	5,861	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,237	4,324	4,151	4,156	4,398	4,362	4,348	4,309	4,191	4,092
505	Metals & minerals, ex. petroleum	7,687	7,622	8,204	8,648	8,912	7,209	7,329	7,030	6,764	6,927	7,295	7,259	7,478
506	Electrical goods	13,606	13,709	13,716	13,843	13,901	13,592	13,494	13,149	13,178	12,619	13,145	13,277	13,605
507	Hardware, plumbing & heating equipment	7,031	6,854	6,840	6,872	6,934	6,487	6,637	6,571	6,472	6,812	7,040	6,725	6,949
508	Machinery, equip. & supplies	38,251	39,040	39,118	39,944	39,968	34,845	34,969	35,031	34,718	35,019	36,342	35,911	36,245
509	Miscellaneous durable goods	7,437	7,430	7,819	7,714	7,172	8,500	8,154	7,657	7,642	7,550	7,675	7,762	7,851
51	Nondurable goods	57,129	57,971	58,038	58,718	59,534	53,040	54,089	54,097	53,748	55,202	55,783	56,850	57,101
511	Paper & paper products	3,964	3,916	4,055	4,062	4,118	3,549	3,554	3,587	3,460	3,638	3,832	3,758	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,916	5,215	5,116	4,333	4,389	4,579	4,568	4,602	4,826	5,022	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,023	7,945	7,942	7,479	7,781	7,426	7,466	7,729	7,750	8,134	8,127
514	Groceries & related products	12,910	12,605	12,491	12,613	12,526	12,065	12,141	12,794	12,475	12,861	12,649	12,856	13,029
515	Farm-product raw materials	6,822	7,717	7,532	7,754	8,425	6,847	7,068	6,795	6,587	6,852	7,126	7,021	6,854
516	Chemicals & allied products	2,714	2,780	2,836	2,838	2,936	2,371	2,377	2,325	2,444	2,453	2,401	2,452	2,551
517	Petroleum & petroleum products	3,546	3,964	3,974	3,946	3,956	3,578	3,559	3,900	3,745	3,705	3,695	3,607	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,088	3,983	4,311	4,247	4,178	4,252	4,347	4,304	4,236	4,282
519	Misc. nondurable goods	9,944	9,862	10,114	10,257	10,532	8,507	8,973	8,513	8,751	9,015	9,200	9,764	9,935
	Stock/sales ratios, Total	1.30	1.30	1.29	1.30	1.30	1.26	1.25	1.24	1.21	1.21	1.23	1.27	1.29
50	Durable goods	1.78	1.77	1.75	1.74	1.72	1.73	1.69	1.68	1.66	1.63	1.66	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.67	1.69	1.54	1.55	1.65	1.62	1.65	1.59	1.60	1.58	1.65	1.67
502	Furniture & home furnishings	1.80	1.78	1.87	2.00	1.97	2.05	2.14	2.05	1.92	1.76	1.88	1.90	1.85
503	Lumber & other construction mat.	1.43	1.31	1.25	1.23	1.29	1.14	1.07	1.08	1.07	1.08	1.11	1.15	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.45	2.42	2.52	2.44	2.54	2.35	2.55	2.54	2.54	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.51	1.47	1.47	1.39	1.30	1.34	1.38	1.39	1.38
506	Electrical goods	1.76	1.74	1.66	1.63	1.61	1.67	1.68	1.60	1.60	1.59	1.65	1.69	1.81
507	Hardware, plumbing & heating equipment	1.70	1.80	1.64	1.65	1.67	1.77	1.66	1.65	1.60	1.60	1.68	1.62	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.36	2.30	2.20	2.18	2.13	2.12	2.10	2.18	2.25	2.33
509	Miscellaneous durable goods	1.10	1.07	1.16	1.21	1.04	1.24	1.11	1.15	1.20	1.08	1.00	1.07	1.06
51	Nondurable goods .....	.85	.85	.85	.88	.88	.81	.84	.83	.80	.81	.83	.86	.86
511	Paper & paper products .....	.94	.94	.96	.98	.98	1.01	.98	.97	.92	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.81	1.77	1.55	1.58	1.65	1.66	1.65	1.79	1.83	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.06	2.06	1.98	2.10	2.11	2.06	1.95	1.94	1.96	2.02	1.98
514	Groceries & related products .....	.65	.64	.65	.67	.65	.61	.62	.65	.64	.67	.64	.63	.65
515	Farm-product raw materials .....	.71	.81	.77	.77	.84	.82	.80	.74	.67	.69	.73	.87	.82
516	Chemicals & allied products	1.22	1.18	1.11	1.06	1.08	1.25	1.23	1.19	1.26	1.25	1.18	1.20	1.15
517	Petroleum & petroleum products .....	.31	.32	.32	.33	.33	.28	.29	.30	.28	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.19	1.16	1.19	1.22	1.22	1.24	1.24	1.22	1.22	1.22
519	Misc. nondurable goods	1.06	1.05	1.09	1.13	1.23	.90	1.04	1.05	.97	.98	1.02	1.12	1.08

^rRevised.

^aPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988					1987						Total 5 mos.			
		Jan.	Feb.	Mar.	Apr.	May ^P	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	131,787	137,410	126,672	130,275	127,653	126,500	132,110	137,621	126,896	132,747	655,084	607,025
50	Durable goods	54,944	59,327	69,184	66,378	68,070	60,643	64,887	62,586	61,837	65,226	69,005	61,096	62,725	317,903	291,915
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,620	14,616	13,078	13,363	12,883	12,398	12,220	14,294	12,670	13,509	67,016	62,085
502	Furniture & home furnishings	1,947	2,178	2,298	2,135	2,196	1,884	1,955	2,038	2,084	2,501	2,469	2,123	2,090	10,754	9,442
503	Lumber & other construction mat. . .	3,971	4,448	5,527	5,773	5,800	5,212	6,057	6,115	5,795	6,021	5,979	4,998	4,583	25,519	22,812
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,479	1,643	1,767	1,665	1,582	1,445	1,628	1,712	1,837	1,827	2,011	1,850	1,705	8,136	8,233
505	Metals & minerals, ex. petroleum ..	5,304	5,384	6,855	5,969	5,801	4,756	5,140	4,985	5,169	5,481	5,343	4,786	5,315	29,313	23,861
506	Electrical goods	6,862	7,542	8,651	7,946	8,238	7,591	8,130	8,187	8,312	8,524	8,857	8,085	7,917	39,239	38,019
507	Hardware, plumbing & heating equipment	3,663	3,548	4,258	4,132	4,421	3,750	4,330	4,141	4,026	4,357	4,514	4,033	4,052	20,022	18,019
508	Machinery, equip. & supplies	14,711	15,716	18,601	17,360	18,014	15,957	16,818	16,188	15,888	17,197	17,126	15,103	16,361	84,402	77,493
509	Miscellaneous durable goods	5,722	6,375	7,225	6,778	7,402	6,970	7,466	6,537	6,328	7,098	8,412	7,448	7,193	33,502	31,951
51	Nondurable goods	63,808	65,660	72,964	65,409	69,340	66,029	65,388	65,067	64,663	66,884	68,616	65,800	70,022	337,181	315,110
511	Paper & paper products	3,946	4,047	4,600	4,029	4,114	3,319	3,742	3,696	3,789	3,974	4,255	4,022	4,270	20,736	16,993
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,066	2,809	2,871	2,683	2,815	2,749	2,630	2,892	2,806	2,675	2,922	14,293	13,466
513	Apparel, piece goods & notions	3,456	4,174	4,244	3,398	3,729	3,078	3,897	3,992	4,402	4,194	4,411	3,760	3,126	19,001	17,501
514	Groceries & related products	19,006	18,705	19,698	18,364	20,028	20,113	19,810	20,426	19,467	19,346	19,718	19,990	20,982	95,801	95,294
515	Farm-product raw materials	10,015	9,696	10,956	9,993	10,400	8,479	8,342	8,047	8,324	8,777	10,053	9,009	9,800	50,660	40,991
516	Chemicals & allied products	2,135	2,333	2,708	2,727	2,822	1,897	2,072	1,953	1,899	2,027	2,172	1,951	2,049	12,725	9,247
517	Petroleum & petroleum products	12,187	12,408	13,876	11,371	11,657	11,938	11,694	12,294	12,015	13,279	12,860	12,570	13,193	61,499	61,078
518	Beer, wine, & distilled beverages ..	2,659	2,962	3,619	3,230	3,637	3,722	3,826	3,768	3,560	3,564	3,630	3,467	4,254	16,107	16,249
519	Misc. nondurable goods	7,674	8,518	10,197	9,888	10,082	10,800	9,190	8,142	8,577	8,831	8,711	8,356	9,426	46,359	44,291
	Inventories, Total	168,783	171,742	173,184	174,543	172,438	157,255	158,425	157,211	154,651	158,624	163,892	164,406	165,819	(X)	(X)
50	Durable goods	109,662	111,920	113,888	115,597	114,659	105,611	105,703	105,052	103,382	104,729	107,150	106,314	107,257	(X)	(X)
501	Motor vehicles & auto. equip.	21,646	22,681	22,747	22,078	21,505	20,659	20,396	19,920	19,751	20,995	21,027	21,784	21,948	(X)	(X)
502	Furniture & home furnishings	4,154	4,140	4,194	4,379	4,358	3,972	3,975	4,093	4,034	4,165	4,062	4,027	4,011	(X)	(X)
503	Lumber & other construction mat. . .	6,903	6,891	7,123	7,294	7,176	5,864	5,974	6,043	5,740	5,937	5,899	5,779	6,091	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,069	4,027	4,185	4,203	4,242	4,080	4,164	4,526	4,438	4,431	4,378	4,132	3,973	(X)	(X)
505	Metals & minerals, ex. petroleum ..	7,848	7,892	8,237	8,683	9,001	7,274	7,461	7,107	6,771	6,858	7,149	7,056	7,583	(X)	(X)
506	Electrical goods	13,171	13,380	13,565	13,705	13,873	13,551	13,494	13,451	13,442	13,086	13,408	13,343	13,374	(X)	(X)
507	Hardware, plumbing & heating equipment	6,862	6,840	7,018	7,113	7,107	6,649	6,690	6,637	6,491	6,717	6,913	6,597	6,692	(X)	(X)
508	Machinery, equip. & supplies	37,907	38,884	39,235	40,343	40,168	35,019	35,354	35,206	34,892	34,800	36,524	36,624	36,064	(X)	(X)
509	Miscellaneous durable goods	7,102	7,185	7,584	7,799	7,729	8,543	8,185	8,069	7,825	7,731	7,790	7,972	7,521	(X)	(X)
51	Nondurable goods	59,121	59,822	59,296	58,946	57,779	51,644	52,722	52,159	51,269	53,895	56,742	58,092	58,562	(X)	(X)
511	Paper & paper products	4,016	3,955	4,120	4,107	4,114	3,553	3,565	3,573	3,495	3,540	3,771	3,750	3,850	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,068	5,361	4,993	4,229	4,240	4,419	4,390	4,602	4,947	4,942	5,076	(X)	(X)
513	Apparel, piece goods & notions	8,001	7,870	7,646	7,603	8,037	7,576	8,038	7,909	7,892	8,023	7,564	7,662	7,989	(X)	(X)
514	Groceries & related products	12,781	12,681	12,329	12,487	12,401	11,956	12,129	12,538	12,038	12,720	13,130	13,409	13,185	(X)	(X)
515	Farm-product raw materials	8,378	9,013	8,120	7,669	7,102	5,765	5,803	5,416	5,230	5,982	7,668	8,172	8,136	(X)	(X)
516	Chemicals & allied products	2,711	2,813	2,830	2,929	3,030	2,435	2,408	2,353	2,446	2,345	2,389	2,454	2,508	(X)	(X)
517	Petroleum & petroleum products	3,869	3,813	3,855	3,666	3,742	3,435	3,534	3,818	3,513	3,746	3,776	3,762	3,751	(X)	(X)
518	Beer, wine, & distilled beverages ..	3,869	4,070	4,142	4,211	4,007	4,333	4,391	4,207	4,188	4,373	4,545	4,431	3,884	(X)	(X)
519	Misc. nondurable goods	10,282	10,493	11,186	10,913	10,353	8,362	8,614	7,926	8,077	8,564	8,952	9,510	10,183	(X)	(X)
	Stock/sales ratios, Total	1.42	1.37	1.22	1.32	1.25	1.24	1.22	1.23	1.22	1.20	1.19	1.30	1.25	(X)	(X)
50	Durable goods	2.00	1.89	1.65	1.74	1.68	1.74	1.63	1.68	1.67	1.61	1.55	1.74	1.71	(X)	(X)
501	Motor vehicles & auto. equip.	1.92	1.82	1.62	1.51	1.47	1.58	1.53	1.57	1.59	1.72	1.47	1.72	1.62	(X)	(X)
502	Furniture & home furnishings	2.13	1.90	1.83	2.05	1.98	2.11	2.03	2.01	1.94	1.67	1.65	1.90	1.92	(X)	(X)
503	Lumber & other construction mat. . .	1.74	1.55	1.29	1.26	1.24	1.13	.99	.99	.99	.99	.99	1.16	1.33	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.75	2.45	2.37	2.52	2.68	2.82	2.56	2.64	2.41	2.43	2.18	2.23	2.33	(X)	(X)
505	Metals & minerals, ex. petroleum ..	1.48	1.47	1.20	1.45	1.55	1.53	1.45	1.43	1.31	1.25	1.34	1.47	1.43	(X)	(X)
506	Electrical goods	1.92	1.77	1.57	1.72	1.68	1.79	1.66	1.64	1.62	1.54	1.51	1.65	1.69	(X)	(X)
507	Hardware, plumbing & heating equipment	1.87	1.93	1.65	1.72	1.61	1.77	1.55	1.60	1.61	1.54	1.53	1.64	1.65	(X)	(X)
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.32	2.23	2.19	2.10	2.17	2.20	2.02	2.13	2.36	2.20	(X)	(X)
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	.98	1.23	1.10	1.23	1.24	1.09	.93	1.07	1.05	(X)	(X)
51	Nondurable goods .....	.93	.91	.81	.90	.83	.78	.81	.80	.79	.81	.83	.88	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.02	1.00	1.07	.95	.97	.92	.89	.89	.93	.90	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.91	1.74	1.58	1.51	1.61	1.67	1.59	1.76	1.85	1.74	(X)	(X)
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.24	2.16	2.46	2.06	1.98	1.79	1.91	1.71	2.04	2.56	(X)	(X)
514	Groceries & related products .....	.67	.68	.63	.68	.62	.69	.61	.61	.62	.66	.67	.67	.63	(X)	(X)
515	Farm-product raw materials .....	.84	.93	.74	.80	.68	.68	.70	.67	.63	.68	.76	.91	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.05	1.07	1.07	1.28	1.18	1.20	1.29	1.16	1.10	1.26	1.22	(X)	(X)
517	Petroleum & petroleum products .....	.32	.31	.28	.32	.32	.29	.30	.31	.29	.28	.29	.30	.28	(X)	(X)
518	Beer, wine, & distilled beverages ..	1.46	1.37	1.14	1.30	1.10	1.16	1.15	1.12	1.18	1.23	1.25	1.28	.91	(X)	(X)
519	Misc. nondurable goods	1.34	1.23	1.10	1.10	1.03	.77	.94	.97	.94	.97	1.03	1.14	1.08	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

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 ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		May 1988 from Apr. 1988	May 1988 from May 1987	5 months 1988 from 5 months 1987	May 1988 from Apr. 1988	May 1988 from May 1987	May 1988 from Apr. 1988	May 1988 from May 1987	May 1988 from Apr. 1988	May 1988 from May 1987
	Total	+4.3	+8.5	+7.9	-1.2	+9.7	+6	+5.9	+3	+9.7
50	Durable goods	+2.5	+12.2	+8.9	-8	+8.6	+7	+9.3	-3	+8.5
501	Motor vehicles & auto. equip. ....	.0	+11.8	+7.9	-2.6	+4.1	-1.9	+10.7	-1.2	+4.1
502	Furniture & home furnishings	+2.9	+16.6	+13.9	-5	+9.7	.0	+14.0	-1.7	+9.6
503	Lumber & other construction mat.	+5	+11.3	+11.9	-1.6	+22.4	-4.2	+8.0	+5	+22.3
504	Sporting, recreational, photographic & hobby goods, toys & supplies	-5.0	+9.5	-1.2	+9	+4.0	+3.1	+8.1	+2.1	+4.2
505	Metals & minerals, ex. petroleum	-2.8	+22.0	+22.8	+3.7	+23.7	-2.7	+19.7	+3.1	+23.6
506	Electrical goods	+3.7	+8.5	+3.2	+1.2	+2.4	+1.4	+5.8	+4	+2.3
507	Hardware, plumbing & heating equipment	+7.0	+17.9	+11.1	-1	+6.9	-.3	+13.2	+9	+6.9
508	Machinery, equip. & supplies	+3.8	+12.9	+8.9	-4	+14.7	+2.6	+9.5	+1	+14.7
509	Miscellaneous durable goods	+9.2	+6.2	+4.9	-7.3	-15.4	+8.0	+7	-7.0	-15.6
51	Nondurable goods	+6.0	+5.0	+7.0	-2.0	+11.9	+6	+2.8	+1.4	+12.2
511	Paper & paper products	+2.1	+24.0	+22.0	+2	+15.8	+1.8	+20.1	+1.4	+16.0
512	Drugs, drug proprietaries and druggists' sundries	+2.2	+7.0	+6.1	-6.9	+18.1	+3	+3.2	-1.9	+18.1
513	Apparel, piece goods & notions	+9.7	+21.2	+8.6	+5.7	+6.1	+3.8	+12.8	.0	+6.2
514	Groceries & related products	+9.1	-.4	+5	-7	+3.7	+3.1	-1.7	-7	+3.8
515	Farm-product raw materials	+8.4	+22.7	+23.6	-7.4	+23.2	-.8	+18.8	+8.7	+23.0
516	Chemicals & allied products	+3.5	+48.8	+37.6	+3.4	+24.4	+1.7	+44.2	+3.5	+23.8
517	Petroleum & petroleum products	+2.5	-2.4	+7	+2.1	+8.9	+1.4	-3.4	+3	+10.6
518	Beer, wine, & distilled beverages	+12.6	-2.3	-.9	-4.8	-7.5	-.5	-5.1	-2.6	-7.6
519	Misc. nondurable goods	+2.0	-6.6	+4.7	-5.1	+23.8	-6.0	-9.3	+2.7	+23.8

¹Adjusted 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*¹ 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

¹Executive 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 (± 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.4-1.7	1.5	1.4-1.8	1.5	0.3-0.6	0.5	0.9-1.4	1.0	1.4	0.9	0.8
50	Durable goods	1.8-2.1	1.9	1.7-2.0	1.8	0.6-0.9	0.7	1.1-1.6	1.4	1.8	1.2	1.2
501	Motor vehicles & auto. equip.	3.2-6.2	5.8	3.1-5.8	5.7	0.7-3.3	1.5	2.6-4.3	3.8	5.7	3.3	3.5
502	Furniture & home furnishings	6.9-8.9	7.5	6.3-8.3	7.0	2.7-4.3	3.7	5.0-7.2	5.7	7.4	5.1	4.4
503	Lumber & other construction mat.	4.5-6.6	5.0	4.1-6.6	5.2	1.8-3.7	2.0	2.9-5.3	3.6	4.7	3.9	2.5
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-7.7	6.6	5.4-8.6	6.3	2.2-7.2	3.5	5.2-9.0	6.3	5.4	7.0	4.8
505	Metals & minerals, ex. petroleum	4.2-5.2	4.8	4.0-5.3	4.4	1.0-1.8	1.5	3.1-4.2	3.9	4.6	3.0	2.9
506	Electrical goods	2.4-3.7	3.2	2.2-3.3	3.0	0.9-2.2	1.3	2.3-3.7	3.3	2.8	2.8	2.2
507	Hardware, plumbing & heating equipment ..	6.6-8.9	7.6	6.3-8.1	7.8	1.6-4.0	2.9	4.5-7.4	5.6	6.8	5.0	4.3
508	Machinery, equip. & supplies	2.8-3.9	3.2	2.0-3.6	2.9	1.8-2.4	1.9	2.5-4.0	2.8	2.8	1.7	2.5
509	Miscellaneous durable goods	3.6-5.2	4.4	3.4-4.7	3.8	2.0-2.3	2.0	4.0-5.1	4.6	4.1	2.4	3.8
51	Nondurable goods	2.8-3.5	3.0	2.6-3.4	3.2	0.5-1.1	0.8	1.6-3.1	2.0	2.9	1.6	1.8
511	Paper & paper products	4.9-6.3	5.4	5.0-5.9	5.2	1.1-2.1	1.3	3.1-5.2	4.2	5.2	3.3	3.4
512	Drugs, drug proprietaries and druggists' sundries	5.2-6.2	5.4	4.9-6.2	5.4	0.6-2.4	1.2	3.4-8.4	5.7	5.4	6.1	6.0
513	Apparel, piece goods & notions	7.9-10.6	9.0	7.5-10.6	8.2	1.9-6.0	3.0	6.2-10.2	7.4	8.1	4.3	5.8
514	Groceries & related products	5.3-6.8	6.4	5.1-7.0	6.7	0.7-2.3	1.3	3.3-6.6	3.8	6.2	3.8	3.6
515	Farm-product raw materials	6.1-7.3	6.6	5.6-6.4	5.9	1.8-3.5	3.3	4.0-6.9	5.6	5.8	4.7	4.6
516	Chemicals & allied products	8.8-7.8	8.5	5.8-8.0	6.2	1.2-2.9	2.1	3.3-5.3	4.9	5.9	4.8	2.9
517	Petroleum & petroleum products	4.4-5.4	4.8	4.4-5.0	4.7	0.5-2.0	1.1	2.5-3.3	3.1	4.8	3.3	2.4
518	Beer, wine, & distilled beverages	2.6-3.9	3.3	2.6-3.8	3.1	1.1-2.5	1.5	2.3-3.7	2.8	3.0	2.5	2.1
519	Misc. nondurable goods	3.9-6.4	4.6	3.9-5.9	4.4	1.4-3.5	1.9	3.4-5.6	4.3	4.6	3.9	3.6
	Inventories, Total	1.1-1.4	1.2	1.1-1.3	1.2	0.2-0.3	0.3	0.6-1.1	1.0	(X)	(X)	(X)
50	Durable goods	1.6-1.7	1.6	1.6-1.7	1.6	0.2-0.4	0.3	1.2-1.6	1.4	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.0-8.4	6.1	6.0-8.5	6.2	0.4-1.1	0.8	2.9-3.7	3.2	(X)	(X)	(X)
502	Furniture & home furnishings	8.8-11.7	11.0	8.8-11.6	11.0	0.7-1.7	1.1	5.6-8.0	7.6	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-5.6	5.4	4.2-5.7	5.1	1.0-1.6	1.2	4.3-6.2	5.6	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.7-8.2	7.3	6.7-8.1	7.2	0.6-3.0	1.3	4.9-7.8	5.6	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.2-6.3	5.7	5.5-6.1	5.7	0.6-1.6	1.0	2.5-4.2	3.2	(X)	(X)	(X)
506	Electrical goods	2.4-3.5	2.9	2.3-3.3	2.9	0.3-1.1	0.4	2.2-2.7	2.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	4.1-4.9	4.6	4.1-5.0	4.5	0.7-1.3	1.0	2.4-3.5	2.6	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.8-4.0	3.5	2.8-3.8	3.4	0.5-0.9	0.7	2.7-3.7	3.2	(X)	(X)	(X)
509	Miscellaneous durable goods	8.3-9.0	8.7	8.2-8.8	8.5	0.7-1.3	0.9	6.8-8.6	7.3	(X)	(X)	(X)
51	Nondurable goods	2.0-3.1	2.4	1.9-2.8	2.2	0.5-0.8	0.6	1.6-2.6	2.1	(X)	(X)	(X)
511	Paper & paper products	5.4-6.3	5.8	5.2-6.2	5.7	0.5-1.3	0.7	2.4-2.9	2.7	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.0-7.2	6.3	5.8-6.8	6.4	0.5-1.3	0.9	3.5-5.4	4.1	(X)	(X)	(X)
513	Apparel, piece goods & notions	4.9-6.9	6.5	5.2-6.5	6.1	0.9-1.8	1.3	5.7-8.8	7.6	(X)	(X)	(X)
514	Groceries & related products	4.7-6.2	5.4	4.5-5.8	5.2	0.5-1.4	0.6	2.9-4.2	3.5	(X)	(X)	(X)
515	Farm-product raw materials	7.0-8.3	7.4	6.8-7.7	7.4	0.7-3.8	1.3	6.2-7.5	6.7	(X)	(X)	(X)
516	Chemicals & allied products	6.9-8.8	7.7	7.4-8.6	7.6	1.0-2.1	1.3	4.3-8.4	5.4	(X)	(X)	(X)
517	Petroleum & petroleum products	3.8-5.5	4.8	3.4-5.2	4.3	1.1-1.6	1.2	3.3-4.1	3.8	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.4-5.6	4.8	4.3-5.7	4.7	0.6-1.8	0.9	3.1-9.2	4.8	(X)	(X)	(X)
519	Misc. nondurable goods	6.5-9.4	8.2	7.3-9.3	8.1	1.0-2.6	1.5	4.8-7.7	5.2	(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 1987 through May 1988.

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	1987								1988					
		May ¹	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ¹	May ¹	June
	Sales, ¹ Total .....	.992	1.032	.996	.978	1.011	1.041	.987	1.038	.918	.952	1.068	.989	1.022	1.032
50	Durable goods .....	.986	1.055	1.005	.983	1.031	1.073	.980	1.013	.880	.931	1.064	1.005	1.014	1.055
501	Motor vehicles & auto. equip.	1.029	1.071	1.026	.959	.947	1.081	.976	1.045	.896	.922	1.049	1.020	1.039	1.086
502	Furniture & home furnishings ....	.973	1.044	1.015	1.008	1.065	1.134	.992	.973	.859	.939	1.015	.968	.995	1.050
503	Lumber & other construction mat.	1.023	1.126	1.114	1.091	1.096	1.108	.980	.884	.779	.829	.988	1.005	1.054	1.140
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.876	.954	.988	.989	1.071	1.186	1.122	1.041	.855	.958	1.023	.962	.887	.974
505	Metals & minerals, ex. petroleum .....	.968	1.030	.986	.994	1.058	1.012	.915	.978	.949	.983	1.152	.987	.986	1.055
506	Electrical goods .....	.930	1.014	.994	1.006	1.072	1.112	1.028	1.054	.887	.955	1.047	.933	.954	1.014
507	Hardware, plumbing & heating equipment	1.023	1.085	1.038	.997	1.021	1.079	.973	.978	.888	.933	1.018	.992	1.065	1.082
508	Machinery, equip. & supplies	1.006	1.048	.984	.971	1.029	1.027	.945	1.050	.888	.941	1.106	1.025	1.037	1.043
509	Miscellaneous durable goods	1.016	1.016	.957	.995	1.011	1.097	1.030	.970	.844	.915	1.073	1.059	1.071	1.053
51	Nondurable goods	1.011	1.013	.987	.965	.992	1.012	.994	1.059	.952	.969	1.066	.975	1.039	1.010
511	Paper & paper products .....	.947	1.034	.995	1.005	1.005	1.047	.969	1.018	.938	.973	1.088	.974	.977	1.036
512	Drugs, drug proprietaries and druggists' sundries .....	.960	1.014	.988	.957	1.040	1.038	.976	1.041	.976	.973	1.062	.977	.995	1.023
513	Apparel, piece goods & notions .....	.865	1.057	1.108	1.148	1.055	1.115	.936	.762	.863	1.076	1.091	.879	.929	1.025
514	Groceries & related products	1.022	1.017	1.038	.997	1.002	1.004	.977	1.039	.958	.949	1.027	.978	1.035	1.030
515	Farm-product raw materials	1.010	.949	.875	.852	.880	1.024	1.111	1.177	1.035	1.015	1.118	.954	1.043	.937
516	Chemicals & allied products	1.002	1.072	1.001	.977	1.037	1.064	.954	.921	.956	.988	1.063	1.016	1.034	1.079
517	Petroleum & petroleum products .....	.948	.947	.938	.905	1.006	1.012	1.012	1.114	1.059	1.015	1.104	.948	.958	.952
518	Beer, wine, & distilled beverages	1.029	1.101	1.098	1.039	1.019	1.033	.996	1.216	.741	.813	1.008	.937	1.060	1.120
519	Misc. nondurable goods	1.145	1.061	1.007	.955	.959	.964	.955	1.029	.818	.906	1.095	1.087	1.179	1.065
	Inventories, ¹ Total .....	.991	.993	.991	.986	.996	1.010	1.008	1.003	1.004	1.006	1.008	1.006	.990	.994
50	Durable goods	1.000	1.007	1.006	1.003	1.011	1.003	.998	.992	.986	.994	1.000	1.007	1.000	1.007
501	Motor vehicles & auto. equip. ....	.987	1.007	.976	.963	1.020	1.009	1.016	1.016	.996	1.004	1.008	1.001	.987	1.009
502	Furniture & home furnishings	1.001	.993	.995	1.014	1.008	.995	.988	1.010	1.018	1.003	.993	.990	1.002	.993
503	Lumber & other construction mat.	1.008	1.039	1.015	1.007	.999	.982	.986	.982	.947	.984	1.015	1.031	1.009	1.045
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.983	1.002	1.029	1.017	1.019	1.016	.986	.971	.982	.986	.999	.992	.981	1.002
505	Metals & minerals, ex. petroleum	1.009	1.018	1.011	1.001	.990	.980	.972	1.014	1.021	1.009	1.004	1.004	1.010	1.017
506	Electrical goods .....	.997	1.000	1.023	1.020	1.037	1.020	1.005	.983	.968	.976	.989	.990	.998	1.000
507	Hardware, plumbing & heating equipment	1.025	1.008	1.010	1.003	.986	.982	.981	.963	.976	.998	1.026	1.035	1.025	1.008
508	Machinery, equip. & supplies	1.005	1.011	1.005	1.005	.994	1.005	.992	.995	.991	.996	1.003	1.010	1.005	1.011
509	Miscellaneous durable goods	1.005	1.005	1.027	1.024	1.024	1.015	1.027	.958	.955	.967	.970	1.011	1.008	1.009
51	Nondurable goods .....	.970	.971	.962	.949	.973	1.018	1.031	1.032	1.038	1.032	1.021	1.002	.968	.972
511	Paper & paper products	1.001	1.003	.996	1.010	.973	.984	.998	1.005	1.013	1.010	1.016	1.011	.999	1.003
512	Drugs, drug proprietaries and druggists' sundries .....	.976	.966	.965	.961	1.000	1.025	.984	.997	1.032	1.038	1.031	1.028	.976	.965
513	Apparel, piece goods & notions	1.013	1.033	1.065	1.057	1.038	.976	.942	.983	.991	.978	.953	.957	1.012	1.030
514	Groceries & related products ....	.991	.999	.980	.965	.989	1.038	1.043	1.012	.990	1.006	.987	.990	.990	.998
515	Farm-product raw materials .....	.842	.821	.797	.794	.873	1.076	1.164	1.187	1.228	1.168	1.078	.989	.843	.824
516	Chemicals & allied products	1.027	1.013	1.012	1.001	.956	.995	1.001	.983	.999	1.012	.998	1.032	1.032	1.014
517	Petroleum & petroleum products .....	.960	.993	.979	.938	1.011	1.022	1.043	1.103	1.091	.962	.970	.929	.946	.991
518	Beer, wine, & distilled beverages	1.005	1.034	1.007	.985	1.006	1.056	1.046	.907	.943	.980	1.011	1.030	1.006	1.034
519	Misc. nondurable goods .....	.983	.960	.931	.923	.950	.973	.974	1.025	1.034	1.064	1.106	1.064	.983	.959

¹Revised

¹Adjusted 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 1988

BW88-06
Issued August 1988

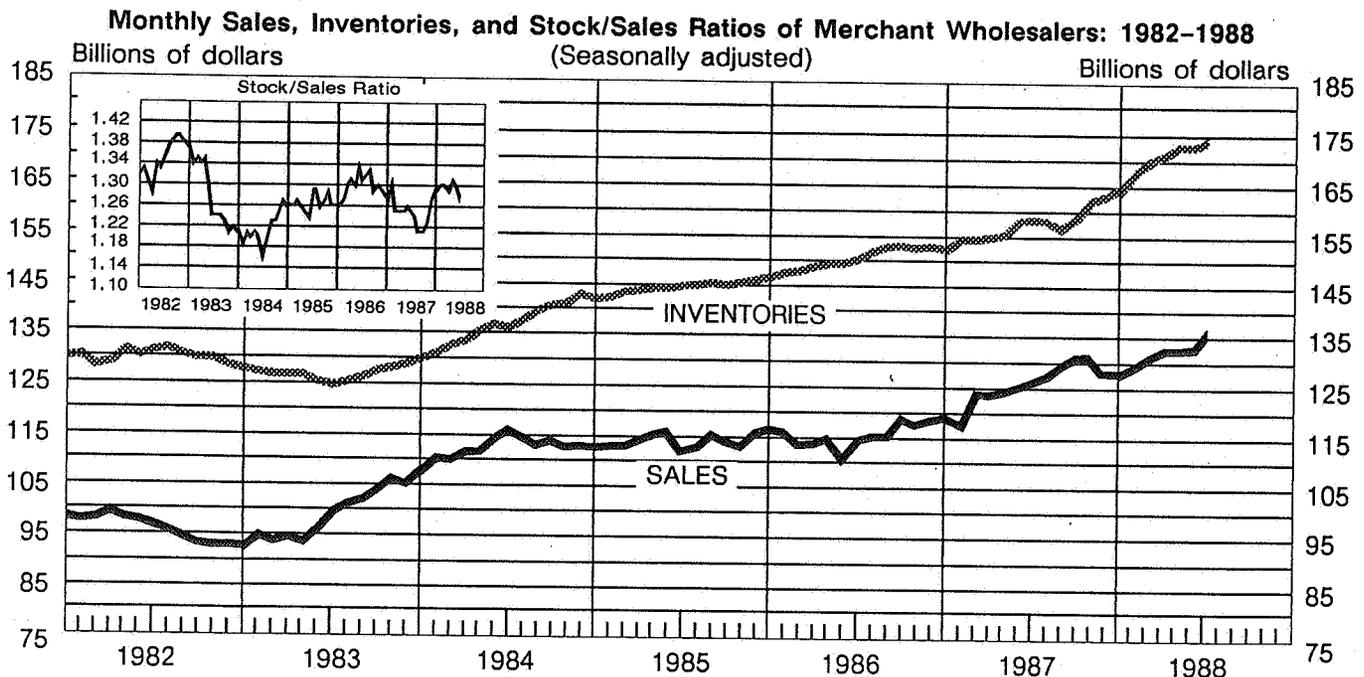
Sales. June 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$136.6 billion, up 2.5 percent (± 0.8 percent) from the revised May level and up 8.0 percent (± 1.7 percent) from a year ago. The May preliminary estimate was revised downward by \$0.6 billion or about 0.4 percent. June sales of durable goods increased 0.7 percent (± 1.2 percent) from May, and were 7.3 percent (± 1.9 percent) above a year ago. June sales of nondurable goods were up 4.3 percent (± 1.4 percent) from May and were 8.6 percent (± 3.1 percent) above June 1987. Monthly gains in the nondurable goods group were as follows: sales of farm-product raw materials were up 7.9 percent; apparel, piece goods, and notions increased 7.1 percent; and sales of groceries and related products increased 3.6 percent to \$20,149 million.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$174.7 billion at the end of June, up 0.8 percent (± 0.4 percent) from the revised May level and

up 10.1 percent (± 1.7 percent) from a year ago. The May preliminary estimate was revised downward by \$0.6 billion or about 0.3 percent. Inventories of durable goods wholesalers decreased 0.8 percent (± 0.6 percent) from the May level but were 7.5 percent (± 2.1 percent) above a year ago. Motor vehicles and automotive equipment inventories decreased 3.3 percent from the May level to \$21,226 million. Inventories of nondurable goods wholesalers were up 3.8 percent (± 0.8 percent) from the May level and were 15.3 percent (± 4.7 percent) from June 1987. Monthly increases in the stocks of nondurable goods were as follows: inventories of farm-product raw materials increased 19.2 percent to \$10,021 million and miscellaneous nondurable goods increased 5.5 percent to \$10,972 million.

