



Monthly Survey of Manufacturing

December 2003



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December 2003

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Symbols

The following symbols are used in this Statistics Canada publication:

- . not available for any reference period.
- .. not available for a specific reference period.
- ... not applicable.
- x suppressed to meet the confidentiality requirements of the Statistics Act.

Notice to users

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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Table of contents

	Page
Highlights	6
Products and services	10
Statistical Tables	
1. All Manufacturing Industries	11
2. Motor Vehicle, and Parts and Accessories Industries	12
3. All Manufacturing Industries except Motor Vehicle, Parts and Accessories Industries	13
4. Shipments by Major Group and Selected Industries	14
5. Inventories by Major Group and Selected Industries	16
6. Unfilled Orders by Selected Major Group and Industries	18
7. New Orders by Selected Major Group and Industries	20
8. Shipments and Inventory Owned for Selected Industries, Unadjusted	22
9. Inventories owned by stage of fabrication	30
10. Shipments by Major Group and Province, Unadjusted	31
Survey Documentation	37

Highlights

December 2003 and Annual 2003

A modest increase in December's shipments capped off what has otherwise been a bumpy ride for manufacturers in 2003. Shipments rose 1.0% to \$42.7 billion, the first increase in three months. Meanwhile, manufacturers' prospects seem encouraging as they continue to sign new orders. Orders climbed 1.6% in December, the third boost in four months.

Canada's manufacturers remain cautiously optimistic

Following a lacklustre 2003, Canadian manufacturers were cautiously optimistic regarding the outlook for the first quarter of 2004. According to the Business Conditions Survey for January, business confidence improved and greater satisfaction was expressed for finished-product inventory levels and orders received, while 30% of manufacturers anticipated that they would increase production during the first quarter. However, there was some trepidation noted regarding the low levels of unfilled orders.

On the job front, manufacturing employment rose by 4,800 positions in January, but remained well below levels of one year ago, according to the recent Labour Force Survey. Employment was largely unchanged in December (-1,900).

Most provinces and the territories post gains in December

Ontario led the six provinces and the territories reporting higher shipments in December. Manufacturers posted shipments of \$22.7 billion, up \$325 million (+1.5%) in Ontario, wiping out November's 1.4% drop. The motor vehicle and chemical products industries were largely responsible.

Shipments in Quebec rose by \$52 million (+0.5%) to \$9.8 billion, the highest level since September. Aerospace manufacturing and quarter-end boosts in the computer industry were the primary contributors. New Brunswick also reported a strong gain in December, as shipments increased for the second month in a row to \$1.1 billion (+5.8%).

Production of big-ticket items boosts shipments

By industry, 15 of the 21 major groups, accounting for 64% of total shipments, reported increases in December. Manufacturers of big ticket, durable goods, including aircrafts, motor vehicles and parts, rose 1.2% to \$24.2 billion, the first increase since September. Nondurable goods manufacturing edged up 0.7% to \$18.5 billion.

Leading all industries, motor vehicle shipments increased 3.0% to \$5.0 billion in December, recovering somewhat from consecutive declines in October (-2.1%) and November (-4.1%). The trend for motor vehicle manufacturing has been gradually descending since mid-2002.

Motor vehicle production has been quite volatile in 2003, as manufacturers and retailers attempted to grapple with market conditions. During the year, auto retailers continued to tempt

Shipments by province and territory

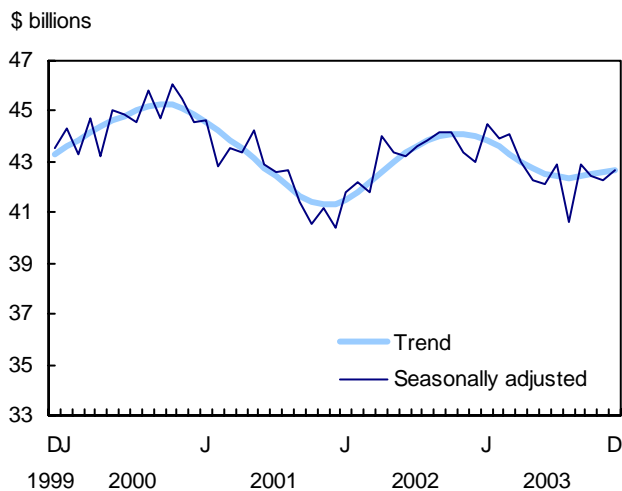
	November 2003	December 2003	November to December 2003
Seasonally adjusted			
	\$ millions		% change
Newfoundland and Labrador	202	207	2.7
Prince Edward Island	115	115	-0.4
Nova Scotia	747	735	-1.6
New Brunswick	1,083	1,146	5.8
Quebec	9,747	9,800	0.5
Ontario	22,386	22,711	1.5
Manitoba	972	999	2.9
Saskatchewan	648	643	-0.8
Alberta	3,567	3,602	1.0
British Columbia	2,806	2,741	-2.3
Yukon, Northwest Territories and Nunavut	6	7	27.8

consumers with generous incentives, while low interest rates provide affordable financing. Despite these factors, in recent months, temporary plant shutdowns and a deceleration in production by some manufacturers have been necessary for inventory control purposes.

Gains reported in aerospace and chemicals

Other industries reporting higher shipments in December included aerospace, chemical products and motor vehicle parts. Production of aerospace products and parts jumped 13.0% to \$920.6 million, regaining ground lost in November (-12.7%). Meanwhile, pharmaceutical manufacturers contributed to a 2.6% rise in shipments of chemical products to \$3.3 billion, the highest level since September. The motor vehicle parts industry reported a 2.7% increase in December.

Manufacturers' shipments rally in December



Partly offsetting the rise in total shipments was the wood products industry, where shipments plunged 7.6% to \$2.3 billion. This was the third consecutive decline, and was primarily due to a significant drop in the industrial price of wood and a labour dispute in British Columbia's coastal forestry sector.

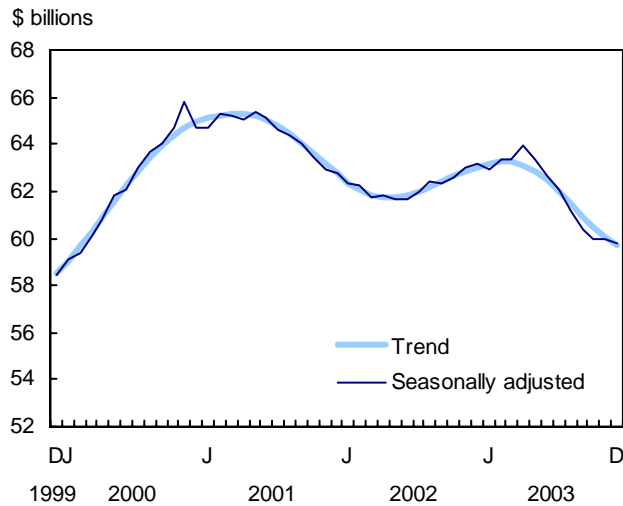
Manufacturers continue to clear out inventories

In December, inventories closed the year at \$59.8 billion, down 0.3% from November. Manufacturers' inventories have been in a gradual decline since last spring, falling 6.4% since their recent high of \$63.9 billion in April.

Inventories of raw materials, which have been on a steady decline throughout 2003, were essentially unchanged at \$25.9 billion in December, the lowest level in just over four years. Meanwhile, decreases were reported in both goods-in-process (-1.0%) and finished-product (-0.2%) inventories. Finished-products (\$18.9 billion) continued their downward trek, and following eight consecutive declines, they are at the lowest level since August 2002.

Decreases in inventories of aerospace products and parts (-1.7%) and primary metals (-1.2%) offset a 2.2% gain in the chemical products industry.

Inventories edge down again

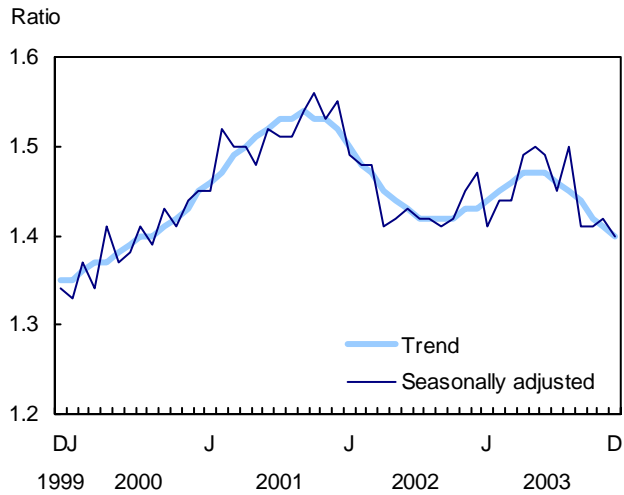


The inventory-to-shipment ratio falls to a three-year low

Improved shipments coupled with a small reduction in inventories, contributed to a lower inventory-to-shipment ratio in December. The ratio fell to 1.40, the lowest level in over three years. Inventories have been trending down throughout the year.

The finished-product inventory-to-shipment ratio also edged down to 0.44 in December from 0.45 in November. This ratio is a measure of the time that would be required in order to exhaust finished-products if shipments were to remain at their current level.

The inventory-to-shipment ratio falls back



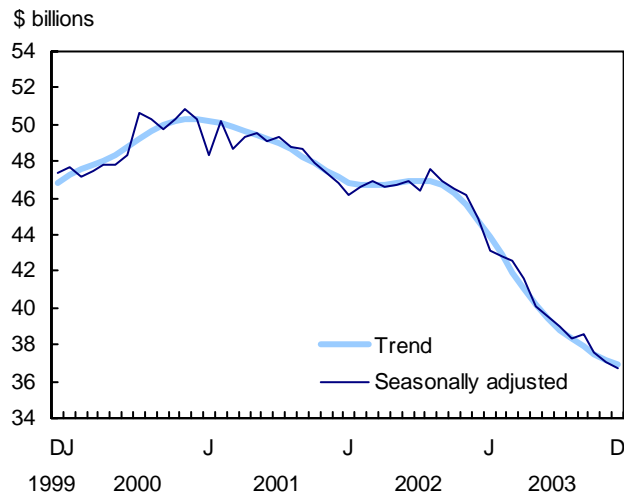
Manufacturers satisfied with level of new orders

Manufacturers of aerospace products, motor vehicles and computers were among several industries reporting higher new orders in December. New orders improved a healthy 1.6% to \$42.4 billion, doubling November's gain (+0.8%). A sign of future production, new orders have risen in three of the last four months.

Order cancellations contribute to further declines in unfilled orders

Although manufacturers were upbeat about the level of new orders received, the ongoing decrease in the backlog of unfilled orders remained a vulnerable component of the Canadian manufacturing sector. Contract cancellations and weaknesses in some industries contributed to a 0.8% drop in unfilled orders to \$36.7 billion for December. Orders, currently at the lowest level since August 1997, have declined in 15 of the last 16 months.

Unfilled orders continue to weaken



Heading into 2004, the continued erosion of unfilled orders remained a source of unease for manufacturers. January's Business Conditions Survey noted that 23% of manufacturers expressed concern for the lower-than-normal backlog of orders.

Decreases in unfilled orders were widespread in December, including the transportation equipment (-0.9%), plastics and rubber products (-8.3%), and electrical equipment, appliance and component (-9.1%) industries.

Canadian manufacturers faced a rough ride in 2003

For the year as a whole, manufacturing shipments slipped 1.0% to \$513.2 billion in 2003, following a gain of 1.9% in 2002. As well, by year's end, manufacturers' books were significantly lighter. Unfilled orders were just \$36.7 billion in December, down 18% (-\$8.1 billion) from December 2002 (\$44.8 billion), and the lowest level in over six years.

On the positive side, inventories are down substantially (-5.3%) since December 2002, and in recent months, orders booked by manufacturers have been on the rise.

Shipments and orders abound in the United States

In contrast to Canada's slowdown in production, manufacturers south of the border muscled their way through 2003. US factory shipments increased 2.7% by year-end, as a steady stream of new orders were placed on manufacturers' books.

Various factors hold back Canadian manufacturing

To recap, several negative events affected Canadian manufacturers and the economy as a whole in 2003. Most global economies were held at bay during the first part of the year, as the war in Iraq unfolded. The SARS virus devastated the service and tourism sectors of the Toronto region, while the single case of BSE (mad cow disease) in Alberta closed international borders to Canadian beef.

Much of Canada's manufacturing heartland in Ontario was darkened by the electrical blackout of August 14. During the following week of energy conservation, many factories operated at reduced capacity. Meanwhile, fires consumed forests in British Columbia, and the Canada-US softwood lumber dispute trade remained in the courts of law. These events cut into what could have been a more prosperous year for the wood products industry, as North American demand for new housing boomed.

In addition to all of these factors, the Canadian dollar closed the year at a 10-year high against its US counterpart.

Autos and computers drive down shipments

Despite incentive-laden deals and excellent financing options, motor vehicle manufacturers reported the largest decrease in shipments in 2003. Motor vehicle shipments slumped 5.0% to \$62.5 billion, following a robust 2002 (+5.7%).

Canada's telecommunications sector continued to struggle since the industry crashed in 2001. Shipments of computer and electronic products dropped 12.9% to \$18.5 billion in 2003. Just three years ago, computer shipments peaked at \$37.5 billion. In the latter half of 2003, there have been signs that the telecommunications sector may be starting to recover.

Other notable decreases in 2003 included paper manufacturing (-4.4%), in part the result of falling prices, the machinery industry (-5.3%) and the aerospace products and parts industry (-8.4%).

Higher industrial prices for petroleum and chemical products partly offset an otherwise dismal year for manufacturers. Prices of petroleum and coal products soared earlier in 2003, boosting shipments 10.4% to \$35.7 billion overall. Strong demand and high prices for pharmaceutical and petrochemical products contributed to a 4.8% jump in chemical products manufacturing, over the same period in 2002.

Manufacturing slows in Canada's largest provinces

The lacklustre performance of 2003 was concentrated in Canada's two largest manufacturing economies, Ontario and Quebec, in addition to British Columbia, and was only partly offset by improvements in the remaining provinces and the territories. Alberta led the majority of provinces reporting higher shipments for the year.

Shipments weaken in Ontario and Quebec

A marked slowdown in motor vehicle and parts manufacturing, coupled with the electrical blackout of August 14, contributed to Ontario's weak standing in 2003. A downturn in production of machinery, and the ongoing malaise of the computer industry also contributed. Total shipments in Ontario slipped 1.7% (-\$4.7 billion) to \$272.9 billion in 2003, following a 3.4% rise in 2002.

Quebec's manufacturers posted shipments of \$119.1 billion, a 2.4% (-\$2.9 billion) drop from 2002. The downturn in the global aviation sector continued to batter Quebec's aerospace products and parts industry. Computer manufacturing also retrenched sharply following a steep decline in 2002. The clothing and textile mills industries reported significant decreases, partially because of the ongoing globalization of these industries.

