



Monthly Survey of Manufacturing

February 2003



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Estimates in this publication are subject to revision to accommodate newly received information. It is advisable to always use data from the most recent issue.

In the following tables, some components may not add exactly to the total, because of rounding.

For a complete description of concepts, methodology and definitions, please refer to the "Survey Documentation" section at the end of this publication or consult Statistics Canada's Website at www.statcan.ca/english/sdds/2101.htm .

A note on CANSIM

The data published in Monthly Survey of Manufacturing (Tables 304-0014 and 304-0015) (Catalogue No. 31-001-XIE) are also available in machine-readable form through CANSIM (Canadian Socio-Economic Information Management System). Users interested in accessing data via CANSIM should contact one of Statistics Canada's regional centres at the numbers listed on the inside front cover of this Publication, or contact the Marketing Division, Statistics Canada R.H. Coats Building, Ottawa, Ontario, K1A 0T6 (613) 951-8200.

Acknowledgement

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Highlights

In February, manufacturers reported a 0.9% decline in shipments, while inventories continued to accumulate and unfilled orders decreased for the sixth consecutive month. Global uncertainty continued to negatively impact the Canadian manufacturing sector.

Following a gangbuster January, manufacturers of motor vehicles pulled back moderately in February, contributing to the overall decline in shipments. February's decrease would have been larger, but was offset by soaring petroleum and coal product prices. Geopolitical unrest in various regions of the world and uncertainty regarding access to adequate supplies of petroleum products led to record-high petroleum and coal product prices in recent months.

Excluding the motor vehicle and parts industries and the price-inflated shipments of the petroleum and coal products industry, shipments fell back 1.3% in February. Overall, 16 of 21 industries, representing 68% of total shipments, posted decreases in February.

Durable goods manufacturers pull down shipments

February's decline was entirely concentrated in the durable goods sector, a key indicator of consumer and business confidence. Shipments decreased 2.0% to \$24.8 billion, the fourth decline in the last five months. Meanwhile, rising petroleum prices contributed to a 0.6% increase in shipments of non-durable goods in February.

Shipments in Ontario decline the most

Seven provinces and all territories reported lower shipments in February. The motor vehicle industry largely contributed to the \$500 million decrease (-2.1%) in Ontario's shipments, leading all provinces. The primary metals and computer industries also contracted in Ontario. New Brunswick (-\$40.8 million, -3.6%) and British Columbia (-\$28.2 million, -1.0%) rounded out the top three declining provinces.

The petroleum and coal products industry boosted shipments in Quebec and Alberta. Manufacturers in Quebec increased shipments by \$129 million (+1.3%) in February, and shipments in Alberta rose \$79.6 million (+2.1%). The food industry largely contributed to a \$23.7 million boost (+2.4%) to Manitoba's manufacturing activity.

Manufacturers cut jobs in March

According to the latest results of the Labour Force Survey (March 2003), factory jobs have declined in five of the last seven months. In March, there were 37,000 fewer manufacturing jobs, wiping out February's gains (+21,000). The manufacturing losses in March were in automotive and plastics, as well as in food and wood products.

Shipments by province and territory

	January 2003	February 2003	January to February
Seasonally adjusted			
	\$ millions		% change
Newfoundland and Labrador	194	176	-9.2
Prince Edward Island	104	103	-1.6
Nova Scotia	770	768	-0.2
New Brunswick	1,147	1,107	-3.6
Quebec	10,288	10,418	1.3
Ontario	23,789	23,289	-2.1
Manitoba	979	1,002	2.4
Saskatchewan	625	603	-3.5
Alberta	3,749	3,828	2.1
British Columbia	2,888	2,860	-1.0
Yukon, Northwest Territories and Nunavut	6	5	-17.8

Automobile manufacturing falls back

Shipments of motor vehicles edged back 2.4% to \$5.3 billion in February, after January's 15.1% surge. In January, several motor vehicle manufacturers returned to higher production levels following extended shutdowns at some assembly plants in the previous two months.

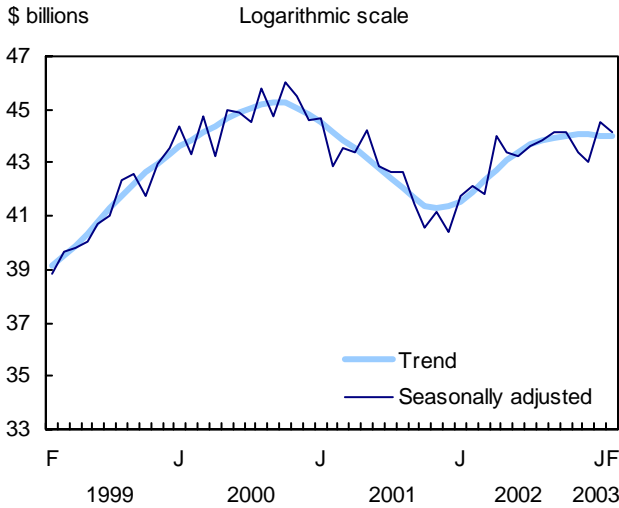
February marked the sixth decrease in the last seven months for shipments of motor vehicles. Softening consumer demand for automobiles (particularly in the United States), rising retail inventories and some apprehension concerning the future prospects of car sales in 2003 have contributed to the gradual slowdown in shipments since mid-2002. The trend for shipments of motor vehicles has been negative for seven consecutive months.

Manufacturers of primary metals and railroad rolling stock also reported decreases in February. Shipments of primary metals fell 2.1% to \$2.9 billion, losing some of the ground gained in December (+5.6%). Recent volatility in the railroad rolling stock industry contributed to a 19.4% drop in production this month. Production was \$219 million in February, an 11-month low.

Soaring petroleum prices partly offset February's decline

Escalating prices pushed Canadian shipments of petroleum and coal products to a new high in February. Shipments of petroleum and coal products jumped 5.9% to \$3.4 billion, offsetting some of the decline in total manufacturing shipments this month. International concerns for adequate supplies of petroleum products coupled with political conflicts in various regions of the world have contributed to significant unease in the energy sector. Prices for petroleum and coal products have soared 16% in the first two months of 2003.

Shipments fall back in February



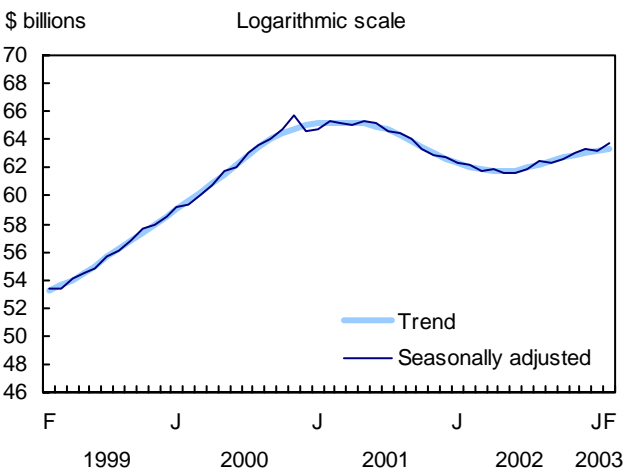
Inventories hit a 17-month high

In February, manufacturers held \$63.7 billion in inventories, up 0.9% from January. Inventories have been gradually rising since last summer and are now at the highest level since September 2001. The trend for inventories has been positive since June 2002.

Finished-product inventories continue to rise

February's build-up of inventories was partly due to a 1.2% jump in finished-product inventories, the seventh consecutive increase. Finished-product inventories hit \$20.0 billion in February, just short of June 2001's record high of \$20.2 billion. The accumulation of inventories in recent months may be a sign of weakening demand, due in part to the ongoing economic uncertainty of Canada's largest trading partner, the United States.

Inventories rise for the fourth time in the last five months



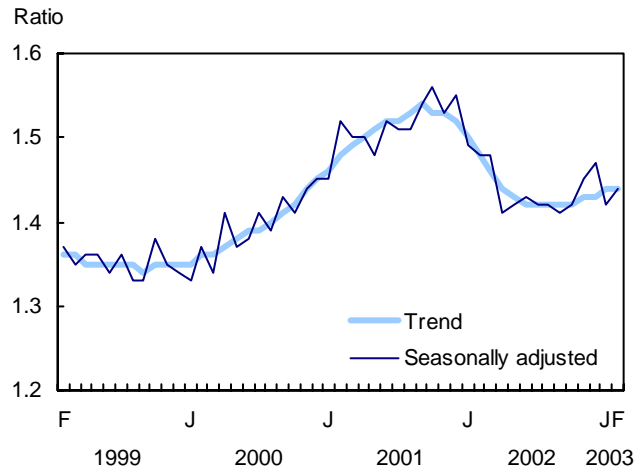
In addition to finished-product inventories, raw material and goods-in-process inventories also increased in February. Raw material inventories rose 0.5%, making up for January's drop (-0.5%). Meanwhile, goods-in-process inventories increased 1.1% to \$16.1 billion, the highest level since August 2002.

The main contributor to the increase in inventories was the chemical products industry. Rising industrial prices for chemicals and petroleum products contributed to a 3.4% rise in chemical product inventories to \$5.8 billion.

The inventory-to-shipment ratio edges up

Rising inventories boosted the inventory-to-shipment ratio to 1.44 in February from 1.42 in January. In December, the ratio had climbed to 1.47, a nine-month high. A higher ratio may indicate some difficulty by manufacturers to clear inventories as a result of weak demand.

The inventory-to-shipment ratio moves up in February



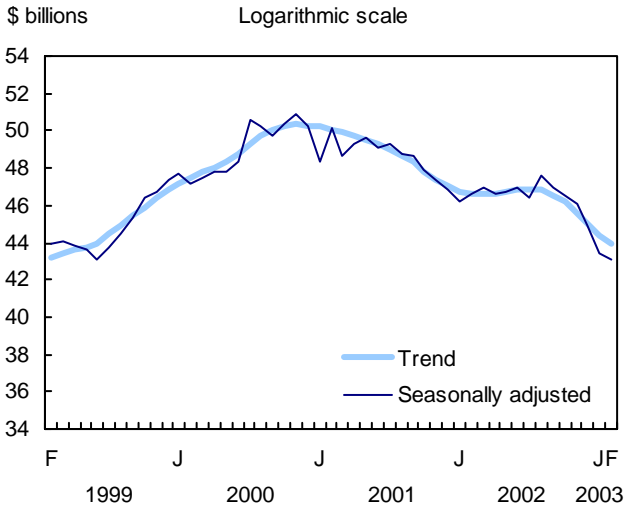
The finished-product inventory-to-shipment ratio also edged up in February, rising to 0.45 from 0.44 in January. The ratio is a measure of the time that would be required in order to exhaust finished-product inventories if shipments were to remain at their current level.

Unfilled orders decline once again

February marked the sixth straight monthly decline in unfilled orders. Orders fell 0.9% to \$43.0 billion, the lowest level since January 1999.

Continuing weakness in the aerospace products and parts industry largely contributed to February's drop. Aerospace orders fell 3.4% to \$14.2 billion, the seventeenth decrease in a row. Concerns about terrorism, the threat of war in Iraq and a significant downturn in business travel have all contributed to a slump in the global aviation sector. Excluding the aerospace products and parts industry, unfilled orders rose 0.3%.

Unfilled orders remain weak



Telecommunications manufacturers also reported a decline in unfilled orders in February. Unfilled orders of computer and electronic products fell 4.6% to \$4.0 billion, the lowest level since May 2002 and the third decrease in the last four months.

New orders rise to a six-month high

New orders increased for the second month in a row, rising 1.6% to \$43.7 billion, a six-month high. Machinery and transportation equipment manufacturing reported sizable new orders on the books in February.

Note to readers

In addition to current-month estimates, data for the previous three months are regularly revised. Factors influencing revisions include late receipt of company data, incorrect information reported earlier, replacement of estimates with actual figures (once available), and seasonal adjustments. Consult the appropriate CANSIM tables for revised data.

Non-durable goods industries include food, beverage and tobacco products, textile mills, textile product mills, leather and allied products, paper, printing and related support activities, petroleum and coal products, chemicals, and plastic and rubber products.

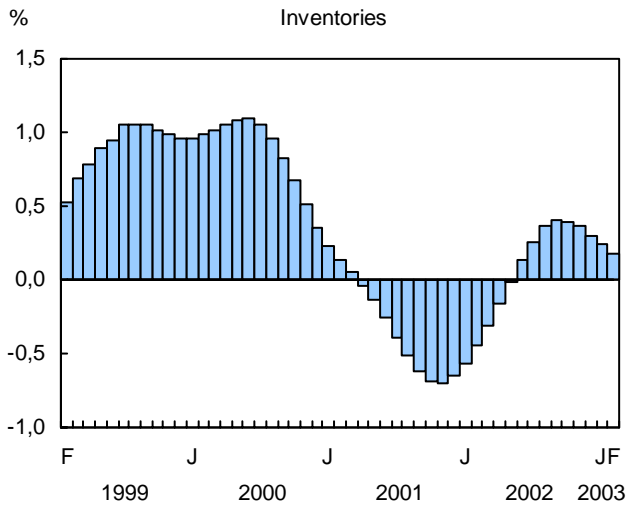
Durable goods industries include clothing, wood products, non-metallic mineral products, primary metals, fabricated metal products, machinery, computer and electronic products, electrical equipment, appliances and components, transportation equipment, furniture and related products, and miscellaneous manufacturing.

Unfilled orders are a stock of orders that will contribute to future shipments assuming that the orders are not cancelled.

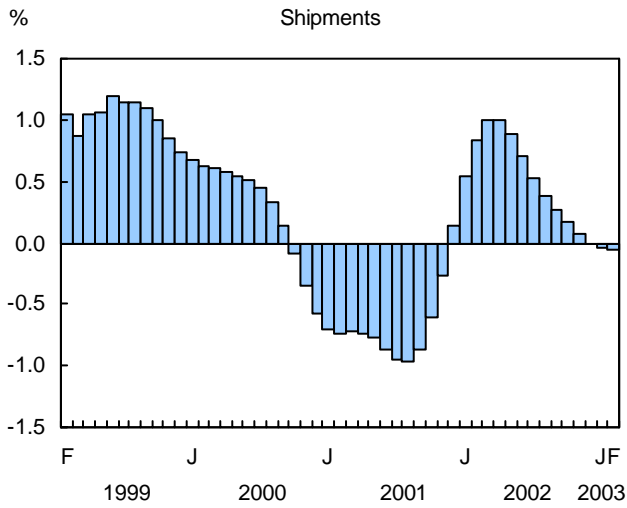
New orders are those received whether shipped in the current month or not. They are measured as the sum of shipments for the current month plus the change in unfilled orders. Some people interpret new orders as orders that will lead to future demand. This is inappropriate since the "new orders" variable includes orders that have already been shipped. Readers should take note that the month-to-month change in new orders may be volatile. This will happen particularly if the previous month's change in unfilled orders is closely related to the current month's change.

Not all orders will be translated into Canadian factory shipments because portions of large contracts can be subcontracted out to manufacturers in other countries.