Stock/Sales Ratio. The June stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28, down from the May ratio of 1.30. 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 Wholesale Trade for July is scheduled to be released September 7, 1988 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988						1987						
		Jan.	Feb.	Mar.	Apr.	May	June ^P	Jun. ^F	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	129,720	131,622	132,885	133,015	133,264	136,565	126,469	127,705	129,662	131,437	131,743	128,501	128,332
50	Durable goods	62,486	63,795	64,881	66,081	65,933	66,364	61,823	62,155	62,387	63,584	64,265	62,325	61,983
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,333	13,913	13,949	12,477	12,362	12,928	12,904	13,223	12,982	12,927
502	Furniture & home furnishings	2,267	2,319	2,264	2,206	2,137	2,103	1,885	2,008	2,067	2,348	2,177	2,140	2,148
503	Lumber & other construction mat.	5,098	5,366	5,594	5,744	5,408	5,393	5,408	5,489	5,312	5,494	5,396	5,100	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,731	1,765	1,765	1,715	1,733	1,857	1,708	1,696	1,649	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	6,048	5,760	5,875	5,000	5,056	5,200	5,181	5,280	5,231	5,435
506	Electrical goods	7,736	7,897	8,263	8,517	8,517	8,540	8,018	8,236	8,262	7,951	7,965	7,865	7,511
507	Hardware, plumbing & heating equipment ..	4,125	3,803	4,183	4,165	4,165	4,327	3,962	3,989	4,038	4,267	4,184	4,145	4,143
508	Machinery, equip. & supplies	16,566	16,701	16,818	16,937	17,316	17,659	16,002	16,451	16,363	16,712	16,676	15,982	15,582
509	Miscellaneous durable goods	6,780	6,967	6,733	6,400	6,952	6,753	7,356	6,831	6,360	7,021	7,668	7,231	7,415
51	Non-durable goods	67,234	67,827	68,004	66,934	67,331	70,201	64,646	65,550	67,275	67,853	67,478	66,176	66,349
511	Paper & paper products	4,207	4,159	4,228	4,137	4,194	4,289	3,626	3,715	3,770	3,954	4,064	4,151	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,887	2,875	2,946	2,998	2,776	2,782	2,748	2,781	2,703	2,741	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,866	4,051	4,339	3,673	3,603	3,834	3,975	3,956	4,017	4,102
514	Groceries & related products	19,839	19,710	19,180	18,777	19,445	20,149	19,498	19,678	19,526	19,307	19,639	20,461	20,194
515	Farm-product raw materials	9,676	9,553	9,800	10,056	10,108	10,907	8,708	9,197	9,770	9,974	9,817	8,109	8,326
516	Chemicals & allied products	2,233	2,361	2,548	2,684	2,788	2,957	1,910	1,951	1,944	1,955	2,041	2,045	2,225
517	Petroleum & petroleum products	11,508	12,225	12,569	11,995	12,211	12,507	12,335	13,107	13,276	13,200	12,708	12,421	11,843
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,447	3,437	3,494	3,475	3,432	3,426	3,498	3,514	3,481	3,498
519	Misc. non-durable goods	9,381	9,402	9,312	9,097	8,151	8,581	8,645	8,085	8,981	9,209	9,036	8,760	9,160
	Inventories, Total	168,388	170,632	171,732	173,530	173,418	174,747	168,686	168,611	167,072	169,135	162,517	163,353	165,097
50	Durable goods	111,259	112,661	113,694	114,812	113,666	112,711	104,871	104,514	103,324	103,933	106,734	106,503	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,566	22,056	21,955	21,226	20,254	20,410	20,510	20,583	20,839	21,441	21,602
502	Furniture & home furnishings	4,081	4,128	4,224	4,423	4,295	4,277	4,019	4,114	3,978	4,132	4,082	4,076	3,971
503	Lumber & other construction mat.	7,289	7,003	7,018	7,075	6,855	6,632	5,755	5,954	5,700	5,943	6,007	5,861	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,237	4,261	4,176	4,172	4,398	4,382	4,348	4,309	4,191	4,092
505	Metals & minerals, ex. petroleum	7,687	7,822	8,204	8,648	8,559	8,544	7,351	7,030	6,764	6,927	7,255	7,259	7,478
506	Electrical goods	13,606	13,709	13,716	13,843	13,783	13,748	13,508	13,149	13,178	12,610	13,145	13,277	13,605
507	Hardware, plumbing & heating equipment ..	7,031	6,854	6,840	6,872	6,827	6,772	6,643	6,571	6,472	6,812	7,040	6,725	6,949
508	Machinery, equip. & supplies	38,251	39,040	39,118	39,944	39,786	39,815	35,039	35,031	34,718	35,019	36,342	35,911	36,245
509	Miscellaneous durable goods	7,437	7,430	7,819	7,714	7,345	7,521	8,130	7,857	7,642	7,550	7,675	7,762	7,851
51	Non-durable goods	57,129	57,971	58,038	58,718	59,752	62,036	63,815	64,097	63,748	65,202	65,783	66,850	67,101
511	Paper & paper products	3,964	3,916	4,055	4,062	4,023	4,073	3,554	3,587	3,460	3,638	3,832	3,758	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,916	5,215	5,145	5,197	4,412	4,579	4,568	4,602	4,826	5,022	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,023	7,945	8,327	8,436	7,670	7,426	7,466	7,729	7,750	8,134	8,127
514	Groceries & related products	12,910	12,605	12,491	12,613	12,499	12,516	12,178	12,794	12,475	12,861	12,649	12,856	13,029
515	Farm-product raw materials	6,822	7,717	7,532	7,754	8,410	10,021	6,933	6,795	6,587	6,852	7,126	7,021	6,854
516	Chemicals & allied products	2,714	2,780	2,836	2,838	3,032	3,104	2,347	2,325	2,444	2,453	2,401	2,452	2,551
517	Petroleum & petroleum products	3,546	3,964	3,974	3,946	3,930	3,815	3,632	3,900	3,745	3,705	3,695	3,607	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,088	3,983	3,902	4,263	4,178	4,252	4,347	4,304	4,236	4,282
519	Misc. non-durable goods	9,944	9,862	10,114	10,257	10,403	10,972	8,826	8,513	8,751	9,015	9,200	9,764	9,935
	Stock/sales ratios, Total	1.30	1.30	1.29	1.30	1.30	1.28	1.25	1.24	1.21	1.21	1.23	1.27	1.29
50	Durable goods	1.78	1.77	1.75	1.74	1.72	1.70	1.70	1.68	1.66	1.63	1.66	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.67	1.69	1.54	1.58	1.52	1.62	1.65	1.59	1.60	1.58	1.65	1.67
502	Furniture & home furnishings	1.80	1.78	1.87	2.00	2.01	2.03	2.13	2.05	1.92	1.76	1.88	1.90	1.85
503	Lumber & other construction mat.	1.43	1.31	1.25	1.23	1.27	1.23	1.06	1.08	1.07	1.08	1.11	1.15	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.45	2.41	2.37	2.43	2.54	2.35	2.55	2.54	2.54	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.49	1.45	1.47	1.39	1.30	1.34	1.38	1.39	1.38
506	Electrical goods	1.76	1.74	1.66	1.63	1.62	1.61	1.68	1.60	1.60	1.59	1.65	1.69	1.81
507	Hardware, plumbing & heating equipment ..	1.70	1.80	1.64	1.65	1.64	1.57	1.68	1.65	1.60	1.60	1.68	1.62	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.36	2.30	2.25	2.19	2.13	2.12	2.10	2.18	2.25	2.33
509	Miscellaneous durable goods	1.10	1.07	1.16	1.21	1.06	1.11	1.11	1.15	1.20	1.08	1.00	1.07	1.06
51	Non-durable goods .....	.85	.85	.85	.88	.89	.88	.83	.83	.80	.81	.83	.86	.86
511	Paper & paper products .....	.94	.94	.96	.98	.96	.95	.98	.97	.92	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.81	1.75	1.73	1.59	1.65	1.66	1.65	1.79	1.83	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.06	2.06	2.06	1.94	2.09	2.06	1.95	1.94	1.96	2.02	1.98
514	Groceries & related products .....	.65	.64	.65	.67	.64	.62	.62	.65	.64	.67	.64	.63	.65
515	Farm-product raw materials .....	.71	.81	.77	.77	.83	.92	.80	.74	.67	.69	.73	.87	.82
516	Chemicals & allied products	1.22	1.18	1.11	1.06	1.09	1.05	1.23	1.19	1.26	1.25	1.18	1.20	1.15
517	Petroleum & petroleum products .....	.31	.32	.32	.33	.32	.31	.29	.30	.28	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.19	1.16	1.12	1.23	1.22	1.24	1.24	1.22	1.22	1.22
519	Misc. non-durable goods	1.06	1.05	1.09	1.13	1.28	1.28	1.02	1.05	.97	.98	1.02	1.12	1.08

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988						1987						Total 6 mos.		
		Jan.	Feb.	Mar.	Apr.	May	June ^P	Jun.	July	Aug.	Sept.	Oct.	Nov.	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	131,787	136,044	141,639	130,275	127,653	126,500	132,110	137,621	126,896	132,747	795,357	737,300
50	Durable goods	54,944	59,327	69,184	66,378	67,242	70,284	64,887	62,586	61,837	65,226	69,005	61,096	62,725	387,359	356,802
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,620	14,456	15,023	13,363	12,683	12,398	12,220	14,294	12,670	13,509	81,879	75,448
502	Furniture & home furnishings	1,947	2,178	2,298	2,135	2,124	2,183	1,955	2,038	2,084	2,501	2,469	2,123	2,090	12,865	11,397
503	Lumber & other construction mat.	3,971	4,448	5,527	5,773	5,727	6,089	6,057	6,115	5,795	6,021	5,979	4,988	4,583	31,535	28,869
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,479	1,643	1,767	1,665	1,546	1,707	1,628	1,712	1,837	1,827	2,011	1,850	1,705	9,807	9,861
505	Metals & minerals, ex. petroleum	5,304	5,384	6,855	5,969	5,668	6,181	5,140	4,985	5,169	5,481	5,343	4,788	5,315	35,361	29,001
506	Electrical goods	6,862	7,542	8,651	7,946	8,108	8,634	8,130	8,187	8,312	8,524	8,857	8,085	7,917	47,743	46,149
507	Hardware, plumbing & heating equipment	3,663	3,548	4,258	4,132	4,311	4,773	4,330	4,141	4,026	4,357	4,514	4,033	4,052	24,685	22,349
508	Machinery, equip. & supplies	14,711	15,716	18,601	17,360	17,905	18,489	16,818	16,188	15,888	17,197	17,126	15,103	16,361	102,782	94,311
509	Miscellaneous durable goods	5,722	6,375	7,225	6,778	7,397	7,205	7,466	8,328	7,098	8,412	7,448	7,448	7,193	40,702	39,417
51	Nondurable goods	63,808	65,660	72,964	65,409	68,802	71,355	65,388	65,067	64,663	66,884	68,616	65,800	70,022	407,998	380,498
511	Paper & paper products	3,946	4,047	4,600	4,029	4,072	4,440	3,742	3,896	3,789	3,974	4,255	4,022	4,270	25,134	20,735
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,066	2,809	2,925	3,058	2,815	2,749	2,630	2,892	2,806	2,675	2,922	17,405	16,281
513	Apparel, piece goods & notions	3,456	4,174	4,244	3,398	3,707	4,517	3,897	3,992	4,402	4,194	4,411	3,760	3,126	23,498	21,588
514	Groceries & related products	19,006	18,705	19,698	18,364	20,087	20,814	19,810	20,426	19,467	19,346	19,718	19,990	20,982	116,674	115,104
515	Farm-product raw materials	10,015	9,696	10,956	9,593	10,482	10,416	8,342	8,047	8,324	8,777	10,053	9,009	9,800	61,158	49,333
516	Chemicals & allied products	2,135	2,333	2,708	2,727	2,866	3,232	2,072	1,953	1,899	2,027	2,172	1,951	2,049	16,001	11,319
517	Petroleum & petroleum products	12,187	12,408	13,876	11,371	11,686	11,894	11,694	12,294	12,015	13,279	12,860	12,570	13,193	73,422	72,772
518	Beer, wine, & distilled beverages	2,659	2,962	3,619	3,230	3,636	3,948	3,826	3,768	3,560	3,564	3,630	3,467	4,254	20,054	20,075
519	Misc. nondurable goods	7,674	8,518	10,197	9,888	9,341	9,036	9,190	8,142	8,577	8,361	8,711	8,356	9,426	54,654	53,481
	Inventories, Total	168,783	171,742	173,184	174,543	171,978	174,133	158,425	157,211	154,651	158,624	163,892	164,406	165,819	(X)	(X)
50	Durable goods	109,662	111,920	113,888	115,597	114,132	113,622	105,703	105,052	103,382	104,729	107,150	106,314	107,257	(X)	(X)
501	Motor vehicles & auto. equip.	21,646	22,681	22,747	22,078	21,845	21,375	20,396	19,920	19,751	20,995	21,027	21,784	21,948	(X)	(X)
502	Furniture & home furnishings	4,154	4,140	4,194	4,379	4,325	4,213	3,975	4,053	4,034	4,165	4,062	4,027	4,011	(X)	(X)
503	Lumber & other construction mat.	6,903	6,891	7,123	7,294	6,930	6,904	5,974	6,043	5,740	5,937	5,899	5,779	6,091	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,069	4,027	4,185	4,203	4,184	4,168	4,164	4,526	4,436	4,431	4,378	4,132	3,973	(X)	(X)
505	Metals & minerals, ex. petroleum	7,848	7,892	8,237	8,683	8,679	8,672	7,461	7,107	6,771	6,858	7,149	7,056	7,593	(X)	(X)
506	Electrical goods	13,171	13,380	13,565	13,705	13,742	13,734	13,494	13,451	13,442	13,086	13,408	13,343	13,374	(X)	(X)
507	Hardware, plumbing & heating equipment	6,862	6,840	7,018	7,113	6,984	6,833	6,690	6,637	6,491	6,717	6,913	6,597	6,692	(X)	(X)
508	Machinery, equip. & supplies	37,907	38,884	39,235	40,343	40,025	40,134	35,354	35,206	34,892	34,809	36,524	35,624	36,064	(X)	(X)
509	Miscellaneous durable goods	7,102	7,185	7,584	7,799	7,418	7,589	8,195	8,069	7,825	7,731	7,790	7,972	7,521	(X)	(X)
51	Nondurable goods	59,121	59,822	59,296	58,946	57,846	60,511	52,722	52,159	51,269	53,895	56,742	58,092	58,562	(X)	(X)
511	Paper & paper products	4,016	3,955	4,120	4,107	3,999	4,081	3,565	3,573	3,495	3,540	3,771	3,750	3,850	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,068	5,361	5,001	4,984	4,240	4,419	4,390	4,602	4,947	4,942	5,076	(X)	(X)
513	Apparel, piece goods & notions	8,001	7,870	7,646	7,603	8,452	8,875	8,038	7,909	7,892	8,023	7,564	7,662	7,989	(X)	(X)
514	Groceries & related products	12,781	12,681	12,329	12,487	12,337	12,466	12,129	12,538	12,038	12,720	13,130	13,409	13,185	(X)	(X)
515	Farm-product raw materials	8,378	8,013	8,120	7,669	7,064	8,468	5,803	5,416	5,230	5,982	7,668	8,172	8,136	(X)	(X)
516	Chemicals & allied products	2,711	2,813	2,930	2,929	3,138	3,191	2,408	2,353	2,446	2,345	2,389	2,454	2,508	(X)	(X)
517	Petroleum & petroleum products	3,969	3,813	3,955	3,666	3,753	3,674	3,534	3,818	3,513	3,746	3,776	3,762	3,751	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	4,070	4,142	4,211	4,011	4,019	4,391	4,207	4,188	4,373	4,545	4,431	3,884	(X)	(X)
519	Misc. nondurable goods	10,282	10,493	11,186	10,913	10,091	10,753	8,614	7,926	8,077	8,564	8,952	9,510	10,183	(X)	(X)
	Stock/sales ratios, Total	1.42	1.37	1.22	1.32	1.26	1.23	1.22	1.23	1.22	1.20	1.19	1.30	1.25	(X)	(X)
50	Durable goods	2.00	1.89	1.65	1.74	1.70	1.62	1.63	1.68	1.67	1.61	1.55	1.74	1.71	(X)	(X)
501	Motor vehicles & auto. equip.	1.92	1.82	1.62	1.51	1.51	1.42	1.53	1.57	1.59	1.72	1.47	1.72	1.62	(X)	(X)
502	Furniture & home furnishings	2.13	1.90	1.83	2.05	2.04	1.93	2.03	2.01	1.94	1.67	1.65	1.90	1.92	(X)	(X)
503	Lumber & other construction mat.	1.74	1.55	1.29	1.26	1.21	1.13	.99	.99	.99	.99	.99	1.16	1.33	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.75	2.45	2.37	2.52	2.71	2.44	2.56	2.64	2.41	2.43	2.18	2.23	2.33	(X)	(X)
505	Metals & minerals, ex. petroleum	1.48	1.47	1.20	1.45	1.53	1.40	1.45	1.43	1.31	1.25	1.34	1.47	1.43	(X)	(X)
506	Electrical goods	1.92	1.77	1.57	1.72	1.69	1.59	1.66	1.64	1.62	1.54	1.51	1.65	1.69	(X)	(X)
507	Hardware, plumbing & heating equipment	1.87	1.93	1.65	1.72	1.62	1.43	1.55	1.60	1.61	1.54	1.53	1.64	1.65	(X)	(X)
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.32	2.24	2.17	2.10	2.17	2.20	2.02	2.13	2.36	2.20	(X)	(X)
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	1.00	1.05	1.10	1.23	1.24	1.09	.93	1.07	1.05	(X)	(X)
51	Nondurable goods .....	.93	.91	.81	.90	.84	.85	.81	.80	.79	.81	.83	.88	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.02	.98	.92	.95	.97	.92	.89	.89	.93	.90	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.91	1.71	1.63	1.51	1.61	1.67	1.59	1.76	1.85	1.74	(X)	(X)
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.24	2.28	1.96	2.06	1.98	1.79	1.91	1.71	2.04	2.56	(X)	(X)
514	Groceries & related products .....	.67	.68	.63	.68	.61	.60	.61	.61	.62	.66	.67	.63	.63	(X)	(X)
515	Farm-product raw materials .....	.84	.93	.74	.80	.67	.81	.70	.67	.63	.68	.76	.91	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.05	1.07	1.09	.99	1.16	1.20	1.29	1.16	1.10	1.26	1.22	(X)	(X)
517	Petroleum & petroleum products .....	.32	.31	.28	.32	.32	.31	.30	.31	.29	.28	.29	.30	.28	(X)	(X)
518	Beer, wine, & distilled beverages	1.46	1.37	1.14	1.30	1.10	1.02	1.15	1.12	1.18	1.23	1.25	1.28	.91	(X)	(X)
519	Misc. nondurable goods	1.34	1.23	1.10	1.10	1.08	1.19	.94	.97	.94	.97	1.03	1.14	1.08	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

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 ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Jun. 1988 from May 1988	Jun. 1988 from Jun. 1987	6 months 1988 from 6 months 1987	Jun. 1988 from May 1988	Jun. 1988 from Jun. 1987	Jun. 1988 from May 1988	Jun. 1988 from Jun. 1987	Jun. 1988 from May 1988	Jun. 1988 from Jun. 1987
	Total	+4.1	+8.7	+7.9	+1.3	+9.9	+2.5	+8.0	+8	+10.1
50	Durable goods	+4.5	+8.3	+8.6	-4	+7.5	+7	+7.3	-8	+7.5
501	Motor vehicles & auto. equip.	+3.9	+12.4	+8.5	-2.2	+4.8	+3	+11.8	-3.3	+4.8
502	Furniture & home furnishings	+2.8	+11.7	+12.9	-2.6	+6.0	-1.6	+11.6	-4	+6.4
503	Lumber & other construction mat.	+6.3	+5	+9.2	-4	+15.6	-3	-3	-3.3	+15.2
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+10.4	+4.9	-5	-4	+1	.0	+2.9	-2.0	+1
505	Metals & minerals, ex. petroleum	+9.1	+20.3	+21.9	-1	+16.2	+2.0	+17.5	-2	+16.2
506	Electrical goods	+6.5	+6.2	+3.5	-1	+1.8	+3	+6.5	-3	+1.8
507	Hardware, plumbing & heating equipment	+10.7	+10.2	+10.5	-2.2	+2.1	+3.9	+9.2	-8	+1.9
508	Machinery, equip. & supplies	+3.3	+9.9	+9.0	+3	+13.5	+2.0	+10.4	+1	+13.6
509	Miscellaneous durable goods	-2.6	-3.5	+3.3	+2.3	-7.4	-2.9	-8.2	+2.4	-7.5
51	Nondurable goods	+3.7	+9.1	+7.2	+4.6	+14.8	+4.3	+8.6	+3.8	+15.3
511	Paper & paper products	+9.0	+18.7	+21.2	+2.1	+14.5	+1.8	+17.7	+1.2	+14.6
512	Drugs, drug proprietaries and druggists' sundries	+4.5	+8.6	+6.9	-3	+17.5	+1.8	+8.0	+1.0	+17.8
513	Apparel, piece goods & notions	+21.9	+15.9	+9.8	+5.0	+10.4	+7.1	+18.1	+1.3	+10.0
514	Groceries & related products	+3.6	+5.1	+1.4	+1.0	+2.8	+3.6	+3.3	+1	+2.8
515	Farm-product raw materials	-6	+24.9	+24.0	+19.9	+45.9	+7.9	+25.3	+19.2	+44.5
516	Chemicals & allied products	+12.8	+56.0	+41.4	+1.7	+32.5	+6.1	+54.8	+2.4	+32.3
517	Petroleum & petroleum products	+1.8	+1.7	+9	-2.1	+4.0	+2.4	+1.4	-2.9	+5.0
518	Beer, wine, & distilled beverages	+8.6	+3.2	-1	+2	-8.5	+1.7	+5	-2.0	-8.5
519	Misc. nondurable goods	-3.3	-1.7	+2.2	+6.6	+24.8	+5.3	-7	+5.5	+24.3

¹Adjusted 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*¹ 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.

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

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 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.4-1.7	1.5	1.4-1.8	1.5	0.4-0.6	0.5	0.9-1.4	1.0	1.5	0.9	0.8
50	Durable goods	1.8-2.1	1.9	1.7-2.0	1.8	0.6-0.9	0.7	1.1-1.6	1.3	1.7	1.2	1.1
501	Motor vehicles & auto. equip.	5.3-6.2	5.8	3.1-5.8	5.7	0.7-3.3	1.5	3.5-4.3	3.8	5.5	3.1	3.4
502	Furniture & home furnishings	7.1-8.9	7.6	6.5-8.3	7.3	1.2-4.0	3.3	5.0-7.2	6.3	7.0	4.8	4.1
503	Lumber & other construction mat.	4.5-6.6	4.8	4.1-6.6	4.7	1.2-3.7	2.0	2.9-5.3	3.6	4.5	4.1	1.6
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-7.7	6.4	5.4-8.0	6.0	2.2-7.2	3.4	4.9-8.2	5.6	5.5	6.5	4.5
505	Metals & minerals, ex. petroleum	4.2-5.2	4.8	4.0-5.3	4.5	1.0-1.8	1.2	3.1-4.6	4.0	4.5	2.9	2.9
506	Electrical goods	2.4-3.7	3.5	2.2-3.9	3.1	0.9-2.2	1.3	2.3-3.7	3.3	2.9	2.6	2.2
507	Hardware, plumbing & heating equipment ..	6.6-8.7	7.6	6.3-8.1	7.7	1.6-4.0	3.2	4.5-7.4	5.2	7.0	5.1	4.0
508	Machinery, equip. & supplies	2.8-3.9	3.2	2.7-3.6	2.9	1.8-2.4	1.9	2.6-4.0	2.8	2.7	1.7	2.2
509	Miscellaneous durable goods	3.6-5.6	5.0	3.4-5.2	4.3	1.7-2.2	2.0	3.9-5.1	4.6	4.3	2.4	3.7
51	Nondurable goods	2.8-3.5	3.0	2.6-3.4	3.1	0.5-1.1	0.8	1.6-2.9	1.9	2.9	1.6	1.8
511	Paper & paper products	4.9-6.3	5.8	5.0-5.9	5.2	1.1-2.1	1.3	3.1-5.2	4.2	5.4	3.5	3.4
512	Drugs, drug proprietaries and druggists' sundries	5.2-6.3	5.5	4.9-6.2	5.6	0.6-2.4	1.1	4.7-8.4	6.5	5.4	6.2	6.2
513	Apparel, piece goods & notions	7.9-10.6	8.7	8.1-10.6	8.6	1.9-4.4	3.0	6.2-9.8	7.4	7.8	4.7	5.8
514	Groceries & related products	5.3-7.0	6.5	5.1-7.0	6.7	0.8-2.3	1.3	3.3-4.9	3.8	6.4	3.8	3.8
515	Farm-product raw materials	5.4-7.3	6.6	5.6-6.6	6.1	1.8-3.7	3.4	4.0-6.9	5.2	5.5	4.7	4.1
516	Chemicals & allied products	5.8-10.4	6.5	5.8-7.5	6.2	1.2-4.6	2.3	3.3-7.9	4.9	6.7	4.8	4.0
517	Petroleum & petroleum products	4.4-5.4	4.9	4.4-5.1	4.9	0.6-2.0	1.2	2.3-3.3	3.1	4.8	3.4	2.3
518	Beer, wine, & distilled beverages	2.6-3.9	3.3	2.6-3.8	3.1	1.1-2.5	1.5	1.9-3.7	2.8	2.9	2.5	1.9
519	Misc. nondurable goods	3.9-6.4	5.0	3.9-6.0	4.4	1.4-3.6	2.3	1.8-5.6	4.2	4.5	3.8	3.0
	Inventories, Total	1.1-1.4	1.3	1.1-1.3	1.2	0.2-0.3	0.3	1.0-1.1	1.0	(X)	(X)	(X)
50	Durable goods	1.6-1.7	1.7	1.6-1.7	1.7	0.2-0.4	0.4	1.2-1.6	1.3	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.0-7.0	6.2	6.1-6.5	6.4	0.4-1.1	0.9	2.9-4.0	3.4	(X)	(X)	(X)
502	Furniture & home furnishings	10.6-11.7	11.0	10.1-11.6	11.0	0.7-1.7	1.3	6.6-8.0	7.6	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-5.6	5.4	4.2-5.7	5.0	0.8-1.6	1.1	4.3-6.2	5.2	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-8.2	7.1	6.7-8.1	7.0	0.6-3.0	1.4	4.9-7.8	6.5	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.2-6.3	5.4	5.1-6.1	5.7	0.6-1.6	0.9	2.5-3.8	3.2	(X)	(X)	(X)
506	Electrical goods	2.5-3.5	3.0	2.4-3.5	2.9	0.3-0.5	0.4	2.2-2.7	2.6	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	4.1-5.3	4.6	4.1-5.5	4.5	0.7-1.3	0.9	2.4-3.5	2.9	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.1-4.0	3.5	3.3-3.8	3.4	0.5-0.9	0.8	2.4-3.7	3.2	(X)	(X)	(X)
509	Miscellaneous durable goods	8.3-9.0	8.9	8.2-8.8	8.6	0.7-1.3	0.9	5.7-8.6	7.3	(X)	(X)	(X)
51	Nondurable goods	2.0-3.1	2.6	2.1-2.8	2.5	0.5-0.8	0.5	2.0-2.6	2.3	(X)	(X)	(X)
511	Paper & paper products	5.4-6.3	5.7	5.2-6.2	5.7	0.5-1.3	0.7	2.4-3.4	2.8	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.0-7.2	6.4	5.9-6.8	6.5	0.5-1.3	0.7	3.5-5.4	4.1	(X)	(X)	(X)
513	Apparel, piece goods & notions	4.9-6.9	6.5	5.2-6.5	6.1	0.9-1.8	1.2	5.7-8.8	7.6	(X)	(X)	(X)
514	Groceries & related products	5.3-6.2	5.8	5.2-5.9	5.5	0.5-1.4	0.6	2.9-4.2	3.7	(X)	(X)	(X)
515	Farm-product raw materials	7.0-8.3	7.7	6.8-8.1	7.4	0.7-3.8	1.5	5.3-7.5	6.7	(X)	(X)	(X)
516	Chemicals & allied products	6.6-7.9	7.6	7.0-8.1	7.5	1.0-2.3	1.4	4.3-8.4	5.4	(X)	(X)	(X)
517	Petroleum & petroleum products	4.2-6.7	5.2	3.8-6.1	4.6	1.1-1.8	1.4	3.3-6.1	4.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.1-5.5	4.6	4.2-5.7	4.7	0.6-1.1	0.7	3.5-9.2	4.8	(X)	(X)	(X)
519	Misc. nondurable goods	7.6-9.4	8.2	7.3-9.3	8.4	1.0-2.6	1.5	5.1-7.7	6.2	(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 January 1988 through June 1988.

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

SIC code	Kind of business	1987							1988						
		June ^f	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May ^f	June ^f	July
	Sales,¹ Total	1.034	.996	.978	1.011	1.041	.987	1.038	.918	.952	1.068	.989	1.018	1.037	.945
50	Durable goods	1.053	1.005	.983	1.031	1.073	.980	1.013	.880	.931	1.064	1.005	1.013	1.052	.952
501	Motor vehicles & auto. equip. ...	1.071	1.026	.959	.947	1.081	.976	1.045	.896	.922	1.049	1.020	1.039	1.077	.972
502	Furniture & home furnishings ...	1.037	1.015	1.008	1.065	1.134	.992	.973	.859	.939	1.015	.968	.994	1.038	.969
503	Lumber & other construction mat.	1.120	1.114	1.091	1.096	1.108	.980	.884	.779	.829	.988	1.005	1.059	1.129	1.043
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.949	.988	.989	1.071	1.186	1.122	1.041	.855	.958	1.023	.962	.876	.967	.933
505	Metals & minerals, ex. petroleum	1.028	.986	.994	1.058	1.012	.915	.978	.949	.983	1.152	.987	.984	1.052	.927
506	Electrical goods	1.014	.994	1.006	1.072	1.112	1.028	1.054	.887	.955	1.047	.933	.952	1.011	.962
507	Hardware, plumbing & heating equipment	1.093	1.038	.997	1.021	1.079	.973	.978	.888	.933	1.018	.992	1.035	1.103	.970
508	Machinery, equip. & supplies ...	1.051	.984	.971	1.029	1.027	.945	1.050	.888	.941	1.106	1.025	1.034	1.047	.935
509	Miscellaneous durable goods ...	1.015	.957	.995	1.011	1.097	1.030	.970	.844	.915	1.073	1.059	1.064	1.067	.858
51	Nondurable goods	1.012	.987	.965	.992	1.012	.994	1.059	.952	.969	1.066	.975	1.030	1.013	.942
511	Paper & paper products	1.032	.995	1.005	1.005	1.047	.969	1.018	.938	.973	1.088	.974	.971	1.040	.932
512	Drugs, drug proprietaries and druggists' sundries	1.014	.988	.957	1.040	1.038	.976	1.041	.976	.973	1.062	.977	.993	1.020	.934
513	Apparel, piece goods & notions	1.061	1.108	1.148	1.055	1.115	.936	.762	.863	1.076	1.091	.879	.915	1.041	1.035
514	Groceries & related products ...	1.016	1.038	.997	1.002	1.004	.977	1.039	.958	.949	1.027	.978	1.033	1.033	.991
515	Farm-product raw materials ...	.958	.875	.852	.880	1.024	1.111	1.177	1.035	1.015	1.118	.954	1.037	.955	.830
516	Chemicals & allied products ...	1.085	1.001	.977	1.037	1.064	.954	.921	.956	.988	1.063	1.016	1.028	1.093	.924
517	Petroleum & petroleum products	.948	.938	.905	1.006	1.012	1.012	1.114	1.059	1.015	1.104	.948	.957	.951	.904
518	Beer, wine, & distilled beverages	1.101	1.098	1.039	1.019	1.033	.996	1.216	.741	.813	1.008	.937	1.058	1.130	1.011
519	Misc. nondurable goods	1.063	1.007	.955	.959	.964	.955	1.029	.818	.906	1.095	1.087	1.146	1.053	.960
	Inventories,¹ Total .....	.995	.991	.986	.996	1.010	1.008	1.003	1.004	1.006	1.008	1.006	.990	.996	.992
50	Durable goods	1.006	1.006	1.003	1.011	1.003	.998	.992	.986	.994	1.000	1.007	1.003	1.006	1.007
501	Motor vehicles & auto. equip. ...	1.007	.976	.963	1.020	1.009	1.016	1.016	.996	1.004	1.008	1.001	.995	1.007	.976
502	Furniture & home furnishings ...	.989	.995	1.014	1.008	.995	.988	1.010	1.018	1.003	.993	.990	1.007	.985	.998
503	Lumber & other construction mat.	1.038	1.015	1.007	.999	.982	.986	.982	.947	.984	1.015	1.031	1.011	1.041	1.015
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.998	1.029	1.017	1.019	1.016	.986	.971	.982	.986	.999	.992	.982	.998	1.032
505	Metals & minerals, ex. petroleum	1.015	1.011	1.001	.990	.980	.972	1.014	1.021	1.009	1.004	1.004	1.014	1.015	1.010
506	Electrical goods .....	.999	1.023	1.020	1.037	1.020	1.005	.983	.968	.976	.989	.990	.997	.999	1.022
507	Hardware, plumbing & heating equipment	1.007	1.010	1.003	.986	.982	.981	.963	.976	.998	1.026	1.035	1.023	1.009	1.009
508	Machinery, equip. & supplies ...	1.009	1.005	1.005	.994	1.005	.992	.995	.991	.996	1.003	1.010	1.006	1.008	1.005
509	Miscellaneous durable goods ...	1.008	1.027	1.024	1.024	1.015	1.027	.958	.955	.967	.970	1.011	1.010	1.009	1.028
51	Nondurable goods .....	.974	.962	.949	.973	1.018	1.031	1.032	1.038	1.032	1.021	1.002	.967	.976	.962
511	Paper & paper products	1.003	.996	1.010	.973	.984	.998	1.005	1.013	1.010	1.016	1.011	.994	1.002	.995
512	Drugs, drug proprietaries and druggists' sundries .....	.961	.965	.961	1.000	1.025	.984	.997	1.032	1.038	1.031	1.028	.972	.959	.961
513	Apparel, piece goods & notions	1.048	1.065	1.057	1.038	.976	.942	.983	.991	.978	.953	.957	1.015	1.052	1.060
514	Groceries & related products ...	.996	.980	.965	.989	1.038	1.043	1.012	.990	1.006	.987	.990	.987	.996	.980
515	Farm-product raw materials ...	.837	.797	.794	.873	1.076	1.164	1.187	1.228	1.168	1.078	.989	.840	.845	.799
516	Chemicals & allied products ...	1.026	1.012	1.001	.956	.995	1.001	.983	.999	1.012	.998	1.032	1.035	1.028	1.011
517	Petroleum & petroleum products	.973	.979	.938	1.011	1.022	1.043	1.103	1.091	.962	.970	.929	.955	.963	.988
518	Beer, wine, & distilled beverages	1.030	1.007	.985	1.006	1.056	1.046	.907	.943	.980	1.011	1.030	1.007	1.030	1.004
519	Misc. nondurable goods .....	.976	.931	.923	.950	.973	.974	1.025	1.034	1.064	1.106	1.064	.970	.980	.926

^fRevised

¹Adjusted 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 1988



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW88-07
Issued September 1988

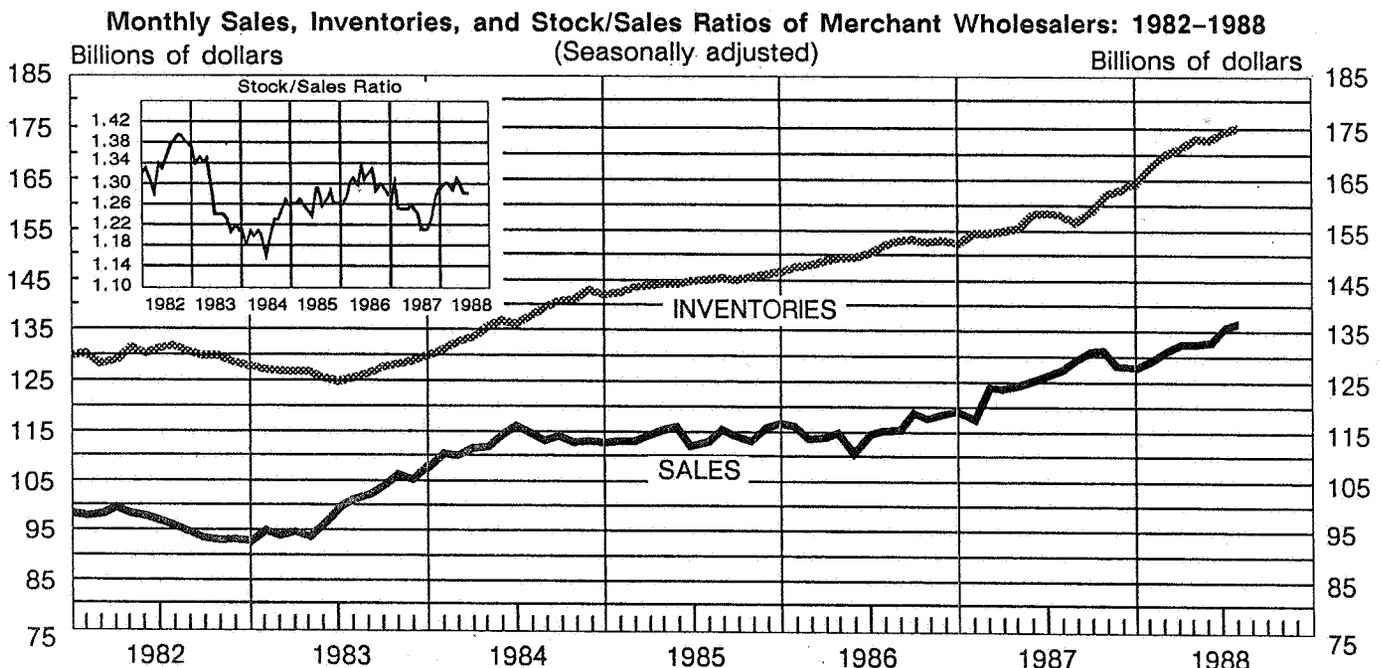
Sales. July 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$137.1 billion, up 0.6 percent (± 0.8 percent) from the revised June level and up 7.6 percent (± 1.6 percent) from a year ago. The June preliminary estimate was revised downward by \$0.3 billion or about 0.2 percent. July sales of durable goods increased 0.5 percent (± 1.2 percent) from June, and were 7.0 percent (± 2.3 percent) above a year ago. Sales of miscellaneous durable goods increased 5.7 percent to \$7,314 million from the June level. However, electrical goods decreased 5.0 percent to \$8,138 million for the same period. July sales of nondurable goods increased 0.6 percent (± 1.3 percent) from June and were 8.1 percent (± 3.2 percent) above July 1987.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$175.8 billion at the end of July, up 0.5 percent (± 0.5 percent) from the revised June level and up 11.0 percent (± 1.8 percent) from a year ago. The

June preliminary estimate was revised upward by \$0.3 billion or about 0.1 percent. Inventories of durable goods wholesalers increased 0.6 percent (± 0.7 percent) from the June level and were 8.6 percent (± 2.1 percent) above a year ago. Motor vehicles and automotive equipment inventories increased 3.6 percent from the June level to \$21,942 million. Inventories of nondurable goods wholesalers were up 0.2 percent (± 0.8 percent) from the June level and were up 15.8 percent (± 4.6 percent) from July 1987. Monthly increases in the stocks of nondurable goods were as follows: drugs, drug proprietaries and druggists' sundries increased 2.5 percent to \$5,406 million and paper and paper products increased 2.3 percent to \$4,234 million.

