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Questions concerning this report may be directed
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CB-89-32

MONTHLY WHOLESALE TRADE REPORT: JANUARY 1989

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 1987 Annual Trade Survey.

Revised estimates for the period December 1980 through December 1988 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 1988," scheduled for release the week of April 3. The January Monthly Wholesale Trade Report, also scheduled for release the week of April 3, will present revised January 1989 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 \$143.4 billion, up 2.3 percent (+1.3 percent) from December, and up 10.7 percent (+2.5 percent) from the January 1988 level. January sales of durable goods increased 2.1 percent (+1.8 percent) from December and were 14.0 percent (+3.2 percent) above a year ago. January sales of nondurable goods were up 2.5 percent (+1.9 percent) from the previous month and were up 7.5 percent (+2.8 percent) from the January 1988 level.

INVENTORIES Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$181.8 billion at the end of January, up 0.2 percent (+0.4 percent) from the previous month and up 8.1 percent (+2.2 percent) from January 1988. Durable goods stocks increased 0.2 percent (+0.6 percent) from December and were 6.4 percent (+2.4 percent) above the January 1988 level. Nondurable goods stocks were up 0.2 percent (+0.7 percent) from the previous month and were 11.2 percent (+2.7 percent) above a year ago.

STOCK/SALES RATIO The January stock/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.27, down from the December ratio of 1.29.

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

Table 1. Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: January 1989

(Sales and inventories in millions of dollars)

Kind of business	Unadjusted			Adjusted ¹		
	Jan. ² 1989	Dec. 1988	Jan. 1988	Jan. 1989	Dec. 1988	Jan. 1988
SALES						
Merchant wholesalers, total.....	134,935	140,648	118,752	143,433	140,205	129,603
Durable goods, total.....	64,342	68,644	54,944	71,502	70,040	62,709
Nondurable goods, total.....	70,593	72,004	63,808	71,931	70,165	66,894
INVENTORIES						
Merchant wholesalers, total.....	182,823	181,837	168,783	181,794	181,419	168,230
Durable goods, total.....	116,833	116,430	109,662	118,341	118,069	111,190
Nondurable goods, total.....	65,990	65,407	59,121	63,453	63,350	57,040
STOCK/SALES RATIOS						
Merchant wholesalers, total.....	1.35	1.29	1.42	1.27	1.29	1.30
Durable goods, total.....	1.82	1.70	2.00	1.66	1.69	1.77
Nondurable goods, total.....	0.93	0.91	0.93	0.88	0.90	0.85

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

²Preliminary estimates.

Table 2. Sales, Inventories, Percent Changes, and Stock/Sales Ratios of Merchant Wholesalers, by Kind of Business: January 1989

SIC code	Kind of business	Sales				Inventories (end-of-month)				Stock/sales ratios	
		Dollars (millions)		Percent change		Dollars (millions)		Percent change			
		Jan. 1 1989	Dec. 1988	Jan. 1989 from Dec. 1988	Jan. 1989 from Jan. 1988	Jan. 1 1989	Dec. 1988	Jan. 1989 from Dec. 1988	Jan. 1989 from Jan. 1988	Jan. 1 1989	Dec. 1988
Data are NOT ADJUSTED for seasonal variation or trading-day differences											
	Merchant wholesalers, total.....	134,935	140,648	-4.1	+13.6	182,823	181,837	+0.5	+8.3	1.35	1.29
50	Durable goods, total.....	64,342	68,644	-6.3	+17.1	116,833	116,430	+0.3	+6.5	1.82	1.70
501	Motor vehicles & auto. equip.....	17,208	14,302	-7.6	+17.0	22,527	22,968	-1.9	+4.1	1.71	1.61
502	Furniture & home furnishings.....	2,072	2,335	-11.3	+6.4	4,375	4,128	+6.0	+5.3	2.11	1.77
503	Lumber & other construction mat.....	4,360	4,443	-1.9	+9.8	6,255	6,148	+1.7	-9.4	1.43	1.38
504	Sporting, recreational, photographic & hobby goods, toys & supplies.....	1,980	2,253	-12.1	+33.9	4,278	4,289	-0.3	+5.1	2.16	1.90
505	Metals & minerals, ex. petroleum.....	6,213	5,969	+4.1	+17.1	8,984	9,156	-1.9	+14.5	1.45	1.53
506	Electrical goods.....	8,352	3,874	-5.9	+21.7	14,108	14,340	-1.6	+7.1	1.69	1.62
507	Hardware, plumbing and heating equipment.....	4,127	4,123	+0.1	+12.7	7,149	6,875	+4.0	+4.2	1.73	1.67
508	Machinery, equip. & supplies.....	17,526	19,255	-9.0	+19.1	41,243	41,065	+0.4	+8.8	2.35	2.13
509	Miscellaneous durable goods.....	6,504	7,090	-8.3	+13.7	7,914	7,461	+6.1	+11.4	1.22	1.05
51	Nondurable goods, total.....	70,593	72,004	-2.0	+10.6	65,990	65,407	+0.9	+11.6	0.93	0.91
511	Paper & paper products.....	4,483	4,443	+0.9	+13.6	4,729	4,436	+6.6	+17.8	1.05	1.00
512	Drugs, drug proprietaries and druggists' sundries.....	3,308	3,241	+2.1	+21.2	5,800	5,651	+2.6	+11.2	1.75	1.74
513	Apparel, piece goods & notions.....	4,302	3,228	+33.3	+24.5	8,796	8,277	+6.3	+9.9	2.04	2.56
514	Groceries & related products.....	19,848	21,780	-8.9	+4.4	13,107	13,293	-1.4	+2.6	0.66	0.61
515	Farm-product raw materials.....	12,429	11,084	+12.1	+24.1	10,441	10,735	-2.7	+24.6	0.84	0.97
516	Chemicals & allied products.....	2,682	2,345	+14.4	+25.6	3,109	3,155	-1.5	+14.7	1.16	1.35
517	Petroleum & petroleum products.....	12,395	12,314	+0.7	+1.7	4,052	4,064	-0.3	+4.7	0.33	0.33
518	Beer, wine, & distilled beverages.....	2,940	4,077	-30.3	+6.8	4,013	3,859	+4.0	+3.7	1.41	0.95
519	Misc. nondurable goods.....	8,306	9,492	-12.5	+8.2	11,943	11,937	+0.1	+16.2	1.44	1.26
Data are ADJUSTED for seasonal variation and, in the case of sales, for trading-day differences											
	Merchant wholesalers, total.....	143,433	140,205	+2.3	+10.7	181,794	181,419	+0.2	+8.1	1.27	1.29
50	Durable goods, total.....	71,502	70,040	+2.1	+14.0	118,341	118,069	+0.2	+6.4	1.66	1.69
501	Motor vehicles & auto. equip.....	14,692	14,146	+3.9	+15.7	22,640	22,606	+0.2	+4.1	1.54	1.60
502	Furniture & home furnishings.....	2,339	2,445	-4.3	+4.1	4,302	4,174	+3.1	+5.1	1.84	1.71
503	Lumber & other construction mat.....	5,337	5,258	+1.5	+6.6	6,529	6,404	+2.0	-9.5	1.22	1.22
504	Sporting, recreational, photographic & hobby goods, toys & supplies.....	2,232	2,187	+2.1	+31.1	4,392	4,435	-1.0	+5.3	1.97	2.03
505	Metals & minerals, ex. petroleum.....	6,458	6,337	+1.9	+14.9	8,808	9,110	-3.3	+14.1	1.36	1.44
506	Electrical goods.....	9,259	8,856	+4.6	+18.6	14,529	14,441	+0.6	+7.1	1.57	1.63
507	Hardware, plumbing and heating equipment.....	4,501	4,354	+3.4	+8.1	7,229	7,095	+1.9	+4.0	1.61	1.63
508	Machinery, equip. & supplies.....	19,217	19,064	+0.8	+15.1	41,660	42,032	-0.9	+8.7	2.17	2.20
509	Miscellaneous durable goods.....	7,467	7,393	+1.0	+10.3	8,252	7,772	+6.2	+11.5	1.11	1.05
51	Nondurable goods, total.....	71,931	70,165	+2.5	+7.5	63,453	63,350	+0.2	+11.2	0.88	0.90
511	Paper & paper products.....	4,561	4,461	+2.2	+9.8	4,618	4,423	+4.4	+17.4	1.01	0.99
512	Drugs, drug proprietaries and druggists' sundries.....	3,269	3,238	+1.0	+16.9	5,534	5,573	-0.7	+11.0	1.69	1.72
513	Apparel, piece goods & notions.....	4,666	4,527	+3.1	+16.2	8,822	8,386	+5.2	+10.0	1.89	1.85
514	Groceries & related products.....	20,525	21,207	-3.2	+3.5	13,094	12,981	+0.9	+2.3	0.64	0.61
515	Farm-product raw materials.....	11,530	9,706	+18.8	+18.7	8,759	9,278	-5.6	+24.9	0.76	0.96
516	Chemicals & allied products.....	2,709	2,656	+2.0	+21.7	3,121	3,256	-4.1	+14.7	1.15	1.23
517	Petroleum & petroleum products.....	11,330	11,402	-0.6	+0.8	3,697	3,684	+0.4	+4.4	0.33	0.32
518	Beer, wine, & distilled beverages.....	3,660	3,533	+3.6	+2.8	4,247	4,236	+0.3	+3.7	1.16	1.20
519	Misc. nondurable goods.....	9,681	9,435	+2.6	+3.6	11,561	11,533	+0.2	+16.3	1.19	1.22

¹Preliminary estimates.

Monthly Wholesale Trade

Sales and Inventories



U.S. Department of Commerce
BUREAU OF THE CENSUS

January 1989

BW89-01
Issued April 1989

NOTICE OF REVISION TO WHOLESALE ESTIMATES: Monthly merchant wholesalers' sales, inventories, and stock/sales ratio estimates by kind of business for the United States have been revised for the period January 1983 through December 1988 utilizing the results from the 1987 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 1988*.

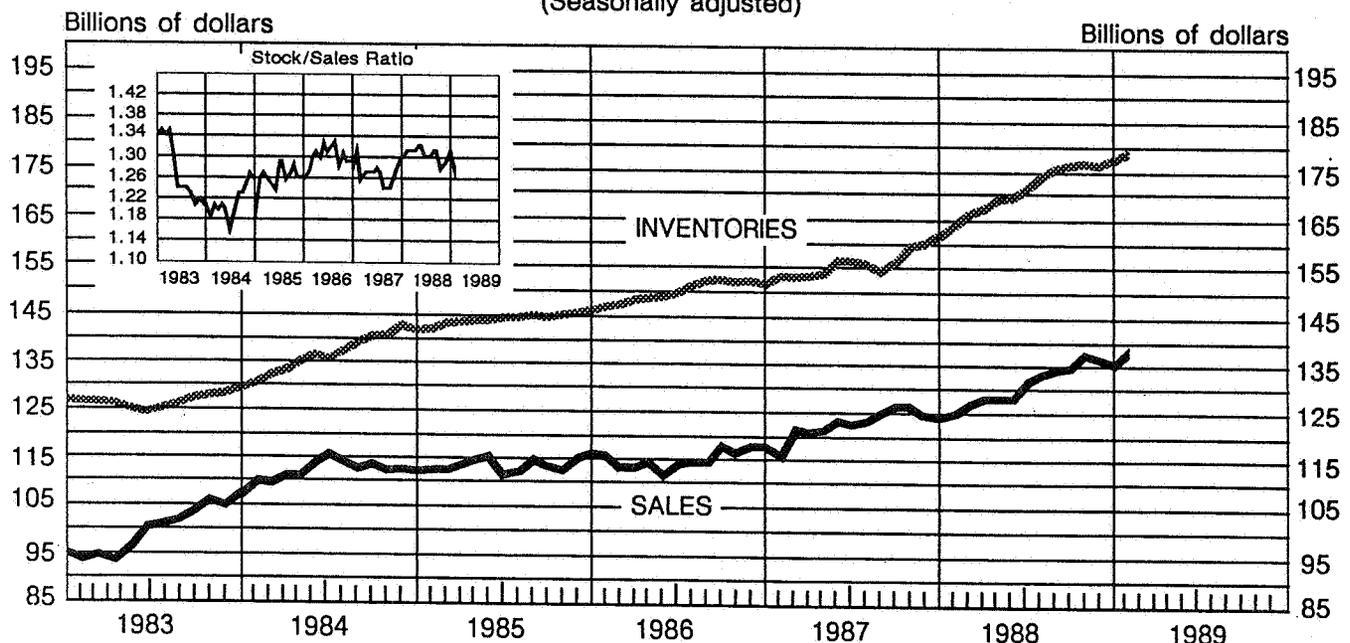
Sales. January 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$139.5 billion, up 2.4 percent (± 1.3 percent) from the revised December level and up 11.1 percent (± 2.6 percent) from a year ago. January sales of durable goods increased 2.3 percent (± 1.8 percent) from December, and were 15.0 percent (± 3.3 percent) above a year ago. Monthly increases in the sales of durable goods were as follows: electrical goods increased 4.5 percent to \$9.5 billion and metals and minerals, except petroleum were up 2.6 percent to \$6.2 billion. January sales of nondurable goods were up 2.6 percent (± 1.9 percent) from the previous month and were up 7.5 percent (± 2.8 percent) from the January 1988 level. Sales of farm-product raw materials increased 19.2 percent to \$11.3 billion from the December level. However, sales of groceries and related products decreased 3.1 percent to \$19.1 billion for the same period.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$178.7 billion at the end of January, up 0.2 percent (± 0.4 percent) from the revised December level and 8.5 percent (± 2.2 percent) from a year ago. Durable goods stocks increased 0.2 percent (± 0.6 percent) from the December level and were 7.0 percent (± 2.4 percent) above a year ago. Inventories of nondurable goods wholesalers were up 0.1 percent (± 0.7 percent) from the December level and were 11.4 percent (± 2.7 percent) above January 1988.

Stock/Sales Ratio. The January stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28, down from the December ratio of 1.31. The year ago ratio was 1.31.

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, 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: 1989 and 1988

(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												
		Jan. ^P	Jan. ^T	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	139,508	125,528	127,518	128,655	128,701	128,790	132,317	133,833	134,728	135,332	138,087	137,239	136,170
50	Durable goods	70,029	60,902	62,330	63,184	64,089	64,101	64,715	65,559	65,501	66,295	67,581	68,543	68,427
501	Motor vehicles & auto. equip.	14,554	12,605	13,487	13,183	14,188	13,880	13,534	13,663	13,349	13,548	14,037	14,288	14,031
502	Furniture & home furnishings	2,393	2,304	2,349	2,291	2,249	2,215	2,241	2,245	2,298	2,310	2,403	2,516	2,503
503	Lumber & other construction mat.	4,891	4,189	4,818	4,781	4,795	4,845	4,845	4,638	4,592	4,579	4,693	4,584	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,412	1,839	1,871	1,869	1,881	1,921	1,991	2,018	2,095	2,108	2,147	2,238	2,367
505	Metals & minerals, ex. petroleum	6,162	5,332	5,248	5,630	5,705	5,494	5,705	5,760	5,826	6,018	5,970	6,221	6,006
506	Electrical goods	9,472	7,988	8,113	8,459	8,628	8,848	8,708	8,507	8,738	8,679	8,974	9,288	9,068
507	Hardware, plumbing & heating equipment	4,144	3,802	3,493	3,852	3,817	3,828	4,008	4,249	4,040	3,878	4,025	3,930	3,974
508	Machinery, equip. & supplies	18,655	16,210	16,230	16,415	16,473	16,810	17,120	17,448	17,912	18,515	18,627	18,596	18,525
509	Miscellaneous durable goods	7,348	6,653	6,945	6,744	6,333	6,860	6,765	7,033	6,651	6,662	6,705	6,904	7,220
51	Nondurable goods	69,477	64,624	65,188	65,471	64,632	64,689	67,602	68,274	69,225	69,037	70,508	68,698	67,743
511	Paper & paper products	4,493	4,093	4,093	4,189	4,092	4,162	4,291	4,415	4,378	4,520	4,520	4,452	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,273	2,800	2,895	2,902	2,881	2,950	3,035	3,095	3,180	3,179	3,165	3,118	3,255
513	Apparel, piece goods & notions	4,688	4,028	3,890	3,898	3,915	4,078	4,280	4,268	4,205	4,428	4,259	4,508	4,538
514	Groceries & related products	19,147	18,487	18,347	17,978	17,462	18,227	18,384	18,447	18,785	18,663	19,409	19,515	19,762
515	Farm-product raw materials	11,344	9,594	9,463	9,651	10,028	9,916	10,769	11,067	11,412	11,616	12,654	10,778	9,517
516	Chemicals & allied products	2,973	2,442	2,685	2,785	2,982	3,007	3,073	3,102	2,987	2,928	2,860	2,985	2,920
517	Petroleum & petroleum products	9,989	10,013	10,768	11,132	10,485	10,742	11,045	11,213	11,218	10,395	10,267	9,998	10,090
518	Beer, wine, & distilled beverages	3,767	3,668	3,704	3,670	3,558	3,527	3,651	3,555	3,612	3,697	3,673	3,730	3,637
519	Misc. nondurable goods	8,803	9,499	9,345	9,268	9,251	8,082	9,074	9,112	9,448	9,611	9,699	9,612	9,629
	Inventories, Total	178,676	184,697	167,011	168,071	169,965	170,346	172,179	174,581	176,388	176,972	177,408	177,060	178,313
50	Durable goods	116,021	108,433	109,811	110,734	111,896	111,162	110,574	112,702	113,727	114,875	115,225	114,975	115,743
501	Motor vehicles & auto. equip.	21,540	20,697	21,364	21,363	20,982	20,972	20,208	20,885	21,047	21,528	21,378	21,353	21,507
502	Furniture & home furnishings	4,146	3,945	3,999	4,067	4,278	4,136	4,229	4,205	4,188	4,201	4,208	4,107	4,023
503	Lumber & other construction mat.	5,682	5,852	5,671	5,665	5,708	5,568	5,441	5,543	5,441	5,501	5,587	5,377	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,424	4,200	4,140	4,233	4,272	4,301	4,303	4,263	4,175	4,332	4,308	4,322	4,467
505	Metals & minerals, ex. petroleum	8,683	7,500	7,773	8,096	8,527	8,431	8,848	8,870	8,867	8,969	9,128	9,169	8,982
506	Electrical goods	14,802	13,912	14,004	14,054	14,142	14,137	14,160	14,106	14,336	14,136	14,488	14,480	14,798
507	Hardware, plumbing & heating equipment	7,400	7,115	7,011	7,010	7,050	7,052	7,096	7,304	7,379	7,414	7,456	7,275	7,264
508	Machinery, equip. & supplies	40,889	37,620	38,319	38,268	39,129	39,129	39,941	39,851	40,389	41,175	41,111	41,245	41,368
509	Miscellaneous durable goods	8,355	7,489	7,530	7,890	7,931	7,436	7,550	7,675	7,925	7,621	7,563	7,647	7,867
51	Nondurable goods	62,655	56,264	57,200	57,337	58,069	59,184	61,605	61,879	62,641	62,097	62,183	62,085	62,570
511	Paper & paper products	4,491	3,826	3,809	3,936	3,954	3,912	4,032	4,194	4,108	4,246	4,297	4,231	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,189	4,678	4,637	4,627	4,889	4,843	4,940	5,069	5,129	4,997	4,870	4,917	5,221
513	Apparel, piece goods & notions	8,254	7,501	7,513	7,523	7,472	7,761	7,905	7,490	7,456	7,408	7,639	7,870	7,848
514	Groceries & related products	12,673	12,383	12,177	12,127	12,246	12,148	12,049	12,401	12,373	12,664	12,753	12,584	12,564
515	Farm-product raw materials	9,027	7,219	7,987	7,829	8,034	8,817	10,492	10,434	10,679	10,348	10,270	9,558	9,562
516	Chemicals & allied products	2,862	2,496	2,529	2,581	2,581	2,764	2,700	2,657	2,764	2,760	2,713	2,734	2,964
517	Petroleum & petroleum products	3,875	3,710	4,138	4,111	4,097	4,106	4,072	4,084	4,196	4,134	3,940	3,861	3,858
518	Beer, wine, & distilled beverages	4,186	4,038	4,090	4,019	4,034	3,946	3,932	4,025	4,090	4,071	4,143	4,128	4,176
519	Misc. nondurable goods	12,098	10,415	10,320	10,584	10,762	10,887	11,483	11,525	11,846	11,469	11,558	12,202	12,069
	Stock/sales ratios, Total	1.28	1.31	1.31	1.31	1.32	1.32	1.30	1.30	1.31	1.31	1.28	1.29	1.31
50	Durable goods	1.66	1.78	1.76	1.75	1.75	1.73	1.71	1.72	1.74	1.73	1.70	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.64	1.59	1.62	1.48	1.53	1.49	1.53	1.58	1.59	1.52	1.49	1.53
502	Furniture & home furnishings	1.73	1.71	1.70	1.78	1.90	1.87	1.89	1.87	1.82	1.82	1.75	1.63	1.61
503	Lumber & other construction mat.	1.16	1.40	1.23	1.19	1.19	1.20	1.17	1.20	1.18	1.20	1.19	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.83	2.28	2.21	2.26	2.27	2.24	2.16	2.11	1.99	2.06	2.01	1.93	1.89
505	Metals & minerals, ex. petroleum	1.41	1.43	1.48	1.44	1.49	1.53	1.52	1.54	1.52	1.49	1.53	1.47	1.50
506	Electrical goods	1.57	1.75	1.73	1.66	1.64	1.63	1.63	1.66	1.64	1.63	1.61	1.56	1.63
507	Hardware, plumbing & heating equipment	1.79	1.87	2.01	1.82	1.85	1.84	1.77	1.72	1.83	1.91	1.85	1.85	1.83
508	Machinery, equip. & supplies	2.19	2.32	2.36	2.34	2.38	2.33	2.27	2.28	2.25	2.22	2.21	2.22	2.23
509	Miscellaneous durable goods	1.14	1.13	1.08	1.17	1.24	1.08	1.12	1.09	1.19	1.14	1.13	1.11	1.09
51	Nondurable goods .....	.90	.87	.88	.88	.90	.91	.91	.91	.90	.90	.88	.90	.92
511	Paper & paper products	1.00	.93	.93	.94	.97	.94	.94	.95	.94	.94	.95	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.67	1.60	1.59	1.70	1.64	1.63	1.64	1.61	1.57	1.54	1.58	1.60
513	Apparel, piece goods & notions	1.76	1.88	1.93	1.93	1.91	1.90	1.85	1.75	1.77	1.67	1.79	1.75	1.73
514	Groceries & related products .....	.66	.67	.66	.67	.70	.67	.66	.67	.66	.68	.68	.64	.64
515	Farm-product raw materials .....	.80	.75	.84	.81	.80	.89	.97	.94	.94	.89	.81	.89	1.00
516	Chemicals & allied products .....	.98	1.02	.94	.93	.87	.92	.88	.88	.93	.94	.95	.92	1.02
517	Petroleum & petroleum products .....	.39	.37	.38	.37	.39	.38	.37	.38	.37	.40	.38	.39	.38
518	Beer, wine, & distilled beverages	1.11	1.10	1.10	1.10	1.13	1.12	1.08	1.13	1.13	1.10	1.13	1.11	1.15
519	Misc. nondurable goods	1.23	1.10	1.10	1.14	1.16	1.35	1.27	1.26	1.25	1.19	1.19	1.27	1.25

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

^TRevised.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989	1988												Total 12 mos.
		Jan. ^P	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1988
	Sales, Total	131,000	114,746	120,930	137,528	127,618	131,689	137,210	126,841	138,551	136,994	141,335	138,289	136,599	1,588,330
50	Durable goods	62,982	53,465	57,758	67,239	64,491	65,312	68,468	62,555	67,904	68,511	70,825	68,957	67,261	782,744
501	Motor vehicles & auto. equip.	13,099	11,183	12,390	13,887	14,500	14,337	14,617	13,335	13,456	12,722	14,893	14,531	14,185	164,046
502	Furniture & home furnishings	2,123	1,995	2,232	2,355	2,188	2,177	2,333	2,124	2,463	2,435	2,686	2,604	2,393	27,985
503	Lumber & other construction mat.	3,981	3,355	3,753	4,681	4,900	4,940	5,202	4,979	5,272	5,041	5,111	4,482	4,058	55,652
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,142	1,600	1,777	1,912	1,802	1,673	1,921	1,832	2,198	2,331	2,480	2,551	2,438	24,495
505	Metals & minerals, ex. petroleum	5,909	5,044	5,120	6,519	5,676	5,390	6,036	5,403	5,960	6,542	5,797	5,804	5,676	68,967
506	Electrical goods	8,534	7,012	7,707	8,840	8,119	8,285	8,880	8,167	9,201	9,200	9,826	9,778	9,068	104,083
507	Hardware, plumbing & heating equipment	3,775	3,350	3,245	3,894	3,779	3,943	4,369	4,198	4,274	3,967	4,263	3,922	3,771	46,995
508	Machinery, equip. & supplies	17,013	14,281	15,258	18,056	16,852	17,982	17,890	16,279	18,575	19,145	18,534	18,243	18,992	209,185
509	Miscellaneous durable goods	6,406	5,635	6,278	7,115	6,675	7,285	7,198	6,238	6,505	7,128	7,255	7,042	6,982	81,336
51	Nondurable goods	68,018	61,281	63,172	70,289	63,127	66,377	68,744	64,286	70,647	68,483	70,510	69,332	69,338	805,586
511	Paper & paper products	4,421	3,892	3,991	4,537	3,973	4,016	4,433	4,115	4,641	4,624	4,581	4,488	4,382	51,653
512	Drugs, drug proprietaries and druggists' sundries	3,316	2,736	2,823	3,073	2,815	2,932	3,093	2,894	3,266	3,284	3,184	3,121	3,248	36,469
513	Apparel, piece goods & notions	4,318	3,468	4,189	4,260	3,410	3,721	4,421	4,358	5,261	4,680	4,668	4,558	3,240	50,234
514	Groceries & related products	18,496	17,711	17,430	18,356	17,113	18,719	18,917	18,336	19,480	18,458	19,176	19,905	20,296	223,897
515	Farm-product raw materials	12,252	9,872	9,558	10,799	9,456	10,332	10,349	9,352	10,362	10,745	13,110	11,155	10,926	126,016
516	Chemicals & allied products	2,949	2,347	2,564	2,977	2,998	3,151	3,377	2,910	3,109	3,016	2,886	2,863	2,578	34,776
517	Petroleum & petroleum products	10,938	10,754	10,949	12,245	10,034	10,312	10,504	10,226	10,960	10,478	9,949	10,198	10,867	127,476
518	Beer, wine, & distilled beverages	2,927	2,740	3,052	3,729	3,328	3,746	4,122	3,530	4,016	3,741	3,607	3,913	4,201	43,725
519	Misc. nondurable goods	8,401	7,781	8,616	10,313	10,000	9,448	9,528	8,565	9,552	9,457	9,369	9,131	9,600	111,340
	Inventories, Total	179,822	165,389	168,311	169,731	171,003	168,419	171,341	172,497	172,736	175,787	178,969	178,197	178,884	(X)
50	Durable goods	114,584	107,011	109,197	111,114	112,803	111,410	111,500	113,366	113,470	115,469	115,561	114,648	114,176	(X)
501	Motor vehicles & auto. equip.	21,432	20,594	21,578	21,641	21,004	20,783	20,321	20,320	22,205	22,000	21,335	21,652	21,851	(X)
502	Furniture & home furnishings	4,221	4,008	3,995	4,047	4,225	4,173	4,225	4,243	4,268	4,260	4,174	3,976	3,983	(X)
503	Lumber & other construction mat.	5,443	5,606	5,580	6,767	5,908	5,601	5,675	5,748	5,408	5,468	5,498	5,221	5,349	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,309	4,099	4,057	4,216	4,234	4,215	4,329	4,434	4,267	4,488	4,418	4,244	4,320	(X)
505	Metals & minerals, ex. petroleum	8,857	7,737	7,781	8,120	8,561	8,557	8,968	9,030	8,681	8,763	8,945	8,821	9,027	(X)
506	Electrical goods	14,470	13,509	13,724	13,913	14,057	14,095	14,146	14,360	14,551	14,489	14,720	14,509	14,709	(X)
507	Hardware, plumbing & heating equipment	7,319	7,025	7,004	7,165	7,283	7,151	7,110	7,355	7,431	7,347	7,396	7,086	7,039	(X)
508	Machinery, equip. & supplies	40,521	37,244	38,204	38,548	39,637	39,325	39,175	39,931	40,409	40,804	41,399	41,492	40,346	(X)
509	Miscellaneous durable goods	8,012	7,189	7,274	7,677	7,894	7,510	7,565	7,944	8,250	7,850	7,676	7,647	7,552	(X)
51	Nondurable goods	65,238	58,378	59,114	58,617	58,200	57,009	59,841	59,131	59,266	60,318	63,408	63,549	64,708	(X)
511	Paper & paper products	4,599	3,908	3,847	4,007	3,994	3,889	4,024	4,190	4,092	4,119	4,280	4,172	4,314	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,438	4,888	4,795	4,752	5,026	4,688	4,742	4,881	4,924	4,957	4,987	4,838	5,299	(X)
513	Apparel, piece goods & notions	8,229	7,486	7,363	7,154	7,113	7,908	8,300	7,917	7,903	7,667	7,379	7,445	7,744	(X)
514	Groceries & related products	12,686	12,371	12,274	11,933	12,087	11,941	11,880	12,165	11,890	12,601	13,314	13,188	12,866	(X)
515	Farm-product raw materials	10,751	8,627	9,281	8,381	7,897	7,274	8,918	8,671	8,703	9,158	11,276	10,800	11,054	(X)
516	Chemicals & allied products	2,839	2,478	2,569	2,584	2,674	2,866	2,770	2,662	2,789	2,619	2,637	2,693	2,881	(X)
517	Petroleum & petroleum products	4,243	4,051	3,993	4,037	3,839	3,929	3,954	4,006	3,999	4,237	3,983	3,946	4,255	(X)
518	Beer, wine, & distilled beverages	3,956	3,814	4,012	4,083	4,151	3,954	4,034	4,013	4,020	4,087	4,387	4,314	3,804	(X)
519	Misc. nondurable goods	12,497	10,759	10,980	11,706	11,419	10,560	11,219	10,626	10,946	10,873	11,165	12,153	12,491	(X)
	Stock/sales ratios, Total	1.37	1.44	1.39	1.23	1.34	1.28	1.25	1.36	1.25	1.28	1.27	1.29	1.31	(X)
50	Durable goods	1.82	2.00	1.89	1.65	1.75	1.71	1.63	1.81	1.67	1.69	1.63	1.66	1.70	(X)
501	Motor vehicles & auto. equip.	1.84	1.84	1.74	1.56	1.45	1.45	1.39	1.52	1.50	1.73	1.43	1.49	1.54	(X)
502	Furniture & home furnishings	1.99	2.01	1.79	1.72	1.93	1.92	1.81	2.00	1.73	1.75	1.55	1.53	1.66	(X)
503	Lumber & other construction mat.	1.37	1.67	1.49	1.24	1.21	1.16	1.09	1.15	1.03	1.08	1.08	1.16	1.32	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.01	2.56	2.28	2.21	2.35	2.52	2.25	2.42	1.94	1.93	1.80	1.66	1.77	(X)
505	Metals & minerals, ex. petroleum	1.50	1.53	1.52	1.25	1.51	1.59	1.49	1.67	1.46	1.34	1.54	1.52	1.59	(X)
506	Electrical goods	1.70	1.93	1.78	1.57	1.73	1.70	1.59	1.76	1.58	1.57	1.50	1.48	1.62	(X)
507	Hardware, plumbing & heating equipment	1.94	2.10	2.16	1.85	1.93	1.81	1.62	1.75	1.74	1.85	1.73	1.81	1.87	(X)
508	Machinery, equip. & supplies	2.38	2.61	2.50	2.13	2.35	2.26	2.19	2.45	2.18	2.13	2.23	2.27	2.16	(X)
509	Miscellaneous durable goods	1.25	1.28	1.16	1.08	1.18	1.03	1.05	1.27	1.27	1.10	1.06	1.09	1.08	(X)
51	Nondurable goods .....	.96	.95	.94	.83	.92	.86	.87	.92	.84	.88	.90	.92	.93	(X)
511	Paper & paper products	1.04	1.00	.96	.88	1.01	.97	.91	1.02	.88	.89	.94	.93	.98	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.64	1.79	1.70	1.55	1.70	1.60	1.53	1.69	1.51	1.51	1.57	1.55	1.63	(X)
513	Apparel, piece goods & notions	1.91	2.18	1.76	1.68	2.09	2.13	1.88	1.82	1.50	1.64	1.58	1.63	2.39	(X)
514	Groceries & related products .....	.69	.70	.70	.65	.71	.64	.63	.66	.61	.68	.69	.66	.63	(X)
515	Farm-product raw materials .....	.88	.87	.97	.77	.84	.70	.86	.93	.84	.85	.88	.97	1.01	(X)
516	Chemicals & allied products .....	.96	1.05	1.00	.87	.89	.91	.82	.91	.90	.87	.91	.94	1.12	(X)
517	Petroleum & petroleum products .....	.39	.38	.38	.33	.38	.38	.38	.39	.36	.40	.40	.39	.39	(X)
518	Beer, wine, & distilled beverages	1.35	1.39	1.31	1.09	1.25	1.06	.98	1.14	1.00	1.09	1.22	1.10	.91	(X)
519	Misc. nondurable goods	1.49	1.39	1.27	1.14	1.14	1.12	1.18	1.24	1.15	1.15	1.19	1.33	1.30	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

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. 1989 from Dec. 1988	Jan. 1989 from Jan. 1988	Jan. 1989 from Dec. 1988	Jan. 1989 from Jan. 1988	Jan. 1989 from Dec. 1988	Jan. 1989 from Jan. 1988	Jan. 1989 from Dec. 1988	Jan. 1989 from Jan. 1988
	Total	-4.1	+14.2	+5	+8.7	+2.4	+11.1	+2	+8.5
50	Durable goods	-6.4	+17.8	+4	+7.1	+2.3	+15.0	+2	+7.0
501	Motor vehicles & auto. equip.	-7.7	+17.0	-1.9	+4.1	+3.7	+15.5	+2	+4.1
502	Furniture & home furnishings	-11.3	+6.4	+6.0	+5.3	-4.4	+3.9	+3.1	+5.1
503	Lumber & other construction mat.	-1.8	+18.7	+1.8	-2.9	+3.3	+16.8	+3.4	-2.9
504	Sporting, recreational, photographic & hobby goods, toys & supplies	-12.1	+33.9	-3	+5.1	+1.9	+31.2	-1.0	+5.3
505	Metals & minerals, ex. petroleum	+4.1	+17.1	-1.9	+14.5	+2.6	+15.6	-3.3	+14.3
506	Electrical goods	-5.9	+21.7	-1.6	+7.1	+4.5	+18.9	+7	+7.1
507	Hardware, plumbing & heating equipment	+1	+12.7	+4.0	+4.2	+4.3	+9.0	+1.9	+4.0
508	Machinery, equip. & supplies	-9.0	+19.1	+4	+8.8	+7	+15.1	-1.1	+8.7
509	Miscellaneous durable goods	-8.2	+13.7	+6.1	+11.4	+1.7	+10.4	+6.2	+11.6
51	Nondurable goods	-1.9	+11.0	+8	+11.8	+2.6	+7.5	+1	+11.4
511	Paper & paper products	+9	+13.6	+6.6	+17.7	+2.2	+9.8	+4.2	+17.4
512	Drugs, drug proprietaries and druggists' sundries	+2.1	+21.2	+2.6	+11.3	+6	+16.9	-6	+10.9
513	Apparel, piece goods & notions	+33.3	+24.5	+6.3	+9.9	+3.3	+16.4	+5.2	+10.0
514	Groceries & related products	-8.9	+4.4	-1.4	+2.5	-3.1	+3.6	+9	+2.3
515	Farm-product raw materials	+12.1	+24.1	-2.7	+24.6	+19.2	+18.2	-5.6	+25.0
516	Chemicals & allied products	+14.4	+25.6	-1.5	+14.7	+1.8	+21.7	-3.4	+14.7
517	Petroleum & petroleum products	+7	+1.7	-3	+4.7	-1.0	-2	+4	+4.4
518	Beer, wine, & distilled beverages	-30.3	+6.8	+4.0	+3.7	+3.6	+2.7	+2	+3.7
519	Misc. nondurable goods	-12.5	+8.2	.0	+16.2	+1.8	+3.2	+2	+16.2

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.

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 22 percent of the sales estimates and 26 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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 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. 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	1.6	1.4-1.7	1.5	0.3-0.8	0.6	0.9-1.4	1.0	1.8	1.8	1.4
50	Durable goods	1.4-2.3	1.9	1.7-1.9	1.7	0.5-1.1	0.7	1.1-1.7	1.4	2.3	1.7	1.7
501	Motor vehicles & auto. equip.	4.4-7.4	5.0	4.2-5.5	5.0	1.2-3.1	1.8	2.6-5.8	4.3	7.4	5.7	5.8
502	Furniture & home furnishings	6.1-10.8	6.9	6.1-8.9	7.2	1.8-4.9	3.6	4.9-8.2	6.4	7.1	8.1	6.5
503	Lumber & other construction mat.	4.6-6.5	5.3	4.7-5.3	5.1	0.9-2.9	1.7	4.1-6.2	5.2	6.5	5.0	5.1
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.7-9.4	8.8	5.5-9.3	6.8	2.6-8.6	4.8	4.7-8.9	6.8	9.4	5.5	6.6
505	Metals & minerals, ex. petroleum	5.2-8.8	7.5	4.9-7.9	6.1	1.2-3.8	1.5	4.0-7.4	5.2	7.7	4.3	5.4
506	Electrical goods	2.5-3.6	2.9	2.5-3.8	2.8	1.0-1.8	1.3	2.3-3.1	2.8	2.9	3.0	3.1
507	Hardware, plumbing & heating equipment ..	8.1-10.1	8.4	7.4-9.6	8.5	1.3-2.7	2.2	2.8-6.4	4.6	8.3	7.6	4.7
508	Machinery, equip. & supplies	2.5-3.7	3.7	2.4-3.5	3.1	1.5-2.1	1.8	2.4-3.6	2.9	3.7	3.1	3.8
509	Miscellaneous durable goods	4.4-6.2	5.1	4.6-6.1	4.8	1.1-2.6	2.1	3.4-4.3	3.9	5.9	3.5	4.3
51	Nondurable goods	2.7-3.2	3.0	2.6-3.1	2.9	0.8-1.1	0.9	1.0-1.6	1.4	3.0	3.3	1.8
511	Paper & paper products	5.1-6.1	5.4	5.2-5.7	5.3	0.9-2.7	1.7	3.0-4.7	3.9	6.1	5.0	3.6
512	Drugs, drug proprietaries and druggists' sundries	4.7-6.4	5.6	4.7-6.6	5.8	0.8-1.7	1.1	2.0-4.4	3.3	4.7	4.9	2.8
513	Apparel, piece goods & notions	8.5-10.5	9.7	8.2-10.2	9.3	2.3-5.9	3.0	5.6-8.7	6.3	10.5	9.2	6.5
514	Groceries & related products	5.4-6.5	5.9	4.9-6.5	6.1	0.7-1.7	1.2	1.8-3.1	2.8	5.8	6.6	2.4
515	Farm-product raw materials	4.6-6.4	5.5	4.1-5.9	4.9	2.4-4.8	3.3	3.9-7.8	4.2	5.9	6.3	7.8
516	Chemicals & allied products	5.5-9.4	6.8	5.7-10.3	7.4	2.0-4.7	2.7	4.9-6.9	5.7	5.5	6.0	5.9
517	Petroleum & petroleum products	6.2-6.7	6.3	6.2-6.7	6.4	0.7-1.3	1.1	3.1-3.8	3.6	6.2	5.0	3.8
518	Beer, wine, & distilled beverages	2.7-3.6	3.3	2.5-3.7	3.0	0.7-2.2	1.5	1.2-3.1	2.4	3.3	3.8	3.1
519	Misc. nondurable goods	4.5-5.6	4.8	4.5-6.1	4.7	0.7-2.6	1.8	2.0-3.7	2.8	5.0	4.5	2.8
	Inventories, Total	1.3-1.8	1.4	1.3-1.6	1.4	0.2-0.9	0.4	1.1-1.7	1.3	(X)	(X)	(X)
50	Durable goods	1.5-2.4	1.6	1.4-2.2	1.5	0.3-1.3	0.4	1.2-2.2	1.4	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.3-6.9	6.7	6.3-6.9	6.7	0.8-1.2	0.7	2.4-3.9	3.0	(X)	(X)	(X)
502	Furniture & home furnishings	9.5-11.8	9.9	9.3-11.8	9.8	0.9-1.9	1.6	4.3-7.2	4.7	(X)	(X)	(X)
503	Lumber & other construction mat.	4.9-5.7	5.1	4.6-5.7	5.0	0.8-1.4	1.1	2.9-4.4	3.1	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.2-6.5	6.0	5.7-6.4	6.0	0.7-1.6	1.4	4.7-10.2	7.5	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.5-6.0	5.8	5.3-6.0	5.6	0.4-1.0	0.5	2.7-3.7	3.1	(X)	(X)	(X)
506	Electrical goods	3.1-4.0	3.4	3.3-3.9	3.5	0.5-0.8	0.7	1.6-2.5	2.2	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.7-10.4	7.7	5.8-10.2	7.5	0.7-0.9	0.8	4.0-9.2	5.9	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.5-4.9	4.0	3.5-4.2	3.8	0.5-3.4	0.7	1.9-4.6	2.4	(X)	(X)	(X)
509	Miscellaneous durable goods	8.1-9.5	8.3	8.0-9.1	8.2	0.8-1.6	1.1	4.2-6.4	4.8	(X)	(X)	(X)
51	Nondurable goods	2.7-3.1	2.9	2.6-3.2	3.0	0.4-0.8	0.5	1.5-2.3	2.0	(X)	(X)	(X)
511	Paper & paper products	4.9-6.0	5.2	4.9-5.7	5.3	0.6-1.2	1.0	2.3-3.4	2.5	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.3-7.4	6.7	6.1-7.3	6.7	0.7-1.4	0.9	1.8-5.3	3.5	(X)	(X)	(X)
513	Apparel, piece goods & notions	5.9-7.2	6.7	5.4-7.1	6.7	1.0-2.0	1.2	4.0-5.3	5.0	(X)	(X)	(X)
514	Groceries & related products	4.4-6.0	5.3	4.6-6.0	5.3	0.4-1.3	0.8	2.8-3.6	3.3	(X)	(X)	(X)
515	Farm-product raw materials	7.0-7.6	7.3	6.9-7.4	7.3	0.9-2.3	1.5	3.8-5.2	4.5	(X)	(X)	(X)
516	Chemicals & allied products	7.0-8.1	7.6	7.1-7.6	7.4	1.1-3.5	1.5	3.4-8.0	5.6	(X)	(X)	(X)
517	Petroleum & petroleum products	5.0-8.8	5.4	4.9-8.5	6.0	0.9-5.5	1.5	3.2-7.9	3.5	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.3-4.9	4.8	3.9-4.9	4.5	0.8-1.1	0.9	1.5-2.8	2.1	(X)	(X)	(X)
519	Misc. nondurable goods	6.8-9.1	8.2	7.6-8.8	8.4	1.1-2.1	1.5	3.2-7.6	4.0	(X)	(X)	(X)

× Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for August 1988 through January 1989.

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	1988												1989	
		Jan. ^r	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. ^r	Jan. ^r	Feb. ^r
	Sales,¹ Total .....	.914	.948	1.067	.989	1.021	1.039	.950	1.031	1.014	1.029	1.011	.999	.941	.910
50	Durable goods .....	.874	.926	1.064	1.008	1.017	1.055	.958	1.037	1.036	1.052	1.010	.978	.897	.890
501	Motor vehicles & auto. equip. ....	.888	.920	1.055	1.022	1.048	1.080	.976	1.008	.939	1.061	1.017	1.011	.900	.883
502	Furniture & home furnishings ....	.866	.950	1.028	.973	.983	1.041	.946	1.072	1.054	1.118	1.035	.956	.887	.905
503	Lumber & other construction mat. ....	.801	.813	.979	1.022	1.042	1.120	1.074	1.148	1.101	1.089	.982	.857	.814	.776
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.870	.950	1.023	.958	.871	.965	.908	1.049	1.107	1.146	1.140	1.030	.888	.902
505	Metals & minerals, ex. petroleum	.946	.976	1.158	.995	.981	1.058	.938	1.023	1.087	.971	.933	.945	.959	.949
506	Electrical goods .....	.880	.950	1.045	.941	.958	1.020	.960	1.053	1.060	1.095	1.053	1.000	.901	.912
507	Hardware, plumbing & heating equipment .....	.881	.929	1.011	.990	1.030	1.095	.988	1.058	1.023	1.059	.998	.949	.911	.888
508	Machinery, equip. & supplies ....	.881	.940	1.100	1.023	1.034	1.045	.933	1.037	1.034	.995	.981	1.009	.912	.908
509	Miscellaneous durable goods ....	.847	.904	1.055	1.054	1.062	1.064	.887	.978	1.070	1.082	1.020	.967	.872	.864
51	Nondurable goods .....	.951	.972	1.072	.974	1.026	1.013	.942	1.028	.999	1.004	1.015	1.016	.981	.930
511	Paper & paper products .....	.951	.975	1.083	.971	.965	1.033	.932	1.060	1.023	1.009	1.008	.997	.984	.943
512	Drugs, drug proprietaries and druggists' sundries .....	.977	.975	1.059	.977	.994	1.019	.935	1.027	1.033	1.006	1.001	.998	1.013	.939
513	Apparel, piece goods & notions	.861	1.077	1.093	.871	.913	1.033	1.021	1.251	1.057	1.096	1.011	.714	.921	1.037
514	Groceries & related products ....	.958	.950	1.021	.980	1.027	1.029	.994	1.037	.989	.988	1.020	1.027	.966	.915
515	Farm-product raw materials	1.029	1.010	1.119	.943	1.042	.961	.845	.908	.925	1.036	1.035	1.148	1.080	.965
516	Chemicals & allied products ....	.961	.955	1.069	1.012	1.048	1.099	.938	1.041	1.030	1.009	.959	.883	.992	.914
517	Petroleum & petroleum products	1.074	1.017	1.100	.957	.960	.951	.912	.977	1.008	.969	1.020	1.077	1.095	.975
518	Beer, wine, & distilled beverages	.747	.824	1.016	.936	1.062	1.129	.993	1.112	1.012	.982	1.049	1.155	.777	.794
519	Misc. nondurable goods .....	.817	.922	1.113	1.081	1.169	1.050	.940	1.011	.984	.966	.950	.997	.857	.875
	Inventories,¹ Total	1.004	1.007	1.009	1.006	.989	.995	.993	.986	.995	1.009	1.004	1.001	1.005	1.007
50	Durable goods .....	.987	.994	1.003	1.006	1.002	1.007	1.006	1.002	1.009	1.004	.995	.985	.987	.994
501	Motor vehicles & auto. equip. ....	.995	1.010	1.013	1.002	.991	1.005	.973	.960	1.022	.998	1.014	1.016	.995	1.010
502	Furniture & home furnishings	1.016	.999	.995	.988	1.009	.999	1.009	1.019	1.014	.992	.968	.990	1.018	.998
503	Lumber & other construction mat. ....	.958	.984	1.018	1.035	1.006	1.043	1.037	.994	.994	.984	.971	.973	.958	.984
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.976	.980	.996	.991	.980	1.006	1.040	1.022	1.036	1.026	.982	.967	.974	.979
505	Metals & minerals, ex. petroleum	1.018	1.001	1.003	1.004	1.015	1.037	1.018	.979	.977	.980	.962	1.005	1.020	1.002
506	Electrical goods .....	.971	.980	.990	.994	.997	.999	1.018	1.015	1.025	1.016	1.002	.994	.971	.980
507	Hardware, plumbing & heating equipment .....	.987	.999	1.025	1.033	1.014	1.002	1.007	1.007	.991	.992	.974	.969	.989	.999
508	Machinery, equip. & supplies ....	.990	.997	1.005	1.013	1.005	1.006	1.002	1.001	.991	1.007	1.006	.976	.991	.997
509	Miscellaneous durable goods ....	.960	.966	.973	1.008	1.010	1.002	1.035	1.041	1.030	1.015	1.000	.960	.959	.963
51	Nondurable goods	1.038	1.032	1.019	.999	.964	.990	.965	.956	.974	1.017	1.025	1.032	1.037	1.032
511	Paper & paper products	1.021	1.010	1.018	1.010	.994	.998	.999	.996	.970	.996	.986	1.001	1.024	1.010
512	Drugs, drug proprietaries and druggists' sundries	1.045	1.034	1.027	1.028	.968	.960	.963	.960	.992	1.024	.984	1.015	1.048	1.034
513	Apparel, piece goods & notions	.998	.980	.951	.952	1.019	1.050	1.057	1.060	1.035	.966	.946	.987	.997	.979
514	Groceries & related products ....	.999	1.008	.984	.987	.983	.986	.981	.961	.995	1.044	1.048	1.024	1.001	1.007
515	Farm-product raw materials	1.195	1.162	1.068	.983	.825	.850	.831	.815	.885	1.098	1.130	1.156	1.191	1.163
516	Chemicals & allied products ....	.992	1.016	1.001	1.036	1.037	1.026	1.002	1.009	.949	.972	.985	.972	.992	1.017
517	Petroleum & petroleum products	1.092	.965	.982	.937	.957	.971	.981	.953	1.025	1.011	1.022	1.103	1.095	.967
518	Beer, wine, & distilled beverages	.945	.981	1.016	1.029	1.002	1.026	.997	.983	1.004	1.059	1.045	.911	.945	.983
519	Misc. nondurable goods	1.033	1.064	1.106	1.061	.970	.977	.922	.924	.948	.966	.996	1.035	1.033	1.063

^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 1989



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW89-02
Issued April 1989

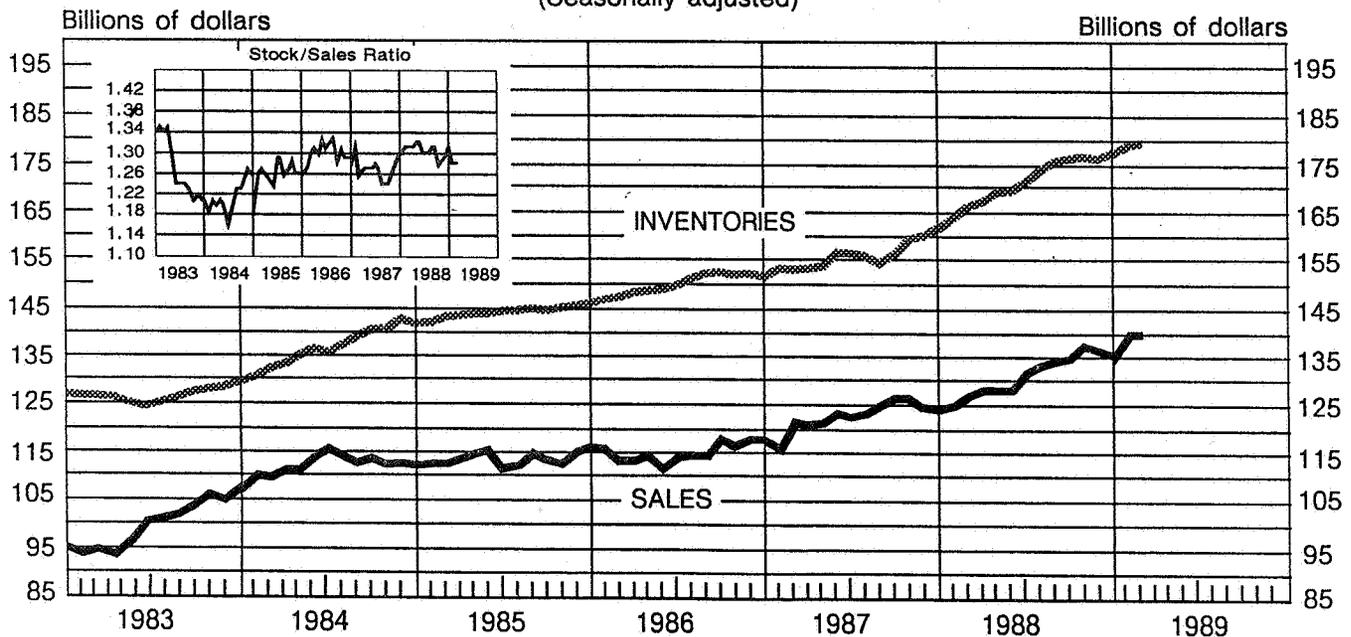
Sales. February 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$140.4 billion, unchanged from the revised January level and up 10.3 percent (± 2.3 percent) from a year ago. The January preliminary estimate was revised upward by \$0.9 billion or about 0.6 percent. February sales of durable goods were also unchanged from January, and were 13.0 percent (± 2.3 percent) above a year ago. Sales of machinery, equipment and supplies increased 3.8 percent to \$19.6 billion from the January level. However, metals and minerals, except petroleum sales decreased 6.5 percent to \$5.7 billion for the same period. February sales of nondurable goods increased 0.1 percent (± 0.8 percent) from January and were 7.8 percent (± 3.6 percent) above February 1988. Sales of petroleum and petroleum products increased 3.9 percent to \$10.7 billion from the January level, but beer, wine, and distilled beverages' sales decreased 3.4 percent to \$3.5 billion for the same period.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$180.3 billion at the end of February, up 0.3 percent (± 0.3 percent) from the revised January level and up 8.0 percent (± 2.0 percent) from a year ago. The January preliminary estimate was revised upward by \$1.1 billion or about 0.6 percent. Inventories of durable goods wholesalers increased 1.0 percent (± 0.4 percent) from the January level and were 8.1 percent (± 2.3 percent) above a year ago. Inventories of nondurable goods wholesalers were down 1.1 percent (± 0.6 percent) from the January level but were up 7.9 percent (± 2.9 percent) from February 1988.