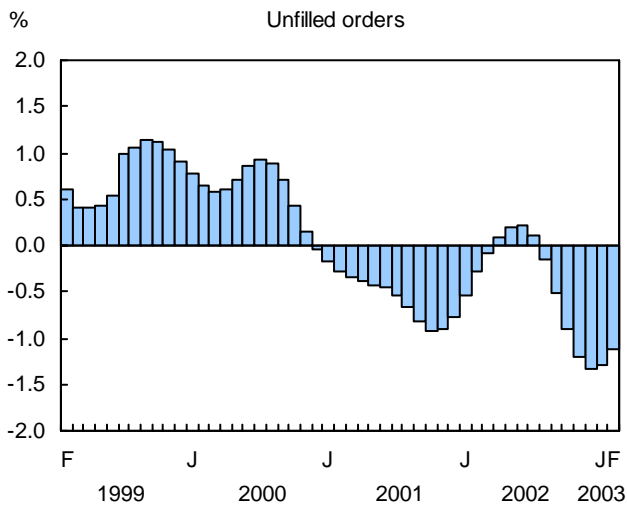
Monthly change in trend



Monthly change in trend



Monthly change in trend



Products and Services

Related Products and Data Sources

- Manufacturing Industries of Canada, 31-203-XPB
- Business Condition Survey, CANSIM (\$) tables 302-0007 and 302-0008
- Perspectives on Labour and Income, 75-001-XIE or 75-001-XPE

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December 2002
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February 2003
March 2003
April 2003
May 2003
June 2003
July 2003
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October 2003
November 2003
December 2003

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February 13, 2004

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Table 1
All manufacturing industries

Period	Unadjusted				Seasonally adjusted					
	Shipments	Inventories	Unfilled orders	New orders	Shipments	Inventories	Unfilled orders	New orders		
\$ millions										
February 2002	39,198	62,903	46,515	39,977	42,168	62,213	46,596	42,586		
March 2002	43,111	62,802	46,430	43,060	41,803	61,724	46,931	42,137		
April 2002	44,708	62,485	46,864	45,142	43,982	61,861	46,641	43,693		
May 2002	46,742	61,933	47,099	46,978	43,380	61,657	46,761	43,500		
June 2002	44,509	61,190	46,755	44,165	43,228	61,612	46,933	43,400		
July 2002	39,887	61,205	46,885	40,016	43,649	61,958	46,440	43,156		
August 2002	45,110	62,231	48,159	46,122	43,851	62,407	47,556	44,968		
September 2002	45,149	62,193	47,324	44,308	44,134	62,320	46,963	43,541		
October 2002	47,191	62,295	46,773	46,640	44,132	62,580	46,491	43,660		
November 2002	44,305	63,129	46,202	43,734	43,385	62,989	46,127	43,021		
December 2002	39,696	62,599	44,626	38,120	42,997	63,357	44,927	41,796		
January 2003	41,840	62,821	42,962	40,176	44,538	63,162	43,454	43,065		
February 2003	40,919	64,450	42,828	40,785	44,157	63,702	43,044	43,748		
Month to month % change										
Shipments		Inventories		Inventory to shipments ratio		Unfilled orders		New orders		
Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	
February 2002	0.9	0.8	-0.2	-0.4	1.48	1.48	0.9	-0.3	3.4	1.1
March 2002	-0.9	1.0	-0.8	-0.3	1.48	1.46	0.7	-0.1	-1.1	1.2
April 2002	5.2	1.0	0.2	-0.2	1.41	1.44	-0.6	0.1	3.7	1.2
May 2002	-1.4	0.9	-0.3	0.0	1.42	1.43	0.3	0.2	-0.4	1.0
June 2002	-0.3	0.7	-0.1	0.1	1.43	1.42	0.4	0.2	-0.2	0.7
July 2002	1.0	0.5	0.6	0.3	1.42	1.42	-1.1	0.1	-0.6	0.4
August 2002	0.5	0.4	0.7	0.4	1.42	1.42	2.4	-0.2	4.2	0.1
September 2002	0.6	0.3	-0.1	0.4	1.41	1.42	-1.2	-0.5	-3.2	-0.1
October 2002	0.0	0.2	0.4	0.4	1.42	1.42	-1.0	-0.9	0.3	-0.2
November 2002	-1.7	0.1	0.7	0.4	1.45	1.43	-0.8	-1.2	-1.5	-0.2
December 2002	-0.9	0.0	0.6	0.3	1.47	1.43	-2.6	-1.3	-2.8	-0.1
January 2003	3.6	0.0	-0.3	0.2	1.42	1.44	-3.3	-1.3	3.0	0.0
February 2003	-0.9	-0.1	0.9	0.2	1.44	1.44	-0.9	-1.1	1.6	0.1

Table 2
Motor vehicle, and parts and accessories industries

Period	Unadjusted				Seasonally adjusted					
	Shipments	Inventories	Unfilled orders	New orders	Shipments	Inventories	Unfilled orders	New orders		
\$ millions										
February 2002	8,375	3,455	1,589	8,374	8,198	3,415	1,589	8,188		
March 2002	8,573	3,339	1,628	8,612	7,847	3,362	1,632	7,891		
April 2002	9,372	3,454	1,633	9,376	8,879	3,430	1,672	8,919		
May 2002	9,399	3,511	1,702	9,468	8,322	3,478	1,715	8,365		
June 2002	8,707	3,356	1,697	8,702	8,363	3,439	1,699	8,348		
July 2002	5,546	3,527	1,776	5,625	8,803	3,576	1,733	8,837		
August 2002	8,832	3,490	1,939	8,995	8,590	3,493	1,894	8,750		
September 2002	8,417	3,525	2,060	8,537	8,347	3,512	2,031	8,485		
October 2002	9,054	3,445	1,968	8,962	8,298	3,450	1,959	8,226		
November 2002	8,695	3,660	1,933	8,660	8,124	3,586	1,932	8,097		
December 2002	6,156	3,688	1,855	6,078	7,251	3,749	1,855	7,174		
January 2003	8,213	3,583	1,834	8,193	8,258	3,545	1,821	8,224		
February 2003	8,248	3,625	1,788	8,201	8,103	3,572	1,787	8,068		
Month to month % change										
Shipments		Inventories		Inventory to shipments ratio		Unfilled orders		New orders		
Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	
February 2002	6.9	2.0	-0.2	0.7	0.42	0.42	-0.7	2.1	5.6	2.1
March 2002	-4.3	2.0	-1.5	0.6	0.43	0.42	2.7	2.4	-3.6	2.1
April 2002	13.1	1.7	2.0	0.6	0.39	0.41	2.4	2.6	13.0	1.8
May 2002	-6.3	1.2	1.4	0.6	0.42	0.41	2.6	2.9	-6.2	1.3
June 2002	0.5	0.7	-1.1	0.6	0.41	0.41	-0.9	3.1	-0.2	0.7
July 2002	5.3	0.2	4.0	0.6	0.41	0.41	2.0	3.1	5.9	0.2
August 2002	-2.4	-0.2	-2.3	0.5	0.41	0.41	9.2	2.7	-1.0	-0.3
September 2002	-2.8	-0.5	0.6	0.5	0.42	0.42	7.3	1.8	-3.0	-0.7
October 2002	-0.6	-0.7	-1.8	0.5	0.42	0.42	-3.5	0.7	-3.1	-0.9
November 2002	-2.1	-0.8	3.9	0.4	0.44	0.43	-1.4	-0.4	-1.6	-1.0
December 2002	-10.7	-0.8	4.5	0.4	0.52	0.43	-4.0	-1.1	-11.4	-1.0
January 2003	13.9	-0.7	-5.4	0.3	0.43	0.44	-1.8	-1.4	14.6	-0.8
February 2003	-1.9	-0.6	0.8	0.3	0.44	0.44	-1.9	-1.4	-1.9	-0.5

Table 3

All manufacturing industries except motor vehicle, parts and accessories industries

Period	Unadjusted				Seasonally adjusted					
	Shipments	Inventories	Unfilled orders	New orders	Shipments	Inventories	Unfilled orders	New orders		
\$ millions										
February 2002	30,823	59,448	44,926	31,603	33,969	58,798	45,007	34,398		
March 2002	34,538	59,463	44,801	34,449	33,955	58,362	45,299	34,247		
April 2002	35,336	59,031	45,231	35,766	35,103	58,431	44,970	34,774		
May 2002	37,343	58,421	45,397	37,511	35,058	58,179	45,046	35,135		
June 2002	35,801	57,834	45,058	35,462	34,865	58,174	45,234	35,052		
July 2002	34,340	57,678	45,109	34,391	34,846	58,383	44,707	34,319		
August 2002	36,279	58,740	46,220	37,127	35,261	58,914	45,663	36,218		
September 2002	36,732	58,668	45,264	35,771	35,787	58,808	44,932	35,056		
October 2002	38,137	58,850	44,804	37,678	35,834	59,130	44,532	35,434		
November 2002	35,610	59,468	44,269	35,075	35,260	59,403	44,195	34,923		
December 2002	33,540	58,911	42,772	32,042	35,746	59,609	43,072	34,623		
January 2003	33,627	59,238	41,128	31,983	36,280	59,617	41,633	34,841		
February 2003	32,671	60,825	41,041	32,585	36,055	60,130	41,258	35,680		
Month to month % change										
Shipments		Inventories		Inventory to shipments ratio		Unfilled orders		New orders		
Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	Seasonally adjusted	Trend	
February 2002	-0.4	0.6	-0.2	-0.5	1.73	1.73	1.0	-0.4	2.9	0.9
March 2002	0.0	0.8	-0.7	-0.4	1.72	1.71	0.6	-0.2	-0.4	1.0
April 2002	3.4	0.8	0.1	-0.2	1.66	1.69	-0.7	0.0	1.5	1.0
May 2002	-0.1	0.8	-0.4	0.0	1.66	1.68	0.2	0.1	1.0	0.9
June 2002	-0.6	0.7	0.0	0.1	1.67	1.67	0.4	0.1	-0.2	0.7
July 2002	-0.1	0.6	0.4	0.2	1.68	1.66	-1.2	0.0	-2.1	0.5
August 2002	1.2	0.5	0.9	0.3	1.67	1.66	2.1	-0.3	5.5	0.2
September 2002	1.5	0.4	-0.2	0.4	1.64	1.66	-1.6	-0.6	-3.2	0.0
October 2002	0.1	0.4	0.5	0.4	1.65	1.66	-0.9	-1.0	1.1	-0.1
November 2002	-1.6	0.3	0.5	0.4	1.68	1.66	-0.8	-1.2	-1.4	0.0
December 2002	1.4	0.2	0.3	0.3	1.67	1.66	-2.5	-1.3	-0.9	0.1
January 2003	1.5	0.1	0.0	0.2	1.64	1.66	-3.3	-1.3	0.6	0.2
February 2003	-0.6	0.1	0.9	0.2	1.67	1.67	-0.9	-1.1	2.4	0.3

Table 4
Shipments by major group and selected industries

	NAICS Code	Unadjusted					
		Current periods					
		February 2003	January 2003	December 2002	November 2002		
		\$ millions					
Food manufacturing	311	4,768	4,810	5,361	5,328		
Beverage and tobacco product manufacturing	312	936	846	1,206	1,070		
Textile mills	313	229	230	218	256		
Textile product mills	314	182	178	177	209		
Clothing manufacturing	315	534	478	440	631		
Leather and allied product manufacturing	316	46	46	54	70		
Wood product manufacturing	321	2,187	2,173	2,048	2,313		
Paper manufacturing	322	2,525	2,678	2,633	2,830		
Printing and related support activities	323	774	793	817	904		
Petroleum and coal products manufacturing	324	3,214	3,174	3,069	2,895		
Chemical manufacturing	325	3,110	3,296	3,132	3,212		
Plastics and rubber products manufacturing	326	1,787	1,860	1,588	1,921		
Non-metallic mineral product manufacturing	327	698	714	748	1,038		
Primary metal manufacturing	331	2,712	2,938	2,536	2,728		
Fabricated metal product manufacturing	332	2,115	2,140	1,910	2,360		
Machinery manufacturing	333	1,826	1,808	1,935	1,961		
Computer and electronic product manufacturing	334	1,391	1,378	1,809	1,663		
Electrical equipment, appliance and component manufacturing	335	694	724	695	796		
Transportation equipment manufacturing	336	9,791	10,178	7,962	10,580		
Motor vehicle manufacturing	3361	5,513	5,411	4,042	5,862		
Motor vehicle body and trailer manufacturing	3362	202	224	205	225		
Motor vehicle parts manufacturing	3363	2,735	2,803	2,114	2,833		
Aerospace product and parts manufacturing	3364	928	1,128	1,121	1,110		
Railroad rolling stock manufacturing	3365	217	303	225	275		
Ship and boat building	3366	72	78	61	63		
Furniture and related product manufacturing	337	970	999	918	1,041		
Miscellaneous manufacturing	339	428	400	439	498		
Non-durable goods industries		17,572	17,911	18,256	18,696		
Durable goods industries		23,347	23,930	21,440	25,609		
Manufacturing		40,919	41,840	39,696	44,305		
		Previous year		Year-to-date		Annual	
		February 2002	January 2002	% Change from 2002	2003	% Change from 2001	2002
		\$ millions					
Food manufacturing	311	4,606	4,706	2.9	9,577	1.1	62,916
Beverage and tobacco product manufacturing	312	851	850	4.8	1,783	3.7	13,304
Textile mills	313	274	253	-12.7	459	-3.8	3,205
Textile product mills	314	193	185	-4.6	360	0.5	2,520
Clothing manufacturing	315	576	464	-2.8	1,012	-3.0	6,780
Leather and allied product manufacturing	316	51	53	-12.4	91	-9.9	777
Wood product manufacturing	321	2,246	2,125	-0.2	4,361	7.2	29,496
Paper manufacturing	322	2,496	2,642	1.3	5,203	-4.4	32,726
Printing and related support activities	323	772	763	2.1	1,567	-4.1	10,063
Petroleum and coal products manufacturing	324	1,995	2,121	55.2	6,388	1.1	32,350
Chemical manufacturing	325	2,753	2,827	14.8	6,406	4.0	37,772
Plastics and rubber products manufacturing	326	1,708	1,678	7.7	3,647	6.7	23,002
Non-metallic mineral product manufacturing	327	637	633	11.3	1,412	9.7	11,586
Primary metal manufacturing	331	2,450	2,558	12.8	5,650	8.7	32,202
Fabricated metal product manufacturing	332	2,112	2,068	1.8	4,255	2.8	27,506
Machinery manufacturing	333	1,824	1,971	-4.2	3,634	1.4	24,117
Computer and electronic product manufacturing	334	1,600	1,528	-11.5	2,769	-16.6	21,245
Electrical equipment, appliance and component manufacturing	335	743	754	-5.3	1,418	-7.6	9,339
Transportation equipment manufacturing	336	9,940	9,375	3.4	19,969	4.6	119,745
Motor vehicle manufacturing	3361	5,774	4,833	3.0	10,923	5.7	65,796
Motor vehicle body and trailer manufacturing	3362	206	216	0.9	426	8.5	2,704
Motor vehicle parts manufacturing	3363	2,600	2,579	6.9	5,538	10.2	32,741
Aerospace product and parts manufacturing	3364	886	1,185	-0.7	2,056	-15.0	12,472
Railroad rolling stock manufacturing	3365	245	228	9.7	520	5.4	2,878
Ship and boat building	3366	152	89	-37.7	150	20.6	1,241
Furniture and related product manufacturing	337	965	931	3.9	1,969	2.4	12,303
Miscellaneous manufacturing	339	409	390	3.7	828	8.5	5,527
Non-durable goods industries		15,697	16,077	11.7	35,483	1.1	218,635
Durable goods industries		23,501	22,797	2.1	47,276	2.5	299,845
Manufacturing		39,198	38,875	6.0	82,759	1.9	518,480