Stock/Sales Ratio. The July stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28. The year ago ratio was 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 August is scheduled to be released October 11 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988							1987					
		Jan.	Feb.	Mar.	Apr.	May	June	July ^p	Jul. ^r	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	129,720	131,622	132,885	133,015	133,264	136,289	137,061	127,422	129,662	131,437	131,743	128,501	128,332
50	Durable goods	62,486	63,795	64,881	66,081	65,933	66,242	66,586	62,201	62,387	63,584	64,265	62,325	61,983
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,333	13,913	13,735	14,007	12,471	12,928	12,904	13,223	12,982	11,927
502	Furniture & home furnishings	2,267	2,319	2,284	2,208	2,137	2,139	2,068	2,022	2,067	2,348	2,177	2,140	2,148
503	Lumber & other construction mat.	5,098	5,368	5,594	5,744	5,408	5,110	5,200	5,455	5,312	5,494	5,396	5,100	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,731	1,765	1,824	1,858	1,729	1,857	1,706	1,696	1,649	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	6,048	5,760	6,005	6,014	5,025	5,200	5,181	5,280	5,231	5,435
506	Electrical goods	7,736	7,897	8,263	8,517	8,517	8,562	8,138	8,220	8,262	7,951	7,965	7,865	7,511
507	Hardware, plumbing & heating equipment	4,125	3,803	4,183	4,165	4,165	4,378	4,587	3,963	4,038	4,267	4,184	4,145	4,143
508	Machinery, equip. & supplies	16,566	16,701	16,818	16,937	17,316	17,568	17,400	16,435	16,363	16,712	16,676	15,982	15,582
509	Miscellaneous durable goods	6,780	6,967	6,733	6,400	6,952	6,921	7,314	6,881	6,360	7,021	7,668	7,231	7,415
51	Nondurable goods	67,234	67,827	68,004	66,934	67,331	70,047	70,475	65,221	67,275	67,853	67,478	66,176	66,349
511	Paper & paper products	4,207	4,159	4,228	4,137	4,194	4,331	4,418	3,718	3,770	3,954	4,064	4,151	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,887	2,875	2,946	3,024	3,079	2,763	2,748	2,781	2,703	2,741	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,866	4,051	4,276	4,413	3,629	3,834	3,975	3,956	4,017	4,102
514	Groceries & related products	19,839	19,710	19,180	18,777	19,445	19,652	19,634	19,659	19,526	19,307	19,639	20,461	20,194
515	Farm-product raw materials	9,676	9,553	9,800	10,056	10,108	11,028	11,209	9,031	9,770	9,974	9,817	8,109	8,326
516	Chemicals & allied products	2,233	2,361	2,548	2,684	2,788	2,850	2,964	1,943	1,944	1,955	2,041	2,045	2,225
517	Petroleum & petroleum products	11,508	12,225	12,569	11,995	12,211	12,477	12,518	13,023	13,276	13,200	12,708	12,421	11,843
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,447	3,437	3,521	3,514	3,441	3,426	3,498	3,514	3,481	3,498
519	Misc. nondurable goods	9,381	9,402	9,312	9,097	8,151	8,888	8,726	8,014	8,981	9,209	9,036	8,750	9,160
	Inventories, Total	168,388	170,632	171,732	173,530	173,418	175,001	175,826	158,351	157,072	159,135	162,517	163,353	165,097
50	Durable goods	111,259	112,661	113,694	114,812	113,666	112,674	113,354	104,396	103,324	103,933	106,734	106,503	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,566	22,056	21,955	21,176	21,942	20,327	20,510	20,583	20,839	21,441	21,602
502	Furniture & home furnishings	4,081	4,128	4,224	4,423	4,295	4,428	4,489	4,081	3,978	4,132	4,082	4,076	3,971
503	Lumber & other construction mat.	7,289	7,003	7,018	7,075	6,855	6,320	6,361	5,867	5,700	5,943	6,007	5,861	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,237	4,261	4,271	4,211	4,416	4,362	4,348	4,309	4,191	4,092
505	Metals & minerals, ex. petroleum	7,687	7,822	8,204	8,648	8,559	8,865	9,094	7,037	6,764	6,927	7,295	7,259	7,478
506	Electrical goods	13,606	13,709	13,718	13,843	13,783	13,778	13,660	13,200	13,178	12,619	13,145	13,277	13,605
507	Hardware, plumbing & heating equipment	7,031	6,854	6,840	6,872	6,827	6,868	6,836	6,591	6,472	6,812	7,040	6,725	6,949
508	Machinery, equip. & supplies	38,251	39,040	39,118	39,944	39,786	39,517	39,308	35,066	34,718	35,019	36,342	35,911	36,245
509	Miscellaneous durable goods	7,437	7,430	7,819	7,714	7,345	7,451	7,553	7,811	7,642	7,550	7,675	7,762	7,851
51	Nondurable goods	57,129	57,971	58,038	58,718	59,752	62,327	62,472	53,955	53,748	55,202	55,783	56,850	57,101
511	Paper & paper products	3,984	3,916	4,055	4,062	4,023	4,138	4,234	3,584	3,460	3,638	3,832	3,758	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,918	5,215	5,145	5,274	5,408	4,603	4,568	4,602	4,826	5,022	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,023	7,945	8,327	8,425	8,240	7,511	7,466	7,729	7,750	8,134	8,127
514	Groceries & related products	12,910	12,605	12,491	12,613	12,499	12,598	12,553	12,677	12,475	12,661	12,649	12,856	13,029
515	Farm-product raw materials	6,822	7,717	7,532	7,754	8,410	10,273	9,938	6,621	6,587	6,852	7,126	7,021	6,854
516	Chemicals & allied products	2,714	2,780	2,936	2,938	3,032	2,968	2,926	2,339	2,444	2,453	2,401	2,452	2,551
517	Petroleum & petroleum products	3,546	3,964	3,974	3,946	3,930	3,982	3,865	3,892	3,745	3,705	3,695	3,607	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,088	3,983	3,973	4,088	4,169	4,252	4,347	4,304	4,236	4,282
519	Misc. nondurable goods	9,944	9,862	10,114	10,257	10,403	10,996	11,222	8,559	8,751	9,015	9,200	9,764	9,935
	Stock/sales ratios, Total	1.30	1.30	1.29	1.30	1.30	1.28	1.28	1.24	1.21	1.21	1.23	1.27	1.29
50	Durable goods	1.78	1.77	1.75	1.74	1.72	1.70	1.70	1.68	1.66	1.63	1.66	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.67	1.69	1.54	1.58	1.54	1.57	1.63	1.59	1.60	1.58	1.65	1.67
502	Furniture & home furnishings	1.80	1.78	1.87	2.00	2.01	2.07	2.17	2.02	1.92	1.76	1.88	1.90	1.85
503	Lumber & other construction mat.	1.43	1.31	1.25	1.23	1.27	1.24	1.22	1.08	1.07	1.08	1.11	1.15	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.45	2.41	2.34	2.27	2.55	2.35	2.55	2.54	2.54	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.49	1.48	1.51	1.40	1.30	1.34	1.38	1.39	1.38
506	Electrical goods	1.76	1.74	1.66	1.63	1.62	1.61	1.67	1.61	1.60	1.59	1.65	1.69	1.81
507	Hardware, plumbing & heating equipment	1.70	1.80	1.64	1.65	1.64	1.57	1.49	1.66	1.60	1.60	1.68	1.62	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.36	2.30	2.25	2.26	2.13	2.12	2.10	2.18	2.25	2.33
509	Miscellaneous durable goods	1.10	1.07	1.16	1.21	1.06	1.08	1.03	1.14	1.20	1.08	1.00	1.07	1.06
51	Nondurable goods . . . . .	.85	.85	.85	.88	.89	.89	.89	.83	.80	.81	.83	.86	.86
511	Paper & paper products . . . . .	.94	.94	.96	.98	.96	.96	.96	.96	.92	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.81	1.75	1.74	1.76	1.67	1.66	1.65	1.79	1.83	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.06	2.06	2.06	1.97	1.87	2.07	1.95	1.94	1.96	2.02	1.98
514	Groceries & related products . . . . .	.65	.64	.65	.67	.64	.63	.64	.64	.64	.67	.64	.63	.65
515	Farm-product raw materials . . . . .	.71	.81	.77	.77	.83	.93	.89	.73	.67	.69	.73	.87	.82
516	Chemicals & allied products	1.22	1.18	1.11	1.06	1.09	1.04	.99	1.26	1.26	1.25	1.18	1.20	1.15
517	Petroleum & petroleum products . . . . .	.31	.32	.32	.33	.32	.31	.31	.30	.28	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.19	1.16	1.13	1.16	1.21	1.24	1.24	1.22	1.22	1.22
519	Misc. nondurable goods	1.06	1.05	1.09	1.13	1.28	1.24	1.29	1.07	.97	.98	1.02	1.12	1.08

^rRevised.

^pPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988							1987					Total 7 mos.		
		Jan.	Feb.	Mar.	Apr.	May	June	July ^P	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	131,787	136,044	141,242	129,780	127,653	126,500	132,110	137,621	126,896	132,747	924,740	864,953
50	Durable goods	54,944	59,327	69,184	66,378	67,242	70,060	63,234	62,586	61,837	65,228	69,005	61,096	62,725	450,369	419,388
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,620	14,456	14,738	13,559	12,683	12,398	12,220	14,294	12,670	13,509	95,153	88,131
502	Furniture & home furnishings	1,947	2,178	2,298	2,135	2,124	2,276	1,963	2,038	2,084	2,501	2,469	2,123	2,090	14,921	13,435
503	Lumber & other construction mat.	3,971	4,448	5,627	5,773	5,727	5,698	5,476	6,115	5,795	6,021	5,979	4,998	4,583	36,620	34,984
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,479	1,643	1,787	1,665	1,546	1,775	1,706	1,712	1,837	1,827	2,011	1,850	1,705	11,581	11,573
505	Metals & minerals, ex. petroleum	5,304	5,384	6,855	5,969	5,668	6,347	5,617	4,985	5,169	5,481	5,343	4,788	5,315	41,144	33,986
506	Electrical goods	6,862	7,542	8,651	7,946	8,108	8,690	7,845	8,187	8,312	8,524	8,857	8,085	7,917	55,644	54,336
507	Hardware, plumbing & heating equipment	3,663	3,548	4,258	4,132	4,311	4,798	4,500	4,141	4,026	4,357	4,514	4,033	4,052	29,210	26,490
508	Machinery, equip. & supplies	14,711	15,716	18,601	17,380	17,905	18,429	16,234	16,188	15,888	17,197	17,126	15,103	16,361	118,956	110,499
509	Miscellaneous durable goods	5,722	6,375	7,225	6,778	7,397	7,309	6,334	6,537	6,328	7,098	8,412	7,448	7,193	47,140	45,954
51	Nondurable goods	63,808	65,660	72,964	65,409	68,802	71,182	66,546	65,067	64,663	66,884	68,616	65,800	70,022	474,371	445,565
511	Paper & paper products	3,946	4,047	4,600	4,029	4,072	4,496	4,122	3,696	3,789	3,974	4,255	4,022	4,270	29,312	24,431
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,066	2,809	2,925	3,087	2,894	2,749	2,630	2,892	2,806	2,675	2,922	20,238	19,030
513	Apparel, piece goods & notions	3,456	4,174	4,244	3,398	3,707	4,404	4,550	3,992	4,402	4,194	4,411	3,760	3,126	27,933	25,390
514	Groceries & related products	19,006	19,705	19,838	18,364	20,087	20,300	19,516	20,426	19,467	19,346	19,718	19,990	20,982	135,676	135,530
515	Farm-product raw materials	10,015	9,696	10,556	9,593	10,482	10,499	9,449	8,047	8,324	8,777	10,053	9,009	9,800	70,890	57,380
516	Chemicals & allied products	2,135	2,333	2,708	2,721	2,866	3,072	2,768	1,953	1,899	2,027	2,172	1,951	2,049	18,609	13,272
517	Petroleum & petroleum products	12,187	12,408	13,676	11,371	11,686	11,903	11,329	12,294	12,015	13,279	12,860	12,570	13,193	84,760	85,066
518	Beer, wine, & distilled beverages	2,659	2,962	3,619	3,230	3,636	4,000	3,532	3,768	3,560	3,564	3,630	3,467	4,254	23,843	23,843
519	Misc. nondurable goods	7,574	8,518	10,197	9,888	9,341	9,421	8,386	8,142	8,577	8,831	8,711	8,356	9,426	63,425	61,623
	Inventories, Total	168,783	171,742	173,184	174,543	171,978	174,346	173,953	157,211	154,651	158,624	163,892	164,406	165,819	(X)	(X)
50	Durable goods	109,662	111,920	113,888	115,597	114,132	113,721	114,057	105,052	103,382	104,729	107,150	106,314	107,257	(X)	(X)
501	Motor vehicles & auto. equip.	21,646	22,681	22,747	22,078	21,845	21,345	21,525	19,920	19,751	20,995	21,027	21,784	21,948	(X)	(X)
502	Furniture & home furnishings	4,154	4,140	4,194	4,379	4,325	4,379	4,511	4,093	4,034	4,165	4,062	4,027	4,011	(X)	(X)
503	Lumber & other construction mat.	6,903	6,891	7,123	7,294	6,930	6,522	6,571	6,043	5,740	5,937	5,899	5,779	6,091	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,069	4,027	4,185	4,203	4,184	4,297	4,320	4,526	4,436	4,431	4,378	4,132	3,973	(X)	(X)
505	Metals & minerals, ex. petroleum	7,648	7,892	8,237	8,683	8,679	9,096	9,167	7,107	6,771	6,858	7,149	7,056	7,583	(X)	(X)
506	Electrical goods	13,171	13,360	13,565	13,705	13,742	13,792	13,804	13,451	13,442	13,086	13,408	13,343	13,374	(X)	(X)
507	Hardware, plumbing & heating equipment	6,862	6,840	7,018	7,113	6,984	6,944	6,877	6,637	6,491	6,717	6,913	6,597	6,692	(X)	(X)
508	Machinery, equip. & supplies	37,907	39,884	39,235	40,343	40,025	39,873	39,465	35,206	34,892	34,809	36,524	35,624	36,064	(X)	(X)
509	Miscellaneous durable goods	7,102	7,185	7,584	7,799	7,418	7,473	7,817	8,069	7,825	7,731	7,790	7,972	7,521	(X)	(X)
51	Nondurable goods	59,121	59,822	59,296	58,946	57,846	60,625	59,896	52,159	51,269	53,895	56,742	58,092	58,562	(X)	(X)
511	Paper & paper products	4,016	3,965	4,120	4,107	3,999	4,138	4,217	3,573	3,495	3,540	3,771	3,750	3,850	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,068	5,361	5,001	5,058	5,184	4,419	4,390	4,602	4,947	4,942	5,076	(X)	(X)
513	Apparel, piece goods & notions	8,001	7,870	7,646	7,603	8,452	8,872	8,668	7,909	7,892	8,023	7,564	7,662	7,999	(X)	(X)
514	Groceries & related products	12,781	12,681	12,329	12,487	12,337	12,274	12,427	12,538	12,720	12,720	13,130	13,409	13,185	(X)	(X)
515	Farm-product raw materials	8,378	9,013	8,120	7,669	7,064	8,660	8,169	5,416	5,230	5,982	7,668	8,172	8,136	(X)	(X)
516	Chemicals & allied products	2,711	2,813	2,830	2,929	3,138	3,033	2,935	2,353	2,446	2,582	2,389	2,454	2,508	(X)	(X)
517	Petroleum & petroleum products	3,869	3,813	3,855	3,666	3,753	3,777	3,803	3,818	3,513	3,746	3,776	3,762	3,751	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	4,070	4,142	4,211	4,011	4,092	4,113	4,207	4,188	4,373	4,545	4,431	3,884	(X)	(X)
519	Misc. nondurable goods	10,282	10,493	11,186	10,913	10,091	10,721	10,380	7,926	8,077	8,564	8,952	9,510	10,183	(X)	(X)
	Stock/sales ratios, Total	1.42	1.37	1.22	1.32	1.26	1.23	1.34	1.23	1.22	1.20	1.19	1.30	1.25	(X)	(X)
50	Durable goods	2.00	1.89	1.65	1.74	1.70	1.62	1.80	1.68	1.67	1.61	1.55	1.74	1.71	(X)	(X)
501	Motor vehicles & auto. equip.	1.92	1.82	1.62	1.51	1.51	1.45	1.59	1.57	1.59	1.72	1.47	1.72	1.62	(X)	(X)
502	Furniture & home furnishings	2.13	1.90	1.83	2.05	2.04	1.92	2.30	2.01	1.94	1.67	1.65	1.90	1.92	(X)	(X)
503	Lumber & other construction mat.	1.74	1.55	1.29	1.28	1.21	1.14	1.20	.99	.99	.99	.99	1.16	1.33	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.75	2.45	2.37	2.52	2.71	2.42	2.53	2.64	2.41	2.43	2.18	2.23	2.33	(X)	(X)
505	Metals & minerals, ex. petroleum	1.48	1.47	1.20	1.45	1.53	1.43	1.63	1.43	1.31	1.25	1.34	1.47	1.43	(X)	(X)
506	Electrical goods	1.92	1.77	1.57	1.72	1.69	1.59	1.76	1.64	1.62	1.54	1.51	1.65	1.69	(X)	(X)
507	Hardware, plumbing & heating equipment	1.87	1.93	1.65	1.72	1.62	1.45	1.53	1.60	1.61	1.54	1.53	1.64	1.65	(X)	(X)
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.32	2.24	2.16	2.43	2.17	2.20	2.02	2.13	2.36	2.20	(X)	(X)
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	1.00	1.02	1.23	1.23	1.24	1.09	.93	1.07	1.05	(X)	(X)
51	Nondurable goods .....	.93	.91	.81	.90	.84	.85	.80	.79	.81	.83	.88	.84	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.02	.98	.92	1.02	.97	.92	.89	.89	.90	.90	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.91	1.71	1.64	1.79	1.61	1.67	1.59	1.76	1.85	1.74	(X)	(X)
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.24	2.28	2.01	1.91	1.98	1.79	1.91	1.71	2.04	2.56	(X)	(X)
514	Groceries & related products .....	.67	.68	.63	.68	.61	.60	.64	.61	.62	.66	.67	.67	.63	(X)	(X)
515	Farm-product raw materials .....	.84	.93	.74	.80	.67	.82	.86	.67	.63	.68	.76	.91	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.05	1.07	1.09	.99	1.06	1.20	1.29	1.16	1.10	1.26	1.22	(X)	(X)
517	Petroleum & petroleum products .....	.32	.31	.28	.32	.32	.32	.34	.31	.29	.28	.29	.30	.28	(X)	(X)
518	Beer, wine, & distilled beverages	1.46	1.37	1.14	1.30	1.10	1.02	1.16	1.12	1.18	1.23	1.25	1.28	.91	(X)	(X)
519	Misc. nondurable goods	1.34	1.23	1.10	1.10	1.08	1.14	1.24	.97	.94	.97	1.03	1.14	1.08	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.
 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 ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Jul. 1988 from Jun. 1988	Jul. 1988 from Jul. 1987	7 months 1988 from 7 months 1987	Jul. 1988 from Jun. 1988	Jul. 1988 from Jul. 1987	Jul. 1988 from Jun. 1988	Jul. 1988 from Jul. 1987	Jul. 1988 from Jun. 1988	Jul. 1988 from Jul. 1987
	Total	-8.1	+1.7	+6.9	-2	+10.6	+6	+7.6	+5	+11.0
50	Durable goods	-9.7	+1.0	+7.4	+3	+8.6	+5	+7.0	+6	+8.6
501	Motor vehicles & auto. equip.	-8.0	+6.9	+8.0	+8	+8.1	+2.0	+12.3	+3.6	+7.9
502	Furniture & home furnishings	-13.8	-3.7	+11.1	+3.0	+10.2	-3.3	+2.3	+1.4	+10.0
503	Lumber & other construction mat.	-3.9	-10.4	+4.7	+8	+8.7	+1.8	-4.7	+6	+8.4
504	Sporting, recreational, photographic & hobby goods, toys & supplies	-3.9	-4	+1	+5	-4.6	+1.9	+7.5	-1.4	-4.6
505	Metals & minerals, ex. petroleum	-11.5	+12.7	+21.1	+8	+29.0	+1	+19.7	+2.6	+29.2
506	Electrical goods	-9.7	-4.2	+2.4	+1	+2.6	-5.0	-1.0	-1.6	+2.7
507	Hardware, plumbing & heating equipment	-6.2	+8.7	+10.3	-1.0	+3.6	+4.8	+15.7	-5	+3.7
508	Machinery, equip. & supplies	-11.9	+3	+7.7	-1.0	+12.1	-1.0	+5.9	-5	+12.1
509	Miscellaneous durable goods	-13.3	-3.1	+2.6	+4.6	-3.1	+5.7	+6.3	+1.4	-3.3
51	Nondurable goods	-6.5	+2.3	+6.5	-1.2	+14.8	+6	+8.1	+2	+15.8
511	Paper & paper products	-8.3	+11.5	+20.0	+1.9	+18.0	+2.0	+18.8	+2.3	+18.1
512	Drugs, drug proprietaries and druggists' sundries	-6.3	+5.3	+6.8	+2.5	+17.3	+1.8	+11.4	+2.5	+17.4
513	Apparel, piece goods & notions	+3.3	+14.0	+10.0	-2.3	+9.6	+3.2	+21.6	-2.2	+9.7
514	Groceries & related products	-3.9	-4.5	+1	+1.2	-9	-1	-1	+1.3	-1.0
515	Farm-product raw materials	-10.0	+17.4	+23.2	-5.7	+50.8	+1.6	+24.1	-3.3	+50.1
516	Chemicals & allied products	-9.9	+41.7	+40.2	-3.2	+24.7	+4.0	+52.5	-1.4	+25.1
517	Petroleum & petroleum products	-4.8	-7.8	-4	+7	-4	+3	-3.9	-4	-7
518	Beer, wine, & distilled beverages	-11.7	-6.3	-9	+5	-2.2	-2	+2.1	+2.9	-1.9
519	Misc. nondurable goods	-11.0	+3.0	+2.9	-3.2	+31.0	-1.8	+8.9	+2.1	+31.1

¹Adjusted 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*¹ 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

¹Executive 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.4-1.6	1.5	1.4-1.8	1.5	0.3-0.6	0.5	0.9-1.1	0.9	1.5	0.9	0.8
50	Durable goods	1.8-2.1	1.9	1.7-2.0	1.9	0.6-0.9	0.7	1.1-1.6	1.3	1.7	1.2	1.1
501	Motor vehicles & auto. equip.	5.0-6.2	5.8	5.4-5.8	5.7	0.7-1.8	1.3	3.2-4.3	3.8	5.4	3.2	3.3
502	Furniture & home furnishings	7.4-8.9	7.8	6.6-8.3	7.3	1.2-4.0	3.3	5.0-7.2	6.6	7.0	4.8	4.0
503	Lumber & other construction mat.	4.5-6.6	4.8	4.1-6.6	4.7	1.2-3.7	2.0	2.9-5.3	3.8	4.6	4.3	1.6
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.4-7.7	6.4	5.4-8.0	5.8	2.2-3.7	3.4	4.9-7.0	5.6	5.2	6.1	4.7
505	Metals & minerals, ex. petroleum	4.7-5.2	4.8	4.2-5.3	4.5	1.0-2.0	1.2	3.1-4.6	4.0	4.4	3.0	2.8
506	Electrical goods	2.4-3.7	3.3	2.2-3.9	3.2	0.9-2.2	1.3	2.3-3.7	3.1	2.8	2.5	2.1
507	Hardware, plumbing & heating equipment ..	6.6-8.7	7.6	6.3-7.9	7.7	1.6-4.0	2.7	4.5-7.4	5.2	7.1	5.1	3.9
508	Machinery, equip. & supplies	2.8-3.9	3.2	2.7-3.6	3.0	1.4-2.4	1.8	2.6-4.0	2.8	2.8	1.8	2.2
509	Miscellaneous durable goods	3.6-5.6	5.1	3.5-5.4	4.7	1.7-2.2	2.0	3.9-5.1	4.6	4.3	2.4	3.5
51	Nondurable goods	2.8-3.1	3.0	2.6-3.3	3.0	0.5-1.1	0.8	1.5-2.0	1.8	2.9	1.7	1.7
511	Paper & paper products	4.9-8.4	6.0	5.0-6.6	5.4	1.1-2.0	1.3	3.1-5.0	4.2	5.5	3.5	3.4
512	Drugs, drug proprietaries and druggists' sundries	5.2-6.5	6.0	4.9-6.7	5.6	0.6-1.6	1.1	5.3-8.4	6.5	5.6	6.1	6.0
513	Apparel, piece goods & notions	7.9-10.2	8.7	8.1-9.2	8.5	1.9-4.7	3.5	6.2-8.1	7.4	8.1	5.0	5.9
514	Groceries & related products	5.3-7.2	6.8	5.1-7.2	6.7	0.8-2.3	1.5	3.3-4.5	3.8	6.5	3.8	3.8
515	Farm-product raw materials	5.1-7.3	6.3	4.3-6.6	6.1	1.8-3.9	3.4	3.6-5.9	4.9	5.2	4.5	3.8
516	Chemicals & allied products	5.8-11.4	6.8	5.8-10.3	6.2	1.2-4.6	2.6	3.3-8.8	4.9	7.1	4.8	4.5
517	Petroleum & petroleum products	4.4-6.3	5.2	4.4-5.4	5.0	0.6-2.0	1.5	2.3-4.0	3.2	4.9	3.5	2.4
518	Beer, wine, & distilled beverages	2.6-3.9	3.3	2.6-3.8	3.0	1.1-2.0	1.5	1.9-3.7	2.7	2.8	2.5	1.9
519	Misc. nondurable goods	3.9-6.4	5.4	3.9-6.0	5.0	1.4-3.6	2.2	1.8-5.0	3.9	4.7	3.9	3.1
	Inventories, Total	1.1-1.6	1.3	1.1-1.4	1.3	0.2-0.3	0.3	1.0-1.1	1.0	(X)	(X)	(X)
50	Durable goods	1.6-1.8	1.7	1.6-1.7	1.7	0.2-0.5	0.4	1.1-1.6	1.2	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.0-7.0	6.3	6.1-6.5	6.4	0.6-1.1	0.9	3.1-4.0	3.4	(X)	(X)	(X)
502	Furniture & home furnishings	10.6-11.7	11.1	10.4-11.8	11.0	0.7-2.1	1.3	6.6-8.0	7.4	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-6.1	5.4	4.2-6.3	5.0	0.8-1.3	1.1	4.3-5.9	5.2	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-7.7	6.7	5.7-8.1	6.9	0.6-1.7	1.4	4.9-9.6	6.8	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.2-6.3	5.4	5.1-6.1	5.6	0.6-1.6	0.8	2.5-3.5	3.1	(X)	(X)	(X)
506	Electrical goods	2.8-3.5	3.2	2.8-3.5	3.1	0.3-0.5	0.4	2.2-2.7	2.5	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	4.4-5.3	4.7	4.2-5.5	4.7	0.7-1.0	0.8	2.4-3.5	3.1	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.1-4.2	3.5	3.3-3.9	3.4	0.5-1.4	0.8	2.4-3.7	3.2	(X)	(X)	(X)
509	Miscellaneous durable goods	8.3-9.0	8.8	8.2-8.9	8.6	0.7-1.3	0.8	5.5-7.8	7.1	(X)	(X)	(X)
51	Nondurable goods	2.0-3.2	2.9	2.1-3.2	2.7	0.2-0.8	0.5	2.0-2.6	2.4	(X)	(X)	(X)
511	Paper & paper products	5.4-6.0	5.7	5.2-6.1	5.7	0.5-1.3	0.8	2.4-3.4	2.9	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.0-7.0	6.4	5.9-6.9	6.5	0.5-1.3	0.6	3.5-4.7	4.1	(X)	(X)	(X)
513	Apparel, piece goods & notions	4.9-6.9	6.5	5.2-6.6	6.2	0.9-1.8	1.2	5.7-8.8	7.1	(X)	(X)	(X)
514	Groceries & related products	5.3-6.2	6.0	5.2-6.5	5.7	0.5-1.4	0.6	2.9-4.2	3.8	(X)	(X)	(X)
515	Farm-product raw materials	7.0-8.3	8.0	6.8-8.1	7.5	0.9-3.8	1.5	5.3-7.5	6.4	(X)	(X)	(X)
516	Chemicals & allied products	6.6-7.9	7.3	7.0-7.7	7.4	0.8-2.3	1.4	4.3-8.4	5.2	(X)	(X)	(X)
517	Petroleum & petroleum products	4.2-6.7	5.4	4.1-6.2	5.0	1.1-1.8	1.2	3.6-6.1	4.1	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.1-4.9	4.4	4.0-5.0	4.4	0.6-1.0	0.7	2.5-9.2	4.2	(X)	(X)	(X)
519	Misc. nondurable goods	7.6-9.4	8.5	7.3-9.3	8.6	1.0-1.9	1.3	5.1-7.7	7.2	(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 1987 through July 1988.

Official Business
Penalty for Private Use, \$300

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

SIC code	Kind of business	1987						1988							
		July ^r	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June ^r	July ^r	Aug.
	Sales,¹ Total .....	.997	.978	1.011	1.041	.987	1.038	.918	.952	1.068	.989	1.018	1.037	.947	1.030
50	Durable goods	1.005	.983	1.031	1.073	.980	1.013	.880	.931	1.064	1.005	1.013	1.053	.954	1.039
501	Motor vehicles & auto. equip. ...	1.017	.959	.947	1.081	.976	1.045	.896	.922	1.049	1.020	1.039	1.073	.968	1.011
502	Furniture & home furnishings ...	1.008	1.008	1.065	1.134	.992	.973	.859	.939	1.015	.968	.994	1.064	.949	1.073
503	Lumber & other construction mat.	1.121	1.091	1.096	1.108	.980	.884	.779	.829	.988	1.005	1.059	1.115	1.053	1.162
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.980	.989	1.071	1.186	1.122	1.041	.855	.958	1.023	.962	.876	.973	.918	1.027
505	Metals & minerals, ex. petroleum	.992	.994	1.058	1.012	.915	.978	.949	.983	1.152	.987	.984	1.057	.934	1.039
506	Electrical goods .....	.996	1.006	1.072	1.112	1.028	1.054	.887	.955	1.047	.933	.952	1.015	.964	1.038
507	Hardware, plumbing & heating equipment	1.045	.997	1.021	1.079	.973	.978	.888	.933	1.018	.992	1.035	1.096	.981	1.051
508	Machinery, equip. & supplies ...	.985	.971	1.029	1.027	.945	1.050	.888	.941	1.106	1.025	1.034	1.049	.933	1.036
509	Miscellaneous durable goods ...	.950	.995	1.011	1.097	1.030	.970	.844	.915	1.073	1.059	1.064	1.056	.866	1.026
51	Nondurable goods .....	.992	.965	.992	1.012	.994	1.059	.952	.969	1.066	.975	1.030	1.016	.942	1.018
511	Paper & paper products .....	.994	1.005	1.005	1.047	.969	1.018	.938	.973	1.088	.974	.971	1.038	.933	1.066
512	Drugs, drug proprietaries and druggists' sundries .....	.995	.957	1.040	1.038	.976	1.041	.976	.973	1.062	.977	.993	1.021	.940	1.015
513	Apparel, piece goods & notions	1.100	1.148	1.055	1.115	.936	.762	.863	1.076	1.091	.879	.915	1.030	1.031	1.246
514	Groceries & related products ...	1.039	.997	1.002	1.004	.977	1.039	.958	.949	1.027	.978	1.033	1.033	.994	1.036
515	Farm-product raw materials	.891	.852	.880	1.024	1.111	1.177	1.035	1.015	1.118	.954	1.037	.952	.843	.903
516	Chemicals & allied products	1.005	.977	1.037	1.064	.954	.921	.956	.988	1.063	1.016	1.028	1.078	.934	1.040
517	Petroleum & petroleum products	.944	.905	1.006	1.012	1.012	1.114	1.059	1.015	1.104	.948	.957	.954	.905	.950
518	Beer, wine, & distilled beverages	1.095	1.039	1.019	1.033	.996	1.216	.741	.813	1.008	.937	1.058	1.136	1.005	1.115
519	Misc. nondurable goods	1.016	.955	.959	.964	.955	1.029	.818	.906	1.095	1.087	1.146	1.060	.961	1.006
	Inventories,¹ Total .....	.992	.986	.996	1.010	1.008	1.003	1.004	1.006	1.008	1.006	.990	.996	.993	.986
50	Durable goods	1.007	1.003	1.011	1.003	.998	.992	.986	.994	1.000	1.007	1.003	1.006	1.008	1.003
501	Motor vehicles & auto. equip. ...	.980	.963	1.020	1.009	1.016	1.016	.996	1.004	1.008	1.001	.995	1.008	.981	.962
502	Furniture & home furnishings ...	1.003	1.014	1.008	.995	.988	1.010	1.018	1.003	.993	.990	1.007	.989	1.005	1.016
503	Lumber & other construction mat.	1.030	1.007	.999	.982	.986	.982	.947	.984	1.015	1.031	1.011	1.032	1.033	1.002
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.025	1.017	1.019	1.016	.986	.971	.982	.986	.999	.992	.982	1.006	1.026	1.024
505	Metals & minerals, ex. petroleum	1.010	1.001	.990	.980	.972	1.014	1.021	1.009	1.004	1.004	1.014	1.026	1.008	.998
506	Electrical goods	1.019	1.020	1.037	1.020	1.005	.983	.968	.976	.989	.990	.997	1.001	1.018	1.016
507	Hardware, plumbing & heating equipment	1.007	1.003	.986	.982	.981	.963	.976	.998	1.026	1.035	1.023	1.011	1.006	1.003
508	Machinery, equip. & supplies ...	1.004	1.005	.994	1.005	.992	.995	.991	.996	1.003	1.010	1.006	1.009	1.004	1.004
509	Miscellaneous durable goods ...	1.033	1.024	1.024	1.015	1.027	.958	.955	.967	.970	1.011	1.010	1.003	1.035	1.023
51	Nondurable goods .....	.964	.949	.973	1.018	1.031	1.032	1.038	1.032	1.021	1.002	.967	.979	.965	.949
511	Paper & paper products .....	.997	1.010	.973	.984	.998	1.005	1.013	1.010	1.016	1.011	.994	1.000	.996	1.007
512	Drugs, drug proprietaries and druggists' sundries .....	.960	.961	1.000	1.025	.984	.997	1.032	1.038	1.031	1.028	.972	.959	.959	.954
513	Apparel, piece goods & notions	1.053	1.057	1.038	.976	.942	.983	.991	.978	.953	.957	1.015	1.053	1.052	1.051
514	Groceries & related products ...	.989	.965	.989	1.038	1.043	1.012	.990	1.006	.987	.990	.987	.990	.990	.963
515	Farm-product raw materials	.818	.794	.873	1.076	1.164	1.187	1.228	1.168	1.078	.989	.840	.843	.822	.795
516	Chemicals & allied products	1.006	1.001	.956	.995	1.001	.983	.999	1.012	.998	1.032	1.035	1.022	1.003	1.002
517	Petroleum & petroleum products	.981	.938	1.011	1.022	1.043	1.103	1.091	.962	.970	.929	.955	.973	.984	.945
518	Beer, wine, & distilled beverages	1.009	.985	1.006	1.056	1.046	.907	.943	.980	1.011	1.030	1.007	1.030	1.006	.983
519	Misc. nondurable goods .....	.926	.923	.950	.973	.974	1.025	1.034	1.064	1.106	1.064	.970	.975	.925	.919

^rRevised

¹Adjusted 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

August 1988

BW88-08
Issued October 1988



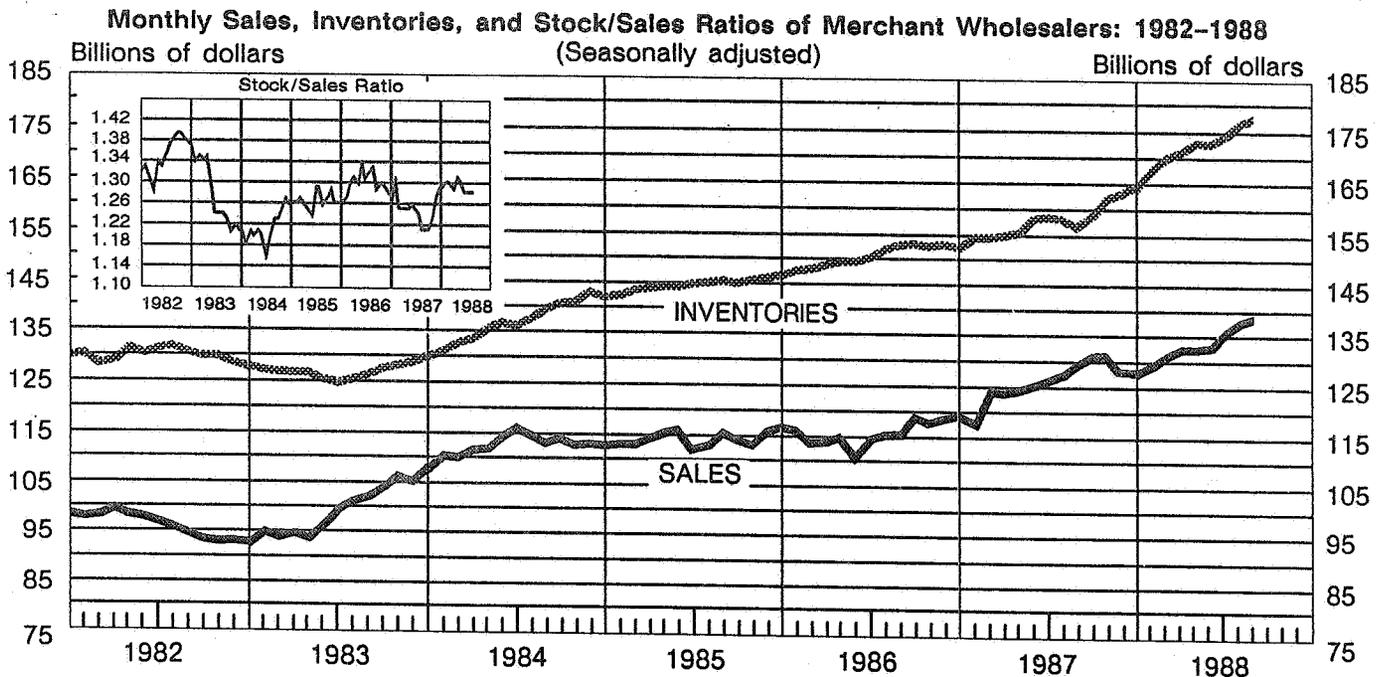
U.S. Department of Commerce
BUREAU OF THE CENSUS

Sales. August 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$139.2 billion, up 0.7 percent (± 0.8 percent) from the revised July level and up 7.7 percent (± 1.7 percent) from a year ago. The July preliminary estimate was revised upward by \$1.1 billion or about 0.8 percent. August sales of durable goods decreased 0.3 percent (± 1.3 percent) from July, but were 7.2 percent (± 2.2 percent) above a year ago. Sales of miscellaneous durable goods were down 7.1 percent to \$6.7 billion from the July level. However, electrical goods increased 4.7 percent to \$8.7 billion for the same period. August sales of nondurable goods increased 1.7 percent (± 1.1 percent) from July and were 8.1 percent (± 2.6 percent) above August 1987. Monthly increases in the sales of nondurable goods were as follows: miscellaneous nondurable goods increased 4.4 percent to \$9.4 billion and drugs, drug proprietaries, and druggists' sundries increased 2.6 percent to \$3.2 billion.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$178.4 billion at the end of August, up 0.6 percent (± 1.5 percent) from the revised July level and up 13.5 percent (± 3.1 percent) from a year ago. The July preliminary estimate was revised upward by \$1.5 billion or about 0.8 percent. Inventories of durable goods wholesalers increased 0.4 percent (± 2.2 percent) from the July level and were 11.4 percent (± 4.0 percent) above a year ago. Inventories of nondurable goods wholesalers were up 1.1 percent (± 0.7 percent) from the July level and were up 17.5 percent (± 4.5 percent) from August 1987.

Stock/Sales Ratio. The August stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28. The year ago ratio was 1.22.