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

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

Monthly 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, 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: 1989 and 1988

(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	1989		1988											
		Jan.	Feb. ^P	Feb. ^F	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
	Sales, Total	140,356	140,423	127,274	128,655	128,701	128,790	132,317	133,833	134,726	135,332	138,087	137,239	136,170	
50	Durable goods	70,302	70,323	62,220	63,184	64,069	64,101	64,715	65,559	65,501	66,295	67,581	68,543	68,427	
501	Motor vehicles & auto. equip.	14,532	14,755	13,380	13,163	14,188	13,680	13,534	13,663	13,349	13,548	14,037	14,288	14,031	
502	Furniture & home furnishings	2,431	2,449	2,347	2,291	2,249	2,215	2,241	2,245	2,298	2,310	2,403	2,516	2,503	
503	Lumber & other construction mat.	4,916	4,781	4,639	4,781	4,795	4,645	4,645	4,836	4,592	4,579	4,693	4,564	4,733	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,188	1,903	1,869	1,881	1,921	1,991	2,018	2,095	2,106	2,147	2,238	2,267	
505	Metals & minerals, ex. petroleum	6,135	5,737	5,306	5,630	5,705	5,494	5,705	5,760	5,826	6,018	5,970	6,221	6,006	
506	Electrical goods	9,529	9,274	8,156	8,459	8,628	8,648	8,706	8,706	8,738	8,679	8,679	8,974	9,068	
507	Hardware, plumbing & heating equipment	4,160	4,112	3,497	3,852	3,817	3,828	4,008	4,249	4,040	3,878	4,025	3,930	3,974	
508	Machinery, equip. & supplies	18,919	19,631	18,093	16,415	16,473	16,810	17,120	17,448	17,912	18,515	18,627	18,596	18,525	
509	Miscellaneous durable goods	7,352	7,396	6,899	6,744	6,333	6,860	6,765	7,033	6,651	6,662	6,705	6,904	7,220	
	Nondurable goods	70,054	70,100	65,054	65,471	64,632	64,689	67,602	68,274	69,225	69,037	70,506	68,696	67,743	
511	Paper & paper products	4,555	4,552	4,077	4,189	4,092	4,162	4,291	4,415	4,378	4,520	4,520	4,452	4,395	
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,179	2,898	2,902	2,881	2,950	3,035	3,095	3,180	3,179	3,165	3,118	3,255	
513	Apparel, piece goods & notions	4,676	4,435	3,974	3,898	3,915	4,076	4,280	4,288	4,205	4,428	4,259	4,508	4,538	
514	Groceries & related products	19,512	19,663	18,328	17,978	17,462	18,227	18,384	18,447	18,765	18,663	19,409	19,515	19,762	
515	Farm-product raw materials	11,348	11,310	9,492	9,651	10,028	9,916	10,769	11,087	11,412	11,616	12,654	10,778	9,517	
516	Chemicals & allied products	2,929	3,047	2,657	2,785	2,962	3,007	3,073	3,102	2,937	2,926	2,860	2,865	2,920	
517	Petroleum & petroleum products	10,287	10,687	10,630	11,132	10,456	10,742	11,045	11,213	11,218	10,395	10,267	9,998	10,990	
518	Beer, wine, & distilled beverages	3,656	3,531	3,704	3,670	3,585	3,527	3,651	3,565	3,612	3,697	3,673	3,730	3,637	
519	Misc. nondurable goods	9,825	9,696	9,294	9,266	9,251	8,082	9,074	9,112	9,448	9,611	9,699	9,612	9,629	
	Inventories, Total	179,761	180,265	168,857	168,071	169,965	170,346	172,179	174,581	176,368	176,972	177,408	177,060	178,313	
50	Durable goods	117,255	118,419	109,555	110,734	111,896	111,162	110,574	112,702	113,727	114,875	115,225	114,975	115,743	
501	Motor vehicles & auto. equip.	21,499	21,388	21,322	21,363	20,962	20,972	20,208	20,885	21,047	21,526	21,378	21,353	21,507	
502	Furniture & home furnishings	4,033	4,100	3,999	4,067	4,276	4,136	4,229	4,205	4,188	4,201	4,208	4,107	4,023	
503	Lumber & other construction mat.	5,777	5,623	5,671	5,665	5,708	5,568	5,441	5,543	5,441	5,501	5,587	5,377	5,497	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,633	4,127	4,233	4,272	4,301	4,303	4,263	4,175	4,332	4,306	4,322	4,467	
505	Metals & minerals, ex. petroleum	8,857	9,059	7,750	8,096	8,527	8,431	8,648	8,870	8,867	8,969	9,128	9,169	8,992	
506	Electrical goods	15,063	15,307	13,961	14,054	14,142	14,137	14,160	14,106	14,336	14,136	14,488	14,480	14,798	
507	Hardware, plumbing & heating equipment	7,588	7,589	6,990	7,010	7,050	7,052	7,096	7,304	7,379	7,414	7,456	7,275	7,264	
508	Machinery, equip. & supplies	41,620	42,108	38,166	38,356	39,128	39,129	38,941	39,851	40,369	41,175	41,111	41,245	41,338	
509	Miscellaneous durable goods	8,377	8,362	7,569	7,690	7,831	7,436	7,550	7,675	7,925	7,621	7,563	7,647	7,867	
51	Nondurable goods	62,506	61,846	57,302	57,337	58,069	59,184	61,605	61,879	62,641	62,097	62,183	62,085	62,570	
511	Paper & paper products	4,588	4,758	3,798	3,936	3,954	3,912	4,032	4,194	4,108	4,246	4,297	4,231	4,310	
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,203	4,646	4,627	4,889	4,843	4,940	5,069	5,129	4,997	4,870	4,917	5,221	
513	Apparel, piece goods & notions	8,170	8,229	7,498	7,523	7,472	7,761	7,905	7,490	7,456	7,408	7,639	7,870	7,846	
514	Groceries & related products	12,822	12,633	12,189	12,127	12,246	12,148	12,049	12,401	12,373	12,664	12,753	12,584	12,564	
515	Farm-product raw materials	9,097	8,517	8,127	8,829	8,034	8,817	10,492	10,434	10,679	10,348	10,270	9,558	9,562	
516	Chemicals & allied products	2,798	2,684	2,536	2,581	2,581	2,764	2,700	2,657	2,764	2,760	2,713	2,734	2,964	
517	Petroleum & petroleum products	3,972	4,134	4,046	4,111	4,097	4,106	4,072	4,084	4,196	4,134	3,940	3,861	3,858	
518	Beer, wine, & distilled beverages	4,099	4,019	4,094	4,019	4,034	3,946	3,932	4,025	4,090	4,071	4,143	4,128	4,176	
519	Misc. nondurable goods	11,783	11,669	10,368	10,584	10,762	10,887	11,483	11,525	11,846	11,469	11,558	12,202	12,069	
	Stock/sales ratios, Total	1.28	1.28	1.31	1.31	1.32	1.32	1.30	1.30	1.31	1.31	1.28	1.29	1.31	
50	Durable goods	1.67	1.69	1.76	1.75	1.75	1.73	1.71	1.72	1.74	1.73	1.70	1.68	1.69	
501	Motor vehicles & auto. equip.	1.48	1.45	1.59	1.62	1.48	1.53	1.49	1.53	1.58	1.59	1.52	1.49	1.53	
502	Furniture & home furnishings	1.66	1.67	1.70	1.78	1.90	1.87	1.89	1.87	1.82	1.82	1.75	1.63	1.61	
503	Lumber & other construction mat.	1.18	1.22	1.22	1.19	1.19	1.20	1.17	1.20	1.18	1.20	1.19	1.18	1.16	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.12	2.17	2.26	2.27	2.24	2.16	2.11	1.99	2.06	2.01	1.93	1.89	
505	Metals & minerals, ex. petroleum	1.44	1.59	1.46	1.44	1.49	1.53	1.52	1.54	1.52	1.49	1.53	1.47	1.50	
506	Electrical goods	1.58	1.65	1.71	1.66	1.64	1.63	1.63	1.66	1.64	1.63	1.61	1.56	1.63	
507	Hardware, plumbing & heating equipment	1.82	1.85	2.00	1.82	1.85	1.84	1.77	1.72	1.83	1.91	1.85	1.85	1.83	
508	Machinery, equip. & supplies	2.20	2.14	2.37	2.34	2.38	2.33	2.27	2.28	2.25	2.22	2.21	2.22	2.23	
509	Miscellaneous durable goods	1.14	1.13	1.10	1.17	1.24	1.08	1.12	1.09	1.19	1.14	1.13	1.11	1.09	
51	Nondurable goods .....	.89	.88	.88	.88	.90	.91	.91	.91	.90	.90	.88	.90	.92
511	Paper & paper products	1.01	1.05	.93	.94	.97	.94	.94	.95	.94	.94	.95	.95	.98	
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.64	1.60	1.59	1.70	1.64	1.63	1.64	1.61	1.57	1.54	1.58	1.60	
513	Apparel, piece goods & notions	1.75	1.88	1.89	1.93	1.91	1.90	1.85	1.75	1.77	1.67	1.79	1.75	1.73	
514	Groceries & related products .....	.68	.64	.67	.67	.70	.67	.66	.67	.66	.68	.66	.64	.64
515	Farm-product raw materials .....	.80	.75	.86	.81	.80	.89	.87	.94	.89	.81	.89	.81	1.00
516	Chemicals & allied products .....	.95	.88	.95	.93	.87	.92	.86	.86	.93	.94	.95	.92	1.02
517	Petroleum & petroleum products .....	.39	.39	.38	.37	.39	.36	.37	.36	.37	.40	.38	.39	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.10	1.13	1.12	1.08	1.13	1.13	1.10	1.13	1.11	1.15	
519	Misc. nondurable goods	1.20	1.20	1.12	1.14	1.16	1.35	1.27	1.26	1.25	1.19	1.19	1.27	1.25	

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989		1988												Total 2 mos.	
		Jan.	Feb. ^P	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1989	1988	
	Sales, Total	131,786	128,344	120,930	137,528	127,618	131,689	137,210	128,841	138,551	136,994	141,335	138,289	136,599	260,130	235,676	
50	Durable goods	63,265	62,923	57,758	67,239	64,491	65,312	68,466	62,555	67,904	68,511	70,825	68,957	67,261	126,188	111,223	
501	Motor vehicles & auto. equip.	13,064	13,176	12,390	13,887	14,500	14,337	14,617	13,335	13,456	12,722	14,893	14,531	14,185	26,240	23,583	
502	Furniture & home furnishings	2,171	2,224	2,232	2,355	2,188	2,177	2,333	2,124	2,463	2,435	2,686	2,604	2,393	4,395	4,227	
503	Lumber & other construction mat.	3,982	3,696	3,753	4,661	4,900	4,840	5,202	4,979	5,272	5,041	5,111	4,482	4,056	7,678	7,108	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,070	1,934	1,777	1,912	1,802	1,673	1,921	1,832	2,198	2,331	2,460	2,551	2,438	4,004	3,377	
505	Metals & minerals, ex. petroleum	5,939	5,364	5,120	6,519	5,676	5,390	6,036	5,403	5,960	6,542	5,797	5,804	5,676	11,303	10,164	
506	Electrical goods	8,633	8,402	7,707	8,840	8,119	8,285	8,880	8,167	9,201	9,200	9,828	9,778	9,088	17,035	14,719	
507	Hardware, plumbing & heating equipment	3,786	3,627	3,245	3,894	3,779	3,943	4,389	4,198	4,274	3,967	4,263	3,922	3,771	7,413	6,595	
508	Machinery, equip. & supplies	17,216	18,021	15,256	18,056	16,852	17,382	17,890	16,279	18,575	19,145	18,534	18,243	18,692	35,237	29,537	
509	Miscellaneous durable goods	6,404	6,479	6,278	7,115	6,675	7,285	7,198	6,238	6,505	7,128	7,255	7,042	6,982	12,883	11,913	
51	Nondurable goods	68,521	65,421	63,172	70,289	63,127	66,377	68,744	64,286	70,647	68,483	70,510	69,332	69,338	133,942	124,453	
511	Paper & paper products	4,464	4,311	3,991	4,537	3,973	4,016	4,433	4,115	4,641	4,624	4,561	4,488	4,382	8,775	7,883	
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,985	2,823	3,073	2,815	2,932	3,093	2,894	3,266	3,284	3,184	3,121	3,248	6,303	5,559	
513	Apparel, piece goods & notions	4,349	4,479	4,189	4,260	3,410	3,721	4,421	4,358	5,261	4,680	4,668	4,558	3,240	8,828	7,657	
514	Groceries & related products	18,985	17,992	17,430	18,356	17,113	18,719	18,917	18,336	19,480	18,458	19,176	19,905	20,296	36,977	35,141	
515	Farm-product raw materials	12,168	10,680	9,558	10,799	9,456	10,332	10,349	9,352	10,362	10,745	13,110	11,155	10,926	23,068	19,430	
516	Chemicals & allied products	2,835	2,806	2,564	2,977	2,998	3,151	3,377	2,910	3,109	3,016	2,886	2,863	2,578	5,641	4,911	
517	Petroleum & petroleum products	11,007	10,634	10,949	12,245	10,034	10,312	10,504	10,226	10,980	10,478	9,949	10,198	10,867	21,641	21,703	
518	Beer, wine, & distilled beverages	2,837	2,811	3,052	3,729	3,328	3,746	4,122	3,530	4,016	3,741	3,607	3,913	4,201	5,648	5,792	
519	Misc. nondurable goods	8,538	8,523	8,616	10,313	10,000	9,448	9,528	8,565	9,552	9,457	9,369	9,131	9,600	17,061	16,377	
	Inventories, Total	181,054	181,880	168,311	169,731	171,003	168,419	171,341	172,497	172,736	175,787	178,969	178,197	178,884	(X)	(X)	
50	Durable goods	115,885	118,037	109,197	111,114	112,803	111,410	111,500	113,366	113,470	115,469	115,561	114,648	114,176	(X)	(X)	
501	Motor vehicles & auto. equip.	21,392	21,666	21,578	21,641	21,004	20,783	20,307	20,321	20,205	21,335	21,652	21,851	21,851	(X)	(X)	
502	Furniture & home furnishings	4,069	4,088	3,995	4,047	4,225	4,173	4,225	4,243	4,268	4,260	4,174	3,976	3,983	(X)	(X)	
503	Lumber & other construction mat.	5,540	5,724	5,580	5,767	5,908	5,601	5,675	5,748	5,408	5,468	5,498	5,221	5,349	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,312	4,554	4,057	4,216	4,234	4,215	4,329	4,434	4,267	4,488	4,418	4,244	4,320	(X)	(X)	
505	Metals & minerals, ex. petroleum	8,999	9,135	7,781	8,120	8,561	8,557	8,968	9,030	8,681	8,763	8,945	8,821	9,027	(X)	(X)	
506	Electrical goods	14,641	15,062	13,724	13,913	14,057	14,095	14,146	14,360	14,551	14,489	14,720	14,509	14,709	(X)	(X)	
507	Hardware, plumbing & heating equipment	7,512	7,614	7,004	7,185	7,283	7,151	7,110	7,355	7,431	7,347	7,396	7,086	7,039	(X)	(X)	
508	Machinery, equip. & supplies	41,412	42,192	38,204	38,548	39,637	39,325	39,175	39,931	40,409	40,804	41,399	41,492	40,346	(X)	(X)	
509	Miscellaneous durable goods	8,008	8,002	7,274	7,677	7,894	7,510	7,565	7,944	8,250	7,850	7,676	7,647	7,552	(X)	(X)	
51	Nondurable goods	65,169	63,843	59,114	58,617	58,200	57,009	59,841	59,131	59,266	60,318	63,408	63,549	64,708	(X)	(X)	
511	Paper & paper products	4,728	4,820	3,847	4,007	3,994	3,889	4,024	4,190	4,092	4,119	4,280	4,172	4,314	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,370	4,795	4,752	5,026	4,688	4,742	4,881	4,924	4,957	4,987	4,838	5,299	(X)	(X)	
513	Apparel, piece goods & notions	8,129	8,073	7,363	7,154	7,113	7,908	8,300	7,917	7,903	7,667	7,379	7,445	7,744	(X)	(X)	
514	Groceries & related products	12,886	12,709	12,274	11,933	12,087	11,941	11,880	12,165	11,890	12,601	13,314	13,188	12,866	(X)	(X)	
515	Farm-product raw materials	10,898	9,726	9,281	8,361	7,897	7,274	7,918	8,718	8,703	9,158	11,276	10,800	11,054	(X)	(X)	
516	Chemicals & allied products	2,782	2,727	2,569	2,584	2,674	2,868	2,770	2,662	2,789	2,619	2,637	2,693	2,881	(X)	(X)	
517	Petroleum & petroleum products	4,321	4,113	3,993	4,037	3,839	3,929	3,954	4,006	3,999	4,237	3,983	3,946	4,255	(X)	(X)	
518	Beer, wine, & distilled beverages	3,869	3,947	4,012	4,083	4,151	3,954	4,034	4,013	4,020	4,087	4,387	4,314	3,804	(X)	(X)	
519	Misc. nondurable goods	12,137	12,358	10,980	11,706	11,419	10,560	11,219	10,626	10,946	10,873	11,165	12,153	12,491	(X)	(X)	
	Stock/sales ratios, Total	1.37	1.42	1.39	1.23	1.34	1.28	1.25	1.36	1.25	1.28	1.27	1.29	1.31	(X)	(X)	
50	Durable goods	1.83	1.88	1.89	1.65	1.75	1.71	1.63	1.81	1.67	1.69	1.63	1.66	1.70	(X)	(X)	
501	Motor vehicles & auto. equip.	1.64	1.64	1.74	1.56	1.45	1.45	1.39	1.52	1.50	1.73	1.43	1.49	1.54	(X)	(X)	
502	Furniture & home furnishings	1.87	1.84	1.79	1.72	1.93	1.92	1.81	2.00	1.73	1.75	1.55	1.63	1.66	(X)	(X)	
503	Lumber & other construction mat.	1.39	1.55	1.49	1.24	1.21	1.16	1.09	1.15	1.03	1.08	1.08	1.16	1.32	(X)	(X)	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.08	2.35	2.28	2.21	2.35	2.52	2.25	2.42	1.94	1.93	1.80	1.66	1.77	(X)	(X)	
505	Metals & minerals, ex. petroleum	1.52	1.70	1.52	1.25	1.51	1.59	1.49	1.67	1.46	1.34	1.54	1.52	1.59	(X)	(X)	
506	Electrical goods	1.70	1.79	1.78	1.57	1.73	1.70	1.59	1.76	1.58	1.57	1.50	1.48	1.62	(X)	(X)	
507	Hardware, plumbing & heating equipment	1.98	2.10	2.16	1.85	1.93	1.81	1.62	1.75	1.74	1.85	1.73	1.81	1.87	(X)	(X)	
508	Machinery, equip. & supplies	2.41	2.34	2.50	2.13	2.35	2.26	2.19	2.45	2.18	2.13	2.23	2.27	2.16	(X)	(X)	
509	Miscellaneous durable goods	1.25	1.24	1.16	1.08	1.18	1.03	1.05	1.27	1.10	1.06	1.06	1.09	1.08	(X)	(X)	
51	Nondurable goods . . . . .	.95	.98	.94	.83	.92	.86	.87	.92	.84	.88	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.12	.96	.88	1.01	.97	.91	1.02	.88	.89	.94	.93	.98	(X)	(X)	
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.70	1.55	1.79	1.60	1.53	1.69	1.51	1.51	1.57	1.55	1.63	(X)	(X)	
513	Apparel, piece goods & notions	1.87	1.80	1.76	1.68	2.09	2.13	1.88	1.82	1.50	1.64	1.58	1.63	2.39	(X)	(X)	
514	Groceries & related products . . . . .	.68	.71	.70	.65	.71	.64	.63	.66	.61	.68	.69	.66	.63	(X)	(X)
515	Farm-product raw materials . . . . .	.89	.89	.97	.77	.84	.70	.86	.93	.84	.85	.86	.86	.97	(X)	(X)
516	Chemicals & allied products . . . . .	.98	.97	1.00	.87	.89	.91	.82	.91	.90	.87	.91	.94	1.12	(X)	(X)
517	Petroleum & petroleum products . . . . .	.39	.39	.36	.33	.38	.38	.38	.39	.36	.40	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.40	1.31	1.09	1.25	1.06	.98	1.14	1.00	1.09	1.22	1.10	.91	(X)	(X)	
519	Misc. nondurable goods	1.42	1.45	1.27	1.14	1.14	1.12	1.18	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)	
		Feb. 1989 from Jan. 1989	Feb. 1989 from Feb. 1988	2 months 1989 from 2 months 1988	Feb. 1989 from Jan. 1989	Feb. 1989 from Feb. 1988	Feb. 1989 from Jan. 1989	Feb. 1989 from Feb. 1988	Feb. 1989 from Jan. 1989	Feb. 1989 from Feb. 1988
	Total	-2.6	+6.1	+10.4	+5	+8.1	.0	+10.3	+3	+8.0
50	Durable goods	-5	+8.9	+13.5	+1.9	+8.1	.0	+13.0	+1.0	+8.1
501	Motor vehicles & auto. equip.	+9	+6.3	+11.3	+1.3	+4	+1.5	+10.3	-5	+3
502	Furniture & home furnishings	+2.4	-.4	+4.0	+5	+2.3	+7	+4.3	+1.7	+2.5
503	Lumber & other construction mat.	-7.2	-1.5	+8.0	+3.3	+2.6	-2.7	+3.1	+8	+2.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies	-6.6	+8.8	+18.6	+5.6	+12.3	-6.0	+15.0	+4.3	+12.3
505	Metals & minerals, ex. petroleum	-9.7	+4.8	+11.2	+1.5	+17.4	-6.5	+8.1	+2.7	+17.4
506	Electrical goods	-2.7	+9.0	+15.7	+2.9	+9.7	-2.7	+13.7	+1.6	+9.6
507	Hardware, plumbing & heating equipment	-4.2	+11.8	+12.4	+1.4	+8.7	-1.2	+17.6	+1	+8.7
508	Machinery, equip. & supplies	+4.7	+18.1	+19.3	+1.9	+10.4	+3.8	+22.0	+1.2	+10.3
509	Miscellaneous durable goods	+1.2	+3.2	+8.1	-.1	+10.0	+6	+7.2	-.2	+10.5
51	Nondurable goods	-4.5	+3.6	+7.6	-2.0	+8.0	+1	+7.8	-1.1	+7.9
511	Paper & paper products	-3.4	+8.0	+11.3	+1.9	+25.3	-.1	+11.7	+3.8	+25.3
512	Drugs, drug proprietaries and druggists' sundries	-10.0	+5.7	+13.4	-.9	+12.0	-2.7	+9.7	+4	+12.0
513	Apparel, piece goods & notions	+3.0	+6.9	+15.3	-.7	+9.6	-5.2	+11.6	+7	+9.7
514	Groceries & related products	-5.2	+3.2	+5.2	-1.4	+3.5	+8	+7.3	-1.5	+3.6
515	Farm-product raw materials	-10.7	+13.8	+18.7	-10.8	+4.8	-.3	+19.2	-6.4	+4.8
516	Chemicals & allied products	-1.0	+9.4	+14.9	-2.0	+6.2	+4.0	+14.7	-4.0	+5.8
517	Petroleum & petroleum products	-3.4	-2.9	-.3	-4.8	+3.0	+3.9	+5	+4.1	+2.2
518	Beer, wine, & distilled beverages	-.9	-7.9	-2.5	+2.0	-1.6	-3.4	-4.7	-2.0	-1.8
519	Misc. nondurable goods	-.2	-1.1	+4.2	+1.8	+12.6	-1.3	+4.3	-1.0	+12.5

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

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

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 22 percent of the sales estimates and 26 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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 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. 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	1.7	1.4-1.8	1.6	0.3-0.8	0.6	0.9-1.4	1.0	1.7	1.6	1.3
50	Durable goods	1.8-2.3	1.9	1.7-2.1	1.8	0.5-1.1	0.6	1.1-1.7	1.3	2.1	1.7	1.3
501	Motor vehicles & auto. equip.	4.4-7.4	5.0	4.2-6.9	5.1	1.2-3.1	1.6	2.6-5.8	3.7	6.7	5.6	4.0
502	Furniture & home furnishings	6.1-10.8	6.9	6.1-8.9	7.2	1.8-4.9	3.5	4.9-8.2	6.4	7.5	7.3	5.2
503	Lumber & other construction mat.	5.2-6.5	5.4	4.7-5.9	5.1	0.9-2.9	1.5	3.4-6.2	4.8	6.1	4.3	3.0
504	Sporting, recreational, photographic & hobby goods, toys & supplies	7.8-9.4	8.8	6.3-9.3	7.4	2.6-8.6	4.1	4.7-9.3	6.8	8.1	6.5	7.3
505	Metals & minerals, ex. petroleum	5.9-8.8	7.5	5.2-7.9	6.8	1.4-3.8	1.6	3.8-7.4	5.2	6.7	4.3	4.1
506	Electrical goods	2.5-3.6	2.9	2.4-3.8	2.7	1.0-1.8	1.3	2.3-3.1	2.7	2.7	3.0	2.5
507	Hardware, plumbing & heating equipment ..	7.9-10.1	8.2	7.4-9.6	8.2	1.3-2.7	2.2	2.8-6.4	4.6	8.0	7.6	3.1
508	Machinery, equip. & supplies	2.8-3.7	3.7	2.4-3.6	3.2	1.5-2.1	1.8	2.4-3.6	2.9	2.9	2.7	2.6
509	Miscellaneous durable goods	4.6-6.2	5.5	4.6-6.2	5.0	1.1-2.2	2.0	3.3-4.3	3.9	5.5	3.6	3.1
51	Nondurable goods	2.7-3.2	2.9	2.6-3.1	2.9	0.6-1.1	0.9	1.0-2.0	1.4	2.8	3.2	1.8
511	Paper & paper products	5.1-6.1	5.4	5.2-5.7	5.3	0.7-2.7	1.7	3.0-4.5	3.7	5.2	5.1	2.9
512	Drugs, drug proprietaries and druggists' sundries	4.0-6.4	5.3	4.4-6.6	5.6	0.8-2.0	1.3	2.0-3.8	3.0	4.1	4.9	2.3
513	Apparel, piece goods & notions	8.5-10.5	9.7	8.2-10.7	9.3	2.3-5.9	3.5	4.3-8.7	6.2	9.8	8.5	4.4
514	Groceries & related products	5.4-6.3	5.8	4.9-6.3	5.8	0.9-1.7	1.3	1.8-3.1	2.8	5.6	6.8	2.6
515	Farm-product raw materials	4.6-6.9	5.5	4.1-5.9	5.2	2.4-4.6	3.5	3.9-9.0	4.7	6.0	6.0	7.9
516	Chemicals & allied products	5.5-8.3	6.8	5.1-8.3	6.8	2.0-3.9	2.7	4.9-6.7	5.7	6.0	5.8	5.1
517	Petroleum & petroleum products	6.2-6.9	6.5	6.1-6.7	6.3	0.7-1.4	1.1	3.1-3.8	3.6	6.5	4.8	3.1
518	Beer, wine, & distilled beverages	2.7-4.5	3.3	2.5-4.0	3.0	1.0-2.2	1.5	1.2-3.9	2.4	4.3	3.5	3.3
519	Misc. nondurable goods	4.5-6.1	4.8	4.5-5.3	4.7	0.7-2.2	1.5	2.0-4.3	2.8	5.5	4.1	3.3
	Inventories, Total	1.3-1.5	1.4	1.3-1.6	1.4	0.2-0.6	0.3	1.1-1.3	1.2	(X)	(X)	(X)
50	Durable goods	1.5-2.0	1.6	1.4-2.2	1.5	0.3-0.7	0.3	1.2-1.6	1.3	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.3-6.8	6.6	6.3-6.9	6.7	0.6-1.2	0.7	2.4-3.9	2.8	(X)	(X)	(X)
502	Furniture & home furnishings	9.3-10.5	9.8	9.3-10.8	9.7	0.9-1.9	1.6	4.3-7.2	4.7	(X)	(X)	(X)
503	Lumber & other construction mat.	4.9-5.7	5.2	4.6-5.7	5.0	0.8-1.3	1.1	2.9-4.4	3.1	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.2-6.5	5.9	5.7-6.4	5.9	0.7-1.6	1.4	4.7-7.7	7.3	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.5-5.8	5.6	5.3-5.8	5.5	0.4-0.8	0.5	2.7-3.7	3.0	(X)	(X)	(X)
506	Electrical goods	2.7-4.0	3.4	2.8-3.9	3.5	0.5-0.8	0.6	1.6-2.5	1.9	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.7-10.4	7.0	5.8-10.2	7.1	0.5-0.9	0.8	3.5-9.2	4.9	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.2-4.4	3.8	3.5-4.2	3.7	0.5-1.0	0.6	1.9-3.1	2.3	(X)	(X)	(X)
509	Miscellaneous durable goods	8.2-9.5	8.5	8.0-9.1	8.4	0.8-2.3	1.1	4.2-6.4	4.8	(X)	(X)	(X)
51	Nondurable goods	2.7-3.1	2.9	2.6-3.2	2.9	0.3-0.8	0.5	1.5-2.3	1.7	(X)	(X)	(X)
511	Paper & paper products	4.9-6.0	5.3	4.9-5.7	5.3	0.6-1.2	1.0	2.3-3.4	2.6	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.9-7.4	6.6	6.0-7.3	6.6	0.6-1.4	0.9	1.8-3.7	3.1	(X)	(X)	(X)
513	Apparel, piece goods & notions	5.9-7.9	7.0	5.4-7.8	6.8	1.0-2.0	1.2	4.0-5.3	4.7	(X)	(X)	(X)
514	Groceries & related products	4.4-6.0	4.9	4.6-6.0	4.9	0.4-1.3	0.8	2.8-3.6	3.3	(X)	(X)	(X)
515	Farm-product raw materials	6.8-7.6	7.3	6.7-7.4	7.3	1.2-2.3	1.5	3.8-5.2	4.9	(X)	(X)	(X)
516	Chemicals & allied products	7.0-7.8	7.6	7.1-7.8	7.4	1.1-2.6	1.5	3.4-6.6	5.4	(X)	(X)	(X)
517	Petroleum & petroleum products	4.9-8.8	5.3	4.9-8.5	5.1	0.9-5.5	1.4	2.3-7.9	3.3	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.3-5.2	4.9	4.0-4.9	4.6	0.8-1.2	1.1	1.5-3.3	2.1	(X)	(X)	(X)
519	Misc. nondurable goods	6.8-8.6	8.2	7.6-8.6	8.2	1.1-2.1	1.4	3.2-7.6	3.6	(X)	(X)	(X)

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for September 1988 through February 1989.

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

SIC code	Kind of business	1988												1989		
		Feb. ^r	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. ^r	Feb. ^r	Mar.	
	Sales,¹ Total .....	.950	1.067	.989	1.021	1.039	.950	1.031	1.014	1.029	1.011	.999	.945	.913	1.055
50	Durable goods .....	.927	1.064	1.008	1.017	1.055	.958	1.037	1.036	1.052	1.010	.978	.904	.891	1.054
501	Motor vehicles & auto. equip. ...	.926	1.055	1.022	1.048	1.080	.976	1.008	.939	1.061	1.017	1.011	.899	.893	1.046
502	Furniture & home furnishings ...	.951	1.028	.973	.983	1.041	.946	1.072	1.054	1.118	1.035	.956	.893	.908	1.033
503	Lumber & other construction mat. ....	.809	.979	1.022	1.042	1.120	1.074	1.148	1.101	1.089	.982	.857	.810	.773	.995
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.934	1.023	.958	.871	.965	.908	1.049	1.107	1.146	1.140	1.030	.889	.884	1.045
505	Metals & minerals, ex. petroleum	.965	1.158	.995	.981	1.058	.938	1.023	1.087	.971	.933	.945	.968	.935	1.170	
506	Electrical goods .....	.945	1.045	.941	.958	1.020	.960	1.053	1.060	1.095	1.053	1.000	.906	.906	1.036
507	Hardware, plumbing & heating equipment .....	.928	1.011	.990	1.030	1.095	.988	1.058	1.023	1.059	.998	.949	.910	.882	1.005
508	Machinery, equip. & supplies ...	.948	1.100	1.023	1.034	1.045	.933	1.037	1.034	.995	.981	1.009	.910	.918	1.089
509	Miscellaneous durable goods ...	.910	1.055	1.054	1.062	1.064	.887	.978	1.070	1.082	1.020	.967	.871	.876	1.055
51	Nondurable goods .....	.975	1.072	.974	1.026	1.013	.942	1.028	.999	1.004	1.015	1.016	.980	.934	1.065
511	Paper & paper products .....	.979	1.083	.971	.965	1.033	.932	1.060	1.023	1.009	1.008	.997	.980	.947	1.077
512	Drugs, drug proprietaries and druggists' sundries .....	.974	1.059	.977	.994	1.019	.935	1.027	1.033	1.006	1.001	.998	1.016	.939	1.048
513	Apparel, piece goods & notions	1.054	1.093	.871	.913	1.033	1.021	1.251	1.057	1.096	1.011	.714	.930	1.010	1.057	
514	Groceries & related products ...	.951	1.021	.980	1.027	1.029	.994	1.037	.989	.988	1.020	1.027	.973	.915	1.021
515	Farm-product raw materials ...	1.007	1.119	.943	1.042	.961	.845	.908	.925	1.036	1.035	1.148	1.074	.962	1.077	
516	Chemicals & allied products ...	.965	1.069	1.012	1.048	1.099	.938	1.041	1.030	1.009	.959	.883	.968	.921	1.088
517	Petroleum & petroleum products	1.030	1.100	.957	.960	.951	.912	.977	1.008	.969	1.020	1.077	1.070	.995	1.109	
518	Beer, wine, & distilled beverages	.824	1.016	.936	1.062	1.129	.993	1.112	1.012	.982	1.049	1.155	.776	.796	1.011	
519	Misc. nondurable goods .....	.927	1.113	1.081	1.169	1.050	.940	1.011	.984	.966	.950	.997	.869	.879	1.124
	Inventories,¹ Total	1.007	1.009	1.006	.989	.995	.993	.986	.995	1.009	1.004	1.001	1.005	1.008	1.009	
50	Durable goods .....	.995	1.003	1.006	1.002	1.007	1.006	1.002	1.009	1.004	.995	.985	.988	.995	1.003
501	Motor vehicles & auto. equip. ...	1.012	1.013	1.002	.991	1.005	.973	.960	1.022	.998	1.014	1.016	.995	1.013	1.013	
502	Furniture & home furnishings ...	.999	.995	.988	1.009	.999	1.009	1.019	1.014	.992	.968	.990	1.009	.997	.993
503	Lumber & other construction mat. ....	.984	1.018	1.035	1.006	1.043	1.037	.994	.994	.984	.971	.973	.959	.983	1.019
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.983	.996	.991	.980	1.006	1.040	1.022	1.036	1.026	.982	.967	.971	.983	.996
505	Metals & minerals, ex. petroleum	1.004	1.003	1.004	1.015	1.037	1.018	.979	.977	.980	.962	1.005	1.016	1.004	1.003	
506	Electrical goods .....	.983	.990	.994	.997	.999	1.018	1.015	1.025	1.016	1.002	.994	.972	.984	.991
507	Hardware, plumbing & heating equipment	1.002	1.025	1.033	1.014	1.002	1.007	1.007	.991	.992	.974	.969	.990	1.002	1.025	
508	Machinery, equip. & supplies ...	1.001	1.005	1.013	1.005	1.006	1.002	1.001	.991	1.007	1.006	.976	.995	1.002	1.005	
509	Miscellaneous durable goods ...	.961	.973	1.008	1.010	1.002	1.035	1.041	1.030	1.015	1.000	.960	.956	.957	.973
51	Nondurable goods	1.030	1.019	.999	.964	.980	.965	.956	.974	1.017	1.025	1.032	1.038	1.031	1.019	
511	Paper & paper products	1.013	1.018	1.010	.994	.998	.999	.996	.970	.996	.986	1.001	1.031	1.013	1.020	
512	Drugs, drug proprietaries and druggists' sundries	1.032	1.027	1.028	.968	.960	.963	.960	.992	1.024	.984	1.015	1.046	1.032	1.025	
513	Apparel, piece goods & notions	.982	.951	.952	1.019	1.050	1.057	1.060	1.035	.966	.946	.987	.995	.981	.954	
514	Groceries & related products ...	1.007	.984	.987	.983	.986	.981	.961	.995	1.044	1.048	1.024	1.005	1.006	.984	
515	Farm-product raw materials ...	1.142	1.068	.983	.825	.850	.831	.815	.885	1.098	1.130	1.156	1.198	1.142	1.063	
516	Chemicals & allied products ...	1.013	1.001	1.036	1.037	1.026	1.002	1.009	.949	.972	.985	.972	.995	1.016	1.000	
517	Petroleum & petroleum products	.987	.982	.937	.957	.971	.981	.953	1.025	1.011	1.022	1.103	1.088	.995	.984	
518	Beer, wine, & distilled beverages	.980	1.016	1.029	1.002	1.026	.997	.983	1.004	1.059	1.045	.911	.944	.982	1.017	
519	Misc. nondurable goods	1.059	1.106	1.061	.970	.977	.922	.924	.948	.966	.996	1.035	1.030	1.059	1.104	

^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

March 1989



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW89-03
Issued May 1989

Sales. March 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$139.9 billion, up 0.2 percent from the revised February level and up 8.7 percent from a year ago. The February preliminary estimate was revised downward by \$0.9 billion or about 0.6 percent. March sales of durable goods were down 0.3 percent from February, but were 9.2 percent above a year ago. Monthly decreases in the sales of durable goods were as follows: lumber and other construction materials decreased 8.0 percent to \$4.3 billion and hardware, plumbing, and heating equipment sales were down 3.9 percent to \$3.8 billion. March sales of nondurable goods increased 0.8 percent from February and were 8.2 percent above March 1988. Sales of petroleum and petroleum products increased 3.7 percent from the February level to \$11.5 billion and drugs, drug proprietaries and druggists' sundries increased 3.3 percent to \$3.3 billion for the same period.

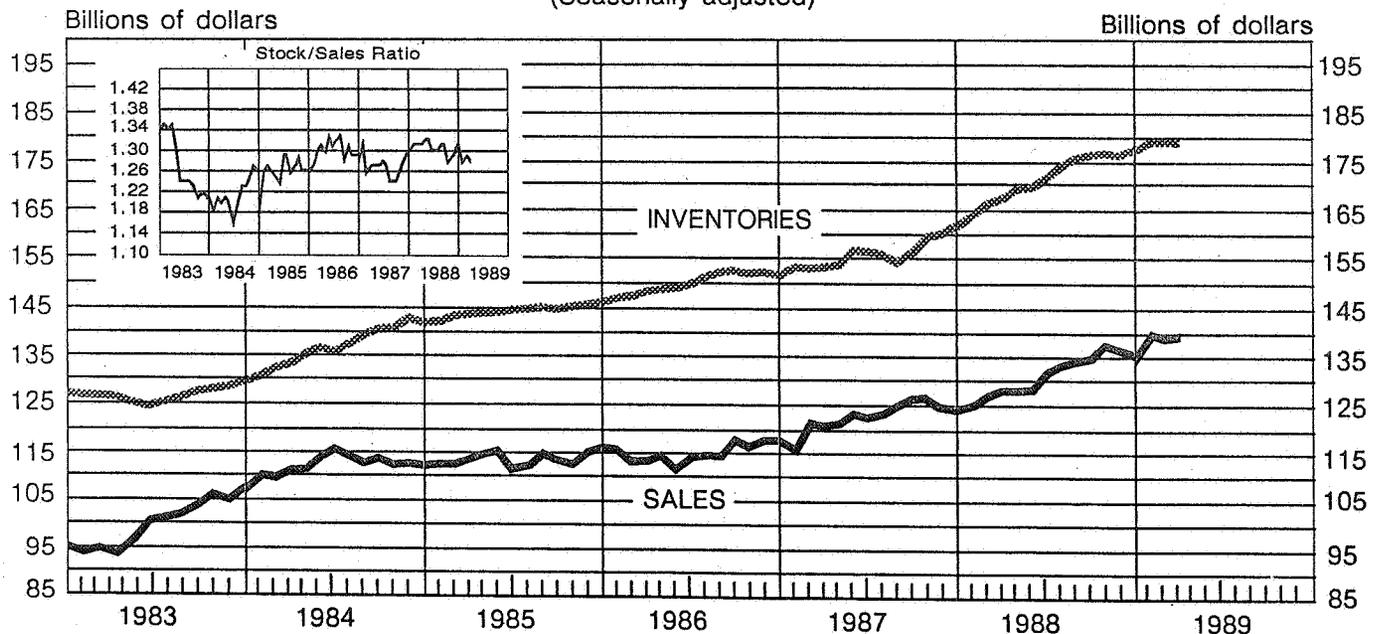
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$179.7 billion at the end of March, down 0.1 percent from the revised February level but up 6.8 percent from a year ago.

The February preliminary estimate was revised downward by \$0.5 billion or about 0.3 percent. Inventories of durable goods wholesalers decreased 0.4 percent from the February level but were up 6.1 percent from a year ago. Inventories of nondurable goods wholesalers were up 0.5 percent from the February level and were 8.1 percent above March 1988. Petroleum and petroleum products' inventories increased 7.4 percent from the February level to \$4.5 billion. However, stocks of farm-product raw materials decreased 3.1 percent to \$8.3 billion for the same period.

Stock/Sales Ratio. The March stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28. The year ago ratio was 1.31.

NOTE: Since this survey is based on a sample, the estimates will differ from the universe values due to both sampling and nonsampling error. For the month-to-month and year-to-year percent changes shown for sales and inventory at the total, durable, and nondurable levels, the margins of sampling error range from .3 to 3.2 percentage points above and below the estimate. See the "Reliability of Data" section on page 4 for a more complete description.

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 7, 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: 1989 and 1988

(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	1989			1988									
		Jan.	Feb.	Mar. ^P	Mar. ^F	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	140,356	139,547	139,869	128,685	128,701	128,790	132,317	133,833	134,726	135,332	138,087	137,239	136,170
50	Durable goods	70,302	69,343	69,105	63,271	64,089	64,101	64,715	65,559	65,501	66,295	67,581	68,543	68,427
501	Motor vehicles & auto. equip.	14,532	14,567	14,492	13,151	14,188	13,680	13,534	13,663	13,349	13,548	14,037	14,288	14,031
502	Furniture & home furnishings	2,431	2,363	2,349	2,284	2,249	2,215	2,241	2,245	2,298	2,310	2,403	2,516	2,503
503	Lumber & other construction mat.	4,916	4,678	4,306	4,746	4,796	4,845	4,645	4,636	4,592	4,579	4,693	4,564	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,213	1,893	1,881	1,921	1,991	2,018	2,095	2,108	2,147	2,238	2,267
505	Metals & minerals, ex. petroleum	6,135	5,705	5,782	5,610	5,705	5,494	5,705	5,760	5,826	6,018	5,970	6,221	6,006
506	Electrical goods	9,529	9,219	9,429	8,451	8,628	8,648	8,706	8,507	8,738	8,679	8,974	9,288	9,068
507	Hardware, plumbing & heating equipment	4,160	3,985	3,829	3,875	3,817	3,828	4,008	4,249	4,040	3,878	4,025	3,930	3,974
508	Machinery, equip. & supplies	18,919	19,528	19,371	16,459	16,473	16,810	17,120	17,448	17,912	18,515	18,627	18,598	18,525
509	Miscellaneous durable goods	7,352	7,272	7,334	6,802	6,333	6,860	6,765	7,033	6,651	6,662	6,705	6,904	7,220
51	Nondurable goods	70,054	70,204	70,764	65,414	64,632	64,689	67,602	68,274	69,225	69,037	70,506	68,696	67,743
511	Paper & paper products	4,555	4,508	4,498	4,209	4,092	4,162	4,291	4,415	4,378	4,520	4,520	4,452	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,176	3,280	2,902	2,881	2,950	3,035	3,095	3,180	3,179	3,165	3,118	3,255
513	Apparel, piece goods & notions	4,676	4,286	4,309	3,898	3,915	4,076	4,280	4,268	4,205	4,428	4,259	4,508	4,538
514	Groceries & related products	19,512	19,719	19,968	17,996	17,462	18,227	18,384	18,447	18,785	18,863	19,409	19,515	19,762
515	Farm-product raw materials	11,348	11,414	11,243	9,738	10,028	9,916	10,769	11,067	11,412	11,616	12,654	10,778	9,517
516	Chemicals & allied products	2,929	2,955	2,890	2,793	2,962	3,007	3,073	3,102	2,987	2,928	2,860	2,985	2,920
517	Petroleum & petroleum products	10,287	11,081	11,489	10,923	10,485	10,742	11,045	11,213	11,218	10,395	10,267	9,998	10,090
518	Beer, wine, & distilled beverages	3,656	3,534	3,598	3,656	3,556	3,527	3,651	3,555	3,612	3,697	3,673	3,730	3,637
519	Misc. nondurable goods	9,825	9,531	9,489	9,299	9,251	8,082	9,074	9,112	9,448	9,611	9,699	9,612	9,629
	Inventories, Total	179,761	179,810	179,701	168,265	169,965	170,346	172,179	174,581	176,388	176,972	177,408	177,060	178,313
50	Durable goods	117,255	117,932	117,512	110,739	111,896	111,162	110,574	112,702	113,727	114,875	115,225	114,975	115,743
501	Motor vehicles & auto. equip.	21,499	21,741	21,896	21,321	20,962	20,972	20,206	20,885	21,047	21,526	21,378	21,353	21,507
502	Furniture & home furnishings	4,033	4,067	4,012	4,084	4,276	4,136	4,229	4,205	4,188	4,201	4,208	4,107	4,023
503	Lumber & other construction mat.	5,777	5,584	5,505	5,687	5,708	5,568	5,441	5,543	5,441	5,501	5,587	5,377	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,469	4,246	4,272	4,301	4,303	4,263	4,175	4,332	4,306	4,322	4,467
505	Metals & minerals, ex. petroleum	8,857	8,878	8,790	8,080	8,527	8,431	8,648	8,870	8,867	8,969	9,128	9,169	8,962
506	Electrical goods	15,063	15,418	15,591	14,011	14,142	14,137	14,180	14,106	14,336	14,136	14,488	14,480	14,798
507	Hardware, plumbing & heating equipment	7,583	7,454	7,426	7,010	7,050	7,052	7,086	7,304	7,379	7,414	7,456	7,275	7,264
508	Machinery, equip. & supplies	41,620	41,730	41,366	39,394	39,128	39,129	38,941	39,851	40,369	41,175	41,111	41,245	41,336
509	Miscellaneous durable goods	8,377	8,524	8,437	7,906	7,831	7,436	7,550	7,675	7,925	7,621	7,563	7,647	7,867
51	Nondurable goods	62,506	61,878	62,189	57,528	58,069	59,184	61,605	61,879	62,641	62,097	62,183	62,085	62,570
511	Paper & paper products	4,586	4,490	4,418	3,938	3,954	3,912	4,032	4,194	4,108	4,246	4,297	4,231	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,073	4,710	4,889	4,843	4,940	5,069	5,129	4,997	4,870	4,917	5,221
513	Apparel, piece goods & notions	8,170	8,337	8,391	7,491	7,472	7,761	7,905	7,490	7,456	7,408	7,639	7,870	7,846
514	Groceries & related products	12,822	12,772	12,983	12,127	12,246	12,148	12,049	12,401	12,373	12,664	12,753	12,584	12,564
515	Farm-product raw materials	9,097	8,558	8,294	8,016	8,034	8,817	10,492	10,434	10,679	10,348	10,270	9,558	9,562
516	Chemicals & allied products	2,796	2,612	2,581	2,600	2,581	2,764	2,700	2,657	2,764	2,760	2,713	2,734	2,964
517	Petroleum & petroleum products	3,972	4,201	4,510	4,021	4,097	4,106	4,072	4,084	4,196	4,134	3,940	3,861	3,858
518	Beer, wine, & distilled beverages	4,099	4,026	3,930	4,031	4,034	3,946	3,932	4,025	4,090	4,071	4,143	4,128	4,176
519	Misc. nondurable goods	11,783	11,727	11,909	10,594	10,762	10,887	11,483	11,525	11,846	11,469	11,558	12,202	12,069
	Stock/sales ratios, Total	1.28	1.29	1.28	1.31	1.32	1.32	1.30	1.30	1.31	1.31	1.28	1.29	1.31
50	Durable goods	1.67	1.70	1.70	1.75	1.75	1.73	1.71	1.72	1.74	1.73	1.70	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.51	1.62	1.48	1.53	1.49	1.53	1.58	1.59	1.52	1.49	1.53
502	Furniture & home furnishings	1.66	1.72	1.71	1.79	1.90	1.89	1.87	1.82	1.82	1.82	1.75	1.63	1.61
503	Lumber & other construction mat.	1.18	1.19	1.28	1.20	1.19	1.20	1.17	1.20	1.18	1.20	1.19	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.02	2.24	2.27	2.24	2.16	2.11	1.99	2.06	2.01	1.93	1.89
505	Metals & minerals, ex. petroleum	1.44	1.56	1.52	1.44	1.49	1.53	1.52	1.54	1.52	1.49	1.53	1.47	1.50
506	Electrical goods	1.58	1.67	1.65	1.66	1.64	1.63	1.63	1.66	1.64	1.63	1.61	1.56	1.63
507	Hardware, plumbing & heating equipment	1.82	1.87	1.94	1.81	1.85	1.84	1.77	1.72	1.83	1.91	1.85	1.85	1.83
508	Machinery, equip. & supplies	2.20	2.14	2.14	2.33	2.38	2.33	2.27	2.28	2.25	2.22	2.21	2.22	2.23
509	Miscellaneous durable goods	1.14	1.17	1.15	1.16	1.24	1.08	1.12	1.09	1.19	1.14	1.13	1.11	1.09
51	Nondurable goods .....	.89	.88	.88	.88	.90	.91	.91	.91	.90	.90	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.94	.97	.94	.94	.96	.94	.94	.95	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.55	1.62	1.70	1.64	1.63	1.64	1.61	1.57	1.54	1.58	1.60
513	Apparel, piece goods & notions	1.75	1.95	1.95	1.92	1.91	1.90	1.85	1.75	1.77	1.67	1.79	1.75	1.73
514	Groceries & related products .....	.66	.65	.65	.67	.70	.67	.66	.67	.66	.68	.66	.64	.64
515	Farm-product raw materials .....	.80	.75	.74	.82	.80	.89	.97	.94	.94	.89	.81	.89	1.00
516	Chemicals & allied products .....	.95	.88	.93	.93	.87	.92	.88	.86	.93	.94	.96	.92	1.02
517	Petroleum & petroleum products .....	.39	.38	.39	.37	.39	.38	.37	.36	.37	.40	.38	.39	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.09	1.10	1.13	1.12	1.08	1.13	1.10	1.10	1.13	1.11	1.15
519	Misc. nondurable goods	1.20	1.23	1.28	1.14	1.16	1.35	1.27	1.26	1.25	1.19	1.19	1.27	1.25

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989				1988								Total 3 mos.		
		Jan.	Feb.	Mar. ^P	Mer.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1989	1988
	Sales, Total	131,788	127,414	148,872	137,528	127,618	131,689	137,210	126,841	138,551	136,994	141,335	138,289	138,599	407,872	373,204
50	Durable goods	63,265	62,003	73,155	67,239	64,491	65,312	68,468	62,555	67,904	68,511	70,825	68,957	67,261	199,423	178,462
501	Motor vehicles & auto. equip.	13,064	13,008	15,144	13,887	14,500	14,337	14,617	13,335	13,456	12,722	14,893	14,531	14,185	41,218	37,470
502	Furniture & home furnishings	2,171	2,138	2,438	2,355	2,188	2,177	2,333	2,124	2,483	2,688	2,604	2,393	2,393	6,745	6,582
503	Lumber & other construction mat. . .	3,982	3,616	4,297	4,681	4,900	4,840	5,202	4,979	5,272	5,041	5,111	4,482	4,056	11,895	11,769
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2,070	1,842	2,268	1,912	1,802	1,673	1,921	1,832	2,198	2,331	2,460	2,551	2,438	6,180	5,289
505	Metals & minerals, ex. petroleum ..	5,939	5,334	6,811	6,519	5,676	5,390	6,036	5,403	5,960	6,542	5,797	5,804	5,676	18,084	16,883
506	Electrical goods	8,633	8,334	9,787	8,840	8,119	8,285	8,880	8,167	9,201	9,200	9,828	9,778	9,068	28,754	23,559
507	Hardware, plumbing & heating equipment	3,786	3,495	3,810	3,894	3,779	3,943	4,389	4,198	4,274	3,967	4,263	3,922	3,771	11,091	10,489
508	Machinery, equip. & supplies	17,216	17,888	21,017	18,056	16,852	17,382	17,890	16,279	18,575	19,145	18,534	18,243	18,692	58,101	47,593
509	Miscellaneous durable goods	6,404	6,370	7,583	7,115	6,675	7,285	7,198	6,238	6,505	7,128	7,255	7,042	6,982	20,357	19,028
51	Nondurable goods	68,521	65,411	75,517	70,289	63,127	66,377	68,744	64,286	70,647	68,483	70,510	69,332	69,338	209,449	194,742
511	Paper & paper products	4,464	4,242	4,831	4,537	3,973	4,016	4,433	4,115	4,641	4,624	4,561	4,468	4,362	13,537	12,420
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,437	3,073	2,815	2,932	3,093	2,894	3,266	3,284	3,184	3,121	3,248	9,725	8,632
513	Apparel, piece goods & notions	4,349	4,350	4,494	4,260	3,410	3,721	4,421	4,358	5,261	4,680	4,668	4,558	3,240	13,193	11,917
514	Groceries & related products	16,985	18,043	20,347	18,356	17,113	18,719	18,917	18,336	19,480	18,458	19,178	19,905	20,296	57,375	53,497
515	Farm-product raw materials	12,168	10,939	12,019	10,799	9,458	10,332	10,349	9,352	10,362	10,745	13,110	11,155	10,926	35,176	30,229
516	Chemicals & allied products	2,635	2,710	3,136	2,977	2,598	3,151	3,377	2,910	3,109	3,016	2,886	2,863	2,578	8,681	7,868
517	Petroleum & petroleum products ..	11,007	10,981	13,109	12,245	10,034	10,312	10,504	10,225	10,990	10,478	9,949	10,198	10,867	35,097	33,948
518	Beer, wine, & distilled beverages ..	2,837	2,808	3,959	3,729	3,328	3,746	4,122	3,530	4,016	3,741	3,607	3,913	4,201	9,302	9,521
519	Misc. nondurable goods	8,538	8,340	10,485	10,313	10,000	9,448	9,528	8,565	9,552	9,457	9,369	9,131	9,600	27,363	26,690
	Inventories, Total	181,054	181,481	181,250	169,731	171,003	168,419	171,341	172,497	172,736	175,787	178,969	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,938	111,114	112,803	111,410	111,500	113,368	113,470	115,469	115,561	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,268	21,641	21,004	20,783	20,307	20,321	20,205	22,000	21,335	21,652	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	3,976	4,047	4,225	4,173	4,225	4,243	4,268	4,260	4,174	3,976	3,983	(X)	(X)
503	Lumber & other construction mat. . .	5,540	5,453	5,582	5,767	5,908	5,601	5,675	5,748	5,408	5,468	5,498	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,312	4,489	4,433	4,216	4,234	4,215	4,329	4,434	4,267	4,488	4,418	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum ..	8,999	8,878	8,843	8,120	8,561	8,557	8,968	8,030	8,681	8,763	8,945	8,821	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,513	13,913	14,057	14,095	14,146	14,360	14,551	14,489	14,720	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,461	7,812	7,185	7,283	7,151	7,110	7,355	7,431	7,347	7,396	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,510	38,548	39,637	39,325	39,175	39,931	40,409	40,804	41,399	41,492	40,348	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,201	7,677	7,894	7,510	7,565	7,944	8,250	7,850	7,678	7,647	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,312	58,617	58,200	57,009	59,841	59,131	59,266	60,318	63,408	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,506	4,007	3,994	3,889	4,024	4,190	4,092	4,119	4,280	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,093	4,752	5,028	4,688	4,742	4,881	4,924	4,957	4,967	4,838	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	8,022	7,154	7,113	7,908	8,300	7,917	7,903	7,667	7,379	7,445	7,744	(X)	(X)
514	Groceries & related products	12,886	12,836	12,736	11,933	12,087	11,941	11,880	12,165	11,890	12,601	13,314	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,850	8,593	8,381	7,897	7,274	8,918	8,671	8,703	9,158	11,276	10,800	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,682	2,665	2,584	2,674	2,868	2,770	2,662	2,789	2,619	2,637	2,693	2,881	(X)	(X)
517	Petroleum & petroleum products ..	4,321	4,121	4,560	4,037	3,839	3,929	3,954	4,008	3,999	4,237	3,983	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages ..	3,869	3,974	3,989	4,083	4,151	3,954	4,034	4,013	4,020	4,087	4,387	4,314	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,148	11,706	11,419	10,580	11,219	10,628	10,948	10,873	11,165	12,153	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.23	1.34	1.28	1.25	1.38	1.25	1.28	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.61	1.65	1.75	1.71	1.63	1.81	1.67	1.69	1.63	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.47	1.56	1.45	1.45	1.39	1.52	1.50	1.73	1.43	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.63	1.72	1.93	1.92	1.81	2.00	1.73	1.75	1.55	1.53	1.66	(X)	(X)
503	Lumber & other construction mat. . .	1.39	1.51	1.30	1.24	1.21	1.16	1.09	1.15	1.03	1.08	1.08	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.08	2.43	1.95	2.21	2.35	2.25	2.42	2.42	1.94	1.93	1.80	1.66	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum ..	1.52	1.66	1.30	1.25	1.51	1.59	1.49	1.67	1.46	1.34	1.54	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.59	1.57	1.73	1.70	1.59	1.76	1.58	1.57	1.50	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	2.00	1.85	1.93	1.81	1.82	1.75	1.74	1.85	1.73	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.98	2.13	2.35	2.26	2.19	2.45	2.18	2.13	2.23	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.08	1.18	1.03	1.05	1.27	1.27	1.10	1.06	1.09	1.08	(X)	(X)
51	Nondurable goods .....	.95	.98	.84	.83	.92	.88	.87	.92	.84	.88	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	.88	1.01	.97	.91	1.02	.88	.89	.94	.93	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.48	1.55	1.79	1.60	1.53	1.69	1.51	1.51	1.57	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.79	1.68	2.09	2.13	1.88	1.82	1.50	1.64	1.58	1.63	2.39	(X)	(X)
514	Groceries & related products .....	.88	.71	.63	.65	.71	.64	.63	.66	.61	.68	.69	.66	.63	(X)	(X)
515	Farm-product raw materials .....	.89	.90	.71	.77	.84	.70	.86	.93	.84	.85	.86	.97	1.01	(X)	(X)
516	Chemicals & allied products .....	.96	.98	.85	.87	.89	.91	.82	.91	.90	.87	.91	.94	1.12	(X)	(X)
517	Petroleum & petroleum products ..	.39	.38	.35	.33	.38	.38	.38	.39	.36	.40	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages ..	1.36	1.42	1.09	1.09	1.25	1.08	.98	1.14	1.00	1.09	1.22	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.25	1.14	1.14	1.12	1.18	1.24	1.15	1.15	1.19	1.33	1.30	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.
 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. 1989 from Feb. 1989	Mar. 1989 from Mar. 1988	3 months 1989 from 3 months 1988	Mar. 1989 from Feb. 1989	Mar. 1989 from Mar. 1988	Mar. 1989 from Feb. 1989	Mar. 1989 from Mar. 1988	Mar. 1989 from Feb. 1989	Mar. 1989 from Mar. 1988
	Total	+16.7	+8.1	+9.3	-.1	+6.8	+2	+8.7	-.1	+6.8
50	Durable goods	+18.0	+8.8	+11.2	+4	+6.1	-.3	+9.2	-.4	+6.1
501	Motor vehicles & auto. equip.	+16.4	+9.1	+10.0	+1.0	+2.9	-.5	+10.2	+7	+2.7
502	Furniture & home furnishings	+14.1	+3.5	+2.5	-1.8	-1.8	-.6	+2.8	-1.4	-1.8
503	Lumber & other construction mat.	+18.8	-7.8	+1.1	+2.4	-3.2	-8.0	-9.3	-1.1	-3.2
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+23.1	+18.6	+16.8	-.8	+5.1	+9.2	+16.9	-1.9	+5.3
505	Metals & minerals, ex. petroleum	+27.7	+4.5	+8.4	-.4	+8.9	+1.3	+3.1	-1.0	+8.8
506	Electrical goods	+17.4	+10.7	+13.6	+2.1	+11.5	+2.3	+11.6	+1.1	+11.3
507	Hardware, plumbing & heating equipment	+9.0	-2.2	+5.7	+2.0	+5.9	-3.9	-1.2	-.4	+5.9
508	Machinery, equip. & supplies	+17.6	+16.4	+17.9	-.8	+7.7	-.8	+17.7	-.8	+7.8
509	Miscellaneous durable goods	+19.0	+6.6	+7.0	.0	+6.8	+9	+7.8	-1.0	+6.7
51	Nondurable goods	+15.5	+7.4	+7.6	-1.0	+8.0	+8	+8.2	+5	+8.1
511	Paper & paper products	+13.9	+6.5	+9.0	-1.2	+12.5	-.2	+6.9	-1.6	+12.2
512	Drugs, drug proprietaries and druggists' sundries	+15.7	+11.8	+12.7	-4.6	+7.2	+3.3	+13.0	-1.6	+7.7
513	Apparel, piece goods & notions	+3.3	+5.5	+10.7	-2.2	+12.1	+5	+10.5	+6	+12.0
514	Groceries & related products	+12.8	+10.8	+7.2	-.8	+6.7	+1.3	+11.0	+1.7	+7.1
515	Farm-product raw materials	+9.6	+11.3	+16.4	-12.8	+2.8	-1.5	+15.5	-3.1	+3.5
516	Chemicals & allied products	+15.7	+5.3	+10.1	+1	+3.1	-2.2	+3.5	+2.6	+3.1
517	Petroleum & petroleum products	+19.4	+7.1	+3.4	+10.7	+13.0	+3.7	+5.2	+7.4	+12.2
518	Bear, wine, & distilled beverages	+30.4	-1.9	-2.3	+4	-2.3	+1.8	-1.6	-2.4	-2.5
519	Misc. nondurable goods	+25.7	+1.7	+2.5	+5.9	+12.3	-.4	+2.0	+1.6	+12.4

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

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

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).