Table 4

Shipments by major group and selected industries - concluded

	NAICS Code	Seasonally adjusted						
		Change from January	Current periods					
			February 2003	January 2003	December 2002	November 2002		
			\$ millions					
Food manufacturing	311	31	5,390	5,359	5,350	5,279		
Beverage and tobacco product manufacturing	312	16	1,149	1,133	1,134	1,111		
Textile mills	313	-6	243	249	254	251		
Textile product mills	314	0	202	202	201	204		
Clothing manufacturing	315	-32	536	568	581	580		
Leather and allied product manufacturing	316	-3	58	60	69	62		
Wood product manufacturing	321	-10	2,411	2,421	2,463	2,435		
Paper manufacturing	322	-45	2,681	2,726	2,756	2,770		
Printing and related support activities	323	-2	850	853	863	838		
Petroleum and coal products manufacturing	324	193	3,443	3,250	3,103	2,869		
Chemical manufacturing	325	-13	3,397	3,410	3,396	3,258		
Plastics and rubber products manufacturing	326	-47	1,975	2,022	1,941	1,950		
Non-metallic mineral product manufacturing	327	-21	1,019	1,040	1,012	994		
Primary metal manufacturing	331	-61	2,859	2,920	2,765	2,756		
Fabricated metal product manufacturing	332	2	2,349	2,347	2,234	2,265		
Machinery manufacturing	333	16	1,956	1,939	1,929	1,971		
Computer and electronic product manufacturing	334	-49	1,566	1,615	1,591	1,625		
Electrical equipment, appliance and component manufacturing	335	-33	745	777	738	769		
Transportation equipment manufacturing	336	-297	9,817	10,114	9,044	9,935		
Motor vehicle manufacturing	3361	-131	5,293	5,424	4,713	5,316		
Motor vehicle body and trailer manufacturing	3362	-9	223	232	234	227		
Motor vehicle parts manufacturing	3363	-25	2,809	2,834	2,538	2,808		
Aerospace product and parts manufacturing	3364	46	1,074	1,027	1,050	1,042		
Railroad rolling stock manufacturing	3365	-53	219	272	240	258		
Ship and boat building	3366	-17	75	92	75	72		
Furniture and related product manufacturing	337	-19	1,043	1,062	1,075	1,001		
Miscellaneous manufacturing	339	-1	470	472	497	462		
Non-durable goods industries		123	19,386	19,263	19,069	18,591		
Durable goods industries		-504	24,771	25,275	23,928	24,794		
Manufacturing		-381	44,157	44,538	42,997	43,385		
		Change from previous month			Trend change from previous month			
		February 2003	January 2003	December 2002	February 2003	January 2003	December 2002	November 2002
		percentage						
Food manufacturing	311	0.6	0.2	1.4	0.3	0.4	0.4	0.4
Beverage and tobacco product manufacturing	312	1.4	-0.1	2.1	0.4	0.4	0.5	0.5
Textile mills	313	-2.5	-2.1	1.2	-1.0	-1.2	-1.3	-1.3
Textile product mills	314	0.0	0.4	-1.3	-0.4	-0.6	-0.8	-1.0
Clothing manufacturing	315	-5.6	-2.4	0.2	-0.9	-0.6	-0.1	0.3
Leather and allied product manufacturing	316	-4.2	-12.1	11.7	-1.5	-1.8	-1.8	-1.4
Wood product manufacturing	321	-0.4	-1.7	1.2	-0.2	-0.2	-0.3	-0.3
Paper manufacturing	322	-1.7	-1.1	-0.5	-0.5	-0.6	-0.6	-0.4
Printing and related support activities	323	-0.3	-1.2	3.0	0.2	0.4	0.5	0.4
Petroleum and coal products manufacturing	324	5.9	4.7	8.2	0.3	0.6	1.0	1.7
Chemical manufacturing	325	-0.4	0.4	4.3	0.4	0.7	1.0	1.2
Plastics and rubber products manufacturing	326	-2.3	4.2	-0.4	0.4	0.4	0.3	0.1
Non-metallic mineral product manufacturing	327	-2.0	2.8	1.8	0.5	0.7	0.9	1.0
Primary metal manufacturing	331	-2.1	5.6	0.3	0.5	0.8	0.9	1.0
Fabricated metal product manufacturing	332	0.1	5.1	-1.4	0.3	0.3	0.2	0.2
Machinery manufacturing	333	0.8	0.5	-2.1	-0.4	-0.7	-0.9	-0.9
Computer and electronic product manufacturing	334	-3.0	1.5	-2.1	-0.8	-1.3	-1.9	-2.3
Electrical equipment, appliance and component manufacturing	335	-4.2	5.3	-4.0	-0.3	-0.4	-0.4	-0.5
Transportation equipment manufacturing	336	-2.9	11.8	-9.0	-0.6	-0.7	-0.7	-0.5
Motor vehicle manufacturing	3361	-2.4	15.1	-11.3	-0.9	-1.2	-1.3	-1.3
Motor vehicle body and trailer manufacturing	3362	-4.0	-0.8	3.0	-0.4	-0.3	0.0	0.3
Motor vehicle parts manufacturing	3363	-0.9	11.7	-9.6	0.1	0.1	0.1	0.2
Aerospace product and parts manufacturing	3364	4.5	-2.2	0.8	0.3	0.7	1.0	1.1
Railroad rolling stock manufacturing	3365	-19.4	13.7	-7.2	-1.4	-1.3	-1.1	-0.9
Ship and boat building	3366	-18.7	22.8	4.8	-1.4	-2.7	-4.4	-5.9
Furniture and related product manufacturing	337	-1.8	-1.2	7.4	0.0	0.2	0.3	0.4
Miscellaneous manufacturing	339	-0.3	-4.9	7.5	0.0	0.0	0.0	0.2
Non-durable goods industries		0.6	1.0	2.6	0.2	0.3	0.4	0.6
Durable goods industries		-2.0	5.6	-3.5	-0.2	-0.3	-0.3	-0.3
Manufacturing		-0.9	3.6	-0.9	-0.1	0.0	0.0	0.1

Table 5
Inventories by major group and selected industries

	NAICS Code	Unadjusted					
		Current periods					
		February 2003	January 2003	December 2002	November 2002		
		\$ millions					
Food manufacturing	311	4,941	4,890	4,868	5,109		
Beverage and tobacco product manufacturing	312	1,762	1,703	1,648	1,759		
Textile mills	313	460	459	447	457		
Textile product mills	314	305	299	308	325		
Clothing manufacturing	315	1,157	1,137	1,124	1,115		
Leather and allied product manufacturing	316	128	124	121	123		
Wood product manufacturing	321	5,217	4,752	4,368	4,227		
Paper manufacturing	322	3,556	3,493	3,460	3,504		
Printing and related support activities	323	674	639	654	704		
Petroleum and coal products manufacturing	324	1,615	1,638	1,525	1,431		
Chemical manufacturing	325	5,919	5,603	5,537	5,490		
Plastics and rubber products manufacturing	326	2,141	2,139	2,127	2,100		
Non-metallic mineral product manufacturing	327	1,296	1,294	1,301	1,152		
Primary metal manufacturing	331	4,951	4,988	5,055	4,997		
Fabricated metal product manufacturing	332	3,658	3,596	3,423	3,497		
Machinery manufacturing	333	4,751	4,638	4,512	4,619		
Computer and electronic product manufacturing	334	4,425	4,432	4,375	4,511		
Electrical equipment, appliance and component manufacturing	335	1,344	1,344	1,333	1,364		
Transportation equipment manufacturing	336	13,565	13,074	13,897	14,056		
Motor vehicle manufacturing	3361	1,678	1,648	1,784	1,788		
Motor vehicle body and trailer manufacturing	3362	517	452	433	431		
Motor vehicle parts manufacturing	3363	1,947	1,935	1,904	1,873		
Aerospace product and parts manufacturing	3364	7,677	7,326	7,965	8,121		
Railroad rolling stock manufacturing	3365	1,403	1,389	1,455	1,461		
Ship and boat building	3366	134	136	133	136		
Furniture and related product manufacturing	337	1,499	1,478	1,449	1,492		
Miscellaneous manufacturing	339	1,087	1,099	1,066	1,095		
Non-durable goods industries		21,500	20,989	20,694	21,003		
Durable goods industries		42,950	41,832	41,904	42,125		
Manufacturing		64,450	62,821	62,599	63,129		
		Previous year		Year-to-date		Average per month	
		February 2002	January 2002	% Change from 2002	Average 2003	% Change from 2001	2002
		\$ millions					
Food manufacturing	311	4,732	4,812	3.0	4,916	3.5	4,834
Beverage and tobacco product manufacturing	312	1,682	1,630	4.6	1,733	5.0	1,717
Textile mills	313	531	521	-12.6	459	-9.3	486
Textile product mills	314	311	316	-3.4	302	-13.1	324
Clothing manufacturing	315	1,146	1,132	0.7	1,147	-12.5	1,173
Leather and allied product manufacturing	316	123	125	1.7	126	-8.7	137
Wood product manufacturing	321	5,109	4,758	1.0	4,984	-6.3	4,451
Paper manufacturing	322	3,638	3,625	-2.9	3,524	-7.0	3,548
Printing and related support activities	323	712	712	-7.8	657	-5.7	702
Petroleum and coal products manufacturing	324	1,715	1,637	-3.0	1,626	-10.6	1,614
Chemical manufacturing	325	5,131	5,122	12.4	5,761	4.0	5,277
Plastics and rubber products manufacturing	326	2,014	2,004	6.5	2,140	0.8	2,038
Non-metallic mineral product manufacturing	327	1,226	1,156	8.7	1,295	2.8	1,215
Primary metal manufacturing	331	4,495	4,566	9.7	4,969	0.4	4,657
Fabricated metal product manufacturing	332	3,454	3,384	6.1	3,627	2.1	3,492
Machinery manufacturing	333	4,715	4,679	0.0	4,694	1.2	4,611
Computer and electronic product manufacturing	334	5,160	5,237	-14.8	4,428	-22.5	4,655
Electrical equipment, appliance and component manufacturing	335	1,404	1,368	-3.0	1,344	-16.2	1,385
Transportation equipment manufacturing	336	13,214	12,874	2.1	13,319	-1.3	13,443
Motor vehicle manufacturing	3361	1,772	1,747	-5.5	1,663	2.9	1,730
Motor vehicle body and trailer manufacturing	3362	428	379	20.2	485	-6.3	417
Motor vehicle parts manufacturing	3363	1,683	1,710	14.4	1,941	3.9	1,762
Aerospace product and parts manufacturing	3364	7,612	7,301	0.6	7,501	0.3	7,817
Railroad rolling stock manufacturing	3365	1,266	1,306	8.5	1,396	-13.8	1,340
Ship and boat building	3366	251	246	-45.7	135	-35.7	145
Furniture and related product manufacturing	337	1,383	1,330	9.7	1,489	1.1	1,427
Miscellaneous manufacturing	339	1,010	1,000	8.7	1,093	3.3	1,059
Non-durable goods industries		20,589	20,503	3.4	21,245	-0.7	20,678
Durable goods industries		42,314	41,484	1.2	42,391	-4.7	41,568
Manufacturing		62,903	61,987	1.9	63,636	-3.4	62,246

Table 5
Inventories by major group and selected industries - concluded

	NAICS Code	Change from January	Seasonally adjusted						
			Current periods						
			February 2003	January 2003	December 2002	November 2002			
			\$ millions						
Food manufacturing	311	93	5,025	4,932	4,935	4,939			
Beverage and tobacco product manufacturing	312	20	1,749	1,729	1,716	1,750			
Textile mills	313	-2	451	453	450	456			
Textile product mills	314	4	304	301	312	329			
Clothing manufacturing	315	10	1,187	1,177	1,169	1,209			
Leather and allied product manufacturing	316	3	139	137	136	135			
Wood product manufacturing	321	74	4,573	4,499	4,458	4,475			
Paper manufacturing	322	14	3,493	3,480	3,520	3,526			
Printing and related support activities	323	20	668	648	678	683			
Petroleum and coal products manufacturing	324	-32	1,604	1,636	1,622	1,503			
Chemical manufacturing	325	189	5,771	5,582	5,629	5,550			
Plastics and rubber products manufacturing	326	-28	2,103	2,131	2,169	2,121			
Non-metallic mineral product manufacturing	327	-15	1,277	1,291	1,324	1,221			
Primary metal manufacturing	331	39	5,014	4,975	4,907	4,867			
Fabricated metal product manufacturing	332	32	3,631	3,598	3,464	3,503			
Machinery manufacturing	333	49	4,709	4,659	4,620	4,572			
Computer and electronic product manufacturing	334	-39	4,367	4,405	4,442	4,419			
Electrical equipment, appliance and component manufacturing	335	-8	1,355	1,363	1,367	1,365			
Transportation equipment manufacturing	336	157	13,712	13,555	13,840	13,735			
Motor vehicle manufacturing	3361	4	1,642	1,638	1,829	1,746			
Motor vehicle body and trailer manufacturing	3362	24	495	472	455	449			
Motor vehicle parts manufacturing	3363	23	1,930	1,907	1,919	1,840			
Aerospace product and parts manufacturing	3364	87	7,883	7,796	7,823	7,854			
Railroad rolling stock manufacturing	3365	14	1,403	1,389	1,455	1,461			
Ship and boat building	3366	-4	126	130	127	130			
Furniture and related product manufacturing	337	-2	1,489	1,491	1,482	1,512			
Miscellaneous manufacturing	339	-38	1,081	1,119	1,116	1,120			
Non-durable goods industries		280	21,308	21,028	21,166	20,991			
Durable goods industries		260	42,394	42,134	42,191	41,998			
Manufacturing		540	63,702	63,162	63,357	62,989			
			Change from previous month		Trend change from previous month				
			February 2003	January 2003	December 2002	February 2003	January 2003	December 2002	November 2002
			percentage						
Food manufacturing	311	1.9	-0.1	-0.1	0.2	0.3	0.4	0.5	
Beverage and tobacco product manufacturing	312	1.2	0.8	-1.9	-0.1	-0.1	-0.1	0.0	
Textile mills	313	-0.5	0.8	-1.3	-0.4	-0.6	-0.8	-0.9	
Textile product mills	314	1.2	-3.6	-5.3	-0.7	-1.1	-1.3	-1.3	
Clothing manufacturing	315	0.8	0.7	-3.3	0.2	0.2	0.3	0.3	
Leather and allied product manufacturing	316	1.9	0.6	0.8	0.3	0.2	0.1	-0.1	
Wood product manufacturing	321	1.6	0.9	-0.4	0.5	0.5	0.5	0.4	
Paper manufacturing	322	0.4	-1.1	-0.2	-0.1	-0.2	-0.2	-0.1	
Printing and related support activities	323	3.1	-4.4	-0.7	-0.8	-0.9	-0.9	-0.8	
Petroleum and coal products manufacturing	324	-2.0	0.9	7.9	-0.3	-0.3	-0.2	-0.1	
Chemical manufacturing	325	3.4	-0.8	1.4	0.6	0.8	1.0	1.2	
Plastics and rubber products manufacturing	326	-1.3	-1.7	2.3	-0.1	0.1	0.4	0.7	
Non-metallic mineral product manufacturing	327	-1.1	-2.5	8.5	0.5	0.7	0.9	0.9	
Primary metal manufacturing	331	0.8	1.4	0.8	0.4	0.6	0.9	1.1	
Fabricated metal product manufacturing	332	0.9	3.9	-1.1	0.5	0.5	0.3	0.2	
Machinery manufacturing	333	1.1	0.8	1.1	0.4	0.5	0.5	0.4	
Computer and electronic product manufacturing	334	-0.9	-0.8	0.5	-0.2	-0.3	-0.4	-0.5	
Electrical equipment, appliance and component manufacturing	335	-0.6	-0.3	0.2	-0.2	-0.3	-0.4	-0.3	
Transportation equipment manufacturing	336	1.2	-2.1	0.8	0.1	0.1	0.2	0.3	
Motor vehicle manufacturing	3361	0.3	-10.5	4.8	-0.7	-0.8	-0.7	-0.5	
Motor vehicle body and trailer manufacturing	3362	5.0	3.6	1.4	2.2	2.6	2.7	2.6	
Motor vehicle parts manufacturing	3363	1.2	-0.6	4.3	1.2	1.4	1.4	1.3	
Aerospace product and parts manufacturing	3364	1.1	-0.3	-0.4	0.0	0.0	0.0	0.0	
Railroad rolling stock manufacturing	3365	1.0	-4.6	-0.4	-0.3	-0.3	-0.1	0.6	
Ship and boat building	3366	-2.8	2.0	-2.2	-0.9	-0.2	0.5	1.0	
Furniture and related product manufacturing	337	-0.1	0.6	-2.0	0.2	0.4	0.5	0.8	
Miscellaneous manufacturing	339	-3.4	0.2	-0.3	-0.1	-0.1	0.1	0.4	
Non-durable goods industries		1.3	-0.7	0.8	0.1	0.2	0.3	0.4	
Durable goods industries		0.6	-0.1	0.5	0.2	0.3	0.3	0.3	
Manufacturing		0.9	-0.3	0.6	0.2	0.2	0.3	0.4	