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 9, 1988 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988								1987				
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. ^P	Aug. ^r	Sept.	Oct.	Nov.	Dec.
	Sales, Total	129,720	131,622	132,885	133,015	133,264	136,289	138,195	139,231	129,316	131,437	131,743	128,501	128,332
50	Durable goods	62,486	63,795	64,881	66,081	65,933	66,242	67,262	67,088	62,570	63,584	64,265	62,325	61,963
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,333	13,913	13,735	13,861	13,511	12,955	12,904	13,223	12,982	12,927
502	Furniture & home furnishings	2,267	2,319	2,264	2,205	2,137	2,139	2,180	2,041	2,348	2,177	2,140	2,148	
503	Lumber & other construction mat.	5,098	5,366	5,594	5,744	5,408	5,110	5,193	5,115	5,307	5,494	5,396	5,100	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,731	1,765	1,824	1,867	1,948	1,826	1,706	1,696	1,649	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	6,048	5,760	6,005	6,082	6,170	5,226	5,181	5,280	5,231	5,435
506	Electrical goods	7,736	7,897	8,263	8,517	8,517	8,562	8,273	8,665	8,262	7,951	7,965	7,865	7,511
507	Hardware, plumbing & heating equipment	4,125	3,803	4,183	4,165	4,165	4,378	4,655	4,544	4,046	4,267	4,184	4,145	4,143
508	Machinery, equip. & supplies	16,566	16,701	16,818	16,937	17,316	17,588	17,896	18,136	16,295	16,712	16,676	15,982	15,582
509	Miscellaneous durable goods	6,780	6,967	6,733	6,400	6,952	6,921	7,255	6,742	6,612	7,021	7,668	7,231	7,415
51	Nondurable goods	67,234	67,827	68,004	66,934	67,331	70,047	70,933	72,143	66,746	67,853	67,478	66,176	66,349
511	Paper & paper products	4,207	4,159	4,228	4,137	4,194	4,331	4,468	4,478	3,774	3,954	4,064	4,151	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,887	2,875	2,946	3,024	3,095	3,177	2,725	2,781	2,703	2,741	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,866	4,051	4,276	4,253	4,222	3,828	3,975	3,956	4,017	4,102
514	Groceries & related products	19,839	19,710	19,180	18,777	19,445	19,652	19,795	20,100	19,448	19,307	19,639	20,461	20,194
515	Farm-product raw materials	9,676	9,553	9,800	10,056	10,108	11,028	11,294	11,633	9,623	9,974	9,817	8,109	8,326
516	Chemicals & allied products	2,233	2,361	2,548	2,684	2,788	2,850	2,849	2,782	1,964	1,955	2,041	2,045	2,225
517	Petroleum & petroleum products	11,508	12,225	12,569	11,995	12,211	12,477	12,748	12,913	13,088	13,200	12,708	12,421	11,843
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,447	3,437	3,521	3,450	3,462	3,426	3,498	3,514	3,481	3,498
519	Misc. nondurable goods	9,381	9,402	9,312	9,097	8,151	8,888	8,931	9,376	8,870	9,209	9,036	8,750	9,160
	Inventories, Total	168,388	170,632	171,732	173,530	173,418	175,001	177,307	178,401	157,198	159,135	162,517	163,353	165,097
50	Durable goods	111,259	112,661	113,694	114,812	113,666	112,674	114,702	115,118	103,355	103,933	108,734	106,503	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,566	22,056	21,955	21,176	21,795	21,573	20,531	20,583	20,839	21,441	21,602
502	Furniture & home furnishings	4,081	4,128	4,224	4,423	4,295	4,428	4,393	4,416	3,987	4,132	4,082	4,076	3,971
503	Lumber & other construction mat.	7,289	7,003	7,018	7,075	6,855	6,320	6,414	6,405	5,717	5,943	6,007	5,861	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,237	4,261	4,271	4,233	4,172	4,332	4,348	4,309	4,191	4,092
505	Metals & minerals, ex. petroleum	7,697	7,822	8,204	8,648	8,559	8,865	9,068	9,170	6,839	6,927	7,295	7,259	7,478
506	Electrical goods	13,606	13,709	13,716	13,843	13,783	13,778	13,752	14,010	13,230	12,619	13,145	13,277	13,605
507	Hardware, plumbing & heating equipment	7,031	6,854	6,840	6,872	6,827	6,868	7,098	7,121	6,446	6,812	7,040	6,725	6,949
508	Machinery, equip. & supplies	38,251	39,040	39,118	39,944	39,786	39,517	40,360	40,513	34,718	35,019	36,342	35,911	36,245
509	Miscellaneous durable goods	7,437	7,430	7,819	7,714	7,345	7,451	7,589	7,738	7,575	7,550	7,675	7,762	7,851
51	Nondurable goods	57,129	57,971	58,038	58,718	59,752	62,327	62,605	63,283	53,843	55,202	55,783	56,850	57,101
511	Paper & paper products	3,964	3,916	4,055	4,062	4,023	4,138	4,312	4,292	3,474	3,638	3,832	3,758	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,916	5,215	5,145	5,274	5,429	5,524	4,607	4,602	4,826	5,022	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,023	7,945	8,327	8,425	7,991	7,757	7,574	7,729	7,750	8,134	8,127
514	Groceries & related products	12,910	12,605	12,491	12,613	12,499	12,398	12,696	12,797	12,462	12,661	12,649	12,856	13,029
515	Farm-product raw materials	6,822	7,717	7,532	7,754	8,410	10,273	10,282	10,640	6,529	6,852	7,126	7,021	6,654
516	Chemicals & allied products	2,714	2,780	2,836	2,838	3,032	2,968	2,902	2,931	2,448	2,453	2,401	2,452	2,551
517	Petroleum & petroleum products	3,546	3,964	3,974	3,946	3,930	3,882	3,900	3,975	3,714	3,705	3,685	3,607	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,088	3,983	3,973	4,067	4,135	4,233	4,347	4,304	4,236	4,282
519	Misc. nondurable goods	9,944	9,862	10,114	10,257	10,403	10,996	11,026	11,232	8,798	9,015	9,200	9,764	9,935
	Stock/sales ratios, Total	1.30	1.30	1.29	1.30	1.30	1.28	1.28	1.28	1.22	1.21	1.23	1.27	1.29
50	Durable goods	1.78	1.77	1.75	1.74	1.72	1.70	1.71	1.72	1.65	1.63	1.66	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.67	1.69	1.54	1.58	1.54	1.57	1.60	1.58	1.60	1.58	1.65	1.67
502	Furniture & home furnishings	1.80	1.78	1.87	2.00	2.01	2.07	2.02	1.96	1.94	1.76	1.88	1.90	1.85
503	Lumber & other construction mat.	1.43	1.31	1.25	1.23	1.27	1.24	1.24	1.25	1.08	1.08	1.11	1.15	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.45	2.41	2.34	2.27	2.14	2.37	2.55	2.54	2.54	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.49	1.48	1.49	1.49	1.31	1.34	1.38	1.39	1.38
506	Electrical goods	1.76	1.74	1.66	1.63	1.62	1.61	1.66	1.62	1.60	1.59	1.65	1.69	1.81
507	Hardware, plumbing & heating equipment	1.70	1.80	1.64	1.65	1.64	1.57	1.52	1.57	1.59	1.60	1.68	1.62	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.36	2.30	2.25	2.26	2.23	2.13	2.10	2.18	2.25	2.33
509	Miscellaneous durable goods	1.10	1.07	1.16	1.21	1.06	1.08	1.05	1.15	1.08	1.00	1.07	1.07	1.06
51	Nondurable goods .....	.85	.85	.85	.88	.89	.89	.88	.88	.81	.81	.83	.86	.86
511	Paper & paper products .....	.94	.94	.96	.98	.96	.96	.97	.96	.92	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.81	1.75	1.74	1.75	1.74	1.69	1.65	1.79	1.83	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.06	2.06	2.06	1.97	1.88	1.84	1.98	1.94	1.96	2.02	1.98
514	Groceries & related products .....	.65	.64	.65	.67	.64	.63	.64	.64	.64	.67	.64	.63	.65
515	Farm-product raw materials .....	.71	.81	.77	.77	.83	.93	.91	.91	.68	.69	.73	.87	.82
516	Chemicals & allied products	1.22	1.18	1.11	1.06	1.09	1.04	1.02	1.05	1.25	1.25	1.18	1.20	1.15
517	Petroleum & petroleum products .....	.31	.32	.32	.33	.32	.31	.31	.31	.28	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.19	1.16	1.13	1.18	1.19	1.24	1.24	1.22	1.22	1.22
519	Misc. nondurable goods	1.06	1.05	1.09	1.13	1.28	1.24	1.23	1.20	.99	.98	1.02	1.12	1.08

^rRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988								1987					Total 8 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. ^P	Aug.	Sept.	Oct.	Nov.	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	131,787	136,044	141,242	130,728	143,276	126,500	132,110	137,621	126,896	132,747	1,068,962	991,453
50	Durable goods	54,944	59,327	69,184	66,378	67,242	70,060	64,030	69,610	61,837	65,226	69,005	61,086	62,725	520,775	481,225
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,620	14,456	14,738	13,445	13,579	12,398	12,220	14,294	12,670	13,509	108,618	100,529
502	Furniture & home furnishings	1,947	2,178	2,298	2,135	2,124	2,276	2,073	2,453	2,084	2,501	2,469	2,123	2,090	17,484	15,519
503	Lumber & other construction mat.	3,971	4,448	5,527	5,773	5,727	5,698	5,453	5,938	5,795	6,021	5,979	4,998	4,583	42,535	40,779
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,479	1,643	1,767	1,665	1,546	1,775	1,893	2,067	1,837	1,827	2,011	1,850	1,705	13,635	13,410
505	Metals & minerals, ex. petroleum ..	5,304	5,384	6,855	5,969	5,668	6,347	5,681	6,423	5,169	5,481	5,343	4,788	5,315	47,631	39,155
506	Electrical goods	6,862	7,542	8,651	7,946	8,108	8,690	7,992	9,003	8,312	8,524	8,857	8,085	7,917	64,794	62,648
507	Hardware, plumbing & heating equipment	3,663	3,548	4,258	4,132	4,311	4,798	4,590	4,744	4,026	4,357	4,514	4,033	4,052	34,044	30,516
508	Machinery, equip. & supplies	14,711	15,716	18,601	17,360	17,905	18,429	16,769	18,843	15,888	17,197	17,126	15,103	16,361	138,334	126,387
509	Miscellaneous durable goods	5,722	6,375	7,225	6,778	7,397	7,309	6,334	6,560	6,328	6,328	6,412	7,448	7,193	53,700	52,282
51	Nondurable goods	63,808	65,660	72,964	65,409	68,802	71,182	66,696	73,666	64,663	66,884	68,616	65,800	70,022	548,187	510,228
511	Paper & paper products	3,946	4,047	4,600	4,029	4,072	4,496	4,173	4,782	3,789	3,974	4,255	4,022	4,270	34,145	28,220
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,066	2,809	2,925	3,087	2,888	3,272	2,630	2,892	2,806	2,675	2,922	23,594	21,660
513	Apparel, piece goods & notions	3,456	4,174	4,244	3,398	3,707	4,404	4,342	5,324	4,402	4,194	4,411	3,760	3,126	33,049	29,792
514	Groceries & related products	19,006	18,705	19,698	18,364	20,087	20,300	19,676	20,964	19,467	19,346	19,718	19,990	20,982	156,800	154,997
515	Farm-product raw materials	10,015	9,696	10,956	9,593	10,482	10,499	9,487	10,609	8,324	8,777	10,053	9,009	9,800	81,337	65,704
516	Chemicals & allied products	2,135	2,333	2,708	2,727	2,866	3,072	2,647	2,871	1,899	2,027	2,172	1,951	2,049	21,359	15,171
517	Petroleum & petroleum products	12,187	12,408	13,876	11,371	11,688	11,903	11,588	12,409	12,015	13,279	12,860	12,570	13,193	97,428	97,081
518	Beer, wine, & distilled beverages ..	2,659	2,962	3,619	3,230	3,636	4,000	3,426	3,881	3,560	3,564	3,630	3,467	4,254	27,413	27,403
519	Misc. nondurable goods	7,674	8,518	10,197	9,888	9,341	9,421	8,469	9,554	8,577	8,831	8,711	8,356	9,426	73,062	70,200
	Inventories, Total	168,783	171,742	173,184	174,543	171,978	174,346	175,528	174,711	154,651	158,624	163,892	164,406	165,819	(X)	(X)
50	Durable goods	109,662	111,920	113,888	115,597	114,132	113,721	115,596	115,102	103,382	104,729	107,150	106,314	107,257	(X)	(X)
501	Motor vehicles & auto. equip.	21,646	22,681	22,747	22,078	21,845	21,345	21,359	20,753	19,751	20,995	21,027	21,784	21,948	(X)	(X)
502	Furniture & home furnishings	4,154	4,140	4,194	4,379	4,325	4,379	4,397	4,495	4,034	4,165	4,062	4,027	4,011	(X)	(X)
503	Lumber & other construction mat.	6,903	6,891	7,123	7,294	6,930	6,522	6,606	6,418	5,740	5,937	5,899	5,779	6,091	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,069	4,027	4,185	4,203	4,184	4,297	4,402	4,285	4,436	4,431	4,378	4,132	3,973	(X)	(X)
505	Metals & minerals, ex. petroleum ..	7,848	7,892	8,237	8,683	8,679	9,098	9,159	9,051	8,771	8,858	7,149	7,056	7,583	(X)	(X)
506	Electrical goods	13,171	13,380	13,565	13,705	13,742	13,792	14,000	14,220	13,442	13,086	13,408	13,343	13,374	(X)	(X)
507	Hardware, plumbing & heating equipment	6,862	6,840	7,018	7,113	6,984	6,944	7,183	7,171	6,491	6,717	6,913	6,597	6,692	(X)	(X)
508	Machinery, equip. & supplies	37,907	38,884	39,235	40,343	40,025	39,873	40,643	40,716	34,892	34,809	36,524	35,624	36,064	(X)	(X)
509	Miscellaneous durable goods	7,102	7,185	7,584	7,799	7,418	7,473	7,847	7,993	7,825	7,731	7,790	7,972	7,521	(X)	(X)
51	Nondurable goods	59,121	59,822	59,296	58,946	57,846	60,625	59,932	59,609	51,269	53,895	56,742	58,092	58,562	(X)	(X)
511	Paper & paper products	4,016	3,955	4,120	4,107	3,999	4,138	4,308	4,313	3,495	3,540	3,771	3,750	3,850	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,068	5,361	5,001	5,058	5,206	5,259	4,390	4,602	4,947	4,942	5,076	(X)	(X)
513	Apparel, piece goods & notions	8,001	7,870	7,646	7,803	8,452	8,872	8,462	8,083	7,892	8,023	7,564	7,662	7,989	(X)	(X)
514	Groceries & related products	12,781	12,681	12,329	12,487	12,337	12,274	12,569	12,362	12,038	12,720	13,130	13,409	13,185	(X)	(X)
515	Farm-product raw materials	8,378	9,013	8,120	7,669	7,084	8,660	8,421	8,501	5,230	5,982	7,668	8,172	8,136	(X)	(X)
516	Chemicals & allied products	2,711	2,813	2,830	2,929	3,138	3,033	2,914	2,934	2,446	2,345	2,389	2,454	2,508	(X)	(X)
517	Petroleum & petroleum products	3,869	3,813	3,855	3,866	3,753	3,777	3,826	3,776	3,513	3,746	3,776	3,762	3,751	(X)	(X)
518	Beer, wine, & distilled beverages ..	3,869	4,070	4,142	4,211	4,011	4,092	4,071	4,081	4,188	4,373	4,545	4,431	3,884	(X)	(X)
519	Misc. nondurable goods	10,282	10,493	11,186	10,913	10,991	10,721	10,155	10,300	8,077	8,564	8,952	9,510	10,183	(X)	(X)
	Stock/sales ratios, Total	1.42	1.37	1.22	1.32	1.26	1.23	1.34	1.22	1.22	1.20	1.19	1.30	1.25	(X)	(X)
50	Durable goods	2.00	1.89	1.65	1.74	1.70	1.62	1.81	1.65	1.67	1.61	1.55	1.74	1.71	(X)	(X)
501	Motor vehicles & auto. equip.	1.92	1.82	1.62	1.51	1.51	1.45	1.59	1.53	1.59	1.72	1.47	1.72	1.62	(X)	(X)
502	Furniture & home furnishings	2.13	1.90	1.83	2.05	2.04	1.92	2.12	1.83	1.94	1.67	1.65	1.90	1.92	(X)	(X)
503	Lumber & other construction mat.	1.74	1.55	1.29	1.26	1.21	1.14	1.21	1.08	.99	.99	.99	1.16	1.33	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.75	2.45	2.37	2.52	2.71	2.42	2.60	2.07	2.41	2.43	2.18	2.23	2.33	(X)	(X)
505	Metals & minerals, ex. petroleum ..	1.48	1.47	1.20	1.45	1.53	1.43	1.61	1.41	1.31	1.25	1.34	1.47	1.43	(X)	(X)
506	Electrical goods	1.92	1.77	1.57	1.72	1.69	1.59	1.75	1.58	1.62	1.54	1.51	1.65	1.69	(X)	(X)
507	Hardware, plumbing & heating equipment	1.87	1.93	1.85	1.72	1.62	1.45	1.66	1.51	1.61	1.54	1.53	1.64	1.65	(X)	(X)
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.32	2.24	2.16	2.42	2.16	2.20	2.02	2.13	2.36	2.20	(X)	(X)
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	1.00	1.02	1.24	1.22	1.24	1.09	.93	1.07	1.05	(X)	(X)
51	Nondurable goods .....	.93	.91	.81	.90	.84	.85	.90	.81	.79	.81	.83	.88	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.02	.98	.92	1.03	.90	.92	.89	.89	.93	.90	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.91	1.71	1.64	1.80	1.61	1.67	1.59	1.76	1.85	1.74	(X)	(X)
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.24	2.28	2.01	1.85	1.52	1.79	1.91	1.71	2.04	2.56	(X)	(X)
514	Groceries & related products .....	.67	.68	.63	.68	.61	.60	.64	.69	.62	.66	.67	.67	.63	(X)	(X)
515	Farm-product raw materials .....	.84	.93	.74	.80	.67	.82	.89	.63	.68	.68	.76	.91	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.05	1.07	1.09	.99	1.10	1.02	1.29	1.16	1.10	1.26	1.22	(X)	(X)
517	Petroleum & petroleum products .....	.32	.31	.28	.32	.32	.32	.33	.30	.29	.28	.29	.30	.28	(X)	(X)
518	Beer, wine, & distilled beverages ..	1.46	1.37	1.14	1.30	1.10	1.02	1.19	1.05	1.18	1.23	1.25	1.28	.91	(X)	(X)
519	Misc. nondurable goods	1.34	1.23	1.10	1.10	1.08	1.14	1.20	1.08	.94	.97	1.03	1.14	1.08	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.
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 ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Aug. 1988 from Jul. 1988	Aug. 1988 from Aug. 1987	8 months 1988 from 8 months 1987	Aug. 1988 from Jul. 1988	Aug. 1988 from Aug. 1987	Aug. 1988 from Jul. 1988	Aug. 1988 from Aug. 1987	Aug. 1988 from Jul. 1988	Aug. 1988 from Aug. 1987
	Total	+9.6	+13.3	+7.8	-.5	+13.0	+7	+7.7	+6	+13.5
50	Durable goods	+8.7	+12.6	+8.2	-.4	+11.3	-.3	+7.2	+4	+11.4
501	Motor vehicles & auto. equip.	+1.0	+9.5	+8.0	-2.8	+5.1	-2.5	+4.3	-1.0	+5.1
502	Furniture & home furnishings	+18.3	+17.7	+12.7	+2.2	+11.4	+3.5	+10.6	+5	+11.3
503	Lumber & other construction mat.	+8.9	+2.5	+4.3	-2.8	+11.8	-1.5	-3.6	-.1	+12.0
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+22.1	+12.5	+1.7	-2.7	-3.4	+4.3	+6.7	-1.4	-3.7
505	Metals & minerals, ex. petroleum	+13.1	+24.3	+21.6	-1.2	+33.7	+1.4	+18.1	+1.1	+34.1
506	Electrical goods	+12.7	+8.3	+3.4	+1.6	+5.8	+4.7	+4.9	+1.9	+5.9
507	Hardware, plumbing & heating equipment	+3.4	+17.8	+11.6	-.2	+10.5	-2.4	+12.3	+3	+10.5
508	Machinery, equip. & supplies	+12.4	+18.6	+9.5	+2	+16.7	+1.3	+11.3	+4	+16.7
509	Miscellaneous durable goods	+3.6	+3.7	+2.7	+1.9	+2.1	-7.1	+2.0	+2.0	+2.2
51	Nondurable goods	+10.5	+13.9	+7.4	-.5	+16.3	+1.7	+8.1	+1.1	+17.5
511	Paper & paper products	+14.6	+26.2	+21.0	+1	+23.4	+2	+18.7	-.5	+23.5
512	Drugs, drug proprietaries and druggists' sundries	+13.3	+24.4	+8.9	+1.0	+19.8	+2.6	+16.6	+1.7	+19.9
513	Apparel, piece goods & notions	+22.6	+20.9	+10.9	-4.5	+2.4	-7	+10.3	-2.9	+2.4
514	Groceries & related products	+6.5	+7.7	+1.2	-1.6	+2.7	+1.5	+3.4	+8	+2.7
515	Farm-product raw materials	+11.8	+27.5	+23.8	+1.0	+62.5	+3.0	+20.9	+3.5	+63.0
516	Chemicals & allied products	+8.5	+51.2	+40.8	+7	+20.0	-2.4	+41.6	+1.0	+19.8
517	Petroleum & petroleum products	+7.1	+3.3	+4	-1.3	+7.5	+1.3	-1.3	+1.9	+7.0
518	Beer, wine, & distilled beverages	+13.3	+9.0	.0	+2	-2.6	+3	+1.1	+1.7	-2.5
519	Misc. nondurable goods	+12.8	+11.4	+4.1	+1.4	+27.5	+4.4	+5.7	+1.9	+27.7

¹Adjusted 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*¹ 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

¹Executive 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.4-1.6	1.5	1.4-1.7	1.5	0.3-0.6	0.5	0.9-1.1	0.9	1.5	0.9	0.8
50	Durable goods	1.4-2.1	1.8	1.7-2.0	1.9	0.6-0.9	0.7	1.1-1.6	1.3	1.7	1.2	1.0
501	Motor vehicles & auto. equip.	5.0-6.2	5.8	5.0-5.8	5.7	0.7-2.0	1.5	3.2-4.7	3.8	5.4	3.2	3.3
502	Furniture & home furnishings	7.4-8.9	7.6	6.6-8.5	7.3	1.2-3.6	3.3	5.0-7.2	6.0	7.0	4.7	3.9
503	Lumber & other construction mat.	4.6-6.6	4.8	4.1-6.6	4.6	1.2-3.7	1.9	2.9-5.4	4.5	4.5	4.6	1.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.4-6.7	6.4	5.4-8.0	5.8	2.2-4.8	3.4	4.9-7.1	6.0	5.1	5.8	4.8
505	Metals & minerals, ex. petroleum	4.7-5.2	5.0	4.2-5.3	4.7	1.0-2.0	1.2	3.1-4.6	3.9	4.5	3.0	2.8
506	Electrical goods	2.4-3.7	3.3	2.2-3.9	3.2	1.1-2.2	1.3	2.3-3.6	3.0	2.9	2.3	2.0
507	Hardware, plumbing & heating equipment ..	6.6-8.7	8.0	6.3-8.7	7.8	1.6-4.0	2.7	4.4-5.8	5.0	7.2	5.4	3.5
508	Machinery, equip. & supplies	2.5-3.9	3.2	2.7-3.6	3.0	1.4-2.4	1.9	2.4-4.0	2.8	2.6	1.8	2.0
509	Miscellaneous durable goods	4.4-5.6	5.1	4.0-5.4	4.7	1.7-2.6	2.1	3.4-5.1	4.3	4.2	2.4	3.4
51	Nondurable goods	2.8-3.1	3.0	2.6-3.2	3.0	0.7-1.1	0.8	1.4-2.0	1.7	2.9	1.7	1.7
511	Paper & paper products	5.1-6.4	6.0	5.2-6.6	5.4	1.1-2.0	1.3	3.3-5.0	4.5	5.3	3.6	3.3
512	Drugs, drug proprietaries and druggists' sundries	5.2-6.5	6.1	5.1-6.7	5.7	0.7-1.6	1.1	4.4-8.4	6.5	5.6	5.9	5.7
513	Apparel, piece goods & notions	7.9-10.2	8.7	8.1-10.1	8.5	2.6-4.7	3.5	6.2-8.1	7.4	8.2	5.2	5.8
514	Groceries & related products	5.3-7.2	6.6	5.1-7.2	6.7	0.7-2.3	1.5	3.1-4.5	3.7	6.4	3.8	3.5
515	Farm-product raw materials	5.1-7.3	6.3	4.3-6.6	5.9	3.1-3.9	3.4	3.6-5.4	4.4	5.3	4.5	3.7
516	Chemicals & allied products	5.8-11.4	8.1	5.8-10.3	6.8	1.2-4.7	2.6	3.3-8.8	6.0	7.2	4.9	4.5
517	Petroleum & petroleum products	4.4-6.3	5.4	4.4-6.7	5.1	0.6-2.0	1.4	2.3-4.0	3.3	5.1	3.6	2.4
518	Beer, wine, & distilled beverages	2.6-3.6	3.3	2.6-3.7	3.0	0.7-2.0	1.5	1.9-3.0	2.7	2.9	2.5	1.8
519	Misc. nondurable goods	3.9-6.4	5.6	3.9-6.1	5.7	1.4-3.8	2.6	1.8-4.2	3.7	4.8	3.9	3.0
	Inventories, Total	1.1-1.8	1.3	1.1-1.5	1.3	0.2-0.9	0.3	1.0-1.7	1.0	(X)	(X)	(X)
50	Durable goods	1.7-2.4	1.7	1.6-1.9	1.7	0.2-1.3	0.4	1.1-2.2	1.2	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.2-7.0	6.6	6.3-6.7	6.5	0.6-1.1	0.8	3.1-4.0	3.3	(X)	(X)	(X)
502	Furniture & home furnishings	10.6-11.8	11.1	10.4-11.8	11.0	0.7-2.1	1.3	6.6-7.6	7.0	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-6.1	5.4	4.7-6.3	5.0	0.8-1.4	1.1	3.9-5.9	4.8	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-7.7	6.5	5.7-7.3	6.7	0.6-1.7	1.4	4.9-10.2	7.4	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.2-6.0	5.4	5.1-6.0	5.6	0.6-1.6	0.9	2.5-3.5	3.1	(X)	(X)	(X)
506	Electrical goods	3.0-3.5	3.4	2.9-3.5	3.3	0.3-0.7	0.4	2.2-2.7	2.4	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	4.6-7.9	4.8	4.4-7.5	4.8	0.7-1.0	0.8	2.4-6.5	3.2	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.1-4.9	3.7	3.3-3.9	3.5	0.5-3.4	0.9	2.4-4.6	3.2	(X)	(X)	(X)
509	Miscellaneous durable goods	8.1-8.9	8.5	8.2-8.9	8.5	0.7-1.6	0.8	4.6-7.4	6.3	(X)	(X)	(X)
51	Nondurable goods	2.3-3.2	3.0	2.1-3.2	2.8	0.2-0.8	0.5	2.1-2.6	2.4	(X)	(X)	(X)
511	Paper & paper products	5.0-6.0	5.7	5.2-6.1	5.7	0.5-1.0	0.7	2.4-3.4	2.9	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.0-7.0	6.6	5.9-6.9	6.5	0.5-1.0	0.6	3.5-5.3	4.3	(X)	(X)	(X)
513	Apparel, piece goods & notions	4.9-6.9	6.3	5.2-6.6	6.2	1.0-1.8	1.4	5.2-7.8	6.8	(X)	(X)	(X)
514	Groceries & related products	5.3-6.2	6.0	5.3-6.5	5.8	0.5-1.4	0.6	3.1-4.2	3.8	(X)	(X)	(X)
515	Farm-product raw materials	7.1-8.3	8.0	6.9-8.1	7.5	0.9-3.8	1.3	3.8-7.5	6.0	(X)	(X)	(X)
516	Chemicals & allied products	6.6-8.1	7.3	7.0-7.7	7.4	0.8-3.5	1.8	4.3-8.0	5.2	(X)	(X)	(X)
517	Petroleum & petroleum products	5.1-7.7	6.1	4.1-6.7	5.6	1.1-1.8	1.3	4.0-6.4	5.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.1-4.8	4.4	3.9-4.7	4.2	0.6-1.0	0.7	2.5-6.1	3.8	(X)	(X)	(X)
519	Misc. nondurable goods	7.6-9.4	8.9	7.3-9.3	8.8	1.1-1.9	1.4	5.1-7.7	7.3	(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 1987 through August 1988.

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

SIC code	Kind of business	1987					1988									
		Aug. ¹	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July ¹	Aug. ¹	Sept.	
	Sales,¹ Total .....	.981	1.011	1.041	.987	1.038	.918	.952	1.068	.989	1.018	1.037	.947	1.030	1.015
50	Durable goods .....	.987	1.031	1.073	.980	1.013	.880	.931	1.064	1.005	1.013	1.053	.956	1.037	1.037
501	Motor vehicles & auto. equip. ....	.957	.947	1.081	.976	1.045	.896	.922	1.049	1.020	1.039	1.073	.970	1.005	.953
502	Furniture & home furnishings	1.021	1.065	1.134	.992	.973	.859	.939	1.015	.968	.994	1.064	.951	1.087	1.054	
503	Lumber & other construction mat.	1.092	1.096	1.108	.980	.884	.779	.829	.988	1.005	1.059	1.115	1.050	1.161	1.101	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.006	1.071	1.186	1.122	1.041	.855	.958	1.023	.962	.876	.973	.907	1.061	1.105	
505	Metals & minerals, ex. petroleum .....	.989	1.068	1.012	.915	.978	.949	.983	1.152	.987	.984	1.057	.934	1.041	1.077
506	Electrical goods	1.006	1.072	1.112	1.028	1.054	.887	.955	1.047	.933	.952	1.015	.966	1.039	1.072	
507	Hardware, plumbing & heating equipment .....	.995	1.021	1.079	.973	.978	.888	.933	1.018	.992	1.035	1.096	.986	1.044	1.033
508	Machinery, equip. & supplies ....	.975	1.029	1.027	.945	1.050	.888	.941	1.106	1.025	1.034	1.049	.937	1.039	1.023
509	Miscellaneous durable goods ....	.957	1.011	1.097	1.030	.970	.844	.915	1.073	1.059	1.064	1.056	.873	.973	1.065
51	Nondurable goods .....	.969	.992	1.012	.994	1.059	.952	.969	1.066	.975	1.030	1.016	.941	1.020	.998
511	Paper & paper products	1.004	1.005	1.047	.969	1.018	.938	.973	1.088	.974	.971	1.038	.934	1.068	1.012	
512	Drugs, drug proprietaries and druggists' sundries .....	.965	1.040	1.038	.976	1.041	.976	.973	1.062	.977	.993	1.021	.933	1.030	1.029
513	Apparel, piece goods & notions	1.150	1.055	1.115	.936	.762	.863	1.076	1.091	.879	.915	1.030	1.021	1.261	1.020	
514	Groceries & related products	1.001	1.002	1.004	.977	1.039	.958	.949	1.027	.978	1.033	1.033	.994	1.043	.998	
515	Farm-product raw materials ....	.865	.880	1.024	1.111	1.177	1.035	1.015	1.118	.954	1.037	.952	.840	.912	.887
516	Chemicals & allied products ....	.967	1.037	1.064	.954	.921	.956	.988	1.063	1.016	1.028	1.078	.929	1.032	1.055
517	Petroleum & petroleum products .....	.918	1.006	1.012	1.012	1.114	1.059	1.015	1.104	.948	.957	.954	.909	.961	1.015
518	Beer, wine, & distilled beverages	1.039	1.019	1.033	.996	1.216	.741	.813	1.003	.937	1.058	1.136	.993	1.121	1.015	
519	Misc. nondurable goods .....	.967	.959	.964	.955	1.029	.818	.906	1.095	1.087	1.146	1.060	.943	1.019	.973
	Inventories,¹ Total .....	.986	.996	1.010	1.008	1.003	1.004	1.006	1.008	1.006	.990	.996	.993	.986	.995
50	Durable goods	1.003	1.011	1.003	.998	.992	.986	.994	1.000	1.007	1.003	1.006	1.008	1.002	1.009	
501	Motor vehicles & auto. equip. ....	.962	1.020	1.009	1.016	1.016	.996	1.004	1.008	1.001	.995	1.008	.980	.962	1.018
502	Furniture & home furnishings	1.017	1.008	.995	.988	1.010	1.018	1.003	.993	.990	1.007	.989	1.001	1.018	1.008	
503	Lumber & other construction mat.	1.004	.999	.982	.986	.982	.947	.984	1.015	1.031	1.011	1.032	1.030	1.002	.991	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.024	1.019	1.016	.986	.971	.982	.986	.999	.992	.992	1.006	1.040	1.027	1.026	
505	Metals & minerals, ex. petroleum .....	.990	.990	.980	.972	1.014	1.021	1.009	1.004	1.004	1.014	1.026	1.010	.987	.987
506	Electrical goods	1.016	1.037	1.020	1.005	.983	.968	.976	.989	.990	.997	1.001	1.018	1.015	1.032	
507	Hardware, plumbing & heating equipment	1.007	.986	.982	.981	.963	.976	.998	1.026	1.035	1.023	1.011	1.012	1.007	.987	
508	Machinery, equip. & supplies	1.005	.994	1.005	.992	.995	.991	.996	1.003	1.010	1.006	1.009	1.007	1.005	.991	
509	Miscellaneous durable goods	1.033	1.024	1.015	1.027	.958	.955	.967	.970	1.011	1.010	1.003	1.034	1.033	1.027	
51	Nondurable goods .....	.949	.973	1.018	1.031	1.032	1.038	1.032	1.021	1.002	.967	.979	.964	.949	.973
511	Paper & paper products	1.006	.973	.984	.998	1.005	1.013	1.010	1.016	1.011	.994	1.000	.999	1.005	.970	
512	Drugs, drug proprietaries and druggists' sundries .....	.953	1.000	1.025	.984	.997	1.032	1.038	1.031	1.028	.972	.959	.959	.952	1.004
513	Apparel, piece goods & notions	1.042	1.038	.976	.942	.983	.991	.978	.953	.957	1.015	1.053	1.069	1.042	1.040	
514	Groceries & related products ....	.966	.989	1.038	1.043	1.012	.990	1.006	.987	.990	.987	.990	.990	.966	.988
515	Farm-product raw materials ....	.801	.873	1.076	1.164	1.187	1.228	1.168	1.078	.989	.840	.843	.819	.799	.874
516	Chemicals & allied products	1.000	.956	.995	1.001	.983	.999	1.012	.998	1.032	1.035	1.022	1.004	1.001	.951	
517	Petroleum & petroleum products .....	.946	1.011	1.022	1.043	1.103	1.091	.962	.970	.929	.955	.973	.981	.950	1.015
518	Beer, wine, & distilled beverages .....	.988	1.006	1.056	1.046	.907	.943	.980	1.011	1.030	1.007	1.030	1.001	.987	1.006
519	Misc. nondurable goods .....	.918	.950	.973	.974	1.025	1.034	1.064	1.106	1.064	.970	.975	.921	.917	.951

¹Revised

¹Adjusted 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 1988



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW88-09
Issued November 1988

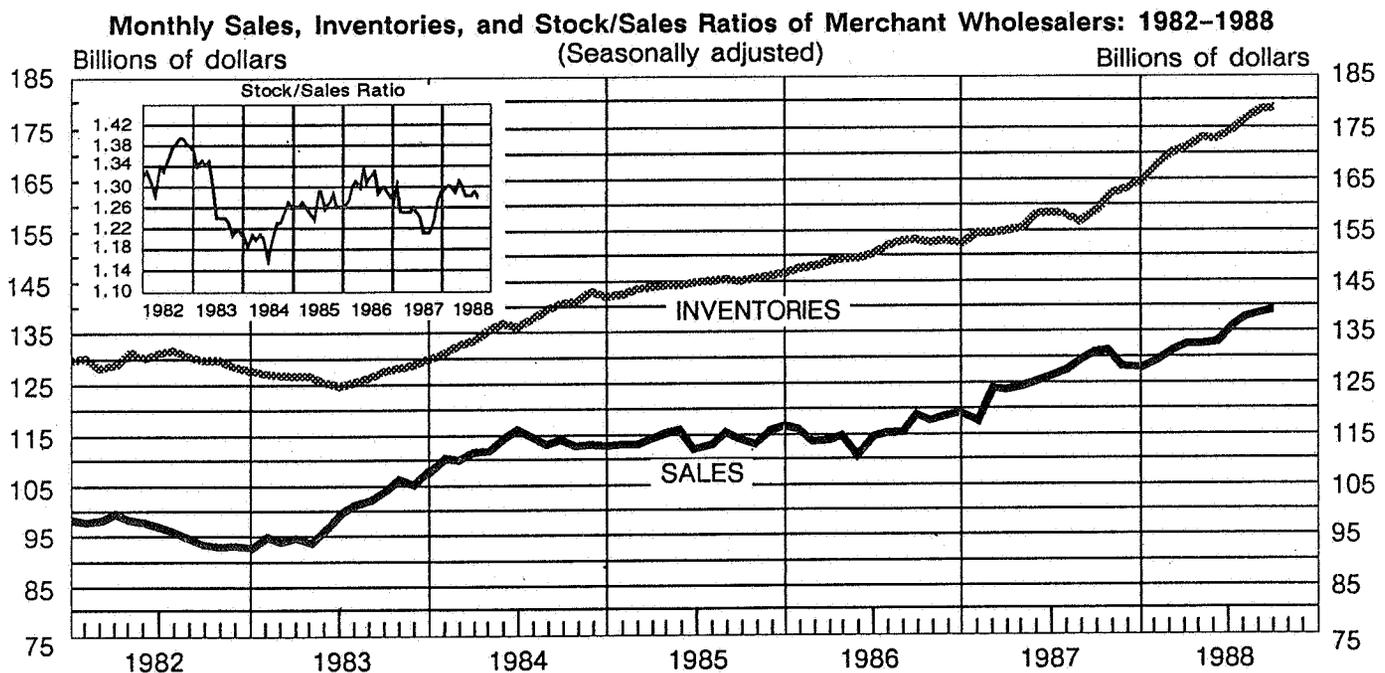
Sales. September 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$139.7 billion, up 0.5 percent (± 1.2 percent) from the revised August level and up 6.7 percent (± 1.9 percent) from a year ago. The August preliminary estimate was revised downward by \$0.2 billion or about 0.2 percent. September sales of durable goods increased 0.7 percent (± 1.3 percent) from August, and were 6.7 percent (± 2.6 percent) above a year ago. Sales of machinery, equipment and supplies increased 3.8 percent to \$19.1 billion from the August level. However, hardware, plumbing, and heating equipment sales decreased 6.1 percent to \$4.2 billion for the same period. September sales of nondurable goods increased 0.2 percent (± 1.7 percent) from August and were 6.8 percent (± 2.4 percent) above September 1987.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$179.4 billion at the end of September, up 0.1 percent (± 0.9 percent) from the revised August level

and up 12.4 percent (± 2.5 percent) from a year ago. The August preliminary estimate was revised upward by \$0.8 billion or about 0.4 percent. Inventories of durable goods wholesalers increased 0.8 percent (± 1.1 percent) from the August level and were 11.8 percent (± 3.0 percent) above a year ago. Inventories of nondurable goods wholesalers were down 1.1 percent (± 0.8 percent) from the August level but were 13.4 percent (± 4.2 percent) above September 1987. Monthly decreases in the stocks of nondurable goods were as follows: inventories of petroleum and petroleum products were down 4.0 percent; miscellaneous nondurable goods decreased 3.6 percent; and inventories of drugs, drug proprietaries and druggists' sundries decreased 3.2 percent to \$5.3 billion.

Stock/Sales Ratio. The September stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28. The year ago ratio was 1.22.