Wood products pull down shipments in British Columbia

British Columbia rounded out the three provinces reporting lower shipments in 2003. Shipments decreased 2.4% to \$33.4 billion (-\$835 million), following a 0.4% rise in 2002. The prevailing export duties on softwood lumber, coupled with falling prices, contributed to a sharp drop in shipments of wood products. Fewer shipments of transportation equipment and computers also contributed.

Alberta improves, leading all provinces

Following a lacklustre 2002 (-3.4%), manufacturing shipments in Alberta rebounded 5.0% (+\$2.1 billion) to \$43.0 billion, leading all provinces reporting higher shipments. Despite the negative impact of mad cow disease on the Alberta economy, higher industrial prices partly contributed to the improvement in 2003. The petroleum, fabricated metal products and chemical products industries led Alberta's manufacturing sector in 2003.

The wood products and chemical products industries contributed to a robust 2003 for Saskatchewan manufacturers. Total shipments were up 3.7% (+\$265 million) to \$7.5 billion, following a 1.3% increase in 2002.

Manitoba's diversified manufacturing sector contributed to a relatively stable year. Shipments edged up 0.9% (+\$101 million) to \$11.6 billion. Increases in fabricated metal products and chemical manufacturing led all industries.

Atlantic Canada posts strong gains

For the second consecutive year, the Atlantic Provinces reported increases in manufacturing activity. Led by a 3.4% (+\$428 million) jump in New Brunswick, shipments ended the year at \$13.1 billion. Meanwhile, manufacturing in Nova Scotia improved 1.8% (+\$155 million) to \$8.8 billion, while Newfoundland and Labrador reported a healthy gain of 6.8% (+\$151 million) to \$2.4 billion.

Prince Edward Island manufacturers posted shipments of \$1.3 billion, up 1.2% (+\$16 million) in 2003. This is well off the province's gain of 9.5% last year.

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.

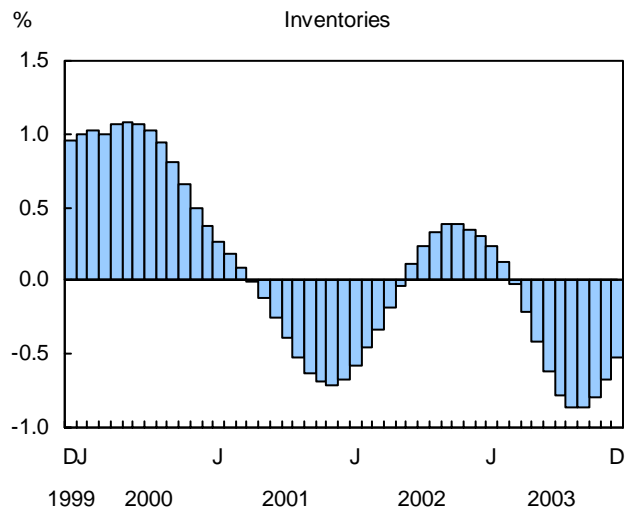
Durable goods industries include clothing, wood products, non-metallic mineral products, primary metals, fabricated metal products, machinery, computer and electronic products, electrical equipment, appliance and components, transportation equipment, furniture and related products and miscellaneous manufacturing.

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

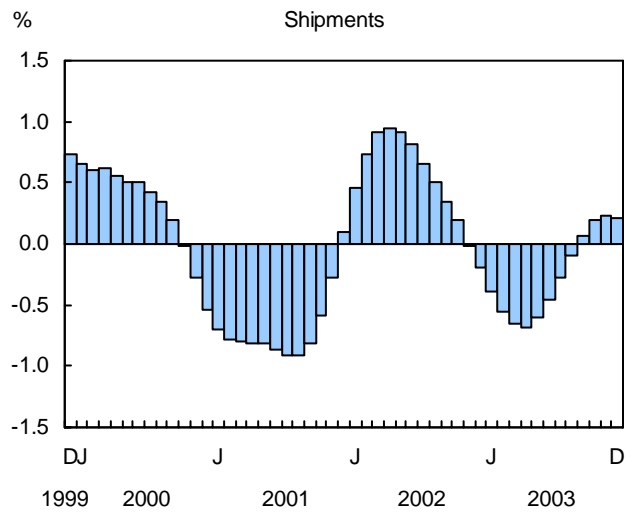
New orders are those received whether shipped in the current month or not. They are measured as the sum of shipments for the current month plus the change in unfilled orders. Some people interpret new orders as orders that will lead to future demand. This is inappropriate since the "new orders" variable 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.

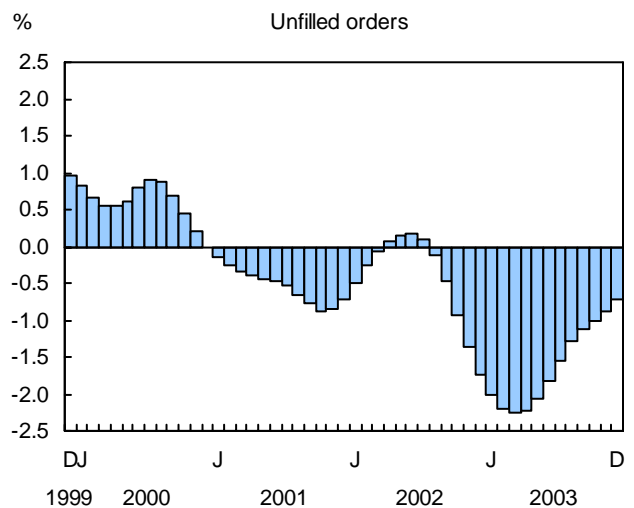
Monthly change in trend



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
- Industrial Product Price Indexes, 62-011-XIE or 62-011-XPB
- Industrial Capacity Utilization Rates CANSIM II table 028-0002

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Schedule of releases

Reference period
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March 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										
December 2002	39,721	62,389	44,536	38,054	42,998	63,161	44,820	41,690		
January 2003	41,879	62,601	42,643	39,986	44,520	62,929	43,123	42,823		
February 2003	40,817	63,980	42,588	40,762	43,901	63,307	42,807	43,584		
March 2003	45,280	64,512	42,467	45,159	44,070	63,368	42,616	43,879		
April 2003	43,482	64,595	41,315	42,330	42,953	63,898	41,630	41,967		
May 2003	44,714	63,666	40,096	43,495	42,285	63,358	40,057	40,711		
June 2003	43,793	62,293	39,277	42,973	42,128	62,635	39,504	41,576		
July 2003	39,307	61,423	39,176	39,206	42,897	62,085	38,972	42,365		
August 2003	41,121	60,953	38,680	40,625	40,659	61,113	38,318	40,005		
September 2003	44,941	59,967	38,984	45,244	42,881	60,365	38,593	43,157		
October 2003	45,374	59,551	37,793	44,183	42,473	59,978	37,544	41,424		
November 2003	42,239	59,984	37,164	41,609	42,278	59,984	37,018	41,752		
December 2003	40,277	58,867	36,592	39,705	42,706	59,795	36,717	42,405		
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	
December 2002	-0.9	-0.2	0.3	0.3	1.47	1.43	-2.8	-1.7	-3.1	-0.6
January 2003	3.5	-0.4	-0.4	0.2	1.41	1.44	-3.8	-2.0	2.7	-0.7
February 2003	-1.4	-0.6	0.6	0.1	1.44	1.45	-0.7	-2.2	1.8	-0.7
March 2003	0.4	-0.7	0.1	0.0	1.44	1.46	-0.4	-2.3	0.7	-0.7
April 2003	-2.5	-0.7	0.8	-0.2	1.49	1.47	-2.3	-2.2	-4.4	-0.6
May 2003	-1.6	-0.6	-0.8	-0.4	1.50	1.47	-3.8	-2.1	-3.0	-0.4
June 2003	-0.4	-0.5	-1.1	-0.6	1.49	1.47	-1.4	-1.8	2.1	-0.2
July 2003	1.8	-0.3	-0.9	-0.8	1.45	1.46	-1.3	-1.6	1.9	0.0
August 2003	-5.2	-0.1	-1.6	-0.9	1.50	1.45	-1.7	-1.3	-5.6	0.2
September 2003	5.5	0.1	-1.2	-0.9	1.41	1.44	0.7	-1.1	7.9	0.2
October 2003	-1.0	0.2	-0.6	-0.8	1.41	1.42	-2.7	-1.0	-4.0	0.3
November 2003	-0.5	0.2	0.0	-0.7	1.42	1.41	-1.4	-0.9	0.8	0.4
December 2003	1.0	0.2	-0.3	-0.5	1.40	1.40	-0.8	-0.7	1.6	0.4

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										
December 2002	6,157	3,689	1,855	6,079	7,258	3,751	1,853	7,179		
January 2003	8,166	3,585	1,834	8,145	8,236	3,552	1,816	8,199		
February 2003	8,211	3,630	1,787	8,164	8,076	3,580	1,779	8,039		
March 2003	8,926	3,529	1,724	8,863	8,335	3,495	1,730	8,286		
April 2003	8,538	3,500	1,630	8,443	8,039	3,489	1,680	7,989		
May 2003	8,733	3,420	1,581	8,684	7,935	3,395	1,606	7,861		
June 2003	8,405	3,238	1,583	8,407	7,800	3,312	1,600	7,794		
July 2003	5,340	3,160	1,607	5,364	8,351	3,221	1,589	8,340		
August 2003	6,894	3,046	1,657	6,944	6,857	3,060	1,659	6,926		
September 2003	8,158	3,170	1,668	8,169	7,784	3,161	1,650	7,775		
October 2003	8,467	3,092	1,726	8,525	7,755	3,109	1,719	7,823		
November 2003	7,598	3,161	1,752	7,625	7,469	3,103	1,719	7,469		
December 2003	6,689	3,004	1,785	6,723	7,686	3,066	1,779	7,746		
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	
December 2002	-10.7	-0.8	4.6	0.2	0.52	0.43	-4.1	-1.7	-11.3	-1.1
January 2003	13.5	-0.8	-5.3	-0.1	0.43	0.43	-2.0	-2.5	14.2	-1.0
February 2003	-1.9	-0.7	0.8	-0.6	0.44	0.43	-2.1	-3.0	-2.0	-0.8
March 2003	3.2	-0.7	-2.4	-1.1	0.42	0.43	-2.8	-3.1	3.1	-0.7
April 2003	-3.5	-0.7	-0.2	-1.6	0.43	0.43	-2.9	-2.7	-3.6	-0.6
May 2003	-1.3	-0.8	-2.7	-1.9	0.43	0.42	-4.4	-1.9	-1.6	-0.6
June 2003	-1.7	-0.7	-2.4	-2.0	0.42	0.42	-0.4	-0.9	-0.8	-0.5
July 2003	7.1	-0.7	-2.7	-1.9	0.39	0.41	-0.7	0.2	7.0	-0.5
August 2003	-17.9	-0.6	-5.0	-1.7	0.45	0.41	4.4	1.0	-16.9	-0.4
September 2003	13.5	-0.5	3.3	-1.4	0.41	0.41	-0.5	1.5	12.3	-0.4
October 2003	-0.4	-0.4	-1.6	-1.1	0.40	0.40	4.2	1.7	0.6	-0.4
November 2003	-3.7	-0.3	-0.2	-0.8	0.42	0.40	0.0	1.6	-4.5	-0.4
December 2003	2.9	-0.3	-1.2	-0.5	0.40	0.40	3.5	1.3	3.7	-0.3

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										
December 2002	33,564	58,700	42,681	31,975	35,740	59,410	42,967	34,511		
January 2003	33,713	59,016	40,809	31,841	36,284	59,376	41,307	34,624		
February 2003	32,607	60,350	40,801	32,598	35,825	59,728	41,027	35,546		
March 2003	36,354	60,983	40,743	36,296	35,735	59,873	40,886	35,593		
April 2003	34,945	61,095	39,685	33,887	34,914	60,409	39,950	33,979		
May 2003	35,981	60,246	38,515	34,811	34,350	59,963	38,451	32,850		
June 2003	35,388	59,055	37,694	34,566	34,328	59,323	37,904	33,781		
July 2003	33,968	58,263	37,569	33,842	34,547	58,864	37,383	34,025		
August 2003	34,226	57,907	37,023	33,681	33,802	58,053	36,659	33,078		
September 2003	36,782	56,797	37,316	37,075	35,097	57,205	36,943	35,381		
October 2003	36,907	56,459	36,067	35,658	34,718	56,869	35,826	33,601		
November 2003	34,641	56,823	35,411	33,985	34,809	56,881	35,299	34,283		
December 2003	33,587	55,862	34,806	32,982	35,020	56,729	34,938	34,660		
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	
December 2002	1.4	-0.1	0.0	0.3	1.66	1.66	-2.8	-1.7	-1.2	-0.5
January 2003	1.5	-0.3	-0.1	0.3	1.64	1.67	-3.9	-2.0	0.3	-0.6
February 2003	-1.3	-0.5	0.6	0.2	1.67	1.68	-0.7	-2.2	2.7	-0.7
March 2003	-0.3	-0.7	0.2	0.0	1.68	1.70	-0.3	-2.2	0.1	-0.7
April 2003	-2.3	-0.7	0.9	-0.1	1.73	1.71	-2.3	-2.2	-4.5	-0.6
May 2003	-1.6	-0.6	-0.7	-0.3	1.75	1.71	-3.8	-2.1	-3.3	-0.4
June 2003	-0.1	-0.4	-1.1	-0.5	1.73	1.71	-1.4	-1.9	2.8	-0.1
July 2003	0.6	-0.2	-0.8	-0.7	1.70	1.70	-1.4	-1.6	0.7	0.1
August 2003	-2.2	0.0	-1.4	-0.8	1.72	1.68	-1.9	-1.4	-2.8	0.3
September 2003	3.8	0.2	-1.5	-0.8	1.63	1.67	0.8	-1.2	7.0	0.4
October 2003	-1.1	0.3	-0.6	-0.8	1.64	1.65	-3.0	-1.1	-5.0	0.5
November 2003	0.3	0.4	0.0	-0.7	1.63	1.63	-1.5	-1.0	2.0	0.5
December 2003	0.6	0.3	-0.3	-0.5	1.62	1.62	-1.0	-0.8	1.1	0.5