Table 6
Unfilled orders by selected major group and industries

	NAICS Code	Unadjusted					
		Current periods					
		February 2003	January 2003	December 2002	November 2002		
		\$ millions					
Textile mills	313	266	265	262	270		
Textile product mills	314	74	75	60	60		
Clothing manufacturing	315	286	287	276	282		
Leather and allied product manufacturing	316	25	22	22	23		
Plastics and rubber products manufacturing	326	1,250	1,328	1,361	1,407		
Primary metal manufacturing	331	1,874	1,847	1,798	1,827		
Fabricated metal product manufacturing	332	2,891	2,871	2,783	2,906		
Machinery manufacturing	333	6,663	6,419	6,436	6,368		
Computer and electronic product manufacturing	334	3,993	4,187	4,112	4,189		
Electrical equipment, appliance and component manufacturing	335	1,032	1,041	1,004	1,003		
Transportation equipment manufacturing	336	21,396	21,579	23,577	24,849		
Motor vehicle manufacturing	3361	912	921	987	1,022		
Motor vehicle body and trailer manufacturing	3362	652	652	574	569		
Motor vehicle parts manufacturing	3363	875	913	868	911		
Aerospace product and parts manufacturing	3364	13,834	14,168	16,001	16,721		
Ship and boat building	3366	35	23	21	22		
Miscellaneous manufacturing	339	190	223	214	248		
Non-durable goods industries		3,032	3,027	2,986	3,043		
Durable goods industries		39,796	39,935	41,640	43,159		
Manufacturing		42,828	42,962	44,626	46,202		
		Previous year		Year-to-date		Average per month	
		February 2002	January 2002	% Change from 2002	Average 2003	% Change from 2001	2002
		\$ millions					
Textile mills	313	279	261	-1.7	266	9.3	276
Textile product mills	314	49	47	53.9	74	2.7	55
Clothing manufacturing	315	328	328	-12.7	286	-7.0	324
Leather and allied product manufacturing	316	22	27	-4.4	23	-18.2	31
Plastics and rubber products manufacturing	326	1,252	1,210	4.7	1,289	15.6	1,254
Primary metal manufacturing	331	1,730	1,540	13.8	1,860	25.1	1,795
Fabricated metal product manufacturing	332	3,015	2,750	-0.1	2,881	0.3	2,878
Machinery manufacturing	333	7,028	6,817	-5.5	6,541	4.3	6,703
Computer and electronic product manufacturing	334	3,568	3,568	14.6	4,090	-8.3	3,978
Electrical equipment, appliance and component manufacturing	335	970	927	9.3	1,037	-30.5	977
Transportation equipment manufacturing	336	25,634	25,762	-16.4	21,488	-8.7	25,566
Motor vehicle manufacturing	3361	956	966	-4.6	917	4.2	1,052
Motor vehicle body and trailer manufacturing	3362	585	571	12.8	652	8.4	590
Motor vehicle parts manufacturing	3363	633	624	42.3	894	24.2	729
Aerospace product and parts manufacturing	3364	18,834	19,079	-26.1	14,001	-12.0	17,877
Ship and boat building	3366	16	16	82.5	29	-37.5	18
Miscellaneous manufacturing	339	245	241	-15.2	206	-12.1	226
Non-durable goods industries		2,806	2,762	8.8	3,030	15.3	2,868
Durable goods industries		43,709	42,974	-8.0	39,865	-5.4	43,746
Manufacturing		46,515	45,736	-7.0	42,895	-4.3	46,614

Table 6

Unfilled orders by selected major group and industries - concluded

	NAICS Code	Change from January	Seasonally adjusted						
			Current periods						
			February 2003	January 2003	December 2002	November 2002			
			\$ millions						
Textile mills	313	-18	251	269	278	287			
Textile product mills	314	2	76	75	68	62			
Clothing manufacturing	315	4	296	292	302	302			
Leather and allied product manufacturing	316	1	35	34	33	33			
Plastics and rubber products manufacturing	326	-68	1,207	1,275	1,297	1,304			
Primary metal manufacturing	331	-59	1,809	1,867	1,918	1,941			
Fabricated metal product manufacturing	332	20	2,891	2,871	2,783	2,906			
Machinery manufacturing	333	243	6,663	6,419	6,436	6,368			
Computer and electronic product manufacturing	334	-194	3,993	4,187	4,112	4,189			
Electrical equipment, appliance and component manufacturing	335	-9	1,032	1,041	1,004	1,003			
Transportation equipment manufacturing	336	-358	21,704	22,062	23,685	24,705			
Motor vehicle manufacturing	3361	-8	912	921	987	1,022			
Motor vehicle body and trailer manufacturing	3362	-25	605	629	588	588			
Motor vehicle parts manufacturing	3363	-26	874	900	868	910			
Aerospace product and parts manufacturing	3364	-497	14,188	14,685	16,094	16,559			
Ship and boat building	3366	11	36	25	23	21			
Miscellaneous manufacturing	339	-34	178	212	218	237			
Non-durable goods industries		-5	2,987	2,992	2,957	2,968			
Durable goods industries		-404	40,057	40,462	41,969	43,159			
Manufacturing		-409	43,044	43,454	44,927	46,127			
			Change from previous month		Trend change from previous month				
			February 2003	January 2003	December 2002	February 2003	January 2003	December 2002	November 2002
			percentage						
Textile mills	313	-6.8	-3.1	-3.2	-0.7	-0.7	-0.6	-0.4	
Textile product mills	314	2.3	10.6	9.4	4.2	5.2	5.8	5.9	
Clothing manufacturing	315	1.5	-3.5	0.2	0.0	-0.4	-0.8	-1.1	
Leather and allied product manufacturing	316	1.7	2.3	1.8	1.3	2.1	2.8	3.2	
Plastics and rubber products manufacturing	326	-5.3	-1.7	-0.5	-1.6	-1.3	-0.8	-0.3	
Primary metal manufacturing	331	-3.2	-2.6	-1.2	-1.1	-0.7	-0.1	0.3	
Fabricated metal product manufacturing	332	0.7	3.1	-4.2	0.4	0.3	0.1	-0.2	
Machinery manufacturing	333	3.8	-0.3	1.1	-0.2	-0.3	-0.6	-0.8	
Computer and electronic product manufacturing	334	-4.6	1.8	-1.8	-1.1	-0.8	-0.3	0.3	
Electrical equipment, appliance and component manufacturing	335	-0.8	3.7	0.1	0.4	0.5	0.6	0.9	
Transportation equipment manufacturing	336	-1.6	-6.9	-4.1	-1.7	-2.2	-2.4	-2.2	
Motor vehicle manufacturing	3361	-0.9	-6.7	-3.4	-3.1	-3.7	-3.7	-3.0	
Motor vehicle body and trailer manufacturing	3362	-3.9	7.1	-0.1	-0.6	-0.6	-0.5	-0.4	
Motor vehicle parts manufacturing	3363	-2.9	3.7	-4.7	0.6	1.3	2.3	3.1	
Aerospace product and parts manufacturing	3364	-3.4	-8.8	-2.8	-1.7	-2.3	-2.6	-2.7	
Ship and boat building	3366	44.9	9.3	9.4	6.9	8.5	9.8	10.4	
Miscellaneous manufacturing	339	-15.9	-2.7	-7.8	-5.3	-4.7	-3.2	-1.3	
Non-durable goods industries		-0.2	1.2	-0.4	-0.6	-0.4	-0.1	0.3	
Durable goods industries		-1.0	-3.6	-2.8	-1.1	-1.4	-1.4	-1.3	
Manufacturing		-0.9	-3.3	-2.6	-1.1	-1.3	-1.3	-1.2	

Table 7

New orders by selected major group and industries

	NAICS Code	Unadjusted					
		Current periods					
		February 2003	January 2003	December 2002	November 2002		
		\$ millions					
Textile mills	313	229	234	210	255		
Textile product mills	314	182	192	176	208		
Clothing manufacturing	315	532	489	434	640		
Leather and allied product manufacturing	316	49	45	53	71		
Plastics and rubber products manufacturing	326	1,709	1,826	1,542	1,824		
Primary metal manufacturing	331	2,739	2,986	2,508	2,820		
Fabricated metal product manufacturing	332	2,135	2,227	1,787	2,448		
Machinery manufacturing	333	2,069	1,792	2,003	1,908		
Computer and electronic product manufacturing	334	1,198	1,453	1,732	1,616		
Electrical equipment, appliance and component manufacturing	335	685	761	696	795		
Transportation equipment manufacturing	336	9,608	8,180	6,690	10,088		
Motor vehicle manufacturing	3361	5,504	5,345	4,007	5,750		
Motor vehicle body and trailer manufacturing	3362	202	301	210	225		
Motor vehicle parts manufacturing	3363	2,697	2,848	2,071	2,909		
Aerospace product and parts manufacturing	3364	595	-706	401	903		
Ship and boat building	3366	83	81	60	64		
Miscellaneous manufacturing	339	396	409	404	464		
Non-durable goods industries		17,577	17,952	18,199	18,513		
Durable goods industries		23,208	22,224	19,921	25,221		
Manufacturing		40,785	40,176	38,120	43,734		
		Previous year		Year-to-date		Average per month	
		February 2002	January 2002	% Change from 2002	2003	% Change from 2001	2002
		\$ millions					
Textile mills	313	291	297	-21.3	463	-1.0	3,248
Textile product mills	314	195	188	-2.4	374	2.0	2,527
Clothing manufacturing	315	577	501	-5.2	1,021	-2.3	6,764
Leather and allied product manufacturing	316	47	50	-3.1	94	-10.6	770
Plastics and rubber products manufacturing	326	1,750	1,606	5.3	3,536	6.2	23,082
Primary metal manufacturing	331	2,641	2,742	6.4	5,725	10.9	32,645
Fabricated metal product manufacturing	332	2,377	2,053	-1.5	4,362	2.6	27,578
Machinery manufacturing	333	2,035	1,957	-3.3	3,861	-3.5	23,449
Computer and electronic product manufacturing	334	1,600	1,433	-12.6	2,651	-8.9	21,697
Electrical equipment, appliance and component manufacturing	335	786	618	3.0	1,447	1.6	9,279
Transportation equipment manufacturing	336	9,811	8,945	-5.2	17,789	3.5	117,130
Motor vehicle manufacturing	3361	5,764	4,894	1.8	10,849	6.4	65,878
Motor vehicle body and trailer manufacturing	3362	220	249	7.2	503	8.7	2,741
Motor vehicle parts manufacturing	3363	2,610	2,599	6.4	5,545	11.0	33,006
Aerospace product and parts manufacturing	3364	641	808	-107.7	-111	-39.5	9,017
Ship and boat building	3366	153	89	-32.1	164	23.8	1,246
Miscellaneous manufacturing	339	413	398	-0.9	804	8.5	5,508
Non-durable goods industries		15,741	16,051	11.8	35,529	1.0	218,818
Durable goods industries		24,236	22,359	-2.5	45,432	3.2	297,856
Manufacturing		39,977	38,411	3.3	80,961	2.3	516,674

Table 7

New orders by selected major group and industries - concluded

	NAICS Code	Change from January	Seasonally adjusted						
			Current periods						
			February 2003	January 2003	December 2002	November 2002			
			\$ millions						
Textile mills	313	-16	224	240	245	254			
Textile product mills	314	-5	204	209	207	206			
Clothing manufacturing	315	-17	540	557	582	585			
Leather and allied product manufacturing	316	-3	58	61	69	67			
Plastics and rubber products manufacturing	326	-94	1,907	2,000	1,934	1,985			
Primary metal manufacturing	331	-69	2,800	2,870	2,742	2,845			
Fabricated metal product manufacturing	332	-65	2,369	2,434	2,110	2,354			
Machinery manufacturing	333	276	2,199	1,923	1,997	1,919			
Computer and electronic product manufacturing	334	-317	1,373	1,690	1,513	1,578			
Electrical equipment, appliance and component manufacturing	335	-79	736	815	739	768			
Transportation equipment manufacturing	336	968	9,459	8,491	8,024	9,452			
Motor vehicle manufacturing	3361	-73	5,285	5,358	4,678	5,204			
Motor vehicle body and trailer manufacturing	3362	-76	198	274	233	202			
Motor vehicle parts manufacturing	3363	-82	2,783	2,866	2,496	2,893			
Aerospace product and parts manufacturing	3364	194	577	382	585	860			
Ship and boat building	3366	-8	86	94	77	74			
Miscellaneous manufacturing	339	-29	437	466	478	429			
Non-durable goods industries		84	19,382	19,298	19,058	18,553			
Durable goods industries		599	24,366	23,767	22,738	24,468			
Manufacturing		683	43,748	43,065	41,796	43,021			
			Change from previous month		Trend change from previous month				
			February 2003	January 2003	December 2002	February 2003	January 2003	December 2002	November 2002
			percentage						
Textile mills	313	-6.7	-1.9	-3.5	-1.0	-1.3	-1.5	-1.6	
Textile product mills	314	-2.6	1.0	0.5	-0.6	-0.7	-0.8	-0.7	
Clothing manufacturing	315	-3.0	-4.3	-0.5	-0.7	-0.4	0.0	0.4	
Leather and allied product manufacturing	316	-4.4	-11.8	2.9	-1.9	-2.1	-1.9	-1.2	
Plastics and rubber products manufacturing	326	-4.7	3.4	-2.6	0.2	0.1	-0.1	-0.2	
Primary metal manufacturing	331	-2.4	4.7	-3.6	0.2	0.4	0.6	0.8	
Fabricated metal product manufacturing	332	-2.7	15.3	-10.3	0.4	0.6	0.6	0.5	
Machinery manufacturing	333	14.3	-3.7	4.1	0.1	0.0	-0.2	-0.7	
Computer and electronic product manufacturing	334	-18.8	11.7	-4.1	-1.6	-2.6	-3.3	-3.8	
Electrical equipment, appliance and component manufacturing	335	-9.7	10.3	-3.7	-0.4	-0.6	-0.8	-0.8	
Transportation equipment manufacturing	336	11.4	5.8	-15.1	0.6	-0.1	-0.9	-1.5	
Motor vehicle manufacturing	3361	-1.4	14.5	-10.1	-0.8	-1.2	-1.5	-1.5	
Motor vehicle body and trailer manufacturing	3362	-27.7	17.6	15.2	-0.5	-0.4	-0.3	-0.4	
Motor vehicle parts manufacturing	3363	-2.9	14.8	-13.7	-0.1	-0.1	-0.1	0.0	
Aerospace product and parts manufacturing	3364	50.9	-34.7	-31.9	12.9	10.5	5.6	-0.3	
Ship and boat building	3366	-8.6	22.4	4.6	-1.6	-2.8	-4.1	-5.4	
Miscellaneous manufacturing	339	-6.3	-2.5	11.5	-0.2	-0.6	-0.9	-0.8	
Non-durable goods industries		0.4	1.3	2.7	0.2	0.3	0.4	0.5	
Durable goods industries		2.5	4.5	-7.1	0.1	-0.2	-0.5	-0.8	
Manufacturing		1.6	3.0	-2.8	0.1	0.0	-0.1	-0.2	

Table 8a
Shipments for selected industries, unadjusted

	NAICS Code	Current periods			
		February 2003	January 2003	December 2002	November 2002
\$ millions					
Food manufacturing	311				
Animal food manufacturing	3111	403	445	450	458
Starch and vegetable fat and oil manufacturing	31122	232	231	238	247
Sugar and confectionery product manufacturing	3113	300	260	357	346
Fruit and vegetable preserving and specialty food manufacturing	3114	445	469	499	503
Dairy product manufacturing	3115	832	817	863	844
Meat product manufacturing	3116	1,337	1,379	1,533	1,438
Cookie, cracker and pasta manufacturing	31182	113	102	117	129
Other food manufacturing	3119	426	424	507	515
Beverage and tobacco product manufacturing	312				
Soft drink and ice manufacturing	31211	256	228	330	282
Breweries	31212	236	227	374	303
Wineries	31213	38	34	55	59
Distilleries	31214	93	97	105	147
Tobacco manufacturing	3122	313	261	343	280
Textile mills	313				
Fibre, yarn and thread mills	3131	34	32	29	38
Fabric mills	3132	149	154	146	165
Textile and fabric finishing and fabric coating	3133	45	45	43	53
Textile product mills	314				
Carpet and rug mills	31411	68	68	64	78
Textile bag and canvas mills	31491	22	18	25	30
Clothing manufacturing	315				
Hosiery and sock mills	31511	35	40	39	58
Other clothing knitting mills	31519	43	42	45	64
Men's and boys' cut and sew clothing manufacturing	31522	179	165	166	243
Women's and girls' cut and sew clothing manufacturing	31523	190	158	126	168
Clothing accessories and other clothing manufacturing	3159	18	17	15	23
Leather and allied product manufacturing	316				
Footwear manufacturing	3162	25	27	36	49
Wood product manufacturing	321				
Sawmills and wood preservation	3211	1,237	1,240	1,169	1,285
Veneer, plywood and engineered wood product manufacturing	3212	500	496	455	514
Other wood product manufacturing	3219	451	437	424	514
Paper manufacturing	322				
Pulp, paper and paperboard mills	3221	1,772	1,905	1,913	2,018
Paperboard container manufacturing	32221	418	423	389	454
Paper bag and coated and treated paper manufacturing	32222	179	180	161	180
Other converted paper product manufacturing	32229	121	133	132	140
Printing and related support activities	323				
Printing	32311	734	755	777	856
Support activities for printing	32312	40	38	40	48
Petroleum and coal products manufacturing	324				
Petroleum refineries	32411	3,036	2,988	2,877	2,619
Chemical manufacturing	325				
Other basic inorganic chemical manufacturing	32518	241	253	227	243
Other basic organic chemical manufacturing	32519	221	246	234	234
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	3252	522	549	490	522
Pesticide and other agricultural chemical manufacturing	32532	37	29	11	3
Pharmaceutical and medicine manufacturing	3254	623	714	840	767
Paint and coating manufacturing	32551	136	139	107	135
Adhesive manufacturing	32552	49	44	36	46
Soap and cleaning compound manufacturing	32561	121	125	112	121
Toilet preparation manufacturing	32562	150	148	135	133
Printing ink manufacturing	32591	33	33	29	38
All other chemical product manufacturing	32599	349	345	325	354