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 9, 1988 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988									1987			
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Sept. ^I	Oct.	Nov.	Dec.
	Sales, Total	129,720	131,622	132,885	133,015	133,264	136,289	138,195	139,008	139,662	130,872	131,743	128,501	128,332
50	Durable goods	62,486	63,795	64,881	66,081	65,933	66,242	67,262	67,065	67,556	63,342	64,265	62,325	61,983
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,333	13,913	13,735	13,861	13,486	13,544	12,890	13,223	12,982	12,927
502	Furniture & home furnishings	2,267	2,319	2,264	2,206	2,137	2,139	2,180	2,218	2,152	2,344	2,177	2,140	2,148
503	Lumber & other construction mat.	5,098	5,366	5,594	5,744	5,408	5,110	5,193	4,999	4,903	5,494	5,396	5,100	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,731	1,765	1,824	1,867	1,914	1,868	1,698	1,696	1,649	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	6,048	5,760	6,005	6,082	6,102	6,315	5,151	5,280	5,231	5,435
506	Electrical goods	7,738	7,897	8,263	8,517	8,517	8,562	8,273	8,641	8,595	7,922	7,985	7,865	7,511
507	Hardware, plumbing & heating equipment ..	4,125	3,803	4,183	4,165	4,165	4,378	4,655	4,472	4,201	4,255	4,184	4,145	4,143
508	Machinery, equip. & supplies	16,568	16,701	16,818	16,937	17,316	17,568	17,896	18,452	19,144	16,567	16,676	15,982	15,582
509	Miscellaneous durable goods	6,780	6,967	6,733	6,400	6,952	6,921	7,255	6,781	6,834	7,021	7,668	7,231	7,415
51	Nondurable goods	67,234	67,827	68,004	66,934	67,331	70,047	70,933	71,943	72,106	67,530	67,478	66,176	66,349
511	Paper & paper products	4,207	4,159	4,228	4,137	4,194	4,331	4,468	4,427	4,533	3,946	4,064	4,151	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,867	2,875	2,946	3,024	3,095	3,173	3,211	2,781	2,703	2,741	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,866	4,051	4,276	4,253	4,187	4,424	3,891	3,656	4,017	4,102
514	Groceries & related products	19,839	19,710	19,180	18,777	19,445	19,652	19,795	20,100	20,143	19,288	19,639	20,461	20,194
515	Farm-product raw materials	9,676	9,553	9,800	10,056	10,108	11,028	11,294	11,654	12,198	9,720	9,817	8,109	8,326
516	Chemicals & allied products	2,233	2,361	2,548	2,684	2,788	2,850	2,849	2,748	2,554	1,970	2,041	2,045	2,225
517	Petroleum & petroleum products	11,508	12,225	12,569	11,995	12,211	12,477	12,748	12,817	12,020	13,319	12,708	12,421	11,843
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,447	3,437	3,521	3,450	3,495	3,589	3,511	3,514	3,491	3,498
519	Misc. nondurable goods	9,381	9,402	9,312	9,097	8,151	8,888	8,881	9,342	9,434	9,104	9,036	8,750	9,160
	Inventories, Total	169,388	170,632	171,732	173,530	173,418	175,001	177,307	179,165	179,374	159,621	162,517	163,353	165,097
50	Durable goods	111,259	112,661	113,694	114,812	113,668	112,674	114,702	115,685	116,606	104,257	106,734	106,503	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,586	22,056	21,955	21,176	21,795	22,076	22,876	20,604	20,839	21,441	21,602
502	Furniture & home furnishings	4,081	4,128	4,224	4,423	4,295	4,428	4,393	4,353	4,337	4,132	4,082	4,076	3,971
503	Lumber & other construction mat.	7,289	7,003	7,018	7,075	6,655	6,320	6,414	6,254	6,226	5,997	6,007	5,861	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,237	4,281	4,271	4,233	4,128	4,145	4,315	4,309	4,191	4,092
505	Metals & minerals, ex. petroleum	7,687	7,822	8,204	8,648	8,559	8,865	9,088	8,912	8,865	7,012	7,256	7,259	7,478
506	Electrical goods	13,606	13,709	13,716	13,843	13,783	13,778	13,762	13,963	13,810	12,730	13,145	13,277	13,605
507	Hardware, plumbing & heating equipment ..	7,031	6,854	6,840	6,872	6,868	7,098	7,208	7,330	6,778	7,040	6,725	6,949	6,949
508	Machinery, equip. & supplies	38,251	39,040	39,118	39,944	39,786	39,517	40,360	40,924	41,386	35,161	36,342	35,911	36,245
509	Miscellaneous durable goods	7,437	7,430	7,819	7,714	7,345	7,451	7,589	7,867	7,631	7,528	7,675	7,762	7,851
51	Nondurable goods	57,129	57,971	58,038	58,718	59,752	62,327	62,605	63,480	62,768	55,364	55,783	56,850	57,101
511	Paper & paper products	3,984	3,916	4,055	4,062	4,023	4,138	4,312	4,211	4,325	3,649	3,832	3,758	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,916	5,215	5,145	5,274	5,429	5,488	5,311	4,663	4,826	5,022	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,023	7,945	8,327	8,425	7,991	7,984	7,803	7,750	7,750	8,134	8,127
514	Groceries & related products	12,910	12,605	12,491	12,613	12,499	12,398	12,696	12,757	13,129	12,771	12,649	12,856	13,029
515	Farm-product raw materials	6,822	7,717	7,532	7,754	8,410	10,272	10,539	10,300	6,884	7,128	7,021	6,854	6,854
516	Chemicals & allied products	2,714	2,780	2,836	2,838	3,032	2,968	2,902	3,039	3,056	2,468	2,401	2,452	2,551
517	Petroleum & petroleum products	3,546	3,964	3,974	3,946	3,930	3,882	3,900	4,007	3,848	3,720	3,696	3,607	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,088	3,983	3,973	4,067	4,135	4,089	4,356	4,304	4,236	4,282
519	Misc. nondurable goods	9,944	9,862	10,114	10,257	10,403	10,996	11,026	11,320	10,907	9,101	9,200	9,764	9,935
	Stock/sales ratios, Total	1.30	1.30	1.29	1.30	1.30	1.28	1.28	1.29	1.28	1.22	1.23	1.27	1.29
50	Durable goods	1.78	1.77	1.75	1.74	1.72	1.70	1.71	1.72	1.73	1.65	1.66	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.67	1.69	1.54	1.58	1.54	1.57	1.64	1.69	1.60	1.58	1.65	1.67
502	Furniture & home furnishings	1.80	1.78	1.87	2.00	2.01	2.07	2.02	1.96	2.02	1.76	1.88	1.90	1.85
503	Lumber & other construction mat.	1.43	1.31	1.25	1.23	1.27	1.24	1.24	1.25	1.27	1.09	1.11	1.15	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.45	2.41	2.34	2.27	2.16	2.22	2.54	2.54	2.54	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.49	1.48	1.49	1.46	1.40	1.36	1.38	1.39	1.38
506	Electrical goods	1.78	1.74	1.66	1.63	1.62	1.61	1.66	1.62	1.61	1.61	1.65	1.69	1.81
507	Hardware, plumbing & heating equipment ..	1.70	1.80	1.64	1.65	1.64	1.57	1.52	1.61	1.74	1.59	1.68	1.62	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.36	2.30	2.25	2.26	2.22	2.16	2.12	2.18	2.25	2.33
509	Miscellaneous durable goods	1.10	1.07	1.16	1.21	1.06	1.08	1.05	1.16	1.12	1.07	1.00	1.07	1.06
51	Nondurable goods .....	.85	.85	.85	.88	.89	.89	.88	.88	.87	.82	.83	.86	.86
511	Paper & paper products .....	.94	.94	.96	.98	.96	.96	.97	.95	.95	.92	.94	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.81	1.75	1.74	1.75	1.73	1.65	1.68	1.79	1.83	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.06	2.06	2.06	1.97	1.88	1.91	1.76	1.99	1.96	2.02	1.98
514	Groceries & related products .....	.65	.64	.65	.67	.64	.63	.64	.63	.65	.66	.64	.63	.65
515	Farm-product raw materials .....	.71	.81	.77	.77	.83	.93	.91	.90	.84	.71	.73	.87	.82
516	Chemicals & allied products	1.22	1.18	1.11	1.06	1.09	1.04	1.02	1.11	1.20	1.25	1.18	1.20	1.15
517	Petroleum & petroleum products .....	.31	.32	.32	.33	.32	.31	.31	.31	.32	.28	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.19	1.16	1.13	1.18	1.14	1.14	1.24	1.22	1.22	1.22
519	Misc. nondurable goods	1.06	1.05	1.09	1.13	1.28	1.24	1.23	1.21	1.16	1.00	1.02	1.12	1.08

^IRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988									1987				Total 9 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Sept.	Oct.	Nov.	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	131,787	138,044	141,242	130,728	142,673	141,401	132,110	137,621	126,898	132,747	1,209,760	1,123,563
50	Durable goods	54,944	59,327	69,184	66,378	67,242	70,060	64,030	69,460	70,015	65,226	69,005	61,096	62,725	590,640	546,451
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,620	14,458	14,738	13,445	13,567	12,907	12,220	14,294	12,670	13,509	121,513	112,749
502	Furniture & home furnishings	1,947	2,178	2,298	2,135	2,124	2,278	2,073	2,404	2,270	2,501	2,469	2,123	2,090	19,705	18,020
503	Lumber & other construction mat.	3,971	4,448	5,527	5,773	5,727	5,698	5,463	5,774	5,374	6,021	5,979	4,998	4,583	47,745	46,800
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,479	1,643	1,767	1,665	1,548	1,775	1,893	2,031	2,058	1,827	2,011	1,850	1,705	15,657	15,237
505	Metals & minerals, ex. petroleum	5,304	5,384	6,855	5,969	5,668	6,347	5,681	6,287	6,845	5,481	5,343	4,786	5,315	54,320	44,636
506	Electrical goods	6,882	7,542	8,651	7,948	8,108	8,690	7,992	9,004	9,188	8,524	8,857	8,065	7,917	73,983	71,172
507	Hardware, plumbing & heating equipment	3,683	3,548	4,258	4,132	4,311	4,798	4,590	4,673	4,327	4,357	4,514	4,033	4,052	38,300	34,873
508	Machinery, equip. & supplies	14,711	15,716	18,601	17,360	17,905	18,429	16,769	19,135	19,795	17,197	17,126	15,103	16,361	156,421	143,584
509	Miscellaneous durable goods	5,722	6,375	7,225	6,778	7,397	7,309	6,334	6,805	7,251	7,098	8,412	7,448	7,193	60,996	59,380
51	Nondurable goods	63,808	65,660	72,964	65,409	68,802	71,182	66,696	73,213	71,388	66,884	68,616	65,800	70,022	619,120	577,112
511	Paper & paper products	3,946	4,047	4,600	4,029	4,072	4,498	4,173	4,706	4,596	3,974	4,255	4,022	4,270	38,665	32,194
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,068	2,809	2,925	3,087	2,988	3,259	3,307	2,892	2,806	2,675	2,922	26,888	24,552
513	Apparel, piece goods & notions	3,456	4,174	4,244	3,398	3,707	4,404	4,342	5,242	4,614	4,194	4,411	3,760	3,126	37,581	33,986
514	Groceries & related products	19,008	18,705	19,698	18,364	20,087	20,300	19,876	20,904	20,163	19,346	19,718	19,990	20,982	176,903	174,343
515	Farm-product raw materials	10,015	9,698	10,956	9,593	10,482	10,499	9,467	10,512	11,137	8,777	10,053	9,009	9,800	92,377	74,481
516	Chemicals & allied products	2,135	2,333	2,708	2,727	2,866	3,072	2,847	2,828	2,677	2,027	2,172	1,951	2,049	23,993	17,198
517	Petroleum & petroleum products	12,187	12,408	13,676	11,371	11,886	11,903	11,588	12,420	11,912	13,279	12,860	12,570	13,193	109,351	110,360
518	Beer, wine, & distilled beverages	2,659	2,962	3,619	3,230	3,636	4,000	3,428	3,897	3,650	3,564	3,630	3,467	4,254	31,079	30,987
519	Misc. nondurable goods	7,674	8,518	10,197	9,888	9,341	9,421	8,469	9,445	9,330	8,831	8,711	8,356	9,426	82,283	79,031
	Inventories, Total	168,783	171,742	173,184	174,543	171,978	174,346	175,528	175,692	177,687	158,624	163,892	164,406	165,819	(X)	(X)
50	Durable goods	109,662	111,920	113,888	115,597	114,132	113,721	115,596	115,639	116,990	104,729	107,150	106,314	107,257	(X)	(X)
501	Motor vehicles & auto. equip.	21,646	22,681	22,747	22,078	21,845	21,345	21,359	21,237	23,311	20,995	21,027	21,784	21,948	(X)	(X)
502	Furniture & home furnishings	4,154	4,140	4,194	4,379	4,325	4,379	4,397	4,423	4,376	4,165	4,062	4,027	4,011	(X)	(X)
503	Lumber & other construction mat.	6,903	6,891	7,123	7,294	6,930	6,522	6,606	6,216	6,158	5,937	5,899	5,779	6,091	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,069	4,027	4,185	4,203	4,184	4,297	4,402	4,235	4,265	4,431	4,378	4,132	3,973	(X)	(X)
505	Metals & minerals, ex. petroleum	7,848	7,892	8,237	8,683	8,679	9,096	9,159	8,805	8,643	8,658	7,149	7,056	7,583	(X)	(X)
506	Electrical goods	13,171	13,380	13,565	13,705	13,742	13,792	14,000	14,186	14,197	13,086	13,408	13,343	13,374	(X)	(X)
507	Hardware, plumbing & heating equipment	6,882	6,840	7,018	7,113	6,984	6,944	7,183	7,258	7,264	6,717	6,913	6,597	6,692	(X)	(X)
508	Machinery, equip. & supplies	37,907	38,884	39,235	40,343	40,025	39,873	40,643	41,129	40,931	34,809	36,524	36,624	36,064	(X)	(X)
509	Miscellaneous durable goods	7,102	7,185	7,584	7,799	7,418	7,473	7,847	8,150	7,845	7,731	7,790	7,972	7,521	(X)	(X)
51	Nondurable goods	59,121	59,822	59,296	58,946	57,846	60,625	59,932	60,053	60,697	53,895	56,742	58,092	58,562	(X)	(X)
511	Paper & paper products	4,016	3,955	4,120	4,107	3,999	4,138	4,308	4,207	4,191	3,540	3,771	3,750	3,850	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,068	5,381	5,001	5,058	5,206	5,252	5,226	4,602	4,947	4,942	5,076	(X)	(X)
513	Apparel, piece goods & notions	8,001	7,870	7,848	7,803	8,452	8,872	8,462	8,447	8,099	8,023	7,564	7,662	7,989	(X)	(X)
514	Groceries & related products	12,781	12,681	12,329	12,487	12,337	12,274	12,569	12,285	13,090	12,720	13,130	13,409	13,185	(X)	(X)
515	Farm-product raw materials	8,378	9,013	8,120	7,869	7,064	6,680	8,421	8,452	8,940	5,982	7,668	8,172	8,136	(X)	(X)
516	Chemicals & allied products	2,711	2,813	2,830	2,929	3,138	3,033	2,914	3,054	2,897	2,345	2,389	2,454	2,508	(X)	(X)
517	Petroleum & petroleum products	3,869	3,813	3,855	3,866	3,753	3,777	3,826	3,819	3,879	3,746	3,776	3,762	3,751	(X)	(X)
518	Beer, wine, & distilled beverages	3,889	4,070	4,142	4,211	4,011	4,092	4,071	4,077	4,101	4,373	4,545	4,431	3,884	(X)	(X)
519	Misc. nondurable goods	10,282	10,493	11,186	10,913	10,991	10,721	10,155	10,460	10,274	8,564	8,952	9,510	10,183	(X)	(X)
	Stock/sales ratios, Total	1.42	1.37	1.22	1.32	1.26	1.23	1.34	1.23	1.26	1.20	1.19	1.30	1.25	(X)	(X)
50	Durable goods	2.00	1.89	1.65	1.74	1.70	1.62	1.81	1.66	1.67	1.61	1.55	1.74	1.71	(X)	(X)
501	Motor vehicles & auto. equip.	1.92	1.82	1.62	1.51	1.51	1.45	1.59	1.57	1.81	1.72	1.47	1.72	1.62	(X)	(X)
502	Furniture & home furnishings	2.13	1.90	1.83	2.05	2.04	1.92	2.12	1.84	1.93	1.67	1.65	1.90	1.92	(X)	(X)
503	Lumber & other construction mat.	1.74	1.55	1.29	1.26	1.21	1.14	1.21	1.08	1.15	.99	.99	1.16	1.33	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.75	2.45	2.37	2.52	2.71	2.42	2.60	2.09	2.07	2.43	2.18	2.23	2.33	(X)	(X)
505	Metals & minerals, ex. petroleum	1.48	1.47	1.20	1.45	1.53	1.43	1.61	1.40	1.28	1.25	1.34	1.47	1.43	(X)	(X)
506	Electrical goods	1.92	1.77	1.57	1.72	1.69	1.59	1.75	1.58	1.55	1.54	1.51	1.65	1.69	(X)	(X)
507	Hardware, plumbing & heating equipment	1.87	1.93	1.65	1.72	1.62	1.45	1.56	1.55	1.68	1.54	1.53	1.64	1.65	(X)	(X)
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.32	2.24	2.16	2.42	2.15	2.07	2.02	2.13	2.36	2.20	(X)	(X)
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	1.00	1.02	1.24	1.23	1.08	1.09	.93	1.07	1.05	(X)	(X)
51	Nondurable goods . . . . .	.93	.91	.81	.90	.84	.85	.90	.82	.85	.81	.83	.88	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.02	.98	.92	1.03	.89	.91	.89	.89	.93	.90	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.91	1.71	1.64	1.80	1.61	1.58	1.59	1.76	1.85	1.74	(X)	(X)
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.24	2.28	2.01	1.95	1.61	1.76	1.91	1.71	2.04	2.56	(X)	(X)
514	Groceries & related products . . . . .	.67	.68	.63	.68	.61	.60	.64	.59	.65	.66	.67	.67	.63	(X)	(X)
515	Farm-product raw materials . . . . .	.84	.93	.74	.80	.67	.82	.89	.80	.68	.76	.91	.83	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.05	1.07	1.09	.99	1.10	1.08	1.08	1.16	1.10	1.26	1.22	(X)	(X)
517	Petroleum & petroleum products . . . . .	.32	.31	.28	.32	.32	.32	.33	.31	.33	.28	.29	.30	.28	(X)	(X)
518	Beer, wine, & distilled beverages	1.46	1.37	1.14	1.30	1.10	1.02	1.19	1.05	1.12	1.23	1.25	1.28	.91	(X)	(X)
519	Misc. nondurable goods	1.34	1.23	1.10	1.10											

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

SIC code	Kind of business	Unadjusted					Adjusted ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Sept. 1988 from Aug. 1988	Sept. 1988 from Sept. 1987	9 months 1988 from 9 months 1987	Sept. 1988 from Aug. 1988	Sept. 1988 from Sept. 1987	Sept. 1988 from Aug. 1988	Sept. 1988 from Sept. 1987	Sept. 1988 from Aug. 1988	Sept. 1988 from Sept. 1987
	Total	-9	+7.0	+7.7	+1.1	+12.0	+5	+6.7	+1	+12.4
50	Durable goods	+8	+7.3	+8.1	+1.2	+11.7	+7	+6.7	+8	+11.8
501	Motor vehicles & auto. equip.	-4.9	+5.6	+7.8	+9.8	+11.0	+4	+5.1	+3.6	+11.0
502	Furniture & home furnishings	-5.6	-9.2	+9.4	-1.1	+5.1	-3.0	-8.2	-4	+5.0
503	Lumber & other construction mat.	-6.9	-10.7	+2.0	-9	+3.7	-1.9	-10.8	-4	+3.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+1.3	+12.6	+2.8	+7	-3.7	-2.4	+10.0	+4	-3.9
505	Metals & minerals, ex. petroleum	+9.2	+24.9	+21.7	-1.8	+26.0	+3.5	+22.6	-5	+26.4
506	Electrical goods	+2.0	+7.8	+3.9	+1	+8.5	-5	+8.5	-1.1	+8.5
507	Hardware, plumbing & heating equipment	-7.4	-7	+9.8	+1	+8.1	-6.1	-1.3	+1.7	+8.1
508	Machinery, equip. & supplies	+3.4	+15.1	+10.3	-5	+17.6	+3.8	+15.6	+1.1	+17.7
509	Miscellaneous durable goods	+9.8	+2.2	+2.7	-3.7	+1.5	+8	-2.7	-3.0	+1.4
51	Nondurable goods	-2.5	+6.7	+7.3	+1.1	+12.6	+2	+6.8	-1.1	+13.4
511	Paper & paper products	-2.3	+15.7	+20.1	-4	+18.4	+2.4	+14.9	+2.7	+18.5
512	Drugs, drug proprietaries and druggists' sundries	+1.5	+14.3	+9.5	-5	+13.6	+1.2	+15.5	-3.2	+13.9
513	Apparel, piece goods & notions	-12.0	+10.0	+10.6	-4.1	+9	+5.7	+13.7	-2.3	+7
514	Groceries & related products	-3.5	+4.2	+1.5	+6.6	+2.9	+2	+4.4	+2.9	+2.8
515	Farm-product raw materials	+5.9	+26.9	+24.0	+5.8	+49.4	+4.7	+25.5	-2.3	+49.6
516	Chemicals & allied products	-5.3	+32.1	+39.5	-5.1	+23.5	-7.1	+29.6	+6	+23.8
517	Petroleum & petroleum products	-4.1	-10.3	-9	+1.6	+3.6	-6.2	-9.8	-4.0	+3.4
518	Beer, wine, & distilled beverages	-6.3	+2.4	+4	+6	-6.2	+2.7	+2.2	-1.1	-6.1
519	Misc. nondurable goods	-1.2	+5.7	+4.1	-1.8	+20.0	+1.0	+3.6	-3.6	+19.8

¹Adjusted 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*¹ 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

¹Executive 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.5-1.8	1.5	1.4-1.7	1.5	0.3-0.6	0.5	0.9-1.1	0.9	1.4	0.9	0.7
50	Durable goods	1.4-2.1	1.8	1.7-2.0	1.8	0.6-0.9	0.7	1.1-1.8	1.4	1.7	1.2	1.0
501	Motor vehicles & auto. equip.	4.8-8.2	5.5	5.0-5.8	5.5	0.7-2.0	1.5	3.2-4.7	3.8	5.2	3.2	3.1
502	Furniture & home furnishings	6.1-8.9	7.6	6.5-8.5	7.2	1.2-3.6	3.0	5.1-7.9	6.6	6.6	4.8	3.7
503	Lumber & other construction mat.	4.6-8.6	5.0	4.3-6.6	4.7	1.1-3.7	1.9	3.8-6.2	5.2	4.8	5.0	1.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.4-7.8	6.6	5.4-6.8	5.8	2.2-4.8	3.2	4.9-7.1	6.6	5.2	5.8	4.8
505	Metals & minerals, ex. petroleum	4.7-5.9	5.2	4.2-5.3	4.8	1.0-2.0	1.4	3.1-4.7	4.3	4.6	3.1	2.9
506	Electrical goods	3.1-3.7	3.5	2.2-3.9	3.2	1.0-2.2	1.2	2.7-3.6	3.0	3.0	2.2	2.0
507	Hardware, plumbing & heating equipment	6.8-10.1	8.5	6.3-9.6	7.9	1.6-4.0	2.3	4.4-6.4	5.0	7.8	5.8	3.5
508	Machinery, equip. & supplies	2.5-3.9	3.4	2.4-3.6	3.0	1.4-2.4	1.9	2.4-4.0	2.9	2.6	1.7	1.9
509	Miscellaneous durable goods	4.4-5.6	5.1	4.6-5.4	4.7	1.7-2.6	2.1	3.4-5.1	4.0	4.3	2.4	3.2
51	Nondurable goods	2.7-3.1	2.9	2.6-3.1	3.0	0.7-1.0	0.8	1.3-2.0	1.6	2.9	1.7	1.5
511	Paper & paper products	5.1-6.4	6.0	5.2-6.6	5.4	0.9-2.0	1.2	3.3-5.0	4.4	5.3	3.8	3.2
512	Drugs, drug proprietaries and druggists' sundries	5.8-6.5	6.3	5.6-6.7	5.8	0.9-1.6	1.1	3.5-8.4	6.5	5.8	5.7	5.4
513	Apparel, piece goods & notions	8.2-10.2	9.0	8.1-10.1	8.5	2.8-4.7	3.7	5.8-8.1	7.4	8.1	5.4	5.8
514	Groceries & related products	5.3-7.2	6.6	5.1-7.2	6.4	0.7-2.3	1.4	2.9-4.5	3.4	6.2	3.8	3.4
515	Farm-product raw materials	5.1-6.8	6.3	4.3-6.6	5.8	3.1-3.9	3.5	3.6-5.1	4.2	5.2	4.4	3.4
516	Chemicals & allied products	5.8-11.4	8.8	5.8-10.3	8.2	2.2-4.7	2.6	3.3-8.8	6.2	7.2	5.0	4.4
517	Petroleum & petroleum products	4.9-6.3	5.8	4.4-6.7	5.3	0.6-2.0	1.4	2.3-4.0	3.4	5.2	3.8	2.5
518	Beer, wine, & distilled beverages	3.0-3.6	3.3	2.6-3.7	2.8	0.7-1.8	1.5	1.2-3.0	2.7	2.8	2.4	1.8
519	Misc. nondurable goods	4.7-6.4	5.6	3.9-6.1	5.7	0.7-3.6	2.2	1.8-4.2	3.7	4.8	3.9	2.8
	Inventories, Total	1.3-1.8	1.4	1.3-1.6	1.3	0.2-0.9	0.3	1.0-1.7	1.1	(X)	(X)	(X)
50	Durable goods	1.7-2.4	1.8	1.6-2.2	1.7	0.2-1.3	0.4	1.1-2.2	1.2	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.2-7.0	6.6	6.3-6.9	6.5	0.6-1.1	0.8	3.1-4.0	3.3	(X)	(X)	(X)
502	Furniture & home furnishings	10.5-11.8	11.1	10.4-11.8	10.9	0.8-2.1	1.3	4.8-7.6	7.0	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-6.1	5.3	4.7-6.3	5.0	0.8-1.4	1.1	2.9-5.9	4.4	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.0-6.8	6.2	5.7-7.0	6.5	0.6-1.7	1.4	6.8-10.2	7.6	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.2-6.0	5.6	5.1-6.0	5.5	0.5-1.6	0.7	2.5-3.5	3.1	(X)	(X)	(X)
506	Electrical goods	3.0-4.0	3.4	3.0-3.9	3.3	0.3-0.7	0.5	2.2-2.7	2.5	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	4.8-10.4	5.1	4.4-10.2	5.1	0.7-1.0	0.8	2.4-9.2	3.4	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.1-4.9	3.9	3.3-4.0	3.7	0.5-3.4	1.1	2.4-4.8	3.1	(X)	(X)	(X)
509	Miscellaneous durable goods	8.1-8.9	8.6	8.0-8.9	8.5	0.7-1.6	0.9	4.2-7.4	5.6	(X)	(X)	(X)
51	Nondurable goods	2.8-3.2	3.0	2.7-3.2	2.8	0.2-0.8	0.5	2.3-2.6	2.4	(X)	(X)	(X)
511	Paper & paper products	4.9-6.0	5.7	4.9-6.1	5.7	0.5-1.0	0.8	2.4-3.4	2.7	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.4-7.0	6.8	6.3-7.0	6.6	0.5-1.0	0.6	3.8-5.3	4.3	(X)	(X)	(X)
513	Apparel, piece goods & notions	5.4-6.9	6.3	5.3-6.6	6.2	1.0-1.8	1.3	4.9-7.8	6.8	(X)	(X)	(X)
514	Groceries & related products	5.6-6.2	6.0	5.6-6.5	5.8	0.5-1.2	0.6	3.1-4.2	3.8	(X)	(X)	(X)
515	Farm-product raw materials	7.1-8.3	7.7	6.9-8.1	7.3	0.9-3.8	1.5	3.8-7.5	5.5	(X)	(X)	(X)
516	Chemicals & allied products	6.6-8.1	7.2	7.0-7.6	7.4	0.8-3.5	1.8	4.3-8.0	5.1	(X)	(X)	(X)
517	Petroleum & petroleum products	5.2-8.8	6.7	4.9-8.5	6.1	1.0-1.8	1.2	4.0-7.9	6.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.1-4.5	4.3	3.9-4.7	4.1	0.6-1.0	0.8	1.5-4.3	3.2	(X)	(X)	(X)
519	Misc. nondurable goods	8.1-9.4	8.9	8.4-9.3	8.8	1.3-1.9	1.5	7.1-7.7	7.4	(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 1987 through September 1988.

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

SIC code	Kind of business	1987				1988									
		Sept. ¹	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. ¹	Sept. ¹	Oct.
	Sales,¹ Total	1.016	1.041	.987	1.038	.918	.952	1.068	.989	1.018	1.037	.947	1.030	1.017	1.015
50	Durable goods	1.036	1.073	.980	1.013	.880	.931	1.064	1.005	1.013	1.053	.956	1.036	1.039	1.043
501	Motor vehicles & auto. equip. ...	.948	1.081	.976	1.045	.896	.922	1.049	1.020	1.039	1.073	.970	1.006	.953	1.045
502	Furniture & home furnishings ...	1.087	1.134	.992	.973	.859	.939	1.015	.968	.994	1.064	.951	1.084	1.055	1.108
503	Lumber & other construction mat.	1.096	1.108	.980	.884	.779	.829	.988	1.005	1.059	1.115	1.050	1.155	1.096	1.076
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.076	1.186	1.122	1.041	.855	.958	1.023	.982	.876	.973	.907	1.061	1.102	1.141
505	Metals & minerals, ex. petroleum	1.064	1.012	.915	.978	.949	.983	1.152	.987	.984	1.057	.934	1.027	1.084	.979
506	Electrical goods	1.078	1.112	1.028	1.054	.887	.955	1.047	.933	.952	1.015	.966	1.042	1.069	1.091
507	Hardware, plumbing & heating equipment	1.024	1.079	.973	.978	.888	.933	1.018	.992	1.035	1.096	.986	1.045	1.030	1.046
508	Machinery, equip. & supplies ...	1.038	1.027	.945	1.050	.888	.941	1.106	1.025	1.034	1.049	.937	1.037	1.034	.989
509	Miscellaneous durable goods ...	1.011	1.097	1.030	.970	.844	.915	1.073	1.059	1.064	1.056	.873	.974	1.061	1.068
51	Nondurable goods .....	.998	1.012	.994	1.059	.952	.969	1.066	.975	1.030	1.016	.941	1.023	.997	.987
511	Paper & paper products	1.007	1.047	.969	1.018	.938	.973	1.088	.974	.971	1.038	.934	1.063	1.014	1.002
512	Drugs, drug proprietaries and druggists' sundries	1.040	1.038	.976	1.041	.976	.973	1.062	.977	.993	1.021	.933	1.027	1.030	1.006
513	Apparel, piece goods & notions	1.078	1.115	.936	.762	.863	1.076	1.091	.879	.915	1.030	1.021	1.252	1.043	1.103
514	Groceries & related products ...	1.003	1.004	.977	1.039	.958	.949	1.027	.978	1.033	1.033	.994	1.040	1.001	.980
515	Farm-product raw materials ...	.903	1.024	1.111	1.177	1.035	1.015	1.118	.954	1.037	.952	.840	.902	.913	.986
516	Chemicals & allied products ...	1.029	1.064	.954	.921	.956	.988	1.063	1.016	1.028	1.078	.929	1.029	1.048	1.023
517	Petroleum & petroleum products	.997	1.012	1.114	1.114	1.059	1.015	1.104	.948	.957	.954	.909	.969	.991	.982
518	Beer, wine, & distilled beverages	1.015	1.033	.996	1.216	.741	.813	1.008	.937	1.058	1.136	.993	1.115	1.017	.978
519	Misc. nondurable goods .....	.970	.964	.955	1.029	.818	.906	1.095	1.087	1.146	1.060	.943	1.011	.989	.946
	Inventories,¹ Total .....	.994	1.010	1.008	1.003	1.004	1.006	1.008	1.006	.990	.996	.993	.987	.993	1.008
50	Durable goods	1.008	1.003	.998	.992	.986	.994	1.000	1.007	1.003	1.006	1.008	1.002	1.008	1.003
501	Motor vehicles & auto. equip. ...	1.019	1.009	1.018	1.016	.996	1.004	1.008	1.001	.995	1.008	.980	.962	1.019	1.001
502	Furniture & home furnishings ...	1.008	.995	.988	1.010	1.018	1.003	.993	.990	1.007	.989	1.001	1.016	1.009	.994
503	Lumber & other construction mat. ....	.990	.982	.986	.982	.947	.984	1.015	1.031	1.011	1.032	1.030	.994	.989	.972
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.027	1.016	.986	.971	.982	.986	.999	.992	.982	1.006	1.040	1.026	1.029	1.022
505	Metals & minerals, ex. petroleum	.978	.980	.972	1.014	1.021	1.009	1.004	1.004	1.014	1.026	1.010	.988	.975	.978
506	Electrical goods	1.028	1.020	1.005	.983	.968	.976	.989	.990	.997	1.001	1.018	1.016	1.028	1.015
507	Hardware, plumbing & heating equipment .....	.991	.982	.981	.963	.976	.998	1.026	1.035	1.023	1.011	1.012	1.007	.991	.984
508	Machinery, equip. & supplies ...	.990	1.005	.992	.995	.991	.996	1.003	1.010	1.006	1.009	1.007	1.005	.989	1.001
509	Miscellaneous durable goods ...	1.027	1.015	1.027	.958	.955	.967	.970	1.011	1.010	1.003	1.034	1.036	1.028	1.018
51	Nondurable goods .....	.971	1.018	1.031	1.032	1.038	1.032	1.021	1.002	.967	.979	.964	.954	.971	1.017
511	Paper & paper products .....	.970	.984	.998	1.005	1.013	1.010	1.016	1.011	.994	1.000	.999	.999	.969	.983
512	Drugs, drug proprietaries and druggists' sundries .....	.987	1.025	.984	.997	1.032	1.038	1.031	1.028	.972	.959	.959	.957	.984	1.027
513	Apparel, piece goods & notions	1.035	.976	.942	.983	.991	.978	.953	.957	1.015	1.053	1.059	1.058	1.038	.975
514	Groceries & related products ...	.996	1.038	1.043	1.012	.990	1.006	.987	.990	.987	.990	.990	.963	.997	1.040
515	Farm-product raw materials ...	.869	1.076	1.164	1.187	1.228	1.168	1.078	.989	.840	.843	.819	.802	.868	1.078
516	Chemicals & allied products ...	.950	.995	1.001	.983	.999	1.012	.998	1.032	1.035	1.022	1.004	1.005	.948	.986
517	Petroleum & petroleum products	1.007	1.022	1.043	1.103	1.091	.962	.970	.929	.955	.973	.981	.953	1.008	1.021
518	Beer, wine, & distilled beverages	1.004	1.056	1.046	.907	.943	.880	1.011	1.030	1.007	1.030	1.001	.986	1.003	1.053
519	Misc. nondurable goods .....	.941	.973	.974	1.025	1.034	1.064	1.106	1.064	.970	.975	.921	.924	.942	.977

¹Revised

¹Adjusted 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 1988



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW88-10
Issued December 1988

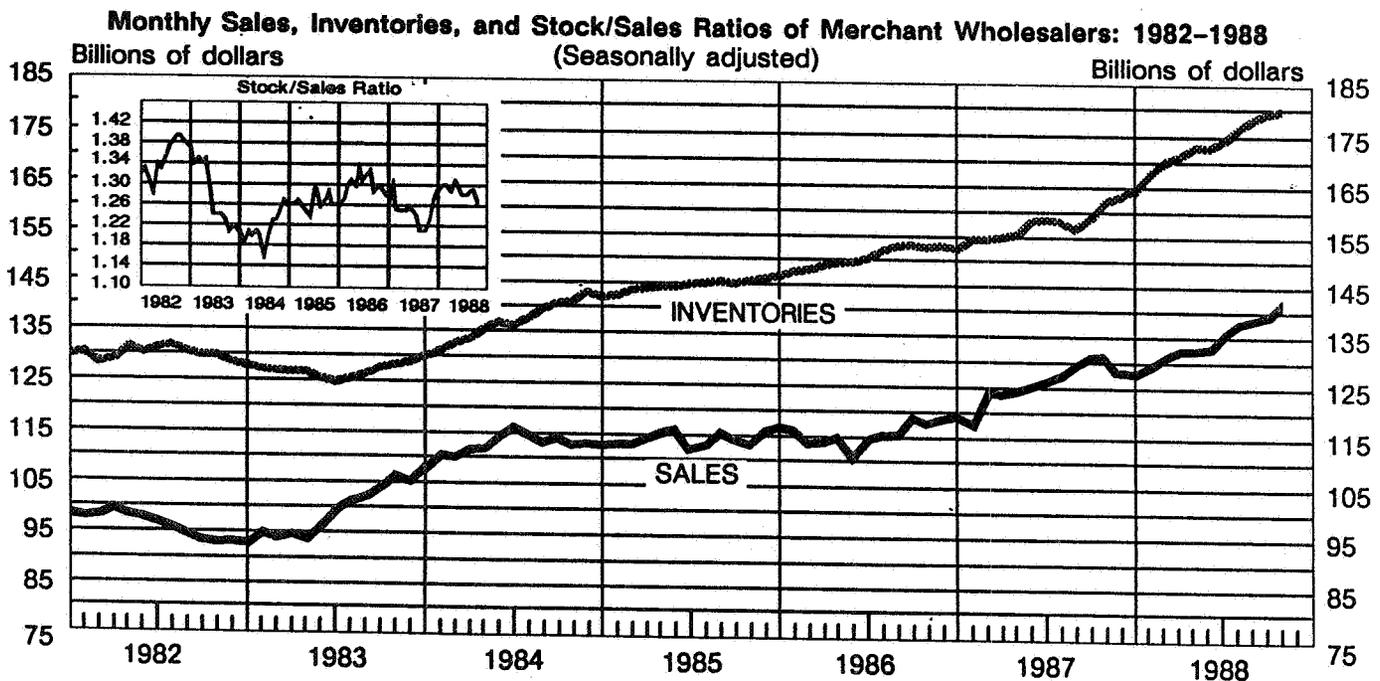
Sales. October 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$142.4 billion, up 1.9 percent (± 0.9 percent) from the revised September level and up 8.5 percent (± 1.8 percent) from a year ago. The September preliminary estimate was revised upward by \$0.02 billion or about 0.01 percent. October sales of durable goods increased 1.6 percent (± 0.9 percent) from September, and were 7.6 percent (± 2.6 percent) above a year ago. October sales of nondurable goods were up 2.3 percent (± 2.7 percent) from September and were up 9.4 percent (± 9.1 percent) from October 1987. Monthly gains in the nondurable goods group were as follows: sales of farm-product raw materials were up 7.9 percent to \$13.1 billion and sales of groceries and related products increased 2.9 percent to \$20.5 billion.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price

changes, were \$180.8 billion at the end of October, up 0.3 percent (± 0.7 percent) from the revised September level and 10.9 percent (± 1.9 percent) from a year ago. The September preliminary estimate was revised upward by \$0.9 billion or about 0.5 percent. Inventories of durable goods wholesalers increased 0.3 percent (± 0.6 percent) from the September level and were 9.7 percent (± 2.2 percent) above a year ago. Inventories of nondurable goods wholesalers were up 0.2 percent (± 1.3 percent) from the September level and were up 13.1 percent (± 3.9 percent) from October 1987.