Table 4
Shipments by major group and selected industries

	NAICS Code	Unadjusted					
		Current periods					
		December 2003	November 2003	October 2003	September 2003		
		\$ millions					
Food manufacturing	311	5,512	5,484	5,839	5,557		
Beverage and tobacco product manufacturing	312	1,199	1,113	1,140	1,150		
Textile mills	313	206	236	245	258		
Textile product mills	314	162	179	201	189		
Clothing manufacturing	315	417	539	595	578		
Leather and allied product manufacturing	316	49	58	77	92		
Wood product manufacturing	321	1,981	2,404	2,668	2,626		
Paper manufacturing	322	2,389	2,465	2,604	2,649		
Printing and related support activities	323	849	900	911	893		
Petroleum and coal products manufacturing	324	2,858	2,790	2,813	2,939		
Chemical manufacturing	325	3,153	3,095	3,352	3,267		
Plastics and rubber products manufacturing	326	1,654	1,938	2,147	2,051		
Non-metallic mineral product manufacturing	327	768	1,016	1,236	1,216		
Primary metal manufacturing	331	2,636	2,699	2,933	2,850		
Fabricated metal product manufacturing	332	2,144	2,426	2,665	2,627		
Machinery manufacturing	333	1,927	1,920	2,006	1,997		
Computer and electronic product manufacturing	334	1,866	1,597	1,475	1,885		
Electrical equipment, appliance and component manufacturing	335	711	763	771	820		
Transportation equipment manufacturing	336	8,394	9,166	10,128	9,728		
Motor vehicle manufacturing	3361	4,354	4,952	5,464	5,362		
Motor vehicle body and trailer manufacturing	3362	210	197	232	211		
Motor vehicle parts manufacturing	3363	2,336	2,646	3,003	2,797		
Aerospace product and parts manufacturing	3364	1,017	845	988	854		
Railroad rolling stock manufacturing	3365	237	246	194	235		
Ship and boat building	3366	79	72	71	72		
Furniture and related product manufacturing	337	947	983	1,051	1,077		
Miscellaneous manufacturing	339	455	467	517	492		
Non-durable goods industries		18,030	18,260	19,329	19,045		
Durable goods industries		22,247	23,979	26,045	25,896		
Manufacturing		40,277	42,239	45,374	44,941		
		Previous year		Year-to-date		Annual	
		December 2002	November 2002	% Change from 2002	2003	% Change from 2001	2002
		\$ millions					
Food manufacturing	311	5,357	5,328	1.9	64,080	1.1	62,911
Beverage and tobacco product manufacturing	312	1,206	1,070	1.8	13,547	3.7	13,304
Textile mills	313	223	256	-10.1	2,886	-3.7	3,210
Textile product mills	314	177	209	-10.2	2,263	0.5	2,520
Clothing manufacturing	315	445	631	-9.1	6,168	-3.0	6,785
Leather and allied product manufacturing	316	54	70	-13.2	675	-9.9	777
Wood product manufacturing	321	2,050	2,313	-3.9	28,344	7.2	29,498
Paper manufacturing	322	2,633	2,830	-4.4	31,288	-4.4	32,726
Printing and related support activities	323	815	904	0.6	10,124	-4.1	10,061
Petroleum and coal products manufacturing	324	3,070	2,895	10.4	35,726	1.1	32,350
Chemical manufacturing	325	3,129	3,212	4.8	39,598	4.0	37,769
Plastics and rubber products manufacturing	326	1,588	1,921	1.4	23,333	6.7	23,002
Non-metallic mineral product manufacturing	327	748	1,038	4.2	12,073	9.7	11,586
Primary metal manufacturing	331	2,549	2,728	2.4	32,980	8.8	32,216
Fabricated metal product manufacturing	332	1,914	2,360	2.1	28,101	2.8	27,510
Machinery manufacturing	333	1,931	1,961	-5.3	22,834	1.3	24,113
Computer and electronic product manufacturing	334	1,820	1,663	-12.9	18,522	-16.5	21,255
Electrical equipment, appliance and component manufacturing	335	692	796	-3.8	8,981	-7.6	9,335
Transportation equipment manufacturing	336	7,963	10,580	-4.8	113,997	4.6	119,746
Motor vehicle manufacturing	3361	4,043	5,862	-5.0	62,512	5.7	65,797
Motor vehicle body and trailer manufacturing	3362	205	225	-0.9	2,679	8.5	2,704
Motor vehicle parts manufacturing	3363	2,114	2,833	-3.4	31,612	10.2	32,741
Aerospace product and parts manufacturing	3364	1,121	1,110	-8.4	11,428	-15.0	12,472
Railroad rolling stock manufacturing	3365	225	275	-3.7	2,772	5.4	2,878
Ship and boat building	3366	62	63	-20.6	986	20.6	1,242
Furniture and related product manufacturing	337	917	1,041	-0.8	12,203	2.4	12,303
Miscellaneous manufacturing	339	439	498	-0.5	5,502	8.5	5,527
Non-durable goods industries		18,252	18,696	2.2	223,520	1.1	218,631
Durable goods industries		21,469	25,609	-3.4	289,702	2.5	299,874
Manufacturing		39,721	44,305	-1.0	513,222	1.9	518,505

Table 4

Shipments by major group and selected industries - concluded

	NAICS Code	Seasonally adjusted							
		Change from November	Current periods						
			December 2003	November 2003	October 2003	September 2003			
			\$ millions						
Food manufacturing	311	-2	5,426	5,428	5,508	5,337			
Beverage and tobacco product manufacturing	312	-28	1,129	1,157	1,143	1,123			
Textile mills	313	0	235	235	229	238			
Textile product mills	314	1	181	180	183	180			
Clothing manufacturing	315	20	523	503	499	506			
Leather and allied product manufacturing	316	6	58	52	55	59			
Wood product manufacturing	321	-190	2,300	2,490	2,502	2,523			
Paper manufacturing	322	15	2,465	2,451	2,464	2,566			
Printing and related support activities	323	0	859	859	835	845			
Petroleum and coal products manufacturing	324	54	2,838	2,783	2,722	2,813			
Chemical manufacturing	325	84	3,328	3,244	3,242	3,339			
Plastics and rubber products manufacturing	326	-1	1,987	1,988	1,961	1,963			
Non-metallic mineral product manufacturing	327	16	1,008	993	1,000	1,012			
Primary metal manufacturing	331	-22	2,774	2,795	2,774	2,770			
Fabricated metal product manufacturing	332	60	2,447	2,387	2,417	2,382			
Machinery manufacturing	333	-61	1,885	1,946	1,885	1,884			
Computer and electronic product manufacturing	334	53	1,632	1,578	1,505	1,747			
Electrical equipment, appliance and component manufacturing	335	0	749	749	737	759			
Transportation equipment manufacturing	336	320	9,343	9,023	9,368	9,359			
Motor vehicle manufacturing	3361	146	4,961	4,816	5,024	5,132			
Motor vehicle body and trailer manufacturing	3362	19	229	209	225	212			
Motor vehicle parts manufacturing	3363	72	2,725	2,653	2,731	2,652			
Aerospace product and parts manufacturing	3364	106	921	815	933	872			
Railroad rolling stock manufacturing	3365	18	254	236	200	201			
Ship and boat building	3366	7	93	86	79	92			
Furniture and related product manufacturing	337	66	1,055	989	978	1,025			
Miscellaneous manufacturing	339	35	483	449	465	450			
Non-durable goods industries		130	18,506	18,376	18,343	18,464			
Durable goods industries		298	24,200	23,902	24,130	24,417			
Manufacturing		428	42,706	42,278	42,473	42,881			
			Change from previous month		Trend change from previous month				
			December 2003	November 2003	October 2003	December 2003	November 2003	October 2003	September 2003
			percentage						
Food manufacturing	311	0.0	-1.5	3.2	0.3	0.4	0.5	0.5	0.5
Beverage and tobacco product manufacturing	312	-2.4	1.3	1.7	0.1	0.2	0.4	0.4	0.4
Textile mills	313	0.2	2.4	-3.8	0.0	0.0	-0.1	-0.4	-0.4
Textile product mills	314	0.5	-2.0	1.6	-0.6	-0.9	-1.1	-1.1	-1.1
Clothing manufacturing	315	3.9	0.9	-1.4	0.9	0.9	0.6	0.2	0.2
Leather and allied product manufacturing	316	10.9	-5.5	-6.0	0.1	0.2	0.3	0.3	0.3
Wood product manufacturing	321	-7.6	-0.5	-0.8	0.9	1.2	1.5	1.7	1.7
Paper manufacturing	322	0.6	-0.5	-4.0	-0.8	-1.1	-1.2	-1.3	-1.3
Printing and related support activities	323	0.0	2.8	-1.2	0.3	0.4	0.4	0.3	0.3
Petroleum and coal products manufacturing	324	2.0	2.3	-3.2	-0.1	-0.3	-0.5	-1.0	-1.0
Chemical manufacturing	325	2.6	0.1	-2.9	0.5	0.3	0.1	-0.2	-0.2
Plastics and rubber products manufacturing	326	0.0	1.4	-0.1	0.3	0.4	0.5	0.5	0.5
Non-metallic mineral product manufacturing	327	1.6	-0.8	-1.2	0.1	0.1	0.0	-0.1	-0.1
Primary metal manufacturing	331	-0.8	0.7	0.1	0.5	0.7	0.8	0.6	0.6
Fabricated metal product manufacturing	332	2.5	-1.3	1.5	0.5	0.7	0.8	0.8	0.8
Machinery manufacturing	333	-3.1	3.2	0.0	0.1	0.2	0.1	0.1	0.1
Computer and electronic product manufacturing	334	3.4	4.9	-13.9	1.6	1.9	2.0	1.7	1.7
Electrical equipment, appliance and component manufacturing	335	0.0	1.6	-2.9	0.2	0.2	0.2	0.2	0.2
Transportation equipment manufacturing	336	3.6	-3.7	0.1	-0.2	-0.3	-0.4	-0.5	-0.5
Motor vehicle manufacturing	3361	3.0	-4.1	-2.1	-0.7	-0.9	-1.1	-1.2	-1.2
Motor vehicle body and trailer manufacturing	3362	9.2	-7.0	6.2	0.5	0.3	0.0	-0.3	-0.3
Motor vehicle parts manufacturing	3363	2.7	-2.8	3.0	0.5	0.7	0.9	0.9	0.9
Aerospace product and parts manufacturing	3364	13.0	-12.7	7.1	-0.4	-1.1	-1.8	-2.2	-2.2
Railroad rolling stock manufacturing	3365	7.5	18.2	-0.5	3.3	2.8	1.4	-0.6	-0.6
Ship and boat building	3366	7.8	8.7	-13.6	1.8	1.8	1.4	0.8	0.8
Furniture and related product manufacturing	337	6.7	1.2	-4.7	1.0	0.8	0.4	-0.1	-0.1
Miscellaneous manufacturing	339	7.7	-3.5	3.4	1.0	1.0	0.9	0.7	0.7
Non-durable goods industries		0.7	0.2	-0.7	0.1	0.1	0.0	-0.2	-0.2
Durable goods industries		1.2	-0.9	-1.2	0.3	0.4	0.4	0.3	0.3
Manufacturing		1.0	-0.5	-1.0	0.2	0.2	0.2	0.1	0.1

Table 5
Inventories by major group and selected industries

	NAICS Code	Unadjusted					
		Current periods					
		December 2003	November 2003	October 2003	September 2003		
		\$ millions					
Food manufacturing	311	4,834	5,027	5,031	4,981		
Beverage and tobacco product manufacturing	312	1,631	1,731	1,719	1,685		
Textile mills	313	403	411	426	437		
Textile product mills	314	284	296	299	304		
Clothing manufacturing	315	1,101	1,105	1,169	1,225		
Leather and allied product manufacturing	316	104	106	114	123		
Wood product manufacturing	321	4,060	3,850	3,825	3,927		
Paper manufacturing	322	3,474	3,518	3,506	3,484		
Printing and related support activities	323	674	702	703	703		
Petroleum and coal products manufacturing	324	1,455	1,496	1,515	1,538		
Chemical manufacturing	325	5,918	5,806	5,631	5,534		
Plastics and rubber products manufacturing	326	2,099	2,103	2,097	2,071		
Non-metallic mineral product manufacturing	327	1,204	1,181	1,159	1,153		
Primary metal manufacturing	331	4,492	4,538	4,487	4,512		
Fabricated metal product manufacturing	332	3,290	3,355	3,388	3,419		
Machinery manufacturing	333	4,260	4,389	4,373	4,304		
Computer and electronic product manufacturing	334	3,850	4,034	4,059	3,999		
Electrical equipment, appliance and component manufacturing	335	1,265	1,305	1,320	1,296		
Transportation equipment manufacturing	336	12,127	12,642	12,337	12,828		
Motor vehicle manufacturing	3361	1,164	1,236	1,225	1,303		
Motor vehicle body and trailer manufacturing	3362	423	455	437	434		
Motor vehicle parts manufacturing	3363	1,840	1,925	1,867	1,867		
Aerospace product and parts manufacturing	3364	7,405	7,698	7,424	7,829		
Railroad rolling stock manufacturing	3365	929	979	1,034	1,076		
Ship and boat building	3366	132	135	132	129		
Furniture and related product manufacturing	337	1,396	1,404	1,412	1,450		
Miscellaneous manufacturing	339	945	984	982	995		
Non-durable goods industries		20,877	21,196	21,041	20,860		
Durable goods industries		37,990	38,788	38,510	39,107		
Manufacturing		58,867	59,984	59,551	59,967		
		Previous year		Year-to-date		Average per month	
		December 2002	November 2002	% Change from 2002	Average 2003	% Change from 2001	2002
		\$ millions					
Food manufacturing	311	4,840	5,109	1.0	4,878	3.4	4,832
Beverage and tobacco product manufacturing	312	1,647	1,759	1.4	1,741	5.0	1,717
Textile mills	313	447	457	-8.7	444	-9.3	486
Textile product mills	314	309	325	-4.9	308	-13.1	324
Clothing manufacturing	315	1,130	1,115	2.2	1,199	-12.5	1,174
Leather and allied product manufacturing	316	118	123	-7.3	127	-8.9	137
Wood product manufacturing	321	4,346	4,227	-0.6	4,420	-6.3	4,449
Paper manufacturing	322	3,460	3,504	0.2	3,557	-7.0	3,548
Printing and related support activities	323	654	704	-0.7	697	-5.7	702
Petroleum and coal products manufacturing	324	1,526	1,431	0.6	1,623	-10.6	1,614
Chemical manufacturing	325	5,534	5,490	10.7	5,840	4.0	5,277
Plastics and rubber products manufacturing	326	2,132	2,100	5.3	2,147	0.8	2,039
Non-metallic mineral product manufacturing	327	1,191	1,152	-0.1	1,205	2.0	1,206
Primary metal manufacturing	331	5,056	4,997	1.5	4,729	0.4	4,657
Fabricated metal product manufacturing	332	3,425	3,497	1.3	3,536	2.1	3,492
Machinery manufacturing	333	4,489	4,619	-3.6	4,442	1.2	4,609
Computer and electronic product manufacturing	334	4,367	4,511	-10.7	4,155	-22.5	4,654
Electrical equipment, appliance and component manufacturing	335	1,327	1,364	-3.4	1,336	-16.3	1,384
Transportation equipment manufacturing	336	13,875	14,056	-3.4	12,988	-1.3	13,441
Motor vehicle manufacturing	3361	1,785	1,788	-20.1	1,383	2.9	1,730
Motor vehicle body and trailer manufacturing	3362	434	431	9.9	458	-6.3	417
Motor vehicle parts manufacturing	3363	1,904	1,873	8.5	1,912	3.9	1,762
Aerospace product and parts manufacturing	3364	7,965	8,121	-0.5	7,775	0.3	7,817
Railroad rolling stock manufacturing	3365	1,431	1,461	-15.3	1,133	-14.0	1,338
Ship and boat building	3366	133	136	-13.7	125	-35.7	145
Furniture and related product manufacturing	337	1,449	1,492	3.4	1,476	1.1	1,427
Miscellaneous manufacturing	339	1,066	1,095	-3.9	1,017	3.3	1,059
Non-durable goods industries		20,667	21,003	3.3	21,362	-0.7	20,676
Durable goods industries		41,722	42,125	-2.5	40,504	-4.7	41,553
Manufacturing		62,389	63,129	-0.6	61,866	-3.4	62,229