Table 8a

Shipments for selected industries, unadjusted - continued

	NAICS Code	Current periods			
		February 2003	January 2003	December 2002	November 2002
\$ millions					
Plastics and rubber products manufacturing	326				
Plastic pipe, pipe fitting and unsupported profile shape manufacturing	32612	134	126	105	144
Polystyrene foam product manufacturing	32614	20	20	21	28
Other plastic product manufacturing	32619	680	741	659	773
Other rubber product manufacturing	32629	193	194	158	200
Non-metallic mineral product manufacturing	327				
Clay product and refractory manufacturing	3271	45	47	42	52
Glass and glass product manufacturing	3272	173	186	149	209
Cement manufacturing	32731	58	60	76	122
Ready-mix concrete manufacturing	32732	96	90	132	216
Other concrete product manufacturing	32739	57	55	79	110
Abrasive product manufacturing	32791	36	39	40	47
All other non-metallic mineral product manufacturing	32799	105	110	109	122
Primary metal manufacturing	331				
Iron and steel mills and ferro-alloy manufacturing	3311	842	1,006	798	874
Iron and steel pipes and tubes manufacturing from purchased steel	33121	247	257	206	232
Foundries	3315	270	290	217	278
Fabricated metal product manufacturing	332				
Cutlery and hand tool manufacturing	3322	41	43	38	46
Plate work and fabricated structural product manufacturing	33231	288	333	304	359
Power boiler and heat exchanger manufacturing	33241	81	71	84	90
Spring and wire product manufacturing	3326	115	121	96	127
Coating, engraving, heat treating and allied activities	3328	220	228	187	234
Other fabricated metal product manufacturing	3329	254	235	185	253
Machinery manufacturing	333				
Agricultural implement manufacturing	33311	182	155	166	152
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	164	168	158	205
All other general-purpose machinery manufacturing	33399	114	144	167	180
Computer and electronic product manufacturing	334				
Computer and peripheral equipment manufacturing	3341	268	250	400	303
Communications equipment manufacturing	3342	383	375	674	475
Audio and video equipment manufacturing	3343	17	17	21	22
Electrical equipment, appliance and component manufacturing	335				
Lighting fixture manufacturing	33512	60	70	63	76
Small electrical appliance manufacturing	33521	17	21	19	27
Major appliance manufacturing	33522	123	123	104	128
Battery manufacturing	33591	11	12	12	13
Communication and energy wire and cable manufacturing	33592	88	85	92	105
All other electrical equipment and component manufacturing	33599	62	66	61	66
Transportation equipment manufacturing	336				
Motor vehicle manufacturing	3361	5,513	5,411	4,042	5,862
Motor vehicle parts manufacturing	3363	2,735	2,803	2,114	2,833
Aerospace product and parts manufacturing	3364	928	1,128	1,121	1,110
Railroad rolling stock manufacturing	3365	217	303	225	275
Ship and boat building	3366	72	78	61	63
Furniture and related product manufacturing	337				
Household and institutional furniture and kitchen cabinet manufacturing	3371	546	563	509	594
Office furniture (including fixtures) manufacturing	3372	365	371	350	377
Miscellaneous manufacturing	339				
Medical equipment and supplies manufacturing	3391	110	104	111	118
Other miscellaneous manufacturing	3399	318	296	328	380

Table 8a

Shipments for selected industries, unadjusted - continued

	NAICS Code	Previous year		Year-to-date		Annual	
		February 2002	January 2002	% Change from 2002	Average 2003	% Change from 2001	2002
\$ millions							
Food manufacturing	311						
Animal food manufacturing	3111	394	437	2.2	849	6.1	5,392
Starch and vegetable fat and oil manufacturing	31122	205	221	8.8	463	3.3	2,811
Sugar and confectionery product manufacturing	3113	277	235	9.3	559	1.4	3,846
Fruit and vegetable preserving and specialty food manufacturing	3114	462	488	-3.8	914	-1.6	5,926
Dairy product manufacturing	3115	741	755	10.3	1,650	1.2	9,888
Meat product manufacturing	3116	1,357	1,407	-1.7	2,716	-6.6	17,674
Cookie, cracker and pasta manufacturing	31182	124	123	-13.0	215	-7.7	1,425
Other food manufacturing	3119	402	402	5.7	850	11.9	5,724
Beverage and tobacco product manufacturing	312						
Soft drink and ice manufacturing	31211	220	216	10.8	483	5.2	3,688
Breweries	31212	250	228	-3.0	463	2.0	4,103
Wineries	31213	31	31	16.1	72	11.8	585
Distilleries	31214	69	112	4.8	190	9.1	1,265
Tobacco manufacturing	3122	281	263	5.6	574	1.3	3,663
Textile mills	313						
Fibre, yarn and thread mills	3131	40	39	-15.5	67	-5.1	465
Fabric mills	3132	179	163	-11.3	303	-3.3	2,065
Textile and fabric finishing and fabric coating	3133	55	51	-15.4	90	-4.5	675
Textile product mills	314						
Carpet and rug mills	31411	71	64	0.4	136	-3.6	890
Textile bag and canvas mills	31491	30	34	-37.0	40	7.2	429
Clothing manufacturing	315						
Hosiery and sock mills	31511	41	39	-6.6	75	0.4	511
Other clothing knitting mills	31519	32	31	35.6	85	0.1	519
Men's and boys' cut and sew clothing manufacturing	31522	196	154	-1.9	344	-5.1	2,354
Women's and girls' cut and sew clothing manufacturing	31523	211	161	-6.7	347	-3.6	2,223
Clothing accessories and other clothing manufacturing	3159	15	16	12.3	35	-4.0	242
Leather and allied product manufacturing	316						
Footwear manufacturing	3162	31	36	-22.2	52	-5.8	518
Wood product manufacturing	321						
Sawmills and wood preservation	3211	1,427	1,324	-10.0	2,477	4.4	17,693
Veneer, plywood and engineered wood product manufacturing	3212	465	465	7.1	996	6.1	6,230
Other wood product manufacturing	3219	354	337	28.6	888	18.3	5,573
Paper manufacturing	322						
Pulp, paper and paperboard mills	3221	1,805	1,905	-0.9	3,676	-6.8	23,505
Paperboard container manufacturing	32221	359	381	13.7	842	3.4	4,914
Paper bag and coated and treated paper manufacturing	32222	174	183	0.2	358	3.0	2,212
Other converted paper product manufacturing	32229	121	133	0.0	253	0.6	1,610
Printing and related support activities	323						
Printing	32311	730	727	2.2	1,489	-1.4	9,559
Support activities for printing	32312	41	36	0.7	78	-37.0	504
Petroleum and coal products manufacturing	324						
Petroleum refineries	32411	1,835	1,943	59.4	6,023	0.8	29,276
Chemical manufacturing	325						
Other basic inorganic chemical manufacturing	32518	201	209	20.3	493	6.8	2,726
Other basic organic chemical manufacturing	32519	193	181	25.0	467	1.8	2,521
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	3252	479	499	9.4	1,070	0.6	6,379
Pesticide and other agricultural chemical manufacturing	32532	39	33	-7.8	66	-13.4	341
Pharmaceutical and medicine manufacturing	3254	594	603	11.7	1,337	22.0	8,405
Paint and coating manufacturing	32551	136	130	3.4	275	-1.4	1,875
Adhesive manufacturing	32552	47	46	0.0	93	12.2	624
Soap and cleaning compound manufacturing	32561	115	123	3.7	247	-7.5	1,516
Toilet preparation manufacturing	32562	139	153	2.1	298	3.2	1,663
Printing ink manufacturing	32591	30	33	4.3	66	13.3	419
All other chemical product manufacturing	32599	299	313	13.3	694	2.6	4,104

Table 8a

Shipments for selected industries, unadjusted - continued

	NAICS Code	Previous year		Year-to-date		Annual	
		February 2002	January 2002	% Change from 2002	Average 2003	% Change from 2001	2002
\$ millions							
Plastics and rubber products manufacturing	326						
Plastic pipe, pipe fitting and unsupported profile shape manufacturing	32612	107	107	21.3	260	4.2	1,758
Polystyrene foam product manufacturing	32614	21	22	-7.1	40	3.8	321
Other plastic product manufacturing	32619	678	652	6.9	1,421	8.6	9,435
Other rubber product manufacturing	32629	194	186	1.7	387	0.0	2,409
Non-metallic mineral product manufacturing	327						
Clay product and refractory manufacturing	3271	40	41	13.2	92	5.0	613
Glass and glass product manufacturing	3272	167	163	8.6	359	6.2	2,396
Cement manufacturing	32731	63	62	-6.4	118	5.7	1,425
Ready-mix concrete manufacturing	32732	97	96	-3.8	186	9.1	2,337
Other concrete product manufacturing	32739	49	43	21.8	112	1.3	1,127
Abrasive product manufacturing	32791	34	26	24.5	75	36.5	450
All other non-metallic mineral product manufacturing	32799	73	79	41.4	215	28.8	1,314
Primary metal manufacturing	331						
Iron and steel mills and ferro-alloy manufacturing	3311	772	798	17.7	1,848	11.1	10,355
Iron and steel pipes and tubes manufacturing from purchased steel	33121	197	214	22.4	504	1.4	2,528
Foundries	3315	252	260	9.3	560	8.7	3,161
Fabricated metal product manufacturing	332						
Cutlery and hand tool manufacturing	3322	37	36	16.4	85	5.4	463
Plate work and fabricated structural product manufacturing	33231	305	322	-1.1	621	0.4	4,286
Power boiler and heat exchanger manufacturing	33241	79	68	3.1	152	7.6	1,022
Spring and wire product manufacturing	3326	117	111	3.1	235	9.8	1,477
Coating, engraving, heat treating and allied activities	3328	202	194	12.9	448	20.0	2,633
Other fabricated metal product manufacturing	3329	239	229	4.5	489	9.5	3,005
Machinery manufacturing	333						
Agricultural implement manufacturing	33311	196	181	-10.4	337	6.3	2,327
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	160	168	1.5	332	9.7	2,298
All other general-purpose machinery manufacturing	33399	159	163	-19.7	258	15.4	2,275
Computer and electronic product manufacturing	334						
Computer and peripheral equipment manufacturing	3341	377	369	-30.5	519	-16.6	4,699
Communications equipment manufacturing	3342	497	504	-24.2	758	-23.8	7,127
Audio and video equipment manufacturing	3343	17	21	-9.8	34	-7.2	218
Electrical equipment, appliance and component manufacturing	335						
Lighting fixture manufacturing	33512	64	64	1.8	131	-3.8	877
Small electrical appliance manufacturing	33521	16	20	6.8	38	-9.3	250
Major appliance manufacturing	33522	120	120	2.1	246	12.4	1,529
Battery manufacturing	33591	11	12	1.9	23	-15.1	139
Communication and energy wire and cable manufacturing	33592	119	137	-32.2	173	-42.0	1,439
All other electrical equipment and component manufacturing	33599	64	67	-2.2	128	-2.3	772
Transportation equipment manufacturing	336						
Motor vehicle manufacturing	3361	5,774	4,833	3.0	10,923	5.7	65,796
Motor vehicle parts manufacturing	3363	2,600	2,579	6.9	5,538	10.2	32,741
Aerospace product and parts manufacturing	3364	886	1,185	-0.7	2,056	-15.0	12,472
Railroad rolling stock manufacturing	3365	245	228	9.7	520	5.4	2,878
Ship and boat building	3366	152	89	-37.7	150	20.6	1,241
Furniture and related product manufacturing	337						
Household and institutional furniture and kitchen cabinet manufacturing	3371	593	548	-2.8	1,109	7.7	7,133
Office furniture (including fixtures) manufacturing	3372	307	318	17.9	736	-6.0	4,319
Miscellaneous manufacturing	339						
Medical equipment and supplies manufacturing	3391	116	110	-5.5	214	5.3	1,432
Other miscellaneous manufacturing	3399	292	280	7.3	614	9.7	4,095

Table 8b
Inventory owned for selected industries, unadjusted

	NAICS Code	Current periods			
		February 2003	January 2003	December 2002	November 2002
\$ millions					
Food manufacturing	311				
Animal food manufacturing	3111	261	255	260	266
Starch and vegetable fat and oil manufacturing	31122	236	224	219	222
Sugar and confectionery product manufacturing	3113	343	353	346	383
Fruit and vegetable preserving and specialty food manufacturing	3114	918	940	956	1,008
Dairy product manufacturing	3115	846	763	763	769
Meat product manufacturing	3116	859	840	812	882
Cookie, cracker and pasta manufacturing	31182	124	126	124	126
Other food manufacturing	3119	471	465	457	470
Beverage and tobacco product manufacturing	312				
Soft drink and ice manufacturing	31211	240	218	216	264
Breweries	31212	163	161	157	177
Wineries	31213	227	226	220	225
Distilleries	31214	502	506	492	501
Tobacco manufacturing	3122	630	593	563	592
Textile mills	313				
Fibre, yarn and thread mills	3131	55	53	52	55
Fabric mills	3132	334	335	327	334
Textile and fabric finishing and fabric coating	3133	71	71	68	68
Textile product mills	314				
Carpet and rug mills	31411	76	76	75	82
Textile bag and canvas mills	31491	50	50	55	64
Clothing manufacturing	315				
Hosiery and sock mills	31511	139	124	126	131
Other clothing knitting mills	31519	102	96	95	96
Men's and boys' cut and sew clothing manufacturing	31522	386	372	369	360
Women's and girls' cut and sew clothing manufacturing	31523	338	357	351	342
Clothing accessories and other clothing manufacturing	3159	68	63	60	63
Leather and allied product manufacturing	316				
Footwear manufacturing	3162	82	79	76	79
Wood product manufacturing	321				
Sawmills and wood preservation	3211	3,550	3,176	2,844	2,730
Veneer, plywood and engineered wood product manufacturing	3212	765	704	664	647
Other wood product manufacturing	3219	901	872	861	851
Paper manufacturing	322				
Pulp, paper and paperboard mills	3221	2,514	2,488	2,478	2,513
Paperboard container manufacturing	32221	539	510	492	507
Paper bag and coated and treated paper manufacturing	32222	266	268	273	258
Other converted paper product manufacturing	32229	147	143	141	148
Printing and related support activities	323				
Printing	32311	663	628	643	693
Support activities for printing	32312	11	11	11	11
Petroleum and coal products manufacturing	324				
Petroleum refineries	32411	1,321	1,338	1,234	1,163
Chemical manufacturing	325				
Other basic inorganic chemical manufacturing	32518	177	174	180	171
Other basic organic chemical manufacturing	32519	165	151	158	150
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	3252	541	528	532	531
Pesticide and other agricultural chemical manufacturing	32532	129	126	118	116
Pharmaceutical and medicine manufacturing	3254	3,126	2,942	2,895	2,910
Paint and coating manufacturing	32551	254	242	229	239
Adhesive manufacturing	32552	84	84	81	80
Soap and cleaning compound manufacturing	32561	104	108	100	108
Toilet preparation manufacturing	32562	183	188	180	182
Printing ink manufacturing	32591	52	52	50	49
All other chemical product manufacturing	32599	319	317	314	309