Stock/Sales Ratio. The October stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.27, down from the September ratio of 1.29. The year ago ratio was 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 November is scheduled to be released January 10, 1989 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988										1987		
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Oct. ^r	Nov.	Dec.
	Sales, Total	129,720	131,822	132,885	133,015	133,264	136,289	138,195	139,008	139,682	142,378	131,186	128,501	128,332
50	Durable goods	62,488	63,795	64,881	66,081	65,933	68,242	67,262	67,065	67,755	68,817	63,949	62,325	61,983
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,333	13,913	13,735	13,861	13,488	13,588	14,125	13,018	12,982	12,927
502	Furniture & home furnishings	2,267	2,319	2,284	2,208	2,137	2,139	2,180	2,218	2,228	2,244	2,170	2,140	2,148
503	Lumber & other construction mat.	5,098	5,388	5,594	5,744	5,408	5,110	5,193	4,999	5,038	5,084	5,382	5,100	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,731	1,785	1,824	1,867	1,914	1,933	1,936	1,698	1,649	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	6,048	5,780	6,005	6,082	6,102	6,346	6,310	5,280	5,231	5,435
506	Electrical goods	7,738	7,897	8,263	8,517	8,517	8,562	8,273	8,641	8,477	8,675	7,965	7,865	7,511
507	Hardware, plumbing & heating equipment	4,125	3,803	4,183	4,165	4,165	4,378	4,655	4,472	4,252	4,374	4,172	4,145	4,143
508	Machinery, equip. & supplies	16,568	16,701	16,818	16,937	17,138	17,568	17,896	18,452	19,129	19,330	16,982	15,982	15,882
509	Miscellaneous durable goods	6,780	6,967	6,733	6,400	6,952	6,921	7,255	6,781	6,784	6,759	7,572	7,231	7,415
51	Nondurable goods	67,234	67,827	68,004	66,934	67,331	70,047	70,933	71,943	71,927	73,561	67,247	66,178	66,349
511	Paper & paper products	4,207	4,159	4,228	4,137	4,194	4,331	4,468	4,427	4,597	4,616	4,045	4,151	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,787	2,895	2,887	2,875	2,948	3,024	3,095	3,173	3,178	3,193	2,708	2,741	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,866	4,051	4,276	4,253	4,187	4,441	4,437	3,910	4,017	4,102
514	Groceries & related products	19,839	19,710	19,180	18,777	19,445	19,852	19,785	20,100	19,947	20,533	19,523	20,481	20,194
515	Farm-product raw materials	9,678	9,553	9,800	10,058	10,108	10,108	11,028	11,294	11,654	12,153	13,114	9,565	8,109
516	Chemicals & allied products	2,233	2,381	2,548	2,684	2,788	2,950	2,549	2,748	2,649	2,659	2,076	2,045	2,225
517	Petroleum & petroleum products	11,508	12,225	12,569	11,985	12,211	12,477	12,748	12,617	11,886	11,737	12,925	12,421	11,843
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,447	3,437	3,521	3,450	3,495	3,584	3,650	3,524	3,481	3,498
519	Misc. nondurable goods	9,381	9,402	9,312	9,007	8,151	8,888	8,981	9,342	9,492	9,622	8,971	8,750	9,160
	Inventories, Total	168,388	170,632	171,732	173,530	173,418	175,001	177,307	179,165	180,278	180,785	163,067	163,353	165,097
50	Durable goods	111,259	112,681	113,694	114,812	113,668	112,674	114,702	115,685	117,294	117,656	107,267	106,503	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,566	22,056	21,955	21,176	21,795	22,076	22,672	22,941	21,006	21,441	21,602
502	Furniture & home furnishings	4,081	4,128	4,224	4,423	4,295	4,428	4,393	4,353	4,384	4,459	4,091	4,076	3,971
503	Lumber & other construction mat.	7,289	7,003	7,018	7,075	6,955	6,320	6,414	6,254	6,373	6,468	6,081	5,861	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,237	4,261	4,271	4,233	4,128	4,304	4,241	4,267	4,191	4,092
505	Metals & minerals, ex. petroleum	7,687	7,522	8,204	8,648	8,559	8,865	9,068	8,912	9,079	9,166	7,310	7,259	7,478
506	Electrical goods	13,606	13,709	13,716	13,843	13,778	13,752	13,963	13,768	13,919	13,223	13,227	13,277	13,605
507	Hardware, plumbing & heating equipment	7,031	6,854	6,940	6,872	6,827	6,868	7,098	7,208	7,248	7,289	7,025	6,725	6,949
508	Machinery, equip. & supplies	39,251	39,040	39,118	39,944	39,788	39,517	40,360	40,924	41,908	41,628	36,597	35,911	36,245
509	Miscellaneous durable goods	7,437	7,430	7,819	7,714	7,345	7,451	7,589	7,867	7,558	7,547	7,667	7,762	7,851
51	Nondurable goods	57,129	57,971	58,038	58,718	59,752	62,327	62,605	63,480	62,984	63,129	55,800	56,850	57,101
511	Paper & paper products	3,984	3,916	4,055	4,062	4,023	4,138	4,312	4,211	4,387	4,391	3,840	3,758	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,916	5,215	5,145	5,274	5,429	5,488	5,340	5,190	4,831	5,022	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,023	7,945	8,327	8,425	7,991	7,984	7,903	8,278	7,710	8,134	8,127
514	Groceries & related products	12,910	12,605	12,491	12,613	12,499	12,398	12,696	12,757	13,071	13,083	12,625	12,856	13,029
515	Farm-product raw materials	6,822	7,717	7,532	7,754	8,410	10,273	10,282	10,539	10,176	9,975	7,168	7,021	6,854
516	Chemicals & allied products	2,714	2,780	2,836	2,838	3,032	2,968	2,902	3,039	3,019	2,945	2,443	2,452	2,551
517	Petroleum & petroleum products	3,546	3,964	3,974	3,946	3,930	3,882	3,900	4,007	3,964	3,797	3,742	3,607	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,088	3,983	3,973	4,067	4,135	4,138	4,251	4,280	4,238	4,282
519	Misc. nondurable goods	9,944	9,882	10,114	10,257	10,403	10,996	11,026	11,320	11,006	11,219	9,183	9,784	9,935
	Stock/sales ratios, Total	1.30	1.30	1.29	1.30	1.30	1.28	1.28	1.29	1.29	1.27	1.24	1.27	1.29
50	Durable goods	1.78	1.77	1.75	1.74	1.72	1.70	1.71	1.72	1.73	1.71	1.68	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.67	1.69	1.54	1.58	1.54	1.57	1.64	1.67	1.62	1.61	1.65	1.67
502	Furniture & home furnishings	1.80	1.78	1.87	2.00	2.01	2.07	2.02	1.96	1.97	1.99	1.89	1.90	1.85
503	Lumber & other construction mat.	1.43	1.31	1.25	1.23	1.27	1.24	1.24	1.25	1.28	1.28	1.13	1.15	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.45	2.41	2.34	2.27	2.16	2.23	2.19	2.51	2.54	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.49	1.48	1.49	1.46	1.43	1.45	1.38	1.39	1.38
506	Electrical goods	1.76	1.74	1.68	1.63	1.62	1.61	1.66	1.62	1.62	1.60	1.66	1.69	1.81
507	Hardware, plumbing & heating equipment	1.70	1.80	1.84	1.65	1.64	1.57	1.52	1.61	1.70	1.67	1.68	1.62	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.36	2.30	2.25	2.28	2.22	2.19	2.15	2.19	2.25	2.33
509	Miscellaneous durable goods	1.10	1.07	1.16	1.21	1.08	1.08	1.05	1.16	1.12	1.12	1.01	1.07	1.06
51	Nondurable goods .....	.85	.85	.85	.88	.89	.89	.88	.88	.88	.86	.83	.86	.86
511	Paper & paper products .....	.94	.94	.96	.98	.96	.96	.97	.95	.95	.95	.95	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.81	1.75	1.74	1.75	1.73	1.68	1.63	1.78	1.83	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.08	2.08	2.08	1.97	1.88	1.91	1.78	1.87	1.97	2.02	1.98
514	Groceries & related products .....	.65	.64	.65	.67	.64	.63	.64	.63	.66	.64	.65	.63	.65
515	Farm-product raw materials .....	.71	.81	.77	.77	.83	.93	.91	.90	.84	.76	.75	.87	.82
516	Chemicals & allied products	1.22	1.18	1.11	1.06	1.09	1.04	1.02	1.11	1.14	1.11	1.18	1.20	1.15
517	Petroleum & petroleum products .....	.31	.32	.32	.33	.32	.31	.31	.33	.33	.32	.29	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.19	1.16	1.13	1.18	1.18	1.15	1.16	1.21	1.22	1.22
519	Misc. nondurable goods	1.06	1.05	1.09	1.13	1.28	1.24	1.23	1.21	1.17	1.17	1.02	1.12	1.08

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.
^rRevised.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988										1987			Total 10 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Oct.	Nov.	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	131,787	138,044	141,242	130,728	142,873	140,998	145,359	137,821	126,896	132,747	1,354,714	1,261,184
50	Durable goods	54,944	59,327	69,184	66,378	67,242	70,060	64,030	69,460	70,060	72,028	69,005	61,096	62,725	662,713	615,456
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,620	14,456	14,738	13,445	13,587	12,827	15,029	14,294	12,670	13,509	136,462	127,043
502	Furniture & home furnishings	1,947	2,178	2,298	2,135	2,124	2,276	2,073	2,404	2,377	2,502	2,469	2,123	2,090	22,314	20,489
503	Lumber & other construction mat.	3,971	4,448	5,527	5,773	5,727	5,698	5,453	5,774	5,522	5,484	5,979	4,998	4,583	53,377	52,779
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,479	1,643	1,767	1,665	1,546	1,775	1,893	2,031	2,155	2,219	2,011	1,850	1,705	17,973	17,248
505	Metals & minerals, ex. petroleum	5,304	5,384	6,855	5,989	5,688	6,347	5,881	6,267	6,879	6,159	5,343	4,786	5,315	60,513	49,979
506	Electrical goods	6,882	7,542	8,651	7,946	8,108	8,690	7,992	9,004	9,003	9,517	8,857	8,065	7,917	83,315	80,029
507	Hardware, plumbing & heating equipment	3,663	3,548	4,258	4,132	4,311	4,798	4,590	4,673	4,337	4,610	4,514	4,033	4,052	42,920	39,387
508	Machinery, equip. & supplies	14,711	15,718	18,601	17,360	17,905	18,429	16,789	19,135	19,722	19,175	17,126	15,103	16,361	177,523	160,710
509	Miscellaneous durable goods	6,722	6,375	7,225	6,778	7,397	7,309	6,334	6,605	7,238	7,333	8,412	7,448	7,193	68,316	67,792
51	Nondurable goods	63,808	65,660	72,964	65,409	68,802	71,182	66,698	73,213	70,938	73,331	68,816	65,800	70,022	692,001	645,728
511	Paper & paper products	3,946	4,047	4,600	4,029	4,072	4,496	4,173	4,706	4,689	4,630	4,255	4,022	4,270	43,388	36,449
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,066	2,809	2,925	3,087	2,888	3,259	3,277	3,209	2,806	2,675	2,922	30,067	27,358
513	Apparel, piece goods & notions	3,456	4,174	4,244	3,398	3,707	4,404	4,342	5,242	4,863	4,965	4,411	3,760	3,126	42,596	38,397
514	Groceries & related products	19,006	18,705	19,699	18,364	20,087	20,300	19,676	20,904	19,807	20,287	19,718	19,990	20,982	198,834	194,061
515	Farm-product raw materials	10,015	9,696	10,956	9,593	10,482	10,499	9,487	10,512	10,901	13,442	10,053	9,009	9,800	105,583	84,534
516	Chemicals & allied products	2,135	2,333	2,708	2,727	2,866	3,072	2,847	2,828	2,744	2,696	2,172	1,951	2,049	26,756	19,370
517	Petroleum & petroleum products	12,187	12,408	13,876	11,371	11,686	11,903	11,588	12,420	11,874	11,326	12,860	12,570	13,193	120,639	123,220
518	Beer, wine, & distilled beverages	2,659	2,962	3,619	3,230	3,636	4,000	3,426	3,897	3,631	3,577	3,630	3,467	4,254	34,637	34,597
519	Misc. nondurable goods	7,674	8,518	10,197	9,888	9,341	9,421	8,469	9,445	9,350	9,199	8,711	8,356	9,426	91,502	87,742
	Inventories, Total	168,783	171,742	173,184	174,543	171,978	174,346	175,528	176,692	178,837	181,630	163,892	164,406	166,819	(X)	(X)
50	Durable goods	109,662	111,920	113,888	115,597	114,132	113,721	115,596	115,639	117,755	117,419	107,150	106,314	107,257	(X)	(X)
501	Motor vehicles & auto. equip.	21,646	22,681	22,747	22,078	21,845	21,345	21,359	21,237	23,125	22,918	21,027	21,784	21,948	(X)	(X)
502	Furniture & home furnishings	4,154	4,140	4,194	4,379	4,325	4,379	4,397	4,423	4,415	4,419	4,062	4,027	4,011	(X)	(X)
503	Lumber & other construction mat.	6,903	6,891	7,123	7,294	6,930	6,522	6,606	6,216	6,284	6,259	5,899	5,779	6,091	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,069	4,027	4,185	4,203	4,184	4,297	4,402	4,235	4,455	4,384	4,378	4,132	3,973	(X)	(X)
505	Metals & minerals, ex. petroleum	7,848	7,892	8,237	8,683	8,679	9,096	9,159	8,805	8,888	8,974	7,149	7,056	7,583	(X)	(X)
506	Electrical goods	13,171	13,360	13,565	13,705	13,742	13,792	14,000	14,186	14,126	14,100	13,408	13,343	13,374	(X)	(X)
507	Hardware, plumbing & heating equipment	6,862	6,840	7,018	7,113	6,984	6,944	7,183	7,258	7,176	7,172	6,913	6,597	6,692	(X)	(X)
508	Machinery, equip. & supplies	37,907	38,884	39,235	40,343	40,025	39,873	40,643	41,129	41,531	41,545	36,524	35,824	36,064	(X)	(X)
509	Miscellaneous durable goods	7,102	7,185	7,584	7,799	7,418	7,473	7,847	8,150	7,755	7,668	7,790	7,972	7,521	(X)	(X)
51	Nondurable goods	59,121	59,822	59,296	58,946	57,846	60,625	59,932	60,053	61,082	64,211	56,742	58,092	58,562	(X)	(X)
511	Paper & paper products	4,016	3,955	4,120	4,107	3,999	4,138	4,308	4,207	4,236	4,312	3,771	3,750	3,850	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,068	5,361	5,001	5,058	5,208	5,252	5,287	5,315	4,947	4,942	5,078	(X)	(X)
513	Apparel, piece goods & notions	8,001	7,870	7,848	7,803	8,452	8,872	8,462	8,447	8,195	8,104	7,564	7,662	7,989	(X)	(X)
514	Groceries & related products	12,781	12,681	12,329	12,487	12,337	12,274	12,569	12,285	13,019	13,593	13,130	13,409	13,185	(X)	(X)
515	Farm-product raw materials	8,378	9,013	8,120	7,669	7,084	8,680	8,421	8,452	8,894	10,693	7,668	8,172	8,136	(X)	(X)
516	Chemicals & allied products	2,711	2,813	2,830	2,929	3,138	3,033	2,914	3,054	2,888	2,865	2,389	2,454	2,508	(X)	(X)
517	Petroleum & petroleum products	3,869	3,813	3,855	3,666	3,753	3,777	3,828	3,819	4,047	3,827	3,778	3,762	3,751	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	4,070	4,142	4,111	4,011	4,092	4,071	4,077	4,146	4,519	4,545	4,431	3,884	(X)	(X)
519	Misc. nondurable goods	10,282	10,493	11,186	10,913	10,091	10,721	10,155	10,460	10,390	10,983	8,952	9,510	10,183	(X)	(X)
	Stock/sales ratios, Total	1.42	1.37	1.22	1.32	1.26	1.23	1.34	1.23	1.27	1.25	1.19	1.30	1.25	(X)	(X)
50	Durable goods	2.00	1.89	1.65	1.74	1.70	1.62	1.81	1.66	1.68	1.63	1.55	1.74	1.71	(X)	(X)
501	Motor vehicles & auto. equip.	1.92	1.82	1.62	1.51	1.51	1.45	1.59	1.57	1.80	1.52	1.47	1.72	1.62	(X)	(X)
502	Furniture & home furnishings	2.13	1.90	1.83	2.05	2.04	1.92	2.12	1.84	1.86	1.77	1.65	1.90	1.92	(X)	(X)
503	Lumber & other construction mat.	1.74	1.55	1.29	1.28	1.21	1.14	1.21	1.08	1.14	1.14	.99	1.16	1.33	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.75	2.45	2.37	2.52	2.71	2.42	2.60	2.09	2.07	1.97	2.18	2.23	2.33	(X)	(X)
505	Metals & minerals, ex. petroleum	1.48	1.47	1.20	1.45	1.53	1.43	1.61	1.40	1.29	1.46	1.34	1.47	1.43	(X)	(X)
506	Electrical goods	1.92	1.77	1.57	1.72	1.69	1.59	1.75	1.58	1.57	1.48	1.51	1.65	1.69	(X)	(X)
507	Hardware, plumbing & heating equipment	1.87	1.93	1.65	1.72	1.62	1.45	1.58	1.55	1.65	1.56	1.53	1.64	1.65	(X)	(X)
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.32	2.24	2.16	2.42	2.15	2.11	2.17	2.13	2.38	2.20	(X)	(X)
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	1.00	1.02	1.24	1.23	1.07	1.05	.93	1.07	1.05	(X)	(X)
51	Nondurable goods . . . . .	.93	.91	.81	.90	.84	.85	.90	.82	.88	.88	.88	.88	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.02	.98	.92	1.03	.89	.90	.93	.89	.93	.90	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.91	1.71	1.64	1.80	1.61	1.61	1.66	1.76	1.65	1.74	(X)	(X)
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.24	2.28	2.01	1.95	1.81	1.78	1.63	1.71	2.04	2.56	(X)	(X)
514	Groceries & related products . . . . .	.67	.68	.63	.68	.61	.60	.64	.59	.66	.67	.67	.67	.63	(X)	(X)
515	Farm-product raw materials . . . . .	.84	.93	.74	.80	.67	.82	.89	.80	.82	.80	.76	.81	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.05	1.07	1.09	.99	1.10	1.08	1.05	1.06	1.10	1.26	1.22	(X)	(X)
517	Petroleum & petroleum products . . . . .	.32	.31	.28	.32	.32	.32	.33	.31	.34	.34	.29	.30	.28	(X)	(X)
518	Beer, wine, & distilled beverages	1.48	1.37	1.14	1.30	1.10	1.02	1.19	1.05	1.14	1.26	1.25	1.28	.91	(X)	(X)
519	Misc. nondurable goods	1.34	1.23	1.1												

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

SIC code	Kind of business	Unadjusted					Adjusted ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Oct. 1988 from Sept. 1988	Oct. 1988 from Oct. 1987	10 months 1988 from 10 months 1987	Oct. 1988 from Sept. 1988	Oct. 1988 from Oct. 1987	Oct. 1988 from Sept. 1988	Oct. 1988 from Oct. 1987	Oct. 1988 from Sept. 1988	Oct. 1988 from Oct. 1987
	Total	+3.1	+5.6	+7.4	+1.6	+10.8	+1.9	+8.5	+3	+10.9
50	Durable goods	+2.8	+4.4	+7.7	-.3	+9.6	+1.6	+7.6	+3	+9.7
501	Motor vehicles & auto. equip.	+17.2	+5.1	+7.4	-.9	+9.0	+4.0	+8.5	+1.2	+9.2
502	Furniture & home furnishings	+5.3	+1.3	+8.9	+1	+8.8	+7	+3.4	+1.7	+9.0
503	Lumber & other construction mat.	-.7	-8.3	+1.1	-.4	+6.1	+5	-5.9	+1.5	+6.3
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+3.0	+10.3	+4.2	-2.0	-.3	+2	+14.0	-1.5	-.6
505	Metals & minerals, ex. petroleum	-10.5	+15.3	+21.1	+1.0	+25.5	-.6	+19.5	+1.0	+25.4
506	Electrical goods	+5.7	+7.5	+4.1	-.2	+5.2	+2.3	+8.9	+1.1	+5.3
507	Hardware, plumbing & heating equipment	+6.3	+2.1	+9.0	-.1	+3.7	+2.9	+4.8	+6	+3.8
508	Machinery, equip. & supplies	-2.8	+12.0	+10.5	.0	+13.7	+1.1	+15.8	-.7	+13.7
509	Miscellaneous durable goods	+1.3	-12.8	+8	-1.1	-1.6	-.1	-10.7	-.1	-1.6
51	Non-durable goods	+3.4	+6.9	+7.2	+5.1	+13.2	+2.3	+9.4	+2	+13.1
511	Paper & paper products	-1.3	+8.8	+19.0	+1.8	+14.3	+4	+14.1	+5	+14.3
512	Drugs, drug proprietaries and druggists' sundries	-2.1	+14.4	+9.9	+5	+7.4	+5	+17.9	-2.8	+7.4
513	Apparel, piece goods & notions	+6.5	+12.6	+10.9	-1.1	+7.1	-.1	+13.5	+4.7	+7.4
514	Groceries & related products	+2.4	+2.9	+1.4	+4.4	+3.5	+2.9	+5.2	+1	+3.6
515	Farm-product raw materials	+23.3	+33.7	+24.9	+20.2	+39.4	+7.9	+37.1	-2.0	+39.2
516	Chemicals & allied products	-1.7	+24.1	+38.1	-.1	+19.9	+4	+28.1	-2.5	+20.5
517	Petroleum & petroleum products	-4.6	-11.9	-2.1	-5.4	+1.4	-1.3	-9.2	-4.2	+1.5
518	Beer, wine, & distilled beverages	-1.5	-1.5	+1	+9.0	-.6	+1.8	+3.6	+2.7	-.7
519	Misc. non-durable goods	-1.6	+5.6	+4.3	+5.7	+22.7	+1.4	+7.3	+1.9	+22.4

¹Adjusted 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*¹ 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

¹Executive 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.4-1.6	1.5	1.4-1.7	1.5	0.3-0.6	0.5	0.9-1.0	0.9	1.4	1.0	0.7
50	Durable goods	1.4-2.0	1.8	1.7-2.0	1.8	0.5-0.9	0.7	1.1-1.5	1.4	1.7	1.2	1.0
501	Motor vehicles & auto. equip.	4.8-8.2	5.2	5.0-5.8	5.4	0.7-2.0	1.4	3.2-5.0	4.1	5.2	3.1	3.3
502	Furniture & home furnishings	6.1-8.9	7.8	6.1-8.5	7.0	1.2-3.6	3.0	4.9-7.9	6.6	8.5	5.0	3.4
503	Lumber & other construction mat.	4.6-5.4	5.0	4.3-6.6	4.9	1.1-3.1	1.7	3.8-6.2	5.2	4.8	5.1	2.2
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.4-9.3	6.6	5.5-6.8	6.0	2.2-7.0	3.3	4.9-8.9	6.6	5.1	5.7	5.0
505	Metals & minerals, ex. petroleum	4.7-8.8	5.2	4.2-5.6	5.0	1.0-3.8	1.6	3.1-7.4	4.6	5.0	3.2	3.3
506	Electrical goods	2.8-3.7	3.4	2.7-3.9	3.3	1.0-1.7	1.2	2.3-3.6	2.8	2.9	2.2	1.7
507	Hardware, plumbing & heating equipment	6.6-10.1	8.6	6.3-9.6	8.3	1.6-3.7	2.2	4.4-6.4	5.1	7.5	5.6	3.4
508	Machinery, equip. & supplies	2.5-3.7	3.4	2.4-3.6	3.1	1.4-2.4	1.9	2.4-3.5	2.9	2.7	1.7	1.9
509	Miscellaneous durable goods	4.4-5.6	4.9	4.6-5.4	4.7	1.7-2.6	2.2	3.4-4.6	3.9	4.3	2.3	3.0
51	Nondurable goods	2.7-3.1	2.9	2.6-3.1	3.0	0.7-1.0	0.8	1.3-1.7	1.5	2.8	1.8	1.5
511	Paper & paper products	5.1-6.4	5.8	5.2-6.6	5.5	0.9-2.7	1.2	3.0-4.8	3.9	5.3	3.9	2.9
512	Drugs, drug proprietaries and druggists' sundries	5.8-6.5	6.3	5.6-6.7	6.0	0.9-1.6	1.4	3.5-8.4	5.2	5.8	5.5	5.1
513	Apparel, piece goods & notions	8.2-10.2	9.2	8.2-10.1	8.9	2.6-4.7	3.4	5.6-9.1	7.4	8.3	5.5	5.7
514	Groceries & related products	5.4-7.2	6.6	4.9-7.2	6.4	0.7-2.3	1.3	2.9-4.5	3.2	6.1	3.8	3.3
515	Farm-product raw materials	4.6-6.8	5.9	4.3-6.6	5.6	3.1-3.9	3.4	3.6-4.6	4.1	4.9	4.4	3.2
516	Chemicals & allied products	6.5-11.4	8.8	5.8-10.3	8.2	2.0-4.7	2.6	3.5-8.8	6.2	7.0	5.3	3.9
517	Petroleum & petroleum products	5.4-8.5	6.2	5.0-6.7	5.8	0.6-1.8	1.3	2.3-4.0	3.6	5.3	3.7	2.5
518	Beer, wine, & distilled beverages	2.7-3.6	3.3	2.6-3.7	3.0	0.7-1.8	1.3	1.2-3.0	2.4	2.7	2.4	1.4
519	Misc. nondurable goods	4.5-6.4	5.4	4.5-6.1	5.7	0.7-3.8	1.6	1.8-4.1	3.4	4.6	4.0	2.7
	Inventories, Total	1.3-1.8	1.4	1.3-1.8	1.3	0.2-0.9	0.4	1.0-1.7	1.1	(X)	(X)	(X)
50	Durable goods	1.6-2.4	1.8	1.4-2.2	1.7	0.3-1.3	0.5	1.1-2.2	1.2	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.2-7.0	6.7	6.3-6.9	6.5	0.6-1.2	0.9	3.1-4.0	3.3	(X)	(X)	(X)
502	Furniture & home furnishings	9.7-11.8	10.8	10.0-11.8	10.7	0.9-2.1	1.5	4.3-7.6	6.7	(X)	(X)	(X)
503	Lumber & other construction mat.	4.6-6.1	5.3	4.7-6.3	5.0	0.8-1.4	1.1	2.9-5.7	4.3	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.8-6.8	6.1	5.7-6.7	6.3	0.6-1.7	1.1	6.9-10.2	7.3	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.3-6.0	5.6	5.1-6.0	5.5	0.4-1.0	0.6	2.9-3.7	3.2	(X)	(X)	(X)
506	Electrical goods	3.4-4.0	3.4	3.3-3.9	3.4	0.3-0.7	0.5	1.6-2.7	2.4	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	4.7-10.4	6.6	4.8-10.2	6.5	0.7-0.8	0.8	3.1-9.2	5.0	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.1-4.9	4.0	3.3-4.2	3.7	0.6-3.4	1.1	2.4-4.6	2.9	(X)	(X)	(X)
509	Miscellaneous durable goods	8.1-8.9	8.6	8.0-8.9	8.5	0.8-1.6	0.9	4.2-6.9	5.6	(X)	(X)	(X)
51	Nondurable goods	2.8-3.2	3.0	2.8-3.2	2.9	0.2-0.8	0.5	2.1-2.5	2.4	(X)	(X)	(X)
511	Paper & paper products	4.9-6.0	5.7	4.9-6.1	5.7	0.5-1.0	0.8	2.4-3.4	2.8	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.4-7.4	6.9	6.3-7.3	6.8	0.5-1.0	0.7	3.6-5.3	4.3	(X)	(X)	(X)
513	Apparel, piece goods & notions	5.4-7.2	6.6	5.3-6.7	6.5	1.0-1.8	1.1	4.9-7.8	5.9	(X)	(X)	(X)
514	Groceries & related products	5.5-6.2	5.9	5.6-6.5	5.9	0.5-1.3	0.6	3.1-4.2	3.7	(X)	(X)	(X)
515	Farm-product raw materials	7.1-8.3	7.7	6.9-8.1	7.3	0.9-3.8	1.5	3.8-6.8	5.2	(X)	(X)	(X)
516	Chemicals & allied products	6.6-8.1	7.2	7.0-7.6	7.4	0.8-3.5	1.5	4.4-8.0	5.3	(X)	(X)	(X)
517	Petroleum & petroleum products	5.5-8.8	6.7	5.2-8.5	6.4	1.0-5.5	1.3	3.6-7.9	6.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.1-4.9	4.3	3.9-4.5	4.1	0.6-1.1	0.8	1.5-4.1	2.7	(X)	(X)	(X)
519	Misc. nondurable goods	8.1-9.4	8.5	8.5-9.3	8.8	1.3-1.9	1.6	4.5-7.6	7.3	(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 1988 through October 1988.

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	1987			1988										
		Oct. ^r	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^r	Oct. ^r	Nov.
	Sales,¹ Total	1.050	.987	1.038	.918	.952	1.068	.989	1.018	1.037	.947	1.030	1.014	1.025	1.014
50	Durable goods	1.081	.980	1.013	.880	.931	1.064	1.005	1.013	1.053	.956	1.036	1.037	1.051	1.005
501	Motor vehicles & auto. equip. ...	1.098	.978	1.045	.896	.922	1.049	1.020	1.039	1.073	.970	1.006	.944	1.064	1.004
502	Furniture & home furnishings ...	1.138	.992	.973	.859	.939	1.015	.968	.994	1.064	.951	1.084	1.067	1.115	1.023
503	Lumber & other construction mat.	1.111	.980	.884	.779	.829	.988	1.005	1.059	1.115	1.050	1.155	1.096	1.083	.991
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.184	1.122	1.041	.855	.958	1.023	.962	.876	.973	.907	1.061	1.115	1.146	1.141
505	Metals & minerals, ex. petroleum	1.012	.915	.978	.949	.983	1.152	.987	.984	1.057	.934	1.027	1.084	.978	.926
506	Electrical goods	1.112	1.028	1.054	.887	.955	1.047	.933	.952	1.015	.966	1.042	1.062	1.097	1.046
507	Hardware, plumbing & heating equipment	1.082	.973	.978	.888	.933	1.018	.992	1.035	1.096	.988	1.045	1.020	1.054	1.003
508	Machinery, equip. & supplies	1.026	.945	1.050	.888	.941	1.106	1.025	1.034	1.049	.937	1.037	1.031	.992	.981
509	Miscellaneous durable goods ...	1.111	1.030	.970	.844	.915	1.073	1.059	1.064	1.056	.873	.974	1.070	1.085	1.032
51	Nondurable goods	1.019	.994	1.059	.952	.969	1.066	.975	1.030	1.016	.941	1.023	.994	.998	1.023
511	Paper & paper products	1.052	.969	1.018	.938	.973	1.088	.974	.971	1.038	.934	1.063	1.020	1.003	1.012
512	Drugs, drug proprietaries and druggists' sundries	1.036	.976	1.041	.976	.973	1.062	.977	.993	1.021	.933	1.027	1.031	1.005	1.008
513	Apparel, piece goods & notions	1.128	.936	.762	.863	1.076	1.091	.879	.915	1.030	1.021	1.252	1.050	1.119	.994
514	Groceries & related products ...	1.010	.977	1.039	.958	.949	1.027	.978	1.033	1.033	.994	1.040	.993	.988	1.008
515	Farm-product raw materials ...	1.051	1.111	1.177	1.035	1.015	1.118	.954	1.037	.952	.840	.902	.897	1.025	1.140
516	Chemicals & allied products ...	1.046	.954	.921	.956	.988	1.063	1.016	1.028	1.078	.929	1.029	1.036	1.014	.955
517	Petroleum & petroleum products	.995	1.012	1.114	1.059	1.015	1.104	.948	.957	.954	.909	.969	.999	.965	1.039
518	Beer, wine, & distilled beverages	1.030	.996	1.216	.741	.813	1.008	.937	1.058	1.136	.993	1.115	1.013	.980	1.044
519	Misc. nondurable goods .....	.971	.955	1.029	.818	.906	1.095	1.087	1.146	1.060	.943	1.011	.985	.956	.950
	Inventories,¹ Total	1.008	1.008	1.003	1.004	1.006	1.008	1.006	.990	.996	.993	.987	.996	1.008	1.005
50	Durable goods	1.002	.998	.992	.986	.994	1.000	1.007	1.003	1.006	1.008	1.002	1.009	1.002	.996
501	Motor vehicles & auto. equip. ...	1.001	1.016	1.016	.996	1.004	1.008	1.001	.995	1.008	.980	.962	1.020	.999	1.012
502	Furniture & home furnishings ...	.993	.988	1.010	1.018	1.003	.993	.990	1.007	.989	1.001	1.016	1.007	.991	.987
503	Lumber & other construction mat. ....	.970	.986	.982	.947	.984	1.015	1.031	1.011	1.032	1.030	.994	.986	.968	.961
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.026	.986	.971	.982	.986	.999	.992	.982	1.006	1.040	1.026	1.035	1.029	.988
505	Metals & minerals, ex. petroleum	.978	.972	1.014	1.021	1.009	1.004	1.004	1.014	1.026	1.010	.988	.979	.979	.967
506	Electrical goods	1.014	1.005	.983	.968	.976	.989	.990	.997	1.001	1.018	1.016	1.026	1.013	1.003
507	Hardware, plumbing & heating equipment .....	.984	.981	.963	.976	.998	1.026	1.035	1.023	1.011	1.012	1.007	.990	.984	.978
508	Machinery, equip. & supplies	.988	.992	.995	.991	.996	1.003	1.010	1.006	1.009	1.007	1.005	.991	.998	.994
509	Miscellaneous durable goods ...	1.016	1.027	.958	.955	.967	.970	1.011	1.010	1.003	1.034	1.036	1.026	1.016	1.029
51	Nondurable goods	1.016	1.031	1.032	1.038	1.032	1.021	1.002	.967	.979	.964	.954	.973	1.016	1.031
511	Paper & paper products .....	.982	.998	1.005	1.013	1.010	1.016	1.011	.994	1.000	.999	.999	.970	.982	.995
512	Drugs, drug proprietaries and druggists' sundries	1.024	.984	.997	1.032	1.038	1.031	1.028	.972	.959	.959	.957	.990	1.024	.990
513	Apparel, piece goods & notions	.981	.942	.983	.991	.978	.953	.957	1.015	1.053	1.059	1.058	1.037	.979	.943
514	Groceries & related products ...	1.040	1.043	1.012	.990	1.006	.987	.990	.987	.990	.990	.963	.996	1.039	1.049
515	Farm-product raw materials ...	1.070	1.164	1.187	1.228	1.168	1.078	.989	.840	.843	.819	.802	.874	1.072	1.158
516	Chemicals & allied products ...	.978	1.001	.983	.999	1.012	.998	1.032	1.035	1.022	1.004	1.005	.950	.973	.993
517	Petroleum & petroleum products	1.009	1.043	1.103	1.091	.962	.970	.929	.955	.973	.981	.953	1.021	1.008	1.039
518	Beer, wine, & distilled beverages	1.062	1.046	.907	.943	.980	1.011	1.030	1.007	1.030	1.001	.986	1.002	1.063	1.044
519	Misc. nondurable goods .....	.977	.974	1.025	1.034	1.064	1.106	1.064	.970	.975	.921	.924	.9*1	.979	.986

^rRevised

¹Adjusted 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 1988



U.S. Department of Commerce
BUREAU OF THE CENSUS

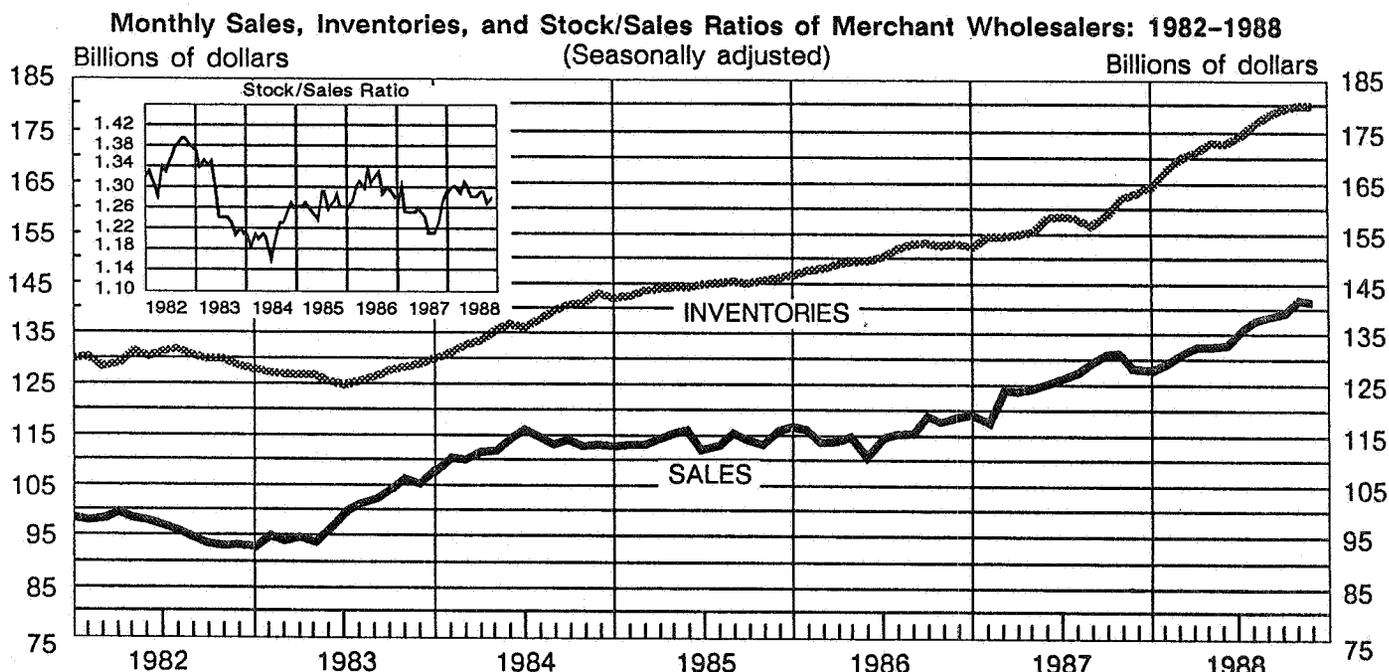
BW88-11
Issued January 1989

Sales. November 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$141.9 billion, down 0.4 percent (± 1.0 percent) from the revised October level but up 9.7 percent (± 1.6 percent) from a year ago. The October preliminary estimate was revised upward by \$0.05 billion or about 0.04 percent. November sales of durable goods increased 1.8 percent (± 1.0 percent) from October, and were 13.1 percent (± 2.1 percent) above a year ago. Monthly gains in the durable goods group were as follows: sales of metals and minerals, except petroleum were up 6.0 percent and electrical goods increased 5.1 percent to \$9.3 billion. November sales of nondurable goods were down 2.5 percent (± 1.6 percent) from October but were 6.6 percent (± 1.8 percent) above November 1987. Monthly decreases in the sales of nondurable goods were as follows: sales of farm-product raw materials were down 15.7 percent and sales of petroleum and petroleum products decreased 2.0 percent to \$11.4 billion.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$181.0 billion at the end of November, little changed from the revised October level but up 10.7 percent (± 2.3 percent) from a year ago. The October preliminary estimate was revised upward by \$0.3 billion or about 0.2 percent. Inventories of durable goods wholesalers increased 0.5 percent (± 0.5 percent) from the October level and were 11.1 percent (± 2.5 percent) above a year ago. Inventories of nondurable goods wholesalers were down 1.0 percent (± 0.9 percent) from the October level but were up 10.0 percent (± 3.4 percent) from November 1987.