Table 5
Inventories by major group and selected industries - concluded

	NAICS Code	Change from November	Seasonally adjusted						
			Current periods						
			December 2003	November 2003	October 2003	September 2003			
			\$ millions						
Food manufacturing	311	28	4,888	4,861	4,894	4,874			
Beverage and tobacco product manufacturing	312	-3	1,720	1,723	1,744	1,760			
Textile mills	313	-4	410	413	429	444			
Textile product mills	314	-12	288	300	301	305			
Clothing manufacturing	315	-34	1,161	1,195	1,215	1,208			
Leather and allied product manufacturing	316	1	118	117	122	122			
Wood product manufacturing	321	69	4,196	4,127	4,129	4,215			
Paper manufacturing	322	-3	3,553	3,556	3,570	3,549			
Printing and related support activities	323	16	703	687	690	700			
Petroleum and coal products manufacturing	324	-9	1,563	1,572	1,542	1,544			
Chemical manufacturing	325	129	6,007	5,878	5,761	5,624			
Plastics and rubber products manufacturing	326	13	2,135	2,121	2,146	2,126			
Non-metallic mineral product manufacturing	327	-5	1,228	1,233	1,219	1,200			
Primary metal manufacturing	331	-54	4,377	4,431	4,400	4,452			
Fabricated metal product manufacturing	332	-37	3,347	3,385	3,419	3,442			
Machinery manufacturing	333	-5	4,334	4,339	4,324	4,305			
Computer and electronic product manufacturing	334	-41	3,922	3,963	4,033	4,103			
Electrical equipment, appliance and component manufacturing	335	-4	1,307	1,311	1,325	1,315			
Transportation equipment manufacturing	336	-218	12,144	12,362	12,303	12,637			
Motor vehicle manufacturing	3361	11	1,216	1,206	1,216	1,271			
Motor vehicle body and trailer manufacturing	3362	-23	444	468	446	448			
Motor vehicle parts manufacturing	3363	-48	1,850	1,897	1,893	1,890			
Aerospace product and parts manufacturing	3364	-127	7,343	7,470	7,362	7,639			
Railroad rolling stock manufacturing	3365	-50	929	979	1,034	1,076			
Ship and boat building	3366	-1	124	125	127	131			
Furniture and related product manufacturing	337	0	1,418	1,418	1,424	1,456			
Miscellaneous manufacturing	339	-17	977	994	990	987			
Non-durable goods industries		157	21,384	21,228	21,198	21,046			
Durable goods industries		-346	38,410	38,756	38,780	39,319			
Manufacturing		-189	59,795	59,984	59,978	60,365			
			Change from previous month		Trend change from previous month				
			December 2003	November 2003	October 2003	December 2003	November 2003	October 2003	September 2003
			percentage						
Food manufacturing	311	0.6	-0.7	0.4	0.0	0.0	0.0	0.0	0.0
Beverage and tobacco product manufacturing	312	-0.2	-1.2	-0.9	-0.4	-0.4	-0.3	-0.2	-0.2
Textile mills	313	-0.9	-3.6	-3.6	-1.1	-1.3	-1.4	-1.3	-1.3
Textile product mills	314	-3.8	-0.3	-1.3	-1.1	-1.3	-1.4	-1.4	-1.4
Clothing manufacturing	315	-2.8	-1.7	0.6	-0.4	-0.4	-0.3	-0.2	-0.2
Leather and allied product manufacturing	316	0.6	-3.4	-0.1	-1.0	-1.3	-1.6	-1.6	-1.6
Wood product manufacturing	321	1.7	-0.1	-2.0	-0.9	-1.2	-1.5	-1.6	-1.6
Paper manufacturing	322	-0.1	-0.4	0.6	-0.1	-0.1	-0.1	-0.1	-0.1
Printing and related support activities	323	2.3	-0.4	-1.5	-0.1	-0.2	-0.3	-0.3	-0.3
Petroleum and coal products manufacturing	324	-0.6	1.9	-0.1	-1.5	-1.7	-1.7	-1.5	-1.5
Chemical manufacturing	325	2.2	2.0	2.4	0.2	0.1	0.0	-0.1	-0.1
Plastics and rubber products manufacturing	326	0.6	-1.2	1.0	-0.1	-0.1	-0.1	-0.2	-0.2
Non-metallic mineral product manufacturing	327	-0.4	1.1	1.6	0.4	0.4	0.4	0.3	0.3
Primary metal manufacturing	331	-1.2	0.7	-1.2	-0.8	-1.2	-1.6	-1.8	-1.8
Fabricated metal product manufacturing	332	-1.1	-1.0	-0.7	-0.8	-1.1	-1.3	-1.3	-1.3
Machinery manufacturing	333	-0.1	0.3	0.4	-0.3	-0.3	-0.5	-0.6	-0.6
Computer and electronic product manufacturing	334	-1.0	-1.7	-1.7	-0.6	-0.7	-0.8	-0.9	-0.9
Electrical equipment, appliance and component manufacturing	335	-0.3	-1.0	0.8	0.0	-0.2	-0.4	-0.6	-0.6
Transportation equipment manufacturing	336	-1.8	0.5	-2.6	-1.1	-1.3	-1.4	-1.4	-1.4
Motor vehicle manufacturing	3361	0.9	-0.9	-4.3	-0.1	-0.8	-1.7	-2.6	-2.6
Motor vehicle body and trailer manufacturing	3362	-5.0	4.8	-0.3	-0.4	-0.6	-0.7	-0.7	-0.7
Motor vehicle parts manufacturing	3363	-2.5	0.3	0.1	-0.7	-0.8	-0.7	-0.7	-0.7
Aerospace product and parts manufacturing	3364	-1.7	1.5	-3.6	-1.2	-1.4	-1.5	-1.4	-1.4
Railroad rolling stock manufacturing	3365	-5.1	-5.4	-3.9	-3.7	-3.6	-3.3	-2.9	-2.9
Ship and boat building	3366	-0.9	-1.6	-2.9	0.5	0.6	0.6	0.8	0.8
Furniture and related product manufacturing	337	0.0	-0.4	-2.2	-0.6	-0.8	-0.9	-1.0	-1.0
Miscellaneous manufacturing	339	-1.7	0.4	0.3	-0.2	-0.3	-0.4	-0.6	-0.6
Non-durable goods industries		0.7	0.1	0.7	-0.1	-0.2	-0.2	-0.3	-0.3
Durable goods industries		-0.9	-0.1	-1.4	-0.7	-0.9	-1.1	-1.2	-1.2
Manufacturing		-0.3	0.0	-0.6	-0.5	-0.7	-0.8	-0.9	-0.9

Table 6
Unfilled orders by selected major group and industries

	NAICS Code	Unadjusted					
		Current periods					
		December 2003	November 2003	October 2003	September 2003		
		\$ millions					
Textile mills	313	199	197	201	208		
Textile product mills	314	57	62	64	56		
Clothing manufacturing	315	274	288	283	309		
Leather and allied product manufacturing	316	27	28	26	26		
Plastics and rubber products manufacturing	326	1,339	1,566	1,439	1,398		
Primary metal manufacturing	331	1,659	1,691	1,689	1,670		
Fabricated metal product manufacturing	332	2,817	2,828	2,934	2,933		
Machinery manufacturing	333	5,700	5,611	5,595	5,658		
Computer and electronic product manufacturing	334	3,544	3,579	3,719	3,991		
Electrical equipment, appliance and component manufacturing	335	846	930	932	928		
Transportation equipment manufacturing	336	17,264	17,485	17,933	18,739		
Motor vehicle manufacturing	3361	863	807	822	784		
Motor vehicle body and trailer manufacturing	3362	542	552	567	565		
Motor vehicle parts manufacturing	3363	922	946	904	883		
Aerospace product and parts manufacturing	3364	10,670	10,644	11,053	11,712		
Ship and boat building	3366	37	45	43	47		
Miscellaneous manufacturing	339	181	179	193	204		
Non-durable goods industries		2,930	3,151	3,086	3,162		
Durable goods industries		33,662	34,012	34,707	35,821		
Manufacturing		36,592	37,164	37,793	38,984		
		Previous year		Year-to-date		Average per month	
		December 2002	November 2002	% Change from 2002	Average 2003	% Change from 2001	2002
		\$ millions					
Textile mills	313	262	270	-19.2	223	9.3	276
Textile product mills	314	60	60	15.3	63	2.7	55
Clothing manufacturing	315	276	282	-3.0	314	-7.0	324
Leather and allied product manufacturing	316	22	23	-2.8	30	-18.2	31
Plastics and rubber products manufacturing	326	1,361	1,407	2.1	1,280	15.6	1,254
Primary metal manufacturing	331	1,798	1,827	-6.3	1,682	25.1	1,795
Fabricated metal product manufacturing	332	2,785	2,906	-2.1	2,817	0.3	2,878
Machinery manufacturing	333	6,497	6,368	-7.8	6,186	4.3	6,709
Computer and electronic product manufacturing	334	4,097	4,189	-4.0	3,816	-8.4	3,977
Electrical equipment, appliance and component manufacturing	335	1,003	1,003	-1.3	965	-30.5	977
Transportation equipment manufacturing	336	23,579	24,849	-24.3	19,359	-8.7	25,566
Motor vehicle manufacturing	3361	987	1,022	-21.6	825	4.2	1,052
Motor vehicle body and trailer manufacturing	3362	574	569	0.8	594	8.4	590
Motor vehicle parts manufacturing	3363	868	911	19.3	870	24.2	729
Aerospace product and parts manufacturing	3364	16,001	16,721	-31.8	12,194	-12.0	17,877
Ship and boat building	3366	23	22	135.1	43	-37.0	18
Miscellaneous manufacturing	339	214	248	-18.7	183	-12.1	226
Non-durable goods industries		2,968	3,043	4.5	2,996	15.3	2,867
Durable goods industries		41,567	43,159	-16.0	36,735	-5.4	43,740
Manufacturing		44,536	46,202	-14.8	39,731	-4.3	46,606

Table 6

Unfilled orders by selected major group and industries - concluded

	NAICS Code	Change from November	Seasonally adjusted						
			Current periods						
			December 2003	November 2003	October 2003	September 2003			
			\$ millions						
Textile mills	313	1	208	208	211	214			
Textile product mills	314	1	63	63	62	56			
Clothing manufacturing	315	-4	306	310	310	323			
Leather and allied product manufacturing	316	2	36	34	32	29			
Plastics and rubber products manufacturing	326	-116	1,278	1,394	1,251	1,373			
Primary metal manufacturing	331	-25	1,734	1,758	1,760	1,706			
Fabricated metal product manufacturing	332	-12	2,817	2,828	2,934	2,933			
Machinery manufacturing	333	89	5,700	5,611	5,595	5,658			
Computer and electronic product manufacturing	334	-35	3,544	3,579	3,719	3,991			
Electrical equipment, appliance and component manufacturing	335	-84	846	930	932	928			
Transportation equipment manufacturing	336	-160	17,226	17,386	17,817	18,350			
Motor vehicle manufacturing	3361	57	863	807	822	784			
Motor vehicle body and trailer manufacturing	3362	-11	557	567	594	628			
Motor vehicle parts manufacturing	3363	3	916	913	897	866			
Aerospace product and parts manufacturing	3364	59	10,618	10,559	10,914	11,280			
Ship and boat building	3366	-6	43	49	45	45			
Miscellaneous manufacturing	339	11	184	173	175	185			
Non-durable goods industries		-105	2,892	2,997	2,911	3,147			
Durable goods industries		-196	33,825	34,021	34,633	35,446			
Manufacturing		-301	36,717	37,018	37,544	38,593			
			Change from previous month		Trend change from previous month				
			December 2003	November 2003	October 2003	December 2003	November 2003	October 2003	September 2003
			percentage						
Textile mills	313	0.2	-1.5	-1.2	0.5	0.2	-0.1	-0.5	
Textile product mills	314	1.3	0.7	11.6	0.9	0.5	0.0	-0.8	
Clothing manufacturing	315	-1.4	-0.1	-4.0	-0.8	-0.8	-0.8	-0.7	
Leather and allied product manufacturing	316	5.0	5.7	9.9	3.6	5.0	5.4	4.7	
Plastics and rubber products manufacturing	326	-8.3	11.4	-8.9	0.0	0.6	1.1	1.3	
Primary metal manufacturing	331	-1.4	-0.1	3.2	1.2	1.5	1.6	1.5	
Fabricated metal product manufacturing	332	-0.4	-3.6	0.0	0.1	0.2	0.3	0.5	
Machinery manufacturing	333	1.6	0.3	-1.1	-1.0	-1.3	-1.5	-1.6	
Computer and electronic product manufacturing	334	-1.0	-3.8	-6.8	-0.4	-0.4	-0.4	-0.5	
Electrical equipment, appliance and component manufacturing	335	-9.1	-0.1	0.4	-0.8	-1.0	-1.3	-1.5	
Transportation equipment manufacturing	336	-0.9	-2.4	-2.9	-1.2	-1.5	-1.7	-1.9	
Motor vehicle manufacturing	3361	7.0	-1.8	4.8	1.6	1.8	1.9	1.7	
Motor vehicle body and trailer manufacturing	3362	-1.9	-4.4	-5.4	-0.9	-1.0	-1.0	-0.8	
Motor vehicle parts manufacturing	3363	0.3	1.7	3.6	1.1	1.4	1.6	1.4	
Aerospace product and parts manufacturing	3364	0.6	-3.3	-3.2	-1.1	-1.6	-2.0	-2.5	
Ship and boat building	3366	-11.7	8.7	1.3	0.1	0.0	-0.2	-0.6	
Miscellaneous manufacturing	339	6.3	-0.8	-5.3	-0.1	-0.3	-0.3	-0.1	
Non-durable goods industries		-3.5	3.0	-7.5	-0.5	-0.4	-0.1	0.1	
Durable goods industries		-0.6	-1.8	-2.3	-0.7	-0.9	-1.1	-1.2	
Manufacturing		-0.8	-1.4	-2.7	-0.7	-0.9	-1.0	-1.1	