Table 8b

Inventory owned for selected industries, unadjusted - continued

	NAICS Code	Current periods			
		February 2003	January 2003	December 2002	November 2002
\$ millions					
Plastics and rubber products manufacturing	326				
Plastic pipe, pipe fitting and unsupported profile shape manufacturing	32612	223	222	223	229
Polystyrene foam product manufacturing	32614	37	39	35	31
Other plastic product manufacturing	32619	905	908	898	898
Other rubber product manufacturing	32629	188	191	194	187
Non-metallic mineral product manufacturing	327				
Clay product and refractory manufacturing	3271	92	90	90	86
Glass and glass product manufacturing	3272	278	275	265	258
Cement manufacturing	32731	205	203	184	154
Ready-mix concrete manufacturing	32732	164	168	213	101
Other concrete product manufacturing	32739	87	83	79	76
Abrasive product manufacturing	32791	138	138	134	144
All other non-metallic mineral product manufacturing	32799	143	145	141	145
Primary metal manufacturing	331				
Iron and steel mills and ferro-alloy manufacturing	3311	2,172	2,226	2,316	2,304
Iron and steel pipes and tubes manufacturing from purchased steel	33121	603	596	659	609
Foundries	3315	299	291	292	295
Fabricated metal product manufacturing	332				
Cutlery and hand tool manufacturing	3322	93	91	84	83
Plate work and fabricated structural product manufacturing	33231	460	441	430	438
Power boiler and heat exchanger manufacturing	33241	173	175	156	155
Spring and wire product manufacturing	3326	158	161	148	161
Coating, engraving, heat treating and allied activities	3328	170	168	165	157
Other fabricated metal product manufacturing	3329	556	562	547	541
Machinery manufacturing	333				
Agricultural implement manufacturing	33311	562	567	546	536
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	337	324	316	326
All other general-purpose machinery manufacturing	33399	373	379	386	392
Computer and electronic product manufacturing	334				
Computer and peripheral equipment manufacturing	3341	607	596	600	600
Communications equipment manufacturing	3342	2,291	2,283	2,211	2,416
Audio and video equipment manufacturing	3343	56	56	55	57
Electrical equipment, appliance and component manufacturing	335				
Lighting fixture manufacturing	33512	144	149	152	148
Small electrical appliance manufacturing	33521	47	47	46	44
Major appliance manufacturing	33522	171	164	160	162
Battery manufacturing	33591	64	62	60	63
Communication and energy wire and cable manufacturing	33592	261	263	269	291
All other electrical equipment and component manufacturing	33599	107	110	104	108
Transportation equipment manufacturing	336				
Motor vehicle manufacturing	3361	1,678	1,648	1,784	1,788
Motor vehicle parts manufacturing	3363	1,947	1,935	1,904	1,873
Aerospace product and parts manufacturing	3364	7,677	7,326	7,965	8,121
Railroad rolling stock manufacturing	3365	1,403	1,389	1,455	1,461
Ship and boat building	3366	134	136	133	136
Furniture and related product manufacturing	337				
Household and institutional furniture and kitchen cabinet manufacturing	3371	835	817	806	819
Office furniture (including fixtures) manufacturing	3372	403	410	399	419
Miscellaneous manufacturing	339				
Medical equipment and supplies manufacturing	3391	178	176	167	173
Other miscellaneous manufacturing	3399	909	923	900	922

Table 8b

Inventory owned for selected industries, unadjusted - continued

	NAICS Code	Previous year		Year-to-date		Annual	
		February 2002	January 2002	% Change from 2002	Average 2003	% Change from 2001	2002
\$ millions							
Food manufacturing	311						
Animal food manufacturing	3111	261	270	-2.6	258	7.3	263
Starch and vegetable fat and oil manufacturing	31122	184	196	21.3	230	6.5	189
Sugar and confectionery product manufacturing	3113	345	383	-4.5	348	-1.3	359
Fruit and vegetable preserving and specialty food manufacturing	3114	837	868	9.0	929	7.9	870
Dairy product manufacturing	3115	715	702	13.6	804	5.3	748
Meat product manufacturing	3116	969	920	-10.0	850	-1.6	884
Cookie, cracker and pasta manufacturing	31182	127	126	-1.4	125	-1.9	115
Other food manufacturing	3119	453	454	3.2	468	4.4	482
Beverage and tobacco product manufacturing	312						
Soft drink and ice manufacturing	31211	206	211	9.6	229	13.8	253
Breweries	31212	148	141	12.2	162	10.2	168
Wineries	31213	212	203	9.2	226	12.6	209
Distilleries	31214	442	436	14.9	504	12.1	484
Tobacco manufacturing	3122	675	639	-6.9	611	-6.2	602
Textile mills	313						
Fibre, yarn and thread mills	3131	63	68	-17.3	54	-22.3	58
Fabric mills	3132	411	393	-16.8	335	-7.1	368
Textile and fabric finishing and fabric coating	3133	57	59	21.6	71	-7.4	60
Textile product mills	314						
Carpet and rug mills	31411	76	82	-3.7	76	-21.6	81
Textile bag and canvas mills	31491	64	62	-20.7	50	5.1	67
Clothing manufacturing	315						
Hosiery and sock mills	31511	132	125	2.5	131	-0.8	136
Other clothing knitting mills	31519	91	91	8.7	99	0.2	103
Men's and boys' cut and sew clothing manufacturing	31522	357	341	8.6	379	-19.9	369
Women's and girls' cut and sew clothing manufacturing	31523	330	332	5.0	348	-7.8	351
Clothing accessories and other clothing manufacturing	3159	62	63	4.2	65	-14.7	64
Leather and allied product manufacturing	316						
Footwear manufacturing	3162	78	79	2.7	81	-10.7	92
Wood product manufacturing	321						
Sawmills and wood preservation	3211	3,629	3,338	-3.5	3,363	-9.8	2,997
Veneer, plywood and engineered wood product manufacturing	3212	697	665	7.9	735	-4.4	652
Other wood product manufacturing	3219	783	756	15.3	887	7.3	802
Paper manufacturing	322						
Pulp, paper and paperboard mills	3221	2,633	2,628	-4.9	2,501	-8.5	2,549
Paperboard container manufacturing	32221	522	523	0.3	524	-5.0	514
Paper bag and coated and treated paper manufacturing	32222	256	249	5.8	267	2.1	254
Other converted paper product manufacturing	32229	139	141	3.7	145	-3.8	147
Printing and related support activities	323						
Printing	32311	696	695	-7.1	646	-4.4	688
Support activities for printing	32312	17	17	-34.9	11	-42.6	14
Petroleum and coal products manufacturing	324						
Petroleum refineries	32411	1,439	1,383	-5.8	1,330	-12.4	1,322
Chemical manufacturing	325						
Other basic inorganic chemical manufacturing	32518	204	207	-14.6	175	-4.3	184
Other basic organic chemical manufacturing	32519	149	170	-1.0	158	-23.8	146
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	3252	548	562	-3.7	535	-18.9	525
Pesticide and other agricultural chemical manufacturing	32532	141	147	-11.2	128	-20.2	133
Pharmaceutical and medicine manufacturing	3254	2,464	2,380	25.3	3,034	32.8	2,665
Paint and coating manufacturing	32551	262	255	-4.0	248	-9.1	249
Adhesive manufacturing	32552	82	81	3.5	84	15.4	81
Soap and cleaning compound manufacturing	32561	145	141	-25.7	106	-11.8	129
Toilet preparation manufacturing	32562	156	159	17.8	186	-6.8	162
Printing ink manufacturing	32591	49	49	6.4	52	-4.2	50
All other chemical product manufacturing	32599	301	298	6.0	318	-0.9	312

Table 8b

Inventory owned for selected industries, unadjusted - concluded

	NAICS Code	Previous year		Year-to-date		Annual	
		February 2002	January 2002	% Change from 2002	Average 2003	% Change from 2001	2002
\$ millions							
Plastics and rubber products manufacturing	326						
Plastic pipe, pipe fitting and unsupported profile shape manufacturing	32612	229	221	-1.1	222	-6.4	222
Polystyrene foam product manufacturing	32614	29	28	31.8	38	1.6	31
Other plastic product manufacturing	32619	819	800	12.0	907	7.8	848
Other rubber product manufacturing	32629	192	206	-4.7	189	-7.2	189
Non-metallic mineral product manufacturing	327						
Clay product and refractory manufacturing	3271	92	90	0.1	91	-12.2	89
Glass and glass product manufacturing	3272	278	267	1.5	276	2.8	272
Cement manufacturing	32731	218	196	-1.3	204	-1.9	187
Ready-mix concrete manufacturing	32732	104	108	56.4	166	-0.3	111
Other concrete product manufacturing	32739	87	76	4.0	85	1.2	82
Abrasive product manufacturing	32791	139	109	11.3	138	32.0	151
All other non-metallic mineral product manufacturing	32799	128	135	9.3	144	0.8	141
Primary metal manufacturing	331						
Iron and steel mills and ferro-alloy manufacturing	3311	1,937	1,968	12.6	2,199	-1.1	2,050
Iron and steel pipes and tubes manufacturing from purchased steel	33121	491	519	18.7	599	6.6	543
Foundries	3315	286	292	2.1	295	1.0	287
Fabricated metal product manufacturing	332						
Cutlery and hand tool manufacturing	3322	81	80	14.8	92	9.3	83
Plate work and fabricated structural product manufacturing	33231	438	439	2.8	451	2.9	448
Power boiler and heat exchanger manufacturing	33241	143	122	31.2	174	27.1	148
Spring and wire product manufacturing	3326	151	153	4.9	160	-7.4	154
Coating, engraving, heat treating and allied activities	3328	155	147	12.0	169	16.4	156
Other fabricated metal product manufacturing	3329	545	546	2.4	559	3.6	548
Machinery manufacturing	333						
Agricultural implement manufacturing	33311	519	509	9.8	565	1.8	512
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	356	337	-4.7	330	6.7	344
All other general-purpose machinery manufacturing	33399	365	350	5.2	376	12.2	363
Computer and electronic product manufacturing	334						
Computer and peripheral equipment manufacturing	3341	623	631	-4.0	602	-42.7	607
Communications equipment manufacturing	3342	2,798	2,899	-19.7	2,287	-19.6	2,447
Audio and video equipment manufacturing	3343	45	46	24.2	56	-10.6	51
Electrical equipment, appliance and component manufacturing	335						
Lighting fixture manufacturing	33512	165	165	-11.4	146	-2.9	160
Small electrical appliance manufacturing	33521	37	38	25.6	47	-19.2	43
Major appliance manufacturing	33522	155	154	8.4	167	10.6	160
Battery manufacturing	33591	76	62	-8.2	63	44.2	70
Communication and energy wire and cable manufacturing	33592	307	301	-13.8	262	-42.1	292
All other electrical equipment and component manufacturing	33599	118	121	-9.7	108	-24.2	111
Transportation equipment manufacturing	336						
Motor vehicle manufacturing	3361	1,772	1,747	-5.5	1,663	2.9	1,730
Motor vehicle parts manufacturing	3363	1,683	1,710	14.4	1,941	3.9	1,762
Aerospace product and parts manufacturing	3364	7,612	7,301	0.6	7,501	0.3	7,817
Railroad rolling stock manufacturing	3365	1,266	1,306	8.5	1,396	-13.8	1,340
Ship and boat building	3366	251	246	-45.7	135	-35.7	145
Furniture and related product manufacturing	337						
Household and institutional furniture and kitchen cabinet manufacturing	3371	726	696	16.2	826	9.7	773
Office furniture (including fixtures) manufacturing	3372	399	392	2.8	406	-11.1	398
Miscellaneous manufacturing	339						
Medical equipment and supplies manufacturing	3391	177	179	-0.5	177	-5.8	180
Other miscellaneous manufacturing	3399	833	822	10.7	916	5.4	879

Table 9
Inventories owned by stage of fabrication

Period covered	Unadjusted			
	Raw materials	Goods in process	Finished products	Total inventories
February 2002	27,712	15,685	19,506	62,903
March 2002	27,254	15,674	19,875	62,802
April 2002	27,133	15,604	19,748	62,485
May 2002	26,681	15,831	19,420	61,933
June 2002	26,301	15,759	19,130	61,190
July 2002	26,991	15,554	18,660	61,205
August 2002	27,198	16,209	18,823	62,231
September 2002	27,108	15,941	19,144	62,193
October 2002	27,379	15,975	18,942	62,295
November 2002	27,237	16,282	19,610	63,129
December 2002	27,704	15,789	19,105	62,599
January 2003	27,941	15,453	19,427	62,821
February 2003	28,336	16,031	20,084	64,450
Period covered	Seasonally adjusted			
	Raw materials	Goods in process	Finished products	Total inventories
February 2002	27,095	15,689	19,429	62,213
March 2002	26,689	15,531	19,505	61,724
April 2002	26,882	15,628	19,351	61,861
May 2002	26,985	15,593	19,078	61,657
June 2002	26,840	15,780	18,992	61,612
July 2002	27,334	15,814	18,811	61,958
August 2002	27,420	16,152	18,835	62,407
September 2002	27,319	15,812	19,189	62,320
October 2002	27,450	15,913	19,217	62,580
November 2002	27,331	16,014	19,643	62,989
December 2002	27,687	15,995	19,675	63,357
January 2003	27,547	15,891	19,724	63,162
February 2003	27,677	16,073	19,952	63,702

Table 10
Shipments by major group and province, unadjusted

Province	Current year			
	February 2003	January 2003	December 2002	November 2002
	\$ millions			
Total				
Newfoundland and Labrador	133	145	177	189
Prince Edward Island	75	83	100	105
Nova Scotia	692	700	726	752
New Brunswick	970	1,024	1,086	972
Quebec	9,334	9,437	9,713	10,390
Ontario	22,213	22,818	20,269	24,052
Manitoba	914	914	931	980
Saskatchewan	567	596	560	564
Alberta	3,401	3,522	3,438	3,578
British Columbia	2,616	2,596	2,693	2,719
311 Food manufacturing				
Newfoundland and Labrador	37	35	55	57
Prince Edward Island	52	61	76	80
Nova Scotia	167	158	206	192
New Brunswick	99	106	130	133
Quebec	1,104	1,052	1,188	1,200
Ontario	1,898	1,928	2,147	2,158
Manitoba	233	242	268	253
Saskatchewan	139	152	166	161
Alberta	731	749	743	751
British Columbia	309	325	382	344
312 Beverage and tobacco product manufacturing				
Nova Scotia	15	12	20	16
Quebec	270	265	378	319
Ontario	491	420	581	538
Saskatchewan	4	3	5	4
British Columbia	65	60	94	81
313 Textile mills				
Quebec	145	142	145	164
Ontario	65	68	56	73
314 Textile product mills				
Quebec	73	68	71	87
Ontario	86	88	77	92
Alberta	2	2	2	3
British Columbia	7	7	13	12
315 Clothing manufacturing				
Quebec	317	272	245	339
Ontario	154	145	135	209
Manitoba	26	24	27	39
Saskatchewan	2	2	2	3
Alberta	6	7	7	11
British Columbia	22	23	18	21
316 Leather and allied product manufacturing				
Quebec	24	24	24	39
Ontario	12	13	21	21
321 Wood product manufacturing				
Nova Scotia	38	39	38	42
Quebec	597	587	529	648
Ontario	422	432	391	444
Manitoba	31	37	35	43
Saskatchewan	37	36	35	43
Alberta	168	174	157	184
British Columbia	787	758	747	768