The margin of sampling error, as used on the front page of this publication, indicates a range about the estimate which corresponds to a 90 percent confidence interval. If, for example, the estimate is up .8 percent and the margin of sampling error is 1.3 percentage points above or below the estimate, then the indicated range is down .5 percent to up 2.1 percent. If the range contains 0, it is uncertain whether there was an increase or decrease.

Nonsampling Errors

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

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

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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 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. 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	1.7	1.4-1.8	1.7	0.3-0.8	0.6	0.9-1.4	1.1	1.6	1.5	1.1
50	Durable goods	1.8-2.3	1.9	1.7-2.1	1.9	0.5-1.1	0.6	1.0-1.7	1.2	2.0	1.7	0.9
501	Motor vehicles & auto. equip.	4.4-7.4	5.4	4.2-6.9	5.2	1.2-3.1	1.4	2.6-5.8	3.7	6.0	5.6	3.1
502	Furniture & home furnishings	6.8-10.8	7.0	6.1-8.9	7.5	2.7-4.9	3.5	4.8-8.2	6.0	6.8	6.9	4.9
503	Lumber & other construction mat.	5.2-6.5	5.5	5.0-5.9	5.2	0.9-2.9	1.5	3.0-6.0	4.2	5.7	4.2	2.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies	6.7-9.4	8.8	6.3-9.3	7.4	2.6-8.6	4.1	4.3-9.3	6.6	6.7	5.8	4.7
505	Metals & minerals, ex. petroleum	5.2-8.8	7.5	5.6-7.9	6.8	1.4-3.8	1.6	2.6-7.4	5.2	6.1	4.3	3.2
506	Electrical goods	2.5-3.2	2.9	2.4-3.3	2.7	0.9-1.8	1.3	2.3-3.1	2.7	2.8	2.6	2.2
507	Hardware, plumbing & heating equipment ..	7.7-8.6	8.2	7.4-9.1	8.0	1.3-2.7	2.1	2.8-6.4	4.6	7.7	7.5	3.1
508	Machinery, equip. & supplies	2.8-3.7	3.5	2.9-3.5	3.2	1.5-2.9	1.8	2.1-3.6	2.7	2.8	2.7	2.1
509	Miscellaneous durable goods	4.9-8.2	5.6	4.6-8.1	5.3	1.1-2.6	2.0	3.3-4.3	3.8	5.4	3.8	2.7
51	Nondurable goods	2.6-3.2	2.9	2.6-3.1	2.8	0.6-1.1	0.8	1.0-2.0	1.5	2.7	3.1	1.6
511	Paper & paper products	5.1-6.1	5.4	5.2-5.7	5.3	0.7-2.7	1.7	2.4-4.5	3.3	5.1	5.0	2.3
512	Drugs, drug proprietaries and druggists' sundries	4.0-6.4	4.9	3.8-6.6	5.1	0.8-2.0	1.3	2.0-3.8	3.0	4.0	5.2	2.6
513	Apparel, piece goods & notions	8.5-10.5	9.7	7.9-10.7	9.3	2.1-5.9	3.0	4.3-8.7	6.2	9.0	8.2	3.7
514	Groceries & related products	5.2-6.3	5.8	4.9-6.3	5.6	0.9-1.7	1.3	1.8-3.6	2.8	5.3	6.5	2.8
515	Farm-product raw materials	4.6-6.9	5.3	4.1-6.0	5.2	2.4-4.6	3.3	3.9-9.0	6.1	5.4	5.9	7.3
516	Chemicals & allied products	6.5-7.4	6.7	5.1-7.8	6.2	2.0-3.9	2.7	4.9-6.7	5.6	5.8	6.0	4.3
517	Petroleum & petroleum products	5.9-6.9	6.5	6.1-7.0	6.4	0.7-1.8	1.2	3.1-3.8	3.5	6.2	4.6	3.2
518	Beer, wine, & distilled beverages	2.7-4.5	3.3	2.5-4.0	3.1	1.0-2.2	1.5	2.1-3.9	2.8	3.8	3.0	2.8
519	Misc. nondurable goods	4.5-6.1	4.9	4.5-5.3	4.9	1.3-2.5	1.7	2.0-4.3	2.7	4.8	3.8	2.5
	Inventories, Total	1.3-1.5	1.4	1.3-1.5	1.4	0.2-0.4	0.3	1.0-1.3	1.2	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.6	1.4-1.6	1.5	0.2-0.4	0.3	1.1-1.4	1.2	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	6.0-8.8	6.6	6.3-6.8	6.6	0.6-1.2	0.7	2.4-3.1	2.6	(X)	(X)	(X)
502	Furniture & home furnishings	9.3-10.0	9.6	8.9-10.0	9.4	1.0-2.2	1.8	4.3-7.2	5.4	(X)	(X)	(X)
503	Lumber & other construction mat.	4.9-5.7	5.3	4.6-5.7	5.2	0.9-1.3	1.1	2.7-4.4	3.1	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.2-6.5	5.9	5.7-6.4	5.9	0.9-1.6	1.5	4.3-7.7	6.9	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	5.0-5.8	5.6	5.2-5.8	5.5	0.4-0.8	0.5	2.4-3.7	3.0	(X)	(X)	(X)
506	Electrical goods	2.7-4.0	3.2	2.8-3.7	3.4	0.5-0.8	0.6	1.6-2.2	1.7	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.7-8.2	6.2	5.3-8.2	6.3	0.5-1.3	0.8	3.5-7.5	4.3	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.0-4.4	3.6	2.9-4.2	3.5	0.4-0.8	0.6	1.9-2.4	2.2	(X)	(X)	(X)
509	Miscellaneous durable goods	8.2-9.5	8.8	8.0-9.1	8.9	0.8-2.3	1.1	4.3-6.4	5.0	(X)	(X)	(X)
51	Nondurable goods	2.5-3.1	2.9	2.6-3.2	2.9	0.3-0.8	0.5	1.2-2.1	1.6	(X)	(X)	(X)
511	Paper & paper products	4.9-6.0	5.3	4.9-5.7	5.4	0.6-1.2	1.1	2.3-3.4	2.6	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.7-7.4	6.4	5.8-7.3	6.2	0.6-1.6	1.1	1.8-3.7	3.1	(X)	(X)	(X)
513	Apparel, piece goods & notions	6.4-7.9	7.0	5.6-7.8	6.9	1.1-2.0	1.2	4.0-5.3	4.8	(X)	(X)	(X)
514	Groceries & related products	4.4-5.5	4.9	4.6-6.0	4.9	0.4-1.3	0.8	2.8-3.5	3.1	(X)	(X)	(X)
515	Farm-product raw materials	6.8-7.6	7.2	6.7-7.4	7.1	1.2-2.3	1.4	3.3-5.2	4.5	(X)	(X)	(X)
516	Chemicals & allied products	6.1-7.8	7.6	6.3-7.8	7.4	1.0-2.6	1.3	3.1-6.8	5.0	(X)	(X)	(X)
517	Petroleum & petroleum products	4.9-5.5	5.3	4.9-8.2	5.1	0.9-5.5	1.4	2.1-3.6	3.3	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	3.7-5.2	4.9	4.4-4.9	4.6	0.8-1.3	1.1	2.1-3.3	2.2	(X)	(X)	(X)
519	Misc. nondurable goods	6.8-8.6	7.9	7.4-8.6	8.0	0.7-2.1	1.2	3.0-4.5	3.4	(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 October 1988 through March 1989.

Official Business
Penalty for Private Use, \$300

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

SIC code	Kind of business	1988										1989			
		Mar. ^r	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. ^r	Mar. ^r	Apr.
	Sales, ¹ Total	1.066	.989	1.021	1.039	.950	1.031	1.014	1.029	1.011	.999	.945	.912	1.054	.971
50	Durable goods	1.061	1.008	1.017	1.055	.958	1.037	1.036	1.052	1.010	.978	.904	.891	1.051	.985
501	Motor vehicles & auto. equip. ...	1.056	1.022	1.048	1.080	.976	1.008	.939	1.061	1.017	1.011	.899	.893	1.045	.992
502	Furniture & home furnishings ...	1.031	.973	.983	1.041	.946	1.072	1.054	1.118	1.035	.956	.893	.904	1.038	.935
503	Lumber & other construction mat. ....	.982	1.022	1.042	1.120	1.074	1.148	1.101	1.089	.982	.857	.810	.773	.998	.979
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.010	.958	.871	.965	.908	1.049	1.107	1.146	1.140	1.030	.889	.909	1.025	.924
505	Metals & minerals, ex. petroleum	1.162	.995	.981	1.058	.938	1.023	1.087	.971	.933	.945	.968	.935	1.178	.973
506	Electrical goods	1.046	.941	.958	1.020	.960	1.053	1.060	1.095	1.053	1.000	.906	.904	1.038	.925
507	Hardware, plumbing & heating equipment	1.005	.990	1.030	1.095	.988	1.058	1.023	1.059	.998	.949	.910	.877	.995	.965
508	Machinery, equip. & supplies	1.097	1.023	1.034	1.045	.933	1.037	1.034	.995	.981	1.009	.910	.915	1.085	1.000
509	Miscellaneous durable goods ...	1.046	1.054	1.082	1.064	.887	.978	1.070	1.082	1.020	.967	.871	.876	1.034	1.072
51	Nondurable goods	1.072	.974	1.026	1.013	.942	1.028	.999	1.004	1.015	1.016	.980	.932	1.067	.952
511	Paper & paper products	1.078	.971	.965	1.033	.932	1.060	1.023	1.009	1.008	.997	.980	.941	1.074	.953
512	Drugs, drug proprietaries and druggists' sundries	1.059	.977	.994	1.019	.935	1.027	1.033	1.006	1.001	.998	1.016	.935	1.048	.955
513	Apparel, piece goods & notions	1.093	.871	.913	1.033	1.021	1.251	1.057	1.096	1.011	.714	.930	1.015	1.043	.866
514	Groceries & related products	1.020	.980	1.027	1.029	.994	1.037	.989	.988	1.020	1.027	.973	.915	1.019	.962
515	Farm-product raw materials	1.109	.943	1.042	.961	.845	.908	.925	1.036	1.035	1.148	1.074	.961	1.069	.938
516	Chemicals & allied products	1.066	1.012	1.048	1.099	.938	1.041	1.030	1.009	.959	.883	.968	.917	1.085	.978
517	Petroleum & petroleum products	1.121	.957	.960	.951	.912	.977	1.008	.969	1.020	1.077	1.070	.991	1.141	.918
518	Beer, wine, & distilled beverages	1.020	.936	1.062	1.129	.993	1.112	1.012	.982	1.049	1.155	.776	.794	1.017	.908
519	Misc. nondurable goods	1.109	1.081	1.169	1.050	.940	1.011	.984	.966	.950	.997	.869	.875	1.105	1.072
	Inventories, ¹ Total	1.008	1.006	.989	.995	.993	.986	.995	1.009	1.004	1.001	1.005	1.008	1.008	1.006
50	Durable goods	1.003	1.006	1.002	1.007	1.006	1.002	1.009	1.004	.995	.985	.988	.996	1.003	1.006
501	Motor vehicles & auto. equip. ...	1.015	1.002	.991	1.005	.973	.960	1.022	.998	1.014	1.016	.995	1.014	1.017	1.001
502	Furniture & home furnishings ...	.991	.988	1.009	.999	1.009	1.019	1.014	.992	.968	.990	1.009	.995	.991	.995
503	Lumber & other construction mat.	1.014	1.035	1.006	1.043	1.037	.994	.994	.984	.971	.973	.959	.980	1.014	1.037
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.993	.991	.980	1.006	1.040	1.022	1.036	1.026	.982	.967	.971	.981	.992	.991
505	Metals & minerals, ex. petroleum	1.005	1.004	1.015	1.037	1.018	.979	.977	.980	.962	1.005	1.016	1.000	1.006	1.004
506	Electrical goods .....	.993	.994	.997	.999	1.018	1.015	1.025	1.016	1.002	.994	.972	.985	.995	.995
507	Hardware, plumbing & heating equipment	1.025	1.033	1.014	1.002	1.007	1.007	.991	.992	.974	.969	.990	1.001	1.025	1.030
508	Machinery, equip. & supplies	1.004	1.013	1.005	1.006	1.002	1.001	.991	1.007	1.006	.976	.995	1.001	1.003	1.014
509	Miscellaneous durable goods ...	.971	1.008	1.010	1.002	1.035	1.041	1.030	1.015	1.000	.960	.956	.962	.972	1.011
51	Nondurable goods	1.016	.999	.964	.980	.965	.956	.974	1.017	1.025	1.032	1.038	1.031	1.015	.997
511	Paper & paper products	1.018	1.010	.994	.998	.999	.996	.970	.996	.986	1.001	1.031	1.016	1.020	1.012
512	Drugs, drug proprietaries and druggists' sundries	1.009	1.028	.968	.960	.963	.960	.992	1.024	.984	1.015	1.046	1.036	1.004	1.028
513	Apparel, piece goods & notions .....	.955	.952	1.019	1.050	1.057	1.060	1.035	.966	.946	.987	.995	.984	.956	.953
514	Groceries & related products .....	.984	.987	.983	.986	.981	.961	.995	1.044	1.048	1.024	1.005	1.005	.981	.986
515	Farm-product raw materials	1.043	.983	.825	.850	.831	.815	.885	1.098	1.130	1.156	1.198	1.151	1.036	.980
516	Chemicals & allied products .....	.994	1.036	1.037	1.026	1.002	1.009	.949	.972	.985	.972	.995	1.019	.994	1.032
517	Petroleum & petroleum products	1.004	.937	.957	.971	.981	.953	1.025	1.011	1.022	1.103	1.088	.981	1.011	.931
518	Beer, wine, & distilled beverages	1.013	1.029	1.002	1.026	.997	.983	1.004	1.059	1.045	.911	.944	.987	1.015	1.028
519	Misc. nondurable goods	1.105	1.061	.970	.977	.922	.924	.948	.966	.996	1.035	1.030	1.059	1.104	1.059

^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 1989

BW89-04
Issued June 1989



U.S. Department of Commerce
BUREAU OF THE CENSUS

Sales: April 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$141.9 billion, up 1.3 percent from the revised March level and up 9.9 percent from a year ago. The March preliminary estimate was revised upward by \$0.1 billion or about 0.1 percent. April sales of durable goods were up 0.2 percent from March, and were 7.3 percent above a year ago. Sales of hardware, plumbing and heating equipment increased 6.5 percent to \$4.1 billion from the March level. However, miscellaneous durable goods decreased 7.4 percent to \$6.6 billion for the same period. April sales of nondurable goods were up 2.4 percent from March and were 12.5 percent above April 1988. Sales of petroleum and petroleum products increased 13.1 percent to \$13.1 billion from the March level.

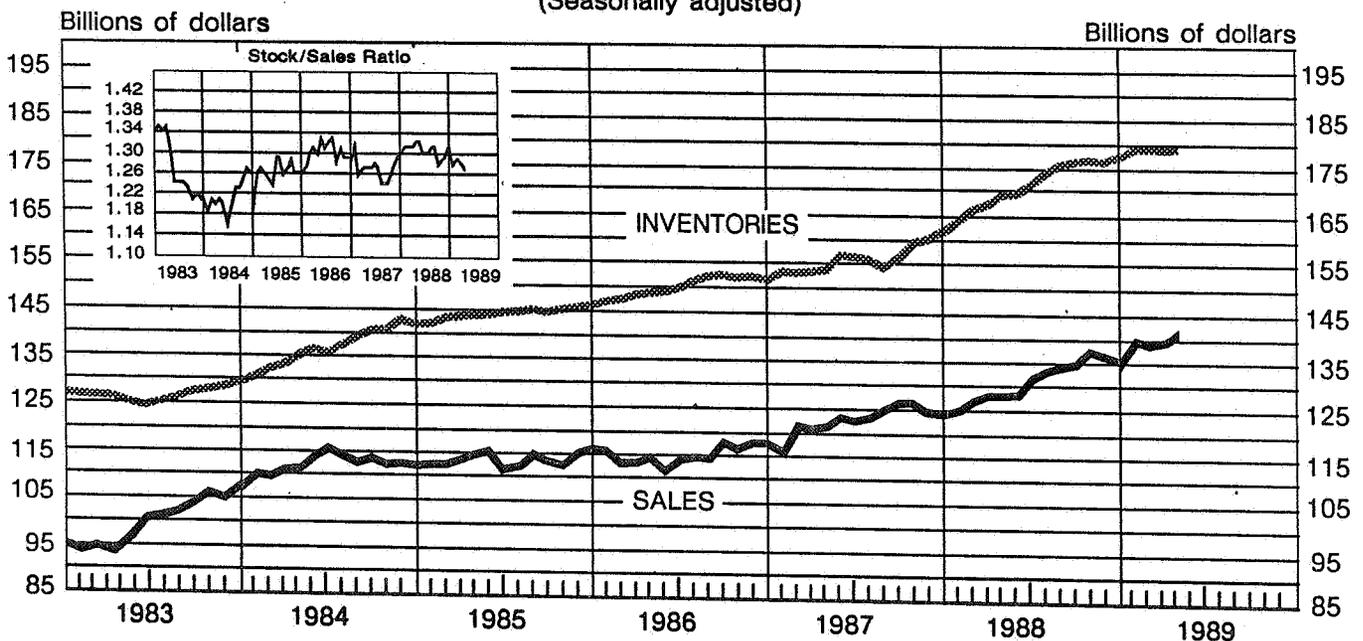
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$179.9 billion at the end of April, up 0.1 percent from the revised March level and up 5.8 percent from a year ago. The March preliminary estimate was

revised downward by \$0.02 billion or about 0.01 percent. Inventories of durable goods wholesalers increased 0.1 percent from the March level and were up 5.1 percent from a year ago. Inventories of nondurable goods wholesalers were up 0.3 percent from the March level and were 7.3 percent above April 1988. Inventories of petroleum and petroleum products increased 6.3 percent from the March level to \$4.9 billion.

Stock/Sales Ratio. The April stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.27. The year ago ratio was 1.32.

NOTE: Since this survey is based on a sample, the estimates will differ from the universe values due to both sampling and nonsampling error. For the month-to-month and year-to-year percent changes shown for sales and inventory at the total, durable, and nondurable levels, the margins of sampling error range from 0.3 to 2.9 percentage points above and below the estimate. See the "Reliability of Data" section on page 4 for a more complete description.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-1989
(Seasonally adjusted)



Monthly Wholesale Trade for May is scheduled to be released July 11, 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: 1989 and 1988

(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	1989				1988									
		Jan.	Feb.	Mar.	Apr. ^P	Apr. ^r	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
	Sales, Total	140,356	139,547	139,991	141,876	129,105	128,790	132,317	133,833	134,726	135,332	138,087	137,239	136,170	
50	Durable goods	70,302	69,343	68,796	68,938	64,273	64,101	64,715	65,559	65,501	66,295	67,581	68,543	68,427	
501	Motor vehicles & auto. equip.	14,532	14,567	14,390	14,335	14,202	13,680	13,534	13,663	13,349	13,548	14,037	14,288	14,031	
502	Furniture & home furnishings	2,431	2,363	2,339	2,334	2,260	2,215	2,241	2,245	2,298	2,310	2,403	2,516	2,503	
503	Lumber & other construction mat.	4,916	4,678	4,448	4,513	4,795	4,645	4,645	4,636	4,592	4,579	4,693	4,564	4,733	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,132	1,907	1,921	1,991	2,018	2,095	2,106	2,147	2,238	2,367	
505	Metals & minerals, ex. petroleum	6,135	5,705	5,971	6,061	5,687	5,494	5,705	5,760	5,826	6,018	5,970	6,221	6,006	
506	Electrical goods	9,529	9,219	9,163	9,178	8,601	8,648	8,706	8,507	8,738	8,679	8,974	9,286	9,068	
507	Hardware, plumbing & heating equipment	4,150	3,985	3,873	4,124	3,806	3,828	4,008	4,249	4,040	3,878	4,025	3,930	3,974	
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,708	16,522	16,810	17,120	17,448	17,912	18,515	18,627	18,596	18,525	
509	Miscellaneous durable goods	7,352	7,272	7,075	6,553	6,493	6,860	6,765	7,033	6,651	6,662	6,705	6,904	7,220	
51	Nondurable goods	70,054	70,204	71,195	72,938	64,832	64,689	67,602	68,274	69,225	69,037	70,506	68,696	67,743	
511	Paper & paper products	4,555	4,508	4,577	4,710	4,096	4,162	4,291	4,415	4,378	4,520	4,520	4,452	4,395	
512	Drugs, drug proprietaries and druggists' sundries	3,268	3,178	3,261	3,258	2,899	2,950	3,035	3,095	3,180	3,179	3,165	3,118	3,255	
513	Apparel, piece goods & notions	4,676	4,286	4,477	4,646	3,974	4,076	4,280	4,268	4,205	4,428	4,259	4,508	4,538	
514	Groceries & related products	19,512	19,719	19,883	19,509	17,552	18,227	18,384	18,447	18,785	18,663	19,409	19,515	19,762	
515	Farm-product raw materials	11,348	11,414	11,474	11,695	10,103	9,916	10,769	11,087	11,412	11,616	12,654	10,778	9,517	
516	Chemicals & allied products	2,929	2,955	2,990	3,125	2,925	3,007	3,073	3,102	2,987	2,928	2,860	2,995	2,920	
517	Petroleum & petroleum products	10,287	11,081	11,568	13,079	10,463	10,742	11,045	11,213	11,218	10,395	10,267	9,998	10,090	
518	Beer, wine, & distilled beverages	3,656	3,534	3,640	3,655	3,544	3,527	3,651	3,555	3,612	3,697	3,673	3,730	3,637	
519	Misc. nondurable goods	9,825	9,531	9,525	9,261	9,276	8,082	9,074	9,112	9,448	9,611	9,699	9,612	9,629	
	Inventories, Total	179,761	179,810	179,681	179,916	170,032	170,346	172,179	174,581	176,368	176,972	177,408	177,060	178,313	
50	Durable goods	117,255	117,932	117,424	117,497	111,837	111,162	110,574	112,702	113,727	114,875	115,225	114,975	115,743	
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,157	20,983	20,972	20,206	20,885	21,047	21,526	21,378	21,353	21,507	
502	Furniture & home furnishings	4,033	4,067	4,078	4,028	4,233	4,136	4,229	4,205	4,188	4,201	4,208	4,107	4,023	
503	Lumber & other construction mat.	5,777	5,564	5,667	5,627	5,688	5,568	5,441	5,543	5,441	5,501	5,587	5,377	5,497	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,736	4,255	4,301	4,303	4,263	4,175	4,332	4,306	4,322	4,467	
505	Metals & minerals, ex. petroleum	8,857	8,878	9,030	8,932	8,468	8,431	8,648	8,670	8,867	9,969	9,128	9,169	8,982	
506	Electrical goods	15,063	15,418	15,353	15,487	14,156	14,137	14,160	14,106	14,336	14,136	14,488	14,480	14,798	
507	Hardware, plumbing & heating equipment	7,588	7,454	7,400	7,465	7,119	7,052	7,096	7,304	7,379	7,414	7,455	7,275	7,264	
508	Machinery, equip. & supplies	41,620	41,730	41,049	41,103	39,051	39,129	38,941	39,851	40,369	41,175	41,111	41,245	41,338	
509	Miscellaneous durable goods	8,377	8,524	8,324	7,962	7,888	7,436	7,550	7,675	7,925	7,621	7,563	7,647	7,867	
51	Nondurable goods	62,506	61,878	62,257	62,419	58,195	59,184	61,605	61,879	62,641	62,097	62,183	62,085	62,570	
511	Paper & paper products	4,586	4,490	4,469	4,453	3,962	3,912	4,032	4,194	4,108	4,246	4,297	4,231	4,310	
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,133	4,875	4,843	4,940	5,069	5,129	4,997	4,870	4,917	5,221	
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,448	7,464	7,781	7,905	7,490	7,456	7,408	7,639	7,870	7,846	
514	Groceries & related products	12,822	12,772	12,931	12,748	12,309	12,148	12,049	12,401	12,373	12,664	12,753	12,584	12,564	
515	Farm-product raw materials	9,097	8,558	8,145	7,645	8,200	8,517	10,492	10,434	10,679	10,348	10,270	9,558	9,562	
516	Chemicals & allied products	2,786	2,512	2,723	2,698	2,501	2,784	2,700	2,857	2,764	2,760	2,713	2,734	2,964	
517	Petroleum & petroleum products	3,972	4,201	4,555	4,948	4,062	4,106	4,072	4,084	4,196	4,134	3,940	3,861	3,858	
518	Beer, wine, & distilled beverages	4,096	4,026	4,036	4,053	4,030	3,948	3,932	4,025	4,090	4,071	4,143	4,128	4,176	
519	Misc. nondurable goods	11,783	11,727	11,913	12,297	10,692	10,987	11,483	11,525	11,846	11,469	11,558	12,202	12,069	
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.32	1.32	1.30	1.30	1.31	1.31	1.28	1.29	1.31	
50	Durable goods	1.67	1.70	1.71	1.70	1.74	1.73	1.71	1.72	1.74	1.73	1.70	1.68	1.69	
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.55	1.48	1.53	1.49	1.53	1.58	1.59	1.52	1.49	1.53	
502	Furniture & home furnishings	1.66	1.72	1.74	1.73	1.87	1.87	1.89	1.87	1.82	1.82	1.75	1.63	1.61	
503	Lumber & other construction mat.	1.18	1.19	1.27	1.25	1.19	1.20	1.17	1.20	1.18	1.20	1.19	1.18	1.16	
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.22	2.23	2.24	2.16	2.11	1.99	2.09	2.01	1.93	1.89	
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.47	1.49	1.53	1.52	1.54	1.52	1.46	1.53	1.47	1.50	
506	Electrical goods	1.58	1.67	1.68	1.69	1.65	1.63	1.63	1.66	1.64	1.63	1.61	1.56	1.63	
507	Hardware, plumbing & heating equipment	1.82	1.87	1.91	1.81	1.87	1.84	1.77	1.72	1.83	1.91	1.85	1.85	1.83	
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.09	2.36	2.33	2.27	2.28	2.25	2.22	2.21	2.22	2.23	
509	Miscellaneous durable goods	1.14	1.17	1.18	1.22	1.21	1.08	1.12	1.09	1.19	1.14	1.13	1.11	1.09	
51	Nondurable goods .....	.89	.88	.87	.86	.90	.91	.91	.91	.90	.90	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.95	.97	.94	.94	.95	.94	.94	.95	.95	.98	
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.58	1.68	1.64	1.63	1.64	1.61	1.57	1.54	1.58	1.60	
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.82	1.88	1.90	1.85	1.75	1.77	1.67	1.79	1.75	1.73	
514	Groceries & related products .....	.66	.65	.66	.65	.70	.67	.66	.67	.66	.68	.66	.64	.64
515	Farm-product raw materials .....	.80	.75	.71	.65	.81	.89	.97	.94	.94	.89	.81	.89	1.00
516	Chemicals & allied products .....	.95	.88	.91	.88	.89	.92	.88	.86	.93	.94	.95	.92	1.02
517	Petroleum & petroleum products .....	.39	.38	.40	.38	.39	.38	.37	.36	.37	.40	.38	.39	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.14	1.12	1.08	1.13	1.13	1.10	1.13	1.11	1.15	
519	Misc. nondurable goods	1.20	1.23	1.25	1.33	1.15	1.35	1.27	1.26	1.25	1.19	1.19	1.27	1.25	

^rRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989				1988								Total 4 mos.		
		Jan.	Feb.	Mar.	Apr. ^P	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1989	1988
	Sales, Total	131,788	127,414	148,920	136,978	127,618	131,689	137,210	126,841	138,551	136,994	141,335	138,289	136,599	545,098	500,822
50	Durable goods	63,265	62,003	72,946	67,531	64,491	65,312	68,468	62,555	67,904	68,511	70,825	68,957	67,261	285,745	242,953
501	Motor vehicles & auto. equip.	13,064	13,008	15,066	14,206	14,500	14,337	14,617	13,335	13,456	12,722	14,893	14,531	14,185	55,344	51,970
502	Furniture & home furnishings	2,171	2,136	2,428	2,173	2,188	2,177	2,333	2,124	2,463	2,435	2,686	2,604	2,393	8,908	8,770
503	Lumber & other construction mat. . .	3,982	3,616	4,399	4,409	4,900	4,840	5,202	4,979	5,272	5,041	5,111	4,482	4,056	16,406	16,659
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2,070	1,842	2,301	1,921	1,802	1,673	1,921	1,832	2,198	2,331	2,460	2,551	2,438	8,134	7,091
505	Metals & minerals, ex. petroleum ..	5,939	5,334	7,052	5,934	5,676	5,390	6,036	5,403	5,960	6,542	5,797	5,804	5,676	22,359	22,359
506	Electrical goods	8,633	8,334	9,456	8,545	8,119	8,285	8,880	8,167	9,201	9,200	9,826	9,778	9,068	34,968	31,678
507	Hardware, plumbing & heating equipment	3,786	3,495	3,838	3,996	3,779	3,943	4,389	4,198	4,274	3,967	4,263	3,922	3,771	15,115	14,268
508	Machinery, equip. & supplies	17,216	17,868	20,892	19,669	16,852	17,382	17,890	16,279	18,575	19,145	18,534	18,243	18,692	75,645	64,445
509	Miscellaneous durable goods	6,404	6,370	7,514	6,678	6,675	7,285	7,198	6,238	6,505	7,128	7,255	7,042	6,982	26,966	25,703
51	Nondurable goods	68,521	65,411	75,974	69,447	63,127	66,377	68,744	64,286	70,647	68,483	70,510	69,332	69,338	279,353	257,869
511	Paper & paper products	4,464	4,242	4,907	4,451	3,973	4,016	4,433	4,115	4,641	4,624	4,561	4,488	4,382	18,064	16,393
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,089	2,815	2,932	3,093	2,894	3,266	3,284	3,184	3,121	3,248	12,798	11,447
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,935	3,410	3,721	4,421	4,358	5,261	4,680	4,668	4,558	3,240	17,357	15,327
514	Groceries & related products	18,985	18,043	20,037	18,670	17,113	18,719	18,917	18,336	19,480	18,458	19,176	19,906	20,296	75,735	70,610
515	Farm-product raw materials	12,188	10,969	12,277	10,900	9,456	10,332	10,349	9,352	10,362	10,745	13,110	11,155	10,926	46,334	39,685
516	Chemicals & allied products	2,835	2,710	3,262	3,097	2,998	3,151	3,377	2,910	3,109	3,016	2,886	2,863	2,576	11,904	10,886
517	Petroleum & petroleum products	11,007	10,931	13,060	12,124	10,034	10,312	10,504	10,226	10,960	10,478	9,949	10,198	10,867	47,172	43,982
518	Beer, wine, & distilled beverages ..	2,837	2,806	3,695	3,337	3,328	3,746	4,122	3,530	4,016	3,741	3,607	3,913	4,201	12,675	12,849
519	Misc. nondurable goods	8,538	8,340	10,592	9,844	10,000	9,448	9,528	8,565	9,552	9,457	9,369	9,131	9,600	37,314	36,690
	Inventories, Total	181,054	181,481	181,246	180,993	171,003	168,419	171,341	172,497	172,736	175,787	178,969	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	118,580	112,803	111,410	111,500	113,366	113,470	115,469	115,561	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,157	21,004	20,783	20,307	20,321	20,205	22,000	21,335	21,652	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	4,049	4,036	4,225	4,173	4,225	4,243	4,268	4,260	4,174	3,976	3,983	(X)	(X)
503	Lumber & other construction mat. . .	5,540	5,453	5,786	5,658	5,908	5,601	5,675	5,748	5,408	5,468	5,498	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	4,312	4,469	4,539	4,708	4,234	4,215	4,329	4,434	4,267	4,488	4,418	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum ..	8,999	8,878	9,102	9,048	8,561	8,557	8,968	9,030	8,681	8,763	8,945	8,821	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,261	15,363	14,057	14,095	14,146	14,360	14,551	14,489	14,720	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,461	7,570	7,614	7,283	7,151	7,110	7,355	7,431	7,347	7,396	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,131	41,802	39,637	39,325	39,175	39,931	40,409	40,804	41,399	41,492	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,994	7,894	7,510	7,565	7,944	8,250	7,850	7,676	7,647	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,413	58,200	57,009	59,841	59,131	59,266	60,318	63,408	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,489	3,994	3,889	4,024	4,190	4,092	4,119	4,280	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,302	5,026	4,688	4,742	4,881	4,924	4,957	4,987	4,838	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	8,034	7,113	7,908	8,300	7,917	7,903	7,667	7,379	7,445	7,744	(X)	(X)
514	Groceries & related products	12,886	12,836	12,685	12,491	12,087	11,941	11,880	12,165	11,890	12,601	13,314	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,650	8,446	7,362	7,897	7,274	8,918	8,671	8,703	9,158	11,276	10,600	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,682	2,720	2,766	2,674	2,866	2,770	2,662	2,789	2,619	2,637	2,693	2,881	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,669	4,661	3,839	3,929	3,954	4,006	3,999	4,237	3,983	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages ..	3,869	3,974	4,117	4,175	4,151	3,964	4,034	4,013	4,020	4,087	4,387	4,314	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	13,133	11,419	10,560	11,219	10,628	10,946	10,873	11,165	12,153	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.32	1.34	1.28	1.25	1.36	1.25	1.28	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.30	1.62	1.76	1.75	1.71	1.63	1.81	1.67	1.69	1.63	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.56	1.45	1.45	1.39	1.52	1.50	1.73	1.43	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.67	1.86	1.93	1.92	1.81	2.00	1.73	1.75	1.55	1.66	1.66	(X)	(X)
503	Lumber & other construction mat. . .	1.39	1.51	1.32	1.33	1.21	1.16	1.09	1.15	1.03	1.08	1.08	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies ..	2.08	2.43	1.97	2.45	2.35	2.52	2.25	2.42	1.94	1.93	1.80	1.66	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum ..	1.52	1.66	1.29	1.52	1.51	1.59	1.49	1.67	1.46	1.34	1.54	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.80	1.73	1.70	1.59	1.76	1.58	1.57	1.50	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.91	1.93	1.81	1.62	1.75	1.74	1.85	1.73	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.13	2.35	2.26	2.19	2.45	2.18	2.13	2.23	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.20	1.18	1.03	1.05	1.27	1.27	1.10	1.06	1.09	1.08	(X)	(X)
51	Nondurable goods .....	.96	.98	.83	.90	.92	.86	.87	.92	.84	.88	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	1.01	1.01	.97	.91	1.02	.88	.89	.94	.93	.96	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.50	1.72	1.79	1.60	1.53	1.69	1.51	1.51	1.57	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	2.04	2.09	2.13	1.88	1.82	1.50	1.64	1.58	1.63	2.39	(X)	(X)
514	Groceries & related products .....	.68	.71	.63	.67	.71	.64	.63	.66	.61	.68	.69	.66	.63	(X)	(X)
515	Farm-product raw materials .....	.89	.90	.69	.88	.84	.70	.88	.93	.84	.85	.86	.97	1.01	(X)	(X)
516	Chemicals & allied products .....	.98	.98	.83	.89	.89	.91	.82	.91	.80	.87	.91	.94	1.12	(X)	(X)
517	Petroleum & petroleum products .....	.39	.38	.36	.38	.38	.38	.38	.39	.38	.40	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages ..	1.38	1.42	1.11	1.25	1.25	1.06	.98	1.14	1.00	1.09	1.22	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.33	1.14	1.12	1.18	1.24	1.15	1.15	1.19	1.33	1.30	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.
 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. 1989 from Mar. 1989	Apr. 1989 from Apr. 1988	4 months 1989 from 4 months 1988	Apr. 1989 from Mar. 1989	Apr. 1989 from Apr. 1988	Apr. 1989 from Mar. 1989	Apr. 1989 from Apr. 1988	Apr. 1989 from Mar. 1989	Apr. 1989 from Apr. 1988
	Total	-8.0	+7.3	+8.8	-1	+5.8	+1.3	+9.9	+1	+5.8
50	Durable goods	-7.4	+4.7	+9.4	+6	+5.1	+2	+7.3	+1	+5.1
501	Motor vehicles & auto. equip.	-5.7	-2.0	+6.5	-7	+5.5	-4	+9	+9	+5.6
502	Furniture & home furnishings	-10.5	-7	+1.6	-3	-4.5	-2	+3.3	-1.2	-4.8
503	Lumber & other construction mat.	+2	-10.0	-1.6	+1.2	-8	+1.5	-5.9	-7	-1.0
504	Sporting, recreational, photo, graphic & hobby goods, toys & supplies	-16.5	+6.6	+14.7	+3.7	+11.2	-3.5	+11.8	+3.6	+11.3
505	Metals & minerals, ex. petroleum	-15.9	+4.5	+8.5	-6	+5.7	+1.5	+6.6	-1.1	+5.5
506	Electrical goods	-9.6	+5.2	+10.4	+7	+9.3	+2	+6.7	+9	+9.4
507	Hardware, plumbing & heating equipment	+4.1	+5.7	+5.9	+6	+4.5	+6.5	+8.4	+9	+4.9
508	Machinery, equip. & supplies	-5.9	+16.7	+17.4	+1.6	+5.5	+2.0	+19.3	+1	+5.3
509	Miscellaneous durable goods	-11.1	.0	+4.9	-1.9	+1.3	-7.4	+9	-4.3	+1.0
51	Nondurable goods	-8.6	+10.0	+8.3	-1.5	+7.2	+2.4	+12.5	+3	+7.3
511	Paper & paper products	-9.3	+12.0	+10.2	-1.6	+12.4	+2.9	+15.0	-4	+12.4
512	Drugs, drug proprietaries and druggists' sundries	-9.7	+9.7	+11.8	+3.3	+5.5	-1	+12.4	+7	+5.3
513	Apparel, piece goods & notions	-16.7	+15.4	+13.2	+1.6	+12.9	+3.8	+16.9	+1.9	+13.2
514	Groceries & related products	-6.8	+9.1	+7.3	-1.5	+3.3	-9	+11.1	-1.4	+3.6
515	Farm-product raw materials	-11.2	+15.3	+16.8	-12.8	-6.8	+1.9	+15.8	-6.1	-6.8
516	Chemicals & allied products	-5.1	+3.3	+9.4	+1.7	+3.4	+4.5	+6.8	-1.0	+3.7
517	Petroleum & petroleum products	-7.2	+20.8	+7.3	-2	+21.4	+13.1	+25.0	+6.3	+21.8
518	Beer, wine, & distilled beverages	-9.7	+3	-1.4	+1.4	+6	+4	+3.1	+4	+6
519	Misc. nondurable goods	-7.1	-1.6	+1.7	+1	+15.0	-2.8	-2	+3.2	+15.0

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).

The margin of sampling error, as used on the front page of this publication, indicates a range about the estimate which corresponds to a 90 percent confidence interval. If, for example, the estimate is up .8 percent and the margin of sampling error is 1.3 percentage points above or below the estimate, then the indicated range is down .5 percent to up 2.1 percent. If the range contains 0, it is uncertain whether there was an increase or decrease.

Nonsampling Errors

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

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

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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

X Cumulative coefficients of variation are not applicable for inventories.

NOTE: Coefficients of variation are based on data unadjusted for seasonal variations or trading-day differences. The range and median coefficients of variation are based on data for November 1988 through April 1989.

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

SIC code	Kind of business	1988										1989				
		Apr. ^r	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar. ^r	Apr. ^r	May	
	Sales,¹ Total .....	.986	1.021	1.039	.950	1.031	1.014	1.029	1.011	.999	.945	.912	1.055	.968	1.042
50	Durable goods	1.008	1.017	1.055	.958	1.037	1.036	1.052	1.010	.978	.904	.891	1.052	.981	1.039	
501	Motor vehicles & auto. equip. ...	1.021	1.048	1.080	.976	1.008	.939	1.061	1.017	1.011	.899	.893	1.047	.991	1.087	
502	Furniture & home furnishings ...	.968	.983	1.041	.946	1.072	1.054	1.118	1.035	.956	.893	.904	1.038	.931	1.021
503	Lumber & other construction mat.	1.022	1.042	1.120	1.074	1.148	1.101	1.089	.982	.857	.810	.773	.989	.977	1.078	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.945	.871	.965	.908	1.049	1.107	1.146	1.140	1.030	.889	.909	1.041	.901	.898
505	Metals & minerals, ex. petroleum	.998	.981	1.058	.938	1.023	1.087	.971	.933	.945	.968	.935	1.181	.979	.991	
506	Electrical goods .....	.944	.958	1.020	.960	1.053	1.060	1.095	1.053	1.000	.906	.904	1.032	.931	.981
507	Hardware, plumbing & heating equipment .....	.993	1.030	1.095	.988	1.058	1.023	1.059	.998	.949	.910	.877	.991	.969	1.057
508	Machinery, equip. & supplies ...	1.020	1.034	1.045	.933	1.037	1.034	.995	.981	1.009	.910	.915	1.081	.998	1.052	
509	Miscellaneous durable goods ...	1.028	1.062	1.064	.887	.978	1.070	1.082	1.020	.967	.871	.876	1.062	1.019	1.069	
51	Nondurable goods .....	.974	1.026	1.013	.942	1.028	.999	1.004	1.015	1.016	.980	.932	1.064	.953	1.050
511	Paper & paper products .....	.970	.965	1.033	.932	1.060	1.023	1.009	1.008	.997	.980	.941	1.072	.945	.978
512	Drugs, drug proprietaries and druggists' sundries .....	.971	.994	1.019	.935	1.027	1.033	1.006	1.001	.998	1.016	.935	1.049	.948	1.022
513	Apparel, piece goods & notions	.858	.913	1.033	1.021	1.251	1.057	1.096	1.011	.714	.930	1.015	1.055	.847	.931	
514	Groceries & related products ...	.975	1.027	1.029	.994	1.037	.989	.988	1.020	1.027	.973	.915	1.018	.957	1.056
515	Farm-product raw materials ...	.936	1.042	.961	.845	.908	.925	1.038	1.035	1.148	1.074	.961	1.070	.932	1.051
516	Chemicals & allied products ...	1.025	1.048	1.099	.938	1.041	1.030	1.009	.959	.883	.968	.917	1.091	.991	1.079	
517	Petroleum & petroleum products	.959	.960	.951	.912	.977	1.008	.969	1.020	1.077	1.070	.991	1.129	.927	.984	
518	Beer, wine, & distilled beverages	.939	1.062	1.129	.993	1.112	1.012	.982	1.049	1.155	.776	.794	1.015	.913	1.102	
519	Misc. nondurable goods	1.078	1.169	1.050	.940	1.011	.984	.966	.950	.997	.869	.875	1.112	1.063	1.174	
	Inventories,¹ Total	1.006	.989	.995	.993	.986	.995	1.009	1.004	1.001	1.005	1.008	1.008	1.006	.989	
50	Durable goods	1.006	1.002	1.007	1.006	1.002	1.009	1.004	.995	.985	.988	.996	1.003	1.006	1.002	
501	Motor vehicles & auto. equip. ...	1.001	.991	1.005	.973	.960	1.022	.998	1.014	1.016	.995	1.014	1.016	1.000	.991	
502	Furniture & home furnishings ...	.998	1.009	.999	1.009	1.019	1.014	.992	.968	.990	1.009	.995	.993	1.002	1.008
503	Lumber & other construction mat.	1.039	1.006	1.043	1.037	.994	.994	.984	.971	.973	.959	.980	1.021	1.041	1.007	
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.995	.980	1.006	1.040	1.022	1.036	1.026	.982	.967	.971	.981	.993	.994	.980
505	Metals & minerals, ex. petroleum	1.011	1.015	1.037	1.018	.979	.977	.980	.962	1.005	1.016	1.000	1.008	1.013	1.013	
506	Electrical goods .....	.993	.997	.999	1.018	1.015	1.025	1.016	1.002	.994	.972	.985	.994	.992	.999
507	Hardware, plumbing & heating equipment	1.023	1.014	1.002	1.007	1.007	.991	.992	.974	.969	.990	1.001	1.023	1.020	1.013	
508	Machinery, equip. & supplies ...	1.015	1.005	1.006	1.002	1.001	.991	1.007	1.008	.978	.995	1.001	1.002	1.017	1.006	
509	Miscellaneous durable goods ...	1.001	1.010	1.002	1.035	1.041	1.030	1.015	1.000	.960	.956	.962	.979	1.004	1.014	
51	Nondurable goods .....	.997	.964	.980	.965	.956	.974	1.017	1.025	1.032	1.038	1.031	1.015	.996	.963
511	Paper & paper products	1.008	.994	.998	.999	.996	.970	.996	.986	1.001	1.031	1.016	1.021	1.008	.991	
512	Drugs, drug proprietaries and druggists' sundries	1.031	.968	.960	.963	.960	.992	1.024	.984	1.015	1.046	1.036	1.007	1.033	.970	
513	Apparel, piece goods & notions	.953	1.019	1.050	1.057	1.060	1.035	.966	.946	.987	.995	.984	.954	.951	1.022	
514	Groceries & related products ...	.982	.983	.986	.981	.961	.995	1.044	1.048	1.024	1.005	.981	.980	.981	
515	Farm-product raw materials ...	.963	.825	.850	.831	.815	.885	1.098	1.130	1.156	1.198	1.151	1.037	.963	.822
516	Chemicals & allied products ...	1.028	1.037	1.026	1.002	1.009	.949	.972	.985	.972	.995	1.019	.999	1.026	1.046	
517	Petroleum & petroleum products	.945	.957	.971	.981	.953	1.025	1.011	1.022	1.103	1.088	.981	1.003	.942	.949	
518	Beer, wine, & distilled beverages	1.030	1.002	1.026	.997	.983	1.004	1.059	1.045	.911	.944	.987	1.020	1.030	1.001	
519	Misc. nondurable goods	1.068	.970	.977	.922	.924	.948	.966	.996	1.035	1.030	1.059	1.101	1.068	.969	

^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

May 1989

BW89-05
Issued July 1989

U.S. Department of Commerce
BUREAU OF THE CENSUS

Sales. May 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$143.0 billion, up 0.5 percent from the revised April level and up 11.2 percent from a year ago. The April preliminary estimate was revised upward by \$0.4 billion or about 0.3 percent. May sales of durable goods were up 2.0 percent from April, and were 10.3 percent above a year ago. Monthly increases in the sales of durable goods were as follows: metals and minerals, except petroleum increased 12.7 percent to \$7.0 billion and miscellaneous durable goods were up 11.3 percent to \$7.3 billion. However, sales of motor vehicles and automotive equipment decreased 7.2 percent to \$13.1 billion for the same period. May sales of nondurable goods were down 0.9 percent from April but were 12.0 percent above May 1988. Monthly decreases in the nondurable goods group were as follows: sales of farm-product raw materials were down 4.4 percent to \$11.1 billion and miscellaneous nondurable goods decreased 3.6 percent to \$8.9 billion.

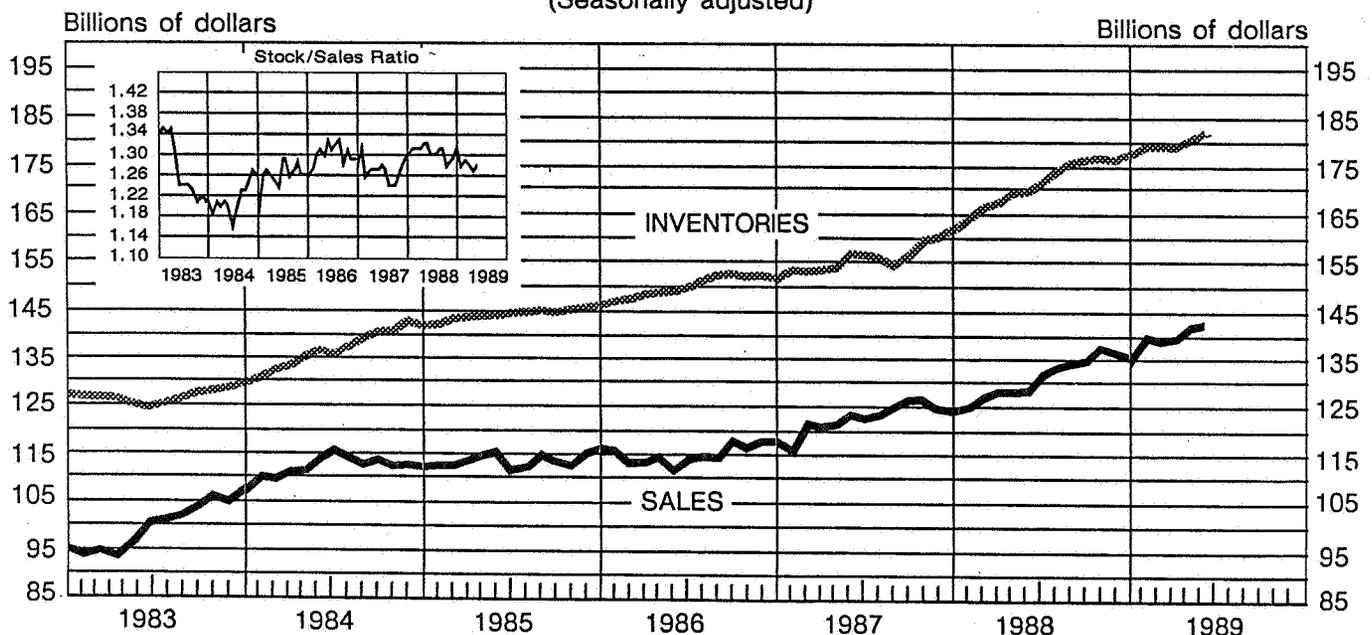
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$182.7 billion at the end of May, up 0.8

percent from the revised April level and up 7.4 percent from a year ago. The April preliminary estimate was revised upward by \$1.3 billion or about 0.7 percent. Inventories of durable goods wholesalers increased 1.5 percent from the April level and were up 9.1 percent from a year ago. Inventories of nondurable goods wholesalers were down 0.6 percent from the April level but were 4.2 percent above May 1988.

Stock/Sales Ratio. The May stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28. The year ago ratio was 1.32.