Table 7

New orders by selected major group and industries

	NAICS Code	Unadjusted					
		Current periods					
		December 2003	November 2003	October 2003	September 2003		
		\$ millions					
Textile mills	313	209	231	238	242		
Textile product mills	314	157	176	210	196		
Clothing manufacturing	315	403	543	569	562		
Leather and allied product manufacturing	316	48	60	77	86		
Plastics and rubber products manufacturing	326	1,426	2,066	2,188	2,247		
Primary metal manufacturing	331	2,604	2,701	2,952	2,871		
Fabricated metal product manufacturing	332	2,132	2,320	2,666	2,762		
Machinery manufacturing	333	2,016	1,935	1,943	1,712		
Computer and electronic product manufacturing	334	1,831	1,457	1,203	2,250		
Electrical equipment, appliance and component manufacturing	335	626	762	775	788		
Transportation equipment manufacturing	336	8,173	8,718	9,322	9,731		
Motor vehicle manufacturing	3361	4,411	4,937	5,501	5,339		
Motor vehicle body and trailer manufacturing	3362	201	181	234	214		
Motor vehicle parts manufacturing	3363	2,312	2,687	3,024	2,830		
Aerospace product and parts manufacturing	3364	1,043	436	329	1,018		
Ship and boat building	3366	71	75	66	75		
Miscellaneous manufacturing	339	457	453	506	489		
Non-durable goods industries		17,809	18,325	19,252	19,222		
Durable goods industries		21,896	23,284	24,931	26,022		
Manufacturing		39,705	41,609	44,183	45,244		
		Previous year		Year-to-date		Annual	
		December 2002	November 2002	% Change from 2002	2003	% Change from 2001	2002
		\$ millions					
Textile mills	313	214	255	-13.2	2,824	-0.8	3,253
Textile product mills	314	176	208	-10.6	2,260	2.0	2,527
Clothing manufacturing	315	439	640	-8.9	6,166	-2.2	6,769
Leather and allied product manufacturing	316	53	71	-11.7	679	-10.6	770
Plastics and rubber products manufacturing	326	1,542	1,824	1.0	23,311	6.2	23,082
Primary metal manufacturing	331	2,521	2,820	0.6	32,840	10.9	32,658
Fabricated metal product manufacturing	332	1,793	2,448	2.0	28,133	2.6	27,584
Machinery manufacturing	333	2,060	1,908	-6.3	22,036	-3.3	23,507
Computer and electronic product manufacturing	334	1,728	1,616	-17.2	17,968	-8.9	21,693
Electrical equipment, appliance and component manufacturing	335	692	795	-4.9	8,823	1.6	9,275
Transportation equipment manufacturing	336	6,693	10,088	-8.1	107,682	3.6	117,133
Motor vehicle manufacturing	3361	4,008	5,750	-5.3	62,389	6.4	65,879
Motor vehicle body and trailer manufacturing	3362	210	225	-3.4	2,646	8.7	2,741
Motor vehicle parts manufacturing	3363	2,071	2,909	-4.1	31,667	11.0	33,006
Aerospace product and parts manufacturing	3364	401	903	-32.4	6,096	-39.5	9,017
Ship and boat building	3366	63	64	-19.9	1,000	24.0	1,248
Miscellaneous manufacturing	339	404	464	-0.7	5,469	8.5	5,508
Non-durable goods industries		18,177	18,513	2.1	223,482	1.0	218,796
Durable goods industries		19,878	25,221	-5.4	281,797	3.2	297,812
Manufacturing		38,054	43,734	-2.2	505,279	2.3	516,608

Table 7

New orders by selected major group and industries - concluded

	NAICS Code	Change from November	Seasonally adjusted						
			Current periods						
			December 2003	November 2003	October 2003	September 2003			
			\$ millions						
Textile mills	313	4	236	232	226	228			
Textile product mills	314	1	181	180	190	190			
Clothing manufacturing	315	16	518	503	486	500			
Leather and allied product manufacturing	316	6	60	54	58	57			
Plastics and rubber products manufacturing	326	-260	1,871	2,131	1,839	2,071			
Primary metal manufacturing	331	-44	2,749	2,793	2,829	2,835			
Fabricated metal product manufacturing	332	154	2,436	2,281	2,418	2,517			
Machinery manufacturing	333	12	1,974	1,962	1,822	1,599			
Computer and electronic product manufacturing	334	158	1,596	1,438	1,233	2,112			
Electrical equipment, appliance and component manufacturing	335	-83	665	748	740	727			
Transportation equipment manufacturing	336	591	9,183	8,593	8,835	9,345			
Motor vehicle manufacturing	3361	217	5,018	4,801	5,061	5,110			
Motor vehicle body and trailer manufacturing	3362	35	218	183	191	248			
Motor vehicle parts manufacturing	3363	59	2,728	2,669	2,762	2,666			
Aerospace product and parts manufacturing	3364	520	980	460	567	1,009			
Ship and boat building	3366	-3	87	90	80	92			
Miscellaneous manufacturing	339	47	494	447	455	425			
Non-durable goods industries		-61	18,401	18,462	18,107	18,564			
Durable goods industries		714	24,004	23,290	23,317	24,593			
Manufacturing		653	42,405	41,752	41,424	43,157			
			Change from previous month		Trend change from previous month				
			December 2003	November 2003	October 2003	December 2003	November 2003	October 2003	September 2003
			percentage						
Textile mills	313	1.8	2.3	-0.8	0.3	0.3	0.3	0.1	
Textile product mills	314	0.7	-5.1	-0.1	-0.5	-0.7	-0.8	-0.8	
Clothing manufacturing	315	3.1	3.5	-2.8	0.9	0.9	0.6	0.0	
Leather and allied product manufacturing	316	10.4	-7.1	3.1	-0.6	0.1	0.8	1.1	
Plastics and rubber products manufacturing	326	-12.2	15.9	-11.2	-0.1	0.1	0.4	0.7	
Primary metal manufacturing	331	-1.6	-1.3	-0.2	0.4	0.6	0.8	0.9	
Fabricated metal product manufacturing	332	6.8	-5.7	-3.9	0.4	0.6	0.6	0.8	
Machinery manufacturing	333	0.6	7.7	13.9	1.1	0.8	0.6	1.1	
Computer and electronic product manufacturing	334	11.0	16.7	-41.6	1.5	1.9	2.4	2.9	
Electrical equipment, appliance and component manufacturing	335	-11.1	1.0	1.8	0.5	0.6	0.5	0.3	
Transportation equipment manufacturing	336	6.9	-2.7	-5.5	0.4	0.2	0.0	-0.1	
Motor vehicle manufacturing	3361	4.5	-5.2	-0.9	-0.7	-0.9	-1.0	-1.1	
Motor vehicle body and trailer manufacturing	3362	18.9	-4.2	-23.0	0.9	0.2	-0.5	-0.9	
Motor vehicle parts manufacturing	3363	2.2	-3.4	3.6	0.4	0.7	0.9	1.0	
Aerospace product and parts manufacturing	3364	113.1	-18.9	-43.8	7.3	7.1	6.3	5.6	
Ship and boat building	3366	-3.3	12.8	-13.2	1.9	1.9	1.6	0.7	
Miscellaneous manufacturing	339	10.5	-1.8	7.1	1.0	1.0	0.9	0.6	
Non-durable goods industries		-0.3	2.0	-2.5	0.1	0.0	-0.1	-0.2	
Durable goods industries		3.1	-0.1	-5.2	0.6	0.6	0.6	0.6	
Manufacturing		1.6	0.8	-4.0	0.4	0.4	0.3	0.2	

Table 8a
Shipments for selected industries, unadjusted

	NAICS Code	Current periods			
		December 2003	November 2003	October 2003	September 2003
\$ millions					
Food manufacturing	311				
Animal food manufacturing	3111	459	444	482	444
Starch and vegetable fat and oil manufacturing	31122	284	282	300	277
Sugar and confectionery product manufacturing	3113	366	372	420	393
Fruit and vegetable preserving and specialty food manufacturing	3114	514	493	519	497
Dairy product manufacturing	3115	963	949	984	948
Meat product manufacturing	3116	1,438	1,465	1,493	1,345
Cookie, cracker and pasta manufacturing	31182	111	119	133	123
Other food manufacturing	3119	525	526	569	552
Beverage and tobacco product manufacturing	312				
Soft drink and ice manufacturing	31211	356	297	308	321
Breweries	31212	424	325	359	343
Wineries	31213	49	56	54	56
Distilleries	31214	70	95	100	92
Tobacco manufacturing	3122	301	341	320	338
Textile mills	313				
Fibre, yarn and thread mills	3131	28	30	31	33
Fabric mills	3132	137	154	160	174
Textile and fabric finishing and fabric coating	3133	42	51	53	51
Textile product mills	314				
Carpet and rug mills	31411	59	64	71	66
Textile bag and canvas mills	31491	17	21	24	25
Clothing manufacturing	315				
Hosiery and sock mills	31511	36	48	47	42
Other clothing knitting mills	31519	45	61	62	56
Men's and boys' cut and sew clothing manufacturing	31522	139	205	210	197
Women's and girls' cut and sew clothing manufacturing	31523	131	152	187	202
Clothing accessories and other clothing manufacturing	3159	19	19	25	22
Leather and allied product manufacturing	316				
Footwear manufacturing	3162	35	42	59	74
Wood product manufacturing	321				
Sawmills and wood preservation	3211	1,013	1,181	1,332	1,356
Veneer, plywood and engineered wood product manufacturing	3212	555	724	800	739
Other wood product manufacturing	3219	413	499	536	531
Paper manufacturing	322				
Pulp, paper and paperboard mills	3221	1,713	1,730	1,797	1,831
Paperboard container manufacturing	32221	370	415	445	462
Paper bag and coated and treated paper manufacturing	32222	140	152	181	174
Other converted paper product manufacturing	32229	125	129	139	141
Printing and related support activities	323				
Printing	32311	809	857	866	851
Support activities for printing	32312	40	42	45	42
Petroleum and coal products manufacturing	324				
Petroleum refineries	32411	2,662	2,546	2,506	2,611
Chemical manufacturing	325				
Other basic inorganic chemical manufacturing	32518	254	249	247	235
Other basic organic chemical manufacturing	32519	210	200	187	176
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	3252	522	500	536	523
Pesticide and other agricultural chemical manufacturing	32532	10	7	11	12
Pharmaceutical and medicine manufacturing	3254	764	709	710	737
Paint and coating manufacturing	32551	133	150	169	179
Adhesive manufacturing	32552	45	52	62	62
Soap and cleaning compound manufacturing	32561	104	100	103	116
Toilet preparation manufacturing	32562	153	137	166	174
Printing ink manufacturing	32591	34	37	41	36
All other chemical product manufacturing	32599	340	344	388	376

Table 8a

Shipments for selected industries, unadjusted - continued

	NAICS Code	Current periods			
		December 2003	November 2003	October 2003	September 2003
		\$ millions			
Plastics and rubber products manufacturing	326				
Plastic pipe, pipe fitting and unsupported profile shape manufacturing	32612	116	139	178	180
Polystyrene foam product manufacturing	32614	24	30	37	34
Other plastic product manufacturing	32619	661	820	894	852
Other rubber product manufacturing	32629	179	194	231	219
Non-metallic mineral product manufacturing	327				
Clay product and refractory manufacturing	3271	43	52	54	56
Glass and glass product manufacturing	3272	149	208	232	225
Cement manufacturing	32731	82	122	165	156
Ready-mix concrete manufacturing	32732	146	212	290	286
Other concrete product manufacturing	32739	87	121	135	123
Abrasive product manufacturing	32791	25	26	29	28
All other non-metallic mineral product manufacturing	32799	116	127	151	141
Primary metal manufacturing	331				
Iron and steel mills and ferro-alloy manufacturing	3311	783	884	951	890
Iron and steel pipes and tubes manufacturing from purchased steel	33121	223	247	269	241
Foundries	3315	249	264	292	291
Fabricated metal product manufacturing	332				
Cutlery and hand tool manufacturing	3322	43	46	47	45
Plate work and fabricated structural product manufacturing	33231	362	380	417	435
Power boiler and heat exchanger manufacturing	33241	81	117	114	138
Spring and wire product manufacturing	3326	83	97	107	113
Coating, engraving, heat treating and allied activities	3328	191	213	242	230
Other fabricated metal product manufacturing	3329	202	233	253	258
Machinery manufacturing	333				
Agricultural implement manufacturing	33311	172	152	155	166
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	178	205	228	211
All other general-purpose machinery manufacturing	33399	134	145	188	157
Computer and electronic product manufacturing	334				
Computer and peripheral equipment manufacturing	3341	400	287	235	414
Communications equipment manufacturing	3342	623	448	404	527
Audio and video equipment manufacturing	3343	19	19	18	17
Electrical equipment, appliance and component manufacturing	335				
Lighting fixture manufacturing	33512	58	69	76	77
Small electrical appliance manufacturing	33521	20	26	25	24
Major appliance manufacturing	33522	103	129	133	118
Battery manufacturing	33591	12	15	13	14
Communication and energy wire and cable manufacturing	33592	93	104	110	109
All other electrical equipment and component manufacturing	33599	71	69	65	74
Transportation equipment manufacturing	336				
Motor vehicle manufacturing	3361	4,354	4,952	5,464	5,362
Motor vehicle parts manufacturing	3363	2,336	2,646	3,003	2,797
Aerospace product and parts manufacturing	3364	1,017	845	988	854
Railroad rolling stock manufacturing	3365	237	246	194	235
Ship and boat building	3366	79	72	71	72
Furniture and related product manufacturing	337				
Household and institutional furniture and kitchen cabinet manufacturing	3371	567	570	618	621
Office furniture (including fixtures) manufacturing	3372	320	346	359	374
Miscellaneous manufacturing	339				
Medical equipment and supplies manufacturing	3391	127	119	131	129
Other miscellaneous manufacturing	3399	328	347	386	363