Table 10
Shipments by major group and province, unadjusted - continued

Province	Current year			
	February 2003	January 2003	December 2002	November 2002
	\$ millions			
322 Paper manufacturing				
Nova Scotia	69	66	79	78
Quebec	893	940	932	1,013
Ontario	788	823	769	858
Alberta	124	124	137	140
British Columbia	395	421	416	425
323 Printing and related support activities				
Quebec	222	222	219	249
Ontario	401	418	440	480
Manitoba	31	30	34	38
Saskatchewan	8	8	9	9
Alberta	43	45	45	49
British Columbia	42	43	43	51
324 Petroleum and coal products manufacturing				
Quebec	751	703	678	644
Ontario	909	939	932	950
Alberta	748	714	646	687
British Columbia	63	64	58	55
325 Chemical manufacturing				
Quebec	657	652	690	739
Ontario	1,655	1,771	1,647	1,680
Manitoba	51	62	54	58
Saskatchewan	53	55	23	27
Alberta	584	646	615	601
British Columbia	95	92	89	91
326 Plastics and rubber products manufacturing				
Nova Scotia	82	92	70	104
Quebec	411	405	360	447
Ontario	1,080	1,158	964	1,143
Manitoba	41	40	35	42
Saskatchewan	8	7	6	8
Alberta	78	71	69	82
British Columbia	74	73	72	78
327 Non-metallic mineral product manufacturing				
Nova Scotia	6	9	9	16
Quebec	136	142	144	234
Ontario	327	335	366	494
Saskatchewan	3	3	4	6
Alberta	99	102	103	134
British Columbia	100	97	93	113
331 Primary metal manufacturing				
Quebec	1,023	1,073	1,003	1,025
Ontario	1,375	1,528	1,220	1,400
Alberta	78	81	71	67
332 Fabricated metal product manufacturing				
Newfoundland and Labrador	8	8	7	9
Prince Edward Island	3	1	3	2
Nova Scotia	20	19	23	28
New Brunswick	18	18	19	21
Quebec	371	383	373	457
Ontario	1,236	1,255	1,078	1,356
Manitoba	75	61	59	63
Saskatchewan	30	30	29	31
Alberta	221	239	209	259
British Columbia	132	124	110	134

Table 10

Shipments by major group and province, unadjusted - continued

Province	Current year			
	February 2003	January 2003	December 2002	November 2002
	\$ millions			
333 Machinery manufacturing				
Quebec	348	334	394	355
Ontario	949	968	1,001	1,054
Manitoba	81	79	79	79
Saskatchewan	52	46	47	44
Alberta	217	226	227	239
British Columbia	146	125	157	155
334 Computer and electronic product manufacturing				
Quebec	452	413	572	499
Ontario	771	781	958	937
Saskatchewan	7	8	9	7
Alberta	72	87	157	109
British Columbia	58	55	82	74
335 Electrical equipment, appliance and component manufacturing				
Quebec	217	240	220	239
Ontario	388	393	383	452
Manitoba	12	13	15	15
Saskatchewan	9	10	12	11
Alberta	27	27	24	32
British Columbia	31	29	29	33
336 Transportation equipment manufacturing				
Nova Scotia	47	53	44	51
Quebec	951	1,168	1,182	1,219
Ontario	8,464	8,621	6,420	8,981
Manitoba	135	128	131	141
Saskatchewan	25	30	22	30
Alberta	67	73	66	61
British Columbia	86	89	80	80
337 Furniture and related product manufacturing				
Quebec	253	241	227	280
Ontario	534	569	505	552
Manitoba	60	55	55	64
Saskatchewan	6	6	6	7
Alberta	59	67	66	73
British Columbia	44	46	46	46
339 Miscellaneous manufacturing				
Newfoundland and Labrador	1	0	0	1
Quebec	119	110	139	191
Ontario	206	166	178	180
Manitoba	9	8	8	9
Saskatchewan	3	4	4	4
Alberta	28	43	33	40
British Columbia	45	49	57	53

Table 10

Shipments by major group and province, unadjusted - continued

	Previous year		Year-to-date		Annual	
	February 2002	January 2002	% Change from 2002	2003	% Change from 2001	2002
	\$ millions					
Total						
Newfoundland and Labrador	141	130	2.2	277	1.3	2,234
Prince Edward Island	79	85	-3.3	159	9.5	1,316
Nova Scotia	642	609	11.3	1,392	1.3	8,647
New Brunswick	785	820	24.3	1,995	3.1	12,632
Quebec	9,052	9,264	2.5	18,772	0.9	122,038
Ontario	21,655	21,024	5.5	45,030	3.4	277,585
Manitoba	861	911	3.2	1,828	0.6	11,538
Saskatchewan	559	574	2.6	1,163	1.3	7,240
Alberta	2,875	3,037	17.1	6,923	-3.4	40,953
British Columbia	2,545	2,417	5.0	5,212	0.4	34,238
311 Food manufacturing						
Newfoundland and Labrador	43	40	-12.3	73	10.3	891
Prince Edward Island	57	64	-6.6	113	8.0	952
Nova Scotia	166	155	1.3	325	2.2	2,234
New Brunswick	97	110	-1.0	204	4.6	2,004
Quebec	1,028	1,020	5.3	2,156	1.4	13,573
Ontario	1,875	1,921	0.8	3,826	-0.1	25,088
Manitoba	226	249	0.2	476	4.3	3,023
Saskatchewan	140	141	3.4	291	3.3	1,825
Alberta	676	713	6.6	1,480	-1.0	9,055
British Columbia	297	295	7.2	635	3.4	4,271
312 Beverage and tobacco product manufacturing						
Nova Scotia	14	11	13.5	28	1.5	213
Quebec	260	251	4.9	535	5.7	4,093
Ontario	425	448	4.3	911	2.6	6,514
Saskatchewan	7	6	-47.5	7	-7.8	92
British Columbia	56	52	16.2	125	9.1	990
313 Textile mills						
Quebec	174	161	-14.5	287	-2.8	2,065
Ontario	81	73	-13.4	133	-5.4	912
314 Textile product mills						
Quebec	79	72	-6.7	141	-2.1	1,020
Ontario	89	87	-1.5	174	3.8	1,138
Alberta	2	2	0.9	4	-14.4	28
British Columbia	11	11	-35.4	14	4.0	153
315 Clothing manufacturing						
Quebec	356	268	-5.4	589	-7.6	3,930
Ontario	168	141	-3.1	300	6.7	2,021
Manitoba	19	18	36.7	51	13.1	376
Saskatchewan	1	2	18.8	4	-5.6	22
Alberta	7	8	-12.8	13	-6.8	89
British Columbia	21	24	2.2	46	-15.8	263
316 Leather and allied product manufacturing						
Quebec	27	26	-8.7	48	-18.8	430
Ontario	15	20	-28.8	25	11.9	225
321 Wood product manufacturing						
Nova Scotia	38	37	2.1	76	10.1	530
Quebec	571	522	8.4	1,184	11.7	7,626
Ontario	423	414	2.2	855	7.9	5,630
Manitoba	35	35	-2.6	67	-13.5	501
Saskatchewan	24	25	46.8	73	39.0	430
Alberta	166	171	1.8	343	2.8	2,265
British Columbia	882	814	-8.9	1,545	4.9	10,832

Table 10

Shipments by major group and province, unadjusted - continued

	Previous year		Year-to-date		Annual	
	February 2002	January 2002	% Change from 2002	2003	% Change from 2001	2002
	\$ millions					
322 Paper manufacturing						
Nova Scotia	68	70	-2.1	135	-17.9	881
Quebec	888	954	-0.5	1,833	-2.7	11,729
Ontario	787	853	-1.7	1,612	-3.6	10,091
Alberta	117	139	-3.3	248	4.0	1,553
British Columbia	370	348	13.6	815	-11.7	4,790
323 Printing and related support activities						
Quebec	222	204	4.1	443	-11.3	2,749
Ontario	403	416	0.1	819	2.0	5,353
Manitoba	36	34	-12.6	61	-6.4	436
Saskatchewan	7	7	15.7	16	6.1	106
Alberta	45	41	2.9	88	-5.4	574
British Columbia	47	49	-11.6	85	-10.7	608
324 Petroleum and coal products manufacturing						
Quebec	411	441	70.5	1,454	6.7	6,844
Ontario	612	652	46.2	1,848	-2.9	9,861
Alberta	452	460	60.3	1,461	1.0	7,491
British Columbia	57	64	5.4	127	-4.8	754
325 Chemical manufacturing						
Quebec	677	674	-3.1	1,310	6.8	8,711
Ontario	1,448	1,515	15.6	3,426	7.8	20,079
Manitoba	43	51	19.7	113	-12.5	616
Saskatchewan	47	44	18.5	108	-10.8	562
Alberta	448	454	36.4	1,230	-6.7	6,456
British Columbia	73	73	28.8	187	7.1	1,076
326 Plastics and rubber products manufacturing						
Nova Scotia	85	89	-0.4	173	6.9	1,141
Quebec	382	363	9.6	816	10.7	5,208
Ontario	1,054	1,037	7.0	2,237	7.0	13,805
Manitoba	37	36	11.1	82	7.5	508
Saskatchewan	7	8	2.6	15	5.4	98
Alberta	63	68	14.1	150	-4.0	1,023
British Columbia	68	65	11.2	147	-3.1	1,008
327 Non-metallic mineral product manufacturing						
Nova Scotia	7	8	-0.3	14	1.2	162
Quebec	135	120	8.9	278	10.8	2,701
Ontario	306	317	6.1	661	4.9	5,264
Saskatchewan	4	4	-12.4	7	-8.1	113
Alberta	78	81	25.7	200	24.1	1,510
British Columbia	83	78	23.0	197	17.0	1,357
331 Primary metal manufacturing						
Quebec	991	1,042	3.1	2,096	7.8	12,712
Ontario	1,201	1,231	19.4	2,903	11.9	16,003
Alberta	67	82	7.2	159	-12.0	882
332 Fabricated metal product manufacturing						
Newfoundland and Labrador	4	3	152.0	17	-15.5	88
Prince Edward Island	1	2	86.3	5	-1.5	25
Nova Scotia	17	17	15.8	39	17.2	264
New Brunswick	19	21	-7.6	36	-5.7	268
Quebec	394	366	-0.8	754	1.8	5,329
Ontario	1,288	1,267	-2.5	2,491	4.7	16,165
Manitoba	48	45	46.4	136	-2.6	703
Saskatchewan	28	26	13.0	60	-6.5	416
Alberta	198	206	13.8	460	-2.7	2,637
British Columbia	116	116	10.3	256	2.2	1,609

Table 10
Shipments by major group and province, unadjusted - concluded

	Previous year		Year-to-date		Annual	
	February 2002	January 2002	% Change from 2002	2003	% Change from 2001	2002
	\$ millions					
333 Machinery manufacturing						
Quebec	331	414	-8.6	682	0.2	4,587
Ontario	973	1,008	-3.2	1,916	4.1	12,943
Manitoba	78	94	-6.8	160	9.9	1,046
Saskatchewan	68	59	-22.6	98	7.4	662
Alberta	241	273	-13.8	443	-14.5	2,873
British Columbia	108	96	33.4	271	8.7	1,594
334 Computer and electronic product manufacturing						
Quebec	495	455	-8.9	865	-18.1	6,588
Ontario	928	881	-14.2	1,551	-14.0	11,889
Saskatchewan	6	7	13.6	16	12.7	94
Alberta	84	93	-9.8	160	-29.9	1,392
British Columbia	55	59	-1.3	113	-17.7	879
335 Electrical equipment, appliance and component manufacturing						
Quebec	222	224	2.4	456	10.7	2,932
Ontario	427	436	-9.5	781	-12.2	5,210
Manitoba	12	11	5.7	24	-14.7	183
Saskatchewan	20	23	-55.0	20	-44.7	209
Alberta	25	26	6.2	54	9.5	328
British Columbia	27	27	12.4	61	-33.0	345
336 Transportation equipment manufacturing						
Nova Scotia	106	64	-41.2	100	29.7	862
Quebec	1,019	1,353	-10.6	2,120	-7.0	14,133
Ontario	8,465	7,606	6.3	17,086	6.5	100,483
Manitoba	132	152	-7.7	263	0.2	1,603
Saskatchewan	28	27	-1.3	55	21.7	349
Alberta	64	69	4.8	140	0.5	785
British Columbia	103	83	-5.6	176	-4.9	1,283
337 Furniture and related product manufacturing						
Quebec	269	225	0.0	494	11.4	3,293
Ontario	509	521	7.0	1,103	-2.2	6,629
Manitoba	60	59	-3.9	115	11.3	743
Saskatchewan	7	7	-11.7	12	3.3	89
Alberta	64	67	-4.5	126	-3.9	838
British Columbia	42	38	12.1	89	14.5	525
339 Miscellaneous manufacturing						
Newfoundland and Labrador	1	1	-41.4	1	22.1	18
Quebec	122	107	-0.1	229	11.3	1,785
Ontario	178	182	3.5	372	6.8	2,284
Manitoba	9	7	0.3	16	-11.0	107
Saskatchewan	3	4	10.3	7	-2.0	44
Alberta	30	36	7.4	71	7.8	440
British Columbia	44	37	15.6	94	14.9	606

Survey documentation

- About the Monthly Survey of Manufacturing
- Concepts and definitions
- Survey Design and Methodology
- Data Quality

About the Monthly Survey of Manufacturing

The statistics contained in this publication are based on information obtained through a sample survey of 11,000 representative manufacturing establishments across Canada. The Monthly Survey of Manufacturers started in 1947 and although its content has remained essentially the same, it underwent a major redesign with respect to the frame in 1999.

The values (in Canadian dollars) of shipments, inventories and orders are used as indicators of the economic condition of manufacturing industries; as inputs to Canada's Gross Domestic Product; as two components in the Statistics Canada composite indicator; as input to macro- and micro-economic studies and in econometric models (e.g. to determine market share, apparent domestic availability, etc.).

Since 1999, Statistics Canada's Business Register provides the sampling frame for the Monthly Survey of Manufacturing (MSM). The target population for the MSM consists of all statistical establishments on the business register that are classified to the manufacturing sector. The sampling frame for the MSM is determined from the target population after subtracting establishments that represent the bottom 2% of the total manufacturing shipments estimate for each province. These establishments are excluded from the frame so that the sample size can be reduced without significantly affecting quality.

Concepts and Definitions

The Monthly Survey of Manufacturing (MSM) publishes statistical series for manufacturers – shipments, inventories, unfilled orders and new orders. The values of these characteristics represent current monthly estimates of the more complete Annual Survey of Manufactures (ASM) data.

The MSM is a sample survey of approximately 11,000 Canadian manufacturing establishments, which are categorized into over 200 industries. Industries are classified according to the 1997 North American Industrial Classification System (NAICS), which replaced the 1980 Standard Industrial Classification (SIC) system. Reference year 2000 is the last year for which data are released on a SIC basis. The MSM adopted the NAICS for its 2001 reference, while previous years' data have been re-calculated to the new classification system back to 1992. Seasonally adjusted series are available for the main aggregates.

An establishment comprises the smallest manufacturing unit capable of reporting the variables of interest. Data collected by the MSM provides a current 'snapshot' of shipment values by the Canadian manufacturing sector, enabling analysis of the state of the Canadian economy, as well as the health of specific industries in the short- to medium-term. The information is used by both private and public sectors including Statistics Canada, federal and provincial governments, business and trade entities, international and domestic non-governmental organizations, consultants, the business press and private citizens. The data are used for analyzing market share, trends, corporate benchmarking, policy analysis, program development, tax policy and trade policy.

1. Shipments

Shipments are defined as the value of goods manufactured by establishments that have been shipped to a customer. Shipments exclude any wholesaling activity, and any revenues from the rental of equipment or the sale of electricity. Note that in practice, some respondents report financial transactions rather than payments for work done. Shipments are available by 3-digit NAICS, broken down by province.

For the aerospace product and parts, and shipbuilding industries, the value of production is used instead of shipments. This value is calculated by adjusting monthly shipments by the monthly change in goods in process and finished product inventories. Raw materials are not included in the calculation since production tries to measure "work done" during the month. This is done in order to reduce distortions caused by the shipment of high value items as completed sales.

2. Inventories

Measurement of component values of inventory is important for economic studies as well as for derivation of production values. Respondents are asked to report their book values (at cost), of raw materials, any goods in process, and finished product inventories separately. In some cases, respondents estimate a total inventory figure, which is allocated on the basis of proportions reported on the ASM. Inventory levels are calculated on a Canadawide basis, not by province.