Stock/Sales Ratio. The November stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28. 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 December is scheduled to be released February 10, 1989 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988										1987		
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ^P	Nov. ^F	Dec.
	Sales, Total	129,720	131,622	132,885	133,015	133,264	136,289	138,195	139,088	139,682	142,429	141,891	129,297	129,332
50	Durable goods	62,486	63,795	64,881	66,081	65,933	66,242	67,262	67,065	67,755	69,275	70,534	62,343	61,983
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,333	13,913	13,735	13,861	13,486	13,588	14,206	14,447	13,008	12,927
502	Furniture & home furnishings	2,267	2,319	2,264	2,206	2,137	2,139	2,180	2,218	2,228	2,342	2,559	2,129	2,148
503	Lumber & other construction mat.	5,098	5,366	5,594	5,744	5,408	5,110	5,193	4,999	5,038	5,155	5,072	5,185	5,184
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,731	1,765	1,824	1,867	1,914	1,933	1,988	2,100	1,626	1,638
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	6,048	5,780	6,005	6,082	6,102	6,346	6,303	6,680	5,236	5,435
506	Electrical goods	7,736	7,897	8,283	8,517	8,517	8,562	8,273	8,641	8,477	8,821	9,274	7,888	7,511
507	Hardware, plumbing & heating equipment	4,125	3,803	4,183	4,165	4,165	4,378	4,655	4,472	4,252	4,410	4,376	4,124	4,143
508	Machinery, equip. & supplies	16,568	16,701	16,818	16,937	17,316	17,568	17,896	18,452	19,129	19,268	19,468	16,050	15,582
509	Miscellaneous durable goods	6,780	6,967	6,733	6,400	6,952	6,921	7,255	6,781	6,764	6,764	6,580	7,087	7,415
51	Nondurable goods	67,234	67,827	68,004	66,934	67,331	70,047	70,933	71,943	71,927	73,154	71,357	66,954	66,349
511	Paper & paper products	4,207	4,159	4,228	4,137	4,194	4,331	4,468	4,427	4,597	4,607	4,609	4,134	4,194
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,887	2,875	2,948	3,024	3,095	3,173	3,178	3,155	3,104	2,763	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,866	4,051	4,276	4,253	4,187	4,441	4,244	4,475	3,933	4,102
514	Groceries & related products	19,839	19,710	19,180	19,777	19,445	19,652	19,795	20,100	19,947	20,807	20,841	20,294	20,194
515	Farm-product raw materials	9,678	9,563	9,800	10,056	10,108	11,028	11,294	11,654	12,153	12,875	10,850	8,747	8,326
516	Chemicals & allied products	2,233	2,361	2,548	2,584	2,788	2,849	2,848	2,748	2,649	2,584	2,734	2,060	2,225
517	Petroleum & petroleum products	11,508	12,225	12,569	11,986	12,211	12,477	12,748	12,817	11,886	11,623	11,365	12,608	11,943
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,447	3,437	3,521	3,450	3,495	3,584	3,590	3,626	3,477	3,498
519	Misc. nondurable goods	9,381	9,402	9,312	9,097	8,151	8,988	8,981	9,342	9,492	9,669	9,733	8,918	9,160
	Inventories, Total	168,388	170,632	171,732	173,530	173,418	175,001	177,307	179,165	180,278	181,049	180,977	163,461	165,097
50	Durable goods	111,259	112,661	113,694	114,812	113,666	112,674	114,702	115,685	117,294	118,026	118,573	108,735	107,996
501	Motor vehicles & auto. equip.	21,733	22,591	22,568	22,056	21,955	21,176	21,795	22,076	22,672	22,492	22,424	21,547	21,602
502	Furniture & home furnishings	4,081	4,128	4,224	4,423	4,295	4,428	4,393	4,363	4,384	4,362	4,234	4,160	3,971
503	Lumber & other construction mat.	7,289	7,003	7,018	7,075	6,855	6,320	6,414	6,254	6,373	6,508	6,433	5,927	6,203
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,237	4,261	4,271	4,233	4,128	4,304	4,274	4,355	4,144	4,092
505	Metals & minerals, ex. petroleum	7,687	7,822	8,204	8,848	8,559	8,865	9,068	8,912	9,079	9,277	9,560	7,297	7,478
506	Electrical goods	13,606	13,709	13,716	13,843	13,783	13,778	13,752	13,963	13,768	14,139	14,199	13,303	13,605
507	Hardware, plumbing & heating equipment	7,031	6,854	6,840	6,872	6,827	6,868	7,098	7,208	7,248	7,319	7,320	6,745	6,949
508	Machinery, equip. & supplies	38,251	39,040	39,118	39,944	39,788	39,517	40,360	40,924	41,908	42,221	42,690	36,695	36,245
509	Miscellaneous durable goods	7,437	7,430	7,819	7,714	7,345	7,451	7,589	7,867	7,558	7,434	7,358	7,917	7,861
51	Nondurable goods	57,129	57,971	58,038	58,718	59,752	62,327	62,605	63,480	62,984	63,023	62,404	56,726	57,101
511	Paper & paper products	3,964	3,918	4,055	4,062	4,023	4,138	4,312	4,211	4,367	4,445	4,469	3,773	3,831
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,918	5,215	5,145	5,274	5,429	5,488	5,340	5,194	5,194	4,977	5,091
513	Apparel, piece goods & notions	8,074	8,047	8,023	7,945	8,327	8,425	7,991	7,984	7,903	8,123	8,189	8,082	8,127
514	Groceries & related products	12,910	12,605	12,491	12,613	12,499	12,398	12,696	12,757	13,071	13,189	13,003	12,807	13,029
515	Farm-product raw materials	6,822	7,717	7,532	7,754	8,410	10,273	10,282	10,539	10,176	10,121	9,288	7,137	6,654
516	Chemicals & allied products	2,714	2,780	2,838	2,838	3,032	2,968	2,902	3,039	3,019	2,968	2,966	2,481	2,551
517	Petroleum & petroleum products	3,546	3,964	3,974	3,946	3,930	3,882	3,900	4,007	3,964	3,763	3,699	3,663	3,401
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,088	3,983	3,973	4,067	4,135	4,138	4,198	4,169	4,248	4,282
519	Misc. nondurable goods	9,944	9,862	10,114	10,257	10,403	10,996	11,026	11,320	11,006	11,022	11,397	9,558	9,835
	Stock/sales ratios, Total	1.30	1.30	1.29	1.30	1.30	1.28	1.28	1.29	1.29	1.27	1.28	1.28	1.29
50	Durable goods	1.78	1.77	1.75	1.74	1.72	1.70	1.71	1.72	1.73	1.70	1.68	1.71	1.74
501	Motor vehicles & auto. equip.	1.73	1.87	1.89	1.54	1.58	1.54	1.57	1.64	1.67	1.58	1.55	1.66	1.67
502	Furniture & home furnishings	1.80	1.78	1.87	2.00	2.01	2.07	2.02	1.96	1.97	1.86	1.65	1.95	1.85
503	Lumber & other construction mat.	1.43	1.31	1.25	1.23	1.27	1.24	1.24	1.25	1.26	1.26	1.27	1.14	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.45	2.41	2.34	2.27	2.16	2.23	2.15	2.07	2.55	2.50
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.49	1.48	1.49	1.48	1.43	1.47	1.43	1.39	1.38
506	Electrical goods	1.76	1.74	1.86	1.63	1.62	1.61	1.66	1.62	1.62	1.60	1.53	1.89	1.81
507	Hardware, plumbing & heating equipment	1.70	1.80	1.84	1.85	1.84	1.57	1.52	1.61	1.70	1.66	1.67	1.64	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.36	2.30	2.25	2.26	2.22	2.19	2.19	2.19	2.22	2.33
509	Miscellaneous durable goods	1.10	1.07	1.16	1.21	1.08	1.08	1.05	1.16	1.12	1.10	1.12	1.12	1.06
51	Nondurable goods .....	.85	.85	.85	.88	.89	.89	.88	.88	.88	.86	.87	.85	.86
511	Paper & paper products .....	.94	.94	.96	.98	.96	.96	.97	.95	.95	.96	.97	.91	.91
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.81	1.75	1.74	1.75	1.73	1.68	1.65	1.67	1.80	1.81
513	Apparel, piece goods & notions	2.02	2.07	2.08	2.06	2.06	1.97	1.88	1.91	1.78	1.91	1.83	2.05	1.98
514	Groceries & related products .....	.65	.64	.65	.67	.64	.63	.64	.63	.66	.63	.62	.63	.65
515	Farm-product raw materials .....	.71	.81	.77	.77	.83	.93	.91	.90	.84	.79	.85	.82	.82
516	Chemicals & allied products	1.22	1.18	1.11	1.06	1.09	1.04	1.02	1.11	1.14	1.15	1.10	1.19	1.15
517	Petroleum & petroleum products .....	.31	.32	.32	.33	.32	.31	.31	.31	.33	.32	.32	.29	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.19	1.16	1.13	1.18	1.18	1.15	1.17	1.15	1.22	1.22
519	Misc. nondurable goods	1.08	1.05	1.09	1.13	1.28	1.24	1.23	1.21	1.16	1.14	1.17	1.07	1.08

^PPreliminary estimate. See sample design and estimation procedures ^RRevised. In Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988											1987		Total 11 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ^P	Nov.	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	131,787	136,044	141,242	130,728	142,873	140,998	145,332	143,084	128,898	132,747	1,497,771	1,388,080
50	Durable goods	54,944	59,327	69,184	66,378	67,242	70,060	64,030	69,460	70,060	72,339	70,999	61,098	62,725	734,023	676,552
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,620	14,458	14,738	13,445	13,587	12,827	15,018	14,820	12,670	13,509	151,089	139,713
502	Furniture & home furnishings	1,947	2,178	2,298	2,135	2,124	2,276	2,073	2,404	2,377	2,821	2,538	2,123	2,090	25,069	22,812
503	Lumber & other construction mat.	3,971	4,448	5,527	5,773	5,727	5,898	5,453	5,774	5,522	6,598	4,988	4,998	4,583	58,477	57,777
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,479	1,843	1,787	1,865	1,548	1,775	1,893	2,031	2,155	2,274	2,438	1,850	1,705	20,484	19,098
505	Metals & minerals, ex. petroleum	5,304	5,384	6,855	5,869	5,888	6,347	5,881	6,267	6,879	6,095	6,268	4,788	5,315	63,715	54,765
508	Electrical goods	6,892	7,542	8,651	7,948	8,108	8,890	7,992	9,004	9,003	9,615	9,784	8,085	7,917	93,197	83,114
507	Hardware, plumbing & heating equipment	3,863	3,548	4,258	4,132	4,311	4,798	4,590	4,873	4,337	4,861	4,424	4,033	4,052	47,365	43,420
508	Machinery, equip. & supplies	14,711	15,718	18,801	17,360	17,905	18,429	16,769	19,135	19,722	19,093	19,077	15,103	16,361	165,518	175,813
509	Miscellaneous durable goods	5,722	6,375	7,225	6,778	7,397	7,309	6,334	6,605	7,238	7,368	6,770	7,448	7,193	75,118	75,240
51	Nondurable goods	63,808	65,660	72,964	65,409	68,802	71,182	66,898	73,213	70,938	72,993	72,085	65,800	70,022	763,748	711,528
511	Paper & paper products	3,948	4,047	4,600	4,029	4,072	4,498	4,173	4,706	4,889	4,825	4,855	4,022	4,270	49,038	40,471
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,088	2,809	2,925	3,087	2,888	3,259	3,277	3,177	3,104	2,875	2,922	33,139	30,033
513	Apparel, piece goods & notions	3,458	4,174	4,244	3,398	3,707	4,404	4,342	4,663	4,651	4,573	3,780	3,126	46,854	42,167	
514	Groceries & related products	19,008	18,705	19,898	18,384	20,087	20,300	19,676	20,904	19,807	20,578	21,154	19,990	20,982	218,279	214,051
515	Farm-product raw materials	10,015	9,698	10,958	9,593	10,482	10,499	9,487	10,512	10,901	13,300	11,438	9,009	9,800	118,877	93,543
516	Chemicals & allied products	2,135	2,333	2,708	2,727	2,866	3,072	2,847	2,828	2,744	2,625	2,803	1,951	2,049	29,289	21,321
517	Petroleum & petroleum products	12,187	12,408	13,878	11,371	11,886	11,903	11,588	12,420	11,874	11,274	11,847	12,570	13,193	132,234	135,790
518	Beer, wine, & distilled beverages	2,659	2,962	3,619	3,230	3,636	4,000	3,428	3,897	3,631	3,500	3,793	3,487	4,254	38,263	38,084
519	Misc. nondurable goods	7,674	8,518	10,197	9,888	9,341	9,421	8,469	9,445	9,350	9,263	9,120	8,358	9,428	100,688	98,098
	Inventories, Total	168,783	171,742	173,184	174,543	171,978	174,348	175,528	175,692	178,837	181,949	182,017	164,406	165,819	00	00
50	Durable goods	109,882	111,920	113,888	115,597	114,132	113,721	115,596	115,639	117,765	117,824	118,020	108,314	107,257	00	00
501	Motor vehicles & auto. equip.	21,648	22,681	22,747	22,078	21,845	21,345	21,359	21,237	23,125	22,425	22,871	21,784	21,948	00	00
502	Furniture & home furnishings	4,154	4,140	4,194	4,379	4,325	4,379	4,397	4,423	4,415	4,327	4,088	4,027	4,011	00	00
503	Lumber & other construction mat.	6,903	6,891	7,123	7,294	6,930	6,522	6,806	6,218	6,284	6,319	6,259	5,779	6,091	00	00
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,089	4,027	4,185	4,203	4,184	4,297	4,402	4,235	4,455	4,385	4,348	4,132	3,973	00	00
505	Metals & minerals, ex. petroleum	7,848	7,832	8,237	8,683	8,879	9,098	9,159	8,805	8,888	9,073	9,216	7,056	7,583	00	00
508	Electrical goods	13,171	13,380	13,565	13,705	13,742	13,792	14,000	14,188	14,128	14,351	14,256	13,343	13,374	00	00
507	Hardware, plumbing & heating equipment	6,862	6,840	7,018	7,113	6,984	6,944	7,183	7,258	7,178	7,224	7,159	6,587	6,892	00	00
508	Machinery, equip. & supplies	37,907	38,884	39,235	40,343	40,025	39,873	40,843	41,129	41,531	42,137	42,847	35,824	36,084	00	00
509	Miscellaneous durable goods	7,102	7,185	7,584	7,799	7,418	7,473	7,847	8,150	7,755	7,583	7,380	7,972	7,521	00	00
51	Nondurable goods	59,121	59,822	59,296	58,948	57,846	60,825	59,932	60,053	61,082	64,125	63,997	58,092	58,582	00	00
511	Paper & paper products	4,016	3,955	4,120	4,107	3,999	4,138	4,308	4,207	4,239	4,401	4,433	3,750	3,850	00	00
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,088	5,361	5,001	5,058	5,208	5,252	5,287	5,319	5,173	4,942	5,078	00	00
513	Apparel, piece goods & notions	8,001	7,870	7,846	7,803	8,452	8,872	8,462	8,447	8,195	7,887	7,771	7,862	7,989	00	00
514	Groceries & related products	12,781	12,681	12,329	12,487	12,337	12,274	12,569	12,285	13,019	13,756	13,601	13,409	13,185	00	00
515	Farm-product raw materials	8,378	9,013	8,120	7,889	7,084	8,860	8,421	8,452	8,894	10,951	10,561	8,172	8,138	00	00
516	Chemicals & allied products	2,711	2,813	2,830	2,929	3,138	3,033	2,914	3,054	2,888	2,963	2,963	2,454	2,508	00	00
517	Petroleum & petroleum products	3,889	3,813	3,855	3,866	3,753	3,777	3,826	3,819	4,047	3,804	3,788	3,782	3,751	00	00
518	Beer, wine, & distilled beverages	3,869	4,070	4,142	4,211	4,011	4,092	4,071	4,077	4,148	4,450	4,344	4,431	3,884	00	00
519	Misc. nondurable goods	10,282	10,493	11,188	10,913	10,091	10,721	10,155	10,460	10,390	10,669	11,383	9,510	10,183	00	00
	Stock/sales ratios, Total	1.42	1.37	1.22	1.32	1.26	1.23	1.34	1.23	1.27	1.25	1.27	1.30	1.25	00	00
50	Durable goods	2.00	1.89	1.85	1.74	1.70	1.82	1.81	1.86	1.88	1.83	1.86	1.74	1.71	00	00
501	Motor vehicles & auto. equip.	1.92	1.82	1.82	1.51	1.51	1.45	1.59	1.57	1.80	1.49	1.55	1.72	1.62	00	00
502	Furniture & home furnishings	2.13	1.90	1.83	2.05	2.04	1.92	2.12	1.84	1.88	1.85	1.55	1.90	1.92	00	00
503	Lumber & other construction mat.	1.74	1.55	1.29	1.26	1.21	1.14	1.21	1.08	1.14	1.13	1.28	1.18	1.33	00	00
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.75	2.45	2.37	2.52	2.71	2.42	2.80	2.09	2.07	1.93	1.78	2.23	2.33	00	00
505	Metals & minerals, ex. petroleum	1.48	1.47	1.20	1.45	1.53	1.43	1.81	1.40	1.29	1.49	1.47	1.47	1.43	00	00
508	Electrical goods	1.92	1.77	1.57	1.72	1.69	1.59	1.75	1.58	1.57	1.49	1.48	1.65	1.69	00	00
507	Hardware, plumbing & heating equipment	1.87	1.93	1.65	1.72	1.62	1.45	1.58	1.55	1.65	1.55	1.62	1.64	1.65	00	00
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.32	2.24	2.16	2.42	2.15	2.11	2.21	2.24	2.36	2.20	00	00
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	1.00	1.02	1.24	1.23	1.07	1.03	1.09	1.07	1.05	00	00
51	Nondurable goods .....	.93	.91	.81	.90	.84	.85	.90	.82	.88	.88	.89	.88	.84	00	00
511	Paper & paper products	1.02	.98	.90	1.02	.98	.92	1.03	.89	.90	.95	.93	.90	.90	00	00
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.91	1.71	1.84	1.80	1.81	1.61	1.67	1.67	1.65	1.74	00	00
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.24	2.28	2.01	1.95	1.81	1.78	1.70	1.70	2.04	2.58	00	00
514	Groceries & related products .....	.67	.68	.63	.68	.61	.60	.64	.58	.68	.67	.64	.67	.63	00	00
515	Farm-product raw materials .....	.84	.93	.74	.80	.67	.82	.89	.80	.82	.82	.92	.91	.83	00	00
516	Chemicals & allied products	1.27	1.21	1.05	1.07	1.09	.99	1.10	.98	1.05	1.10	1.14	1.26	1.22	00	00
517	Petroleum & petroleum products .....	.32	.31	.28	.32	.32	.32	.33	.31	.34	.34	.33	.30	.28	00	00
518	Beer, wine, & distilled beverages	1.48	1.37	1.14	1.30	1.10	1.02	1.19	1.05	1.14	1.27	1.15	1.28	.91	00	00
519	Misc. nondurable goods	1.34	1.23	1.10	1.10	1.08	1.14	1.20	1.11	1.11	1.15	1.25	1.14	1.08	00	00

^PPreliminary estimate. See sample design

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

SIC code	Kind of business	Unadjusted					Adjusted ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Nov. 1988 from Oct. 1988	Nov. 1988 from Nov. 1987	11 months 1988 from 11 months 1987	Nov. 1988 from Oct. 1988	Nov. 1988 from Nov. 1987	Nov. 1988 from Oct. 1988	Nov. 1988 from Nov. 1987	Nov. 1988 from Oct. 1988	Nov. 1988 from Nov. 1987
	Total	-1.5	+12.8	+7.9	.0	+10.7	-4	+9.7	.0	+10.7
50	Durable goods	-1.9	+16.2	+8.5	+2	+11.0	+1.8	+13.1	+5	+11.1
501	Motor vehicles & auto. equip.	-2.6	+15.4	+8.1	+1.1	+4.1	+1.7	+11.1	-3	+4.1
502	Furniture & home furnishings	+8	+24.2	+10.9	-5.8	+1.5	+9.3	+20.2	-2.9	+1.8
503	Lumber & other construction mat.	-10.9	-2	+1.2	-9	+8.3	-1.6	-2.4	-1.2	+8.5
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+7.1	+31.7	+7.2	-9	+5.2	+5.6	+29.2	+1.9	+5.1
505	Metals & minerals, ex. petroleum	+2.8	+30.9	+21.8	+1.6	+30.8	+6.0	+27.6	+3.1	+31.0
506	Electrical goods	+1.8	+21.0	+5.8	-7	+6.8	+5.1	+17.6	+4	+6.7
507	Hardware, plumbing & heating equipment	-5.1	+9.7	+9.2	-9	+8.5	-8	+6.1	.0	+8.5
508	Machinery, equip. & supplies	-.1	+26.3	+11.8	+1.2	+19.7	+9	+21.3	+1.1	+19.6
509	Miscellaneous durable goods	-8.1	-9.1	-2	-2.7	-7.4	-3.0	-7.4	-1.0	-7.1
51	Nondurable goods	-1.2	+9.6	+7.3	-2	+10.2	-2.5	+6.6	-1.0	+10.0
511	Paper & paper products	+8	+15.7	+18.7	+7	+18.2	.0	+11.5	+5	+18.4
512	Drugs, drug proprietaries and druggists' sundries	-2.3	+16.0	+10.3	-2.7	+4.7	-1.6	+12.3	.0	+4.4
513	Apparel, piece goods & notions	-1.7	+21.6	+11.1	-1.5	+1.4	+5.4	+13.8	+8	+1.3
514	Groceries & related products	+2.8	+5.8	+2.0	-1.1	+1.4	+2	+2.7	-1.4	+1.5
515	Farm-product raw materials	-14.0	+26.9	+24.9	-3.6	+29.2	-15.7	+24.0	-8.2	+30.1
516	Chemicals & allied products	-8	+33.4	+37.4	+2.6	+20.7	+5.8	+31.4	+9	+20.8
517	Petroleum & petroleum products	+3.3	-7.3	-2.6	-4	+7	-2.0	-9.7	-1.7	+1.0
518	Beer, wine, & distilled beverages	+8.4	+9.4	+8	-2.4	+8	+1.0	+4.3	-7	-1.9
519	Misc. nondurable goods	-1.5	+9.1	+4.8	+6.5	+19.5	+7	+9.1	+3.4	+19.2

¹Adjusted 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*¹ 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

¹Executive 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.4-1.8	1.5	1.4-1.7	1.5	0.3-0.6	0.5	0.9-1.0	0.9	1.4	1.0	0.7
50	Durable goods	1.4-1.9	1.8	1.7-1.9	1.7	0.5-0.8	0.7	1.1-1.5	1.3	1.7	1.3	0.9
501	Motor vehicles & auto. equip.	4.7-5.9	5.1	5.0-5.7	5.3	1.2-2.0	1.4	3.2-5.0	3.8	5.1	3.1	3.2
502	Furniture & home furnishings	6.1-10.8	7.6	6.1-8.5	7.0	1.2-4.9	3.0	4.9-9.2	6.8	6.8	5.0	3.7
503	Lumber & other construction mat.	4.6-5.4	5.2	4.3-5.1	4.9	0.9-2.1	1.4	3.8-6.2	5.2	4.6	5.2	2.2
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.4-9.3	7.2	5.5-9.3	6.1	2.2-7.0	4.1	4.9-9.9	6.8	5.3	5.8	4.8
505	Metals & minerals, ex. petroleum	4.7-8.8	5.5	4.2-7.9	5.0	1.0-3.8	1.6	4.0-7.4	4.6	5.1	3.3	3.3
506	Electrical goods	2.5-3.6	3.1	2.6-3.9	3.3	1.0-1.7	1.3	2.3-3.1	2.8	2.8	2.1	1.5
507	Hardware, plumbing & heating equipment	8.1-10.1	8.6	7.4-9.6	8.3	1.6-3.7	2.4	2.8-6.4	5.1	7.5	5.8	3.2
508	Machinery, equip. & supplies	2.5-3.7	3.4	2.4-3.5	3.1	1.4-2.1	1.8	2.4-3.5	2.8	2.7	1.7	1.8
509	Miscellaneous durable goods	4.4-5.6	5.0	4.6-5.4	4.8	1.7-2.6	2.1	3.4-4.0	3.9	4.4	2.4	3.0
51	Nondurable goods	2.7-3.2	3.0	2.8-3.1	3.0	0.7-1.0	0.8	1.0-1.7	1.4	2.8	1.9	1.3
511	Paper & paper products	5.1-6.4	5.5	5.2-6.6	5.4	0.9-2.7	1.4	3.0-4.8	4.3	5.2	4.1	2.8
512	Drugs, drug proprietaries and druggists' sundries	5.2-6.5	6.3	5.5-6.7	6.0	0.8-1.6	1.1	3.0-7.5	4.1	5.6	5.3	4.7
513	Apparel, piece goods & notions	8.2-10.2	9.7	8.2-10.2	9.1	2.3-4.7	3.2	5.8-8.1	6.7	8.4	5.6	5.6
514	Groceries & related products	5.4-7.2	6.4	4.9-7.2	6.4	0.7-1.7	1.3	1.8-4.5	3.1	6.1	4.0	3.0
515	Farm-product raw materials	4.6-6.4	5.3	4.1-6.6	5.2	3.1-3.9	3.5	3.8-4.6	4.2	4.7	4.4	2.7
516	Chemicals & allied products	6.5-11.4	8.8	6.5-10.3	8.2	2.0-4.7	2.7	4.9-8.8	6.2	7.0	5.5	3.7
517	Petroleum & petroleum products	5.4-6.7	6.3	5.1-6.7	6.3	0.9-1.8	1.3	2.3-4.0	3.6	5.4	3.8	2.5
518	Beer, wine, & distilled beverages	2.7-3.6	3.3	2.8-3.7	3.1	0.7-1.8	1.5	1.2-2.8	2.3	2.8	2.5	1.3
519	Misc. nondurable goods	4.5-5.7	5.4	4.5-6.1	5.4	0.7-3.6	1.6	1.8-3.7	2.9	4.7	4.0	2.6
	Inventories, Total	1.3-1.8	1.5	1.3-1.6	1.4	0.2-0.9	0.4	1.0-1.7	1.2	(X)	(X)	(X)
50	Durable goods	1.5-2.4	1.8	1.4-2.2	1.7	0.3-1.3	0.5	1.1-2.2	1.3	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.3-7.0	6.8	6.3-6.9	6.5	0.8-1.2	0.8	2.5-4.0	3.3	(X)	(X)	(X)
502	Furniture & home furnishings	9.7-11.8	10.5	9.6-11.8	10.5	0.9-2.1	1.6	4.3-7.3	5.7	(X)	(X)	(X)
503	Lumber & other construction mat.	4.9-6.1	5.3	4.6-6.3	5.0	0.8-1.4	1.0	2.9-5.7	4.1	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.8-6.2	6.0	5.7-6.7	6.0	0.7-1.7	1.5	6.9-10.2	7.5	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.3-6.0	5.8	5.1-6.0	5.5	0.4-1.0	0.6	2.7-3.7	3.2	(X)	(X)	(X)
506	Electrical goods	3.4-4.0	3.4	3.3-3.9	3.4	0.3-0.7	0.5	1.8-2.5	2.2	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	4.7-10.4	7.7	4.8-10.2	7.5	0.7-0.8	0.8	3.1-9.2	5.9	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.1-4.9	4.0	3.4-4.2	3.7	0.5-3.4	1.1	2.4-4.8	2.7	(X)	(X)	(X)
509	Miscellaneous durable goods	8.1-8.8	8.3	8.0-8.9	8.2	0.8-1.6	1.0	4.2-5.8	5.3	(X)	(X)	(X)
51	Nondurable goods	2.8-3.2	3.0	2.8-3.2	3.0	0.2-0.8	0.5	1.8-2.5	2.3	(X)	(X)	(X)
511	Paper & paper products	4.9-6.0	5.4	4.9-6.1	5.5	0.6-1.1	1.0	2.3-3.4	2.6	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.4-7.4	6.9	6.4-7.3	6.8	0.5-1.4	0.7	3.4-5.3	3.8	(X)	(X)	(X)
513	Apparel, piece goods & notions	5.4-7.2	6.6	5.3-7.1	6.6	1.0-1.6	1.1	4.0-6.8	5.2	(X)	(X)	(X)
514	Groceries & related products	4.4-6.2	5.8	5.0-6.5	5.8	0.5-1.3	0.7	2.8-4.2	3.5	(X)	(X)	(X)
515	Farm-product raw materials	7.1-8.1	7.4	6.9-8.1	7.3	0.9-2.3	1.5	3.8-5.7	5.0	(X)	(X)	(X)
516	Chemicals & allied products	6.6-8.1	7.4	7.0-7.6	7.2	0.8-3.5	1.9	4.4-8.0	5.6	(X)	(X)	(X)
517	Petroleum & petroleum products	5.2-8.8	6.7	5.3-8.5	6.4	1.0-5.5	1.5	3.3-7.9	6.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.1-4.9	4.3	3.9-4.6	4.1	0.7-1.1	0.8	1.5-3.5	2.6	(X)	(X)	(X)
519	Misc. nondurable goods	8.1-9.1	8.3	8.3-8.9	8.7	1.1-1.9	1.5	3.2-7.6	7.3	(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 June 1988 through November 1988.

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

SIC code	Kind of business	1987		1988											
		Nov. ¹	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. ¹	Nov. ¹	Dec.
	Sales,¹ Total .....	.983	1.038	.918	.952	1.068	.989	1.018	1.037	.947	1.030	1.014	1.025	1.011	1.005
50	Durable goods .....	.978	1.013	.880	.931	1.064	1.005	1.013	1.053	.956	1.036	1.037	1.049	1.008	.980
501	Motor vehicles & auto. equip. ....	.974	1.045	.896	.922	1.049	1.020	1.039	1.073	.970	1.006	.944	1.057	1.012	1.015
502	Furniture & home furnishings ....	.997	.973	.859	.939	1.015	.968	.994	1.064	.951	1.084	1.067	1.119	1.030	.946
503	Lumber & other construction mat. ....	.962	.884	.779	.829	.988	1.005	1.059	1.115	1.050	1.155	1.096	1.086	.983	.840
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.138	1.041	.855	.958	1.023	.962	.876	.973	.907	1.061	1.115	1.144	1.160	1.017
505	Metals & minerals, ex. petroleum	.914	.978	.949	.983	1.152	.987	.984	1.057	.934	1.027	1.084	.967	.938	.949
506	Electrical goods	1.025	1.054	.887	.955	1.047	.933	.952	1.015	.966	1.042	1.062	1.090	1.055	1.029
507	Hardware, plumbing & heating equipment .....	.978	.978	.888	.933	1.018	.992	1.035	1.096	.986	1.045	1.020	1.057	1.011	.954
508	Machinery, equip. & supplies ....	.941	1.050	.888	.941	1.106	1.025	1.034	1.049	.937	1.037	1.031	.990	.980	1.024
509	Miscellaneous durable goods ...	1.051	.970	.844	.915	1.073	1.059	1.064	1.056	.873	.974	1.070	1.089	1.032	.949
51	Nondurable goods .....	.991	1.059	.952	.969	1.066	.975	1.030	1.016	.941	1.023	.994	1.001	1.015	1.017
511	Paper & paper products .....	.973	1.018	.938	.973	1.088	.974	.971	1.038	.934	1.063	1.020	1.004	1.010	.98
512	Drugs, drug proprietaries and druggists' sundries .....	.988	1.041	.976	.973	1.062	.977	.993	1.021	.933	1.027	1.031	1.007	1.000	.998
513	Apparel, piece goods & notions	.956	.762	.863	1.076	1.091	.879	.915	1.030	1.021	1.252	1.050	1.096	1.022	.720
514	Groceries & related products ...	.985	1.039	.958	.949	1.027	.978	1.033	1.033	.994	1.040	.993	.989	1.015	1.017
515	Farm-product raw materials ...	1.030	1.177	1.035	1.015	1.118	.954	1.037	.952	.840	.902	.897	1.033	1.054	1.168
516	Chemicals & allied products ...	.938	.921	.956	.988	1.063	1.016	1.028	1.078	.929	1.029	1.036	1.016	.952	.897
517	Petroleum & petroleum products	.997	1.114	1.059	1.015	1.104	.948	.957	.954	.909	.969	.999	.970	1.023	1.088
518	Beer, wine, & distilled beverages	.997	1.216	.741	.813	1.008	.937	1.058	1.136	.993	1.115	1.013	.975	1.046	1.170
519	Misc. nondurable goods .....	.937	1.029	.818	.906	1.095	1.087	1.146	1.060	.943	1.011	.985	.958	.937	1.011
	Inventories,¹ Total	1.004	1.003	1.004	1.006	1.008	1.006	.990	.996	.993	.987	.996	1.008	1.004	1.002
50	Durable goods .....	.998	.992	.986	.994	1.000	1.007	1.003	1.006	1.008	1.002	1.009	1.002	.998	.986
501	Motor vehicles & auto. equip.	1.011	1.016	.996	1.004	1.008	1.001	.995	1.008	.980	.962	1.020	.997	1.011	1.017
502	Furniture & home furnishings ....	.968	1.010	1.018	1.003	.993	.990	1.007	.989	1.001	1.016	1.007	.992	.965	1.008
503	Lumber & other construction mat. ....	.975	.982	.947	.984	1.015	1.031	1.011	1.032	1.030	.994	.986	.971	.973	.986
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.997	.971	.982	.986	.999	.992	.982	1.006	1.040	1.026	1.035	1.026	.998	.965
505	Metals & minerals, ex. petroleum	.967	1.014	1.021	1.009	1.004	1.004	1.014	1.026	1.010	.988	.979	.978	.964	1.009
506	Electrical goods	1.003	.983	.968	.976	.989	.990	.997	1.001	1.018	1.016	1.026	1.015	1.004	.990
507	Hardware, plumbing & heating equipment .....	.978	.963	.976	.998	1.026	1.035	1.023	1.011	1.012	1.007	.990	.987	.978	.970
508	Machinery, equip. & supplies ....	.998	.995	.991	.996	1.003	1.010	1.006	1.009	1.007	1.005	.991	.998	.999	.990
509	Miscellaneous durable goods ...	1.007	.958	.955	.967	.970	1.011	1.010	1.003	1.034	1.036	1.026	1.020	1.003	.961
51	Nondurable goods	1.027	1.032	1.038	1.032	1.021	1.002	.967	.979	.964	.954	.973	1.018	1.026	1.032
511	Paper & paper products .....	.994	1.005	1.013	1.010	1.016	1.011	.994	1.000	.999	.999	.970	.990	.992	1.001
512	Drugs, drug proprietaries and druggists' sundries .....	.993	.997	1.032	1.038	1.031	1.028	.972	.959	.959	.957	.990	1.024	.996	1.006
513	Apparel, piece goods & notions	.948	.983	.991	.978	.953	.957	1.015	1.053	1.059	1.058	1.037	.971	.949	.989
514	Groceries & related products ...	1.047	1.012	.990	1.006	.987	.990	.987	.990	.990	.963	.996	1.043	1.046	1.019
515	Farm-product raw materials ...	1.145	1.187	1.228	1.168	1.078	.989	.840	.843	.819	.802	.874	1.082	1.137	1.176
516	Chemicals & allied products ...	.989	.983	.999	1.012	.998	1.032	1.035	1.022	1.004	1.005	.950	.973	.989	.971
517	Petroleum & petroleum products	1.027	1.103	1.091	.962	.970	.929	.955	.973	.981	.953	1.021	1.011	1.024	1.097
518	Beer, wine, & distilled beverages	1.043	.907	.943	.980	1.011	1.030	1.007	1.030	1.001	.986	1.002	1.060	1.042	.909
519	Misc. nondurable goods .....	.995	1.025	1.034	1.064	1.106	1.064	.970	.975	.921	.924	.944	.968	.997	1.033

¹Revised

¹Adjusted 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 ¹ 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

December 1988



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW88-12
Issued February 1989

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 Annual Trade Survey. Revised sales, inventory, and stock/sales ratio estimates for January 1983 through December 1988 are scheduled for release during the week of April 3. Estimates shown in this report do not reflect this revision.

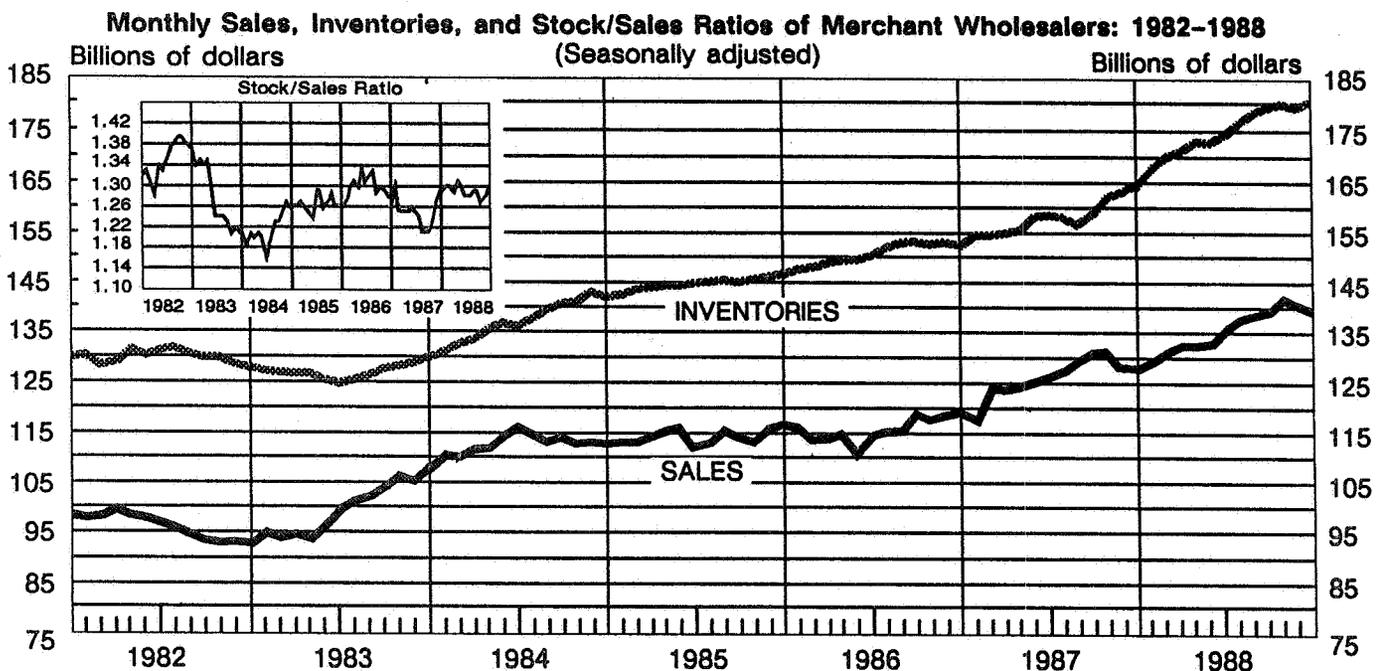
Sales. December 1988 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$140.0 billion, down 0.8 percent (± 0.6 percent) from the revised November level but up 9.1 percent (± 1.8 percent) from a year ago. The November preliminary estimate was revised downward by \$0.8 billion or about 0.6 percent. December sales of durable goods were up 0.2 percent (± 1.0 percent) from November, and were 13.2 percent (± 2.3 percent) above a year ago. December sales of nondurable goods were down 1.8 percent (± 0.9 percent) from November but were up 5.2 percent (± 2.4 percent) from December 1987. Sales of farm-product raw materials were down 11.0 percent to \$9.6 billion.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$181.4 billion at the end of December, up 0.6 percent

(± 0.6 percent) from the revised November level and up 9.6 percent (± 2.3 percent) from a year ago. The November preliminary estimate was revised downward by \$0.7 billion or about 0.4 percent. Inventories of durable goods wholesalers increased 0.6 percent (± 0.5 percent) from the November level and were 8.9 percent (± 2.2 percent) above a year ago. Inventories of nondurable goods wholesalers were up 0.6 percent (± 1.1 percent) from the November level and were 10.9 percent (± 3.0 percent) above December 1987.

Stock/Sales Ratio. The December stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.30, up from the November ratio of 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 January is scheduled to be released March 10, 1989 at 10:00.