Table 8a

Shipments for selected industries, unadjusted - continued

	NAICS Code	Previous year		Year-to-date		Annual	
		December 2002	November 2002	% Change from 2002	2003	% Change from 2001	2002
\$ millions							
Food manufacturing	311						
Animal food manufacturing	3111	450	458	-2.9	5,234	6.1	5,392
Starch and vegetable fat and oil manufacturing	31122	238	247	12.6	3,164	3.3	2,811
Sugar and confectionery product manufacturing	3113	357	346	8.2	4,160	1.4	3,846
Fruit and vegetable preserving and specialty food manufacturing	3114	496	503	-3.4	5,724	-1.7	5,923
Dairy product manufacturing	3115	862	844	13.0	11,175	1.2	9,887
Meat product manufacturing	3116	1,533	1,438	-5.1	16,765	-6.6	17,674
Cookie, cracker and pasta manufacturing	31182	117	129	-4.2	1,365	-7.7	1,425
Other food manufacturing	3119	506	515	6.6	6,102	11.9	5,723
Beverage and tobacco product manufacturing	312						
Soft drink and ice manufacturing	31211	330	282	6.8	3,937	5.2	3,688
Breweries	31212	374	303	1.4	4,162	2.0	4,103
Wineries	31213	55	59	-1.9	574	11.8	585
Distilleries	31214	105	147	-17.0	1,050	9.1	1,265
Tobacco manufacturing	3122	343	280	4.4	3,824	1.3	3,663
Textile mills	313						
Fibre, yarn and thread mills	3131	30	38	-16.5	388	-5.0	465
Fabric mills	3132	147	165	-8.0	1,901	-3.2	2,067
Textile and fabric finishing and fabric coating	3133	46	53	-12.0	596	-4.1	678
Textile product mills	314						
Carpet and rug mills	31411	64	78	-7.7	822	-3.6	890
Textile bag and canvas mills	31491	25	30	-30.9	296	7.2	429
Clothing manufacturing	315						
Hosiery and sock mills	31511	39	58	-5.2	485	0.4	511
Other clothing knitting mills	31519	45	64	9.5	568	0.1	519
Men's and boys' cut and sew clothing manufacturing	31522	172	243	-10.9	2,104	-4.9	2,360
Women's and girls' cut and sew clothing manufacturing	31523	125	168	-6.7	2,073	-3.7	2,221
Clothing accessories and other clothing manufacturing	3159	15	23	-2.5	236	-4.0	242
Leather and allied product manufacturing	316						
Footwear manufacturing	3162	36	49	-12.1	456	-5.8	518
Wood product manufacturing	321						
Sawmills and wood preservation	3211	1,173	1,285	-14.8	15,075	4.4	17,697
Veneer, plywood and engineered wood product manufacturing	3212	455	514	17.1	7,297	6.1	6,230
Other wood product manufacturing	3219	422	514	7.2	5,972	18.2	5,571
Paper manufacturing	322						
Pulp, paper and paperboard mills	3221	1,913	2,018	-6.8	21,898	-6.8	23,505
Paperboard container manufacturing	32221	389	454	6.7	5,242	3.4	4,914
Paper bag and coated and treated paper manufacturing	32222	161	180	-7.8	2,039	3.0	2,212
Other converted paper product manufacturing	32229	132	140	-0.6	1,600	0.6	1,610
Printing and related support activities	323						
Printing	32311	775	856	0.7	9,628	-1.4	9,557
Support activities for printing	32312	40	48	-1.4	497	-37.0	504
Petroleum and coal products manufacturing	324						
Petroleum refineries	32411	2,877	2,619	12.1	32,811	0.8	29,276
Chemical manufacturing	325						
Other basic inorganic chemical manufacturing	32518	227	243	6.1	2,893	6.8	2,726
Other basic organic chemical manufacturing	32519	234	234	1.9	2,569	1.8	2,521
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	3252	490	522	1.9	6,502	0.6	6,379
Pesticide and other agricultural chemical manufacturing	32532	11	3	31.7	449	-13.4	341
Pharmaceutical and medicine manufacturing	3254	837	767	2.7	8,627	22.0	8,402
Paint and coating manufacturing	32551	107	135	4.3	1,956	-1.4	1,875
Adhesive manufacturing	32552	36	46	8.1	675	12.2	624
Soap and cleaning compound manufacturing	32561	112	121	-9.1	1,379	-7.5	1,516
Toilet preparation manufacturing	32562	135	133	9.5	1,822	3.2	1,663
Printing ink manufacturing	32591	29	38	2.2	428	13.3	419
All other chemical product manufacturing	32599	325	354	2.3	4,198	2.6	4,104

Table 8a

Shipments for selected industries, unadjusted - continued

	NAICS Code	Previous year		Year-to-date		Annual	
		December 2002	November 2002	% Change from 2002	2003	% Change from 2001	2002
\$ millions							
Plastics and rubber products manufacturing	326						
Plastic pipe, pipe fitting and unsupported profile shape manufacturing	32612	105	144	5.4	1,852	4.2	1,758
Polystyrene foam product manufacturing	32614	21	28	10.7	356	3.8	321
Other plastic product manufacturing	32619	659	773	1.4	9,570	8.6	9,435
Other rubber product manufacturing	32629	158	200	0.4	2,419	0.0	2,409
Non-metallic mineral product manufacturing	327						
Clay product and refractory manufacturing	3271	42	52	7.3	658	5.0	613
Glass and glass product manufacturing	3272	149	209	2.7	2,459	6.2	2,396
Cement manufacturing	32731	76	122	0.9	1,439	5.7	1,425
Ready-mix concrete manufacturing	32732	132	216	4.3	2,438	9.1	2,337
Other concrete product manufacturing	32739	79	110	6.1	1,196	1.3	1,127
Abrasive product manufacturing	32791	40	47	-13.3	390	36.5	450
All other non-metallic mineral product manufacturing	32799	109	122	10.5	1,453	28.8	1,314
Primary metal manufacturing	331						
Iron and steel mills and ferro-alloy manufacturing	3311	811	874	2.3	10,606	11.3	10,368
Iron and steel pipes and tubes manufacturing from purchased steel	33121	206	232	11.8	2,828	1.4	2,529
Foundries	3315	217	278	2.4	3,236	8.7	3,161
Fabricated metal product manufacturing	332						
Cutlery and hand tool manufacturing	3322	42	46	12.9	527	6.3	467
Plate work and fabricated structural product manufacturing	33231	304	359	0.7	4,314	0.4	4,286
Power boiler and heat exchanger manufacturing	33241	84	90	29.9	1,328	7.6	1,022
Spring and wire product manufacturing	3326	96	127	-11.8	1,302	9.8	1,477
Coating, engraving, heat treating and allied activities	3328	187	234	-0.6	2,617	20.0	2,633
Other fabricated metal product manufacturing	3329	185	253	-2.6	2,926	9.5	3,005
Machinery manufacturing	333						
Agricultural implement manufacturing	33311	161	152	-11.7	2,051	6.1	2,323
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	158	205	-2.0	2,251	9.7	2,298
All other general-purpose machinery manufacturing	33399	167	180	-23.8	1,734	15.4	2,275
Computer and electronic product manufacturing	334						
Computer and peripheral equipment manufacturing	3341	400	303	-20.9	3,716	-16.6	4,699
Communications equipment manufacturing	3342	685	475	-26.1	5,275	-23.7	7,137
Audio and video equipment manufacturing	3343	21	22	-9.5	197	-7.2	218
Electrical equipment, appliance and component manufacturing	335						
Lighting fixture manufacturing	33512	63	76	-6.9	817	-3.7	877
Small electrical appliance manufacturing	33521	19	27	0.6	252	-9.3	250
Major appliance manufacturing	33522	104	128	-3.4	1,477	12.4	1,529
Battery manufacturing	33591	12	13	6.4	148	-15.1	139
Communication and energy wire and cable manufacturing	33592	89	105	-17.7	1,182	-42.2	1,436
All other electrical equipment and component manufacturing	33599	61	66	4.6	808	-2.3	772
Transportation equipment manufacturing	336						
Motor vehicle manufacturing	3361	4,043	5,862	-5.0	62,512	5.7	65,797
Motor vehicle parts manufacturing	3363	2,114	2,833	-3.4	31,612	10.2	32,741
Aerospace product and parts manufacturing	3364	1,121	1,110	-8.4	11,428	-15.0	12,472
Railroad rolling stock manufacturing	3365	225	275	-3.7	2,772	5.4	2,878
Ship and boat building	3366	62	63	-20.6	986	20.6	1,242
Furniture and related product manufacturing	337						
Household and institutional furniture and kitchen cabinet manufacturing	3371	508	594	-2.7	6,940	7.7	7,133
Office furniture (including fixtures) manufacturing	3372	350	377	1.8	4,398	-6.0	4,319
Miscellaneous manufacturing	339						
Medical equipment and supplies manufacturing	3391	111	118	-1.5	1,411	5.3	1,432
Other miscellaneous manufacturing	3399	328	380	-0.1	4,092	9.7	4,095

Table 8b
Inventory owned for selected industries, unadjusted

	NAICS Code	Current periods			
		December 2003	November 2003	October 2003	September 2003
\$ millions					
Food manufacturing	311				
Animal food manufacturing	3111	266	278	270	276
Starch and vegetable fat and oil manufacturing	31122	232	201	208	170
Sugar and confectionery product manufacturing	3113	350	379	354	370
Fruit and vegetable preserving and specialty food manufacturing	3114	947	987	984	952
Dairy product manufacturing	3115	790	791	786	788
Meat product manufacturing	3116	738	803	823	812
Cookie, cracker and pasta manufacturing	31182	124	128	127	127
Other food manufacturing	3119	501	530	536	532
Beverage and tobacco product manufacturing	312				
Soft drink and ice manufacturing	31211	202	243	247	253
Breweries	31212	169	170	172	169
Wineries	31213	209	218	220	213
Distilleries	31214	428	435	448	471
Tobacco manufacturing	3122	623	664	631	578
Textile mills	313				
Fibre, yarn and thread mills	3131	50	49	50	48
Fabric mills	3132	289	296	311	321
Textile and fabric finishing and fabric coating	3133	65	66	65	69
Textile product mills	314				
Carpet and rug mills	31411	70	77	81	84
Textile bag and canvas mills	31491	40	42	41	43
Clothing manufacturing	315				
Hosiery and sock mills	31511	140	137	151	156
Other clothing knitting mills	31519	104	113	114	121
Men's and boys' cut and sew clothing manufacturing	31522	358	361	398	421
Women's and girls' cut and sew clothing manufacturing	31523	315	314	325	337
Clothing accessories and other clothing manufacturing	3159	78	76	77	82
Leather and allied product manufacturing	316				
Footwear manufacturing	3162	67	71	77	86
Wood product manufacturing	321				
Sawmills and wood preservation	3211	2,579	2,368	2,351	2,462
Veneer, plywood and engineered wood product manufacturing	3212	673	647	623	623
Other wood product manufacturing	3219	807	835	851	841
Paper manufacturing	322				
Pulp, paper and paperboard mills	3221	2,443	2,469	2,462	2,432
Paperboard container manufacturing	32221	525	545	536	542
Paper bag and coated and treated paper manufacturing	32222	268	258	262	272
Other converted paper product manufacturing	32229	139	144	143	143
Printing and related support activities	323				
Printing	32311	666	693	694	695
Support activities for printing	32312	9	9	8	8
Petroleum and coal products manufacturing	324				
Petroleum refineries	32411	1,172	1,215	1,241	1,258
Chemical manufacturing	325				
Other basic inorganic chemical manufacturing	32518	227	232	222	210
Other basic organic chemical manufacturing	32519	134	141	153	160
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	3252	548	558	561	548
Pesticide and other agricultural chemical manufacturing	32532	124	117	111	119
Pharmaceutical and medicine manufacturing	3254	3,194	3,097	2,987	2,853
Paint and coating manufacturing	32551	239	248	251	250
Adhesive manufacturing	32552	93	89	87	88
Soap and cleaning compound manufacturing	32561	95	99	98	98
Toilet preparation manufacturing	32562	177	185	178	185
Printing ink manufacturing	32591	53	50	51	53
All other chemical product manufacturing	32599	290	285	291	296

Table 8b

Inventory owned for selected industries, unadjusted - continued

	NAICS Code	Current periods			
		December 2003	November 2003	October 2003	September 2003
		\$ millions			
Plastics and rubber products manufacturing	326				
Plastic pipe, pipe fitting and unsupported profile shape manufacturing	32612	186	189	190	198
Polystyrene foam product manufacturing	32614	37	37	38	38
Other plastic product manufacturing	32619	865	881	881	857
Other rubber product manufacturing	32629	163	169	170	168
Non-metallic mineral product manufacturing	327				
Clay product and refractory manufacturing	3271	81	78	77	76
Glass and glass product manufacturing	3272	266	271	270	270
Cement manufacturing	32731	169	146	139	148
Ready-mix concrete manufacturing	32732	110	108	115	105
Other concrete product manufacturing	32739	105	101	97	94
Abrasive product manufacturing	32791	100	111	105	112
All other non-metallic mineral product manufacturing	32799	146	143	140	141
Primary metal manufacturing	331				
Iron and steel mills and ferro-alloy manufacturing	3311	1,933	1,908	1,918	1,921
Iron and steel pipes and tubes manufacturing from purchased steel	33121	563	583	550	548
Foundries	3315	263	282	269	255
Fabricated metal product manufacturing	332				
Cutlery and hand tool manufacturing	3322	75	78	78	78
Plate work and fabricated structural product manufacturing	33231	432	441	431	454
Power boiler and heat exchanger manufacturing	33241	137	147	158	155
Spring and wire product manufacturing	3326	109	112	117	116
Coating, engraving, heat treating and allied activities	3328	159	154	148	152
Other fabricated metal product manufacturing	3329	532	541	545	556
Machinery manufacturing	333				
Agricultural implement manufacturing	33311	500	535	520	503
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	324	335	341	345
All other general-purpose machinery manufacturing	33399	388	424	452	443
Computer and electronic product manufacturing	334				
Computer and peripheral equipment manufacturing	3341	500	556	566	557
Communications equipment manufacturing	3342	1,941	2,021	2,022	1,989
Audio and video equipment manufacturing	3343	52	53	52	52
Electrical equipment, appliance and component manufacturing	335				
Lighting fixture manufacturing	33512	126	123	130	131
Small electrical appliance manufacturing	33521	54	52	53	50
Major appliance manufacturing	33522	181	174	170	165
Battery manufacturing	33591	73	78	77	75
Communication and energy wire and cable manufacturing	33592	244	255	254	253
All other electrical equipment and component manufacturing	33599	101	106	109	108
Transportation equipment manufacturing	336				
Motor vehicle manufacturing	3361	1,164	1,236	1,225	1,303
Motor vehicle parts manufacturing	3363	1,840	1,925	1,867	1,867
Aerospace product and parts manufacturing	3364	7,405	7,698	7,424	7,829
Railroad rolling stock manufacturing	3365	929	979	1,034	1,076
Ship and boat building	3366	132	135	132	129
Furniture and related product manufacturing	337				
Household and institutional furniture and kitchen cabinet manufacturing	3371	775	774	769	793
Office furniture (including fixtures) manufacturing	3372	386	404	401	403
Miscellaneous manufacturing	339				
Medical equipment and supplies manufacturing	3391	170	176	176	180
Other miscellaneous manufacturing	3399	774	808	805	814