3. Orders

a) Unfilled Orders

Unfilled orders represent a backlog or stock of orders that will generate future shipments assuming that they are not cancelled. As with inventories, unfilled orders and new orders levels are calculated on a Canadawide basis, not by province.

The MSM produces estimates for unfilled orders for all industries except for those industries where orders are customarily filled from stocks on hand and order books are not generally maintained. In the case of the aircraft companies, options to purchase are not treated as orders until they are entered into the accounting system.

b) New Orders

New orders represent current demand for manufactured products. Estimates of new orders are derived from shipments and unfilled orders data. All shipments within a month result from either an order received during the month or at some earlier time. New orders can be calculated as the sum of shipments adjusted for the monthly change in unfilled orders.

4. Non-Durable / Durable goods

a) Non-durable goods industries

Non-durable goods industries include Food (NAICS 311), Beverage and Tobacco Products (312), Textile Mills (313), Textile Product Mills (314), Leather and Allied Products (316), Paper (322), Printing and Related Support Activities (323), Petroleum and Coal Products (324), Chemicals (325) and Plastic and Rubber Products (326)

b) Durable goods industries

Durable goods industries include Clothing (NAICS 315), Wood Products (321), Non-Metallic Mineral Products (327), Primary Metals (331), Fabricated Metal Products (332), Machinery (333), Computer and Electronic Products (334), Electrical Equipment, Appliance and Components (335), Transportation Equipment (336), Furniture and Related Products (337) and Miscellaneous Manufacturing (339).

Survey Design and Methodology

Beginning with the August 1999 reference month, the Monthly Survey of Manufacturing (MSM) has undergone an extensive redesign.

Concept Review

It was decided that before any redesign work could begin the basic concepts and definitions of the program would be confirmed.

This was done in two ways: First, a review of user requirements was initiated. This involved revisiting an internal report to ensure that the user requirements from that exercise were being satisfied. As well, another round of internal review with the major users in the National Accounts was undertaken. This was to specifically focus on any data gaps that could be identified.

Secondly, with these gaps or requirements in hand, a survey was conducted in order to ascertain respondent's ability to report existing and new data. The study was also to confirm that respondents understood the definitions, which were being asked by survey analysts.

The result of the concept review was a reduction of the number of questions for the survey from sixteen to seven. Most of the questions that were dropped had to do with the reporting of shipments for work that was partially completed.

Methodology

The new sample design incorporates the 1997 North American Industrial Classification Standard (NAICS) and gives a much higher profile to provincial estimates. Stratification is done by province with equal quality requirements for each province. Large size units are selected with certainty and small units are selected with a probability based on the desired quality of the estimate within a cell.

The opportunity was also taken at this time to allow for the introduction of sample rotation into the survey design. Most of the smaller companies who are asked to participate in the survey will do so only for a set period.

The estimation system generates estimates using the NAICS. The estimates will also continue to be reconciled to the ASM. Provincial estimates for all variables will be produced. A measure of quality (CV) will also be produced.

Components of the Redesigned Survey

Target Population and Sampling Frame

Statistics Canada's business register provides the sampling frame for the MSM. The target population for the MSM consists of all statistical establishments on the business register that are classified to the manufacturing sector (by NAICS). The sampling frame for the MSM is determined from the target population after subtracting establishments that represent the bottom 2% of the total manufacturing shipments estimate for each province. These establishments were excluded from the frame so that the sample size could be reduced without significantly affecting quality.

The Sample

The MSM sample is a probability sample comprised of approximately 11,000 establishments.

Prior to selection, the sampling frame is subdivided into industry-province cells. For the most part, NAICS codes were used. Depending upon the number of establishments within each cell, further subdivisions were made to group similar sized establishments' together (called stratum). An establishment's size was based on its most recently available annual shipments or sales value.

Each industry by province cell has a 'take-all' stratum composed of establishments sampled each month with certainty. This 'take-all' stratum is composed of establishments that are the largest statistical enterprises, and have the largest impact on estimates within a particular industry by province cell. These large statistical enterprises comprise 45% of the national manufacturing shipment estimates.

Each industry - province cell can have at most three 'take-some' strata. Not all establishments within these strata need to be sampled with certainty. A random sample is drawn from the remaining strata. The responses from these sampled establishments are weighted according to the inverse of their probability of selection.

The initial sample was selected in late 1998 and has been refreshed each month by including a sample of new entrants in the frame.

Data Collection

Data collection, data capture, preliminary edit and follow-up of non-respondents are all performed in Statistics Canada regional offices. Sampled establishments are contacted by mail or telephone according to the preference of the respondent. Data capture and preliminary editing are performed simultaneously to ensure the validity of the data.

In some cases, combined reports are received from enterprises or companies with more than one establishment in the sample where respondents prefer not to provide individual establishment reports. Businesses, which do not report or whose reports contain errors, are followed up immediately.

Data Quality

Statistical Edit and Imputation

Data are analyzed within each industry-province cell. Extreme values are listed for inspection by the magnitude of the deviation from average behavior. Respondents are contacted to verify extreme values. Records that fail statistical edits are considered outliers and are not used for imputation.

Values are imputed for the non-responses, for establishments that do not report or only partially complete the survey form. A number of imputation methods are used depending on the variable requiring treatment. Methods include using industry-province cell trends, historical responses, or reference to the ASM. Following imputation, the MSM staff performs a final verification of the responses that have been imputed.

Revisions

In conjunction with preliminary estimates for the current month, estimates for the previous three months are revised to account for any late returns. Data are revised when late responses are received or if an incorrect response was reported earlier.

Estimation

Estimates are calculated by multiplying an estimation weight to an establishment's reported responses. The estimation weight is the inverse of the sampled establishment's probability of selection. Take all units are self-representative.

Benchmarking

The MSM is periodically benchmarked to the most recent results of the Annual Survey of Manufactures (approximately eighteen months after the end of the reference year). Benchmarking is a process designed to calibrate the monthly estimates to the level of the more complete Annual Survey of Manufacturers. The result is that the two surveys have consistent totals at the aggregated level. The MSM estimates were benchmarked to the 1998 ASM with the release of the January 2001 reference month.

Sampling and Non-sampling Errors

The statistics in this publication are estimates derived from a sample survey and, as such, can be subject to errors. The following material is provided to assist the reader in the interpretation of the estimates published.

Estimates derived from a sample survey are subject to a number of different kinds of errors. These errors can be broken down into two major types: sampling and non-sampling.

1. Sampling Errors

Sampling errors are an inherent risk of sample surveys. They result from the difference between the value of a variable if it is randomly sampled and its value if a census is taken (or the average of all possible random values). These errors are present because observations are made only on a sample and not on the entire population.

The sampling error depends on factors such as the size of the sample, variability in the population, sampling design and method of estimation. For example, for a given sample size, the sampling error will depend on the stratification procedure employed, allocation of the sample, choice of the sampling units and method of selection. (Further, even for the same sampling design, we can make different calculations to arrive at the most efficient estimation procedure.) The most important feature of probability sampling is that the sampling error can be measured from the sample itself.

2. Non-sampling Errors

Non-sampling errors result from a systematic flaw in the structure of the data-collection procedure or design of any or all variables examined. They create a difference between the value of a variable obtained by sampling or census methods and the variable's true value. These errors are present whether a sample or a complete census of the population is taken. Non-sampling errors can be attributed to one or more of the following sources:

a) Coverage error: This error can result from incomplete listing and inadequate coverage of the population of interest.

b) Data response error: This error may be due to questionnaire design, the characteristics of a question, inability or unwillingness of the respondent to provide correct information, misinterpretation of the questions or definitional problems.

c) Non-response error: Some respondents may refuse to answer questions, some may be unable to respond, and others may be too late in responding. Data for the non-responding units can be imputed using the data from responding units or some earlier data on the non-responding units if available.

The extent of error due to imputation is usually unknown and is very much dependent on any characteristic differences between the respondent group and the non-respondent group in the survey. This error generally decreases with increases in the response rate and attempts are therefore made to obtain as high a response rate as possible.

d) Processing error: These errors may occur at various stages of processing such as coding, data entry, verification, editing, weighting, and tabulation, etc. Non-sampling errors are difficult to measure. More important, non-sampling errors require control at the level at which their presence does not impair the use and interpretation of the results.

Measures have been undertaken to minimize the non-sampling errors. For example, units have been defined in a most precise manner and the most up-to-date listings have been used. Questionnaires have been carefully designed to minimize different interpretations. As well, detailed acceptance testing has been carried out for the different stages of editing and processing and every possible effort has been made to reduce the non-response rate as well as the response burden.

Measures of Sampling and Non-sampling Errors

1. Sampling Error Measures

The 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 sample design under the same general conditions. If it was possible that each one of these samples could be surveyed under essentially the same conditions, with an estimate calculated from each sample, it would be expected that the sample estimates would differ from each other.

The average estimate derived from all these possible sample estimates is termed the expected value. The expected value can also be expressed as the value that would be obtained if a census enumeration were taken under identical conditions of collection and processing. An estimate calculated from a sample survey is said to be precise if it is near the expected value.

Sample estimates may differ from this expected value of the estimates. However, since the estimate is based on a probability sample, the variability of the sample estimate with respect to its expected value can be measured. The variance of an estimate is a measure of the precision of the sample estimate and is defined as the average, over all possible samples, of the squared difference of the estimate from its expected value.

The standard error is a measure of precision in absolute terms. The coefficient of variation, defined as the standard error divided by the sample estimate, is a measure of precision in relative terms. For comparison purposes, one may more readily compare the sampling error of one estimate to the sampling error of another estimate by using the coefficient of variation.

In this publication, the coefficient of variation is used to measure the sampling error of the estimates. However, since the coefficient of variation published for this survey is calculated from the responses of individual units, it also measures some non-sampling error.

The formula used to calculate the published coefficients of variation (CV) in Table 1 is:

$$CV(X) = \frac{S(X)}{X}$$

where X denotes the estimate and S(X) denotes the standard error of X.

In this publication, the coefficient of variation is expressed as a percentage.

Confidence intervals can be constructed around the estimate using the estimate and the coefficient of variation. Thus, for our sample, it is possible to state with a given level of confidence that the expected value will fall within the confidence interval constructed around the estimate. For example, if an estimate of \$12,000,000 has a coefficient of variation of 10%, the standard error will be \$1,200,000 or the estimate multiplied by the coefficient of variation. It can then be stated with 68% confidence that the expected value will fall within the interval whose length equals the standard deviation about the estimate, i.e., between \$10,800,000 and \$13,200,000. Alternatively, it can be stated with 95% confidence that the expected value will fall within the interval whose length equals two standard deviations about the estimate, i.e., between \$9,600,000 and \$14,400,000.

The table below contains the national level CVs, expressed as a percentage, for all manufacturing for the MSM characteristics. For CVs at other aggregate levels, contact the Marketing and Dissemination Section at (613) 951-9497, toll free: 1-866-873-8789 or by e-mail at *manufact@statcan.ca*.

National Level CVs by Characteristic

Month	Shipments	Raw Material Inventories	Goods in Process Inventories	Finished Product Inventories	Unfilled Orders	%					
January 2002	0.70	1.30	0.73	1.48	1.64						
February 2002	0.64	1.33	0.75	1.50	1.56						
March 2002	0.63	1.30	0.79	1.50	1.50						
April 2002	0.61	1.34	0.81	1.52	1.39						
May 2002	0.63	1.38	0.75	1.44	1.37						
June 2002	0.64	1.41	0.73	1.51	1.37						
July 2002	0.54	0.88	0.62	1.34	1.37						
August 2002	0.53	0.88	0.65	1.36	1.42						
September 2002	0.53	0.90	0.73	1.40	1.52						
October 2002	0.53	0.93	0.72	1.33	1.86						
November 2002	0.53	0.91	0.72	1.24	1.86						
December 2002	0.57	0.93	0.76	1.25	1.82						
January 2003	0.57	0.91	0.76	1.24	1.79						

2. Non-sampling Error Measures

The exact population value is aimed at or desired by both a sample survey as well as a census. We say the estimate is accurate if it is near this value. Although this value is desired, we cannot assume that the exact value of every unit in the population or sample can be obtained and processed without error. Any difference between the expected value and the exact population value is termed the bias. Systematic biases in the data cannot be measured by the probability measures of sampling error as previously described. The accuracy of a survey estimate is determined by the joint effect of sampling and non-sampling errors.

Three sources of non-sampling error in the MSM are non-response error, imputation error and the error due to editing. To assist users in evaluating these errors, weighted rates that are related to these three types of error are given in Table 2. The following is an example of what is meant by a weighted rate. A cell with a sample of 20 units in which five respond for a particular month would have a response rate of 25%. If these five reporting units represented \$8 million out of a total estimate of \$10 million, the weighted response rate would be 80%.

The definitions of the three weighted rates noted in Table 2 follow. The weighted response rate is the proportion of a characteristic's total estimate that is based upon reported data (excluding data that has been edited). The weighted imputation rate is the proportion of a characteristic's total estimate that is based upon imputed data. The weighted editing rate is the proportion of a characteristic's total estimate that is based upon data that was edited (edited data may have been originally reported or imputed).

The table below contains the three types of weighted rates for each of the characteristics at the national level for all of manufacturing. In the table, the rates (expressed as percentages) are averages over the last thirteen months.

Average National Weighted Rates by Characteristic

Characteristic	Response	Imputation	Editing
		%	
Shipments	92.07	5.23	2.70
Raw Materials	79.22	18.07	2.72
Goods in Process	85.46	9.85	4.69
Finished Products	79.72	14.37	5.91
Unfilled Orders	86.72	7.63	5.65

Joint Interpretation of Measures of Error

The measure of non-response error as well as the coefficient of variation must be considered jointly to have an overview of the quality of the estimates. The lower the coefficient of variation and the higher the weighted response rate, the better will be the published estimate.

Seasonal Adjustment

Economic time series contain the elements essential to the description, explanation and forecasting of the behavior of an economic phenomenon. They are statistical records of

the evolution of economic processes through time. In using time series to observe economic activity, economists and statisticians have identified four characteristic behavioral components: the long-term movement or trend, the cycle, the seasonal variations and the irregular fluctuations. These movements are caused by various economic, climatic or institutional factors. The seasonal variations occur periodically on a more or less regular basis over the course of a year. These variations occur as a result of seasonal changes in weather, statutory holidays and other events that occur at fairly regular intervals and thus have a significant impact on the rate of economic activity.

In the interest of accurately interpreting the fundamental evolution of an economic phenomenon and producing forecasts of superior quality, Statistics Canada uses the X11ARIMA/88 seasonal adjustment method to seasonally adjust its time series. This method minimizes the impact of seasonal variations on the series and essentially consists of adding one year of estimated raw data to the end of the original series before it is seasonally adjusted per se. The estimated data are derived from forecasts using ARIMA (Auto Regressive Integrated Moving Average) models of the Box-Jenkins type.

The X-11 part of the X11ARIMA/88 program uses primarily a ratio-to-moving average method. It is used to smooth the modified series and obtain a preliminary estimate of the trend-cycle. It also calculates the ratios of the original series (fitted) to the estimates of the trend-cycle and estimates the seasonal factors from these ratios. The final seasonal factors are produced only after these operations have been repeated several times.

The procedures to determine the seasonal factors necessary to calculate the final seasonally adjusted data are executed every month. This approach ensures that the estimated seasonal factors are derived from an unadjusted series that includes all the available information about the series, i.e. the current month's unadjusted data as well as the previous month's revised unadjusted data.

While seasonal adjustment permits a better understanding of the underlying trend-cycle of a series, the seasonally adjusted series still contains an irregular component. Slight month-to-month variations in the seasonally adjusted series may be simple irregular movements. To get a better idea of the underlying trend, users should examine several months of the seasonally adjusted series.

The Canada seasonally adjusted total is derived indirectly by the summation of the individually seasonally adjusted kinds of business.

Trend

A seasonally adjusted series may contain the effects of irregular influences and special circumstances and these can mask the trend. The short term trend shows the underlying direction in seasonally adjusted series by averaging across months, thus smoothing out the effects of irregular influences. The result is a more stable series. The trend for the last month may be, subject to significant revision as values in future months are included in the averaging process.