NOTE: Since this survey is based on a sample, the estimates will differ from the universe values due to both sampling and nonsampling error. For the month-to-month and year-to-year, percent changes shown for sales and inventory at the total, durable, and nondurable levels, the margins of sampling error range from 0.4 to 4.1 percentage points above and below the estimate. See the "Reliability of Data" section on page 4 for a more complete description.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-89
(Seasonally adjusted)



Monthly Wholesale Trade for June is scheduled to be released August 9, 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: 1989 and 1988

(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	1989					1988							
		Jan.	Feb.	Mar.	Apr.	May ^P	May ^F	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	140,356	139,547	139,991	142,290	143,047	128,687	132,317	133,833	134,726	135,332	138,087	137,239	136,170
50	Durable goods	70,302	69,343	68,796	69,345	70,747	64,159	64,715	65,559	65,501	66,295	67,581	68,543	68,427
501	Motor vehicles & auto. equip.	14,532	14,567	14,390	14,180	13,145	13,879	13,534	13,663	13,349	13,548	14,037	14,288	14,031
502	Furniture & home furnishings	2,431	2,363	2,339	2,427	2,381	2,226	2,241	2,245	2,298	2,310	2,403	2,516	2,503
503	Lumber & other construction mat.	4,916	4,678	4,448	4,588	4,608	4,596	4,645	4,636	4,592	4,579	4,693	4,564	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,082	2,103	1,939	1,991	2,018	2,095	2,106	2,147	2,238	2,367
505	Metals & minerals, ex. petroleum	6,135	5,705	5,971	6,236	7,029	5,506	5,705	5,760	5,826	6,018	5,970	6,221	6,006
506	Electrical goods	9,529	9,219	9,163	9,328	9,818	8,594	8,706	8,507	8,738	8,679	8,974	9,286	9,068
507	Hardware, plumbing & heating equipment	4,160	3,985	3,873	4,146	4,235	3,828	4,008	4,249	4,040	3,878	4,025	3,930	3,974
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,831	20,140	16,827	17,120	17,448	17,912	18,515	18,627	18,596	18,525
509	Miscellaneous durable goods	7,352	7,272	7,075	6,547	7,288	6,764	6,765	7,033	6,651	6,662	6,705	6,904	7,220
51	Nondurable goods	70,054	70,204	71,195	72,945	72,300	64,528	67,602	68,274	69,225	69,037	70,508	68,696	67,743
511	Paper & paper products	4,555	4,508	4,577	4,738	4,775	4,183	4,291	4,415	4,378	4,520	4,520	4,452	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,178	3,281	3,246	3,306	2,935	3,035	3,095	3,180	3,179	3,165	3,118	3,255
513	Apparel, piece goods & notions	4,676	4,286	4,477	4,643	4,422	4,121	4,280	4,268	4,205	4,428	4,259	4,508	4,538
514	Groceries & related products	19,512	19,719	19,683	19,852	19,987	18,139	18,384	18,447	18,785	18,663	19,409	19,515	19,762
515	Farm-product raw materials	11,348	11,414	11,474	11,597	11,082	10,129	10,769	11,067	11,412	11,616	12,654	10,778	9,517
516	Chemicals & allied products	2,929	2,955	2,990	3,033	2,996	3,004	3,073	3,102	2,997	2,928	2,860	2,985	2,920
517	Petroleum & petroleum products	10,287	11,081	11,568	13,016	13,324	10,642	11,045	11,213	11,218	10,395	10,267	9,998	10,090
518	Beer, wine, & distilled beverages	3,656	3,534	3,640	3,630	3,509	3,554	3,651	3,555	3,612	3,697	3,673	3,730	3,637
519	Misc. nondurable goods	9,825	9,531	9,525	9,231	8,899	7,821	9,074	9,112	9,448	9,611	9,699	9,612	9,629
	Inventories, Total	179,761	179,810	179,681	181,226	182,654	170,086	172,179	174,581	176,368	176,972	177,408	177,060	178,313
50	Durable goods	117,255	117,932	117,424	119,069	120,880	110,823	110,574	112,702	113,727	114,875	115,225	114,975	115,743
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,469	22,790	20,930	20,206	20,885	21,047	21,526	21,378	21,353	21,507
502	Furniture & home furnishings	4,033	4,067	4,076	4,004	4,018	4,128	4,229	4,205	4,188	4,201	4,208	4,107	4,023
503	Lumber & other construction mat.	5,777	5,564	5,667	5,696	5,849	5,464	5,441	5,543	5,441	5,501	5,587	5,377	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,656	4,799	4,279	4,303	4,263	4,175	4,332	4,306	4,322	4,467
505	Metals & minerals, ex. petroleum	8,857	8,878	9,030	9,007	9,053	8,431	8,648	8,670	8,867	8,969	9,128	9,169	8,982
506	Electrical goods	15,063	15,418	15,353	15,620	15,762	14,067	14,180	14,106	14,336	14,136	14,488	14,480	14,798
507	Hardware, plumbing & heating equipment	7,588	7,454	7,400	7,601	7,809	7,038	7,086	7,304	7,379	7,414	7,458	7,275	7,264
508	Machinery, equip. & supplies	41,620	41,730	41,049	42,184	42,883	39,013	39,841	39,851	40,369	41,175	41,111	41,245	41,338
509	Miscellaneous durable goods	8,377	8,524	8,324	7,632	7,917	7,473	7,550	7,675	7,925	7,621	7,563	7,647	7,867
51	Nondurable goods	62,506	61,878	62,257	62,157	61,774	59,263	61,605	61,879	62,641	62,097	62,183	62,085	62,571
511	Paper & paper products	4,588	4,490	4,469	4,541	4,658	3,889	4,032	4,194	4,108	4,246	4,297	4,231	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,169	5,282	4,823	4,940	5,069	5,129	4,997	4,870	4,917	5,221
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,190	7,822	7,814	7,905	7,490	7,456	7,408	7,639	7,870	7,846
514	Groceries & related products	12,822	12,772	12,931	12,879	13,064	12,185	12,049	12,401	12,373	12,664	12,753	12,584	12,564
515	Farm-product raw materials	9,097	8,558	8,145	7,776	7,469	8,806	10,492	10,434	10,679	10,348	10,270	9,558	9,562
516	Chemicals & allied products	2,796	2,812	2,723	2,703	2,616	2,740	2,700	2,857	2,764	2,760	2,713	2,734	2,964
517	Petroleum & petroleum products	3,972	4,201	4,655	4,901	4,819	4,158	4,072	4,084	4,196	4,194	3,940	3,961	3,858
518	Beer, wine, & distilled beverages	4,099	4,026	4,036	3,986	4,030	3,950	3,932	4,025	4,090	4,071	4,143	4,128	4,176
519	Misc. nondurable goods	11,783	11,727	11,913	12,012	12,014	10,898	11,483	11,525	11,846	11,469	11,558	12,202	12,069
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.28	1.32	1.30	1.30	1.31	1.31	1.28	1.29	1.31
50	Durable goods	1.67	1.70	1.71	1.72	1.71	1.73	1.71	1.72	1.74	1.73	1.70	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.59	1.73	1.51	1.49	1.53	1.58	1.59	1.52	1.49	1.53
502	Furniture & home furnishings	1.66	1.72	1.74	1.65	1.69	1.85	1.89	1.87	1.82	1.82	1.75	1.63	1.61
503	Lumber & other construction mat.	1.18	1.19	1.27	1.24	1.27	1.19	1.17	1.20	1.18	1.20	1.19	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.24	2.28	2.21	2.16	2.11	1.99	2.06	2.01	1.93	1.89
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.44	1.29	1.53	1.52	1.54	1.52	1.49	1.53	1.47	1.50
506	Electrical goods	1.58	1.67	1.68	1.67	1.61	1.64	1.63	1.66	1.64	1.63	1.61	1.56	1.63
507	Hardware, plumbing & heating equipment	1.82	1.87	1.91	1.83	1.84	1.84	1.77	1.72	1.83	1.91	1.85	1.85	1.83
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.13	2.13	2.32	2.27	2.28	2.25	2.22	2.21	2.22	2.23
509	Miscellaneous durable goods	1.14	1.17	1.18	1.20	1.09	1.10	1.12	1.09	1.19	1.14	1.13	1.11	1.09
51	Nondurable goods .....	.89	.88	.87	.85	.85	.92	.91	.91	.90	.90	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.96	.98	.93	.94	.95	.94	.94	.95	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.59	1.60	1.64	1.63	1.64	1.61	1.57	1.54	1.58	1.60
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.78	1.77	1.90	1.85	1.75	1.77	1.67	1.79	1.75	1.73
514	Groceries & related products .....	.86	.85	.88	.85	.85	.87	.86	.87	.86	.88	.86	.84	.84
515	Farm-product raw materials .....	.80	.75	.71	.87	.87	.87	.87	.94	.84	.89	.81	.89	1.00
516	Chemicals & allied products .....	.95	.88	.89	.89	.87	.91	.88	.86	.93	.84	.86	.92	1.02
517	Petroleum & petroleum products .....	.39	.38	.40	.38	.36	.39	.37	.36	.37	.37	.40	.38	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.15	1.11	1.08	1.13	1.13	1.10	1.13	1.11	1.15
519	Misc. nondurable goods	1.20	1.23	1.25	1.30	1.35	1.39	1.27	1.26	1.25	1.19	1.19	1.27	1.25

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989					1988					Total 5 mos.				
		Jan.	Feb.	Mar.	Apr.	May ^P	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1989	1988
	Sales, Total	131,786	127,414	148,920	137,567	149,432	131,689	137,210	126,841	138,551	136,994	141,335	138,289	138,599	695,119	632,511
50	Durable goods	63,265	62,003	72,948	68,014	73,550	65,312	68,466	62,555	67,904	68,511	70,825	68,957	67,261	339,778	308,265
501	Motor vehicles & auto. equip.	13,064	13,008	15,088	14,259	13,973	14,337	14,617	13,335	13,456	12,722	14,893	14,531	14,185	69,370	68,307
502	Furniture & home furnishings	2,171	2,136	2,428	2,284	2,410	2,177	2,333	2,124	2,463	2,435	2,686	2,604	2,393	11,409	10,947
503	Lumber & other construction mat.	3,982	3,616	4,399	4,482	5,014	4,840	5,202	4,979	5,272	5,041	5,111	4,482	4,056	21,493	21,509
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,070	1,842	2,301	1,872	1,876	1,673	1,921	1,832	2,198	2,331	2,460	2,551	2,438	9,961	8,764
505	Metals & minerals, ex. petroleum	5,839	5,334	7,052	6,093	6,938	5,390	6,036	5,403	5,960	6,542	5,797	5,804	5,676	31,356	27,749
506	Electrical goods	8,633	8,334	9,456	8,676	9,720	8,285	8,880	8,167	9,201	9,200	9,826	9,778	9,068	44,818	39,963
507	Hardware, plumbing & heating equipment	3,788	3,495	3,838	3,972	4,476	3,943	4,389	4,198	4,274	3,967	4,263	3,922	3,771	19,567	18,211
508	Machinery, equip. & supplies	17,216	17,868	20,892	19,732	21,228	17,382	17,890	16,279	18,575	19,145	18,534	18,243	18,692	96,936	81,827
509	Miscellaneous durable goods	6,404	6,370	7,514	6,665	7,915	7,285	7,198	6,238	6,505	7,128	7,255	7,042	6,982	34,868	32,988
51	Nondurable goods	68,521	65,411	75,974	69,553	75,882	66,377	68,744	64,286	70,647	68,483	70,510	69,332	69,338	355,341	324,246
511	Paper & paper products	4,464	4,242	4,907	4,482	4,851	4,016	4,433	4,115	4,641	4,624	4,561	4,488	4,382	22,746	20,409
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,064	3,409	2,932	3,093	2,894	3,266	3,284	3,184	3,121	3,248	16,182	14,379
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,956	4,024	3,721	4,421	4,358	5,261	4,680	4,668	4,558	3,240	21,402	19,048
514	Groceries & related products	18,985	18,043	20,037	18,840	21,226	18,719	18,917	18,338	19,480	18,458	19,176	19,905	20,296	97,131	89,329
515	Farm-product raw materials	12,188	10,969	12,277	10,959	11,359	10,332	10,349	9,352	10,362	10,745	13,110	11,155	10,926	57,752	50,017
516	Chemicals & allied products	2,835	2,710	3,262	3,018	3,257	3,151	3,377	2,910	3,109	3,016	2,886	2,863	2,578	15,082	14,037
517	Petroleum & petroleum products	11,007	10,981	13,060	12,183	13,231	10,312	10,504	10,228	10,980	10,478	9,949	10,198	10,867	60,462	54,294
518	Beer, wine, & distilled beverages	2,837	2,808	3,695	3,268	3,842	3,746	4,122	3,530	4,016	3,741	3,607	3,913	4,201	16,446	16,595
519	Misc. nondurable goods	8,538	8,340	10,592	9,785	10,883	9,448	9,528	8,565	9,552	9,457	9,369	9,131	9,600	48,138	46,138
	Inventories, Total	181,054	181,481	181,246	182,305	181,181	168,419	171,341	172,497	172,736	175,787	178,969	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	120,185	121,572	111,410	111,500	113,368	113,470	115,469	115,561	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,491	22,653	20,783	20,307	20,321	20,205	22,000	21,335	21,652	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	4,049	3,988	4,074	4,173	4,225	4,243	4,268	4,260	4,174	3,976	3,983	(X)	(X)
503	Lumber & other construction mat.	5,540	5,453	5,786	5,912	6,013	5,601	5,675	5,748	5,408	5,468	5,498	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,312	4,489	4,539	4,605	4,732	4,215	4,329	4,434	4,267	4,488	4,418	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum	8,999	8,878	9,102	9,160	9,198	8,557	8,988	9,030	8,881	8,763	8,945	8,821	9,027	(X)	(X)
506	Electrical goods	14,841	15,187	15,261	15,558	15,809	14,095	14,146	14,360	14,551	14,489	14,720	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,481	7,570	7,745	7,918	7,151	7,110	7,355	7,431	7,347	7,396	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,442	41,772	41,131	42,859	43,226	39,325	39,175	39,331	40,409	40,804	41,399	41,492	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,887	7,949	7,510	7,565	7,944	8,250	7,850	7,676	7,497	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,120	59,609	57,009	59,841	59,131	59,266	60,318	63,408	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,577	4,658	3,889	4,024	4,190	4,092	4,119	4,280	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,329	5,134	4,888	4,742	4,881	4,924	4,957	4,987	4,838	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	7,789	7,924	7,908	8,300	7,917	7,903	7,667	7,379	7,445	7,744	(X)	(X)
514	Groceries & related products	12,888	12,836	12,865	12,647	12,777	11,941	11,880	12,165	11,890	12,601	13,314	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,850	8,446	6,535	6,192	7,274	8,918	8,671	8,703	9,158	11,276	10,800	11,056	(X)	(X)
516	Chemicals & allied products	2,782	2,662	2,720	2,789	2,749	2,866	2,770	2,662	2,789	2,619	2,637	2,693	2,881	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,669	4,627	4,515	3,929	3,954	4,006	3,999	4,237	3,983	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	3,974	4,117	4,082	4,030	3,954	4,034	4,013	4,020	4,087	4,387	4,314	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	12,745	11,630	10,560	11,219	10,626	10,946	10,873	11,165	12,153	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.33	1.21	1.28	1.25	1.36	1.25	1.28	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.62	1.77	1.65	1.71	1.63	1.81	1.67	1.69	1.63	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.58	1.62	1.45	1.39	1.52	1.50	1.73	1.43	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.67	1.75	1.69	1.92	1.81	2.00	1.73	1.75	1.55	1.53	1.66	(X)	(X)
503	Lumber & other construction mat.	1.39	1.51	1.32	1.32	1.20	1.18	1.09	1.15	1.03	1.08	1.08	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.08	2.43	1.97	2.46	2.52	2.52	2.25	2.42	1.94	1.93	1.80	1.68	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum	1.52	1.66	1.29	1.50	1.33	1.59	1.49	1.67	1.46	1.34	1.54	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.79	1.63	1.70	1.59	1.78	1.58	1.57	1.50	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.95	1.77	1.81	1.62	1.75	1.74	1.85	1.73	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.17	2.04	2.28	2.19	2.45	2.18	2.13	2.23	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.18	1.00	1.03	1.05	1.27	1.27	1.10	1.06	1.09	1.08	(X)	(X)
51	Nondurable goods .....	.95	.98	.83	.89	.79	.86	.87	.92	.84	.88	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	1.02	1.00	.97	.91	1.02	.88	.89	.94	.93	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.50	1.74	1.51	1.60	1.53	1.69	1.51	1.51	1.57	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	1.87	1.97	2.13	1.88	1.82	1.50	1.64	1.58	1.63	2.39	(X)	(X)
514	Groceries & related products .....	.68	.71	.63	.67	.60	.64	.63	.66	.61	.68	.69	.66	.63	(X)	(X)
515	Farm-product raw materials .....	.89	.90	.69	.69	.55	.70	.86	.93	.84	.85	.88	.97	1.01	(X)	(X)
516	Chemicals & allied products .....	.98	.98	.83	.92	.84	.91	.82	.91	.90	.87	.91	.94	1.12	(X)	(X)
517	Petroleum & petroleum products .....	.39	.38	.38	.38	.34	.38	.38	.39	.36	.40	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.42	1.11	1.25	1.05	1.06	.98	1.14	1.00	1.09	1.22	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.30	1.07	1.12	1.18	1.24	1.15	1.15	1.19	1.33	1.30	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.
 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 1989 from Apr. 1989	May 1989 from May 1988	5 months 1989 from 5 months 1988	May 1989 from Apr. 1989	May 1989 from May 1988	May 1989 from Apr. 1989	May 1989 from May 1988	May 1989 from Apr. 1989	May 1989 from May 1988
	Total	+8.6	+13.5	+9.9	-.6	+7.6	+5	+11.2	+8	+7.4
50	Durable goods	+8.1	+12.6	+10.2	+1.2	+9.1	+2.0	+10.3	+1.5	+9.1
501	Motor vehicles & auto. equip.	-2.0	-2.5	+4.6	+7	+9.0	-7.2	-5.3	+1.4	+8.9
502	Furniture & home furnishings	+8.4	+10.7	+4.2	+2.7	-2.4	-1.9	+7.0	+3	-2.7
503	Lumber & other construction mat.	+11.9	+3.6	-.1	+1.7	+7.4	+4	+3	+2.7	+7.0
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+2	+12.1	+13.7	+2.8	+12.3	+1.0	+8.5	+3.1	+12.2
505	Metals & minerals, ex. petroleum	+13.9	+28.7	+13.0	+4	+7.5	+12.7	+27.7	+5	+7.4
506	Electrical goods	+12.0	+17.3	+12.1	+1.6	+12.2	+5.3	+14.2	+9	+12.0
507	Hardware, plumbing & heating equipment	+12.7	+13.5	+7.4	+2.2	+10.7	+2.1	+10.6	+2.7	+11.0
508	Machinery, equip. & supplies	+7.6	+22.1	+18.5	+9	+9.9	+1.6	+19.7	+1.7	+9.9
509	Miscellaneous durable goods	+18.8	+8.6	+5.7	+8	+5.8	+11.3	+7.7	+1.1	+5.9
51	Nondurable goods	+9.1	+14.3	+9.6	-4.0	+4.6	-.9	+12.0	-.6	+4.2
511	Paper & paper products	+3.8	+15.8	+11.5	+1.8	+19.8	+8	+14.2	+2.6	+19.8
512	Drugs, drug proprietaries and druggists' sundries	+11.3	+16.3	+12.5	-3.7	+9.5	+1.8	+12.6	+2.2	+9.5
513	Apparel, piece goods & notions	+1.7	+8.1	+12.4	+1.7	+2	-4.8	+7.3	-4.5	+1
514	Groceries & related products	+12.7	+13.4	+8.7	+1.0	+7.0	+7	+10.2	+1.4	+7.2
515	Farm-product raw materials	+3.6	+9.9	+15.5	-17.8	-14.9	-4.4	+9.4	-3.9	-15.2
516	Chemicals & allied products	+7.9	+3.4	+7.4	-1.4	-4.1	-1.2	-.3	-3.2	-4.5
517	Petroleum & petroleum products	+8.6	+28.3	+11.4	-2.4	+14.9	+2.4	+25.2	-1.7	+15.9
518	Beer, wine, & distilled beverages	+17.6	+2.6	-.9	-1.3	+1.9	-2.2	-1.3	+1.1	+2.0
519	Misc. nondurable goods	+11.2	+15.2	+4.3	-8.7	+10.1	-3.6	+13.8	.0	+10.2

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

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

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).

The margin of sampling error, as used on the front page of this publication, indicates a range about the estimate which corresponds to a 90 percent confidence interval. If, for example, the estimate is up .8 percent and the margin of sampling error is 1.3 percentage points above or below the estimate, then the indicated range is down .5 percent to up 2.1 percent. If the range contains 0, it is uncertain whether there was an increase or decrease.

Nonsampling Errors

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

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

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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 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. 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	1.3-1.8	1.7	1.3-1.8	1.7	0.3-0.8	0.8	1.0-1.6	1.2	1.5	1.4	1.1
50	Durable goods	1.9-2.3	2.1	1.8-2.1	2.0	0.5-1.2	1.0	1.0-1.7	1.4	1.9	1.7	0.8
501	Motor vehicles & auto. equip.	4.0-7.4	5.6	4.2-6.9	5.5	1.2-3.1	2.2	2.8-5.8	3.7	5.3	5.8	2.4
502	Furniture & home furnishings	6.5-8.4	7.0	5.6-8.9	7.1	3.1-4.3	3.4	4.8-7.8	6.4	6.5	7.1	4.9
503	Lumber & other construction mat.	4.5-6.5	5.5	4.5-5.9	5.3	1.0-2.9	1.5	2.7-5.1	3.8	5.1	4.6	2.0
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.8-9.4	7.6	5.3-8.7	6.6	2.1-8.6	2.8	2.8-9.3	5.2	5.5	5.4	4.1
505	Metals & minerals, ex. petroleum	5.2-8.4	7.1	4.9-7.8	6.8	1.4-2.5	1.8	2.6-5.6	4.4	6.9	4.5	3.4
506	Electrical goods	2.3-4.4	3.0	2.4-3.2	2.6	0.9-2.9	1.2	1.8-3.3	2.7	2.8	2.8	1.8
507	Hardware, plumbing & heating equipment	7.1-8.3	8.0	7.0-8.2	7.5	1.3-3.3	1.8	3.1-5.2	4.3	7.3	6.9	2.6
508	Machinery, equip. & supplies	2.8-4.7	3.7	2.9-4.2	3.3	1.6-2.9	1.9	2.1-3.6	2.9	3.1	2.7	1.8
509	Miscellaneous durable goods	4.6-6.2	5.6	4.6-6.1	5.3	1.1-2.6	1.7	2.6-4.3	3.4	5.0	4.1	2.3
51	Nondurable goods	2.4-3.2	2.7	2.4-3.1	2.8	0.4-1.1	0.8	1.4-2.2	1.7	2.5	2.9	1.7
511	Paper & paper products	5.0-6.1	5.4	5.0-5.7	5.3	0.7-2.0	1.8	2.1-4.0	2.7	5.0	5.3	1.5
512	Drugs, drug proprietaries and druggists' sundries	4.0-5.3	4.8	3.8-5.7	4.6	1.2-2.0	1.5	2.0-4.0	2.9	4.4	5.3	2.4
513	Apparel, piece goods & notions	8.5-10.7	9.4	7.9-10.7	9.2	2.1-5.9	3.5	4.3-8.7	5.4	9.4	8.0	3.3
514	Groceries & related products	4.8-6.1	5.4	4.8-6.3	5.6	0.8-1.7	0.9	2.4-3.6	2.8	5.0	6.2	2.6
515	Farm-product raw materials	5.1-6.9	5.8	4.8-6.1	5.6	1.3-4.6	2.9	5.0-9.0	7.8	5.4	5.8	7.1
516	Chemicals & allied products	5.5-7.4	6.5	5.1-7.8	6.3	2.1-3.9	2.8	4.6-8.7	5.6	5.9	6.0	3.7
517	Petroleum & petroleum products	5.9-7.5	6.7	6.1-7.0	6.5	0.7-2.0	1.4	3.1-4.3	3.7	6.7	4.7	3.5
518	Beer, wine, & distilled beverages	2.9-4.5	3.7	2.5-4.0	3.4	1.0-2.2	1.5	2.3-3.9	2.9	3.6	2.9	2.1
519	Misc. nondurable goods	4.8-7.1	5.5	4.7-6.7	5.0	1.4-2.6	2.0	2.0-4.3	2.9	5.6	4.5	2.9
	Inventories, Total	1.2-1.4	1.3	1.2-1.5	1.3	0.2-0.3	0.2	0.7-1.3	1.1	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.5	1.5-1.6	1.5	0.2-0.4	0.3	1.0-1.4	1.2	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.7-6.7	6.4	5.7-6.8	6.5	0.8-1.4	0.8	2.2-2.9	2.6	(X)	(X)	(X)
502	Furniture & home furnishings	9.3-9.9	9.7	8.9-9.7	9.3	0.9-2.2	1.5	4.5-7.2	6.6	(X)	(X)	(X)
503	Lumber & other construction mat.	4.9-6.2	5.4	4.7-6.1	5.2	0.8-1.3	1.1	2.7-3.6	3.3	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.2-6.7	5.9	5.7-6.6	5.9	0.8-2.0	1.5	4.3-7.7	5.2	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	4.8-5.6	5.3	4.8-5.7	5.3	0.5-0.8	0.6	2.4-3.7	3.0	(X)	(X)	(X)
506	Electrical goods	2.6-4.0	2.9	2.7-3.7	3.0	0.5-0.8	0.5	1.6-2.2	1.8	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	5.1-6.6	5.7	5.2-6.8	5.8	0.5-1.3	0.9	1.8-4.6	3.5	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.0-4.2	3.7	2.9-4.1	3.5	0.4-0.8	0.6	1.9-2.8	2.1	(X)	(X)	(X)
509	Miscellaneous durable goods	8.6-9.5	9.0	8.7-9.1	8.9	0.7-2.3	1.1	3.0-6.4	4.8	(X)	(X)	(X)
51	Nondurable goods	2.5-3.0	2.8	2.6-3.0	2.8	0.3-0.7	0.4	0.7-1.6	1.3	(X)	(X)	(X)
511	Paper & paper products	4.9-5.7	5.4	4.9-5.5	5.3	0.7-1.5	1.2	2.3-3.4	2.8	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.7-6.7	6.3	5.8-6.8	6.1	0.8-1.6	0.8	1.8-3.6	2.5	(X)	(X)	(X)
513	Apparel, piece goods & notions	8.4-8.3	7.1	5.6-7.8	7.0	0.8-2.0	1.2	3.3-5.3	4.3	(X)	(X)	(X)
514	Groceries & related products	4.7-5.3	5.1	4.6-5.7	5.1	0.4-1.3	0.8	2.3-3.5	2.9	(X)	(X)	(X)
515	Farm-product raw materials	6.8-7.6	7.0	6.6-7.4	6.8	1.2-1.7	1.3	3.3-5.1	3.8	(X)	(X)	(X)
516	Chemicals & allied products	6.1-7.8	7.4	6.3-8.0	7.4	1.0-2.6	1.3	3.1-5.6	3.8	(X)	(X)	(X)
517	Petroleum & petroleum products	4.9-6.1	5.4	4.9-5.4	5.1	0.9-2.1	1.2	1.3-3.3	2.3	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	3.7-5.2	4.6	3.3-4.9	4.4	0.8-1.3	1.0	2.1-3.3	2.2	(X)	(X)	(X)
519	Misc. nondurable goods	6.8-9.6	8.0	7.4-8.9	8.0	0.7-2.1	1.1	2.2-3.8	3.4	(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 December 1988 through May 1989.

Official Business
Penalty for Private Use, \$300

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

SIC code	Kind of business	1988								1989					
		May ^r	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr. ^r	May ^r	June
	Sales,¹ Total	1.018	1.039	.950	1.031	1.014	1.029	1.011	.999	.945	.912	1.055	.968	1.044	1.030
50	Durable goods	1.015	1.055	.958	1.037	1.036	1.052	1.010	.978	.904	.891	1.052	.980	1.043	1.051
501	Motor vehicles & auto. equip. ...	1.033	1.080	.976	1.008	.939	1.061	1.017	1.011	.899	.893	1.047	1.007	1.063	1.070
502	Furniture & home furnishings ...	.978	1.041	.946	1.072	1.054	1.118	1.035	.956	.893	.904	1.038	.933	1.012	1.040
503	Lumber & other construction mat.	1.053	1.120	1.074	1.148	1.101	1.089	.982	.857	.810	.773	.989	.977	1.088	1.128
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.863	.965	.908	1.049	1.107	1.146	1.140	1.030	.889	.909	1.041	.899	.892	.969
505	Metals & minerals, ex. petroleum	.979	1.058	.938	1.023	1.087	.971	.933	.945	.968	.935	1.181	.977	.987	1.061
506	Electrical goods .....	.964	1.020	.960	1.053	1.060	1.095	1.053	1.000	.906	.904	1.032	.930	.990	1.010
507	Hardware, plumbing & heating equipment	1.030	1.095	.988	1.058	1.023	1.059	.998	.949	.910	.877	.991	.958	1.057	1.099
508	Machinery, equip. & supplies	1.033	1.045	.933	1.037	1.034	.995	.981	1.009	.910	.915	1.081	.995	1.054	1.041
509	Miscellaneous durable goods ...	1.077	1.064	.887	.978	1.070	1.082	1.020	.967	.871	.876	1.062	1.018	1.086	1.074
51	Nondurable goods	1.022	1.013	.942	1.028	.999	1.004	1.015	1.016	.980	.932	1.064	.954	1.046	1.007
511	Paper & paper products .....	.960	1.033	.932	1.060	1.023	1.009	1.008	.997	.980	.941	1.072	.946	.974	1.038
512	Drugs, drug proprietaries and druggists' sundries .....	.999	1.019	.935	1.027	1.033	1.006	1.001	.998	1.016	.935	1.049	.944	1.031	1.011
513	Apparel, piece goods & notions	.903	1.033	1.021	1.251	1.057	1.096	1.011	.714	.930	1.015	1.055	.852	.910	1.026
514	Groceries & related products	1.032	1.029	.994	1.037	.989	.988	1.020	1.027	.973	.915	1.018	.949	1.062	1.017
515	Farm-product raw materials	1.020	.961	.845	.908	.925	1.036	1.035	1.148	1.074	.961	1.070	.945	1.025	.951
516	Chemicals & allied products	1.049	1.099	.938	1.041	1.030	1.009	.959	.883	.968	.917	1.091	.995	1.087	1.101
517	Petroleum & petroleum products	.969	.951	.912	.977	1.008	.969	1.020	1.077	1.070	.991	1.129	.936	.993	.961
518	Beer, wine, & distilled beverages	1.054	1.129	.993	1.112	1.012	.982	1.049	1.155	.776	.794	1.015	.910	1.095	1.111
519	Misc. nondurable goods	1.208	1.050	.940	1.011	.984	.966	.950	.997	.869	.875	1.112	1.060	1.223	1.045
	Inventories,¹ Total .....	.992	.995	.993	.986	.995	1.009	1.004	1.001	1.005	1.008	1.008	1.006	.993	.994
50	Durable goods	1.005	1.007	1.006	1.002	1.009	1.004	.995	.985	.988	.996	1.003	1.007	1.005	1.006
501	Motor vehicles & auto. equip. ...	.993	1.005	.973	.960	1.022	.998	1.014	1.016	.995	1.014	1.016	1.001	.994	1.005
502	Furniture & home furnishings ...	1.011	.999	1.009	1.019	1.014	.992	.968	.990	1.009	.995	.993	.991	1.014	.997
503	Lumber & other construction mat.	1.025	1.043	1.037	.994	.994	.984	.971	.973	.959	.980	1.021	1.038	1.028	1.043
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.985	1.006	1.040	1.022	1.036	1.026	.982	.967	.971	.981	.993	.989	.986	1.007
505	Metals & minerals, ex. petroleum	1.015	1.037	1.018	.979	.977	.980	.962	1.005	1.016	1.000	1.008	1.017	1.016	1.030
506	Electrical goods	1.002	.999	1.018	1.015	1.025	1.016	1.002	.994	.972	.985	.994	.996	1.003	1.000
507	Hardware, plumbing & heating equipment	1.016	1.002	1.007	1.007	.991	.992	.974	.969	.990	1.001	1.023	1.019	1.014	1.004
508	Machinery, equip. & supplies	1.008	1.006	1.002	1.001	.991	1.007	1.006	.976	.995	1.001	1.002	1.016	1.008	1.004
509	Miscellaneous durable goods ...	1.005	1.002	1.035	1.041	1.030	1.015	1.000	.960	.956	.962	.979	1.007	1.004	1.006
51	Nondurable goods .....	.962	.980	.965	.956	.974	1.017	1.025	1.032	1.038	1.031	1.015	.996	.961	.981
511	Paper & paper products	1.000	.998	.999	.996	.970	.996	.986	1.001	1.031	1.016	1.021	1.008	1.000	.997
512	Drugs, drug proprietaries and druggists' sundries .....	.972	.960	.963	.960	.992	1.024	.984	1.015	1.046	1.036	1.007	1.031	.972	.962
513	Apparel, piece goods & notions	1.012	1.050	1.057	1.060	1.035	.966	.946	.987	.995	.984	.954	.951	1.013	1.054
514	Groceries & related products	.980	.986	.981	.961	.995	1.044	1.048	1.024	1.005	1.005	.981	.982	.978	.986
515	Farm-product raw materials	.826	.850	.831	.815	.885	1.098	1.130	1.156	1.198	1.151	1.037	.969	.829	.853
516	Chemicals & allied products	1.046	1.026	1.002	1.009	.949	.972	.985	.972	.995	1.019	.999	1.032	1.051	1.027
517	Petroleum & petroleum products	.945	.971	.981	.953	1.025	1.011	1.022	1.103	1.088	.981	1.003	.944	.937	.970
518	Beer, wine, & distilled beverages	1.001	1.026	.997	.983	1.004	1.059	1.045	.911	.944	.987	1.020	1.024	1.000	1.024
519	Misc. nondurable goods .....	.969	.977	.922	.924	.948	.966	.996	1.035	1.030	1.059	1.101	1.061	.968	.980

^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

June 1989

 BW89-06
 Issued August 1989

 U.S. Department of Commerce
 BUREAU OF THE CENSUS

Sales. June 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$142.0 billion, down 0.3 percent from the revised May level but up 7.4 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 were down 1.6 percent from May, but were 6.7 percent above a year ago. Monthly decreases in the sales of durable goods were as follows: miscellaneous durable goods were down 7.9 percent to \$6.7 billion; hardware, plumbing and heating equipment sales decreased 5.6 percent to \$3.9 billion; and sales of electrical goods decreased 5.2 percent to \$9.4 billion. June sales of nondurable goods were up 1.0 percent from May and were 8.1 percent above June 1988. Monthly gains in the nondurable goods group were as follows: sales of apparel, piece goods and notions were up 5.0 percent to \$4.6 billion and beer, wine, and distilled beverages increased 3.7 percent to \$3.7 billion.

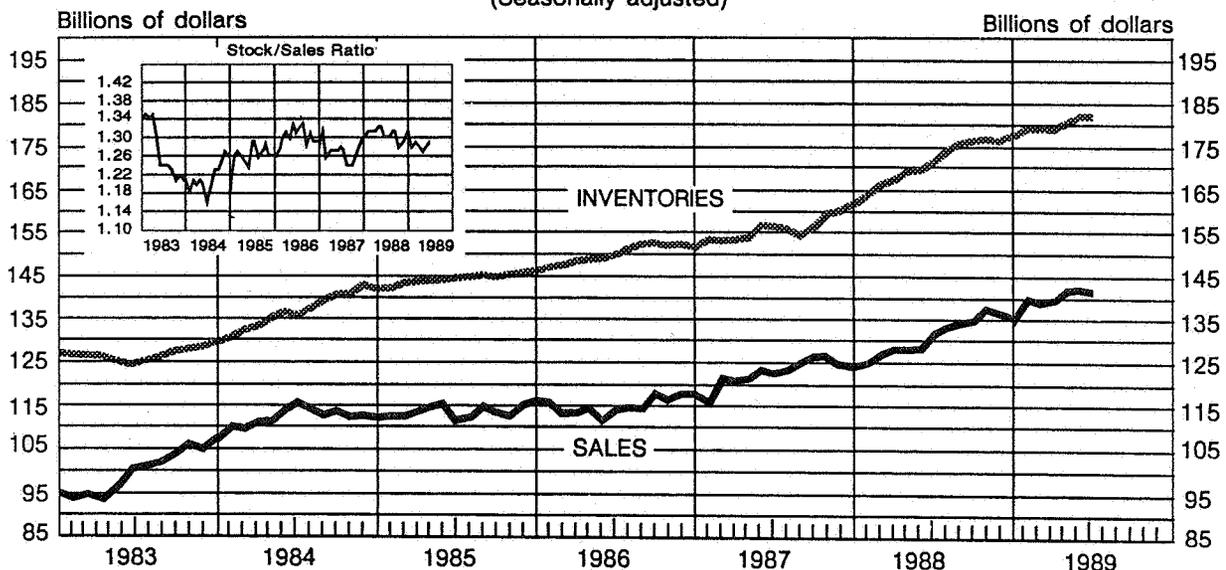
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$182.7 billion at the end of June, up 0.1

percent from the revised May level and up 6.2 percent from a year ago. The May preliminary estimate was revised downward by \$0.04 billion or about 0.02 percent. Inventories of durable goods wholesalers were up 0.1 percent from the May level and increased 8.9 percent from a year ago. Inventories of nondurable goods wholesalers were up 0.1 percent from the May level and were 1.3 percent above June 1988.

Stock/Sales Ratio. The June stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.29.

NOTE: Since this survey is based on a sample, the estimates will differ from the universe values due to both sampling and nonsampling error. For the month-to-month and year-to-year percent changes shown for sales and inventory at the total, durable, and nondurable levels, the margins of sampling error range from 0.4 to 3.5 percentage points above and below the estimate. See the "Reliability of Data" section on page 4 for a more complete description.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-89
 (Seasonally adjusted)



Monthly Wholesale Trade for July is scheduled to be released September 7, 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: 1989 and 1988

(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	1989						1988						
		Jan.	Feb.	Mar.	Apr.	May	June ^P	June ^F	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	140,356	139,547	139,991	142,290	142,474	142,046	132,285	133,833	134,728	135,332	138,087	137,239	136,170
50	Durable goods	70,302	69,343	68,796	69,345	70,293	69,144	64,824	65,559	65,501	66,295	67,581	68,543	68,427
501	Motor vehicles & auto. equip.	14,532	14,587	14,390	14,160	13,217	13,252	13,623	13,663	13,349	13,548	14,037	14,288	14,031
502	Furniture & home furnishings	2,431	2,363	2,339	2,427	2,369	2,327	2,281	2,245	2,288	2,310	2,403	2,516	2,503
503	Lumber & other construction mat.	4,916	4,678	4,448	4,588	4,541	4,386	4,661	4,636	4,592	4,579	4,693	4,564	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,082	2,070	2,033	2,001	2,018	2,095	2,106	2,147	2,236	2,267
505	Metals & minerals, ex. petroleum	8,135	5,705	5,971	6,236	6,812	6,921	5,678	5,760	5,826	6,018	5,970	6,221	6,006
506	Electrical goods	9,529	9,219	9,163	9,328	9,676	9,359	8,697	8,507	8,738	8,679	8,974	9,268	9,068
507	Hardware, plumbing & heating equipment	4,180	3,985	3,873	4,146	4,120	3,891	4,034	4,249	4,040	3,978	4,025	3,930	3,974
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,831	19,978	20,244	17,103	17,448	17,912	18,515	18,627	18,596	18,525
509	Miscellaneous durable goods	7,352	7,272	7,075	6,547	7,310	6,731	6,746	7,033	6,651	6,662	6,705	6,904	7,220
51	Nondurable goods	70,054	70,204	71,195	72,945	72,181	72,902	67,461	68,274	69,225	69,037	70,508	68,696	67,743
511	Paper & paper products	4,555	4,508	4,577	4,738	4,728	4,495	4,296	4,415	4,378	4,520	4,520	4,452	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,176	3,261	3,246	3,281	3,248	3,032	3,095	3,180	3,179	3,165	3,118	3,255
513	Apparel, piece goods & notions	4,676	4,288	4,477	4,643	4,377	4,595	4,255	4,288	4,205	4,428	4,259	4,508	4,538
514	Groceries & related products	19,512	19,719	19,683	19,852	20,169	20,479	18,330	18,447	18,785	18,663	19,409	19,515	19,762
515	Farm-product raw materials	11,348	11,414	11,474	11,597	10,925	10,758	10,780	11,067	11,412	11,616	12,654	10,778	9,517
516	Chemicals & allied products	2,929	2,955	2,990	3,033	2,951	3,011	3,048	3,102	2,987	2,928	2,860	2,985	2,920
517	Petroleum & petroleum products	10,267	11,081	11,568	13,016	13,266	13,288	10,953	11,213	11,218	10,395	10,267	9,998	10,090
518	Beer, wine, & distilled beverages	3,656	3,534	3,640	3,569	3,576	3,708	3,641	3,555	3,612	3,697	3,673	3,730	3,637
519	Misc. nondurable goods	9,825	9,531	9,525	9,231	8,918	9,320	9,126	9,112	9,448	9,611	9,699	9,612	9,629
	Inventories, Total	179,761	179,810	179,681	181,226	182,615	182,737	172,079	174,581	176,368	176,972	177,406	177,060	178,313
50	Durable goods	117,255	117,932	117,424	119,069	120,481	120,545	110,690	112,702	113,727	114,875	115,225	114,975	115,743
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,469	23,067	23,116	20,266	20,885	21,047	21,526	21,378	21,353	21,507
502	Furniture & home furnishings	4,033	4,067	4,078	4,004	4,036	4,081	4,200	4,205	4,188	4,201	4,208	4,107	4,023
503	Lumber & other construction mat.	5,777	5,564	5,667	5,696	5,614	5,420	5,483	5,543	5,441	5,501	5,587	5,377	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,656	4,654	4,718	4,299	4,263	4,175	4,332	4,306	4,322	4,467
505	Metals & minerals, ex. petroleum	8,857	8,878	9,030	9,007	8,788	8,623	8,696	8,870	8,867	8,969	9,128	9,169	8,962
506	Electrical goods	15,083	15,418	15,353	15,620	15,825	16,057	14,132	14,106	14,336	14,136	14,488	14,480	14,798
507	Hardware, plumbing & heating equipment	7,588	7,454	7,400	7,601	7,713	7,780	7,082	7,304	7,379	7,414	7,456	7,275	7,264
508	Machinery, equip. & supplies	41,620	41,730	41,049	42,184	42,862	43,084	38,980	39,851	40,369	41,175	41,111	41,245	41,338
509	Miscellaneous durable goods	8,377	8,524	8,324	7,832	7,945	7,666	7,550	7,675	7,925	7,821	7,563	7,647	7,667
51	Nondurable goods	62,506	61,878	62,257	62,157	62,134	62,192	61,389	61,679	62,641	62,097	62,183	62,085	62,570
511	Paper & paper products	4,586	4,490	4,469	4,541	4,535	4,475	4,052	4,194	4,108	4,248	4,297	4,231	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,169	5,190	5,337	4,919	5,069	5,129	4,997	4,870	4,917	5,221
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,190	8,307	8,381	7,772	7,490	7,456	7,408	7,639	7,870	7,846
514	Groceries & related products	12,822	12,772	12,931	12,879	13,109	13,181	12,085	12,401	12,373	12,664	12,753	12,584	12,564
515	Farm-product raw materials	9,097	8,558	8,145	7,776	7,422	6,974	10,418	10,434	10,679	10,348	10,270	9,558	9,562
516	Chemicals & allied products	2,796	2,612	2,723	2,703	2,622	2,691	2,679	2,657	2,784	2,760	2,713	2,734	2,984
517	Petroleum & petroleum products	3,972	4,201	4,655	4,901	4,821	4,559	4,076	4,084	4,196	4,134	3,940	3,861	3,858
518	Beer, wine, & distilled beverages	4,099	4,026	4,036	3,986	4,053	3,988	3,963	4,025	4,090	4,071	4,143	4,128	4,176
519	Misc. nondurable goods	11,783	11,727	11,913	12,012	12,075	12,206	11,425	11,525	11,846	11,469	11,558	12,202	12,069
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.28	1.29	1.30	1.30	1.31	1.31	1.28	1.29	1.31
50	Durable goods	1.67	1.70	1.71	1.72	1.71	1.74	1.71	1.72	1.74	1.73	1.70	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.59	1.75	1.74	1.49	1.53	1.58	1.59	1.52	1.49	1.53
502	Furniture & home furnishings	1.66	1.72	1.74	1.65	1.70	1.75	1.84	1.87	1.82	1.82	1.75	1.63	1.61
503	Lumber & other construction mat.	1.18	1.19	1.27	1.24	1.24	1.24	1.18	1.20	1.18	1.20	1.19	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.24	2.25	2.32	2.15	2.11	1.99	2.06	2.01	1.93	1.89
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.44	1.29	1.25	1.53	1.54	1.52	1.49	1.53	1.47	1.50
506	Electrical goods	1.58	1.67	1.68	1.67	1.60	1.72	1.62	1.66	1.64	1.63	1.61	1.58	1.63
507	Hardware, plumbing & heating equipment	1.82	1.87	1.91	1.83	1.87	2.00	1.76	1.72	1.83	1.91	1.85	1.85	1.83
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.13	2.15	2.13	2.28	2.28	2.25	2.22	2.21	2.22	2.23
509	Miscellaneous durable goods	1.14	1.17	1.18	1.20	1.09	1.14	1.12	1.09	1.19	1.14	1.13	1.11	1.09
51	Nondurable goods .....	.89	.88	.87	.85	.86	.85	.91	.91	.90	.90	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.96	.96	1.00	.94	.95	.94	.94	.95	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.59	1.58	1.64	1.62	1.64	1.61	1.57	1.54	1.58	1.60
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.78	1.90	1.82	1.83	1.75	1.77	1.67	1.79	1.75	1.73
514	Groceries & related products .....	.68	.65	.66	.65	.65	.64	.66	.67	.66	.68	.68	.64	.64
515	Farm-product raw materials .....	.80	.75	.71	.67	.68	.65	.97	.94	.89	.89	.81	.89	1.00
516	Chemicals & allied products .....	.95	.88	.91	.89	.89	.89	.88	.88	.93	.94	.95	.92	1.02
517	Petroleum & petroleum products .....	.39	.38	.40	.38	.38	.37	.37	.36	.37	.40	.38	.39	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.13	1.08	1.09	1.13	1.13	1.10	1.13	1.11	1.15
519	Misc. nondurable goods	1.20	1.23	1.25	1.30	1.35	1.31	1.25	1.26	1.25	1.19	1.19	1.19	1.27

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989						1988						Total 6 mos.		
		Jan.	Feb.	Mar.	Apr.	May	June ^P	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1989	1988
	Sales, Total	131,788	127,414	148,920	137,567	148,832	146,623	137,210	128,841	138,551	136,994	141,335	138,289	136,599	841,142	769,721
50	Durable goods	63,265	62,003	72,948	68,014	73,231	72,813	68,466	62,555	67,904	68,511	70,825	68,957	67,261	412,272	376,731
501	Motor vehicles & auto. equip.	13,084	13,008	15,088	14,259	14,103	14,080	14,617	13,335	13,456	12,722	14,893	14,531	14,185	83,560	80,924
502	Furniture & home furnishings	2,171	2,138	2,428	2,264	2,402	2,341	2,333	2,124	2,463	2,435	2,686	2,604	2,393	13,742	13,280
503	Lumber & other construction mat.	3,982	3,616	4,399	4,482	4,959	4,925	5,202	4,979	5,272	5,041	5,111	4,482	4,056	26,363	26,711
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,070	1,842	2,301	1,872	1,838	1,956	1,921	1,832	2,198	2,331	2,480	2,551	2,438	11,879	10,685
505	Metals & minerals, ex. petroleum	5,939	5,334	7,052	6,093	6,819	7,419	8,036	5,403	5,960	6,542	5,797	5,804	5,676	38,656	33,785
506	Electrical goods	8,633	8,334	9,456	8,675	9,728	9,499	8,880	8,167	9,201	9,200	9,826	9,778	9,068	54,325	48,843
507	Hardware, plumbing & heating equipment	3,788	3,495	3,838	3,972	4,375	4,229	4,389	4,198	4,274	3,967	4,263	3,922	3,771	23,695	22,600
508	Machinery, equip. & supplies	17,216	17,668	20,892	19,732	21,017	21,155	17,850	16,279	18,575	19,145	18,534	18,243	18,692	117,880	99,717
509	Miscellaneous durable goods	6,404	6,370	7,514	6,665	7,990	7,229	7,198	6,238	6,505	7,128	7,265	7,042	6,982	42,172	40,186
51	Nondurable goods	68,521	65,411	75,974	69,553	75,601	73,810	68,744	64,286	70,647	68,483	70,510	69,332	69,338	428,870	392,990
511	Paper & paper products	4,464	4,242	4,907	4,482	4,596	4,661	4,433	4,115	4,641	4,624	4,581	4,488	4,382	27,352	24,842
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,064	3,379	3,280	3,093	2,894	3,266	3,284	3,184	3,121	3,248	19,432	17,472
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,956	3,939	4,774	4,421	4,358	5,261	4,680	4,668	4,558	3,240	26,091	23,469
514	Groceries & related products	18,985	18,043	20,037	18,840	21,359	20,868	18,917	18,338	19,480	18,458	19,176	19,905	20,296	118,132	108,246
515	Farm-product raw materials	12,188	10,969	12,277	10,959	11,264	10,177	10,349	9,352	10,362	10,745	13,110	11,155	10,926	67,834	60,366
516	Chemicals & allied products	2,835	2,710	3,262	3,018	3,187	3,348	3,377	2,910	3,109	3,016	2,888	2,863	2,578	18,360	17,414
517	Petroleum & petroleum products	11,007	10,981	13,060	12,183	13,190	12,743	10,504	10,226	10,960	10,478	9,949	10,198	10,867	73,164	64,798
518	Beer, wine, & distilled beverages	2,837	2,806	3,695	3,266	3,905	4,164	4,122	3,530	4,016	3,741	3,607	3,913	4,201	20,673	20,717
519	Misc. nondurable goods	8,538	8,340	10,592	9,785	10,782	9,795	9,528	8,565	9,552	9,457	9,369	9,131	9,600	57,832	55,688
	Inventories, Total	181,054	181,481	181,248	182,305	181,114	182,492	171,341	172,497	172,736	175,787	178,969	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	120,185	121,146	121,334	111,500	113,366	113,470	115,489	115,581	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,491	22,998	23,139	20,307	20,321	20,205	22,000	21,335	21,852	21,851	(X)	(X)
502	Furniture & home furnishings	4,089	4,047	4,049	3,968	4,091	4,114	4,225	4,243	4,268	4,260	4,174	3,976	3,983	(X)	(X)
503	Lumber & other construction mat.	5,540	5,453	5,786	5,912	5,754	5,810	5,675	5,748	5,408	5,468	5,498	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,312	4,469	4,539	4,605	4,556	4,751	4,329	4,434	4,267	4,488	4,418	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum	8,999	8,878	9,102	9,160	8,889	8,899	8,968	8,030	8,681	8,763	8,945	8,821	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,281	15,558	15,857	16,073	14,146	14,360	14,551	14,489	14,720	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,461	7,570	7,745	7,798	7,803	7,110	7,355	7,431	7,347	7,398	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,131	42,859	43,182	43,256	39,175	39,931	40,409	40,804	41,393	41,492	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,887	8,040	7,689	7,565	7,944	8,250	7,850	7,676	7,647	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,120	59,969	61,158	59,841	59,131	59,266	60,318	63,408	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,577	4,485	4,430	4,024	4,190	4,092	4,119	4,280	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,329	5,014	5,140	4,742	4,881	4,924	4,957	4,987	4,838	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	7,769	8,490	9,001	8,300	7,917	7,903	7,667	7,379	7,445	7,744	(X)	(X)
514	Groceries & related products	12,886	12,836	12,685	12,647	12,834	12,931	11,880	12,165	11,890	12,601	13,314	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,850	8,446	7,535	6,168	6,012	8,918	8,671	8,703	9,158	11,276	10,100	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,662	2,720	2,789	2,716	2,768	2,770	2,662	2,789	2,619	2,637	2,693	2,881	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,669	4,627	4,541	4,785	3,954	4,006	3,999	4,237	3,983	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	3,974	4,117	4,052	4,057	4,048	4,034	4,013	4,020	4,087	4,387	4,314	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	12,745	11,664	12,023	11,219	10,626	10,948	10,873	11,165	12,153	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.33	1.22	1.24	1.25	1.36	1.25	1.28	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.82	1.77	1.65	1.67	1.63	1.81	1.87	1.69	1.63	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.58	1.63	1.65	1.39	1.52	1.50	1.73	1.43	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.87	1.75	1.70	1.76	1.81	2.00	1.73	1.75	1.55	1.53	1.66	(X)	(X)
503	Lumber & other construction mat.	1.39	1.51	1.32	1.32	1.16	1.14	1.09	1.15	1.03	1.08	1.08	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.08	2.43	1.97	2.46	2.48	2.43	2.25	2.42	1.94	1.93	1.80	1.66	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum	1.52	1.66	1.29	1.50	1.30	1.20	1.49	1.67	1.46	1.34	1.54	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.79	1.63	1.69	1.59	1.76	1.58	1.57	1.50	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.95	1.78	1.85	1.62	1.75	1.74	1.85	1.73	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.17	2.05	2.04	2.19	2.45	2.18	2.13	2.23	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.18	1.01	1.06	1.05	1.27	1.27	1.10	1.08	1.09	1.08	(X)	(X)
51	Nondurable goods .....	.95	.98	.83	.89	.79	.83	.87	.92	.84	.88	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.08	1.08	.93	1.02	.98	.95	.91	1.02	.88	.89	.94	.93	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.83	1.80	1.50	1.74	1.48	1.57	1.53	1.69	1.51	1.51	1.57	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	1.97	2.16	1.89	1.88	1.82	1.56	1.64	1.58	1.63	2.39	(X)	(X)
514	Groceries & related products .....	.88	.71	.83	.87	.60	.82	.83	.86	.81	.86	.89	.86	.83	(X)	(X)
515	Farm-product raw materials .....	.89	.90	.69	.89	.55	.59	.88	.83	.84	.85	.86	.97	1.01	(X)	(X)
516	Chemicals & allied products .....	.98	.98	.83	.92	.85	.83	.82	.91	.90	.87	.91	.94	1.12	(X)	(X)
517	Petroleum & petroleum products .....	.39	.38	.38	.38	.34	.36	.35	.39	.36	.40	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.42	1.11	1.25	1.04	.97	.98	1.14	1.00	1.09	1.22	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.30	1.08	1.23	1.18	1.24	1.15	1.15	1.19	1.33	1.30	(X)	(X)

^PPreliminary estimates. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

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)	
		June 1989 from May 1989	June 1989 from June 1988	6 months 1989 from 6 months 1988	June 1989 from May 1989	June 1989 from June 1988	June 1989 from May 1989	June 1989 from June 1988	June 1989 from May 1989	June 1989 from June 1988
	Total	-1.5	+6.9	+9.3	+8	+6.5	-.3	+7.4	+1	+6.2
50	Durable goods	-.6	+6.3	+9.4	+2	+8.8	-1.6	+6.7	+1	+8.9
501	Motor vehicles & auto. equip.	-.3	-3.8	+3.3	+6	+13.9	+3	-2.7	+2	+14.1
502	Furniture & home furnishings	-2.5	+3	+3.5	+6	-2.6	-1.8	+2.0	+1.1	-2.8
503	Lumber & other construction mat.	-.7	-5.3	-1.3	-2.5	-1.1	-3.4	-5.9	-3.5	-1.1
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+6.4	+1.8	+11.2	+4.3	+9.7	-1.8	+1.6	+1.4	+9.7
505	Metals & minerals, ex. petroleum	+8.8	+22.9	+14.4	+1	-.8	+1.6	+21.9	-1.6	-.9
506	Electrical goods	-2.4	+7.0	+11.2	+1.4	+13.6	-5.2	+7.6	+1.5	+13.6
507	Hardware, plumbing & heating equipment	-3.3	-3.6	+4.8	+1	+9.7	-5.6	-3.5	+9	+9.9
508	Machinery, equip. & supplies	+7	+18.3	+18.2	+2	+10.4	+1.3	+18.4	+5	+10.5
509	Miscellaneous durable goods	-9.5	+4	+4.9	-4.4	+1.6	-7.9	-.2	-3.5	+1.5
51	Nondurable goods	-2.4	+7.4	+9.1	+2.0	+2.2	+1.0	+8.1	+1	+1.3
511	Paper & paper products	+1.4	+5.1	+10.1	-1.2	+10.1	-4.9	+4.6	-1.3	+10.4
512	Drugs, drug proprietaries and druggists' sundries	-2.9	+6.0	+11.2	+2.5	+8.4	-1.0	+7.1	+2.8	+8.5
513	Apparel, piece goods & notions	+21.2	+8.0	+11.2	+6.0	+8.4	+5.0	+8.0	+9	+7.8
514	Groceries & related products	-2.3	+10.3	+9.1	+8	+8.8	+1.5	+11.7	+5	+9.1
515	Farm-product raw materials	-9.7	-1.7	+12.4	-2.5	-32.6	-1.5	-.2	-6.0	-33.1
516	Chemicals & allied products	+5.1	-.9	+5.4	+2.7	+6	+2.0	-1.2	+2.6	+4
517	Petroleum & petroleum products	-3.4	+21.3	+12.9	+5.4	+21.0	+2	+21.3	+2.9	+21.7
518	Beer, wine, & distilled beverages	+6.6	+1.0	-.2	-.2	+3	+3.7	+1.8	-1.6	+6
519	Misc. nondurable goods	-9.2	+2.8	+3.9	+3.1	+7.2	+4.5	+2.1	+1.1	+6.8

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.

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).

The margin of sampling error, as used on the front page of this publication, indicates a range about the estimate which corresponds to a 90 percent confidence interval. If, for example, the estimate is up .8 percent and the margin of sampling error is 1.3 percentage points above or below the estimate, then the indicated range is down .5 percent to up 2.1 percent. If the range contains 0, it is uncertain whether there was an increase or decrease.

Nonsampling Errors

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

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

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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

× Cumulative coefficients of variation are not applicable for inventories.