Table 8b

Inventory owned for selected industries, unadjusted - continued

	NAICS Code	Previous year		Year-to-date		Average per month	
		December 2002	November 2002	% Change from 2002	Average 2003	% Change from 2001	2002
\$ millions							
Food manufacturing	311						
Animal food manufacturing	3111	258	266	4.0	273	7.2	263
Starch and vegetable fat and oil manufacturing	31122	219	222	4.1	196	6.5	189
Sugar and confectionery product manufacturing	3113	346	383	1.2	364	-1.3	359
Fruit and vegetable preserving and specialty food manufacturing	3114	927	1,008	3.4	897	7.6	868
Dairy product manufacturing	3115	762	769	5.7	791	5.3	748
Meat product manufacturing	3116	812	882	-8.1	812	-1.6	884
Cookie, cracker and pasta manufacturing	31182	124	126	9.9	126	-1.9	115
Other food manufacturing	3119	457	470	2.9	496	4.4	482
Beverage and tobacco product manufacturing	312						
Soft drink and ice manufacturing	31211	216	264	-1.2	250	13.8	253
Breweries	31212	157	177	2.4	172	10.2	168
Wineries	31213	220	225	3.9	218	12.6	209
Distilleries	31214	492	501	2.1	494	12.1	484
Tobacco manufacturing	3122	563	592	0.9	608	-6.2	602
Textile mills	313						
Fibre, yarn and thread mills	3131	52	55	-10.4	52	-22.3	58
Fabric mills	3132	327	334	-11.7	325	-7.1	368
Textile and fabric finishing and fabric coating	3133	67	68	11.3	67	-7.4	60
Textile product mills	314						
Carpet and rug mills	31411	75	82	1.0	82	-21.6	81
Textile bag and canvas mills	31491	55	64	-31.8	46	5.1	67
Clothing manufacturing	315						
Hosiery and sock mills	31511	126	131	8.5	147	-0.7	136
Other clothing knitting mills	31519	95	96	13.9	118	0.2	103
Men's and boys' cut and sew clothing manufacturing	31522	373	360	8.6	401	-19.9	369
Women's and girls' cut and sew clothing manufacturing	31523	352	342	-4.1	336	-7.8	351
Clothing accessories and other clothing manufacturing	3159	60	63	18.2	75	-14.6	64
Leather and allied product manufacturing	316						
Footwear manufacturing	3162	74	79	-5.6	87	-10.9	92
Wood product manufacturing	321						
Sawmills and wood preservation	3211	2,831	2,730	-4.3	2,868	-9.8	2,996
Veneer, plywood and engineered wood product manufacturing	3212	664	647	6.1	692	-4.4	652
Other wood product manufacturing	3219	852	851	7.3	860	7.2	801
Paper manufacturing	322						
Pulp, paper and paperboard mills	3221	2,478	2,513	-2.2	2,494	-8.5	2,549
Paperboard container manufacturing	32221	492	507	5.8	544	-5.0	514
Paper bag and coated and treated paper manufacturing	32222	273	258	7.2	272	2.2	254
Other converted paper product manufacturing	32229	141	148	1.0	148	-3.8	147
Printing and related support activities	323						
Printing	32311	643	693	0.0	688	-4.4	688
Support activities for printing	32312	11	11	-36.6	9	-42.6	14
Petroleum and coal products manufacturing	324						
Petroleum refineries	32411	1,234	1,163	0.7	1,331	-12.4	1,322
Chemical manufacturing	325						
Other basic inorganic chemical manufacturing	32518	180	171	8.7	200	-4.3	184
Other basic organic chemical manufacturing	32519	158	150	6.1	154	-23.8	146
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	3252	532	531	8.2	568	-18.9	525
Pesticide and other agricultural chemical manufacturing	32532	116	116	-10.0	120	-20.3	133
Pharmaceutical and medicine manufacturing	3254	2,895	2,910	15.5	3,079	32.8	2,665
Paint and coating manufacturing	32551	229	239	3.0	256	-9.1	249
Adhesive manufacturing	32552	81	80	8.9	89	15.5	81
Soap and cleaning compound manufacturing	32561	100	108	-19.6	104	-11.8	129
Toilet preparation manufacturing	32562	180	182	15.5	187	-6.8	162
Printing ink manufacturing	32591	49	49	4.7	52	-4.2	50
All other chemical product manufacturing	32599	314	309	-1.7	306	-0.9	312

Table 8b

Inventory owned for selected industries, unadjusted - concluded

	NAICS Code	Previous year		Year-to-date		Average per month	
		December 2002	November 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	227	229	-4.1	214	-6.3	223
Polystyrene foam product manufacturing	32614	35	31	20.0	38	1.6	31
Other plastic product manufacturing	32619	898	898	5.3	893	7.8	848
Other rubber product manufacturing	32629	194	187	-4.8	180	-7.2	189
Non-metallic mineral product manufacturing	327						
Clay product and refractory manufacturing	3271	90	86	-4.0	85	-12.2	89
Glass and glass product manufacturing	3272	265	258	0.8	274	2.8	272
Cement manufacturing	32731	184	154	-6.1	176	-1.9	187
Ready-mix concrete manufacturing	32732	102	101	0.0	102	-8.6	102
Other concrete product manufacturing	32739	80	76	15.1	94	1.3	82
Abrasive product manufacturing	32791	134	144	-19.8	121	32.0	151
All other non-metallic mineral product manufacturing	32799	142	145	2.6	145	0.9	141
Primary metal manufacturing	331						
Iron and steel mills and ferro-alloy manufacturing	3311	2,316	2,304	-1.0	2,030	-1.1	2,050
Iron and steel pipes and tubes manufacturing from purchased steel	33121	659	609	7.7	585	6.7	543
Foundries	3315	292	295	-1.0	284	1.0	287
Fabricated metal product manufacturing	332						
Cutlery and hand tool manufacturing	3322	84	83	-2.2	81	9.3	83
Plate work and fabricated structural product manufacturing	33231	430	438	2.7	460	2.9	448
Power boiler and heat exchanger manufacturing	33241	156	155	12.4	166	27.1	148
Spring and wire product manufacturing	3326	148	161	-11.4	136	-7.4	154
Coating, engraving, heat treating and allied activities	3328	165	157	1.5	158	16.4	156
Other fabricated metal product manufacturing	3329	547	541	1.4	556	3.6	548
Machinery manufacturing	333						
Agricultural implement manufacturing	33311	528	536	2.5	523	1.5	510
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	3334	319	326	0.7	347	6.8	345
All other general-purpose machinery manufacturing	33399	386	392	11.3	404	12.2	363
Computer and electronic product manufacturing	334						
Computer and peripheral equipment manufacturing	3341	600	600	-7.3	563	-42.7	607
Communications equipment manufacturing	3342	2,212	2,416	-14.7	2,087	-19.6	2,447
Audio and video equipment manufacturing	3343	55	57	5.6	54	-10.6	51
Electrical equipment, appliance and component manufacturing	335						
Lighting fixture manufacturing	33512	155	148	-16.0	135	-2.7	160
Small electrical appliance manufacturing	33521	46	44	15.3	49	-19.2	43
Major appliance manufacturing	33522	161	162	9.8	176	10.6	160
Battery manufacturing	33591	60	63	-2.0	68	44.2	70
Communication and energy wire and cable manufacturing	33592	264	291	-8.8	266	-42.2	291
All other electrical equipment and component manufacturing	33599	104	108	-3.7	107	-24.2	111
Transportation equipment manufacturing	336						
Motor vehicle manufacturing	3361	1,785	1,788	-20.1	1,383	2.9	1,730
Motor vehicle parts manufacturing	3363	1,904	1,873	8.5	1,912	3.9	1,762
Aerospace product and parts manufacturing	3364	7,965	8,121	-0.5	7,775	0.3	7,817
Railroad rolling stock manufacturing	3365	1,431	1,461	-15.3	1,133	-14.0	1,338
Ship and boat building	3366	133	136	-13.7	125	-35.7	145
Furniture and related product manufacturing	337						
Household and institutional furniture and kitchen cabinet manufacturing	3371	806	819	4.8	810	9.7	772
Office furniture (including fixtures) manufacturing	3372	400	419	3.9	414	-11.1	398
Miscellaneous manufacturing	339						
Medical equipment and supplies manufacturing	3391	167	173	-2.5	175	-5.8	180
Other miscellaneous manufacturing	3399	900	922	-4.3	842	5.4	879

Table 9
Inventories owned by stage of fabrication

Period covered	Unadjusted			
	Raw materials	Goods in process	Finished products	Total inventories
December 2002	27,600	15,742	19,047	62,389
January 2003	27,863	15,527	19,210	62,601
February 2003	28,300	15,874	19,806	63,980
March 2003	28,431	15,820	20,261	64,512
April 2003	27,952	16,165	20,478	64,595
May 2003	27,058	16,224	20,385	63,666
June 2003	26,529	15,841	19,923	62,293
July 2003	26,620	15,470	19,333	61,423
August 2003	26,525	15,537	18,891	60,953
September 2003	25,938	15,260	18,769	59,967
October 2003	26,004	14,949	18,597	59,551
November 2003	25,792	15,317	18,875	59,984
December 2003	25,856	14,733	18,278	58,867
Period covered	Seasonally adjusted			
	Raw materials	Goods in process	Finished products	Total inventories
December 2002	27,591	15,943	19,626	63,161
January 2003	27,471	15,952	19,506	62,929
February 2003	27,661	15,917	19,730	63,307
March 2003	27,779	15,774	19,815	63,368
April 2003	27,726	16,150	20,023	63,898
May 2003	27,388	15,978	19,991	63,358
June 2003	27,085	15,773	19,777	62,635
July 2003	26,948	15,661	19,476	62,085
August 2003	26,686	15,415	19,012	61,113
September 2003	26,246	15,149	18,970	60,365
October 2003	26,106	14,922	18,950	59,978
November 2003	25,901	15,149	18,935	59,984
December 2003	25,902	14,991	18,902	59,795

Table 10
Shipments by major group and province, unadjusted

Province	Current year			
	December 2003	November 2003	October 2003	September 2003
	\$ millions			
Total				
Newfoundland and Labrador	192	186	207	229
Prince Edward Island	105	111	123	133
Nova Scotia	728	743	770	758
New Brunswick	1,081	1,074	1,057	1,151
Quebec	9,565	9,904	10,506	10,535
Ontario	20,889	22,459	24,336	23,858
Manitoba	954	951	1,048	1,026
Saskatchewan	594	593	680	648
Alberta	3,559	3,544	3,794	3,640
British Columbia	2,604	2,670	2,846	2,956
311 Food manufacturing				
Newfoundland and Labrador	54	60	57	79
Prince Edward Island	75	73	87	94
Nova Scotia	207	186	210	205
New Brunswick	149	170	212	224
Quebec	1,188	1,240	1,303	1,235
Ontario	2,243	2,196	2,353	2,212
Manitoba	276	267	283	253
Saskatchewan	172	164	169	159
Alberta	765	776	790	714
British Columbia	383	351	376	382
312 Beverage and tobacco product manufacturing				
Nova Scotia	24	18	22	19
Quebec	387	354	346	365
Ontario	561	549	566	558
Saskatchewan	6	4	5	5
British Columbia	91	77	83	82
313 Textile mills				
Quebec	126	147	150	162
Ontario	62	68	75	72
314 Textile product mills				
Quebec	64	79	84	80
Ontario	73	73	89	82
Alberta	3	3	3	3
British Columbia	8	9	9	8
315 Clothing manufacturing				
Quebec	213	282	331	331
Ontario	143	175	176	163
Manitoba	26	37	41	44
Saskatchewan	2	3	3	2
Alberta	6	10	9	6
British Columbia	22	23	26	25
316 Leather and allied product manufacturing				
Quebec	22	32	49	65
Ontario	20	18	19	19
321 Wood product manufacturing				
Nova Scotia	32	48	47	50
Quebec	507	656	744	708
Ontario	363	473	513	503
Manitoba	37	46	58	58
Saskatchewan	45	52	65	57
Alberta	199	233	247	242
British Columbia	675	741	814	839

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

Province	Current year			
	December 2003	November 2003	October 2003	September 2003
	\$ millions			
322 Paper manufacturing				
Nova Scotia	66	83	73	70
Quebec	806	828	901	911
Ontario	695	752	801	798
Alberta	135	122	135	121
British Columbia	405	395	390	443
323 Printing and related support activities				
Quebec	225	242	251	236
Ontario	452	473	469	471
Manitoba	36	38	38	38
Saskatchewan	9	9	11	11
Alberta	51	55	58	58
British Columbia	47	51	49	51
324 Petroleum and coal products manufacturing				
Quebec	612	622	628	626
Ontario	824	861	944	907
Alberta	648	613	641	706
British Columbia	57	59	64	62
325 Chemical manufacturing				
Quebec	703	711	725	722
Ontario	1,699	1,641	1,789	1,799
Manitoba	60	61	63	75
Saskatchewan	28	30	44	45
Alberta	554	539	617	517
British Columbia	94	97	95	89
326 Plastics and rubber products manufacturing				
Nova Scotia	79	91	97	94
Quebec	387	459	515	483
Ontario	968	1,150	1,256	1,199
Manitoba	39	41	48	45
Saskatchewan	6	9	9	9
Alberta	78	82	100	102
British Columbia	83	91	104	101
327 Non-metallic mineral product manufacturing				
Nova Scotia	9	15	16	16
Quebec	155	253	299	298
Ontario	381	481	577	550
Saskatchewan	3	5	13	14
Alberta	92	101	149	149
British Columbia	98	119	131	135
331 Primary metal manufacturing				
Quebec	1,063	1,012	1,090	1,108
Ontario	1,223	1,351	1,470	1,398
Alberta	87	98	102	77
332 Fabricated metal product manufacturing				
Newfoundland and Labrador	11	17	16	17
Prince Edward Island	4	4	2	2
Nova Scotia	26	23	30	29
New Brunswick	18	24	26	26
Quebec	416	486	534	507
Ontario	1,168	1,349	1,506	1,465
Manitoba	61	61	74	72
Saskatchewan	32	43	46	43
Alberta	288	295	295	299
British Columbia	121	123	135	167

Table 10

Shipments by major group and province, unadjusted - continued

Province	Current year			
	December 2003	November 2003	October 2003	September 2003
	\$ millions			
333 Machinery manufacturing				
Quebec	408	426	367	444
Ontario	925	935	1,029	982
Manitoba	88	78	76	78
Saskatchewan	49	42	52	49
Alberta	282	250	286	258
British Columbia	141	156	161	146
334 Computer and electronic product manufacturing				
Quebec	576	435	410	575
Ontario	1,076	955	867	1,076
Saskatchewan	10	8	10	9
Alberta	112	101	83	114
British Columbia	60	64	68	83
335 Electrical equipment, appliance and component manufacturing				
Quebec	231	260	270	273
Ontario	379	391	390	433
Manitoba	11	13	14	14
Saskatchewan	12	12	15	13
Alberta	43	47	41	46
British Columbia	26	31	30	30
336 Transportation equipment manufacturing				
Nova Scotia	62	58	60	56
Quebec	1,060	928	1,046	942
Ontario	6,952	7,882	8,690	8,400
Manitoba	128	112	128	130
Saskatchewan	25	21	25	24
Alberta	60	64	75	68
British Columbia	88	77	81	84
337 Furniture and related product manufacturing				
Quebec	249	271	287	285
Ontario	516	523	559	588
Manitoba	54	59	65	62
Saskatchewan	6	6	6	7
Alberta	63	62	67	66
British Columbia	44	44	47	51
339 Miscellaneous manufacturing				
Newfoundland and Labrador	1	1	1	1
Quebec	167	179	176	181
Ontario	166	162	198	184
Manitoba	8	9	10	7
Saskatchewan	5	4	4	4
Alberta	28	33	36	33
British Columbia	56	57	69	60