Address inquiries concerning this report to Shirley Roberts, Business Division, Bureau of the Census, Washington, D.C. 20233. 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: 1988 and 1987

(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	1988												1987
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. ^P	Dec. ^P
	Sales, Total	129,720	131,822	132,885	133,015	133,284	136,289	138,195	139,008	139,882	142,429	141,086	139,953	128,289
50	Durable goods	62,486	63,795	64,881	66,081	65,933	68,242	67,262	67,065	67,755	69,275	70,086	70,213	62,004
501	Motor vehicles & auto. equip.	12,595	13,550	13,348	14,333	13,913	13,735	13,861	13,486	13,588	14,206	14,478	14,225	13,141
502	Furniture & home furnishings	2,267	2,319	2,284	2,208	2,137	2,139	2,180	2,228	2,342	2,460	2,460	2,141	2,141
503	Lumber & other construction mat.	5,098	5,368	5,594	5,744	5,408	5,110	5,193	4,999	5,038	5,155	5,019	5,160	5,274
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1,730	1,715	1,727	1,731	1,765	1,824	1,867	1,914	1,933	1,988	2,059	2,160	1,827
505	Metals & minerals, ex. petroleum	5,589	5,477	5,951	6,048	5,780	6,005	6,082	6,102	6,346	6,303	6,527	6,380	6,457
506	Electrical goods	7,738	7,897	8,263	8,517	8,517	8,562	8,273	8,641	8,477	8,821	9,087	8,899	7,547
507	Hardware, plumbing & heating equipment	4,125	3,803	4,183	4,165	4,165	4,278	4,655	4,472	4,252	4,410	4,284	4,249	4,110
508	Machinery, equip. & supplies	16,568	16,701	16,818	16,937	17,316	17,568	17,898	18,452	19,129	19,286	19,216	19,261	15,449
509	Miscellaneous durable goods	6,780	6,967	6,733	6,400	6,952	6,921	7,255	6,781	6,764	6,764	6,956	7,419	7,256
51	Nondurable goods	67,234	67,827	68,004	66,934	67,351	70,047	70,933	71,943	71,927	73,154	71,000	69,740	66,265
511	Paper & paper products	4,207	4,159	4,228	4,137	4,194	4,331	4,468	4,427	4,597	4,607	4,497	4,376	4,154
512	Drugs, drug proprietaries and druggists' sundries	2,797	2,895	2,887	2,875	2,948	3,024	3,095	3,173	3,178	3,155	3,111	3,208	2,807
513	Apparel, piece goods & notions	4,005	3,879	3,890	3,866	4,051	4,276	4,263	4,187	4,441	4,244	4,462	4,328	4,085
514	Groceries & related products	19,839	19,710	19,180	18,777	19,445	19,652	19,795	20,100	19,947	20,807	21,087	21,539	20,040
515	Farm-product raw materials	9,876	9,553	9,800	10,056	10,108	11,028	11,294	11,654	12,153	12,875	10,757	9,576	8,348
516	Chemicals & allied products	2,233	2,361	2,548	2,584	2,788	2,850	2,849	2,748	2,649	2,584	2,688	2,539	2,254
517	Petroleum & petroleum products	11,508	12,225	12,589	11,995	12,211	12,477	12,748	12,917	11,986	11,823	11,329	11,325	11,983
518	Beer, wine, & distilled beverages	3,588	3,643	3,590	3,447	3,437	3,521	3,450	3,495	3,584	3,584	3,616	3,549	3,498
519	Misc. nondurable goods	9,381	9,402	9,312	9,097	8,151	8,888	8,981	9,342	9,492	9,989	9,453	8,300	9,116
	Inventories, Total	168,388	170,632	171,732	173,530	173,418	175,001	177,307	179,165	180,278	181,049	180,327	181,448	165,588
50	Durable goods	111,259	112,681	113,694	114,812	113,868	112,674	114,702	115,685	117,294	118,026	117,544	118,265	108,619
501	Motor vehicles & auto. equip.	21,733	22,591	22,586	22,056	21,965	21,178	21,795	22,078	22,672	22,492	22,489	22,812	21,581
502	Furniture & home furnishings	4,081	4,128	4,224	4,423	4,295	4,428	4,393	4,353	4,384	4,362	4,235	4,111	4,043
503	Lumber & other construction mat.	7,289	7,003	7,018	7,075	6,855	6,320	6,414	6,254	6,373	6,508	6,192	6,188	6,332
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,144	4,084	4,189	4,237	4,261	4,271	4,233	4,128	4,304	4,274	4,255	4,285	4,121
505	Metals & minerals, ex. petroleum	7,687	7,822	8,204	8,648	8,659	8,865	9,068	9,912	9,079	9,277	9,310	8,829	7,538
506	Electrical goods	13,606	13,709	13,716	13,843	13,783	13,778	13,752	13,963	13,768	14,139	14,132	14,711	13,482
507	Hardware, plumbing & heating equipment	7,031	6,854	6,840	6,872	6,827	6,868	7,098	7,208	7,248	7,319	7,098	7,046	6,906
508	Machinery, equip. & supplies	38,251	39,040	39,118	39,944	39,788	39,517	40,360	40,924	41,908	42,221	42,317	42,601	36,838
509	Miscellaneous durable goods	7,437	7,430	7,819	7,714	7,345	7,451	7,589	7,867	7,558	7,434	7,516	7,702	7,778
51	Nondurable goods	57,129	57,971	58,038	58,718	59,752	62,327	62,605	63,480	62,984	63,023	62,783	63,163	56,969
511	Paper & paper products	3,964	3,916	4,055	4,062	4,023	4,138	4,312	4,211	4,367	4,445	4,338	4,335	3,865
512	Drugs, drug proprietaries and druggists' sundries	5,052	4,927	4,916	5,215	5,145	5,274	5,429	5,488	5,340	5,194	5,208	5,501	5,001
513	Apparel, piece goods & notions	8,074	8,047	8,023	7,945	8,327	8,425	7,991	7,984	7,903	8,123	8,377	8,279	8,078
514	Groceries & related products	12,910	12,605	12,491	12,613	12,499	12,398	12,696	12,757	13,071	13,189	13,001	13,063	12,889
515	Farm-product raw materials	6,822	7,717	7,532	7,764	8,410	10,273	10,282	10,539	10,176	10,121	9,323	9,404	7,014
516	Chemicals & allied products	2,714	2,780	2,836	2,838	3,032	2,968	2,902	3,039	3,019	2,968	2,994	3,281	2,583
517	Petroleum & petroleum products	3,548	3,964	3,974	3,946	3,930	3,882	3,900	4,007	3,964	3,763	3,673	3,591	3,422
518	Beer, wine, & distilled beverages	4,103	4,153	4,097	4,088	3,983	3,973	4,067	4,135	4,138	4,198	4,185	4,172	4,278
519	Misc. nondurable goods	9,944	9,882	10,114	10,257	10,403	10,996	11,026	11,320	11,006	11,022	11,684	11,481	9,839
	Stock/sales ratios, Total	1.30	1.30	1.29	1.30	1.30	1.28	1.28	1.29	1.29	1.27	1.28	1.30	1.29
50	Durable goods	1.78	1.77	1.75	1.74	1.72	1.70	1.71	1.72	1.73	1.70	1.68	1.68	1.75
501	Motor vehicles & auto. equip.	1.73	1.67	1.69	1.54	1.58	1.54	1.57	1.64	1.67	1.58	1.55	1.60	1.64
502	Furniture & home furnishings	1.80	1.78	1.87	2.00	2.01	2.07	2.02	1.97	1.86	1.72	1.67	1.89	1.89
503	Lumber & other construction mat.	1.43	1.31	1.25	1.23	1.27	1.24	1.24	1.25	1.26	1.26	1.23	1.20	1.20
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.40	2.38	2.43	2.45	2.41	2.34	2.27	2.18	2.23	2.15	2.07	1.98	2.53
505	Metals & minerals, ex. petroleum	1.38	1.43	1.38	1.43	1.49	1.48	1.49	1.48	1.43	1.47	1.43	1.38	1.38
506	Electrical goods	1.78	1.74	1.66	1.63	1.62	1.61	1.66	1.62	1.62	1.60	1.56	1.65	1.79
507	Hardware, plumbing & heating equipment	1.70	1.80	1.84	1.65	1.64	1.57	1.52	1.61	1.70	1.66	1.68	1.66	1.68
508	Machinery, equip. & supplies	2.31	2.34	2.33	2.36	2.30	2.25	2.26	2.22	2.19	2.19	2.20	2.21	2.38
509	Miscellaneous durable goods	1.10	1.07	1.16	1.21	1.06	1.08	1.05	1.16	1.12	1.10	1.08	1.04	1.07
51	Nondurable goods .....	.85	.85	.85	.88	.89	.89	.88	.88	.88	.86	.88	.91	.88
511	Paper & paper products .....	.94	.94	.98	.98	.96	.96	.97	.95	.95	.96	.96	.99	.93
512	Drugs, drug proprietaries and druggists' sundries	1.81	1.70	1.70	1.81	1.75	1.74	1.75	1.73	1.68	1.65	1.67	1.73	1.78
513	Apparel, piece goods & notions	2.02	2.07	2.06	2.06	2.06	1.97	1.88	1.91	1.78	1.91	1.88	1.91	1.99
514	Groceries & related products .....	.65	.64	.65	.67	.64	.63	.64	.63	.66	.63	.62	.61	.64
515	Farm-product raw materials .....	.71	.81	.77	.77	.83	.93	.91	.90	.84	.79	.87	.88	.84
516	Chemicals & allied products	1.22	1.18	1.11	1.06	1.09	1.04	1.02	1.11	1.14	1.15	1.11	1.29	1.15
517	Petroleum & petroleum products .....	.31	.32	.32	.33	.32	.31	.31	.31	.33	.32	.32	.32	.29
518	Beer, wine, & distilled beverages	1.14	1.14	1.14	1.19	1.16	1.13	1.18	1.18	1.15	1.17	1.18	1.18	1.22
519	Misc. nondurable goods	1.08	1.05	1.09	1.13	1.28	1.24	1.23	1.21	1.18	1.14	1.14	1.23	1.08

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.

^RRevised.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1988 and 1987

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

SIC code	Kind of business	1988												1987	Total 12 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. ^P	Dec.	1988	1987
	Sales, Total	118,752	124,987	142,148	131,787	136,044	141,242	130,728	142,673	140,998	145,332	142,234	140,908	132,747	1,637,827	1,520,827
50	Durable goods	54,944	59,327	69,184	66,378	67,242	70,080	64,030	69,480	70,060	72,339	70,364	69,334	62,725	802,722	739,277
501	Motor vehicles & auto. equip.	11,285	12,493	14,002	14,620	14,456	14,738	13,445	13,567	12,827	15,018	14,652	14,410	13,509	185,511	153,222
502	Furniture & home furnishings	1,947	2,178	2,298	2,135	2,124	2,276	2,073	2,404	2,377	2,621	2,541	2,327	2,090	27,301	24,702
503	Lumber & other construction mat. . .	3,971	4,448	5,527	5,773	5,727	5,898	5,453	5,774	5,522	5,598	4,909	4,366	4,583	62,765	62,360
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	1,479	1,643	1,767	1,665	1,548	1,775	1,693	2,031	2,155	2,274	2,358	2,233	1,705	22,619	20,803
505	Metals & minerals, ex. petroleum ..	5,304	5,384	6,855	5,969	5,688	6,347	5,681	6,267	6,879	6,096	6,103	6,010	5,315	72,562	60,080
506	Electrical goods	6,862	7,542	8,651	7,946	8,108	8,690	7,992	9,004	9,003	9,615	9,569	9,059	7,917	102,041	96,031
507	Hardware, plumbing & heating equipment	3,663	3,548	4,258	4,132	4,311	4,798	4,590	4,673	4,337	4,661	4,288	4,049	4,052	51,308	47,472
508	Machinery, equip. & supplies	14,711	15,716	18,601	17,360	17,905	18,429	16,769	19,135	19,722	19,093	18,793	19,685	16,381	215,919	192,174
509	Miscellaneous durable goods	5,722	6,375	7,225	6,778	7,397	7,309	6,334	6,605	7,238	7,366	7,151	7,198	7,193	82,698	82,433
51	Nondurable goods	63,808	65,660	72,964	65,409	68,802	71,182	66,696	73,213	70,936	72,993	71,870	71,572	70,022	835,105	781,550
511	Paper & paper products	3,946	4,047	4,600	4,029	4,072	4,496	4,173	4,706	4,689	4,625	4,551	4,354	4,270	52,268	44,741
512	Drugs, drug proprietaries and druggists' sundries	2,730	2,817	3,066	2,809	2,925	3,087	2,988	3,259	3,277	3,177	3,114	3,214	2,922	36,363	32,955
513	Apparel, piece goods & notions	3,456	4,174	4,244	3,998	3,707	4,404	4,342	5,242	4,663	4,651	4,542	3,077	3,128	49,900	45,283
514	Groceries & related products	19,006	18,705	19,598	18,364	20,087	20,300	19,676	20,604	19,807	20,579	21,361	22,069	20,882	240,585	235,033
515	Farm-product raw materials	10,015	9,696	10,956	9,593	10,482	10,499	9,467	10,512	10,901	13,300	11,316	10,698	9,800	127,655	103,343
516	Chemicals & allied products	2,135	2,333	2,708	2,727	2,866	3,072	2,847	2,828	2,744	2,625	2,605	2,237	2,049	31,527	23,370
517	Petroleum & petroleum products ..	12,187	12,408	13,876	11,371	11,686	11,903	11,588	12,420	11,874	11,274	11,556	12,276	13,193	144,419	149,983
518	Beer, wine, & distilled beverages ..	2,659	2,962	3,619	3,230	3,636	4,000	3,428	3,897	3,631	3,500	3,797	4,117	4,254	42,474	42,318
519	Misc. nondurable goods	7,674	6,518	10,197	9,888	9,341	9,421	8,469	9,445	9,350	9,263	9,028	9,300	9,426	109,894	105,524
	Inventories, Total	168,783	171,742	173,184	174,543	171,978	174,346	175,528	175,692	178,837	181,949	181,123	181,940	165,819	(X)	(X)
50	Durable goods	109,662	111,920	113,888	115,597	114,132	113,721	115,596	115,639	117,755	117,824	116,892	116,715	107,257	(X)	(X)
501	Motor vehicles & auto. equip.	21,846	22,681	22,747	22,078	21,845	21,345	21,359	21,237	23,125	22,425	22,759	23,200	21,948	(X)	(X)
502	Furniture & home furnishings	4,154	4,140	4,194	4,379	4,325	4,379	4,397	4,423	4,415	4,327	4,121	4,066	4,011	(X)	(X)
503	Lumber & other construction mat. . .	6,903	6,891	7,123	7,294	6,930	6,522	6,606	6,216	6,284	6,319	6,000	5,928	6,091	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,069	4,027	4,185	4,203	4,184	4,297	4,402	4,235	4,455	4,385	4,212	4,118	3,973	(X)	(X)
505	Metals & minerals, ex. petroleum ..	7,848	7,892	8,237	8,683	8,679	9,096	9,159	8,805	8,888	9,073	8,947	8,891	7,583	(X)	(X)
506	Electrical goods	13,171	13,380	13,565	13,705	13,742	13,792	14,000	14,186	14,126	14,351	14,146	14,608	13,374	(X)	(X)
507	Hardware, plumbing & heating equipment	6,862	6,840	7,018	7,113	6,984	6,944	7,183	7,258	7,176	7,224	6,921	6,835	6,692	(X)	(X)
508	Machinery, equip. & supplies	37,907	38,884	39,235	40,343	40,225	39,873	40,643	41,129	41,531	42,137	42,232	41,621	38,064	(X)	(X)
509	Miscellaneous durable goods	7,102	7,185	7,584	7,799	7,418	7,473	7,847	8,150	7,755	7,583	7,554	7,448	7,521	(X)	(X)
51	Nondurable goods	59,121	59,822	59,296	58,946	57,846	60,625	59,932	60,053	61,082	64,125	64,231	65,225	58,562	(X)	(X)
511	Paper & paper products	4,016	3,965	4,120	4,107	3,999	4,138	4,308	4,207	4,238	4,401	4,290	4,322	3,850	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,214	5,114	5,068	5,361	5,001	5,058	5,206	5,252	5,287	5,319	5,181	5,646	5,076	(X)	(X)
513	Apparel, piece goods & notions	8,001	7,870	7,646	7,603	8,452	8,872	8,462	8,447	8,195	7,887	7,954	8,196	7,989	(X)	(X)
514	Groceries & related products	12,781	12,681	12,329	12,487	12,337	12,274	12,569	12,285	13,019	13,756	13,625	13,403	13,185	(X)	(X)
515	Farm-product raw materials	8,378	9,013	8,120	7,669	7,064	8,660	8,421	8,452	8,894	10,951	10,488	10,843	8,136	(X)	(X)
516	Chemicals & allied products	2,711	2,813	2,830	2,929	3,138	3,033	2,914	3,054	2,868	2,888	2,949	3,183	2,508	(X)	(X)
517	Petroleum & petroleum products ..	3,869	3,813	3,855	3,666	3,753	3,777	3,826	3,819	4,047	3,804	3,769	3,964	3,751	(X)	(X)
518	Beer, wine, & distilled beverages ..	3,869	4,070	4,142	4,211	4,011	4,092	4,071	4,077	4,146	4,450	4,377	3,784	3,884	(X)	(X)
519	Misc. nondurable goods	10,282	10,493	11,186	10,913	10,091	10,721	10,155	10,460	10,390	10,669	11,614	11,894	10,183	(X)	(X)
	Stock/sales ratios, Total	1.42	1.37	1.22	1.32	1.26	1.23	1.34	1.23	1.27	1.25	1.27	1.29	1.25	(X)	(X)
50	Durable goods	2.00	1.89	1.65	1.74	1.70	1.62	1.81	1.66	1.68	1.63	1.66	1.68	1.71	(X)	(X)
501	Motor vehicles & auto. equip.	1.92	1.82	1.62	1.51	1.51	1.45	1.59	1.57	1.80	1.49	1.55	1.61	1.62	(X)	(X)
502	Furniture & home furnishings	2.13	1.90	1.83	2.05	2.04	1.92	2.12	1.84	1.86	1.65	1.62	1.75	1.92	(X)	(X)
503	Lumber & other construction mat. . .	1.74	1.55	1.29	1.26	1.21	1.14	1.21	1.08	1.14	1.13	1.22	1.36	1.33	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.75	2.45	2.37	2.52	2.71	2.42	2.60	2.09	2.07	1.93	1.79	1.84	2.33	(X)	(X)
505	Metals & minerals, ex. petroleum ..	1.48	1.47	1.20	1.45	1.53	1.43	1.61	1.40	1.29	1.49	1.47	1.48	1.43	(X)	(X)
506	Electrical goods	1.92	1.77	1.57	1.72	1.69	1.59	1.75	1.58	1.57	1.49	1.48	1.61	1.69	(X)	(X)
507	Hardware, plumbing & heating equipment	1.87	1.93	1.65	1.72	1.62	1.45	1.56	1.55	1.65	1.55	1.61	1.69	1.65	(X)	(X)
508	Machinery, equip. & supplies	2.58	2.47	2.11	2.32	2.24	2.16	2.42	2.15	2.11	2.21	2.25	2.11	2.20	(X)	(X)
509	Miscellaneous durable goods	1.24	1.13	1.05	1.15	1.00	1.02	1.24	1.23	1.07	1.03	1.06	1.04	1.05	(X)	(X)
51	Nondurable goods .....	.93	.91	.81	.90	.84	.85	.90	.82	.88	.88	.89	.91	.84	(X)	(X)
511	Paper & paper products	1.02	.98	.90	1.02	.98	.92	1.03	.89	.90	.94	.99	.90	.90	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.91	1.82	1.65	1.91	1.71	1.64	1.80	1.61	1.61	1.67	1.66	1.76	1.74	(X)	(X)
513	Apparel, piece goods & notions	2.32	1.89	1.80	2.24	2.28	2.01	1.95	1.81	1.76	1.70	1.75	2.66	2.56	(X)	(X)
514	Groceries & related products .....	.67	.68	.63	.68	.61	.60	.64	.59	.66	.67	.64	.61	.63	(X)	(X)
515	Farm-product raw materials .....	.84	.93	.74	.80	.67	.82	.89	.80	.82	.82	.93	.99	.83	(X)	(X)
516	Chemicals & allied products	1.27	1.21	1.05	1.07	1.09	.99	1.10	1.08	1.05	1.10	1.13	1.42	1.22	(X)	(X)
517	Petroleum & petroleum products ..	.32	.31	.28	.32	.32	.32	.33	.31	.34	.34	.33	.32	.28	(X)	(X)
518	Beer, wine, & distilled beverages ..	1.46	1.37	1.14	1.30	1.10	1.02	1.19	1.05	1.14	1.27	1.15	.92	.91	(X)	(X)
519	Misc. nondurable goods	1.34	1.23	1.10	1.10	1.08	1.14	1.20	1.11	1.11	1.15	1.29	1.28	1.08	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1987.
 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 ¹			
		Sales			Inventories, end-of-month (at cost)		Sales		Inventories, end-of-month (at cost)	
		Dec. 1988 from Nov. 1988	Dec. 1988 from Dec. 1987	12 months 1988 from 12 months 1987	Dec. 1988 from Nov. 1988	Dec. 1988 from Dec. 1987	Dec. 1988 from Nov. 1988	Dec. 1988 from Dec. 1987	Dec. 1988 from Nov. 1988	Dec. 1988 from Dec. 1987
	Total	- .9	+6.1	+7.7	+ .5	+9.7	- .8	+9.1	+ .6	+9.6
50	Durable goods	-1.5	+10.5	+8.6	- .2	+8.8	+ .2	+13.2	+ .6	+8.9
501	Motor vehicles & auto. equip.	-1.7	+6.7	+8.0	+1.9	+5.7	-1.7	+8.2	+1.4	+5.7
502	Furniture & home furnishings	-8.4	+11.3	+10.5	-1.3	+1.4	.0	+14.9	-2.9	+1.7
503	Lumber & other construction mat.	-11.1	-4.8	+ .6	-1.2	-2.7	+2.8	-2.2	- .1	-2.3
504	Sporting, recreational, photographic & hobby goods, toys & supplies	-5.3	+31.0	+8.7	-2.2	+3.6	+4.9	+32.8	+ .7	+4.0
505	Metals & minerals, ex. petroleum	-1.5	+13.1	+20.8	- .6	+17.2	-2.3	+16.9	-5.2	+17.1
506	Electrical goods	-5.3	+14.4	+6.3	+3.3	+9.2	-2.1	+17.9	+4.1	+9.1
507	Hardware, plumbing & heating equipment	-5.6	- .1	+8.1	-1.2	+2.1	- .8	+3.4	- .7	+2.0
508	Machinery, equip. & supplies	+4.7	+20.3	+12.4	-1.4	+15.4	+ .2	+24.7	+ .7	+15.6
509	Miscellaneous durable goods	+ .6	.0	+ .3	-1.4	-1.0	+6.7	+2.2	+2.5	-1.0
51	Nondurable goods	- .4	+2.2	+6.9	+1.5	+11.4	-1.8	+5.2	+ .6	+10.9
511	Paper & paper products	-4.3	+2.0	+16.9	+ .7	+12.3	-2.7	+5.3	- .1	+12.2
512	Drugs, drug proprietaries and druggists' sundries	+3.2	+10.0	+10.3	+9.4	+11.2	+3.1	+14.3	+6.7	+11.1
513	Apparel, piece goods & notions	-32.3	-1.6	+10.2	+3.0	+2.6	-3.0	+6.5	-1.2	+2.5
514	Groceries & related products	+3.5	+5.3	+2.4	-1.6	+1.7	+2.1	+7.5	+ .5	+1.3
515	Farm-product raw materials	-3.7	+11.2	+23.5	+3.4	+33.3	-11.0	+14.7	+ .9	+34.1
516	Chemicals & allied products	-14.1	+9.2	+34.9	+7.9	+26.9	-5.5	+12.6	+9.6	+27.0
517	Petroleum & petroleum products	+6.2	-7.0	-3.1	+4.9	+5.4	.0	-5.5	-2.2	+4.9
518	Beer, wine, & distilled beverages	+8.4	-3.2	+ .4	-13.5	-2.6	-1.9	+1.5	- .3	-2.5
519	Misc. nondurable goods	+3.0	-1.3	+4.1	+2.4	+16.8	-1.6	+2.0	-1.7	+16.7

¹Adjusted 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*¹ 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

¹Executive 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 27 percent of the sales estimates and 31 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1987* for a full description of the sample design and estimation procedures.

Benchmarking

Wholesale sales and inventory estimates reflect the results of a benchmarking² operation which made use of revised 1983 and 1984 annual estimates and 1985 and 1986 estimates tabulated from the 1986 Annual Trade Survey. The sales estimates for the period January 1983 through December 1987 were derived so that the sum of the 12 months for each of the years 1983 through 1986 were equal to the annual sales estimates computed for 1983 through 1986. The revision process minimized changes to month-to-month trends of the original series. The estimates for the original series were derived by using composite estimation procedures. Monthly inventory estimates for the period January 1983 through December 1987 were revised to equate each December inventory to the 1983 through 1986 end-of-year inventories derived from the Annual Trade Surveys. The revision minimized changes to month-to-month trends of the original series. Through the use of carry-forward factors, the effect of the revision process was applied to composite sales and inventory estimates subsequent to December 1986. Carry-forward factors for sales and inventories are derived by dividing the revised December 1986 estimate by the composite estimate for December 1986. These factors were derived at various kind-of-business levels and are held constant until the next 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 1977 AND 1982 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 1977 and 1982 census sales estimates included the receipts of merchant wholesalers and sales branches of ferrous metals service centers with inventories.

Establishments classified in the Farm-Product Raw Materials group (SIC 515) are included as 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 1977 and 1982 sales for the SIC were obtained from the 1977 and 1982 Annual Trade Surveys (ATS).

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

²For a more detailed description, see the section dealing with revisions to published data in the Current Business Reports publication, *Revised Monthly Wholesale Trade: December 1980 Through December 1987*.

included in the monthly survey. The inventory estimates for the years 1977 and 1982 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. After the last benchmarking operation, factors were developed and used to derive adjusted sales and inventory estimates for the period January 1983 through January 1988. 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	
	Sales, Total	1.4-1.8	1.5	1.4-1.7	1.5	0.3-0.8	0.5	0.9-1.0	1.0	1.4	1.7	0.9
50	Durable goods	1.4-1.9	1.8	1.7-1.9	1.7	0.5-0.8	0.8	1.1-1.5	1.3	1.7	1.8	1.0
501	Motor vehicles & auto. equip.	4.4-5.9	4.9	4.2-5.5	5.1	1.2-2.0	1.4	2.6-5.0	3.7	5.0	5.7	3.7
502	Furniture & home furnishings	6.1-10.8	7.1	6.1-9.9	7.3	1.8-4.9	3.4	4.9-9.2	6.5	6.6	7.1	5.4
503	Lumber & other construction mat.	4.8-5.5	5.2	4.7-5.3	5.1	0.9-2.1	1.6	4.1-8.2	5.2	4.6	5.1	2.3
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.4-9.3	8.2	5.5-9.3	6.6	2.6-7.0	4.1	4.7-8.9	6.8	5.6	6.0	4.8
505	Metals & minerals, ex. petroleum	4.9-8.8	6.7	4.2-7.9	5.4	1.2-3.8	1.6	4.0-7.4	4.9	5.2	4.2	4.1
506	Electrical goods	2.5-3.6	3.0	2.6-3.8	3.0	1.0-1.7	1.3	2.3-3.0	2.8	2.8	3.4	2.2
507	Hardware, plumbing & heating equipment	8.1-10.1	8.5	7.9-9.6	8.5	1.3-2.7	2.2	2.8-6.4	4.9	7.6	8.0	4.4
508	Machinery, equip. & supplies	2.5-3.7	3.5	2.4-3.5	3.1	1.4-2.1	1.8	2.4-3.5	2.9	2.7	3.7	2.8
509	Miscellaneous durable goods	4.4-6.2	5.0	4.6-5.4	4.8	1.9-2.6	2.1	3.4-4.2	3.9	4.5	3.8	2.4
51	Nondurable goods	2.7-3.2	3.0	2.6-3.1	3.0	0.6-1.0	0.8	1.0-1.5	1.4	2.9	3.5	1.4
511	Paper & paper products	5.1-6.4	5.4	5.2-6.6	5.3	0.9-2.7	1.7	3.0-4.8	4.3	5.2	5.8	2.4
512	Drugs, drug proprietaries and druggists' sundries	5.2-8.5	6.1	4.7-6.7	6.0	0.8-1.6	1.1	2.0-6.0	3.8	5.5	5.2	1.7
513	Apparel, piece goods & notions	8.5-10.2	9.7	8.2-10.2	9.3	2.3-4.7	3.0	5.6-8.7	6.7	8.2	10.6	6.4
514	Groceries & related products	5.4-7.2	6.2	4.9-7.2	6.3	0.7-1.7	1.3	1.8-4.1	3.0	6.1	6.4	2.2
515	Farm-product raw materials	4.8-6.4	5.1	4.1-5.9	4.8	2.4-3.9	3.3	3.6-5.0	4.2	4.5	7.1	4.4
516	Chemicals & allied products	6.2-11.4	7.7	6.5-10.3	8.5	2.0-4.7	2.7	4.9-8.8	5.9	6.9	6.0	3.4
517	Petroleum & petroleum products	6.2-6.7	6.4	5.4-6.7	6.4	0.9-1.8	1.2	3.1-4.0	3.6	5.4	4.4	2.2
518	Beer, wine, & distilled beverages	2.7-3.8	3.3	2.6-3.7	3.0	0.7-1.8	1.5	1.2-2.8	2.4	2.7	3.8	2.2
519	Misc. nondurable goods	4.5-5.7	5.1	4.5-6.1	5.0	0.7-2.6	1.6	2.0-3.7	2.9	4.8	4.7	3.2
	Inventories, Total	1.3-1.8	1.5	1.3-1.8	1.4	0.2-0.9	0.4	1.1-1.7	1.3	(X)	(X)	(X)
50	Durable goods	1.5-2.4	1.7	1.4-2.2	1.6	0.3-1.3	0.5	1.1-2.2	1.3	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.3-6.9	6.7	6.3-6.9	6.6	0.6-1.2	0.7	2.5-3.9	3.1	(X)	(X)	(X)
502	Furniture & home furnishings	9.5-11.8	10.2	9.3-11.8	10.3	0.9-2.1	1.6	4.3-7.3	4.7	(X)	(X)	(X)
503	Lumber & other construction mat.	4.9-6.1	5.1	4.6-6.3	5.0	0.8-1.4	1.1	2.9-5.7	3.4	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.2-8.2	6.0	5.7-8.3	5.8	0.7-1.7	1.4	4.7-10.2	7.5	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.5-6.0	5.6	5.3-6.0	5.5	0.4-1.0	0.6	2.7-3.7	3.1	(X)	(X)	(X)
506	Electrical goods	3.4-4.0	3.4	3.3-3.9	3.4	0.4-0.8	0.6	1.6-2.5	2.2	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	4.7-10.4	7.7	4.8-10.2	7.5	0.7-0.8	0.8	3.1-9.2	5.9	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.5-4.9	4.0	3.5-4.2	3.7	0.5-3.4	1.0	1.9-4.6	2.7	(X)	(X)	(X)
509	Miscellaneous durable goods	8.1-9.2	8.3	8.0-8.9	8.2	0.8-1.6	1.0	4.2-5.8	4.8	(X)	(X)	(X)
51	Nondurable goods	2.7-3.2	3.0	2.8-3.2	3.0	0.2-0.8	0.5	1.6-2.4	2.2	(X)	(X)	(X)
511	Paper & paper products	4.9-6.0	5.2	4.9-6.1	5.3	0.8-1.2	1.0	2.3-3.1	2.5	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.8-7.4	6.9	6.1-7.3	6.8	0.5-1.4	0.8	2.1-5.3	3.6	(X)	(X)	(X)
513	Apparel, piece goods & notions	5.9-7.2	6.7	5.4-7.1	6.6	1.0-2.0	1.1	4.0-6.7	5.2	(X)	(X)	(X)
514	Groceries & related products	4.4-6.2	5.8	4.6-6.5	5.7	0.6-1.3	0.8	2.8-3.8	3.4	(X)	(X)	(X)
515	Farm-product raw materials	7.1-8.0	7.4	6.9-9.1	7.3	0.9-2.3	1.5	3.8-5.7	4.9	(X)	(X)	(X)
516	Chemicals & allied products	7.0-8.1	7.4	7.0-7.6	7.4	0.8-3.5	1.5	4.3-6.0	5.6	(X)	(X)	(X)
517	Petroleum & petroleum products	5.2-8.8	6.0	4.9-8.5	6.4	1.0-5.5	1.5	3.3-7.9	4.8	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.1-4.9	4.6	3.9-4.8	4.3	0.8-1.1	0.9	1.5-2.8	2.3	(X)	(X)	(X)
519	Misc. nondurable goods	6.8-9.1	8.3	7.6-8.8	8.6	1.1-2.1	1.5	3.2-7.6	5.9	(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 July 1988 through December 1988.

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	1987	1988												1989
		Dec. ¹	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ¹	Dec. ¹	Jan.
	Sales, ¹ Total	1.030	.918	.952	1.068	.989	1.018	1.037	.947	1.030	1.014	1.025	1.011	1.000	.948
50	Durable goods	1.005	.880	.931	1.064	1.005	1.013	1.053	.956	1.036	1.037	1.049	1.005	.978	.912
501	Motor vehicles & auto. equip. ...	1.028	.898	.922	1.049	1.020	1.039	1.073	.970	1.006	.944	1.057	1.012	1.013	.920
502	Furniture & home furnishings ...	.976	.859	.939	1.015	.968	.994	1.064	.951	1.084	1.067	1.119	1.033	.946	.891
503	Lumber & other construction mat. ....	.869	.779	.829	.988	1.005	1.059	1.115	1.050	1.155	1.098	1.086	.978	.846	.811
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.048	.855	.958	1.023	.962	.876	.973	.907	1.061	1.115	1.144	1.145	1.034	.874
505	Metals & minerals, ex. petroleum	.974	.949	.983	1.152	.987	.984	1.057	.934	1.027	1.084	.967	.935	.942	.966
506	Electrical goods	1.049	.887	.955	1.047	.933	.952	1.015	.966	1.042	1.062	1.090	1.053	1.018	.900
507	Hardware, plumbing & heating equipment .....	.986	.888	.933	1.018	.992	1.035	1.096	.986	1.045	1.020	1.057	1.001	.953	.912
508	Machinery, equip. & supplies	1.059	.888	.941	1.106	1.025	1.034	1.049	.937	1.037	1.031	.990	.978	1.022	.912
509	Miscellaneous durable goods ...	.991	.844	.915	1.073	1.059	1.064	1.056	.873	.974	1.070	1.089	1.028	.970	.885
51	Nondurable goods	1.052	.952	.989	1.066	.975	1.030	1.016	.941	1.023	.994	1.001	1.018	1.020	.980
511	Paper & paper products	1.028	.938	.973	1.088	.974	.971	1.038	.934	1.063	1.020	1.004	1.012	.995	.977
512	Drugs, drug proprietaries and druggists' sundries	1.041	.976	.973	1.062	.977	.993	1.021	.933	1.027	1.031	1.007	1.001	1.002	1.010
513	Apparel, piece goods & notions	.769	.863	1.076	1.091	.879	.915	1.030	1.021	1.252	1.050	1.096	1.018	.711	.924
514	Groceries & related products ...	1.047	.958	.949	1.027	.978	1.033	1.033	.994	1.040	.993	.989	1.013	1.026	.975
515	Farm-product raw materials ...	1.174	1.035	1.015	1.118	.954	1.037	.952	.840	.902	.897	1.033	1.052	1.138	1.075
516	Chemicals & allied products ...	.909	.956	.988	1.063	1.016	1.028	1.078	.929	1.029	1.036	1.016	.968	.881	.990
517	Petroleum & petroleum products	1.101	1.059	1.015	1.104	.948	.957	.954	.909	.969	.999	.970	1.020	1.084	1.085
518	Beer, wine, & distilled beverages	1.216	.741	.813	1.008	.937	1.058	1.136	.993	1.115	1.013	.975	1.050	1.160	.763
519	Misc. nondurable goods	1.034	.818	.906	1.095	1.087	1.146	1.060	.943	1.011	.985	.958	.955	1.000	.851
	Inventories, ¹ Total	1.001	1.004	1.006	1.008	1.006	.990	.996	.993	.987	.996	1.008	1.003	1.001	1.004
50	Durable goods .....	.985	.986	.994	1.000	1.007	1.003	1.006	1.008	1.002	1.009	1.002	.994	.984	.987
501	Motor vehicles & auto. equip. ...	1.017	.996	1.004	1.008	1.001	.995	1.008	.980	.962	1.020	.997	1.012	1.017	.995
502	Furniture & home furnishings ...	.992	1.018	1.003	.993	.990	1.007	.989	1.001	1.016	1.007	.992	.973	.989	1.012
503	Lumber & other construction mat. ....	.962	.947	.984	1.015	1.031	1.011	1.032	1.030	.994	.986	.971	.969	.958	.951
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.964	.982	.986	.999	.992	.982	1.006	1.040	1.026	1.035	1.026	.990	.961	.977
505	Metals & minerals, ex. petroleum	1.006	1.021	1.009	1.004	1.004	1.014	1.026	1.010	.988	.979	.978	.961	1.007	1.019
506	Electrical goods .....	.992	.968	.976	.989	.990	.997	1.001	1.018	1.016	1.026	1.015	1.001	.993	.970
507	Hardware, plumbing & heating equipment .....	.969	.976	.998	1.026	1.035	1.023	1.011	1.012	1.007	.990	.987	.975	.970	.982
508	Machinery, equip. & supplies .....	.979	.991	.996	1.003	1.010	1.008	1.009	1.007	1.005	.991	.998	.998	.977	.992
509	Miscellaneous durable goods ...	.967	.955	.967	.970	1.011	1.010	1.003	1.034	1.036	1.026	1.020	1.005	.967	.950
51	Nondurable goods	1.032	1.038	1.032	1.021	1.002	.967	.979	.964	.954	.973	1.018	1.026	1.032	1.037
511	Paper & paper products .....	.996	1.013	1.010	1.016	1.011	.994	1.000	.999	.999	.970	.990	.989	.997	1.019
512	Drugs, drug proprietaries and druggists' sundries	1.015	1.032	1.038	1.031	1.028	.972	.959	.959	.957	.990	1.024	.991	1.016	1.040
513	Apparel, piece goods & notions	.989	.991	.978	.953	.957	1.015	1.053	1.059	1.058	1.037	.971	.950	.990	.988
514	Groceries & related products ...	1.023	.990	1.006	.987	.990	.987	.990	.990	.963	.996	1.043	1.048	1.026	.996
515	Farm-product raw materials ...	1.160	1.228	1.168	1.078	.989	.840	.843	.819	.802	.874	1.082	1.125	1.153	1.215
516	Chemicals & allied products ...	.971	.999	1.012	.998	1.032	1.035	1.022	1.004	1.005	.950	.973	.985	.970	.994
517	Petroleum & petroleum products	1.096	1.091	.962	.970	.929	.955	.973	.981	.953	1.021	1.011	1.026	1.101	1.089
518	Beer, wine, & distilled beverages	.908	.943	.980	1.011	1.030	1.007	1.030	1.001	.988	1.002	1.060	1.046	.907	.944
519	Misc. nondurable goods	1.035	1.034	1.064	1.106	1.064	.970	.975	.921	.924	.944	.968	.994	1.036	1.034

¹Revised

¹Adjusted 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.