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

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

SIC code	Kind of business	1988							1989						
		June ^r	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May ^r	June ^r	July
	Sales,¹ Total	1.036	.950	1.031	1.014	1.029	1.011	.999	.945	.912	1.055	.968	1.045	1.028	.957
50	Durable goods	1.051	.958	1.037	1.036	1.052	1.010	.978	.904	.891	1.052	.980	1.044	1.050	.958
501	Motor vehicles & auto. equip. ...	1.073	.976	1.008	.939	1.061	1.017	1.011	.899	.893	1.047	1.007	1.067	1.061	.981
502	Furniture & home furnishings ...	1.023	.946	1.072	1.054	1.118	1.035	.956	.893	.904	1.038	.933	1.014	1.006	.949
503	Lumber & other construction mat.	1.116	1.074	1.148	1.101	1.089	.982	.857	.810	.773	.989	.977	1.092	1.123	1.064
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.960	.908	1.049	1.107	1.146	1.140	1.030	.889	.909	1.041	.899	.888	.962	.907
505	Metals & minerals, ex. petroleum	1.063	.938	1.023	1.087	.971	.933	.945	.968	.935	1.181	.977	1.001	1.072	.922
506	Electrical goods	1.021	.960	1.053	1.060	1.095	1.053	1.000	.906	.904	1.032	.930	.985	1.015	.965
507	Hardware, plumbing & heating equipment	1.088	.988	1.058	1.023	1.059	.998	.949	.910	.877	.991	.958	1.062	1.087	1.007
508	Machinery, equip. & supplies	1.046	.933	1.037	1.034	.995	.981	1.009	.910	.915	1.081	.995	1.052	1.045	.933
509	Miscellaneous durable goods ...	1.067	.887	.978	1.070	1.082	1.020	.967	.871	.876	1.062	1.018	1.093	1.074	.892
51	Nondurable goods	1.015	.942	1.028	.999	1.004	1.015	1.016	.980	.932	1.064	.954	1.046	1.010	.951
511	Paper & paper products	1.032	.932	1.060	1.023	1.009	1.008	.997	.980	.941	1.072	.946	.972	1.037	.927
512	Drugs, drug proprietaries and druggists' sundries	1.020	.935	1.027	1.033	1.006	1.001	.998	1.016	.935	1.049	.944	1.030	1.010	.939
513	Apparel, piece goods & notions ..	1.039	1.021	1.251	1.057	1.096	1.011	.714	.930	1.015	1.055	.852	.900	1.039	1.035
514	Groceries & related products ...	1.032	.994	1.037	.989	.988	1.020	1.027	.973	.915	1.018	.949	1.059	1.019	.995
515	Farm-product raw materials ....	.960	.845	.908	.925	1.036	1.035	1.148	1.074	.961	1.070	.945	1.031	.946	.885
516	Chemicals & allied products	1.108	.938	1.041	1.030	1.009	.959	.883	.968	.917	1.091	.995	1.080	1.112	.930
517	Petroleum & petroleum products ..	.959	.912	.977	1.008	.969	1.020	1.077	1.070	.991	1.129	.936	.995	.959	.921
518	Beer, wine, & distilled beverages	1.132	.993	1.112	1.012	.982	1.049	1.155	.776	.794	1.015	.910	1.092	1.123	.994
519	Misc. nondurable goods	1.044	.940	1.011	.984	.966	.950	.997	.869	.875	1.112	1.060	1.209	1.051	.943
	Inventories,¹ Total .....	.995	.993	.986	.995	1.009	1.004	1.001	1.005	1.008	1.008	1.006	.991	.995	.993
50	Durable goods	1.005	1.006	1.002	1.009	1.004	.995	.985	.988	.996	1.003	1.007	1.005	1.004	1.006
501	Motor vehicles & auto. equip. ...	1.002	.973	.960	1.022	.998	1.014	1.016	.995	1.014	1.016	1.001	.997	1.001	.973
502	Furniture & home furnishings ...	1.006	1.009	1.019	1.014	.992	.968	.990	1.009	.995	.993	.991	1.014	1.008	1.011
503	Lumber & other construction mat.	1.035	1.037	.994	.994	.984	.971	.973	.959	.980	1.021	1.038	1.025	1.035	1.037
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.007	1.040	1.022	1.036	1.026	.982	.967	.971	.981	.993	.989	.979	1.007	1.041
505	Metals & minerals, ex. petroleum	1.031	1.018	.979	.977	.980	.962	1.005	1.016	1.000	1.008	1.017	1.014	1.032	1.016
506	Electrical goods	1.001	1.018	1.015	1.025	1.016	1.002	.994	.972	.985	.994	.996	1.002	1.001	1.017
507	Hardware, plumbing & heating equipment	1.004	1.007	1.007	.991	.992	.974	.969	.990	1.001	1.023	1.019	1.011	1.003	1.010
508	Machinery, equip. & supplies	1.005	1.002	1.001	.991	1.007	1.006	.976	.995	1.001	1.002	1.016	1.007	1.004	1.004
509	Miscellaneous durable goods ...	1.002	1.035	1.041	1.030	1.015	1.000	.960	.956	.962	.979	1.007	1.012	1.003	1.037
51	Nondurable goods .....	.982	.965	.956	.974	1.017	1.025	1.032	1.038	1.031	1.015	.996	.962	.983	.966
511	Paper & paper products .....	.993	.999	.996	.970	.996	.986	1.001	1.031	1.016	1.021	1.008	.989	.990	.999
512	Drugs, drug proprietaries and druggists' sundries .....	.964	.963	.960	.992	1.024	.984	1.015	1.046	1.036	1.007	1.031	.966	.963	.967
513	Apparel, piece goods & notions ..	1.068	1.057	1.060	1.035	.966	.946	.987	.995	.984	.954	.951	1.022	1.074	1.050
514	Groceries & related products ...	.983	.981	.961	.995	1.044	1.048	1.024	1.005	1.005	.981	.982	.979	.981	.982
515	Farm-product raw materials ....	.856	.831	.815	.885	1.098	1.130	1.156	1.198	1.151	1.037	.969	.831	.862	.835
516	Chemicals & allied products	1.034	1.002	1.009	.949	.972	.985	.972	.995	1.019	.999	1.032	1.036	1.036	1.001
517	Petroleum & petroleum products ..	.970	.981	.953	1.025	1.011	1.022	1.103	1.088	.981	1.003	.944	.942	.965	.990
518	Beer, wine, & distilled beverages	1.018	.997	.983	1.004	1.059	1.045	.911	.944	.987	1.020	1.024	1.001	1.015	.994
519	Misc. nondurable goods .....	.982	.922	.924	.948	.966	.996	1.035	1.030	1.059	1.101	1.061	.966	.985	.921

^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

July 1989



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW89-07
Issued September 1989

Sales. July 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$140.9 billion, down 0.8 percent from the revised June level but up 5.3 percent from a year ago. The June preliminary estimate was revised downward by \$0.09 billion or about 0.06 percent. July sales of durable goods were up 0.5 percent from June, and were 6.1 percent above a year ago. Monthly gains in the durable goods group were as follows: sales of miscellaneous durable goods were up 6.7 percent to \$7.2 billion and metals and minerals, except petroleum increased 2.7 percent to \$7.2 billion. July sales of nondurable goods were down 2.0 percent from June but were 4.4 percent above July 1988. Monthly decreases in the sales of nondurable goods were as follows: petroleum and petroleum products were down 7.3 percent to \$12.1 billion; farm-product raw materials decreased 4.8 percent to \$10.1 billion; and sales of miscellaneous nondurable goods decreased 3.5 percent to \$9.3 billion.

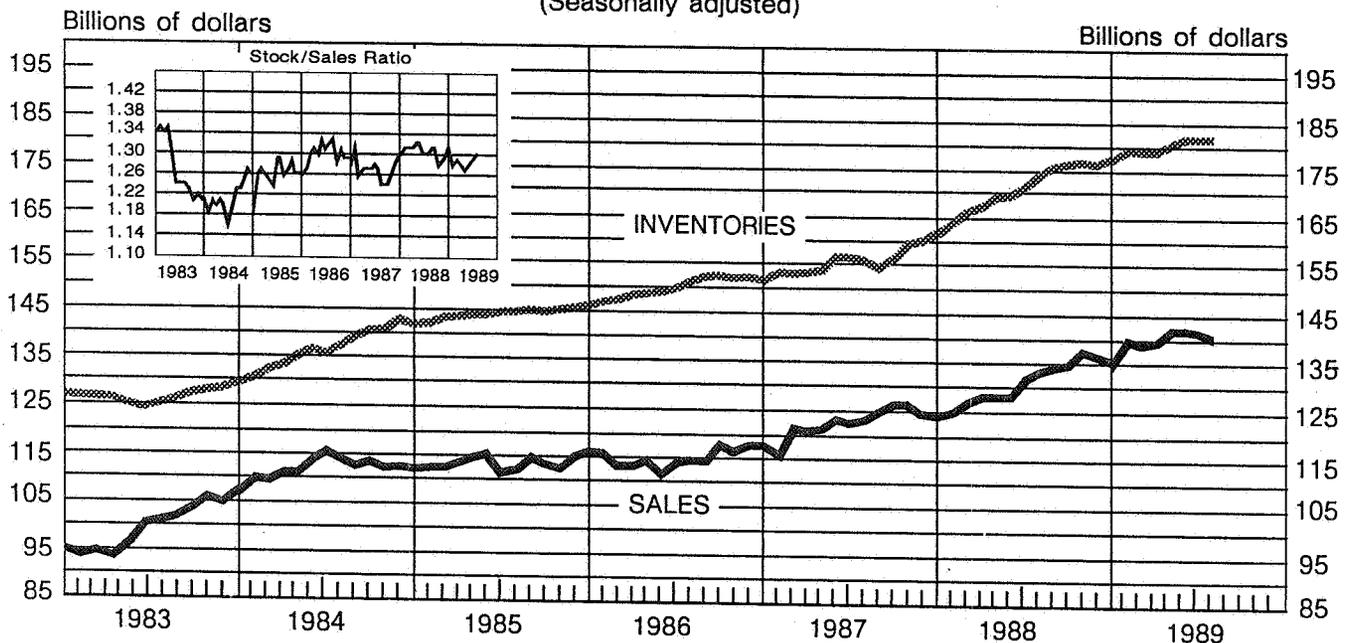
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price

changes, were \$182.6 billion at the end of July, showed no change from the revised June level and increased 4.6 percent from a year ago. The June preliminary estimate was revised downward by \$0.2 billion or about 0.1 percent. Inventories of durable goods wholesalers were up 0.4 percent from the June level and were up 7.1 percent from a year ago. Inventories of nondurable goods wholesalers were down 0.7 percent from the June level but were up 0.2 percent from July 1988.

Stock/Sales Ratio. The July stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.30, up from the June ratio of 1.29.

NOTE: Since this survey is based on a sample, the estimates will differ from the universe values due to both sampling and nonsampling error. For the month-to-month and year-to-year percent changes shown for sales and inventory at the total, durable, and nondurable levels, the margins of sampling error range from 0.4 to 2.7 percentage points above and below the estimate. See the "Reliability of Data" section on page 4 for a more complete description.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-89
(Seasonally adjusted)



Monthly Wholesale Trade for August is scheduled to be released October 11, 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: 1989 and 1988

(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	1989						1988						
		Jan.	Feb.	Mar.	Apr.	May	June	July ^P	July ^F	Aug.	Sept.	Oct.	Nov.	Dec.
	Sales, Total	140,356	139,547	139,991	142,290	142,474	141,959	140,881	133,850	134,726	135,332	138,087	137,239	136,170
50	Durable goods	70,302	69,343	68,796	69,345	70,293	69,147	69,523	65,528	65,501	66,295	67,581	68,543	68,427
501	Motor vehicles & auto. equip.	14,532	14,567	14,390	14,160	13,217	13,230	12,989	13,747	13,349	13,548	14,037	14,298	14,031
502	Furniture & home furnishings	2,431	2,363	2,339	2,427	2,369	2,315	2,371	2,260	2,298	2,310	2,403	2,516	2,503
503	Lumber & other construction mat.	4,916	4,678	4,448	4,588	4,541	4,522	4,505	4,632	4,592	4,579	4,693	4,564	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,082	2,070	2,125	1,985	2,038	2,095	2,106	2,147	2,238	2,367
505	Metals & minerals, ex. petroleum	6,135	5,705	5,971	6,236	6,812	6,971	7,158	5,754	5,826	6,018	5,970	6,221	6,006
506	Electrical goods	9,529	9,219	9,163	9,328	9,876	9,247	9,118	8,525	8,738	8,679	8,974	9,286	9,068
507	Hardware, plumbing & heating equipment	4,160	3,985	3,873	4,146	4,120	3,880	3,905	4,253	4,040	3,878	4,025	3,930	3,974
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,831	19,978	20,095	20,279	17,318	17,912	18,515	18,627	18,598	18,525
509	Miscellaneous durable goods	7,352	7,272	7,075	6,547	7,310	6,762	7,213	7,001	6,651	6,662	6,705	6,904	7,220
51	Nondurable goods	70,054	70,204	71,195	72,945	72,181	72,812	71,358	68,322	69,225	69,037	70,506	68,696	67,743
511	Paper & paper products	4,555	4,508	4,577	4,738	4,728	4,662	4,824	4,387	4,378	4,520	4,520	4,452	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,176	3,281	3,246	3,281	3,273	3,352	3,075	3,180	3,179	3,165	3,118	3,255
513	Apparel, piece goods & notions	4,676	4,286	4,477	4,643	4,377	4,705	4,875	4,243	4,205	4,428	4,259	4,508	4,538
514	Groceries & related products	19,512	19,719	19,683	19,852	20,169	20,168	19,917	18,559	18,785	18,663	19,409	19,515	19,762
515	Farm-product raw materials	11,348	11,414	11,474	11,597	10,925	10,650	10,139	11,015	11,412	11,616	12,654	10,778	9,517
516	Chemicals & allied products	2,929	2,955	2,990	3,033	2,951	3,031	3,163	3,080	2,987	2,928	2,860	2,985	2,920
517	Petroleum & petroleum products	10,287	11,081	11,568	13,016	13,256	13,033	12,084	11,067	11,218	10,395	10,267	9,998	10,090
518	Beer, wine, & distilled beverages	3,658	3,534	3,640	3,589	3,576	3,701	3,769	3,566	3,612	3,697	3,673	3,730	3,637
519	Misc. nondurable goods	9,825	9,531	9,525	9,231	8,918	9,589	9,255	9,350	9,448	9,611	9,699	9,612	9,629
	Inventories, Total	179,761	179,810	179,681	181,226	182,615	182,548	182,573	174,466	176,368	176,972	177,408	177,060	178,313
50	Durable goods	117,255	117,932	117,424	119,069	120,481	120,231	120,693	112,712	113,727	114,875	115,225	114,975	115,743
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,469	23,067	22,826	22,979	20,928	21,047	21,526	21,378	21,353	21,507
502	Furniture & home furnishings	4,033	4,087	4,078	4,004	4,035	4,114	4,137	4,188	4,188	4,201	4,208	4,107	4,023
503	Lumber & other construction mat.	5,777	5,584	5,667	5,698	5,614	5,603	5,622	5,532	5,441	5,501	5,587	5,377	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,656	4,854	4,839	4,781	4,247	4,175	4,332	4,306	4,322	4,467
505	Metals & minerals, ex. petroleum	8,857	8,878	9,030	9,007	8,768	8,961	9,079	8,844	8,867	8,969	9,128	9,169	8,982
506	Electrical goods	15,063	15,418	15,353	15,520	15,825	15,889	16,117	14,148	14,336	14,136	14,488	14,480	14,798
507	Hardware, plumbing & heating equipment	7,588	7,454	7,400	7,601	7,713	7,697	7,683	7,304	7,379	7,414	7,456	7,275	7,264
508	Machinery, equip. & supplies	41,620	41,730	41,049	42,184	42,862	42,843	42,967	39,851	40,389	41,175	41,111	41,245	41,338
509	Miscellaneous durable goods	8,377	8,524	8,324	7,832	7,945	7,459	7,328	7,690	7,925	7,621	7,563	7,647	7,867
51	Nondurable goods	62,506	61,878	62,257	62,157	62,134	62,317	61,880	61,754	62,641	62,097	62,183	62,085	62,570
511	Paper & paper products	4,586	4,490	4,469	4,541	4,535	4,533	4,552	4,190	4,108	4,246	4,297	4,231	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,169	5,190	5,380	5,397	5,042	5,129	4,997	4,870	4,917	5,221
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,190	8,307	8,378	8,563	7,511	7,456	7,408	7,639	7,870	7,846
514	Groceries & related products	12,822	12,772	12,931	12,879	13,109	13,054	12,515	12,413	12,373	12,664	12,753	12,584	12,564
515	Farm-product raw materials	9,097	8,558	8,145	7,776	7,422	6,976	6,709	10,323	10,679	10,348	10,270	9,558	9,562
516	Chemicals & allied products	2,796	2,612	2,723	2,703	2,622	2,747	2,761	2,654	2,754	2,780	2,713	2,734	2,964
517	Petroleum & petroleum products	3,972	4,201	4,655	4,901	4,821	5,045	4,762	4,088	4,196	4,134	3,940	3,861	3,658
518	Beer, wine, & distilled beverages	4,099	4,026	4,036	3,986	4,053	4,099	4,209	4,021	4,090	4,071	4,143	4,128	4,176
519	Misc. nondurable goods	11,783	11,727	11,913	12,012	12,075	12,105	12,412	11,512	11,946	11,469	11,558	12,202	12,069
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.28	1.29	1.30	1.30	1.31	1.31	1.28	1.29	1.31
50	Durable goods	1.67	1.70	1.71	1.72	1.71	1.74	1.74	1.72	1.74	1.73	1.70	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.59	1.75	1.73	1.77	1.52	1.58	1.59	1.52	1.49	1.53
502	Furniture & home furnishings	1.66	1.72	1.74	1.65	1.70	1.78	1.74	1.84	1.82	1.82	1.75	1.63	1.61
503	Lumber & other construction mat.	1.18	1.19	1.27	1.24	1.24	1.24	1.25	1.19	1.18	1.20	1.19	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.24	2.25	2.28	2.41	2.08	1.99	2.06	2.01	1.93	1.89
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.44	1.29	1.29	1.27	1.54	1.52	1.49	1.53	1.47	1.50
506	Electrical goods	1.58	1.67	1.68	1.67	1.60	1.72	1.77	1.66	1.64	1.63	1.61	1.56	1.63
507	Hardware, plumbing & heating equipment	1.82	1.87	1.91	1.83	1.87	1.98	1.97	1.72	1.83	1.91	1.85	1.85	1.83
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.13	2.15	2.13	2.12	2.30	2.25	2.22	2.21	2.22	2.23
509	Miscellaneous durable goods	1.14	1.17	1.18	1.20	1.09	1.10	1.02	1.10	1.19	1.14	1.13	1.11	1.09
51	Nondurable goods .....	.89	.88	.87	.85	.86	.86	.87	.90	.90	.90	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.96	.96	.97	.94	.96	.94	.94	.95	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.59	1.58	1.64	1.61	1.64	1.61	1.57	1.54	1.58	1.60
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.76	1.90	1.78	1.76	1.77	1.77	1.67	1.79	1.75	1.73
514	Groceries & related products .....	.66	.65	.66	.65	.65	.65	.63	.67	.66	.68	.66	.64	.64
515	Farm-product raw materials .....	.80	.75	.71	.67	.68	.66	.66	.94	.94	.89	.81	.89	1.00
516	Chemicals & allied products .....	.95	.88	.91	.89	.89	.91	.88	.87	.93	.94	.95	.92	1.02
517	Petroleum & petroleum products .....	.39	.38	.40	.38	.36	.39	.39	.37	.37	.40	.38	.39	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.13	1.11	1.11	1.13	1.13	1.10	1.13	1.11	1.15
519	Misc. nondurable goods	1.20	1.23	1.25	1.30	1.35	1.26	1.34	1.23	1.25	1.19	1.19	1.27	1.25

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989							1988						Total 7 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July ^a	July	Aug.	Sept.	Oct.	Nov.	Dec.	1989	1988
	Sales, Total	131,786	127,414	148,920	137,567	148,832	146,662	133,981	126,841	138,551	136,994	141,335	138,289	136,599	975,162	896,562
50	Durable goods	63,265	62,003	72,946	68,014	73,231	72,803	66,352	62,555	67,904	68,511	70,825	68,957	67,261	478,614	439,286
501	Motor vehicles & auto. equip.	13,064	13,008	15,066	14,259	14,103	14,063	12,625	13,335	13,456	12,722	14,893	14,531	14,185	96,188	94,259
502	Furniture & home furnishings	2,171	2,136	2,428	2,264	2,402	2,320	2,243	2,124	2,463	2,435	2,686	2,604	2,393	15,964	15,404
503	Lumber & other construction mat.	3,982	3,616	4,399	4,482	4,959	5,114	4,816	4,979	5,272	5,041	5,111	4,482	4,056	31,368	31,690
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,070	1,842	2,301	1,872	1,838	2,080	1,771	1,832	2,198	2,331	2,460	2,551	2,438	13,774	12,517
505	Metals & minerals, ex. petroleum	5,939	5,334	7,052	6,093	6,819	7,438	6,621	5,403	5,980	6,542	5,797	5,804	5,676	45,296	39,188
506	Electrical goods	8,633	8,334	9,456	8,675	9,728	9,376	8,781	8,167	9,201	9,200	9,826	9,778	9,068	62,983	57,010
507	Hardware, plumbing & heating equipment	3,786	3,495	3,838	3,972	4,375	4,225	3,901	4,198	4,274	3,967	4,263	3,922	3,771	27,592	26,798
508	Machinery, equip. & supplies	17,216	17,898	20,892	19,732	21,017	20,999	19,001	16,279	18,576	19,145	18,534	18,243	18,692	136,726	115,986
509	Miscellaneous durable goods	6,404	6,370	7,514	6,665	7,990	7,188	6,593	6,238	6,505	7,128	7,255	7,042	6,982	48,724	46,424
51	Nondurable goods	68,521	65,411	75,974	69,553	75,601	73,859	67,629	64,286	70,647	68,483	70,510	69,332	69,338	496,548	457,276
511	Paper & paper products	4,464	4,242	4,907	4,482	4,596	4,802	4,501	4,115	4,641	4,624	4,561	4,488	4,382	31,994	28,957
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,064	3,379	3,296	3,174	2,894	3,266	3,284	3,184	3,121	3,248	22,622	20,366
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,956	3,939	4,856	5,065	4,358	5,261	4,680	4,668	4,558	3,240	31,238	27,827
514	Groceries & related products	18,985	18,043	20,037	18,840	21,359	20,551	19,658	18,336	19,480	18,458	19,176	19,905	20,296	137,473	126,582
515	Farm-product raw materials	12,188	10,969	12,277	10,959	11,264	10,149	8,912	9,352	10,362	10,745	13,110	11,155	10,926	76,718	69,718
516	Chemicals & allied products	2,835	2,710	3,262	3,018	3,187	3,370	2,976	2,910	3,109	3,016	2,886	2,863	2,578	21,358	20,324
517	Petroleum & petroleum products	11,007	10,981	13,060	12,183	13,190	12,590	11,178	10,226	10,960	10,478	9,949	10,198	10,867	84,189	75,024
518	Beer, wine, & distilled beverages	2,837	2,806	3,995	3,266	3,905	4,138	3,706	3,530	4,016	3,741	3,607	3,913	4,201	24,353	24,247
519	Misc. nondurable goods	8,538	8,340	10,592	9,785	10,782	10,107	8,459	8,565	9,552	9,457	9,369	9,131	9,600	66,603	64,231
	Inventories, Total	181,054	181,481	181,246	182,305	181,114	182,346	181,128	172,497	172,736	175,787	178,969	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	120,185	121,145	121,043	121,313	113,366	113,470	115,469	115,561	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,491	22,998	22,872	22,290	20,321	20,205	22,000	21,335	21,652	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	4,049	3,968	4,091	4,143	4,220	4,243	4,268	4,260	4,174	3,976	3,983	(X)	(X)
503	Lumber & other construction mat.	5,540	5,453	5,786	5,912	5,754	5,821	5,853	5,748	5,408	5,468	5,498	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,312	4,469	4,539	4,605	4,556	4,897	5,001	4,434	4,287	4,488	4,418	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum	8,999	8,878	9,102	9,160	8,889	9,337	9,270	9,030	8,681	8,763	8,945	8,821	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,261	15,558	15,857	15,873	16,327	14,360	14,551	14,489	14,720	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,461	7,570	7,745	7,798	7,712	7,729	7,355	7,431	7,347	7,396	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,131	42,859	43,162	42,929	43,053	39,931	40,409	40,804	41,399	41,492	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,887	8,040	7,459	7,570	7,944	8,250	7,850	7,676	7,647	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,120	59,969	61,303	59,815	59,131	59,266	60,318	63,408	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,577	4,485	4,501	4,561	4,190	4,092	4,119	4,280	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,329	5,014	5,186	5,230	4,881	4,924	4,957	4,987	4,838	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	7,789	8,490	8,956	9,025	7,917	7,903	7,667	7,379	7,445	7,744	(X)	(X)
514	Groceries & related products	12,886	12,836	12,685	12,647	12,834	12,806	12,277	12,165	11,890	12,601	13,314	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,850	8,446	7,535	6,168	6,027	5,669	6,671	8,703	9,158	11,276	10,800	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,662	2,720	2,789	2,716	2,843	2,764	2,662	2,789	2,619	2,637	2,693	2,891	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,669	4,627	4,541	4,944	4,662	4,006	3,999	4,237	3,983	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	3,974	4,117	4,082	4,057	4,165	4,196	4,013	4,020	4,087	4,387	4,314	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	12,745	11,664	11,875	11,431	10,626	10,946	10,873	11,165	12,163	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.33	1.22	1.24	1.36	1.36	1.25	1.28	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.62	1.77	1.65	1.66	1.83	1.81	1.67	1.69	1.63	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.58	1.63	1.63	1.77	1.52	1.50	1.73	1.43	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.67	1.75	1.70	1.79	1.88	2.00	1.73	1.75	1.55	1.53	1.66	(X)	(X)
503	Lumber & other construction mat.	1.39	1.51	1.32	1.32	1.16	1.14	1.22	1.15	1.03	1.08	1.08	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.08	2.43	1.97	2.46	2.48	2.35	2.82	2.42	1.94	1.93	1.80	1.66	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum	1.52	1.66	1.29	1.50	1.30	1.26	1.40	1.67	1.46	1.34	1.54	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.79	1.63	1.69	1.86	1.76	1.58	1.57	1.50	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.95	1.78	1.83	1.98	1.75	1.74	1.85	1.73	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.17	2.05	2.04	2.27	2.45	2.18	2.13	2.23	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.18	1.01	1.04	1.15	1.27	1.27	1.10	1.06	1.09	1.08	(X)	(X)
51	Nondurable goods . . . . .	.95	.98	.83	.89	.79	.83	.88	.92	.84	.88	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	1.02	.98	.94	1.01	1.02	.88	.89	.94	.93	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.50	1.74	1.48	1.57	1.65	1.69	1.51	1.51	1.57	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	1.97	2.16	1.84	1.78	1.82	1.50	1.64	1.58	1.63	2.39	(X)	(X)
514	Groceries & related products . . . . .	.68	.71	.63	.67	.60	.62	.62	.66	.61	.68	.69	.66	.63	(X)	(X)
515	Farm-product raw materials . . . . .	.89	.90	.89	.69	.55	.59	.84	.93	.84	.85	.86	.97	1.01	(X)	(X)
516	Chemicals & allied products . . . . .	.98	.98	.83	.92	.85	.84	.93	.91	.90	.87	.91	.94	1.12	(X)	(X)
517	Petroleum & petroleum products . . . . .	.39	.38	.36	.38	.34	.39	.42	.39	.36	.40	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.42	1.11	1.25	1.04	1.01	1.13	1.14	1.00	1.09	1.22	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.30	1.08										

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)	
		July 1989 from June 1989	July 1989 from July 1988	7 months 1989 from 7 months 1988	July 1989 from June 1989	July 1989 from July 1988	July 1989 from June 1989	July 1989 from July 1988	July 1989 from June 1989	July 1989 from July 1988
	Total	-8.6	+5.6	+8.8	-.7	+5.0	-.8	+5.3	.0	+4.6
50	Durable goods	-8.9	+6.1	+9.0	+2	+7.0	+5	+6.1	+4	+7.1
501	Motor vehicles & auto. equip.	-10.2	-5.3	+2.0	-2.5	+9.7	-1.8	-5.5	+7	+9.8
502	Furniture & home furnishings	-3.3	+5.6	+3.6	+1.9	-.5	+2.4	+4.9	+6	-.7
503	Lumber & other construction mat.	-5.8	-3.3	-1.0	+5	+1.8	-.4	-2.7	+3	+1.6
504	Sporting, recreational, photographic & hobby goods, toys & supplies	-14.9	-3.3	+10.0	+2.1	+12.8	-6.6	-2.6	-1.2	+12.6
505	Metals & minerals, ex. petroleum	-11.0	+22.5	+15.6	-.7	+2.7	+2.7	+24.4	+1.3	+2.7
506	Electrical goods	-6.3	+7.5	+10.5	+2.9	+13.7	-1.4	+7.0	+1.4	+13.9
507	Hardware, plumbing & heating equipment	-7.7	-7.1	+3.0	+2	+5.1	+6	-8.2	-.2	+5.2
508	Machinery, equip. & supplies	-9.5	+16.7	+17.9	+3	+7.8	+9	+17.1	+3	+7.8
509	Miscellaneous durable goods	-8.3	+5.7	+5.0	+1.5	-4.7	+6.7	+3.0	-1.8	-4.7
51	Nondurable goods	-8.4	+5.2	+8.6	-2.4	+1.2	-2.0	+4.4	-.7	+2
511	Paper & paper products	-6.3	+9.4	+10.5	+1.3	+8.9	+3.5	+10.0	+4	+8.6
512	Drugs, drug proprietaries and druggists' sundries	-3.7	+9.7	+11.1	+8	+7.2	+2.4	+9.0	+3	+7.0
513	Apparel, piece goods & notions	+4.3	+16.2	+12.3	+8	+14.0	+3.6	+14.9	+2.2	+14.0
514	Groceries & related products	-4.3	+7.2	+8.6	-4.1	+.9	-1.2	+7.3	-4.1	+.8
515	Farm-product raw materials	-12.2	-4.7	+10.0	-5.9	-34.6	-4.8	-8.0	-3.8	-35.0
516	Chemicals & allied products	-11.7	+2.3	+5.1	-2.8	+3.8	+4.0	+3.0	+5	+4.0
517	Petroleum & petroleum products	-11.2	+9.3	+12.2	-5.7	+16.4	-7.3	+9.2	-5.6	+16.5
518	Beer, wine, & distilled beverages	-10.4	+5.0	+.4	+.7	+4.6	+1.6	+5.4	+2.7	+4.7
519	Misc. nondurable goods	-16.3	-1.2	+3.7	-3.7	+7.6	-3.5	-1.0	+2.5	+7.8

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.

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).

The margin of sampling error, as used on the front page of this publication, indicates a range about the estimate which corresponds to a 90 percent confidence interval. If, for example, the estimate is up .8 percent and the margin of sampling error is 1.3 percentage points above or below the estimate, then the indicated range is down .5 percent to up 2.1 percent. If the range contains 0, it is uncertain whether there was an increase or decrease.

Nonsampling Errors

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

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

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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 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. 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	1.3-1.7	1.5	1.3-1.8	1.5	0.4-0.8	0.6	1.0-1.6	1.1	1.5	1.5	0.9
50	Durable goods	1.7-2.2	2.0	1.8-2.1	2.0	0.5-1.2	0.9	1.0-1.6	1.4	1.8	1.7	0.8
501	Motor vehicles & auto. equip.	3.8-6.6	4.8	3.6-6.9	5.5	1.3-2.7	1.8	2.9-4.0	3.4	4.8	5.4	2.0
502	Furniture & home furnishings	6.3-8.4	6.9	5.6-7.9	7.0	2.6-3.6	3.2	4.8-8.0	7.2	5.8	7.1	5.2
503	Lumber & other construction mat.	4.5-6.3	5.3	4.5-5.9	5.2	1.0-2.2	1.4	2.6-3.9	2.9	5.0	4.6	1.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.4-8.5	5.9	4.8-8.1	5.5	2.1-3.5	2.8	2.8-9.3	4.7	4.8	4.8	3.0
505	Metals & minerals, ex. petroleum	5.2-8.4	6.5	4.9-8.2	6.9	1.2-2.5	1.8	2.3-5.0	3.1	6.6	4.5	2.9
506	Electrical goods	2.9-4.4	3.2	2.4-4.2	2.9	0.9-2.9	1.2	1.8-3.3	2.4	2.8	2.8	1.6
507	Hardware, plumbing & heating equipment	7.1-8.1	7.8	7.0-8.1	7.8	1.2-3.3	1.6	3.1-5.2	3.6	7.4	7.1	2.2
508	Machinery, equip. & supplies	2.8-4.7	3.7	2.9-4.2	3.4	1.6-2.9	1.9	2.1-3.4	2.6	3.3	2.7	1.7
509	Miscellaneous durable goods	4.6-5.6	5.1	4.6-5.7	5.1	1.4-3.5	1.7	2.6-4.7	3.3	4.8	4.3	2.0
51	Nondurable goods	2.4-2.8	2.5	2.4-2.9	2.5	0.4-0.9	0.8	1.6-2.2	1.9	2.5	2.9	1.5
511	Paper & paper products	5.0-6.0	5.4	5.0-5.7	5.3	0.7-1.9	1.5	2.1-3.0	2.6	5.2	5.4	1.1
512	Drugs, drug proprietaries and druggists' sundries	4.0-6.0	5.1	3.8-5.7	4.7	0.6-2.0	1.4	2.7-4.2	3.6	4.7	5.6	2.5
513	Apparel, piece goods & notions	8.7-10.7	9.4	7.9-10.7	10.0	1.6-5.3	3.1	4.3-8.2	4.8	9.1	8.1	3.5
514	Groceries & related products	4.5-5.6	4.7	4.5-5.7	4.9	0.5-1.7	1.0	2.4-4.8	3.5	4.7	6.4	2.8
515	Farm-product raw materials	4.4-6.9	5.6	4.6-6.1	5.6	1.3-3.8	2.5	4.8-9.0	7.5	4.7	5.1	6.0
516	Chemicals & allied products	6.4-8.3	7.1	5.1-7.4	6.3	1.8-3.9	2.5	4.3-6.7	5.3	6.2	7.0	3.7
517	Petroleum & petroleum products	5.9-7.5	7.0	6.1-7.5	7.0	0.7-2.4	1.6	3.0-4.3	3.4	6.8	4.9	3.2
518	Beer, wine, & distilled beverages	3.1-4.5	3.8	3.1-4.0	3.4	1.0-1.8	1.1	2.3-3.9	2.6	3.3	2.8	1.7
519	Misc. nondurable goods	4.8-7.1	6.2	4.8-6.7	5.5	1.4-2.8	2.2	2.1-4.3	2.8	5.5	4.7	2.2
	Inventories, Total	1.1-1.3	1.2	1.1-1.4	1.3	0.2-0.3	0.2	0.7-1.1	0.8	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.5	1.5-1.6	1.5	0.2-0.4	0.3	1.0-1.3	1.1	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.7-6.5	6.1	5.7-6.7	6.1	0.6-1.4	0.9	2.0-2.9	2.3	(X)	(X)	(X)
502	Furniture & home furnishings	9.3-9.9	9.8	8.9-9.7	9.5	0.9-2.2	1.4	5.4-7.0	6.4	(X)	(X)	(X)
503	Lumber & other construction mat.	5.2-6.7	5.6	4.7-6.2	5.5	0.7-1.2	1.0	2.7-4.0	3.4	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	5.4-6.7	5.9	5.2-6.6	5.8	0.8-2.1	1.4	2.5-6.7	4.4	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	4.4-5.6	5.0	4.6-5.5	4.9	0.6-0.8	0.6	2.4-3.7	2.6	(X)	(X)	(X)
506	Electrical goods	2.6-3.1	2.7	2.6-3.1	2.8	0.4-0.6	0.5	1.4-2.0	1.8	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	5.1-6.4	5.7	5.2-6.1	5.8	0.5-1.3	0.7	1.8-3.7	3.4	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.9-4.2	3.5	2.9-3.9	3.5	0.4-0.7	0.5	2.1-2.8	2.3	(X)	(X)	(X)
509	Miscellaneous durable goods	8.6-9.6	9.0	8.7-9.4	9.0	0.7-2.3	1.0	3.0-5.7	4.0	(X)	(X)	(X)
51	Nondurable goods	2.5-3.0	2.8	2.6-2.9	2.8	0.3-0.5	0.4	0.7-1.6	1.1	(X)	(X)	(X)
511	Paper & paper products	4.9-6.1	5.6	5.2-5.9	5.3	0.7-1.5	0.9	2.1-2.8	2.5	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.7-6.7	6.2	5.8-6.5	6.2	0.6-1.6	0.8	1.8-3.6	3.0	(X)	(X)	(X)
513	Apparel, piece goods & notions	6.6-8.3	7.2	6.9-7.8	7.1	0.8-1.7	1.2	2.9-5.0	4.3	(X)	(X)	(X)
514	Groceries & related products	4.8-5.4	5.2	4.6-5.7	5.5	0.4-1.3	0.8	2.1-3.0	2.6	(X)	(X)	(X)
515	Farm-product raw materials	6.8-7.5	7.0	6.6-7.3	6.8	1.2-2.0	1.3	2.4-5.1	3.3	(X)	(X)	(X)
516	Chemicals & allied products	6.1-7.9	7.4	6.3-8.0	7.4	0.9-2.6	1.3	3.1-5.6	3.7	(X)	(X)	(X)
517	Petroleum & petroleum products	4.9-6.8	5.8	5.0-6.7	5.3	1.1-1.6	1.2	1.3-2.4	2.2	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	3.7-5.2	4.4	3.8-4.7	4.4	0.8-1.3	1.1	1.9-3.3	2.5	(X)	(X)	(X)
519	Misc. nondurable goods	7.2-9.6	8.6	7.4-8.9	8.2	0.7-1.3	1.1	2.2-3.8	3.7	(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 1989 through July 1989.

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	1988						1989							
		July ^r	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June ^r	July ^r	Aug.
	Sales,¹ Total .....	.948	1.031	1.014	1.029	1.011	.999	.945	.912	1.055	.968	1.045	1.031	.956	1.038
50	Durable goods .....	.956	1.037	1.036	1.052	1.010	.978	.904	.891	1.052	.980	1.044	1.050	.959	1.040
501	Motor vehicles & auto. equip. ...	.970	1.008	.939	1.061	1.017	1.011	.899	.893	1.047	1.007	1.067	1.063	.972	1.008
502	Furniture & home furnishings ...	.940	1.072	1.054	1.118	1.035	.956	.893	.904	1.038	.933	1.014	1.002	.946	1.059
503	Lumber & other construction mat.	1.075	1.148	1.101	1.089	.982	.857	.810	.773	.989	.977	1.092	1.131	1.069	1.131
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.899	1.049	1.107	1.146	1.140	1.030	.889	.909	1.041	.899	.888	.979	.892	1.034
505	Metals & minerals, ex. petroleum	.939	1.023	1.087	.971	.933	.945	.968	.935	1.181	.977	1.001	1.067	.925	1.043
506	Electrical goods .....	.958	1.053	1.060	1.095	1.053	1.000	.906	.904	1.032	.930	.985	1.014	.963	1.048
507	Hardware, plumbing & heating equipment .....	.987	1.058	1.023	1.059	.998	.949	.910	.877	.991	.958	1.062	1.089	.999	1.061
508	Machinery, equip. & supplies ...	.940	1.037	1.034	.995	.981	1.009	.910	.915	1.081	.995	1.052	1.045	.937	1.052
509	Miscellaneous durable goods ...	.891	.978	1.070	1.082	1.020	.967	.871	.876	1.062	1.018	1.093	1.063	.914	1.001
51	Nondurable goods .....	.941	1.028	.999	1.004	1.015	1.016	.980	.932	1.064	.954	1.046	1.014	.947	1.033
511	Paper & paper products .....	.938	1.060	1.023	1.009	1.008	.997	.980	.941	1.072	.946	.972	1.030	.933	1.084
512	Drugs, drug proprietaries and druggists' sundries .....	.941	1.027	1.033	1.006	1.001	.998	1.016	.935	1.049	.944	1.030	1.007	.947	1.036
513	Apparel, piece goods & notions	1.027	1.251	1.057	1.096	1.011	.714	.930	1.015	1.055	.852	.900	1.032	1.039	1.272
514	Groceries & related products ...	.988	1.037	.989	.988	1.020	1.027	.973	.915	1.018	.949	1.059	1.019	.987	1.043
515	Farm-product raw materials ...	.849	.908	.925	1.036	1.035	1.148	1.074	.961	1.070	.945	1.031	.953	.879	.943
516	Chemicals & allied products ...	.951	1.041	1.030	1.009	.959	.883	.968	.917	1.091	.995	1.080	1.112	.944	1.023
517	Petroleum & petroleum products	.924	.977	1.008	.969	1.020	1.077	1.070	.991	1.129	.936	.995	.966	.925	.967
518	Beer, wine, & distilled beverages	.990	1.112	1.012	.982	1.049	1.155	.776	.794	1.015	.910	1.092	1.118	.986	1.124
519	Misc. nondurable goods .....	.916	1.011	.984	.966	.950	.997	.869	.875	1.112	1.060	1.209	1.054	.914	.995
	Inventories,¹ Total .....	.991	.986	.995	1.009	1.004	1.001	1.005	1.008	1.008	1.006	.991	.995	.991	.986
50	Durable goods	1.005	1.002	1.009	1.004	.995	.985	.988	.996	1.003	1.007	1.005	1.004	1.005	1.001
501	Motor vehicles & auto. equip. ...	.971	.960	1.022	.998	1.014	1.016	.995	1.014	1.016	1.001	.997	1.002	.970	.960
502	Furniture & home furnishings ...	1.018	1.019	1.014	.992	.968	.990	1.009	.995	.993	.991	1.014	1.007	1.020	1.022
503	Lumber & other construction mat.	1.039	.994	.994	.984	.971	.973	.959	.980	1.021	1.038	1.025	1.039	1.041	.990
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.044	1.022	1.036	1.026	.982	.967	.971	.981	.993	.989	.979	1.012	1.046	1.023
505	Metals & minerals, ex. petroleum	1.021	.979	.977	.980	.962	1.005	1.016	1.000	1.008	1.017	1.014	1.042	1.021	.977
506	Electrical goods	1.015	1.015	1.025	1.016	1.002	.994	.972	.985	.994	.996	1.002	.999	1.013	1.013
507	Hardware, plumbing & heating equipment	1.007	1.007	.991	.992	.974	.969	.990	1.001	1.023	1.019	1.011	1.002	1.006	1.011
508	Machinery, equip. & supplies ...	1.002	1.001	.991	1.007	1.006	.976	.995	1.001	1.002	1.016	1.007	1.002	1.002	1.003
509	Miscellaneous durable goods ...	1.033	1.041	1.030	1.015	1.000	.960	.956	.962	.979	1.007	1.012	1.000	1.033	1.040
51	Nondurable goods .....	.965	.956	.974	1.017	1.025	1.032	1.038	1.031	1.015	.996	.962	.984	.965	.957
511	Paper & paper products	1.000	.996	.970	.996	.986	1.001	1.031	1.016	1.021	1.008	.989	.993	1.002	.995
512	Drugs, drug proprietaries and druggists' sundries .....	.968	.960	.992	1.024	.984	1.015	1.046	1.036	1.007	1.031	.966	.964	.969	.962
513	Apparel, piece goods & notions	1.054	1.060	1.035	.966	.946	.987	.995	.984	.954	.951	1.022	1.069	1.054	1.047
514	Groceries & related products ...	.980	.961	.995	1.044	1.048	1.024	1.005	1.005	.981	.982	.979	.981	.981	.963
515	Farm-product raw materials ...	.840	.815	.885	1.098	1.130	1.156	1.198	1.151	1.037	.969	.831	.864	.845	.820
516	Chemicals & allied products ...	1.003	1.009	.949	.972	.985	.972	.995	1.019	.999	1.032	1.036	1.035	1.001	1.009
517	Petroleum & petroleum products	.980	.953	1.025	1.011	1.022	1.103	1.088	.981	1.003	.944	.942	.980	.979	.964
518	Beer, wine, & distilled beverages	.998	.983	1.004	1.059	1.045	.911	.944	.997	1.020	1.024	1.001	1.016	.997	.983
519	Misc. nondurable goods .....	.923	.924	.948	.966	.996	1.035	1.030	1.059	1.101	1.061	.966	.981	.921	.925

^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 1989

 BW89-08
 Issued October 1989

 U.S. Department of Commerce
 BUREAU OF THE CENSUS

Sales. August 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$143.8 billion, up 1.5 percent from the revised July level and up 7.0 percent from a year ago. The July preliminary estimate was revised upward by \$0.8 billion or about 0.6 percent. August sales of durable goods increased 1.8 percent from July, and were 9.3 percent above a year ago. Monthly gains in the durable goods group were as follows: sales of furniture and home furnishings were up 6.3 percent to \$2.6 billion; motor vehicles and automotive equipment increased 5.3 percent to \$13.9 billion; and electrical goods increased 3.1 percent to \$9.6 billion. August sales of nondurable goods were up 1.2 percent from July and were 4.9 percent above August 1988.

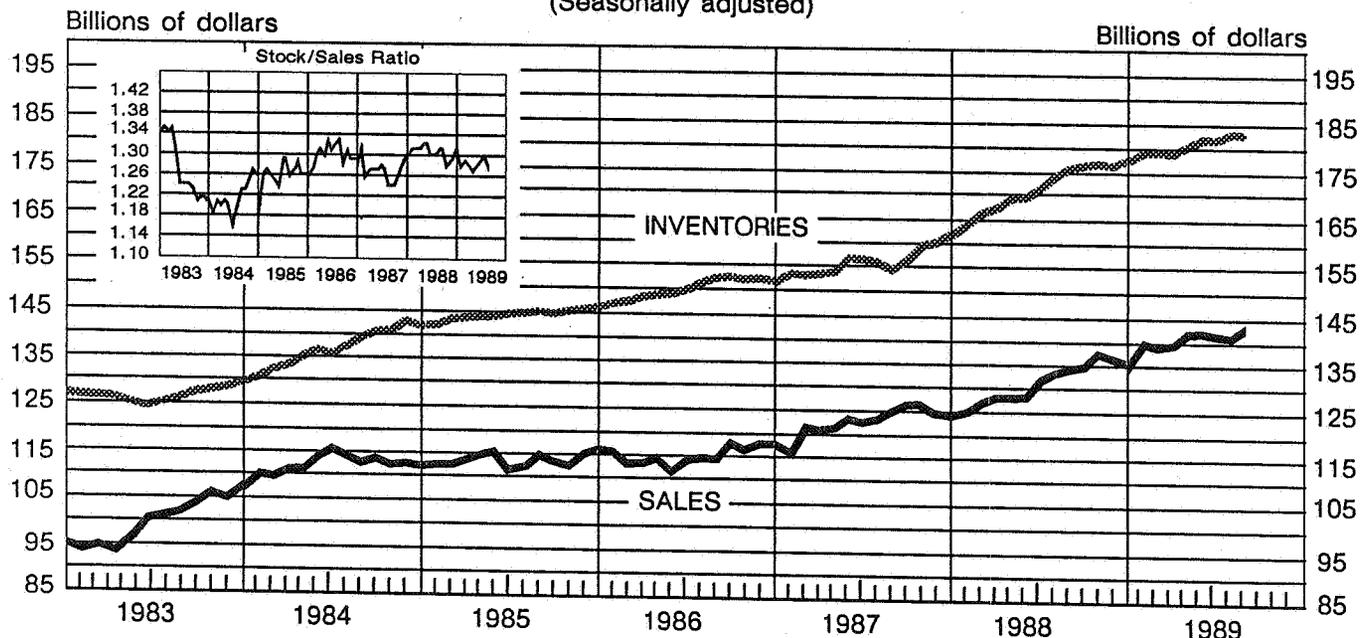
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$183.7 billion at the end of August, down 0.2 percent from the revised July level but up 4.1 percent

from a year ago. The July preliminary estimate was revised upward by \$1.4 billion or about 0.8 percent. Inventories of durable goods wholesalers decreased 0.2 percent from the July level but were up 7.1 percent from a year ago. Inventories of nondurable goods wholesalers were down 0.2 percent from the July level and were 1.3 percent below August 1988.

Stock/Sales Ratio. The August stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.28, down from the July ratio of 1.30.

NOTE: Since this survey is based on a sample, the estimates will differ from the universe values due to both sampling and nonsampling error. For the month-to-month and year-to-year percent changes shown for sales and inventory at the total, durable, and nondurable levels, the margins of sampling error range from 0.5 to 2.9 percentage points above and below the estimate. See the "Reliability of Data" section on page 4 for a more complete description.

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-89
 (Seasonally adjusted)



Monthly Wholesale Trade for September is scheduled to be released November 8, 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: 1989 and 1988

(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	1989								1988				
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. ^P	Aug. ^r	Sept.	Oct.	Nov.	Dec.
	Sales, Total	140,358	139,547	139,991	142,290	142,474	141,959	141,667	143,792	134,377	135,332	138,087	137,239	136,170
50	Durable goods	70,302	69,343	68,796	69,345	70,293	69,147	70,220	71,510	65,450	66,295	67,581	68,543	68,427
501	Motor vehicles & auto. equip.	14,532	14,567	14,390	14,160	13,217	13,230	13,173	13,875	13,336	13,548	14,037	14,288	14,031
502	Furniture & home furnishings	2,431	2,363	2,339	2,427	2,369	2,315	2,407	2,559	2,263	2,310	2,403	2,516	2,503
503	Lumber & other construction mat.	4,916	4,678	4,448	4,588	4,541	4,522	4,599	4,750	4,572	4,579	4,693	4,564	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,082	2,070	2,125	2,040	2,120	2,083	2,106	2,147	2,238	2,367
505	Metals & minerals, ex. petroleum	6,135	5,705	5,971	6,236	6,812	6,971	6,988	6,789	5,878	6,018	5,970	6,221	6,006
506	Electrical goods	9,529	9,219	9,163	9,328	9,876	9,247	9,331	9,621	8,688	8,679	8,974	9,286	9,068
507	Hardware, plumbing & heating equipment	4,160	3,985	3,873	4,146	4,120	3,880	3,956	4,031	3,998	3,878	4,025	3,930	3,974
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,831	19,978	20,095	20,442	20,594	17,878	18,515	18,627	18,596	18,525
509	Miscellaneous durable goods	7,352	7,272	7,075	6,547	7,310	6,762	7,283	7,171	6,734	6,662	6,705	6,904	7,220
51	Nondurable goods	70,054	70,204	71,195	72,945	72,181	72,812	71,447	72,282	68,927	69,037	70,506	68,696	67,743
511	Paper & paper products	4,555	4,508	4,577	4,738	4,728	4,662	4,846	4,865	4,378	4,520	4,520	4,452	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,176	3,261	3,246	3,281	3,273	3,340	3,348	3,156	3,179	3,165	3,118	3,255
513	Apparel, piece goods & notions	4,676	4,288	4,477	4,643	4,377	4,705	4,758	4,749	4,219	4,428	4,259	4,508	4,538
514	Groceries & related products	19,512	19,719	19,683	19,952	20,169	20,168	19,949	19,730	18,858	18,663	19,409	19,515	19,762
515	Farm-product raw materials	11,348	11,414	11,474	11,597	10,925	10,650	10,265	10,765	11,118	11,616	12,654	10,778	9,517
516	Chemicals & allied products	2,929	2,965	2,990	3,033	2,951	3,031	3,081	3,010	3,081	2,928	2,860	2,985	2,920
517	Petroleum & petroleum products	10,287	11,081	11,588	13,016	13,256	13,033	12,188	12,350	11,015	10,395	10,267	9,998	10,090
518	Beer, wine, & distilled beverages	3,658	3,534	3,640	3,589	3,576	3,701	3,618	3,655	3,625	3,697	3,673	3,730	3,637
519	Misc. nondurable goods	9,825	9,531	9,525	9,231	8,918	9,589	9,402	9,810	9,542	9,611	9,699	9,612	9,629
	Inventories, Total	179,761	179,810	179,681	181,226	182,615	182,548	183,950	183,654	176,415	176,972	177,408	177,060	178,313
50	Durable goods	117,255	117,932	117,424	119,069	120,481	120,231	122,142	121,950	113,876	114,875	115,225	114,975	115,743
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,469	23,067	22,826	23,154	22,786	21,113	21,526	21,378	21,353	21,507
502	Furniture & home furnishings	4,033	4,067	4,078	4,004	4,035	4,114	4,143	4,157	4,180	4,201	4,208	4,107	4,023
503	Lumber & other construction mat.	5,777	5,564	5,667	5,696	5,614	5,603	5,670	5,734	5,468	5,501	5,587	5,377	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,656	4,654	4,839	4,795	4,792	4,179	4,332	4,306	4,322	4,467
505	Metals & minerals, ex. petroleum	8,857	8,878	9,030	9,007	8,766	8,961	9,332	9,525	8,867	8,969	9,128	9,169	8,982
506	Electrical goods	15,063	15,418	15,353	15,620	15,825	15,889	16,233	16,056	14,407	14,136	14,488	14,480	14,798
507	Hardware, plumbing & heating equipment	7,588	7,454	7,400	7,601	7,713	7,697	7,854	7,901	7,336	7,414	7,456	7,275	7,264
508	Machinery, equip. & supplies	41,620	41,730	41,049	42,184	42,862	42,843	43,640	43,667	40,409	41,175	41,111	41,245	41,338
509	Miscellaneous durable goods	8,377	8,524	8,324	7,832	7,945	7,459	7,321	7,332	7,917	7,621	7,563	7,647	7,867
51	Nondurable goods	62,506	61,878	62,257	62,157	62,134	62,317	61,808	61,704	62,539	62,097	62,183	62,085	62,570
511	Paper & paper products	4,588	4,490	4,469	4,541	4,535	4,533	4,628	4,628	4,125	4,246	4,297	4,231	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,169	5,190	5,380	5,428	5,647	5,092	4,997	4,870	4,917	5,221
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,190	8,307	8,378	8,564	8,603	7,577	7,408	7,639	7,870	7,846
514	Groceries & related products	12,822	12,772	12,931	12,879	13,109	13,054	12,612	12,751	12,385	12,684	12,763	12,584	12,564
515	Farm-product raw materials	9,097	8,558	8,145	7,778	7,422	6,976	6,933	7,064	10,423	10,348	10,270	9,558	9,562
516	Chemicals & allied products	2,796	2,612	2,723	2,703	2,622	2,747	2,732	2,675	2,767	2,760	2,713	2,734	2,964
517	Petroleum & petroleum products	3,972	4,201	4,655	4,901	4,821	5,045	4,629	4,664	4,174	4,134	3,940	3,861	3,858
518	Beer, wine, & distilled beverages	4,099	4,026	4,036	3,986	4,053	4,099	4,126	3,881	4,098	4,071	4,143	4,128	4,176
519	Misc. nondurable goods	11,783	11,727	11,913	12,012	12,075	12,105	12,156	11,791	11,898	11,469	11,558	12,202	12,069
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.28	1.29	1.30	1.28	1.31	1.31	1.28	1.29	1.31
50	Durable goods	1.67	1.70	1.71	1.72	1.71	1.74	1.74	1.71	1.74	1.73	1.70	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.59	1.75	1.73	1.76	1.64	1.58	1.59	1.52	1.49	1.53
502	Furniture & home furnishings	1.66	1.72	1.74	1.65	1.70	1.78	1.72	1.62	1.83	1.82	1.75	1.63	1.61
503	Lumber & other construction mat.	1.18	1.19	1.21	1.24	1.24	1.23	1.21	1.20	1.20	1.20	1.19	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.24	2.25	2.28	2.35	2.26	2.01	2.06	2.01	1.93	1.89
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.44	1.29	1.29	1.34	1.40	1.51	1.49	1.53	1.47	1.50
506	Electrical goods	1.58	1.67	1.68	1.67	1.60	1.72	1.74	1.67	1.66	1.63	1.61	1.56	1.63
507	Hardware, plumbing & heating equipment	1.82	1.87	1.91	1.83	1.87	1.98	1.99	1.96	1.83	1.91	1.85	1.85	1.83
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.13	2.15	2.13	2.13	2.12	2.26	2.22	2.21	2.22	2.23
509	Miscellaneous durable goods	1.14	1.17	1.18	1.20	1.09	1.10	1.01	1.02	1.18	1.14	1.13	1.11	1.09
51	Nondurable goods .....	.89	.88	.87	.85	.86	.86	.87	.85	.91	.90	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.96	.96	.97	.96	.95	.94	.94	.95	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.59	1.58	1.64	1.63	1.69	1.61	1.57	1.54	1.58	1.60
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.76	1.90	1.78	1.80	1.81	1.80	1.67	1.79	1.75	1.73
514	Groceries & related products .....	.66	.65	.66	.65	.65	.63	.63	.65	.65	.66	.66	.64	.64
515	Farm-product raw materials .....	.80	.75	.71	.67	.68	.68	.68	.68	.68	.68	.68	.68	.68
516	Chemicals & allied products .....	.95	.88	.91	.89	.89	.91	.89	.89	.89	.81	.89	.89	1.00
517	Petroleum & petroleum products .....	.39	.38	.40	.38	.36	.39	.38	.38	.38	.38	.38	.38	1.02
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.13	1.11	1.14	1.06	1.13	1.10	1.13	1.11	1.15
519	Misc. nondurable goods	1.20	1.23	1.25	1.30	1.35	1.26	1.29	1.20	1.25	1.19	1.19	1.27	1.25

^rRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989								1988					Total 8 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. ^P	Aug.	Sept.	Oct.	Nov.	Dec.	1989	1988
	Sales, Total	131,786	127,414	148,920	137,567	148,832	146,662	134,412	149,802	138,551	136,994	141,335	138,289	136,599	1,125,365	1,035,113
50	Durable goods	63,265	62,003	72,946	68,014	73,231	72,803	66,904	74,927	67,904	68,511	70,825	68,957	67,261	554,093	507,190
501	Motor vehicles & auto. equip.	13,064	13,008	15,066	14,259	14,103	14,063	12,712	14,263	13,456	12,722	14,893	14,531	14,185	110,538	107,715
502	Furniture & home furnishings	2,171	2,136	2,428	2,264	2,402	2,320	2,258	2,751	2,463	2,435	2,686	2,604	2,393	18,730	17,867
503	Lumber & other construction mat.	3,982	3,616	4,399	4,482	4,959	5,114	4,912	5,425	5,272	5,041	5,111	4,482	4,056	36,889	36,962
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,070	1,842	2,301	1,872	1,838	2,080	1,816	2,245	2,198	2,331	2,460	2,551	2,438	16,064	14,715
505	Metals & minerals, ex. petroleum	5,939	5,334	7,052	6,093	6,819	7,438	6,493	6,979	5,960	6,542	5,797	5,804	5,676	52,147	45,148
506	Electrical goods	8,633	8,334	9,456	8,675	9,728	9,376	8,976	10,217	9,201	9,200	9,826	9,778	9,068	73,395	66,211
507	Hardware, plumbing & heating equipment	3,786	3,495	3,838	3,972	4,375	4,225	3,912	4,341	4,274	3,967	4,263	3,922	3,771	31,944	31,072
508	Machinery, equip. & supplies	17,216	17,868	20,892	19,732	21,017	20,999	19,154	21,686	18,575	19,145	18,534	18,243	18,692	158,564	134,571
509	Miscellaneous durable goods	6,404	6,370	7,514	6,665	7,990	7,188	6,671	7,020	6,505	7,128	7,255	7,042	6,982	55,822	52,929
51	Nondurable goods	68,521	65,411	75,974	69,553	75,601	73,859	67,508	74,875	70,647	68,483	70,510	69,332	69,338	571,302	527,923
511	Paper & paper products	4,464	4,242	4,907	4,482	4,596	4,802	4,507	5,254	4,641	4,624	4,561	4,488	4,382	37,254	33,598
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,064	3,379	3,296	3,150	3,492	3,266	3,284	3,184	3,121	3,248	26,090	23,632
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,956	3,939	4,856	4,929	6,012	5,261	4,680	4,668	4,558	3,240	37,114	33,088
514	Groceries & related products	18,985	18,043	20,037	18,840	21,359	20,551	19,789	20,421	19,480	18,458	19,176	19,905	20,296	168,025	146,062
515	Farm-product raw materials	12,188	10,969	12,277	10,959	11,264	10,149	8,961	10,464	10,362	10,745	13,110	11,155	10,926	87,231	80,080
516	Chemicals & allied products	2,835	2,710	3,262	3,018	3,187	3,370	2,915	3,070	3,109	3,016	2,886	2,863	2,578	24,367	23,433
517	Petroleum & petroleum products	11,007	10,981	13,060	12,183	13,190	12,590	11,178	12,189	10,960	10,478	9,949	10,198	10,867	96,376	85,984
518	Beer, wine, & distilled beverages	2,837	2,806	3,695	3,266	3,905	4,138	3,535	4,094	4,016	3,741	3,607	3,913	4,201	28,276	28,263
519	Misc. nondurable goods	8,538	8,340	10,592	9,785	10,782	10,107	8,546	9,879	9,552	9,457	9,369	9,131	9,600	76,569	73,783
	Inventories, Total	181,054	181,481	181,246	182,305	181,114	182,346	182,771	180,345	172,736	175,787	178,969	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	120,185	121,145	121,043	123,080	121,361	113,470	115,469	115,561	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,491	22,998	22,872	22,575	21,783	20,205	21,335	21,652	21,851	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	4,049	3,968	4,091	4,143	4,222	4,236	4,268	4,260	4,174	3,976	3,983	(X)	(X)
503	Lumber & other construction mat.	5,540	5,453	5,786	5,912	5,754	5,821	5,897	5,654	5,408	5,468	5,498	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,312	4,469	4,539	4,605	4,556	4,897	5,040	4,893	4,267	4,488	4,418	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum	8,999	8,878	9,102	9,160	8,889	9,337	9,528	9,296	8,681	8,763	8,945	8,821	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,261	15,558	15,857	15,873	16,509	16,201	14,551	14,489	14,720	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,481	7,570	7,745	7,798	7,712	7,925	8,020	7,431	7,347	7,396	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,131	42,859	43,162	42,929	43,858	43,623	40,409	40,804	41,399	41,492	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,887	8,040	7,459	7,526	7,655	8,250	7,850	7,676	7,647	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,120	59,969	61,303	59,691	58,984	59,266	60,318	63,408	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,577	4,485	4,501	4,647	4,582	4,092	4,119	4,280	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,329	5,014	5,186	5,249	5,472	4,824	4,957	4,987	4,838	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	7,789	8,490	8,956	9,001	8,956	7,903	7,667	7,379	7,445	7,744	(X)	(X)
514	Groceries & related products	12,886	12,836	12,685	12,647	12,834	12,806	12,347	12,228	11,890	12,601	13,314	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,650	8,446	7,535	6,168	6,027	5,858	5,920	8,703	9,158	11,276	10,800	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,662	2,720	2,789	2,718	2,843	2,735	2,702	2,789	2,619	2,637	2,693	2,881	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,689	4,627	4,541	4,944	4,541	4,473	3,999	4,237	3,983	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages	3,889	3,974	4,117	4,082	4,057	4,165	4,105	3,803	4,020	4,087	4,387	4,314	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	12,745	11,664	11,875	11,208	10,848	10,946	10,873	11,165	12,153	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.33	1.22	1.24	1.36	1.20	1.25	1.28	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.62	1.77	1.65	1.66	1.84	1.62	1.67	1.69	1.63	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.58	1.63	1.63	1.78	1.53	1.50	1.73	1.43	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.67	1.75	1.70	1.79	1.87	1.54	1.73	1.75	1.55	1.53	1.66	(X)	(X)
503	Lumber & other construction mat.	1.39	1.51	1.32	1.32	1.16	1.14	1.20	1.04	1.03	1.08	1.08	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.08	2.43	1.97	2.46	2.48	2.35	2.78	2.18	1.94	1.93	1.80	1.66	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum	1.52	1.66	1.29	1.50	1.30	1.26	1.47	1.33	1.46	1.34	1.54	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.79	1.63	1.69	1.84	1.59	1.58	1.57	1.50	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.95	1.78	1.83	2.03	1.85	1.74	1.85	1.73	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.17	2.05	2.04	2.29	2.01	2.18	2.13	2.23	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.18	1.01	1.04	1.13	1.09	1.27	1.10	1.06	1.09	1.08	(X)	(X)
51	Nondurable goods .....	.95	.98	.83	.89	.79	.83	.88	.79	.84	.88	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	1.02	.98	.94	1.03	.87	.88	.89	.94	.93	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.50	1.74	1.48	1.57	1.67	1.57	1.51	1.51	1.57	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	1.97	2.16	1.84	1.83	1.49	1.50	1.64	1.58	1.63	2.39	(X)	(X)
514	Groceries & related products .....	.68	.71	.63	.67	.60	.62	.60	.61	.68	.68	.69	.68	.63	(X)	(X)
515	Farm-product raw materials .....	.89	.90	.69	.69	.55	.59	.65	.57	.84	.85	.86	.97	1.01	(X)	(X)
516	Chemicals & allied products .....	.98	.98	.83	.92	.85	.84	.94	.88	.90	.87	.91	.94	1.12	(X)	(X)
517	Petroleum & petroleum products .....	.39	.38	.36	.38	.34	.39	.41	.37	.36	.40	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.42	1.11	1.25	1.04	1.01	1.16	.93	1.00	1.09	1.22	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.30	1.08	1.17	1.31	1.10	1.15	1.15	1.19	1.33	1.30	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.
 X Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

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 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. 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	1.3-1.7	1.5	1.3-1.6	1.5	0.4-0.8	0.6	0.9-1.6	1.1	1.5	1.4	0.9
50	Durable goods	1.7-2.2	1.9	1.8-2.1	2.0	0.5-1.2	0.9	1.0-1.6	1.4	1.8	1.7	0.7
501	Motor vehicles & auto, equip.	3.8-5.6	4.5	3.6-6.1	4.6	1.3-2.7	2.0	2.9-4.0	3.3	4.7	5.3	1.7
502	Furniture & home furnishings	6.3-8.4	6.7	5.8-7.2	6.8	1.5-3.4	3.2	4.8-8.0	7.2	5.9	6.8	4.6
503	Lumber & other construction mat.	4.5-5.5	5.1	4.5-5.8	5.1	1.0-2.2	1.3	2.6-3.9	2.9	4.9	4.6	1.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.4-6.9	5.9	4.6-6.4	5.3	2.1-5.9	2.8	2.8-7.4	4.7	4.8	5.1	3.4
505	Metals & minerals, ex. petroleum	5.2-9.6	6.6	4.9-8.2	7.0	1.2-2.8	2.2	2.3-5.4	3.1	7.1	4.5	3.3
506	Electrical goods	2.7-4.4	3.2	2.5-4.2	3.1	0.9-2.9	1.1	1.8-3.3	2.3	2.7	2.9	1.5
507	Hardware, plumbing & heating equipment ..	7.1-8.5	7.9	7.0-8.2	7.8	1.2-3.3	1.5	3.1-5.2	3.6	7.5	7.3	2.0
508	Machinery, equip. & supplies	3.3-4.7	3.7	2.9-4.2	3.6	1.2-2.9	1.9	2.1-3.4	2.5	3.2	2.6	1.6
509	Miscellaneous durable goods	4.5-5.6	4.9	4.5-5.7	4.9	1.4-3.5	1.6	2.6-4.7	3.4	4.7	4.3	2.0
51	Nondurable goods	2.4-2.9	2.5	2.4-2.7	2.4	0.4-1.0	0.8	1.6-2.2	1.7	2.5	2.9	1.5
511	Paper & paper products	5.0-6.0	5.5	5.0-5.7	5.4	1.1-1.9	1.5	2.1-3.0	2.6	5.1	5.3	1.0
512	Drugs, drug proprietaries and druggists' sundries	4.2-6.0	5.3	3.8-5.7	4.9	0.6-1.7	1.2	2.7-4.2	3.6	4.8	5.6	2.4
513	Apparel, piece goods & notions	8.7-10.7	9.4	7.9-10.1	9.5	1.6-5.3	2.8	4.5-8.2	5.1	9.0	8.0	3.4
514	Groceries & related products	4.4-5.2	4.6	4.3-5.7	4.7	0.5-1.7	0.8	2.4-4.8	3.6	4.7	6.4	2.9
515	Farm-product raw materials	4.4-6.6	5.6	3.7-6.1	5.2	1.3-4.8	2.5	4.0-8.0	6.4	4.5	5.2	5.4
516	Chemicals & allied products	5.9-8.3	6.7	5.9-8.1	6.9	1.8-3.8	2.5	4.3-6.0	5.3	6.2	7.2	3.7
517	Petroleum & petroleum products	5.9-7.5	6.9	6.4-7.5	7.0	0.7-2.4	1.6	1.8-3.3	3.3	6.7	5.1	2.9
518	Beer, wine, & distilled beverages	3.1-4.4	3.8	3.1-4.2	3.4	0.6-1.8	1.1	2.3-3.4	2.6	3.5	2.8	1.9
519	Misc. nondurable goods	4.8-7.1	6.3	4.8-7.0	6.0	1.4-3.2	2.5	2.1-3.9	2.8	5.6	4.7	2.2
	Inventories, Total	1.1-1.3	1.2	1.1-1.3	1.2	0.2-0.3	0.2	0.7-1.1	0.8	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.5	1.5-1.6	1.5	0.2-0.4	0.3	1.0-1.7	1.1	(X)	(X)	(X)
501	Motor vehicles & auto, equip.	5.7-6.3	6.1	5.7-6.3	6.1	0.6-1.4	0.9	2.0-3.0	2.3	(X)	(X)	(X)
502	Furniture & home furnishings	9.1-9.9	9.8	8.9-9.6	9.5	0.9-2.2	1.2	4.2-7.0	5.9	(X)	(X)	(X)
503	Lumber & other construction mat.	5.2-6.7	5.7	5.0-6.2	5.5	0.7-1.3	1.1	2.7-4.0	3.3	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.6-6.7	5.8	5.2-6.6	5.7	0.8-2.1	1.6	2.5-5.8	4.0	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	4.4-5.1	5.0	4.6-5.2	4.8	0.6-0.9	0.7	2.4-3.7	2.5	(X)	(X)	(X)
506	Electrical goods	2.5-3.1	2.6	2.6-3.1	2.7	0.4-0.6	0.5	1.4-2.5	1.9	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.1-6.7	5.9	5.2-6.4	5.8	0.6-1.3	0.7	1.8-3.3	3.4	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.9-4.2	3.6	2.9-3.9	3.6	0.4-0.7	0.6	2.1-4.0	2.4	(X)	(X)	(X)
509	Miscellaneous durable goods	8.6-9.6	9.1	8.7-9.4	9.1	0.7-1.2	0.9	2.6-5.7	3.7	(X)	(X)	(X)
51	Nondurable goods	2.5-3.0	2.8	2.5-2.9	2.7	0.3-0.6	0.4	0.7-1.2	1.0	(X)	(X)	(X)
511	Paper & paper products	4.9-6.6	5.7	5.2-6.2	5.4	0.8-1.5	1.1	2.1-2.8	2.6	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5.7-6.7	6.3	5.8-6.5	6.4	0.6-1.6	0.8	1.8-3.6	2.9	(X)	(X)	(X)
513	Apparel, piece goods & notions	6.6-8.3	7.0	6.6-7.8	7.0	0.8-1.8	1.2	2.9-5.0	3.8	(X)	(X)	(X)
514	Groceries & related products	4.6-5.4	5.2	4.6-5.7	5.5	0.4-1.3	0.7	2.1-3.0	2.4	(X)	(X)	(X)
515	Farm-product raw materials	6.8-7.7	7.2	6.6-7.3	7.0	1.0-2.0	1.3	2.4-3.8	3.3	(X)	(X)	(X)
516	Chemicals & allied products	6.1-7.9	7.4	6.3-8.0	7.4	0.9-1.5	1.3	3.1-5.4	3.7	(X)	(X)	(X)
517	Petroleum & petroleum products	5.4-7.2	6.3	5.2-6.8	5.6	1.0-1.6	1.1	1.9-3.4	2.0	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	3.7-6.3	4.4	3.8-5.0	4.4	0.8-1.6	1.1	1.9-3.4	2.5	(X)	(X)	(X)
519	Misc. nondurable goods	7.2-9.6	8.6	7.4-8.9	8.4	0.7-1.5	1.2	2.2-3.8	3.8	(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 1989 through August 1989.

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	1988					1989								
		Aug. ^r	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July ^r	Aug. ^r	Sept.
	Sales,¹ Total	1.034	1.014	1.029	1.011	.999	.945	.912	1.055	.968	1.045	1.031	.953	1.043	.990
50	Durable goods	1.040	1.036	1.052	1.010	.978	.904	.891	1.052	.980	1.044	1.050	.956	1.045	1.010
501	Motor vehicles & auto. equip. ...	1.009	.939	1.061	1.017	1.011	.899	.893	1.047	1.007	1.067	1.063	.965	1.028	.915
502	Furniture & home furnishings ...	1.079	1.054	1.118	1.035	.956	.893	.904	1.038	.933	1.014	1.002	.938	1.075	1.039
503	Lumber & other construction mat.	1.153	1.101	1.089	.982	.857	.810	.773	.989	.977	1.092	1.131	1.068	1.142	1.079
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.055	1.107	1.146	1.140	1.030	.889	.909	1.041	.899	.888	.979	.890	1.059	1.064
505	Metals & minerals, ex. petroleum	1.014	1.087	.971	.933	.945	.968	.935	1.181	.977	1.001	1.067	.929	1.028	1.042
506	Electrical goods	1.059	1.060	1.095	1.053	1.000	.906	.904	1.032	.930	.985	1.014	.962	1.062	1.041
507	Hardware, plumbing & heating equipment	1.069	1.023	1.059	.998	.949	.910	.877	.991	.958	1.062	1.089	.989	1.077	.985
508	Machinery, equip. & supplies ...	1.039	1.034	.995	.981	1.009	.910	.915	1.081	.995	1.052	1.045	.937	1.053	1.006
509	Miscellaneous durable goods ...	.966	1.070	1.082	1.020	.967	.871	.876	1.062	1.018	1.093	1.063	.916	.979	.982
51	Nondurable goods	1.032	.999	1.004	1.015	1.016	.980	.932	1.064	.954	1.046	1.014	.946	1.036	.975
511	Paper & paper products	1.060	1.023	1.009	1.008	.997	.980	.941	1.072	.946	.972	1.030	.930	1.080	.981
512	Drugs, drug proprietaries and druggists' sundries	1.035	1.033	1.006	1.001	.998	1.016	.935	1.049	.944	1.030	1.007	.943	1.043	.998
513	Apparel, piece goods & notions ...	1.247	1.057	1.096	1.011	.714	.930	1.015	1.055	.852	.900	1.032	1.036	1.266	1.018
514	Groceries & related products ...	1.033	.989	.988	1.020	1.027	.973	.915	1.018	.949	1.059	1.019	.992	1.035	.973
515	Farm-product raw materials ...	.932	.925	1.036	1.035	1.148	1.074	.961	1.070	.945	1.031	.953	.873	.972	.898
516	Chemicals & allied products ...	1.031	1.030	1.009	.959	.883	.968	.917	1.091	.995	1.080	1.112	.946	1.020	.991
517	Petroleum & petroleum products	.995	1.008	.969	1.020	1.077	1.070	.991	1.129	.936	.995	.966	.917	.987	1.001
518	Beer, wine, & distilled beverages	1.108	1.012	.982	1.049	1.155	.776	.794	1.015	.910	1.092	1.118	.977	1.120	.976
519	Misc. nondurable goods	1.001	.984	.966	.950	.997	.869	.875	1.112	1.060	1.209	1.054	.909	1.007	.943
	Inventories,¹ Total .....	.985	.995	1.009	1.004	1.001	1.005	1.008	1.008	1.006	.991	.995	.994	.984	.995
50	Durable goods .....	.999	1.009	1.004	.995	.985	.988	.996	1.003	1.007	1.005	1.004	1.008	.998	1.009
501	Motor vehicles & auto. equip. ...	.957	1.022	.998	1.014	1.016	.995	1.014	1.016	1.001	.997	1.002	.975	.956	1.023
502	Furniture & home furnishings ...	1.021	1.014	.992	.968	.990	1.009	.995	.993	.991	1.014	1.007	1.019	1.019	1.017
503	Lumber & other construction mat. ....	.989	.994	.984	.971	.973	.959	.980	1.021	1.038	1.025	1.039	1.040	.986	.989
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.021	1.036	1.026	.982	.967	.971	.981	.993	.989	.979	1.012	1.051	1.021	1.038
505	Metals & minerals, ex. petroleum	.979	.977	.980	.962	1.005	1.016	1.000	1.008	1.017	1.014	1.042	1.021	.976	.978
506	Electrical goods	1.010	1.025	1.016	1.002	.994	.972	.985	.994	.996	1.002	.999	1.017	1.009	1.020
507	Hardware, plumbing & heating equipment	1.013	.991	.992	.974	.969	.990	1.001	1.023	1.019	1.011	1.002	1.009	1.015	.995
508	Machinery, equip. & supplies ...	1.000	.991	1.007	1.006	.976	.995	1.001	1.002	1.016	1.007	1.002	1.005	.999	.991
509	Miscellaneous durable goods ...	1.042	1.030	1.015	1.000	.960	.956	.962	.979	1.007	1.012	1.000	1.028	1.044	1.026
51	Nondurable goods .....	.956	.974	1.017	1.025	1.032	1.038	1.031	1.015	.996	.962	.984	.965	.956	.975
511	Paper & paper products .....	.992	.970	.996	.986	1.001	1.031	1.016	1.021	1.008	.989	.993	1.004	.990	.969
512	Drugs, drug proprietaries and druggists' sundries .....	.967	.992	1.024	.984	1.015	1.046	1.036	1.007	1.031	.966	.964	.967	.969	.991
513	Apparel, piece goods & notions ...	1.043	1.035	.966	.946	.987	.995	.984	.954	.951	1.022	1.069	1.051	1.041	1.032
514	Groceries & related products ...	.960	.995	1.044	1.048	1.024	1.005	1.005	.981	.982	.979	.981	.979	.959	.999
515	Farm-product raw materials ...	.835	.885	1.098	1.130	1.156	1.198	1.151	1.037	.969	.831	.864	.845	.838	.893
516	Chemicals & allied products ...	1.008	.949	.972	.985	.972	.995	1.019	.999	1.032	1.036	1.035	1.001	1.010	.947
517	Petroleum & petroleum products	.958	1.025	1.011	1.022	1.103	1.088	.981	1.003	.944	.942	.980	.981	.959	1.033
518	Beer, wine, & distilled beverages	.981	1.004	1.059	1.045	.911	.944	.987	1.020	1.024	1.001	1.016	.995	.980	1.005
519	Misc. nondurable goods .....	.920	.948	.966	.996	1.035	1.030	1.059	1.101	1.061	.966	.981	.922	.920	.951

^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

U.S. Department of Commerce
BUREAU OF THE CENSUS

September 1989

BW89-09
Issued November 1989

Sales. September 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$144.3 billion, up 0.7 percent (± 1.0 percent) from the revised August level and up 7.1 percent (± 1.3 percent) from a year ago. The August preliminary estimate was revised downward by \$0.5 billion or about 0.4 percent. September sales of durable goods increased 0.9 percent (± 1.5 percent) from August, and were 8.7 percent (± 2.3 percent) above a year ago. Monthly sales of machinery, equipment and supplies were up 3.2 percent to \$21.2 billion. However, sales of lumber and other construction materials decreased 4.1 percent to \$4.5 billion. September sales of nondurable goods were up 0.5 percent (± 0.5 percent) from August and were up 5.5 percent (± 1.8 percent) from September 1988.

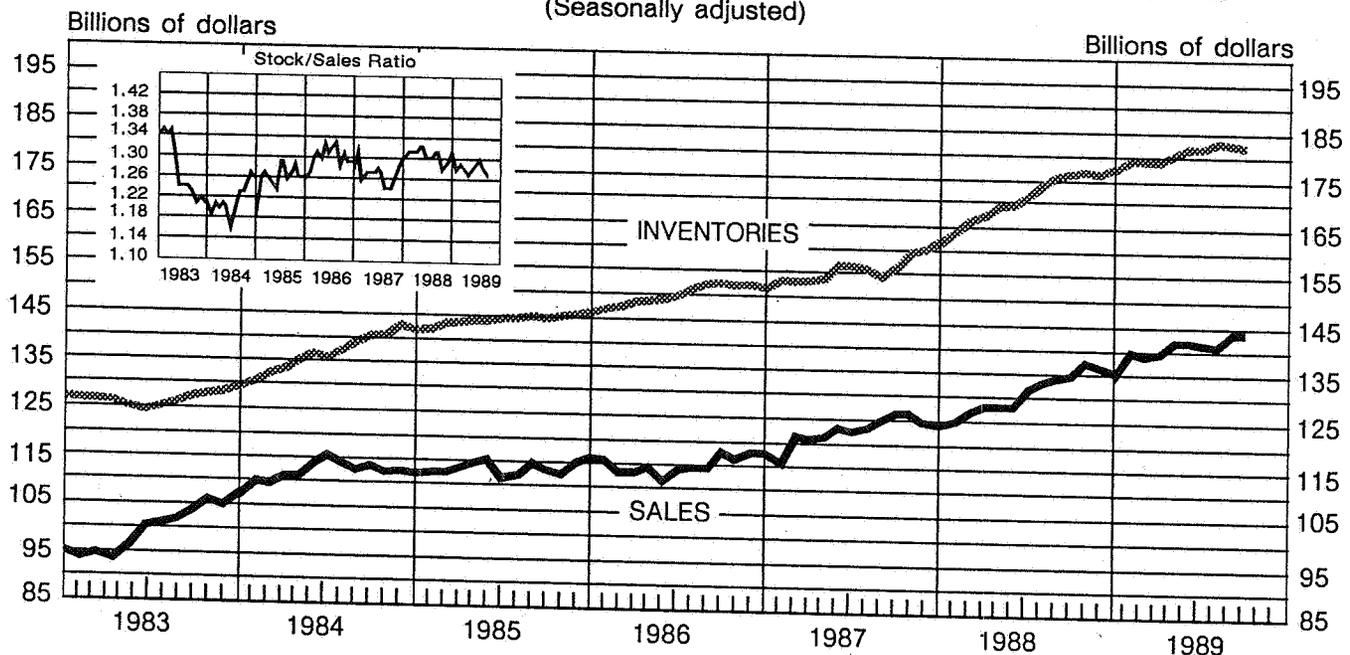
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price

changes, were \$183.0 billion at the end of September, down 0.3 percent (± 0.3 percent) from the revised August level but up 3.4 percent (± 1.2 percent) from a year ago. The August preliminary estimate was revised downward by \$0.1 billion or about 0.07 percent. Inventories of durable goods wholesalers decreased 0.3 percent (± 0.4 percent) from the August level but increased 5.3 percent (± 1.5 percent) from a year ago. Inventories of nondurable goods wholesalers were down 0.3 percent (± 0.5 percent) from the August level and were 0.2 percent (± 1.8 percent) below September 1988.

Stock/Sales Ratio. The September stock/sales ratio for merchant wholesalers, based on seasonally adjusted data was 1.27. The year ago ratio was 1.31.

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

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-89
(Seasonally adjusted)



Monthly Wholesale Trade for October is scheduled to be released December 12, 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: 1989 and 1988

(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	1989									1988			
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Sept. ^r	Oct.	Nov.	Dec.
	Sales, Total	140,356	139,547	139,991	142,290	142,474	141,959	141,667	143,280	144,273	134,749	138,087	137,239	136,170
50	Durable goods	70,302	69,343	68,796	69,345	70,293	69,147	70,220	71,228	71,888	66,144	67,581	68,543	68,427
501	Motor vehicles & auto. equip.	14,532	14,567	14,390	14,160	13,217	13,230	13,173	14,015	13,993	13,520	14,037	14,288	14,031
502	Furniture & home furnishings	2,431	2,383	2,339	2,427	2,369	2,315	2,407	2,505	2,505	2,297	2,403	2,516	2,503
503	Lumber & other construction mat.	4,916	4,678	4,448	4,588	4,541	4,522	4,599	4,657	4,465	4,608	4,693	4,564	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,082	2,070	2,125	2,040	2,143	2,293	2,074	2,147	2,238	2,367
505	Metals & minerals, ex. petroleum	6,135	5,705	5,971	6,236	6,812	6,971	6,989	6,572	6,594	6,046	5,970	6,221	6,006
506	Electrical goods	9,529	9,219	9,163	9,328	9,876	9,247	9,331	9,608	9,600	8,712	8,974	9,286	9,068
507	Hardware, plumbing & heating equipment	4,160	3,985	3,873	4,146	4,120	3,880	3,956	3,993	3,922	3,870	4,025	3,930	3,974
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,831	19,978	20,095	20,442	20,500	21,156	18,286	18,627	18,596	18,525
509	Miscellaneous durable goods	7,352	7,272	7,075	6,547	7,310	6,762	7,283	7,235	7,360	6,731	6,705	6,904	7,220
51	Nondurable goods	70,054	70,204	71,195	72,945	72,181	72,812	71,447	72,052	72,385	68,605	70,506	68,696	67,743
511	Paper & paper products	4,555	4,508	4,577	4,738	4,728	4,662	4,846	4,755	4,786	4,502	4,520	4,452	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,268	3,176	3,261	3,246	3,281	3,273	3,340	3,346	3,357	3,170	3,165	3,118	3,255
513	Apparel, piece goods & notions	4,676	4,286	4,477	4,643	4,377	4,705	4,758	4,612	4,782	4,341	4,259	4,508	4,538
514	Groceries & related products	19,512	19,719	19,683	19,852	20,169	20,168	19,949	19,797	20,064	18,701	19,409	19,516	19,762
515	Farm-product raw materials	11,348	11,414	11,474	11,597	10,925	10,650	10,265	10,767	10,420	11,370	12,654	10,778	9,517
516	Chemicals & allied products	2,929	2,955	2,990	3,033	2,951	3,031	3,081	2,959	2,953	2,860	2,860	2,955	2,920
517	Petroleum & petroleum products	10,287	11,081	11,568	13,016	13,266	13,033	12,188	12,262	12,355	10,323	10,257	9,998	10,090
518	Beer, wine, & distilled beverages	3,655	3,534	3,640	3,589	3,576	3,701	3,618	3,709	3,721	3,682	3,673	3,730	3,637
519	Misc. nondurable goods	9,825	9,531	9,525	9,231	8,918	9,589	9,402	9,825	9,947	9,553	9,699	9,612	9,629
	Inventories, Total	179,761	179,810	179,681	181,226	182,615	182,548	183,950	183,529	182,982	177,029	177,408	177,060	178,313
50	Durable goods	117,255	117,932	117,424	119,069	120,481	120,231	122,142	121,520	121,181	115,099	115,225	114,975	115,743
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,469	23,067	22,826	23,154	22,878	22,712	21,526	21,378	21,353	21,507
502	Furniture & home furnishings	4,033	4,067	4,078	4,004	4,035	4,114	4,143	4,138	4,133	4,181	4,208	4,107	4,023
503	Lumber & other construction mat.	5,777	5,564	5,667	5,696	5,614	5,603	5,670	5,517	5,391	5,546	5,587	5,377	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,656	4,654	4,839	4,795	4,740	4,665	4,353	4,306	4,322	4,467
505	Metals & minerals, ex. petroleum	8,857	8,878	9,030	9,007	8,766	8,961	9,332	9,322	9,198	9,034	9,128	9,169	8,982
506	Electrical goods	15,063	15,418	15,353	15,620	15,825	15,889	16,233	16,089	16,032	14,275	14,488	14,480	14,798
507	Hardware, plumbing & heating equipment	7,588	7,454	7,400	7,601	7,713	7,697	7,854	7,847	7,992	7,347	7,456	7,275	7,264
508	Machinery, equip. & supplies	41,620	41,730	41,049	42,184	42,862	42,843	43,640	43,477	43,325	41,216	41,111	41,245	41,338
509	Miscellaneous durable goods	8,377	8,524	8,324	7,832	7,945	7,459	7,321	7,512	7,733	7,621	7,563	7,647	7,867
51	Nondurable goods	62,506	61,878	62,257	62,157	62,134	62,317	61,808	62,009	61,801	61,930	62,183	62,085	62,570
511	Paper & paper products	4,586	4,490	4,469	4,541	4,535	4,533	4,628	4,541	4,558	4,260	4,297	4,231	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,169	5,190	5,380	5,428	5,566	5,634	5,007	4,870	4,917	5,221
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,190	8,307	8,378	8,564	8,788	8,804	7,465	7,639	7,870	7,846
514	Groceries & related products	12,822	12,772	12,931	12,879	13,109	13,054	12,612	12,667	12,605	12,588	12,753	12,584	12,564
515	Farm-product raw materials	9,097	8,558	8,145	7,776	7,422	6,976	6,933	7,032	6,823	10,164	10,270	9,558	9,562
516	Chemicals & allied products	2,796	2,812	2,723	2,703	2,822	2,742	2,822	2,647	2,724	2,751	2,713	2,734	2,964
517	Petroleum & petroleum products	3,972	4,201	4,655	4,901	4,821	5,045	4,629	4,645	4,557	4,114	3,940	3,861	3,858
518	Beer, wine, & distilled beverages	4,099	4,026	4,036	3,986	4,053	4,099	4,126	4,082	4,097	4,063	4,143	4,128	4,176
519	Misc. nondurable goods	11,783	11,727	11,913	12,012	12,075	12,105	12,156	12,041	11,999	11,518	11,558	12,202	12,069
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.28	1.29	1.30	1.28	1.27	1.31	1.28	1.29	1.31
50	Durable goods	1.67	1.70	1.71	1.72	1.71	1.74	1.74	1.71	1.69	1.74	1.70	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.59	1.75	1.73	1.76	1.63	1.62	1.59	1.52	1.49	1.53
502	Furniture & home furnishings	1.66	1.72	1.74	1.65	1.70	1.78	1.72	1.65	1.65	1.82	1.75	1.63	1.61
503	Lumber & other construction mat.	1.18	1.19	1.27	1.24	1.24	1.23	1.18	1.21	1.20	1.19	1.19	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.24	2.25	2.28	2.35	2.21	2.03	2.10	2.01	1.93	1.89
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.44	1.29	1.29	1.34	1.42	1.39	1.49	1.53	1.47	1.50
506	Electrical goods	1.58	1.67	1.68	1.67	1.60	1.72	1.74	1.67	1.67	1.64	1.61	1.56	1.63
507	Hardware, plumbing & heating equipment	1.82	1.87	1.91	1.83	1.87	1.98	1.99	1.97	2.04	1.90	1.85	1.85	1.83
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.13	2.15	2.13	2.13	2.12	2.05	2.25	2.21	2.22	2.23
509	Miscellaneous durable goods	1.14	1.17	1.18	1.20	1.09	1.10	1.01	1.04	1.05	1.13	1.13	1.11	1.09
51	Nondurable goods . . . . .	.89	.88	.87	.85	.86	.86	.87	.86	.85	.90	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.96	.96	.97	.96	.95	.95	.95	.95	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.59	1.58	1.64	1.63	1.66	1.68	1.58	1.54	1.58	1.60
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.76	1.90	1.78	1.80	1.91	1.84	1.72	1.79	1.75	1.73
514	Groceries & related products . . . . .	.66	.65	.66	.65	.65	.65	.63	.64	.63	.67	.66	.64	.64
515	Farm-product raw materials . . . . .	.80	.75	.71	.67	.68	.66	.68	.65	.65	.69	.81	.89	1.00
516	Chemicals & allied products . . . . .	.95	.88	.91	.89	.89	.91	.89	.89	.92	.93	.95	.92	1.02
517	Petroleum & petroleum products . . . . .	.39	.38	.40	.38	.36	.36	.38	.38	.37	.40	.38	.39	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.13	1.11	1.14	1.10	1.10	1.10	1.13	1.11	1.15
519	Misc. nondurable goods	1.20	1.23	1.25	1.30	1.35	1.26	1.29	1.23	1.21	1.21	1.19	1.27	1.25

^rRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989									1988				Total 9 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Sept.	Oct.	Nov.	Dec.	1989	1988
	Sales, Total	131,786	127,414	148,920	137,567	148,832	146,662	134,412	148,912	142,638	136,994	141,335	138,289	136,599	1,267,143	1,172,107
50	Durable goods	63,265	62,003	72,946	68,014	73,231	72,803	66,904	74,373	72,222	68,511	70,825	68,957	67,261	625,761	575,701
501	Motor vehicles & auto. equip.	13,064	13,008	15,066	14,259	14,103	14,063	12,712	14,323	12,888	12,722	14,893	14,531	14,185	123,486	120,437
502	Furniture & home furnishings	2,171	2,136	2,428	2,264	2,402	2,320	2,675	2,625	2,435	2,686	2,604	2,393	2,179	20,302	20,302
503	Lumber & other construction mat.	3,982	3,616	4,399	4,482	4,959	5,114	4,912	5,346	4,782	5,041	5,111	4,482	4,056	41,592	42,003
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,070	1,842	2,301	1,872	1,838	2,080	1,816	2,209	2,492	2,331	2,460	2,551	2,438	18,520	17,046
505	Metals & minerals, ex. petroleum	5,939	5,334	7,052	6,053	6,819	7,438	6,493	6,809	6,792	6,542	5,797	5,804	5,676	58,769	51,690
506	Electrical goods	8,633	8,334	9,456	8,675	9,728	9,376	8,976	10,184	9,965	9,200	9,826	9,778	9,068	83,327	75,411
507	Hardware, plumbing & heating equipment	3,786	3,495	3,838	3,972	4,375	4,225	3,912	4,300	3,887	3,967	4,263	3,922	3,771	35,790	35,039
508	Machinery, equip. & supplies	17,218	17,868	20,892	19,732	21,017	20,959	19,154	21,422	21,600	19,145	18,534	18,243	18,692	179,900	153,716
509	Miscellaneous durable goods	6,404	6,370	7,514	6,665	7,990	7,188	6,671	7,105	7,191	7,128	7,255	7,042	6,982	63,098	60,057
51	Nondurable goods	68,521	65,411	75,974	69,553	75,601	73,859	67,508	74,539	70,416	68,483	70,510	69,332	69,338	641,382	596,406
511	Paper & paper products	4,464	4,242	4,907	4,482	4,596	4,802	4,507	5,116	4,729	4,624	4,561	4,488	4,382	41,845	38,222
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,084	3,379	3,296	3,150	3,483	3,367	3,284	3,184	3,121	3,248	29,448	26,916
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,956	3,939	4,856	4,929	5,779	4,945	4,680	4,668	4,558	3,240	41,826	37,768
514	Groceries & related products	18,988	18,043	20,037	18,840	21,359	20,551	19,789	20,510	19,482	18,458	19,176	19,905	20,296	177,596	164,520
515	Farm-product raw materials	12,188	10,959	12,277	10,959	11,264	10,149	8,961	10,455	9,524	10,745	13,110	11,155	10,926	96,746	90,825
516	Chemicals & allied products	2,835	2,710	3,262	3,018	3,187	3,370	2,915	3,036	2,873	3,016	2,886	2,863	2,578	27,206	26,449
517	Petroleum & petroleum products	11,007	10,981	13,060	12,183	13,190	12,590	11,176	12,135	12,417	10,478	9,949	10,198	10,867	108,739	96,462
518	Beer, wine, & distilled beverages	2,837	2,806	3,695	3,266	3,905	4,138	3,535	4,180	3,609	3,741	3,607	3,913	4,201	31,971	32,004
519	Misc. nondurable goods	8,538	8,340	10,592	9,785	10,782	10,107	8,546	9,845	9,470	9,457	9,369	9,131	9,600	86,005	83,240
	Inventories, Total	181,054	181,481	181,246	182,305	181,114	182,346	182,771	180,360	182,097	175,787	178,969	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	120,185	121,145	121,043	123,080	121,019	121,542	115,469	115,561	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,491	22,998	22,872	22,575	21,940	23,212	22,000	21,335	21,652	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	4,049	3,968	4,091	4,143	4,222	4,212	4,216	4,260	4,174	3,976	3,983	(X)	(X)
503	Lumber & other construction mat.	5,540	5,453	5,786	5,912	5,754	5,821	5,897	5,423	5,310	5,468	5,498	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,312	4,469	4,539	4,605	4,556	4,897	5,040	4,849	4,814	4,488	4,418	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum	8,999	8,878	9,102	9,160	8,889	9,337	9,528	9,098	8,885	8,763	8,945	8,821	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,261	15,558	15,857	15,873	16,509	16,282	16,240	14,489	14,720	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,481	7,570	7,745	7,798	7,712	7,925	7,941	8,016	7,347	7,396	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,131	42,859	43,162	42,929	43,858	43,477	42,892	40,804	41,399	41,492	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,887	8,040	7,459	7,526	7,797	7,957	7,850	7,676	7,647	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,120	59,969	61,303	59,691	59,341	60,555	60,318	63,408	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,577	4,485	4,501	4,647	4,477	4,403	4,119	4,280	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,329	5,014	5,186	5,249	5,382	5,666	4,957	4,987	4,838	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	7,789	8,490	8,956	9,001	9,183	9,024	7,667	7,379	7,445	7,744	(X)	(X)
514	Groceries & related products	12,886	12,836	12,885	12,647	12,834	12,806	12,347	12,148	12,655	12,601	13,314	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,850	8,446	7,535	6,168	6,027	5,858	5,879	6,154	9,158	11,276	10,800	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,662	2,720	2,789	2,716	2,843	2,735	2,663	2,596	2,619	2,637	2,693	2,881	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,669	4,627	4,541	4,944	4,541	4,459	4,712	4,237	3,983	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	3,974	4,117	4,082	4,057	4,165	4,105	4,000	4,130	4,057	4,387	4,314	3,604	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	12,745	11,664	11,875	11,208	11,150	11,315	10,873	11,165	12,153	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.33	1.22	1.24	1.36	1.21	1.28	1.28	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.62	1.77	1.65	1.66	1.84	1.63	1.68	1.69	1.63	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.58	1.63	1.63	1.78	1.53	1.80	1.73	1.43	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.67	1.75	1.70	1.79	1.87	1.57	1.61	1.75	1.55	1.53	1.66	(X)	(X)
503	Lumber & other construction mat.	1.39	1.51	1.32	1.32	1.16	1.14	1.20	1.01	1.11	1.08	1.08	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.08	2.43	1.97	2.46	2.48	2.35	2.78	2.20	1.93	1.93	1.80	1.66	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum	1.52	1.66	1.29	1.50	1.30	1.26	1.47	1.34	1.31	1.34	1.54	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.79	1.63	1.69	1.84	1.60	1.63	1.57	1.50	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.95	1.78	1.83	2.03	1.85	2.06	1.85	1.73	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.17	2.05	2.04	2.29	2.03	1.99	2.13	2.23	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.18	1.01	1.04	1.13	1.10	1.11	1.10	1.06	1.09	1.08	(X)	(X)
51	Nondurable goods . . . . .	.95	.98	.83	.89	.79	.83	.88	.80	.86	.88	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	1.02	.98	.94	1.03	.88	.93	.89	.94	.93	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.50	1.74	1.48	1.57	1.67	1.55	1.65	1.51	1.57	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	1.97	2.16	1.84	1.83	1.59	1.82	1.64	1.58	1.63	2.39	(X)	(X)
514	Groceries & related products . . . . .	.68	.71	.63	.67	.60	.62	.62	.59	.68	.68	.69	.66	.63	(X)	(X)
515	Farm-product raw materials . . . . .	.89	.90	.69	.69	.55	.59	.65	.66	.65	.65	.65	.66	.63	(X)	(X)
516	Chemicals & allied products . . . . .	.98	.98	.83	.92	.85	.84	.94	.88	.90	.87	.91	.94	1.01	(X)	(X)
517	Petroleum & petroleum products . . . . .	.39	.38	.36	.38	.34	.39	.41	.37	.38	.40	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.42	1.11	1.25	1.04	1.01	1.16	.96	1.14	1.09	1.22	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.30	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)	
		Sept. 1989 from Aug. 1989	Sept. 1989 from Sept. 1988	9 months 1989 from 9 months 1988	Sept. 1989 from Aug. 1989	Sept. 1989 from Sept. 1988	Sept. 1989 from Aug. 1989	Sept. 1989 from Sept. 1988	Sept. 1989 from Aug. 1989	Sept. 1989 from Sept. 1988
	Total	-4.2	+4.1	+8.1	+1.0	+3.6	+7	+7.1	-3	+3.4
50	Durable goods	-2.9	+5.4	+8.7	+4	+5.3	+9	+8.7	-3	+5.3
501	Motor vehicles & auto. equip.	-10.0	+1.3	+2.5	+5.8	+5.5	-2	+3.5	-7	+5.5
502	Furniture & home furnishings	-1.9	+7.8	+4.8	+1	-1.0	.0	+9.1	-1	-1.1
503	Lumber & other construction mat.	-10.5	-5.1	-1.0	-2.1	-2.9	-4.1	-3.1	-2.3	-2.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+12.8	+6.9	+8.6	-7	+7.3	+7.0	+10.6	-1.6	+7.2
505	Metals & minerals, ex. petroleum	-2	+3.8	+13.7	-2.3	+1.4	+3	+9.1	-1.3	+1.8
506	Electrical goods	-2.2	+8.3	+10.5	-3	+12.1	-1	+10.2	-4	+12.3
507	Hardware, plumbing & heating equipment	-9.6	-2.0	+2.1	+9	+9.1	-1.8	+1.3	+1.8	+8.8
508	Machinery, equip. & supplies	+8	+12.8	+17.0	-1.3	+5.1	+3.2	+15.7	-3	+5.1
509	Miscellaneous durable goods	+1.2	+9	+5.1	+2.1	+1.4	+1.7	+9.3	+2.9	+1.5
51	Nondurable goods	-5.5	+2.8	+7.5	+2.0	+4	+5	+5.5	-3	-2
511	Paper & paper products	-7.6	+2.3	+9.5	-1.7	+6.9	+7	+6.3	+4	+7.0
512	Drugs, drug proprietaries and druggists' sundries	-3.3	+2.5	+9.4	+3.4	+12.3	+3	+5.9	+1.2	+12.5
513	Apparel, piece goods & notions	-14.4	+5.7	+10.7	-1.7	+17.7	+3.7	+10.2	+2	+17.9
514	Groceries & related products	-5.0	+5.5	+7.9	+4.2	+4	+1.3	+7.3	-5	+1
515	Farm-product raw materials	-8.9	-11.4	+6.5	+4.7	-32.8	-3.2	-8.4	-3.0	-32.9
516	Chemicals & allied products	-5.4	-4.7	+2.9	-2.5	-9	-2	-3	+2.9	-1.0
517	Petroleum & petroleum products	+2.3	+18.5	+12.7	+5.7	+11.2	+6	+19.7	-1.9	+10.8
518	Beer, wine, & distilled beverages	-13.7	-3.5	-1	+3.3	+1.1	+3	+1.1	+4	+8
519	Misc. nondurable goods	-3.8	+1	+3.3	+1.5	+4.1	+1.2	+4.1	-3	+4.2

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 22 percent of the sales estimates and 26 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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 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. 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	1.3-1.7	1.6	1.3-1.6	1.5	0.4-0.8	0.6	0.7-1.6	1.0	1.5	1.4	0.8
50	Durable goods	1.7-2.2	1.9	1.7-2.1	1.9	0.5-1.2	0.9	1.1-1.6	1.4	1.8	1.7	0.7
501	Motor vehicles & auto. equip.	3.8-5.6	4.0	3.6-6.1	4.1	1.0-2.7	2.0	3.0-4.0	3.5	4.5	5.3	1.7
502	Furniture & home furnishings	6.3-8.4	6.7	5.6-7.1	6.4	1.5-3.2	3.2	5.3-8.0	7.5	6.0	6.6	4.8
503	Lumber & other construction mat.	4.5-5.4	5.0	4.5-5.2	5.0	1.1-2.2	1.3	2.6-3.9	2.7	4.8	4.6	1.8
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.4-8.2	5.9	4.6-6.4	5.3	2.1-5.9	3.0	2.8-8.4	5.2	4.9	5.0	3.4
505	Metals & minerals, ex. petroleum	5.8-9.6	6.6	4.9-9.0	7.6	1.2-3.7	2.2	2.3-5.4	3.3	6.8	4.6	2.9
506	Electrical goods	2.7-4.4	3.5	2.5-4.2	2.9	0.9-2.9	1.3	1.8-3.3	2.2	2.8	3.0	1.4
507	Hardware, plumbing & heating equipment	7.1-9.0	8.1	7.0-8.7	8.0	1.2-3.3	1.4	2.7-4.1	3.3	7.7	7.5	1.9
508	Machinery, equip. & supplies	3.4-4.7	3.7	3.3-4.2	3.6	1.2-2.7	1.7	2.5-3.4	2.6	3.1	2.7	1.6
509	Miscellaneous durable goods	4.5-5.3	4.9	4.5-5.1	4.8	1.4-3.5	1.6	2.6-4.7	3.5	4.7	4.3	2.1
51	Nondurable goods	2.4-2.9	2.5	2.4-3.0	2.4	0.4-1.0	0.9	1.1-2.2	1.6	2.5	2.8	1.3
511	Paper & paper products	5.0-6.0	5.5	5.0-5.7	5.3	1.1-1.9	1.5	2.1-3.1	2.7	5.0	5.3	1.2
512	Drugs, drug proprietaries and druggists' sundries	4.9-6.0	5.3	4.5-5.7	5.0	0.6-1.7	1.1	2.7-4.2	3.4	4.7	5.7	2.5
513	Apparel, piece goods & notions	8.6-10.7	9.4	8.1-10.1	9.5	1.6-5.3	2.8	4.5-9.2	5.1	8.8	8.1	3.5
514	Groceries & related products	4.3-4.8	4.6	4.3-4.9	4.6	0.5-1.3	0.8	2.4-4.3	3.5	4.6	6.2	2.8
515	Farm-product raw materials	4.4-6.6	5.9	3.7-6.2	5.2	1.3-4.8	2.6	4.0-8.0	5.4	4.4	5.1	4.9
516	Chemicals & allied products	5.9-8.3	6.6	5.9-8.1	6.9	1.8-3.8	2.4	2.8-6.0	5.0	6.2	7.1	3.3
517	Petroleum & petroleum products	6.7-7.5	7.0	6.4-7.5	7.0	0.7-2.4	1.7	1.8-4.3	3.2	6.7	5.2	2.8
518	Beer, wine, & distilled beverages	3.1-4.4	3.4	3.1-4.2	3.4	0.6-1.6	1.1	2.3-3.2	2.4	3.3	2.8	1.7
519	Misc. nondurable goods	5.8-7.1	6.3	4.8-7.0	6.0	1.4-3.2	2.4	2.1-4.8	3.4	5.3	4.6	2.1
	Inventories, Total	1.1-1.3	1.2	1.1-1.3	1.2	0.2-0.3	0.2	0.7-1.1	0.8	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.5	1.5-1.6	1.5	0.2-0.4	0.3	0.9-1.7	1.1	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.7-6.3	6.1	5.7-6.2	6.1	0.6-1.4	0.8	2.0-3.0	2.2	(X)	(X)	(X)
502	Furniture & home furnishings	9.1-9.9	9.8	9.1-9.6	9.5	0.8-1.5	1.1	4.2-7.0	5.4	(X)	(X)	(X)
503	Lumber & other construction mat.	5.2-6.7	6.0	5.0-6.3	5.9	0.7-1.3	1.0	3.2-4.0	3.4	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.6-6.7	5.6	4.7-6.6	5.5	0.8-2.1	1.7	2.5-5.8	4.0	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	4.0-5.1	4.9	4.4-4.9	4.7	0.6-0.9	0.8	2.4-3.7	2.7	(X)	(X)	(X)
506	Electrical goods	2.5-3.2	2.6	2.6-3.0	2.7	0.4-0.6	0.5	1.4-2.5	2.0	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	5.1-6.9	6.2	5.2-6.5	5.9	0.6-1.0	0.7	1.8-5.3	3.4	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.9-4.2	3.6	3.0-3.9	3.6	0.4-0.7	0.6	2.1-4.0	2.5	(X)	(X)	(X)
509	Miscellaneous durable goods	8.6-9.6	9.1	8.7-9.4	9.2	0.6-1.2	0.8	2.6-5.7	3.6	(X)	(X)	(X)
51	Nondurable goods	2.7-3.0	2.8	2.5-2.9	2.7	0.3-0.6	0.4	0.7-1.2	1.0	(X)	(X)	(X)
511	Paper & paper products	5.4-6.6	5.8	5.2-6.2	5.7	0.8-1.5	0.9	2.1-2.9	2.8	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.0-6.7	6.4	5.9-6.5	6.4	0.6-1.0	0.8	1.8-3.6	2.6	(X)	(X)	(X)
513	Apparel, piece goods & notions	6.7-8.3	7.0	6.2-7.8	7.0	0.8-1.8	1.3	2.9-4.8	3.8	(X)	(X)	(X)
514	Groceries & related products	4.6-5.4	5.1	4.6-5.7	5.4	0.4-0.9	0.5	1.8-3.0	2.2	(X)	(X)	(X)
515	Farm-product raw materials	7.0-8.0	7.4	6.6-7.7	7.2	1.0-2.0	1.4	2.4-3.8	3.4	(X)	(X)	(X)
516	Chemicals & allied products	6.8-7.9	7.5	6.9-8.0	7.4	0.9-1.5	1.3	3.2-5.4	4.1	(X)	(X)	(X)
517	Petroleum & petroleum products	5.4-7.9	6.7	5.2-7.9	6.3	0.7-1.6	1.1	1.3-2.4	1.8	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.1-6.3	4.6	3.8-5.2	4.5	0.8-5.6	1.0	1.9-3.8	2.8	(X)	(X)	(X)
519	Misc. nondurable goods	8.1-9.6	8.7	8.0-8.9	8.4	1.1-1.5	1.3	2.2-4.0	3.8	(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 1989 through September 1989.

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	1988				1989									
		Sept. ^r	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug. ^r	Sept. ^r	Oct.
	Sales,¹ Total	1.018	1.029	1.011	.999	.945	.912	1.055	.968	1.045	1.031	.953	1.040	.993	1.053
50	Durable goods	1.034	1.052	1.010	.978	.904	.891	1.052	.980	1.044	1.050	.956	1.043	1.010	1.079
501	Motor vehicles & auto. equip. ...	.941	1.061	1.017	1.011	.899	.893	1.047	1.007	1.067	1.063	.965	1.022	.921	1.076
502	Furniture & home furnishings ...	1.060	1.118	1.035	.956	.893	.904	1.038	.933	1.014	1.002	.938	1.068	1.048	1.147
503	Lumber & other construction mat.	1.094	1.089	.982	.857	.810	.773	.989	.977	1.092	1.131	1.068	1.148	1.071	1.119
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.124	1.146	1.140	1.030	.889	.909	1.041	.899	.888	.979	.890	1.031	1.087	1.166
505	Metals & minerals, ex. petroleum	1.082	.971	.933	.945	.968	.935	1.181	.977	1.001	1.067	.929	1.036	1.030	1.011
506	Electrical goods	1.056	1.095	1.053	1.000	.906	.904	1.032	.930	.985	1.014	.962	1.060	1.038	1.117
507	Hardware, plumbing & heating equipment	1.025	1.059	.998	.949	.910	.877	.991	.958	1.062	1.089	.989	1.077	.991	1.100
508	Machinery, equip. & supplies ...	1.047	.995	.981	1.009	.910	.915	1.081	.995	1.052	1.045	.937	1.045	1.021	1.036
509	Miscellaneous durable goods ...	1.059	1.082	1.020	.967	.871	.876	1.062	1.018	1.093	1.063	.916	.982	.977	1.108
51	Nondurable goods	1.003	1.004	1.015	1.016	.980	.932	1.064	.954	1.046	1.014	.946	1.035	.977	1.031
511	Paper & paper products	1.027	1.009	1.008	.997	.980	.941	1.072	.946	.972	1.030	.930	1.076	.988	1.057
512	Drugs, drug proprietaries and druggists' sundries	1.036	1.006	1.001	.998	1.016	.935	1.049	.944	1.030	1.007	.943	1.041	1.003	1.041
513	Apparel, piece goods & notions	1.078	1.096	1.011	.714	.930	1.015	1.055	.852	.900	1.032	1.036	1.253	1.034	1.182
514	Groceries & related products	.987	.988	1.020	1.027	.973	.915	1.018	.949	1.059	1.019	.992	1.036	.971	1.000
515	Farm-product raw materials ...	.945	1.036	1.035	1.148	1.074	.961	1.070	.945	1.031	.953	.873	.971	.914	1.053
516	Chemicals & allied products ...	1.018	1.009	.959	.883	.968	.917	1.091	.995	1.080	1.112	.946	1.026	.973	1.050
517	Petroleum & petroleum products	1.015	.969	1.020	1.077	1.070	.991	1.129	.936	.995	.966	.917	.988	1.005	.984
518	Beer, wine, & distilled beverages	1.016	.982	1.049	1.155	.776	.794	1.015	.910	1.092	1.118	.977	1.127	.970	1.016
519	Misc. nondurable goods .....	.990	.966	.950	.997	.869	.875	1.112	1.060	1.209	1.054	.909	1.002	.952	.998
	Inventories,¹ Total .....	.995	1.009	1.004	1.001	1.005	1.008	1.008	1.006	.991	.995	.994	.985	.995	1.009
50	Durable goods	1.007	1.004	.995	.985	.988	.996	1.003	1.007	1.005	1.004	1.008	1.000	1.007	1.004
501	Motor vehicles & auto. equip. ...	1.022	.998	1.014	1.016	.995	1.014	1.016	1.001	.997	1.002	.975	.959	1.022	.996
502	Furniture & home furnishings ...	1.019	.992	.968	.990	1.009	.995	.993	.991	1.014	1.007	1.019	1.018	1.020	.993
503	Lumber & other construction mat. ....	.986	.984	.971	.973	.959	.980	1.021	1.038	1.025	1.039	1.040	.983	.985	.979
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.031	1.026	.982	.967	.971	.981	.993	.989	.979	1.012	1.051	1.023	1.032	1.026
505	Metals & minerals, ex. petroleum	.970	.980	.962	1.005	1.016	1.000	1.008	1.017	1.014	1.042	1.021	.976	.966	.983
506	Electrical goods	1.015	1.016	1.002	.994	.972	.985	.994	.996	1.002	.999	1.017	1.012	1.013	1.012
507	Hardware, plumbing & heating equipment	1.000	.992	.974	.969	.990	1.001	1.023	1.019	1.011	1.002	1.009	1.012	1.003	.996
508	Machinery, equip. & supplies ...	.990	1.007	1.006	.976	.995	1.001	1.002	1.016	1.007	1.002	1.005	1.000	.990	1.003
509	Miscellaneous durable goods ...	1.030	1.015	1.000	.960	.956	.962	.979	1.007	1.012	1.000	1.028	1.038	1.029	1.009
51	Nondurable goods .....	.976	1.017	1.025	1.032	1.038	1.031	1.015	.996	.962	.984	.965	.958	.977	1.018
511	Paper & paper products .....	.967	.996	.986	1.001	1.031	1.016	1.021	1.008	.989	.993	1.004	.986	.966	.995
512	Drugs, drug proprietaries and druggists' sundries .....	.990	1.024	.984	1.015	1.046	1.036	1.007	1.031	.966	.964	.967	.967	.988	1.024
513	Apparel, piece goods & notions	1.027	.966	.946	.987	.995	.984	.954	.951	1.022	1.069	1.051	1.045	1.025	.961
514	Groceries & related products	1.001	1.044	1.048	1.024	1.005	1.005	.981	.982	.979	.981	.979	.959	1.004	1.046
515	Farm-product raw materials ...	.901	1.098	1.130	1.156	1.198	1.151	1.037	.969	.831	.864	.845	.836	.902	1.110
516	Chemicals & allied products ...	.952	.972	.985	.972	.995	1.019	.999	1.032	1.036	1.035	1.001	1.006	.953	.970
517	Petroleum & petroleum products	1.030	1.011	1.022	1.103	1.088	.981	1.003	.944	.942	.980	.981	.960	1.034	1.007
518	Beer, wine, & distilled beverages	1.006	1.059	1.045	.911	.944	.987	1.020	1.024	1.001	1.016	.995	.980	1.008	1.063
519	Misc. nondurable goods .....	.944	.966	.996	1.035	1.030	1.059	1.101	1.061	.966	.981	.922	.926	.943	.972

^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

October 1989



U.S. Department of Commerce
BUREAU OF THE CENSUS

BW89-10
Issued December 1989

Sales. October 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$143.7 billion, down 0.1 percent (± 1.0 percent) from the revised September level but up 4.5 percent (± 1.2 percent) from a year ago. The September preliminary estimate was revised downward by \$0.4 billion or about 0.3 percent. October sales of durable goods decreased 0.5 percent (± 1.2 percent) from September, but were 5.6 percent (± 2.0 percent) above a year ago. Sales of metals and minerals except petroleum increased 5.3 percent to \$7.0 billion from the September level. However, sales of miscellaneous durable goods decreased 5.3 percent to \$6.9 billion for the same period. October sales of non-durable goods were up 0.2 percent (± 1.4 percent) from September and were up 3.5 percent (± 1.5 percent) from October 1988.