Table 10

Shipments by major group and province, unadjusted - continued

	Previous year		Year-to-date		Annual	
	December 2002	November 2002	% Change from 2002	2003	% Change from 2001	2002
	\$ millions					
Total						
Newfoundland and Labrador	177	189	6.8	2,386	1.3	2,234
Prince Edward Island	100	105	1.2	1,332	9.5	1,316
Nova Scotia	725	752	1.8	8,801	1.3	8,646
New Brunswick	1,086	972	3.4	13,059	3.1	12,632
Quebec	9,735	10,390	-2.4	119,124	0.9	122,059
Ontario	20,264	24,052	-1.7	272,873	3.4	277,581
Manitoba	931	980	0.9	11,638	0.6	11,538
Saskatchewan	559	564	3.7	7,504	1.3	7,239
Alberta	3,451	3,578	5.0	43,035	-3.4	40,966
British Columbia	2,691	2,719	-2.4	33,402	0.4	34,236
311 Food manufacturing						
Newfoundland and Labrador	55	57	-9.1	810	10.3	891
Prince Edward Island	76	80	-1.9	934	8.0	952
Nova Scotia	205	192	-0.4	2,225	2.2	2,234
New Brunswick	130	133	-1.9	1,966	4.6	2,004
Quebec	1,188	1,200	4.4	14,167	1.4	13,573
Ontario	2,144	2,158	2.1	25,623	-0.1	25,085
Manitoba	268	253	1.1	3,057	4.3	3,023
Saskatchewan	166	161	4.1	1,900	3.3	1,825
Alberta	744	751	-1.0	8,967	-1.0	9,055
British Columbia	381	344	3.7	4,430	3.4	4,270
312 Beverage and tobacco product manufacturing						
Nova Scotia	20	16	15.2	245	1.5	213
Quebec	378	319	3.3	4,228	5.7	4,093
Ontario	581	538	0.8	6,564	2.6	6,514
Saskatchewan	5	4	-33.5	62	-7.8	92
British Columbia	94	81	2.3	1,013	9.1	990
313 Textile mills						
Quebec	149	164	-11.9	1,823	-2.6	2,069
Ontario	56	73	-10.5	817	-5.3	912
314 Textile product mills						
Quebec	71	87	-8.3	935	-2.1	1,020
Ontario	77	92	-11.1	1,012	3.8	1,138
Alberta	2	3	11.1	32	-14.4	28
British Columbia	13	12	-32.4	104	4.0	153
315 Clothing manufacturing						
Quebec	251	339	-9.1	3,579	-7.4	3,937
Ontario	134	209	-12.2	1,774	6.6	2,020
Manitoba	27	39	-4.2	361	13.1	376
Saskatchewan	2	3	10.6	24	-5.6	22
Alberta	7	11	-5.1	84	-6.8	89
British Columbia	18	21	3.5	272	-15.8	263
316 Leather and allied product manufacturing						
Quebec	24	39	-9.1	390	-18.8	430
Ontario	21	21	-18.4	184	11.9	225
321 Wood product manufacturing						
Nova Scotia	38	42	-0.7	526	10.1	530
Quebec	541	648	0.8	7,700	11.9	7,637
Ontario	383	444	-2.5	5,482	7.7	5,622
Manitoba	35	43	7.4	538	-13.5	501
Saskatchewan	35	43	29.1	555	39.0	430
Alberta	157	184	7.8	2,441	2.8	2,265
British Columbia	746	768	-13.5	9,363	4.8	10,830

Table 10

Shipments by major group and province, unadjusted - continued

	Previous year		Year-to-date		Annual	
	December 2002	November 2002	% Change from 2002	2003	% Change from 2001	2002
	\$ millions					
322 Paper manufacturing						
Nova Scotia	79	78	1.6	896	-17.9	881
Quebec	932	1,013	-7.8	10,812	-2.7	11,729
Ontario	769	858	-5.9	9,499	-3.6	10,091
Alberta	137	140	-0.3	1,548	4.0	1,553
British Columbia	416	425	4.7	5,013	-11.7	4,790
323 Printing and related support activities						
Quebec	219	249	1.2	2,782	-11.3	2,749
Ontario	438	480	-1.0	5,298	2.0	5,351
Manitoba	34	38	-3.0	423	-6.4	436
Saskatchewan	9	9	6.9	114	6.1	106
Alberta	45	49	3.3	593	-5.4	574
British Columbia	43	51	-8.7	555	-10.7	608
324 Petroleum and coal products manufacturing						
Quebec	678	644	13.0	7,736	6.7	6,845
Ontario	932	950	8.6	10,709	-2.9	9,861
Alberta	646	687	11.6	8,360	1.0	7,491
British Columbia	58	55	0.4	757	-4.8	754
325 Chemical manufacturing						
Quebec	690	739	-0.2	8,694	6.8	8,711
Ontario	1,645	1,680	4.6	20,999	7.8	20,076
Manitoba	54	58	19.2	734	-12.6	616
Saskatchewan	23	27	19.2	670	-10.8	562
Alberta	615	601	8.3	6,994	-6.7	6,456
British Columbia	89	91	14.3	1,230	7.1	1,076
326 Plastics and rubber products manufacturing						
Nova Scotia	70	104	-7.2	1,059	6.9	1,141
Quebec	360	447	4.9	5,462	10.7	5,208
Ontario	963	1,143	-0.1	13,790	6.9	13,805
Manitoba	35	42	2.2	519	7.5	508
Saskatchewan	6	8	8.9	107	5.4	98
Alberta	69	82	3.9	1,063	-4.0	1,023
British Columbia	72	78	12.3	1,132	-3.1	1,008
327 Non-metallic mineral product manufacturing						
Nova Scotia	9	16	-1.8	159	1.2	162
Quebec	144	234	5.3	2,846	10.8	2,701
Ontario	366	494	5.6	5,560	4.9	5,264
Saskatchewan	4	6	-7.3	104	-8.2	113
Alberta	103	134	-4.2	1,446	24.1	1,510
British Columbia	93	113	5.9	1,438	17.0	1,357
331 Primary metal manufacturing						
Quebec	1,003	1,025	-0.2	12,688	7.8	12,712
Ontario	1,220	1,400	2.2	16,362	11.9	16,003
Alberta	84	67	15.9	1,039	-10.7	896
332 Fabricated metal product manufacturing						
Newfoundland and Labrador	7	9	81.7	160	-15.5	88
Prince Edward Island	3	2	12.6	29	-1.5	25
Nova Scotia	23	28	13.4	300	17.2	264
New Brunswick	19	21	-2.5	262	-5.7	268
Quebec	373	457	0.1	5,335	1.8	5,329
Ontario	1,078	1,356	-1.9	15,855	4.7	16,165
Manitoba	63	63	15.9	819	-2.0	707
Saskatchewan	29	31	10.6	460	-6.5	416
Alberta	209	259	24.2	3,276	-2.7	2,637
British Columbia	110	134	-0.3	1,605	2.2	1,609

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

	Previous year		Year-to-date		Annual	
	December 2002	November 2002	% Change from 2002	2003	% Change from 2001	2002
	\$ millions					
333 Machinery manufacturing						
Quebec	394	355	-1.6	4,512	0.2	4,587
Ontario	1,002	1,054	-9.9	11,658	4.1	12,943
Manitoba	74	79	-6.8	971	9.4	1,042
Saskatchewan	47	44	-10.0	596	7.4	662
Alberta	226	239	2.5	2,945	-14.5	2,872
British Columbia	157	155	7.7	1,717	8.7	1,594
334 Computer and electronic product manufacturing						
Quebec	572	499	-17.4	5,439	-18.1	6,588
Ontario	969	937	-9.6	10,759	-13.9	11,900
Saskatchewan	9	7	8.9	102	12.7	94
Alberta	157	109	-25.3	1,040	-29.9	1,392
British Columbia	82	74	-9.9	792	-17.7	879
335 Electrical equipment, appliance and component manufacturing						
Quebec	218	239	1.2	2,964	10.6	2,930
Ontario	383	452	-8.1	4,790	-12.2	5,210
Manitoba	15	15	-20.6	146	-14.7	183
Saskatchewan	11	11	-29.4	147	-45.0	208
Alberta	24	32	36.5	448	9.5	328
British Columbia	29	33	4.0	359	-32.9	345
336 Transportation equipment manufacturing						
Nova Scotia	44	51	-22.1	672	29.7	862
Quebec	1,183	1,219	-14.5	12,080	-7.0	14,134
Ontario	6,420	8,981	-3.3	97,147	6.5	100,483
Manitoba	131	141	0.1	1,604	0.2	1,603
Saskatchewan	22	30	-11.5	309	21.7	349
Alberta	66	61	8.4	850	0.5	785
British Columbia	80	80	-15.4	1,085	-4.9	1,283
337 Furniture and related product manufacturing						
Quebec	227	280	-1.7	3,239	11.4	3,293
Ontario	505	552	0.2	6,644	-2.2	6,629
Manitoba	55	64	-3.7	715	11.3	743
Saskatchewan	6	7	-9.2	81	3.3	89
Alberta	66	73	-8.1	771	-3.9	838
British Columbia	46	46	4.0	546	14.4	525
339 Miscellaneous manufacturing						
Newfoundland and Labrador	0	1	-29.8	13	22.1	18
Quebec	139	191	-4.1	1,713	11.3	1,785
Ontario	178	180	2.8	2,348	6.8	2,284
Manitoba	8	9	-11.9	94	-11.0	107
Saskatchewan	4	4	10.9	49	-2.0	44
Alberta	33	40	-11.0	391	7.8	440
British Columbia	57	53	6.3	644	15.0	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	%					
December 2002	0.54	0.92	0.74	1.20	1.82						
January 2003	0.52	0.89	0.75	1.25	1.81						
February 2003	0.52	0.89	0.73	1.25	1.78						
March 2003	0.52	0.92	0.76	1.26	1.75						
April 2003	0.54	0.91	0.78	1.28	1.68						
May 2003	0.55	0.95	0.73	1.29	1.60						
June 2003	0.56	0.97	0.69	1.36	1.55						
July 2003	0.61	1.02	0.70	1.46	1.51						
August 2003	0.54	1.08	0.70	1.42	1.62						
September 2003	0.55	1.14	0.75	1.48	2.02						
October 2003	0.56	1.23	0.82	1.49	2.02						
November 2003	0.58	1.29	0.81	1.42	2.07						
December 2003	0.57	1.44	0.89	1.50	1.99						

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	91.96	5.37	2.67
Raw Materials	79.06	17.75	3.19
Goods in Process	66.89	10.23	22.88
Finished Products	79.03	13.91	7.07
Unfilled Orders	85.34	7.01	7.65

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.



Manufacturing, Construction
and Energy Division

Monthly Survey of Manufacturing

Division de la fabrication,
de la construction et de l'énergie

Enquête mensuelle sur les industries manufacturières

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Confidentiel une fois rempli

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du Canada, 1985, chapitre S19.

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If you need assistance, please call telephone No. below.
Si vous avez besoin d'aide, veuillez téléphoner au n° suivant.

Telephone/Téléphone:

Toll Free/Numéro sans frais:

Fax/Télécopieur:

Toll Free Fax/Télécopieur sans frais:



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INFORMATION SHARING AGREEMENTS:

To reduce response burden and to ensure more uniform statistics, Statistics Canada has entered into agreements with government departments and agencies for the sharing of data. See the second page for details of the agreements concerning this survey.

ENTENTES DE PARTAGE DES DONNÉES :

Pour alléger le fardeau de réponse et assurer des statistiques plus uniformes, Statistique Canada a conclu des ententes avec des ministères et organismes publics en vue d'un échange de données. Voir la deuxième page pour détails sur les accords concernant cette enquête.

Please correct name, address and establishment coverage if necessary – Veuillez corriger le nom, l'adresse et le regroupement d'établissements s'il y a lieu.

<ul style="list-style-type: none"> When values are not available by the due date, estimates are acceptable. Do not report cumulative or year-to-date values. Leave blank spaces only where values are not normally reported. 		<ul style="list-style-type: none"> Lorsque les valeurs ne sont pas disponibles à la date d'échéance, on peut accepter un estimé de ces valeurs. Ne donnez pas des chiffres cumulatifs. Laissez un espace en blanc seulement où les valeurs ne sont pas normalement rapportées. 	
1. Shipments – Livraisons		2. Inventories – Stocks manufacturiers	
Omit cents – Omettre les cents			
a) Goods of own manufacture Produits de propre fabrication	01	a) Raw materials, fuel, supplies, Matières premières, combustible, fournitures	04
b) Goods purchased for resale Produits achetés pour la revente	02	b) Goods in Process (gross value) Produits en cours (valeur brute)	05
TOTAL	03	c) Finished products of own manufacture Produits finis de propre fabrication	06
		d) Goods purchased for resale Produits achetés pour la revente	07
		TOTAL	08
3. Orders – Commandes		4. Period – Période	
Unfilled orders at month end Commandes non remplies à la fin du mois	09	Closing date of accounting period covered Date de clôture de la période comptable	10
		Month – Mois	Day – Jour
Name of contact – Nom de la personne-ressource		Tel. No. – N° de tél.	Date
Position – Fonction		Area code. Ind. rég.	Y-A M D-J
Thank you for your cooperation – Merci de votre collaboration			

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INFORMATION SHARING AGREEMENTS:

Section 11 of the federal Statistics Act provides for the joint collection and sharing of information with provincial statistical agencies which (1) have been established under provincial legislation providing substantially the same provisions for confidentiality and penalties for disclosure of confidential information as the federal Statistics Act, and (2) have the provincial or territorial legislative authority to collect this information on their own. Section 11 therefore was designed to reduce response burden and to facilitate the production of consistent and high quality national and provincial statistics.

A Section 11 agreement is in effect with the Institut de la statistique du Québec with respect to establishments located within the boundaries of that province.

ACCORDS DE PARTAGE DES DONNÉES :

L'article 11 de la Loi fédérale sur la statistique prévoit la collecte conjointe et le partage des données avec les organismes statistiques provinciaux qui 1) ont été établis en vertu d'une loi provinciale prévoyant essentiellement le même degré de protection de la confidentialité et les mêmes sanctions relatives à la divulgation d'information confidentielle que la Loi fédérale sur la statistique, et 2) sont autorisés légalement, par leur province ou leur territoire à recueillir eux-mêmes l'information. L'article 11 vise donc à réduire le fardeau de réponse et à faciliter la production de statistiques cohérentes et de bonne qualité aux niveaux fédéral et provincial.

L'accord en vertu de l'article 11 a été conclu avec l'Institut de la statistique du Québec en ce qui a trait aux établissements situés à l'intérieur des limites de cette province.

Comments – Commentaires