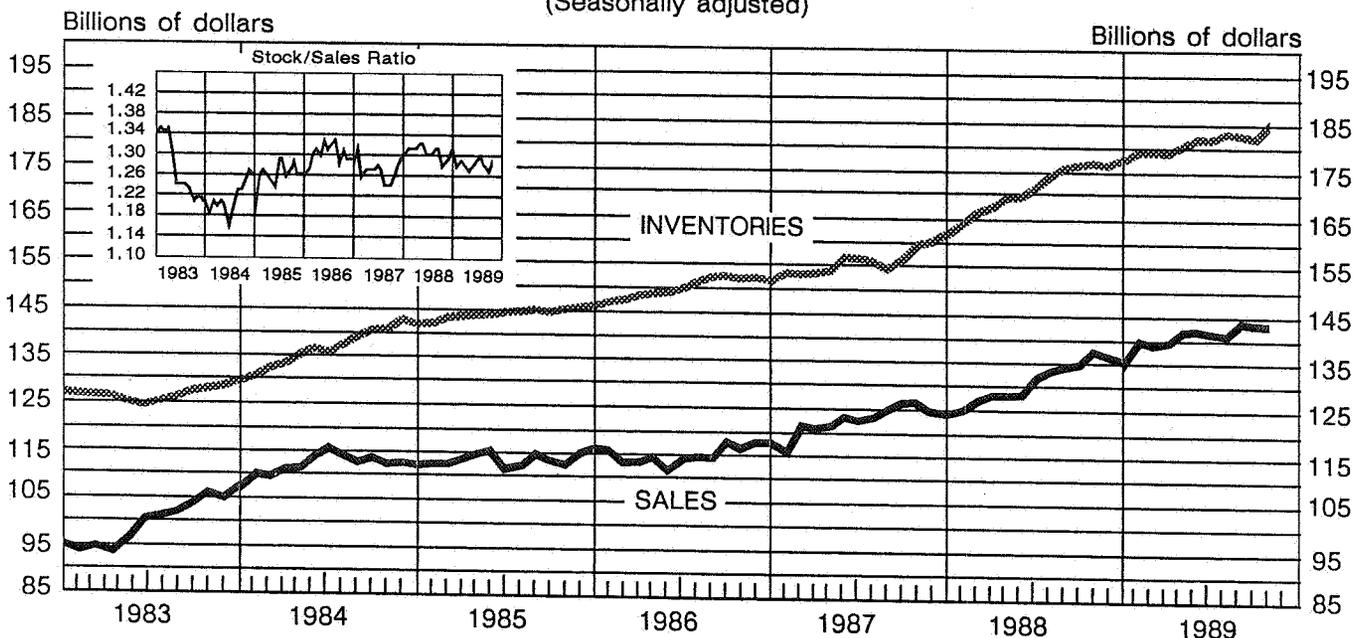
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$186.0 billion at the end of October, up 1.7 percent (± 0.7 percent) from the revised September

level and up 5.0 percent (± 1.2 percent) from a year ago. The September preliminary estimate was revised downward by \$0.09 billion or about 0.05 percent. Inventories of durable goods wholesalers increased 1.1 percent (± 0.6 percent) from the September level and were 5.7 percent (± 1.4 percent) above a year ago. Monthly increases in the stocks of durable goods were as follows: inventories of motor vehicles and automotive equipment were up 3.4 percent to \$22.8 billion and inventories of miscellaneous durable goods increased 4.7 percent to \$8.0 billion. Inventories of nondurable goods wholesalers were up 2.8 percent (± 1.6 percent) from the September level and were up 3.7 percent (± 2.2 percent) from October 1988.

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

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

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-89
(Seasonally adjusted)



Monthly Wholesale Trade for November is scheduled to be released January 10, 1990 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: 1989 and 1988

(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	1989										1988		
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Oct. ^F	Nov.	Dec.
	Sales, Total	140,356	139,547	139,991	142,290	142,474	141,959	141,667	143,280	143,905	143,691	137,459	137,239	136,170
50	Durable goods	70,302	69,343	68,796	69,345	70,293	69,147	70,220	71,228	71,543	71,183	67,400	68,543	68,427
501	Motor vehicles & auto. equip.	14,532	14,567	14,390	14,160	13,217	13,230	13,173	14,015	13,996	13,844	14,103	14,288	14,031
502	Furniture & home furnishings	2,431	2,363	2,339	2,427	2,369	2,315	2,407	2,505	2,487	2,310	2,420	2,516	2,503
503	Lumber & other construction mat.	4,916	4,678	4,448	4,588	4,541	4,522	4,599	4,657	4,576	4,675	4,663	4,564	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,082	2,070	2,125	2,040	2,143	2,293	2,241	2,150	2,238	2,267
505	Metals & minerals, ex. petroleum	6,135	5,705	5,971	6,236	6,812	6,971	6,989	6,572	6,612	6,962	5,891	6,221	6,006
506	Electrical goods	9,529	9,219	9,163	9,328	9,876	9,247	9,331	9,608	9,487	9,410	9,015	9,286	9,068
507	Hardware, plumbing & heating equipment	4,160	3,985	3,873	4,146	4,120	3,880	3,956	3,993	3,944	3,943	3,999	3,980	3,974
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,831	19,978	20,095	20,442	20,500	20,895	20,926	18,460	18,596	18,525
509	Miscellaneous durable goods	7,352	7,272	7,075	6,547	7,310	6,762	7,283	7,235	7,253	6,872	6,699	6,904	7,220
51	Nondurable goods	70,054	70,204	71,195	72,945	72,181	72,812	71,447	72,052	72,362	72,508	70,059	68,696	67,743
511	Paper & paper products	4,555	4,508	4,577	4,738	4,728	4,662	4,846	4,755	4,850	4,856	4,467	4,452	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,176	3,261	3,246	3,281	3,273	3,340	3,346	3,418	3,623	3,159	3,118	3,255
513	Apparel, piece goods & notions	4,676	4,286	4,477	4,643	4,377	4,705	4,758	4,612	4,773	4,654	4,224	4,508	4,538
514	Groceries & related products	19,512	19,719	19,683	19,852	20,169	20,168	19,949	19,797	19,789	20,219	19,292	19,515	19,762
515	Farm-product raw materials	11,348	11,414	11,474	11,597	10,925	10,650	10,265	10,767	10,410	10,576	12,310	10,778	9,517
516	Chemicals & allied products	2,929	2,955	2,990	3,033	2,951	3,031	3,081	2,959	3,029	3,045	2,860	2,985	2,920
517	Petroleum & petroleum products	10,287	11,081	11,568	13,016	13,256	13,033	12,188	12,282	12,373	11,945	10,407	9,998	10,090
518	Beer, wine, & distilled beverages	3,656	3,534	3,640	3,589	3,576	3,701	3,618	3,709	3,722	3,683	3,681	3,730	3,637
519	Misc. nondurable goods	9,825	9,531	9,525	9,231	8,918	9,589	9,402	9,825	9,598	9,897	9,659	9,612	9,629
	Inventories, Total	179,761	179,810	179,681	181,226	182,615	182,548	183,950	183,529	182,891	186,001	177,159	177,060	178,313
50	Durable goods	117,255	117,932	117,424	119,069	120,481	120,231	122,142	121,520	120,614	121,960	115,422	114,975	115,743
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,469	23,067	22,826	23,154	22,878	22,058	22,801	21,399	21,353	21,507
502	Furniture & home furnishings	4,033	4,067	4,078	4,004	4,035	4,114	4,143	4,138	4,186	4,240	4,191	4,107	4,023
503	Lumber & other construction mat.	5,777	5,564	5,667	5,696	5,614	5,603	5,670	5,517	5,582	5,623	5,616	5,377	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,856	4,654	4,839	4,795	4,740	4,809	4,866	4,298	4,322	4,467
505	Metals & minerals, ex. petroleum	8,657	8,878	9,030	9,007	8,786	8,951	8,332	8,322	9,181	9,012	9,128	9,169	8,982
506	Electrical goods	15,063	15,418	15,353	15,620	15,825	15,889	16,233	16,089	15,866	15,997	14,545	14,480	14,798
507	Hardware, plumbing & heating equipment	7,588	7,454	7,400	7,601	7,713	7,697	7,854	7,847	7,927	8,008	7,389	7,275	7,264
508	Machinery, equip. & supplies	41,620	41,730	41,049	42,184	42,862	42,843	43,640	43,477	43,325	43,362	41,316	41,245	41,338
509	Miscellaneous durable goods	8,377	8,524	8,324	7,832	7,945	7,459	7,321	7,512	7,680	8,041	7,540	7,647	7,867
51	Nondurable goods	62,506	61,878	62,257	62,157	62,134	62,317	61,808	62,009	62,277	64,051	61,737	62,085	62,570
511	Paper & paper products	4,586	4,490	4,469	4,541	4,535	4,533	4,628	4,541	4,610	4,559	4,302	4,231	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,169	5,190	5,380	5,428	5,566	5,703	5,695	4,894	4,917	5,221
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,190	8,307	8,378	8,564	8,788	8,819	9,078	7,655	7,870	7,846
514	Groceries & related products	12,822	12,772	12,931	12,879	13,109	13,054	12,612	12,667	12,540	13,356	12,692	12,584	12,564
515	Farm-product raw materials	9,097	8,558	8,145	7,776	7,422	6,976	6,933	7,032	6,892	7,336	9,944	9,558	9,562
516	Chemicals & allied products	2,796	2,612	2,723	2,703	2,622	2,732	2,627	2,785	2,698	2,736	2,735	2,734	2,964
517	Petroleum & petroleum products	3,972	4,201	4,655	4,901	4,821	5,045	4,629	4,645	4,647	4,703	3,944	3,861	3,858
518	Beer, wine, & distilled beverages	4,099	4,026	4,036	3,986	4,053	4,099	4,126	4,082	4,164	4,194	4,108	4,128	4,176
519	Misc. nondurable goods	11,783	11,727	11,913	12,012	12,075	12,105	12,156	12,041	12,117	12,432	11,463	12,202	12,069
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.28	1.29	1.30	1.28	1.27	1.29	1.29	1.29	1.31
50	Durable goods	1.67	1.70	1.71	1.72	1.71	1.74	1.74	1.71	1.69	1.71	1.71	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.59	1.75	1.73	1.76	1.63	1.58	1.65	1.52	1.49	1.53
502	Furniture & home furnishings	1.66	1.72	1.74	1.65	1.70	1.78	1.72	1.65	1.68	1.84	1.73	1.63	1.61
503	Lumber & other construction mat.	1.18	1.19	1.27	1.24	1.24	1.24	1.23	1.18	1.22	1.20	1.20	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.24	2.25	2.28	2.35	2.21	2.10	2.17	2.00	1.93	1.89
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.44	1.29	1.29	1.34	1.42	1.39	1.29	1.55	1.47	1.50
506	Electrical goods	1.58	1.67	1.68	1.67	1.60	1.72	1.74	1.67	1.67	1.70	1.61	1.56	1.63
507	Hardware, plumbing & heating equipment	1.82	1.87	1.91	1.83	1.87	1.98	1.99	1.97	2.01	2.03	1.85	1.85	1.83
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.13	2.15	2.13	2.13	2.12	2.07	2.07	2.24	2.22	2.23
509	Miscellaneous durable goods	1.14	1.17	1.18	1.20	1.09	1.10	1.01	1.04	1.06	1.17	1.13	1.11	1.09
51	Nondurable goods .....	.89	.88	.87	.85	.86	.86	.87	.86	.86	.88	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.96	.96	.97	.96	.95	.95	.94	.96	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.59	1.58	1.64	1.63	1.66	1.67	1.57	1.55	1.58	1.60
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.78	1.90	1.78	1.80	1.91	1.85	1.95	1.81	1.75	1.73
514	Groceries & related products .....	.66	.65	.66	.65	.65	.63	.63	.64	.63	.66	.66	.64	.64
515	Farm-product raw materials .....	.80	.75	.71	.67	.68	.66	.68	.65	.66	.69	.81	.89	1.00
516	Chemicals & allied products .....	.95	.88	.91	.89	.89	.91	.89	.89	.92	.89	.96	.92	1.02
517	Petroleum & petroleum products .....	.39	.38	.40	.38	.36	.39	.38	.38	.38	.39	.38	.38	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.13	1.11	1.14	1.10	1.12	1.14	1.12	1.11	1.15
519	Misc. nondurable goods	1.20	1.23	1.25	1.30	1.35	1.26	1.29	1.23	1.21	1.26	1.19	1.27	1.25

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989										1988			Total 10 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Oct.	Nov.	Dec.	1989	1988
	Sales, Total	131,786	127,414	148,920	137,567	148,832	146,662	134,412	148,912	142,118	151,673	141,335	138,289	136,599	1,418,296	1,313,442
50	Durable goods	63,265	62,003	72,946	68,014	73,231	72,803	66,904	74,373	71,887	76,779	70,825	68,957	67,261	702,205	646,526
501	Motor vehicles & auto. equip.	13,064	13,008	15,066	14,259	14,103	14,063	12,712	14,323	12,876	14,910	14,893	14,531	14,185	138,384	135,330
502	Furniture & home furnishings	2,171	2,136	2,428	2,264	2,402	2,320	2,258	2,675	2,676	2,606	2,686	2,604	2,393	23,936	22,988
503	Lumber & other construction mat. . .	3,982	3,616	4,399	4,482	4,959	5,114	4,912	5,348	4,924	5,273	5,111	4,482	4,056	47,007	47,114
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . .	2,070	1,842	2,301	1,872	1,838	2,080	1,816	2,209	2,486	2,615	2,460	2,551	2,438	21,129	19,506
505	Metals & minerals, ex. petroleum . . .	5,939	5,334	7,052	6,093	6,819	7,438	6,493	6,809	6,777	7,115	5,797	5,804	5,676	65,869	57,487
506	Electrical goods	8,633	8,334	9,456	8,675	9,728	9,376	8,976	10,184	9,838	10,464	9,826	9,778	9,088	93,664	85,237
507	Hardware, plumbing & heating equipment	3,786	3,495	3,838	3,972	4,375	4,225	3,912	4,300	3,901	4,349	4,263	3,922	3,771	40,153	39,302
508	Machinery, equip. & supplies	17,216	17,868	20,892	19,732	21,017	20,999	19,154	21,422	21,229	21,826	18,534	18,243	18,692	201,355	172,250
509	Miscellaneous durable goods	6,404	6,370	7,514	6,665	7,990	7,188	6,671	7,105	7,180	7,621	7,255	7,042	6,982	70,708	67,312
51	Nondurable goods	68,521	65,411	75,974	69,553	75,601	73,859	67,508	74,539	70,231	74,894	70,510	69,332	69,338	716,091	666,916
511	Paper & paper products	4,464	4,242	4,907	4,482	4,596	4,802	4,507	5,116	4,797	5,157	4,561	4,488	4,382	47,070	42,783
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,064	3,379	3,296	3,150	3,483	3,435	3,772	3,184	3,121	3,248	33,288	30,100
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,956	3,939	4,856	4,929	5,779	4,940	5,459	4,668	4,558	3,240	47,280	42,436
514	Groceries & related products	18,985	18,043	20,037	18,840	21,359	20,551	19,789	20,510	19,096	20,381	19,176	19,905	20,296	197,591	183,696
515	Farm-product raw materials	12,188	10,969	12,277	10,959	11,264	10,149	8,961	10,455	9,390	11,496	13,110	11,155	10,926	108,108	103,935
516	Chemicals & allied products	2,835	2,710	3,262	3,018	3,187	3,370	2,915	3,036	2,953	3,191	2,886	2,863	2,578	30,477	29,335
517	Petroleum & petroleum products	11,007	10,981	13,060	12,183	13,190	12,590	11,176	12,135	12,447	11,646	9,949	10,198	10,867	120,415	106,411
518	Beer, wine, & distilled beverages	2,837	2,806	3,695	3,266	3,905	4,138	3,535	4,180	3,625	3,756	3,607	3,913	4,201	35,743	35,611
519	Misc. nondurable goods	8,538	8,340	10,592	9,785	10,782	10,107	8,546	9,845	9,548	10,036	9,369	9,131	9,600	96,119	92,609
	Inventories, Total	181,054	181,481	181,246	182,305	181,114	182,346	182,771	180,360	181,925	187,574	178,969	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	120,185	121,145	121,043	123,080	121,019	120,951	122,180	115,561	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,491	22,998	22,872	22,575	21,940	22,543	22,733	21,335	21,652	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	4,049	3,968	4,091	4,143	4,222	4,212	4,268	4,219	4,174	3,976	3,983	(X)	(X)
503	Lumber & other construction mat. . .	5,540	5,453	5,788	5,912	5,754	5,821	5,897	5,423	5,515	5,505	5,498	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . .	4,312	4,469	4,539	4,605	4,556	4,897	5,040	4,849	4,987	5,007	4,418	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum . . .	8,999	8,878	9,102	9,160	8,889	9,337	9,528	8,998	8,915	8,841	8,945	8,821	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,261	15,558	15,857	15,873	16,509	16,282	16,025	16,173	14,720	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,461	7,570	7,745	7,798	7,712	7,925	7,941	7,919	8,032	7,396	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,131	42,859	43,162	42,929	43,858	43,477	42,935	43,492	41,399	41,492	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,887	8,040	7,459	7,526	7,797	7,826	8,178	7,676	7,647	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,120	59,969	61,303	59,691	59,341	60,974	65,394	63,408	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,577	4,485	4,501	4,647	4,477	4,467	4,541	4,280	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,329	5,014	5,186	5,249	5,382	5,663	5,798	4,987	4,838	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	7,789	8,490	8,956	9,001	9,183	9,031	8,733	7,379	7,445	7,744	(X)	(X)
514	Groceries & related products	12,886	12,836	12,685	12,647	12,834	12,806	12,347	12,148	12,565	14,024	13,314	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,850	8,446	7,535	6,168	6,027	5,858	5,879	6,168	8,363	11,276	10,800	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,662	2,720	2,789	2,716	2,843	2,735	2,663	2,674	2,587	2,637	2,693	2,881	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,669	4,627	4,541	4,944	4,541	4,459	4,786	4,764	3,983	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	3,974	4,117	4,082	4,057	4,165	4,105	4,000	4,206	4,488	4,387	4,314	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	12,745	11,664	11,875	11,208	11,150	11,414	12,096	11,165	12,153	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.33	1.22	1.24	1.36	1.21	1.28	1.24	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.62	1.77	1.65	1.66	1.84	1.63	1.68	1.59	1.63	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.58	1.63	1.63	1.78	1.53	1.75	1.52	1.43	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.67	1.75	1.70	1.79	1.87	1.57	1.60	1.62	1.55	1.53	1.66	(X)	(X)
503	Lumber & other construction mat. . .	1.39	1.51	1.32	1.32	1.16	1.14	1.20	1.01	1.12	1.04	1.08	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies . . .	2.08	2.43	1.97	2.46	2.48	2.35	2.78	2.20	2.01	1.91	1.80	1.66	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum . . .	1.52	1.66	1.29	1.50	1.30	1.26	1.47	1.34	1.32	1.24	1.54	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.79	1.63	1.69	1.84	1.60	1.63	1.55	1.50	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.95	1.78	1.83	2.03	1.85	2.03	1.85	1.73	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.17	2.05	2.04	2.29	2.03	2.02	1.99	2.23	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.18	1.01	1.04	1.13	1.10	1.09	1.07	1.06	1.09	1.08	(X)	(X)
51	Nondurable goods .....	.95	.98	.83	.89	.79	.83	.88	.80	.87	.87	.90	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	1.02	.98	.94	1.03	.88	.93	.88	.94	.93	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.50	1.74	1.48	1.57	1.67	1.55	1.65	1.54	1.57	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	1.97	2.16	1.84	1.83	1.59	1.83	1.60	1.58	1.63	2.39	(X)	(X)
514	Groceries & related products .....	.68	.71	.63	.67	.60	.62	.62	.59	.66	.69	.66	.66	.63	(X)	(X)
515	Farm-product raw materials .....	.89	.90	.69	.69	.55	.59	.65	.56	.66	.73	.86	.97	1.01	(X)	(X)
516	Chemicals & allied products .....	.98	.83	.92	.85	.84	.94	.88	.91	.81	.91	.94	.94	1.12	(X)	(X)
517	Petroleum & petroleum products .....	.39	.38	.36	.38	.34	.39	.41	.37	.38	.41	.40	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.42	1.11	1.25	1.04	1.01	1.16	.96	1.16	1.19	1.22	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.30	1.08	1.17	1.31	1.13	1.20	1.21	1.19	1.33	1.30	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.
 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)	
		Oct. 1989 from Sept. 1989	Oct. 1989 from Oct. 1988	10 months 1989 from 10 months 1988	Oct. 1989 from Sept. 1989	Oct. 1989 from Oct. 1988	Oct. 1989 from Sept. 1989	Oct. 1989 from Oct. 1988	Oct. 1989 from Sept. 1989	Oct. 1989 from Oct. 1988
	Total	+6.7	+7.3	+8.0	+3.1	+4.8	-.1	+4.5	+1.7	+5.0
50	Durable goods	+6.8	+8.4	+8.6	+1.0	+5.7	-.5	+5.6	+1.1	+5.7
501	Motor vehicles & auto. equip.	+15.8	+1.1	+2.3	+8	+6.6	-1.1	-1.8	+3.4	+6.6
502	Furniture & home furnishings	-2.6	-3.0	+4.1	-1.6	+1.1	-7.1	-4.5	+1.3	+1.2
503	Lumber & other construction mat.	+7.1	+3.2	-.2	-.2	+1	+2.2	+3	+7	+1
504	Sporting, recreational, photographic & hobby goods, toys & supplies	+5.2	+6.3	+8.3	+4	+13.3	-2.3	+4.2	+1.2	+13.2
505	Metals & minerals, ex. petroleum	+5.0	+22.7	+14.6	-.8	-1.2	+5.3	+18.2	-1.8	-1.3
506	Electrical goods	+6.4	+6.5	+9.9	+9	+9.9	-.8	+4.4	+8	+10.0
507	Hardware, plumbing & heating equipment	+11.5	+2.0	+2.2	+1.4	+8.6	.0	-1.4	+1.0	+8.4
508	Machinery, equip. & supplies	+2.8	+17.8	+16.9	+1.3	+5.1	+1	+13.4	+1	+5.0
509	Miscellaneous durable goods	+6.1	+5.0	+5.0	+4.5	+6.5	-5.3	+2.6	+4.7	+6.6
51	Nondurable goods	+6.6	+6.2	+7.4	+7.2	+3.1	+2	+3.5	+2.8	+3.7
511	Paper & paper products	+7.5	+13.1	+10.0	+1.7	+6.1	+1	+8.7	-1.1	+6.0
512	Drugs, drug proprietaries and druggists' sundries	+9.8	+18.5	+10.6	+2.4	+16.3	+6.0	+14.7	-.1	+16.4
513	Apparel, piece goods & notions	+10.5	+16.9	+11.4	-3.3	+18.3	-2.5	+10.2	+2.9	+18.6
514	Groceries & related products	+6.7	+6.3	+7.6	+11.6	+5.3	+2.2	+4.8	+6.5	+5.2
515	Farm-product raw materials	+22.4	-12.3	+4.0	+35.6	-25.8	+1.6	-14.1	+6.4	-26.2
516	Chemicals & allied products	+8.1	+10.6	+3.9	-3.3	-1.9	+5	+6.5	-3.1	-1.4
517	Petroleum & petroleum products	-6.4	+17.1	+13.2	-.5	+19.6	-3.5	+14.8	+1.2	+19.2
518	Beer, wine, & distilled beverages	+3.6	+4.1	+4	+6.7	+2.3	-.8	+3	+7	+2.1
519	Misc. nondurable goods	+5.1	+7.1	+3.8	+6.0	+8.3	-1.0	+2.5	+2.6	+8.5

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 22 percent of the sales estimates and 26 percent for inventories.

Sample Design and Estimation Procedures

See *Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 Through December 1988* 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 1986 and 1987 annual estimates tabulated from the 1986 and 1987 Annual Trade Surveys. Monthly sales estimates for most SIC's were revised for the period January 1986 through December 1988. For SIC's 503 and 512, monthly sales estimates were revised back to January 1983 to reflect revisions to the 1983 through 1985 sales estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the 12-month sums of the estimates for the years 1983 (or 1986) through 1987 to the annual sales estimates derived from the Annual Trade Surveys. The revision process also minimized changes to month-to-month trends of the original series. The sales estimates of the original series were derived by using composite estimation procedures.

Monthly inventory estimates for most SIC's were revised for the period January 1987 through December 1988. For SIC's 503 and 512, monthly inventory estimates were revised back to January 1983 to reflect revisions to the end-of-year 1983 through 1985 inventory estimates derived from the Annual Trade Surveys. The benchmarking process equated each of the December estimates for the years 1983 through 1987 (or 1987) to the end-of-year inventory estimates derived from the Annual Trade Surveys. The revision also minimized changes to month-to-month trends of the original series. Estimates of the original series were also derived by using composite estimation procedures.

Carry-forward factors for sales and inventories were derived by dividing the revised December 1987 estimates by the composite estimates for December 1987. Through the use of these carry-forward factors, the effects of the revision process were applied to composite sales and inventory estimates subsequent to December 1987. These factors were derived at various kind-of-business levels and will be 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

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 1988*.

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 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. 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	1.6	1.3-1.7	1.5	0.4-0.6	0.6	0.7-1.6	1.0	1.5	1.4	0.8
50	Durable goods	1.7-2.2	1.9	1.7-2.1	1.8	0.5-1.1	0.8	1.1-1.6	1.3	1.8	1.7	0.6
501	Motor vehicles & auto. equip.	3.8-5.0	4.0	3.6-5.1	4.1	1.0-2.7	1.6	1.9-4.0	3.3	4.5	5.2	1.5
502	Furniture & home furnishings	6.3-8.4	6.7	6.1-7.6	6.8	1.5-5.1	3.2	5.3-8.0	7.8	5.8	6.6	4.8
503	Lumber & other construction mat.	4.4-5.4	5.0	4.5-5.1	4.8	1.1-2.2	1.3	2.3-3.2	2.7	4.7	4.6	1.5
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.4-8.2	6.3	4.6-7.0	5.3	2.1-5.9	4.0	4.6-8.4	6.4	4.8	5.1	3.0
505	Metals & minerals, ex. petroleum	5.8-9.6	6.5	5.2-9.0	7.6	1.2-3.7	1.9	2.3-5.4	3.3	6.7	4.9	2.4
506	Electrical goods	2.7-4.6	3.9	2.5-4.2	3.0	0.9-2.9	1.7	1.8-3.4	2.2	2.9	2.9	1.4
507	Hardware, plumbing & heating equipment ..	7.6-9.0	8.2	7.2-8.7	8.2	1.2-1.8	1.4	2.6-4.1	3.3	7.6	7.5	1.9
508	Machinery, equip. & supplies	3.4-4.4	3.7	3.3-4.2	3.7	1.2-2.1	1.7	2.5-3.0	2.6	3.2	2.7	1.5
509	Miscellaneous durable goods	4.5-5.3	5.1	4.5-5.5	4.8	1.2-3.5	1.6	3.1-4.7	3.6	4.7	4.3	2.0
51	Nondurable goods	2.4-2.9	2.6	2.4-3.0	2.4	0.4-1.0	0.8	0.9-2.2	1.6	2.5	2.8	1.2
511	Paper & paper products	5.0-6.0	5.3	5.0-5.7	5.2	0.9-1.9	1.2	2.3-3.3	2.8	5.0	5.3	1.1
512	Drugs, drug proprietaries and druggists' sundries	5.0-6.3	5.4	4.8-5.7	5.2	0.6-1.7	1.3	3.0-4.2	3.4	4.9	5.7	2.4
513	Apparel, piece goods & notions	8.6-10.7	9.6	8.1-10.1	9.5	1.6-5.3	3.3	4.6-8.2	5.5	8.9	6.3	3.3
514	Groceries & related products	4.3-5.2	4.6	4.1-4.9	4.5	0.5-2.2	0.9	2.0-4.8	3.5	4.6	6.1	2.6
515	Farm-product raw materials	4.4-6.3	5.9	3.7-6.2	5.0	1.3-4.8	2.6	4.0-7.8	5.1	4.4	4.8	4.5
516	Chemicals & allied products	5.9-8.7	7.5	5.9-8.1	6.9	1.8-3.8	2.8	2.8-6.0	5.3	6.4	7.0	3.2
517	Petroleum & petroleum products	5.8-7.5	6.8	6.9-7.5	7.0	0.7-2.4	1.7	1.8-4.3	3.1	6.6	5.3	2.6
518	Beer, wine, & distilled beverages	3.1-4.4	3.4	2.8-4.2	3.4	0.8-1.6	1.0	1.5-3.2	2.4	3.2	2.7	1.6
519	Misc. nondurable goods	5.6-7.1	6.2	5.2-7.0	6.0	1.4-3.2	2.1	2.1-4.8	3.5	5.3	4.6	2.1
	Inventories, Total	1.1-1.4	1.2	1.1-1.4	1.2	0.2-0.4	0.2	0.7-1.1	0.8	(X)	(X)	(X)
50	Durable goods	1.5-1.6	1.5	1.5-1.6	1.5	0.2-0.4	0.3	0.8-1.7	1.1	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.9-6.3	6.1	5.8-6.2	6.1	0.6-1.1	0.8	2.0-3.0	2.2	(X)	(X)	(X)
502	Furniture & home furnishings	9.1-9.8	9.8	9.1-9.8	9.4	0.8-1.5	1.1	4.2-6.4	5.4	(X)	(X)	(X)
503	Lumber & other construction mat.	5.2-6.7	6.0	5.0-6.5	5.9	0.7-1.3	0.9	3.2-4.0	3.5	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.6-6.5	5.6	4.7-6.1	5.5	0.8-2.1	1.4	2.5-5.8	3.6	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	4.0-5.1	4.6	3.9-4.9	4.7	0.6-0.9	0.8	2.4-3.0	2.5	(X)	(X)	(X)
506	Electrical goods	2.5-3.2	2.7	2.6-3.0	2.7	0.4-0.6	0.5	1.4-2.5	2.0	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.7-6.9	6.4	5.7-6.5	6.1	0.6-1.0	0.7	3.0-5.3	3.4	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.9-3.9	3.6	3.0-3.9	3.6	0.4-0.7	0.6	1.9-4.0	2.5	(X)	(X)	(X)
509	Miscellaneous durable goods	8.6-9.6	9.1	8.6-9.4	9.2	0.6-1.2	0.9	2.6-3.8	3.3	(X)	(X)	(X)
51	Nondurable goods	2.7-2.9	2.8	2.5-2.9	2.7	0.3-0.9	0.4	1.0-1.3	1.1	(X)	(X)	(X)
511	Paper & paper products	5.7-6.6	6.0	5.2-6.2	5.9	0.8-1.5	0.9	2.1-2.9	2.8	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.0-7.1	6.5	5.9-6.9	6.5	0.6-1.0	0.8	2.0-3.6	2.6	(X)	(X)	(X)
513	Apparel, piece goods & notions	6.7-8.3	7.0	6.2-7.8	7.0	0.8-2.0	1.3	2.9-4.8	3.8	(X)	(X)	(X)
514	Groceries & related products	4.6-7.6	5.1	4.6-5.5	5.1	0.4-3.8	0.5	1.8-4.1	2.2	(X)	(X)	(X)
515	Farm-product raw materials	7.1-8.0	7.4	6.6-7.7	7.2	1.0-2.0	1.5	2.4-3.8	3.3	(X)	(X)	(X)
516	Chemicals & allied products	6.8-8.5	7.5	6.9-8.0	7.8	0.9-1.5	1.3	3.6-5.5	4.9	(X)	(X)	(X)
517	Petroleum & petroleum products	6.1-7.9	7.0	5.2-7.9	6.8	0.7-1.6	1.2	1.3-5.5	1.8	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.3-6.3	5.0	3.8-5.2	4.8	0.8-5.6	1.1	1.9-3.8	2.8	(X)	(X)	(X)
519	Misc. nondurable goods	8.1-9.6	8.7	8.1-8.9	8.8	1.1-1.5	1.3	3.0-4.0	3.8	(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 1989 through October 1989.

Official Business
Penalty for Private Use, \$300

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

SIC code	Kind of business	1988			1989										
		Oct. ^r	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^r	Oct. ^r	Nov.
	Sales,¹ Total	1.031	1.011	.999	.945	.912	1.055	.968	1.045	1.031	.953	1.040	.991	1.058	1.012
50	Durable goods	1.052	1.010	.978	.904	.891	1.052	.980	1.044	1.050	.956	1.043	1.010	1.080	1.007
501	Motor vehicles & auto. equip.	1.056	1.017	1.011	.899	.893	1.047	1.007	1.067	1.063	.965	1.022	.920	1.077	1.020
502	Furniture & home furnishings ...	1.110	1.035	.956	.893	.904	1.038	.933	1.014	1.002	.938	1.068	1.076	1.128	1.036
503	Lumber & other construction mat.	1.096	.982	.857	.810	.773	.989	.977	1.092	1.131	1.068	1.148	1.076	1.128	.976
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.144	1.140	1.030	.889	.909	1.041	.899	.888	.979	.890	1.031	1.084	1.167	1.169
505	Metals & minerals, ex. petroleum	.984	.933	.945	.968	.935	1.181	.977	1.001	1.067	.929	1.036	1.025	1.022	.948
506	Electrical goods	1.090	1.053	1.000	.906	.904	1.032	.930	.985	1.014	.962	1.060	1.037	1.112	1.046
507	Hardware, plumbing & heating equipment	1.066	.998	.949	.910	.877	.991	.958	1.062	1.089	.989	1.077	.989	1.103	1.001
508	Machinery, equip. & supplies	1.004	.981	1.009	.910	.915	1.081	.995	1.052	1.045	.937	1.045	1.016	1.043	.973
509	Miscellaneous durable goods ...	1.083	1.020	.967	.871	.876	1.062	1.018	1.093	1.063	.916	.982	.990	1.109	1.090
51	Nondurable goods	1.009	1.015	1.016	.980	.932	1.064	.954	1.046	1.014	.946	1.035	.975	1.039	1.014
511	Paper & paper products	1.021	1.008	.997	.980	.941	1.072	.946	.972	1.030	.930	1.076	.989	1.062	1.013
512	Drugs, drug proprietaries and druggists' sundries	1.008	1.001	.998	1.016	.935	1.049	.944	1.030	1.007	.943	1.041	1.005	1.041	.994
513	Apparel, piece goods & notions .	1.105	1.011	.714	.930	1.015	1.055	.852	.900	1.032	1.036	1.253	1.035	1.173	1.000
514	Groceries & related products ...	.994	1.020	1.027	.973	.915	1.018	.949	1.059	1.019	.992	1.036	.965	1.008	1.029
515	Farm-product raw materials	1.065	1.035	1.148	1.074	.961	1.070	.945	1.031	.953	.873	.971	.902	1.087	1.050
516	Chemicals & allied products	1.009	.959	.883	.968	.917	1.091	.995	1.080	1.112	.946	1.026	.975	1.048	.953
517	Petroleum & petroleum products	.956	1.020	1.077	1.070	.991	1.129	.936	.995	.966	.917	.988	1.006	.975	.999
518	Beer, wine, & distilled beverages	.980	1.049	1.155	.776	.794	1.015	.910	1.092	1.118	.977	1.127	.974	1.017	1.064
519	Misc. nondurable goods .....	.970	.950	.997	.869	.875	1.112	1.060	1.209	1.054	.909	1.002	.955	1.014	.965
	Inventories,¹ Total	1.011	1.004	1.001	1.005	1.008	1.008	1.006	.991	.995	.994	.985	.993	1.012	1.004
50	Durable goods	1.006	.995	.985	.988	.996	1.003	1.007	1.005	1.004	1.008	1.000	1.005	1.006	.994
501	Motor vehicles & auto. equip. ....	.997	1.014	1.016	.995	1.014	1.016	1.001	.997	1.002	.975	.959	1.022	.997	1.014
502	Furniture & home furnishings ...	.996	.968	.990	1.009	.995	.993	.991	1.014	1.007	1.019	1.018	1.024	.995	.964
503	Lumber & other construction mat. ....	.979	.971	.973	.959	.980	1.021	1.038	1.025	1.039	1.040	.983	.988	.979	.975
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.028	.982	.967	.971	.981	.993	.989	.979	1.012	1.051	1.023	1.037	1.029	.979
505	Metals & minerals, ex. petroleum	.980	.962	1.005	1.016	1.000	1.008	1.017	1.014	1.042	1.021	.976	.971	.981	.962
506	Electrical goods	1.012	1.002	.994	.972	.985	.994	.996	1.002	.999	1.017	1.012	1.010	1.011	1.000
507	Hardware, plumbing & heating equipment	1.001	.974	.969	.990	1.001	1.023	1.019	1.011	1.002	1.009	1.012	.999	1.003	.975
508	Machinery, equip. & supplies	1.002	1.006	.976	.995	1.001	1.002	1.016	1.007	1.002	1.005	1.000	.991	1.003	1.000
509	Miscellaneous durable goods ...	1.018	1.000	.960	.956	.962	.979	1.007	1.012	1.000	1.028	1.038	1.019	1.017	.993
51	Nondurable goods	1.020	1.025	1.032	1.038	1.031	1.015	.996	.962	.984	.965	.958	.977	1.021	1.027
511	Paper & paper products .....	.995	.986	1.001	1.031	1.016	1.021	1.008	.989	.993	1.004	.986	.969	.996	.990
512	Drugs, drug proprietaries and druggists' sundries	1.019	.984	1.015	1.046	1.036	1.007	1.031	.966	.964	.967	.967	.993	1.018	.984
513	Apparel, piece goods & notions .	.964	.946	.987	.995	.984	.954	.951	1.022	1.069	1.051	1.045	1.024	.962	.946
514	Groceries & related products ...	1.049	1.048	1.024	1.005	1.005	.981	.982	.979	.981	.979	.959	1.002	1.050	1.049
515	Farm-product raw materials	1.134	1.130	1.156	1.198	1.151	1.037	.969	.831	.864	.845	.836	.895	1.140	1.132
516	Chemicals & allied products ....	.964	.985	.972	.995	1.019	.999	1.032	1.036	1.035	1.001	1.006	.960	.959	.987
517	Petroleum & petroleum products	1.010	1.022	1.103	1.088	.981	1.003	.944	.942	.980	.981	.960	1.030	1.013	1.005
518	Beer, wine, & distilled beverages	1.068	1.045	.911	.944	.987	1.020	1.024	1.001	1.016	.995	.980	1.010	1.070	1.049
519	Misc. nondurable goods .....	.974	.996	1.035	1.030	1.059	1.101	1.061	.966	.981	.922	.926	.942	.973	.988

^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 1989

U.S. Department of Commerce
BUREAU OF THE CENSUS

BW89-11
Issued January 1990

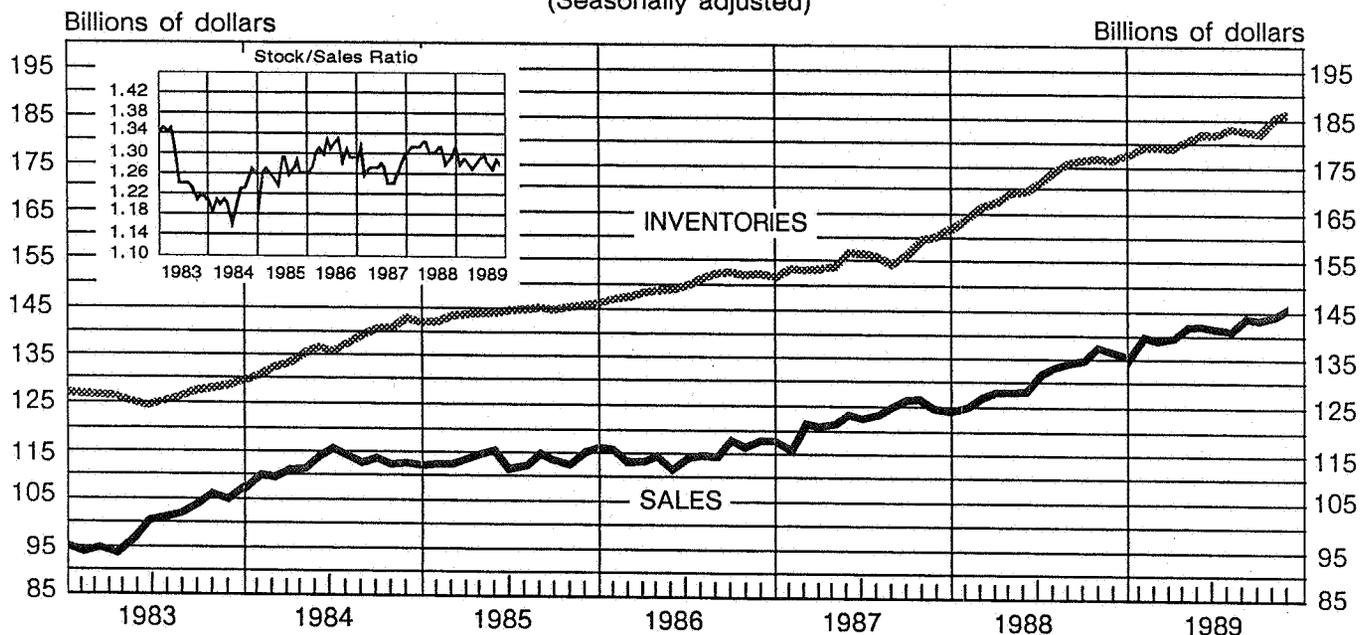
Sales. November 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$146.3 billion, up 1.2 percent (± 0.7 percent) from the revised October level and were up 6.7 percent (± 1.5 percent) from a year ago. The October preliminary estimate was revised upward by \$0.9 billion or about 0.6 percent. November sales of durable goods increased 2.4 percent (± 0.8 percent) from October, and were 7.1 percent (± 2.1 percent) above a year ago. Monthly gains in the durable goods group were as follows: sales of miscellaneous durable goods were up 8.6 percent to \$7.6 billion; metals and minerals, except petroleum increased 7.6 percent to \$7.6 billion; and electrical goods increased 3.6 percent to \$9.9 billion. November sales of nondurable goods were up 0.1 percent (± 1.1 percent) from October and were up 6.3 percent (± 2.4 percent) from November 1988. Sales of miscellaneous nondurable goods increased 3.5 percent to \$10.3 billion from the October level. However, sales of groceries and related products decreased 2.7 percent to \$19.7 billion.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$187.1 billion at the end of November, up 0.5 percent (± 0.5 percent) from the revised October level and were up 5.7 percent (± 2.0 percent) from a year ago. The October preliminary estimate was revised upward by \$0.1 billion or about 0.06 percent. Inventories of durable goods wholesalers increased 0.6 percent (± 0.6 percent) from the October level and were 6.9 percent (± 2.0 percent) above a year ago. Inventories of nondurable goods wholesalers were up 0.3 percent (± 0.6 percent) from the October level and were up 3.3 percent (± 3.0 percent) from November 1988.

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

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

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-89
(Seasonally adjusted)



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

Address inquiries concerning this report to Michael Brown, 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: 1989 and 1988

(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	1989											1988	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ^P	Nov. ^r	Dec.
	Sales, Total	140,356	139,547	139,991	142,290	142,474	141,959	141,667	143,280	143,905	144,554	146,307	137,140	136,170
50	Durable goods	70,302	69,343	68,796	69,345	70,293	69,147	70,220	71,228	71,543	71,598	73,288	68,426	68,427
501	Motor vehicles & auto. equip.	14,532	14,567	14,390	14,160	13,217	13,230	13,173	14,015	13,996	13,899	13,681	14,373	14,031
502	Furniture & home furnishings	2,431	2,363	2,339	2,427	2,369	2,315	2,407	2,505	2,487	2,337	2,481	2,480	2,503
503	Lumber & other construction mat.	4,916	4,678	4,448	4,588	4,541	4,522	4,599	4,657	4,576	4,683	4,682	4,564	4,733
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,082	2,070	2,125	2,040	2,143	2,293	2,217	2,202	2,228	2,367
505	Metals & minerals, ex. petroleum	6,135	5,705	5,971	6,236	6,812	6,971	6,989	6,572	6,612	7,097	7,633	6,181	6,006
506	Electrical goods	9,529	9,219	9,163	9,328	9,876	9,247	9,331	9,608	9,487	9,521	9,861	9,233	9,068
507	Hardware, plumbing & heating equipment ..	4,160	3,985	3,873	4,146	4,120	3,880	3,956	3,993	3,944	3,995	4,030	3,930	3,974
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,831	19,978	20,095	20,442	20,500	20,895	20,878	21,150	18,653	18,525
509	Miscellaneous durable goods	7,352	7,272	7,075	6,547	7,310	6,762	7,283	7,235	7,253	6,971	7,568	6,784	7,220
51	Nondurable goods	70,054	70,204	71,195	72,945	72,181	72,812	71,447	72,052	72,362	72,966	73,019	68,714	67,743
511	Paper & paper products	4,555	4,508	4,577	4,738	4,728	4,662	4,846	4,755	4,850	4,883	4,925	4,435	4,395
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,176	3,261	3,246	3,281	3,273	3,340	3,346	3,418	3,578	3,656	3,109	3,255
513	Apparel, piece goods & notions	4,676	4,286	4,477	4,643	4,377	4,705	4,758	4,612	4,773	4,671	5,045	4,434	4,538
514	Groceries & related products	19,512	19,719	19,683	19,852	20,169	20,168	19,949	19,797	19,789	20,278	19,726	19,401	19,762
515	Farm-product raw materials	11,348	11,414	11,474	11,597	10,925	10,650	10,265	10,767	10,410	10,818	10,872	10,926	9,517
516	Chemicals & allied products	2,929	2,955	2,990	3,033	2,951	3,031	3,081	2,959	3,029	3,034	3,127	2,982	2,920
517	Petroleum & petroleum products	10,287	11,081	11,568	13,016	13,256	13,033	12,188	12,282	12,373	12,126	11,776	10,229	10,090
518	Beer, wine, & distilled beverages	3,656	3,534	3,640	3,589	3,576	3,701	3,618	3,709	3,722	3,661	3,639	3,716	3,637
519	Misc. nondurable goods	9,825	9,531	9,525	9,231	8,918	9,589	9,402	9,825	9,998	9,907	10,253	9,482	9,629
	Inventories, Total	179,761	179,810	179,681	181,226	182,615	182,548	183,950	183,529	182,891	186,119	187,095	177,061	178,313
50	Durable goods	117,255	117,932	117,424	119,069	120,481	120,231	122,142	121,520	120,614	122,351	123,120	115,120	115,743
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,469	23,067	22,826	23,154	22,878	22,058	22,806	22,769	21,353	21,507
502	Furniture & home furnishings	4,033	4,067	4,078	4,004	4,035	4,114	4,143	4,138	4,186	4,187	4,148	4,124	4,023
503	Lumber & other construction mat.	5,777	5,564	5,667	5,696	5,614	5,603	5,670	5,517	5,582	5,671	5,731	5,405	5,497
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,656	4,654	4,839	4,795	4,740	4,809	4,819	4,937	4,300	4,467
505	Metals & minerals, ex. petroleum	8,857	8,878	9,030	9,007	8,766	8,961	9,332	9,322	9,181	9,114	9,378	9,113	8,982
506	Electrical goods	15,063	15,418	15,353	15,620	15,825	15,889	16,233	16,089	15,866	16,026	16,132	14,509	14,798
507	Hardware, plumbing & heating equipment ..	7,588	7,454	7,400	7,601	7,713	7,697	7,854	7,847	7,927	8,134	8,229	7,260	7,264
508	Machinery, equip. & supplies	41,620	41,730	41,049	42,184	42,862	42,843	43,640	43,477	43,325	43,649	43,712	41,409	41,338
509	Miscellaneous durable goods	8,377	8,524	8,324	7,832	7,945	7,459	7,321	7,512	7,580	7,945	8,084	7,647	7,867
51	Nondurable goods	62,506	61,878	62,257	62,157	62,134	62,317	61,808	62,009	62,277	63,768	63,975	61,941	62,570
511	Paper & paper products	4,586	4,490	4,469	4,541	4,535	4,533	4,628	4,541	4,610	4,653	4,651	4,214	4,310
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,169	5,190	5,380	5,428	5,566	5,703	5,681	5,707	4,947	5,221
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,190	8,307	8,378	8,564	8,788	8,819	8,914	8,695	7,887	7,846
514	Groceries & related products	12,822	12,772	12,931	12,879	13,109	13,054	12,612	12,667	12,540	13,406	13,611	12,512	12,564
515	Farm-product raw materials	9,097	8,558	8,145	7,776	7,422	6,976	6,933	7,032	6,892	7,533	7,830	9,351	9,562
516	Chemicals & allied products	2,796	2,612	2,723	2,703	2,742	2,747	2,732	2,647	2,723	2,602	2,539	2,756	2,964
517	Petroleum & petroleum products	3,972	4,201	4,655	4,901	4,821	5,045	4,629	4,645	4,647	4,655	4,694	3,930	3,858
518	Beer, wine, & distilled beverages	4,099	4,026	4,036	3,986	4,053	4,099	4,126	4,082	4,164	4,155	4,226	4,093	4,176
519	Misc. nondurable goods	11,783	11,727	11,913	12,012	12,075	12,105	12,156	12,041	12,117	12,169	12,022	12,251	12,069
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.28	1.29	1.30	1.28	1.27	1.29	1.28	1.29	1.31
50	Durable goods	1.67	1.70	1.71	1.72	1.71	1.74	1.74	1.71	1.69	1.71	1.68	1.68	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.59	1.75	1.73	1.76	1.63	1.58	1.64	1.66	1.49	1.53
502	Furniture & home furnishings	1.66	1.72	1.74	1.65	1.70	1.78	1.72	1.65	1.68	1.79	1.67	1.66	1.61
503	Lumber & other construction mat.	1.18	1.19	1.27	1.24	1.24	1.23	1.23	1.18	1.22	1.21	1.22	1.18	1.16
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.24	2.25	2.28	2.35	2.21	2.10	2.17	2.24	1.93	1.89
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.44	1.29	1.29	1.34	1.42	1.39	1.28	1.23	1.47	1.50
506	Electrical goods	1.58	1.67	1.66	1.67	1.60	1.72	1.74	1.67	1.68	1.64	1.67	1.57	1.63
507	Hardware, plumbing & heating equipment ..	1.82	1.87	1.91	1.83	1.87	1.98	1.99	1.97	2.01	2.04	2.04	1.85	1.83
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.13	2.15	2.13	2.13	2.12	2.12	2.09	2.07	2.22	2.23
509	Miscellaneous durable goods	1.14	1.17	1.18	1.20	1.09	1.10	1.01	1.04	1.06	1.14	1.07	1.13	1.09
51	Nondurable goods .....	.89	.88	.87	.85	.86	.86	.87	.86	.86	.87	.88	.90	.92
511	Paper & paper products	1.01	1.00	.98	.96	.96	.97	.96	.95	.95	.95	.94	.95	.98
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.59	1.58	1.64	1.63	1.66	1.67	1.59	1.56	1.59	1.60
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.76	1.90	1.78	1.80	1.91	1.85	1.91	1.72	1.78	1.73
514	Groceries & related products .....	.66	.65	.66	.65	.65	.65	.63	.64	.63	.66	.69	.64	.64
515	Farm-product raw materials .....	.80	.75	.71	.67	.68	.66	.68	.65	.66	.70	.72	.86	1.00
516	Chemicals & allied products .....	.95	.88	.91	.89	.89	.91	.89	.89	.92	.86	.81	.92	1.02
517	Petroleum & petroleum products .....	.39	.38	.40	.38	.36	.39	.38	.38	.38	.38	.40	.38	.38
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.13	1.11	1.14	1.10	1.12	1.13	1.16	1.10	1.15
519	Misc. nondurable goods	1.20	1.23	1.25	1.30	1.35	1.26	1.29	1.23	1.21	1.23	1.17	1.29	1.25

^rRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989											1988		Total 11 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ^P	Nov.	Dec.	1989	1988
	Sales, Total	131,786	127,414	148,920	137,567	148,832	146,662	134,412	148,912	142,118	152,192	148,149	138,289	136,599	1,566,964	1,451,731
50	Durable goods	63,265	62,003	72,946	68,014	73,231	72,803	66,904	74,373	71,887	77,042	74,284	68,957	67,261	776,752	715,483
501	Motor vehicles & auto. equip.	13,064	13,008	15,066	14,259	14,103	14,063	12,712	14,323	12,876	15,080	13,859	14,531	14,185	152,413	149,861
502	Furniture & home furnishings	2,171	2,136	2,428	2,284	2,402	2,320	2,258	2,675	2,676	2,629	2,610	2,604	2,393	26,569	25,592
503	Lumber & other construction mat.	3,982	3,616	4,399	4,482	4,959	5,114	4,912	5,348	4,924	5,287	4,537	4,482	4,056	51,558	51,596
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,070	1,842	2,301	1,872	1,838	2,080	1,816	2,209	2,486	2,594	2,559	2,551	2,438	23,667	22,057
505	Metals & minerals, ex. petroleum	5,939	5,334	7,052	6,093	6,819	7,438	6,493	6,809	6,777	7,189	7,189	7,274	5,804	5,676	73,217
506	Electrical goods	6,633	6,334	9,456	8,675	9,728	9,376	8,976	10,184	9,838	10,559	10,413	9,778	9,068	104,172	95,015
507	Hardware, plumbing & heating equipment	3,786	3,495	3,838	3,972	4,375	4,225	3,912	4,300	3,901	4,399	4,034	3,922	3,771	44,237	43,224
508	Machinery, equip. & supplies	17,216	17,868	20,892	19,732	21,017	20,999	19,154	21,422	21,229	21,734	20,537	18,243	18,692	221,800	190,493
509	Miscellaneous durable goods	6,404	6,370	7,514	6,665	7,990	7,188	6,671	7,105	7,180	7,571	8,461	7,042	6,982	79,119	74,354
51	Nondurable goods	68,521	65,411	75,974	69,553	75,601	73,859	67,508	74,539	70,231	75,150	73,865	69,332	69,338	790,212	736,248
511	Paper & paper products	4,464	4,242	4,907	4,482	4,596	4,802	4,507	5,116	4,797	5,181	5,014	4,488	4,382	52,108	47,271
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,064	3,379	3,296	3,150	3,483	3,435	3,728	3,674	3,121	3,248	36,918	33,221
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,956	3,939	4,856	4,929	5,779	4,940	5,432	5,161	4,558	3,240	52,414	46,994
514	Groceries & related products	18,985	18,043	20,037	18,840	21,359	20,551	19,789	20,510	19,096	20,440	20,377	19,905	20,296	218,027	203,601
515	Farm-product raw materials	12,188	10,969	12,277	10,959	11,264	10,149	8,961	10,455	9,390	11,662	11,274	11,155	10,926	119,548	115,090
516	Chemicals & allied products	2,835	2,710	3,262	3,018	3,187	3,370	2,915	3,036	2,953	3,131	3,008	2,863	2,578	33,425	32,198
517	Petroleum & petroleum products	11,007	10,981	13,060	12,183	13,190	12,590	11,176	12,135	12,447	11,859	11,529	10,198	10,867	132,157	116,609
518	Beer, wine, & distilled beverages	2,837	2,806	3,695	3,268	3,905	4,138	3,535	4,180	3,625	3,731	3,872	3,913	4,201	39,590	39,524
519	Misc. nondurable goods	8,538	8,340	10,592	9,785	10,782	10,107	8,546	9,845	9,548	9,986	9,956	9,131	9,600	106,025	101,740
	Inventories, Total	181,054	181,481	181,246	182,305	181,114	182,346	182,771	180,360	181,925	187,550	187,993	178,197	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	120,185	121,145	121,043	123,080	121,019	120,951	122,504	122,609	114,648	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,491	22,998	22,872	22,575	21,940	22,543	22,715	23,111	21,652	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	4,049	3,968	4,091	4,143	4,222	4,212	4,288	4,166	3,995	3,976	3,983	(X)	(X)
503	Lumber & other construction mat.	5,540	5,453	5,788	5,912	5,754	5,821	5,897	5,423	5,515	5,558	5,525	5,221	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,312	4,469	4,539	4,605	4,556	4,897	5,040	4,849	4,987	4,935	4,878	4,244	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum	8,999	8,878	9,102	9,160	8,889	9,337	9,528	9,098	8,915	8,941	9,078	8,821	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,261	15,568	15,857	15,873	16,509	16,282	16,025	16,186	16,118	14,509	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,461	7,570	7,745	7,798	7,712	7,925	7,941	7,919	8,191	8,023	7,086	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,131	42,859	43,162	42,929	43,858	43,477	42,935	43,780	43,789	41,492	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,887	8,040	7,459	7,526	7,797	7,826	8,032	8,084	7,647	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,120	59,969	61,303	59,691	59,341	60,974	65,046	65,384	63,549	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,577	4,485	4,501	4,647	4,477	4,467	4,658	4,600	4,172	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,329	5,014	5,186	5,249	5,382	5,663	5,795	5,576	4,898	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	7,789	8,490	8,956	9,001	9,183	9,031	8,575	8,225	7,445	7,744	(X)	(X)
514	Groceries & related products	12,886	12,836	12,685	12,647	12,834	12,647	12,347	12,148	12,565	14,078	14,360	13,188	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,850	8,446	7,535	6,168	6,027	5,858	5,879	6,168	8,535	9,044	10,800	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,662	2,720	2,789	2,718	2,843	2,735	2,863	2,674	2,508	2,468	2,693	2,581	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,669	4,627	4,541	4,944	4,541	4,459	4,786	4,678	4,703	3,946	4,255	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	3,974	4,117	4,082	4,057	4,165	4,105	4,000	4,206	4,428	4,408	4,314	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	12,745	11,664	11,875	11,208	11,150	11,414	11,792	11,950	12,153	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.33	1.22	1.24	1.36	1.21	1.28	1.23	1.27	1.29	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.62	1.77	1.65	1.66	1.84	1.63	1.68	1.59	1.65	1.66	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.58	1.63	1.63	1.78	1.53	1.75	1.51	1.67	1.49	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.67	1.75	1.70	1.79	1.87	1.57	1.60	1.58	1.53	1.53	1.66	(X)	(X)
503	Lumber & other construction mat.	1.39	1.51	1.32	1.32	1.16	1.14	1.20	1.01	1.12	1.05	1.22	1.16	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.08	2.43	1.97	2.46	2.48	2.35	2.78	2.20	2.01	1.90	1.91	1.66	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum	1.52	1.66	1.29	1.50	1.30	1.26	1.47	1.34	1.32	1.24	1.25	1.52	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.79	1.63	1.69	1.84	1.60	1.63	1.53	1.55	1.48	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.95	1.78	1.83	2.03	1.85	2.03	1.86	1.99	1.81	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.17	2.05	2.04	2.29	2.03	2.02	2.01	2.13	2.27	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.18	1.01	1.04	1.13	1.10	1.09	1.06	.96	1.09	1.08	(X)	(X)
51	Nondurable goods .....	.95	.98	.83	.89	.79	.83	.88	.80	.87	.87	.89	.92	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	1.02	.98	.94	1.03	.88	.93	.90	.92	.93	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.50	1.74	1.48	1.57	1.67	1.55	1.65	1.55	1.52	1.55	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	1.97	2.16	1.84	1.83	1.59	1.83	1.58	1.59	1.63	2.39	(X)	(X)
514	Groceries & related products .....	.68	.71	.63	.67	.60	.62	.62	.59	.66	.69	.70	.66	.63	(X)	(X)
515	Farm-product raw materials .....	.89	.90	.69	.69	.55	.59	.65	.66	.66	.73	.80	.97	1.01	(X)	(X)
516	Chemicals & allied products .....	.98	.98	.83	.92	.85	.84	.94	.88	.91	.80	.82	.94	1.12	(X)	(X)
517	Petroleum & petroleum products .....	.39	.38	.36	.38	.34	.39	.41	.37	.38	.39	.41	.39	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.42	1.11	1.25	1.04	1.01	1.16	.96	1.16	1.19	1.15	1.10	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.30	1.08	1.17	1.31	1.13	1.20	1.18	1.20	1.33	1.30	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

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

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 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. 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	1.6	1.5-1.7	1.6	0.4-0.6	0.5	0.7-1.1	0.9	1.5	1.4	0.7
50	Durable goods	1.7-2.3	1.9	1.7-2.2	1.8	0.5-0.9	0.7	1.1-1.6	1.2	1.9	1.7	0.7
501	Motor vehicles & auto. equip.	3.8-5.3	4.1	3.6-4.7	4.1	1.0-2.2	1.5	1.9-3.6	3.1	4.6	5.1	1.5
502	Furniture & home furnishings	6.3-9.3	6.7	6.1-7.6	6.7	1.5-5.1	3.2	5.3-8.0	7.5	6.1	6.7	4.5
503	Lumber & other construction mat.	4.4-5.4	4.9	4.2-5.1	4.8	1.1-2.2	1.3	2.3-3.2	2.6	4.6	4.6	1.4
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.4-8.2	6.9	4.6-7.0	5.8	2.1-5.9	4.8	4.2-8.4	6.0	4.7	5.3	2.8
505	Metals & minerals, ex. petroleum	5.8-10.5	6.5	5.2-9.0	7.3	1.2-3.8	2.4	2.3-5.4	3.3	7.1	5.0	2.7
506	Electrical goods	2.7-4.6	3.9	2.9-4.2	3.3	0.7-2.4	1.3	1.9-3.4	2.3	3.0	2.9	1.4
507	Hardware, plumbing & heating equipment ..	7.6-9.0	8.3	7.9-8.7	8.3	1.2-1.8	1.4	2.6-3.9	3.3	7.7	7.5	1.9
508	Machinery, equip. & supplies	3.4-4.4	3.6	3.3-3.7	3.6	1.1-2.1	1.6	2.4-3.0	2.5	3.2	2.6	1.5
509	Miscellaneous durable goods	4.5-5.3	5.0	4.5-5.5	4.9	1.2-3.5	1.6	3.1-4.7	3.6	4.7	4.4	2.1
51	Nondurable goods	2.5-2.9	2.7	2.4-3.0	2.5	0.6-1.0	0.8	0.9-2.0	1.5	2.5	2.8	1.2
511	Paper & paper products	5.1-6.0	5.3	5.0-5.7	5.2	0.9-1.9	1.2	2.7-4.0	3.0	4.9	5.2	1.1
512	Drugs, drug proprietaries and druggists' sundries	5.0-6.3	5.7	5.0-5.8	5.4	0.6-1.7	1.0	2.9-4.2	3.3	5.0	5.6	2.2
513	Apparel, piece goods & notions	8.6-11.6	9.6	8.1-10.1	9.5	1.6-5.3	3.8	4.6-8.2	5.4	9.0	8.3	3.4
514	Groceries & related products	4.3-5.3	4.6	4.1-5.2	4.5	0.5-2.2	1.1	2.0-4.8	3.0	4.7	6.1	2.5
515	Farm-product raw materials	4.4-6.3	5.8	3.7-5.2	5.0	2.0-4.8	2.6	3.2-5.4	4.8	4.5	4.7	4.1
516	Chemicals & allied products	5.9-8.7	8.1	5.9-8.7	7.0	1.7-3.8	2.4	2.8-6.0	5.0	6.5	7.1	3.1
517	Petroleum & petroleum products	5.8-7.3	6.7	5.5-7.5	7.0	0.7-2.4	1.7	1.8-3.4	2.9	6.5	5.4	2.3
518	Beer, wine, & distilled beverages	3.1-5.4	3.4	2.8-4.3	3.5	0.6-3.5	1.0	1.5-3.4	2.4	3.4	2.7	1.6
519	Misc. nondurable goods	5.6-6.8	6.2	5.2-7.0	6.0	1.3-3.2	2.1	2.1-4.8	3.5	5.5	4.6	2.2
	Inventories, Total	1.1-1.5	1.2	1.1-1.4	1.2	0.2-0.4	0.3	0.7-1.1	0.8	(X)	(X)	(X)
50	Durable goods	1.5-1.7	1.6	1.5-1.6	1.5	0.2-0.4	0.3	0.8-1.7	1.1	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.9-6.5	6.1	5.8-6.2	6.1	0.6-1.1	0.7	2.0-3.0	2.2	(X)	(X)	(X)
502	Furniture & home furnishings	8.4-9.8	9.5	8.6-9.6	9.4	0.8-2.1	1.2	4.2-6.4	5.0	(X)	(X)	(X)
503	Lumber & other construction mat.	5.3-6.7	6.0	5.3-6.5	5.9	0.7-1.3	0.8	2.6-4.0	3.5	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.6-6.5	5.6	4.7-6.1	5.3	0.7-2.1	1.4	2.5-4.2	3.4	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	4.0-5.1	4.7	3.9-5.2	4.7	0.6-1.0	0.8	2.3-3.0	2.5	(X)	(X)	(X)
506	Electrical goods	2.5-3.2	2.9	2.6-3.0	2.7	0.4-0.6	0.5	1.4-2.5	2.1	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment ..	5.7-6.9	6.5	5.8-6.8	6.2	0.6-0.9	0.7	2.6-5.3	3.4	(X)	(X)	(X)
508	Machinery, equip. & supplies	2.9-3.9	3.6	3.0-3.9	3.6	0.4-0.7	0.6	1.9-4.0	2.5	(X)	(X)	(X)
509	Miscellaneous durable goods	8.6-9.6	9.1	8.6-9.6	9.2	0.5-1.2	0.8	2.6-3.8	3.2	(X)	(X)	(X)
51	Nondurable goods	2.7-3.0	2.8	2.5-2.9	2.7	0.3-0.9	0.5	1.0-1.8	1.2	(X)	(X)	(X)
511	Paper & paper products	5.7-6.6	6.0	5.4-6.2	5.9	0.6-1.4	0.9	2.1-2.9	2.7	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.0-7.1	6.5	5.9-6.9	6.5	0.6-1.0	0.8	2.0-3.3	2.5	(X)	(X)	(X)
513	Apparel, piece goods & notions	6.7-7.9	7.0	6.2-7.9	7.0	1.0-2.0	1.5	2.9-4.8	4.2	(X)	(X)	(X)
514	Groceries & related products	4.6-8.9	5.3	4.6-7.8	5.2	0.4-3.8	0.7	1.8-6.0	2.6	(X)	(X)	(X)
515	Farm-product raw materials	6.6-8.0	7.4	7.0-7.7	7.2	1.0-2.0	1.4	2.4-4.2	3.3	(X)	(X)	(X)
516	Chemicals & allied products	6.8-8.5	7.7	6.9-8.4	7.8	0.6-1.5	1.2	3.6-6.0	4.9	(X)	(X)	(X)
517	Petroleum & petroleum products	6.5-7.9	7.2	5.8-7.9	7.0	0.7-1.2	1.1	1.6-5.5	2.1	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.3-6.3	5.2	3.8-5.2	5.0	0.9-5.6	1.1	1.9-3.8	2.7	(X)	(X)	(X)
519	Misc. nondurable goods	8.1-9.1	8.7	8.1-8.9	8.7	1.0-1.5	1.3	3.0-4.1	3.8	(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 1989 through November 1989.

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	1988		1989											
		Nov. ¹	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct. ¹	Nov. ¹	Dec.
	Sales,¹ Total	1.010	.999	.945	.912	1.055	.968	1.045	1.031	.953	1.040	.991	1.056	1.012	.965
50	Durable goods	1.012	.978	.904	.891	1.052	.980	1.044	1.050	.956	1.043	1.010	1.078	1.013	.946
501	Motor vehicles & auto. equip. ...	1.011	1.011	.899	.893	1.047	1.007	1.067	1.063	.965	1.022	.920	1.085	1.013	.974
502	Furniture & home furnishings ...	1.050	.956	.893	.904	1.038	.933	1.014	1.002	.938	1.068	1.076	1.125	1.052	.935
503	Lumber & other construction mat. ....	.982	.857	.810	.773	.989	.977	1.092	1.131	1.068	1.148	1.076	1.129	.969	.847
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.145	1.030	.889	.909	1.041	.899	.888	.979	.890	1.031	1.084	1.170	1.162	1.017
505	Metals & minerals, ex. petroleum	.939	.945	.968	.935	1.181	.977	1.001	1.067	.929	1.036	1.025	1.013	.953	.922
506	Electrical goods	1.059	1.000	.906	.904	1.032	.930	.985	1.014	.962	1.060	1.037	1.109	1.056	.981
507	Hardware, plumbing & heating equipment .....	.998	.949	.910	.877	.991	.958	1.062	1.089	.989	1.077	.989	1.101	1.001	.908
508	Machinery, equip. & supplies ...	.978	1.009	.910	.915	1.081	.995	1.052	1.045	.937	1.045	1.016	1.041	.971	.971
509	Miscellaneous durable goods ...	1.038	.967	.871	.876	1.062	1.018	1.093	1.063	.916	.982	.990	1.086	1.118	.911
51	Nondurable goods	1.012	1.016	.980	.932	1.064	.954	1.046	1.014	.946	1.035	.975	1.037	1.012	.983
511	Paper & paper products	1.012	.997	.980	.941	1.072	.946	.972	1.030	.930	1.076	.989	1.061	1.018	.962
512	Drugs, drug proprietaries and druggists' sundries	1.004	.998	1.016	.935	1.049	.944	1.030	1.007	.943	1.041	1.005	1.042	1.005	.970
513	Apparel, piece goods & notions	1.028	.714	.930	1.015	1.055	.852	.900	1.032	1.036	1.253	1.035	1.163	1.023	.704
514	Groceries & related products ...	1.026	1.027	.973	.915	1.018	.949	1.059	1.019	.992	1.036	.965	1.008	1.033	1.006
515	Farm-product raw materials ...	1.021	1.148	1.074	.961	1.070	.945	1.031	.953	.873	.971	.902	1.078	1.037	1.085
516	Chemicals & allied products ...	.960	.883	.968	.917	1.091	.995	1.080	1.112	.946	1.026	.975	1.032	.962	.867
517	Petroleum & petroleum products	.997	1.077	1.070	.991	1.129	.936	.995	.966	.917	.988	1.006	.978	.979	1.018
518	Beer, wine, & distilled beverages	1.053	1.155	.776	.794	1.015	.910	1.092	1.118	.977	1.127	.974	1.019	1.064	1.111
519	Misc. nondurable goods .....	.963	.997	.869	.875	1.112	1.060	1.209	1.054	.909	1.002	.955	1.008	.971	.986
	Inventories,¹ Total	1.004	1.001	1.005	1.008	1.008	1.006	.991	.995	.994	.985	.993	1.010	1.004	1.001
50	Durable goods .....	.995	.985	.988	.996	1.003	1.007	1.005	1.004	1.008	1.000	1.005	1.005	.994	.983
501	Motor vehicles & auto. equip. ...	1.014	1.016	.995	1.014	1.016	1.001	.997	1.002	.975	.959	1.022	.996	1.015	1.014
502	Furniture & home furnishings ...	.964	.990	1.009	.995	.993	.991	1.014	1.007	1.019	1.018	1.024	.995	.963	.987
503	Lumber & other construction mat. ....	.966	.973	.959	.980	1.021	1.038	1.025	1.039	1.040	.983	.988	.980	.964	.970
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.987	.967	.971	.981	.993	.989	.979	1.012	1.051	1.023	1.037	1.024	.988	.963
505	Metals & minerals, ex. petroleum	.968	1.005	1.016	1.000	1.008	1.017	1.014	1.042	1.021	.976	.971	.981	.968	1.005
506	Electrical goods	1.000	.994	.972	.985	.994	.996	1.002	.999	1.017	1.012	1.010	1.010	.999	.990
507	Hardware, plumbing & heating equipment .....	.976	.969	.990	1.001	1.023	1.019	1.011	1.002	1.009	1.012	.999	1.007	.975	.969
508	Machinery, equip. & supplies ...	1.002	.976	.995	1.001	1.002	1.016	1.007	1.002	1.005	1.000	.991	1.003	1.002	.976
509	Miscellaneous durable goods ...	1.000	.980	.956	.962	.979	1.007	1.012	1.000	1.028	1.038	1.019	1.011	1.000	.958
51	Nondurable goods	1.028	1.032	1.038	1.031	1.015	.996	.962	.984	.965	.958	.977	1.022	1.028	1.033
511	Paper & paper products .....	.990	1.001	1.031	1.016	1.021	1.008	.989	.993	1.004	.986	.969	1.001	.989	.997
512	Drugs, drug proprietaries and druggists' sundries .....	.978	1.015	1.046	1.036	1.007	1.031	.966	.964	.967	.967	.993	1.020	.977	1.015
513	Apparel, piece goods & notions	.944	.987	.995	.984	.954	.951	1.022	1.069	1.051	1.045	1.024	.982	.946	.989
514	Groceries & related products ...	1.054	1.024	1.005	1.005	.981	.982	.979	.981	.979	.959	1.002	1.050	1.055	1.024
515	Farm-product raw materials ...	1.155	1.156	1.198	1.151	1.037	.969	.831	.864	.845	.836	.895	1.133	1.155	1.157
516	Chemicals & allied products ...	.977	.972	.995	1.019	.999	1.032	1.036	1.035	1.001	1.006	.960	.964	.972	.970
517	Petroleum & petroleum products	1.004	1.103	1.088	.981	1.003	.944	.942	.980	.981	.960	1.030	1.005	1.002	1.078
518	Beer, wine, & distilled beverages	1.054	.911	.944	.987	1.020	1.024	1.001	1.016	.995	.980	1.010	1.066	1.055	.916
519	Misc. nondurable goods .....	.992	1.035	1.030	1.059	1.101	1.061	.966	.981	.922	.926	.942	.969	.994	1.043

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

December 1989

BW89-12
Issued February 1990

Intention to Revise Wholesale Estimates: The unadjusted and adjusted merchant wholesale sales, inventory, and stock/sales ratio estimates will be revised utilizing the results of the 1987 Census of Wholesale Trade and the 1988 Annual Trade Survey. Revised sales, inventory, and stock/sales ratio estimates for January 1983 through December 1989 are scheduled for release during the week of April 2. Estimates shown in this report do not reflect this revision.

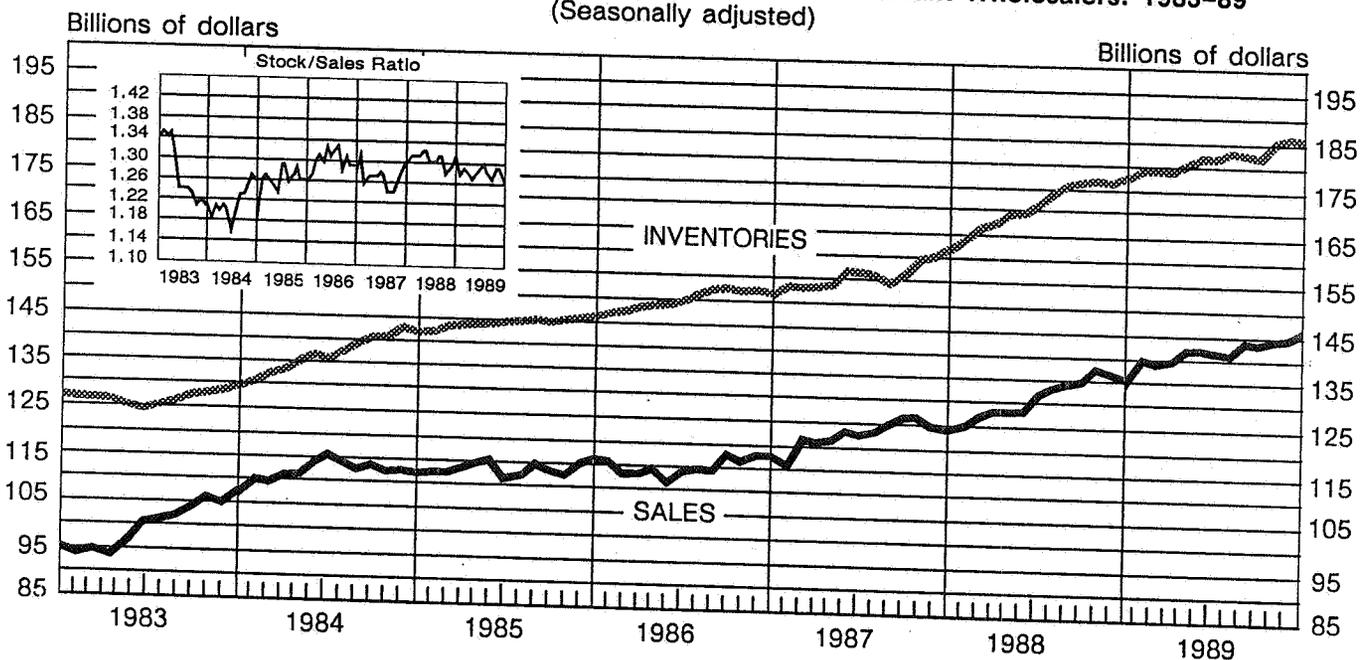
Sales. December 1989 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$146.7 billion, up 1.1 percent (± 1.1 percent) from the revised November level and were up 7.2 percent (± 1.8 percent) from a year ago. The November preliminary estimate was revised downward by \$1.2 billion or about 0.8 percent. December sales of durable goods were 0.0 percent (± 1.4 percent) from the revised November level, and were 5.9 percent (± 2.4 percent) above a year ago. Sales of miscellaneous durable goods increased 5.5 percent to \$8.3 billion from the November level. However, sales of lumber and other construction materials decreased 10.0 percent to \$4.1 billion and motor vehicles and automotive equipment decreased 2.2 percent to \$13.3 billion for the same period. December sales of nondurable goods were up 2.2 percent (± 1.4 percent) from November and were up 8.5 percent (± 2.9 percent) from December 1988. Sales of petroleum and petroleum products increased 13.9 percent from the November level to \$13.6 billion.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$186.7 billion at the end of December, down 0.2 percent (± 0.4 percent) from the revised November level but were up 4.5 percent (± 1.6 percent) from a year ago. The November preliminary estimate was revised downward by \$0.1 billion or about 0.06 percent. Inventories of durable goods wholesalers decreased 0.1 percent (± 0.7 percent) from the November level but were 5.7 percent (± 1.5 percent) above a year ago. Inventories of nondurable goods wholesalers were down 0.2 percent (± 0.6 percent) from the November level but were up 2.3 percent (± 3.7 percent) from December 1988.

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

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

Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1983-89
(Seasonally adjusted)



Monthly Wholesale Trade for January is scheduled to be released March 9, 1990 at 10:00.

Address inquiries concerning this report to Michael Brown, 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: 1989 and 1988

(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	1989												1988
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. ^P	Dec. ^F
	Sales, Total	140,356	139,547	139,991	142,290	142,474	141,959	141,667	143,280	143,905	144,554	145,076	146,711	136,898
50	Durable goods	70,302	69,343	68,796	69,345	70,293	69,147	70,220	71,228	71,543	71,598	72,575	72,610	68,591
501	Motor vehicles & auto. equip.	14,532	14,567	14,390	14,160	13,217	13,230	13,173	14,015	13,996	13,899	13,594	13,300	14,128
502	Furniture & home furnishings	2,431	2,363	2,339	2,427	2,369	2,315	2,407	2,505	2,487	2,337	2,403	2,279	2,503
503	Lumber & other construction mat.	4,916	4,678	4,448	4,588	4,541	4,522	4,599	4,657	4,576	4,683	4,520	4,070	4,705
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,328	2,026	2,210	2,082	2,070	2,125	2,040	2,143	2,293	2,217	2,161	2,217	2,313
505	Metals & minerals, ex. petroleum	6,135	5,705	5,971	6,236	6,812	6,971	6,989	6,572	6,612	7,097	7,403	7,223	6,025
506	Electrical goods	9,529	9,219	9,163	9,328	9,876	9,247	9,331	9,608	9,487	9,521	9,710	9,905	9,077
507	Hardware, plumbing & heating equipment	4,160	3,985	3,873	4,146	4,120	3,880	3,956	3,993	3,944	3,995	3,986	3,987	3,990
508	Machinery, equip. & supplies	18,919	19,528	19,327	19,831	19,978	20,095	20,442	20,500	20,895	20,878	20,932	21,333	18,805
509	Miscellaneous durable goods	7,352	7,272	7,075	6,547	7,310	6,762	7,283	7,235	7,253	6,971	7,866	8,296	7,045
51	Nondurable goods	70,054	70,204	71,195	72,945	72,181	72,812	71,447	72,052	72,362	72,956	72,501	74,101	68,307
511	Paper & paper products	4,555	4,508	4,577	4,738	4,728	4,662	4,846	4,755	4,850	4,883	4,805	4,750	4,417
512	Drugs, drug proprietaries and druggists' sundries	3,266	3,176	3,261	3,246	3,281	3,273	3,340	3,346	3,418	3,578	3,627	3,643	3,242
513	Apparel, piece goods & notions	4,676	4,286	4,477	4,643	4,377	4,705	4,758	4,612	4,773	4,671	4,973	5,257	4,355
514	Groceries & related products	19,512	19,719	19,683	19,852	20,169	20,168	19,949	19,797	19,789	20,278	19,607	19,442	19,686
515	Farm-product raw materials	11,348	11,414	11,474	11,587	10,925	10,650	10,265	10,767	10,410	10,818	10,731	10,394	10,337
516	Chemicals & allied products	2,929	2,955	2,950	3,033	2,951	3,031	3,081	2,959	3,029	3,034	3,105	3,114	2,930
517	Petroleum & petroleum products	10,287	11,081	11,568	13,016	13,256	13,033	12,188	12,282	12,373	12,126	11,931	13,586	10,242
518	Beer, wine, & distilled beverages	3,656	3,534	3,640	3,589	3,578	3,701	3,618	3,709	3,722	3,661	3,715	3,739	3,612
519	Misc. nondurable goods	9,825	9,531	9,525	9,231	8,918	9,589	9,402	9,825	9,998	9,907	10,007	10,176	9,486
	Inventories, Total	179,761	179,810	179,681	181,226	182,615	182,548	183,950	183,529	182,891	186,119	186,987	186,698	178,626
50	Durable goods	117,255	117,932	117,424	119,069	120,481	120,231	122,142	121,520	120,614	122,351	122,876	122,718	116,075
501	Motor vehicles & auto. equip.	21,499	21,741	21,952	22,469	23,067	22,826	23,154	22,878	22,058	22,806	22,547	21,963	21,635
502	Furniture & home furnishings	4,033	4,067	4,078	4,004	4,035	4,114	4,143	4,138	4,186	4,187	4,115	4,058	4,073
503	Lumber & other construction mat.	5,777	5,564	5,667	5,696	5,614	5,603	5,670	5,517	5,582	5,671	5,497	5,500	5,526
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,441	4,556	4,571	4,656	4,654	4,839	4,795	4,740	4,809	4,819	4,925	4,816	4,505
505	Metals & minerals, ex. petroleum	8,857	8,878	9,030	9,007	8,766	8,961	9,332	9,322	9,181	9,114	9,205	8,983	9,009
506	Electrical goods	15,063	15,418	15,353	15,620	16,825	15,899	16,233	16,089	15,866	16,026	16,131	16,248	14,843
507	Hardware, plumbing & heating equipment	7,588	7,454	7,400	7,601	7,713	7,697	7,854	7,847	7,927	8,134	8,097	8,036	7,279
508	Machinery, equip. & supplies	41,620	41,730	41,049	42,184	42,862	42,843	43,640	43,477	43,325	43,649	44,103	44,932	41,338
509	Miscellaneous durable goods	8,377	8,524	8,324	7,832	7,945	7,459	7,321	7,512	7,680	7,945	8,256	8,182	7,867
51	Nondurable goods	62,506	61,878	62,257	62,157	62,134	62,317	61,808	62,009	62,277	63,768	64,111	63,980	62,551
511	Paper & paper products	4,586	4,490	4,469	4,541	4,535	4,533	4,628	4,541	4,610	4,653	4,550	4,444	4,358
512	Drugs, drug proprietaries and druggists' sundries	5,181	5,155	5,095	5,169	5,190	5,380	5,428	5,566	5,703	5,681	5,704	5,856	5,130
513	Apparel, piece goods & notions	8,170	8,337	8,290	8,190	8,307	8,378	8,564	8,788	8,819	8,914	8,959	9,056	7,838
514	Groceries & related products	12,822	12,772	12,931	12,879	13,109	13,054	12,612	12,667	12,540	13,406	13,110	13,779	12,516
515	Farm-product raw materials	9,097	8,558	8,145	7,776	7,422	6,976	6,933	7,032	6,892	7,533	7,942	8,215	9,488
516	Chemicals & allied products	2,796	2,612	2,723	2,703	2,822	2,747	2,732	2,647	2,785	2,602	2,544	2,517	2,985
517	Petroleum & petroleum products	3,972	4,201	4,655	4,901	4,821	5,045	4,629	4,845	4,647	4,655	4,606	4,253	4,076
518	Beer, wine, & distilled beverages	4,099	4,026	4,036	3,986	4,053	4,099	4,126	4,082	4,164	4,155	4,270	4,263	4,126
519	Misc. nondurable goods	11,783	11,727	11,913	12,012	12,075	12,105	12,156	12,041	12,117	12,169	11,926	11,597	12,034
	Stock/sales ratios, Total	1.28	1.29	1.28	1.27	1.28	1.29	1.30	1.28	1.27	1.29	1.29	1.27	1.30
50	Durable goods	1.67	1.70	1.71	1.72	1.71	1.74	1.74	1.71	1.69	1.71	1.69	1.69	1.69
501	Motor vehicles & auto. equip.	1.48	1.49	1.53	1.59	1.75	1.73	1.76	1.63	1.58	1.64	1.66	1.65	1.53
502	Furniture & home furnishings	1.66	1.72	1.74	1.65	1.70	1.78	1.72	1.65	1.68	1.79	1.71	1.78	1.63
503	Lumber & other construction mat.	1.18	1.19	1.27	1.24	1.24	1.24	1.23	1.18	1.22	1.21	1.22	1.35	1.17
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.91	2.25	2.07	2.24	2.25	2.28	2.35	2.21	2.10	2.17	2.28	2.17	1.95
505	Metals & minerals, ex. petroleum	1.44	1.56	1.51	1.44	1.29	1.29	1.34	1.42	1.39	1.28	1.24	1.24	1.50
506	Electrical goods	1.58	1.67	1.68	1.67	1.60	1.72	1.74	1.67	1.67	1.68	1.66	1.64	1.64
507	Hardware, plumbing & heating equipment	1.82	1.87	1.91	1.83	1.87	1.98	1.97	1.97	2.01	2.04	2.03	2.02	1.82
508	Machinery, equip. & supplies	2.20	2.14	2.12	2.13	2.15	2.13	2.12	2.07	2.09	2.11	2.11	2.11	2.20
509	Miscellaneous durable goods	1.14	1.17	1.18	1.20	1.09	1.10	1.01	1.04	1.06	1.14	1.05	.99	1.12
51	Nondurable goods .....	.89	.88	.87	.85	.86	.86	.87	.86	.86	.87	.88	.86	.92
511	Paper & paper products	1.01	1.00	.98	.96	.96	.97	.96	.95	.95	.95	.95	.94	.99
512	Drugs, drug proprietaries and druggists' sundries	1.59	1.62	1.56	1.59	1.58	1.64	1.63	1.66	1.67	1.59	1.57	1.61	1.58
513	Apparel, piece goods & notions	1.75	1.95	1.85	1.76	1.90	1.78	1.80	1.91	1.85	1.91	1.80	1.72	1.80
514	Groceries & related products .....	.66	.65	.66	.65	.65	.65	.63	.64	.63	.66	.69	.71	.64
515	Farm-product raw materials .....	.80	.75	.71	.67	.68	.66	.68	.65	.66	.70	.74	.79	.92
516	Chemicals & allied products .....	.95	.88	.91	.88	.89	.91	.89	.89	.92	.86	.82	.81	1.02
517	Petroleum & petroleum products .....	.39	.38	.40	.38	.36	.39	.38	.38	.38	.38	.39	.31	.40
518	Beer, wine, & distilled beverages	1.12	1.14	1.11	1.11	1.13	1.11	1.14	1.10	1.12	1.13	1.15	1.14	1.14
519	Misc. nondurable goods	1.20	1.23	1.25	1.30	1.35	1.26	1.29	1.23	1.21	1.23	1.19	1.14	1.27

^FRevised.

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.

Table 1B. Unadjusted Estimated Monthly Sales, Inventories, and Stock/Sales Ratios of Merchant Wholesalers: 1989 and 1988

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

SIC code	Kind of business	1989												1988	Total 12 mos.	
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. ^P	Dec.	1989	1988
	Sales, Total	131,786	127,414	148,920	137,567	148,832	146,662	134,412	148,912	142,118	152,192	146,818	141,556	136,599	1,707,189	1,588,330
50	Durable goods	63,265	62,003	72,946	68,014	73,231	72,803	66,904	74,373	71,887	77,042	73,599	68,842	67,261	844,909	782,744
501	Motor vehicles & auto. equip.	13,064	13,008	15,066	14,259	14,103	14,063	12,712	14,323	12,876	15,080	13,879	12,795	14,185	165,228	164,046
502	Furniture & home furnishings	2,171	2,136	2,428	2,284	2,402	2,320	2,258	2,675	2,676	2,629	2,590	2,101	2,393	28,590	27,985
503	Lumber & other construction mat.	3,982	3,616	4,399	4,482	4,959	5,114	4,912	5,346	4,924	5,287	4,375	3,439	4,056	54,835	55,652
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2,070	1,842	2,301	1,872	1,838	2,080	1,816	2,209	2,486	2,594	2,502	2,275	2,438	25,885	24,495
505	Metals & minerals, ex. petroleum	5,939	5,334	7,052	6,093	6,819	7,438	6,493	6,809	6,777	7,189	7,122	6,616	5,676	79,681	68,967
506	Electrical goods	8,633	8,334	9,456	8,675	9,728	9,376	8,976	10,184	9,838	10,559	10,195	9,647	9,068	113,601	104,083
507	Hardware, plumbing & heating equipment	3,786	3,495	3,838	3,972	4,375	4,225	3,912	4,300	3,901	4,399	3,982	3,612	3,771	47,797	46,995
508	Machinery, equip. & supplies	17,216	17,868	20,892	19,732	21,017	20,999	19,154	21,422	21,229	21,734	20,283	20,501	18,692	242,047	209,185
509	Miscellaneous durable goods	6,404	6,370	7,514	6,665	7,990	7,188	7,188	7,105	7,180	7,571	8,731	7,856	6,982	87,245	81,336
51	Nondurable goods	68,521	65,411	75,974	69,553	75,601	73,859	67,508	74,539	70,231	75,150	73,219	72,714	69,338	862,280	805,586
511	Paper & paper products	4,484	4,242	4,907	4,482	4,596	4,802	4,507	5,116	4,797	5,181	4,877	4,541	4,382	56,512	51,653
512	Drugs, drug proprietaries and druggists' sundries	3,318	2,970	3,421	3,064	3,379	3,296	3,150	3,483	3,435	3,728	3,645	3,548	3,248	40,437	36,469
513	Apparel, piece goods & notions	4,349	4,350	4,723	3,956	3,939	4,856	4,929	5,779	4,940	5,432	4,988	3,827	3,240	56,068	50,234
514	Groceries & related products	18,985	18,043	20,037	18,840	21,359	20,551	19,789	20,510	19,096	20,440	20,332	19,617	20,296	237,599	223,897
515	Farm-product raw materials	12,188	10,969	12,277	10,959	11,264	10,149	8,961	10,455	9,390	11,662	11,300	10,217	10,926	129,791	126,016
516	Chemicals & allied products	2,835	2,710	3,262	3,018	3,187	3,370	2,915	3,036	2,953	3,131	2,956	2,687	2,578	36,060	34,776
517	Petroleum & petroleum products	11,007	10,981	13,060	12,183	13,190	12,590	11,176	12,135	12,447	11,859	11,490	14,089	10,867	146,207	127,476
518	Beer, wine, & distilled beverages	2,837	2,806	3,695	3,268	3,905	4,138	3,535	4,180	3,625	3,731	3,964	4,154	4,201	43,836	43,725
519	Misc. nondurable goods	8,538	8,340	10,592	9,785	10,782	10,107	8,546	9,845	9,548	9,986	9,667	10,034	9,600	115,770	111,340
	Inventories, Total	181,054	181,481	181,246	182,305	181,114	182,346	182,771	180,360	181,925	187,550	187,982	186,545	178,884	(X)	(X)
50	Durable goods	115,885	117,512	117,890	120,185	121,145	121,043	123,080	121,019	120,951	122,504	122,334	120,593	114,176	(X)	(X)
501	Motor vehicles & auto. equip.	21,392	22,045	22,303	22,491	22,998	22,872	22,575	21,940	22,543	22,715	22,930	22,161	21,851	(X)	(X)
502	Furniture & home furnishings	4,069	4,047	4,049	3,968	4,091	4,143	4,222	4,212	4,286	4,166	3,979	3,948	3,983	(X)	(X)
503	Lumber & other construction mat.	5,540	5,453	5,786	5,912	5,754	5,821	5,897	5,423	5,515	5,558	5,228	5,313	5,349	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4,312	4,489	4,539	4,605	4,556	4,897	5,040	4,849	4,987	4,935	4,866	4,609	4,320	(X)	(X)
505	Metals & minerals, ex. petroleum	8,999	8,878	9,102	9,180	8,889	9,337	9,528	9,098	8,915	8,941	8,910	9,001	9,027	(X)	(X)
506	Electrical goods	14,641	15,187	15,261	15,558	15,857	15,873	16,509	16,282	16,025	16,186	16,099	16,118	14,709	(X)	(X)
507	Hardware, plumbing & heating equipment	7,512	7,461	7,570	7,745	7,798	7,712	7,925	7,941	7,919	8,191	7,878	7,771	7,039	(X)	(X)
508	Machinery, equip. & supplies	41,412	41,772	41,131	42,859	43,162	42,929	43,858	43,477	42,935	43,780	44,147	43,809	40,346	(X)	(X)
509	Miscellaneous durable goods	8,008	8,200	8,149	7,887	8,040	7,459	7,526	7,797	7,826	8,032	8,297	7,863	7,552	(X)	(X)
51	Nondurable goods	65,169	63,969	63,356	62,120	59,969	61,303	59,691	59,341	60,974	65,046	65,648	65,952	64,708	(X)	(X)
511	Paper & paper products	4,728	4,562	4,563	4,577	4,485	4,501	4,647	4,477	4,467	4,658	4,477	4,395	4,314	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	5,419	5,341	5,131	5,329	5,014	5,186	5,249	5,382	5,663	5,795	5,533	6,067	5,299	(X)	(X)
513	Apparel, piece goods & notions	8,129	8,204	7,909	7,789	8,490	8,956	9,001	9,183	9,031	8,575	8,947	7,744	7,784	(X)	(X)
514	Groceries & related products	12,886	12,836	12,685	12,647	12,834	12,806	12,347	12,148	12,565	14,076	14,350	14,179	12,866	(X)	(X)
515	Farm-product raw materials	10,898	9,850	8,446	7,535	6,168	6,027	5,858	5,879	6,168	8,535	9,110	9,538	11,054	(X)	(X)
516	Chemicals & allied products	2,782	2,662	2,720	2,789	2,716	2,843	2,735	2,663	2,674	2,508	2,478	2,426	2,881	(X)	(X)
517	Petroleum & petroleum products	4,321	4,121	4,669	4,627	4,541	4,944	4,541	4,459	4,786	4,678	4,629	4,389	4,255	(X)	(X)
518	Beer, wine, & distilled beverages	3,869	3,974	4,117	4,082	4,057	4,165	4,105	4,000	4,206	4,429	4,509	3,939	3,804	(X)	(X)
519	Misc. nondurable goods	12,137	12,419	13,116	12,745	11,864	11,875	11,208	11,150	11,414	11,792	12,033	12,072	12,491	(X)	(X)
	Stock/sales ratios, Total	1.37	1.42	1.22	1.33	1.22	1.24	1.36	1.21	1.28	1.23	1.28	1.32	1.31	(X)	(X)
50	Durable goods	1.83	1.90	1.62	1.77	1.65	1.66	1.84	1.63	1.68	1.59	1.66	1.75	1.70	(X)	(X)
501	Motor vehicles & auto. equip.	1.64	1.69	1.48	1.58	1.63	1.63	1.78	1.53	1.75	1.51	1.65	1.73	1.54	(X)	(X)
502	Furniture & home furnishings	1.87	1.89	1.67	1.75	1.70	1.79	1.87	1.57	1.60	1.58	1.57	1.88	1.66	(X)	(X)
503	Lumber & other construction mat.	1.39	1.51	1.32	1.32	1.16	1.14	1.20	1.01	1.12	1.05	1.19	1.54	1.32	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	2.08	2.43	1.97	2.46	2.48	2.35	2.78	2.20	2.01	1.90	1.94	2.03	1.77	(X)	(X)
505	Metals & minerals, ex. petroleum	1.52	1.66	1.29	1.50	1.30	1.28	1.47	1.34	1.32	1.24	1.25	1.36	1.59	(X)	(X)
506	Electrical goods	1.70	1.82	1.61	1.79	1.63	1.69	1.84	1.60	1.63	1.53	1.58	1.67	1.62	(X)	(X)
507	Hardware, plumbing & heating equipment	1.98	2.13	1.97	1.95	1.78	1.83	2.03	1.85	2.03	1.86	1.98	2.15	1.87	(X)	(X)
508	Machinery, equip. & supplies	2.41	2.34	1.97	2.17	2.05	2.04	2.29	2.03	2.02	2.01	2.18	2.14	2.16	(X)	(X)
509	Miscellaneous durable goods	1.25	1.29	1.08	1.18	1.01	1.04	1.13	1.10	1.09	1.06	.95	1.00	1.08	(X)	(X)
51	Nondurable goods .....	.95	.98	.83	.89	.79	.83	.88	.80	.87	.87	.90	.91	.93	(X)	(X)
511	Paper & paper products	1.06	1.08	.93	1.02	.98	.94	1.03	.88	.93	.90	.92	.97	.98	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	1.63	1.80	1.50	1.74	1.48	1.57	1.67	1.55	1.65	1.55	1.52	1.71	1.63	(X)	(X)
513	Apparel, piece goods & notions	1.87	1.89	1.67	1.97	2.16	1.84	1.83	1.59	1.83	1.58	1.71	2.34	2.39	(X)	(X)
514	Groceries & related products .....	.68	.71	.63	.67	.60	.62	.62	.59	.66	.69	.71	.72	.63	(X)	(X)
515	Farm-product raw materials .....	.89	.90	.69	.69	.55	.59	.65	.56	.66	.73	.81	.93	1.01	(X)	(X)
516	Chemicals & allied products .....	.98	.98	.83	.92	.85	.84	.94	.88	.91	.80	.84	.90	1.12	(X)	(X)
517	Petroleum & petroleum products .....	.39	.38	.36	.38	.34	.39	.41	.37	.38	.39	.40	.31	.39	(X)	(X)
518	Beer, wine, & distilled beverages	1.36	1.42	1.11	1.25	1.04	1.01	1.16	.96	1.16	1.19	1.14	.95	.91	(X)	(X)
519	Misc. nondurable goods	1.42	1.49	1.24	1.30	1.08	1.17	1.31	1.13	1.20	1.18	1.24	1.20	1.30	(X)	(X)

^PPreliminary estimate. See sample design and estimation procedures in Revised Monthly Wholesale Trade, Sales and Inventories: December 1980 through December 1988.
 x Cumulative data are not applicable for inventories or stock/sales ratios, cumulative seasonally adjusted sales estimates are not tabulated.

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 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. 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	1.6-1.8	1.7	1.5-1.7	1.6	0.4-0.6	0.6	0.7-1.0	0.9	1.5	1.8	0.8
50	Durable goods	1.7-2.5	2.0	1.7-2.2	1.8	0.5-0.9	0.8	1.1-1.4	1.2	1.9	2.3	1.0
501	Motor vehicles & auto. equip.	3.8-5.3	4.3	3.9-5.0	4.2	1.0-2.2	1.4	1.9-3.6	2.9	4.5	7.4	3.5
502	Furniture & home furnishings	6.3-9.4	7.2	6.1-8.1	6.7	1.5-5.1	3.2	5.3-9.0	8.0	6.2	7.1	5.6
503	Lumber & other construction mat.	4.4-5.4	4.9	4.2-5.0	4.7	1.1-2.5	1.6	2.3-3.5	2.7	4.6	6.5	2.7
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.4-8.2	7.2	4.6-7.5	6.6	2.6-5.9	4.8	4.2-8.4	7.1	4.7	9.4	7.5
505	Metals & minerals, ex. petroleum	5.8-10.5	6.9	5.2-11.9	7.3	1.2-5.0	3.3	2.3-5.4	2.9	7.2	7.7	1.6
506	Electrical goods	2.7-5.5	4.1	2.9-4.5	3.3	0.7-2.4	1.3	1.9-3.8	2.6	3.2	2.9	2.1
507	Hardware, plumbing & heating equipment	7.6-9.0	8.3	7.9-9.7	8.3	1.2-1.8	1.4	2.6-3.9	3.2	7.7	8.3	3.7
508	Machinery, equip. & supplies	3.4-4.4	3.8	3.3-3.8	3.7	1.1-2.1	1.5	2.4-3.6	2.5	3.2	3.7	2.2
509	Miscellaneous durable goods	4.5-5.8	5.2	4.2-5.5	4.8	1.2-3.5	2.0	3.5-4.7	3.7	4.7	5.9	2.4
51	Nondurable goods	2.5-2.9	2.7	2.4-3.0	2.6	0.6-1.0	0.8	0.9-1.6	1.5	2.5	3.0	1.4
511	Paper & paper products	5.1-8.0	5.2	5.0-5.7	5.2	0.9-2.1	1.6	2.7-4.4	3.2	4.9	6.1	3.5
512	Drugs, drug proprietaries and druggists' sundries	5.0-6.3	5.8	5.1-5.8	5.5	0.8-1.5	1.0	1.8-3.5	3.1	5.0	4.7	1.3
513	Apparel, piece goods & notions	8.6-12.3	9.7	8.1-11.5	9.5	2.1-5.3	4.5	4.6-7.3	5.4	9.1	10.5	5.5
514	Groceries & related products	4.3-5.3	4.6	4.1-5.3	4.5	0.5-2.2	1.1	2.0-3.7	2.9	4.7	5.8	2.6
515	Farm-product raw materials	4.4-6.7	6.1	3.7-6.2	5.6	2.0-4.8	3.1	3.2-5.7	5.1	4.5	5.9	3.8
516	Chemicals & allied products	5.9-8.7	8.1	6.0-8.7	7.8	1.7-2.9	2.0	2.8-6.3	5.5	6.6	5.5	5.3
517	Petroleum & petroleum products	6.8-7.3	6.5	5.5-7.1	6.9	0.7-2.4	1.7	1.8-3.5	2.9	6.4	6.2	1.9
518	Beer, wine, & distilled beverages	3.1-5.4	3.8	2.8-4.4	3.8	0.6-3.5	1.1	1.5-3.4	2.8	3.4	3.3	2.1
519	Misc. nondurable goods	5.3-6.8	6.2	5.2-7.0	5.9	1.3-3.2	2.0	2.1-4.8	3.5	5.3	5.0	2.8
	Inventories, Total	1.2-1.5	1.2	1.2-1.4	1.3	0.2-0.4	0.3	0.7-1.1	0.8	(X)	(X)	(X)
50	Durable goods	1.5-1.8	1.6	1.5-1.8	1.6	0.2-0.4	0.3	0.8-1.7	1.0	(X)	(X)	(X)
501	Motor vehicles & auto. equip.	5.9-6.5	6.1	5.8-6.2	6.1	0.4-1.1	0.7	2.0-3.0	2.4	(X)	(X)	(X)
502	Furniture & home furnishings	8.1-9.8	9.1	8.2-9.6	9.2	0.8-2.1	1.1	4.2-6.4	5.4	(X)	(X)	(X)
503	Lumber & other construction mat.	5.3-6.7	6.2	5.3-6.5	5.9	0.7-1.3	0.9	2.6-4.0	3.5	(X)	(X)	(X)
504	Sporting, recreational, photographic & hobby goods, toys & supplies	4.6-6.5	5.5	4.7-6.1	5.5	0.7-2.2	1.4	2.5-4.4	3.5	(X)	(X)	(X)
505	Metals & minerals, ex. petroleum	4.0-5.2	4.7	3.9-5.2	4.7	0.8-1.0	0.9	2.3-3.0	2.7	(X)	(X)	(X)
506	Electrical goods	2.5-3.9	3.0	2.6-3.6	2.8	0.5-0.8	0.6	1.9-2.5	2.1	(X)	(X)	(X)
507	Hardware, plumbing & heating equipment	5.7-8.9	6.5	5.8-6.8	6.4	0.6-0.9	0.7	2.6-5.3	3.3	(X)	(X)	(X)
508	Machinery, equip. & supplies	3.0-3.9	3.6	3.0-3.9	3.6	0.4-0.9	0.6	1.9-4.0	2.4	(X)	(X)	(X)
509	Miscellaneous durable goods	8.6-9.8	9.1	8.6-9.3	9.1	0.5-1.6	0.8	2.6-3.7	2.9	(X)	(X)	(X)
51	Nondurable goods	2.7-3.1	2.9	2.5-3.0	2.9	0.3-0.9	0.5	1.0-2.2	1.2	(X)	(X)	(X)
511	Paper & paper products	5.3-6.6	6.0	5.5-6.2	5.9	0.6-1.4	0.9	2.2-3.1	2.8	(X)	(X)	(X)
512	Drugs, drug proprietaries and druggists' sundries	6.3-7.1	6.6	5.9-6.9	6.5	0.5-1.0	0.6	2.0-2.6	2.3	(X)	(X)	(X)
513	Apparel, piece goods & notions	6.7-7.9	6.9	6.2-7.9	6.9	1.3-2.0	1.8	2.9-5.4	4.2	(X)	(X)	(X)
514	Groceries & related products	4.6-9.3	6.3	4.6-9.1	5.2	0.4-3.8	0.7	1.8-6.1	3.1	(X)	(X)	(X)
515	Farm-product raw materials	6.8-8.0	7.4	6.5-7.7	7.2	1.0-1.6	1.4	2.4-4.9	3.6	(X)	(X)	(X)
516	Chemicals & allied products	7.5-8.5	8.1	7.1-8.4	7.9	0.6-2.0	1.2	3.7-6.0	5.3	(X)	(X)	(X)
517	Petroleum & petroleum products	6.8-7.9	7.2	5.8-7.9	7.0	0.7-1.8	1.1	1.8-5.5	3.5	(X)	(X)	(X)
518	Beer, wine, & distilled beverages	4.7-6.3	5.2	4.6-5.2	5.0	0.9-5.6	1.1	2.1-3.8	3.0	(X)	(X)	(X)
519	Misc. nondurable goods	8.3-9.1	8.7	8.0-8.9	8.7	1.0-1.5	1.4	3.0-4.5	3.9	(X)	(X)	(X)

× Cumulative coefficients of variation are not applicable for inventories.

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

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	1988	1989												1990
		Dec. ^f	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. ^f	Dec. ^f	Jan.
	Sales,¹ Total .....	.996	.945	.912	1.055	.968	1.045	1.031	.953	1.040	.991	1.056	1.010	.962	.967
50	Durable goods .....	.979	.904	.891	1.052	.980	1.044	1.050	.956	1.043	1.010	1.078	1.010	.945	.935
501	Motor vehicles & auto. equip.	1.004	.899	.893	1.047	1.007	1.067	1.063	.965	1.022	.920	1.085	1.021	.962	.934
502	Furniture & home furnishings ...	.956	.893	.904	1.038	.933	1.014	1.002	.938	1.068	1.076	1.125	1.053	.922	.945
503	Lumber & other construction mat. ....	.862	.810	.773	.989	.977	1.092	1.131	1.068	1.148	1.076	1.129	.968	.845	.833
504	Sporting, recreational, photographic & hobby goods, toys & supplies	1.054	.889	.909	1.041	.899	.888	.979	.890	1.031	1.084	1.170	1.158	1.026	.930
505	Metals & minerals, ex. petroleum	.942	.968	.935	1.181	.977	1.001	1.067	.929	1.036	1.025	1.013	.962	.916	.977
506	Electrical goods .....	.999	.906	.904	1.032	.930	.985	1.014	.962	1.060	1.037	1.109	1.050	.974	.928
507	Hardware, plumbing & heating equipment .....	.945	.910	.877	.991	.958	1.062	1.089	.989	1.077	.989	1.101	.999	.906	.942
508	Machinery, equip. & supplies ...	.994	.910	.915	1.081	.995	1.052	1.045	.937	1.045	1.016	1.041	.969	.961	.928
509	Miscellaneous durable goods ...	.991	.871	.876	1.062	1.018	1.093	1.063	.916	.982	.990	1.086	1.110	.947	.886
51	Nondurable goods	1.011	.980	.932	1.064	.954	1.046	1.014	.946	1.035	.975	1.037	1.008	.982	.998
511	Paper & paper products .....	.992	.980	.941	1.072	.946	.972	1.030	.930	1.076	.989	1.061	1.015	.956	.998
512	Drugs, drug proprietaries and druggists' sundries	1.002	1.016	.935	1.049	.944	1.030	1.007	.943	1.041	1.005	1.042	1.005	.974	1.043
513	Apparel, piece goods & notions	.744	.930	1.015	1.055	.852	.900	1.032	1.036	1.253	1.035	1.163	1.003	.728	.935
514	Groceries & related products ...	1.031	.973	.915	1.018	.949	1.059	1.019	.992	1.036	.965	1.008	1.037	1.009	1.003
515	Farm-product raw materials ...	1.057	1.074	.961	1.070	.945	1.031	.953	.873	.971	.902	1.078	1.053	.983	1.093
516	Chemicals & allied products ...	.880	.968	.917	1.091	.995	1.080	1.112	.946	1.026	.975	1.032	.952	.863	1.002
517	Petroleum & petroleum products	1.061	1.070	.991	1.129	.936	.995	.966	.917	.988	1.006	.978	.963	1.037	1.068
518	Beer, wine, & distilled beverages	1.163	.776	.794	1.015	.910	1.092	1.118	.977	1.127	.974	1.019	1.067	1.111	.807
519	Misc. nondurable goods	1.012	.869	.875	1.112	1.060	1.209	1.054	.909	1.002	.955	1.008	.966	.986	.891
	Inventories,¹ Total .....	.999	1.005	1.008	1.008	1.006	.991	.995	.994	.985	.993	1.010	1.004	.999	1.006
50	Durable goods .....	.982	.988	.996	1.003	1.007	1.005	1.004	1.008	1.000	1.005	1.005	.994	.982	.990
501	Motor vehicles & auto. equip.	1.010	.995	1.014	1.016	1.001	.997	1.002	.975	.959	1.022	.996	1.017	1.009	.991
502	Furniture & home furnishings ...	.978	1.009	.995	.993	.991	1.014	1.007	1.019	1.018	1.024	.995	.967	.973	1.007
503	Lumber & other construction mat. ....	.968	.959	.980	1.021	1.038	1.025	1.039	1.040	.983	.988	.980	.951	.966	.974
504	Sporting, recreational, photographic & hobby goods, toys & supplies .....	.959	.971	.981	.993	.989	.979	1.012	1.051	1.023	1.037	1.024	.988	.957	.969
505	Metals & minerals, ex. petroleum	1.002	1.016	1.000	1.008	1.017	1.014	1.042	1.021	.976	.971	.981	.968	1.002	1.014
506	Electrical goods .....	.991	.972	.985	.994	.996	1.002	.999	1.017	1.012	1.010	1.010	.998	.992	.973
507	Hardware, plumbing & heating equipment .....	.967	.990	1.001	1.023	1.019	1.011	1.002	1.009	1.012	.999	1.007	.973	.967	.984
508	Machinery, equip. & supplies ...	.976	.995	1.001	1.002	1.016	1.007	1.002	1.005	1.000	.991	1.003	1.001	.975	.997
509	Miscellaneous durable goods ...	.960	.956	.962	.979	1.007	1.012	1.000	1.028	1.038	1.019	1.011	1.005	.961	.961
51	Nondurable goods	1.032	1.038	1.031	1.015	.996	.962	.984	.965	.958	.977	1.022	1.028	1.032	1.038
511	Paper & paper products .....	.990	1.031	1.016	1.021	1.008	.989	.993	1.004	.986	.969	1.001	.984	.989	1.027
512	Drugs, drug proprietaries and druggists' sundries	1.033	1.046	1.036	1.007	1.031	.966	.964	.967	.967	.993	1.020	.970	1.036	1.052
513	Apparel, piece goods & notions	.988	.995	.984	.954	.951	1.022	1.069	1.051	1.045	1.024	.962	.951	.988	1.000
514	Groceries & related products ...	1.028	1.005	1.005	.981	.982	.979	.981	.979	.959	1.002	1.050	1.055	1.029	1.004
515	Farm-product raw materials ...	1.165	1.198	1.151	1.037	.969	.831	.864	.845	.836	.895	1.133	1.147	1.161	1.209
516	Chemicals & allied products ...	.965	.995	1.019	.999	1.032	1.036	1.035	1.001	1.006	.960	.964	.974	.964	1.000
517	Petroleum & petroleum products	1.044	1.088	.981	1.003	.944	.942	.980	.981	.960	1.030	1.005	1.005	1.032	1.065
518	Beer, wine, & distilled beverages	.922	.944	.987	1.020	1.024	1.001	1.016	.995	.980	1.010	1.066	1.056	.924	.945
519	Misc. nondurable goods	1.038	1.030	1.059	1.101	1.061	.966	.981	.922	.926	.942	.969	1.009	1.041	1.029

^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.

